ISSUES IN SPANISH VERBAL INFLECTION: A DISTRIBUTED MORPHOLOGY APPROACH

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A dissertation submitted to The Faculty of Graduate Studies in partial fulfillment of the requirement for the degree of

Doctor of Philosophy

Graduate Program in Linguistics and Applied Linguistics

York University

Toronto, Ontario

May 2022

Abstract

This dissertation analyzes various issues in the morphology of Spanish's seven simple verb forms in a syntax-centric morphological framework known as Distributed Morphology (DM). In the extant DM literature, scholars have primarily analyzed verbal inflection as a linear arrangement of morphemes (e.g., Madrid Servín, 2005; Oltra-Massuet and Arregi, 2005). However, failing to account for the interpretation of a given verbal form is problematic. A focus on the semantics of each verbal form is required to understand how several seemingly disparate forms, such as the future and the subjunctive or the conditional and the imperfect subjunctive, are related to each other and what this relationship reveals about their structure. Thus, a major claim made in this dissertation is that a fairly robust understanding of the semantics of each of the seven verbal forms considered is required to (i) link the structure of these verbal forms to their meanings, (ii) to account for contrasts that are not currently accounted for in the literature, and (iii) to make connections between forms that would not otherwise be obvious. Additionally, for the future and conditional forms, in particular, it is argued that the historical analysis, which consists of an infinitive followed by a form of the verb *haber* 'have', is superior to proposed reanalysis-based approaches. This historically informed approach demonstrates that we cannot dismiss historical analyses wholesale. Throughout the dissertation, I also demonstrate that the morphosyntax of these seven simple Spanish verbal forms can be accounted for with less conceptual machinery than previously argued for in several DM analyses while covering more empirical ground. Specifically, it is argued that the employment of lexical diacritics and morphological readjustment rules, among other analytical devices, are unnecessary for the analysis of Spanish verbs. In addition to these broad concerns, the dissertation proposes several novel solutions to data that have proven recalcitrant in prior analyses thus making an important contribution to the theoretical literature on Spanish verbal morphology.

Dedication

English is utterly devoid of words to do this section justice, so I offer a selection of words from Welsh and Portuguese, respectively, which can, at best, only approximate the sentiments I wish to express for those who are no longer with us.

- Hiraeth [hira]: likened to homesickness tinged with grief or sadness over the lost or departed. It is a mix of longing, yearning, nostalgia, and wistfulness.

- Saudade [saw' dadi]: a deep emotional state of nostalgic or profound melancholic longing for an absent something or someone that one loves.

Acknowledgements

First and foremost, I would like to thank my supervisor Gabriela Alboiu for her guidance and encouragement throughout my time as a graduate student. She has taught and continues to teach me how to be the most exemplary sort of mentor sparing no effort to support her students in every way possible while holding them to the highest academic standards. Without her input and guidance, there is simply no way that this dissertation would have ever been written, and any particularly well thought out and cogent parts are undoubtedly due to her influence.

I must also express my deep gratitude to my committee members, without whom this dissertation would be far less precise and well-argued. In particular, I thank Dan Siddiqi for his feedback on Chapter 7 and for challenging me to deal with the problems of disjunction which that chapter raises; Bronwyn Bjorkman and Cristina Cuervo for the depth of their commentary and their continual pushing for greater precision which led to massive improvements in my argumentation; and last but not least Ruth King and Marlon Valencia for encouraging me to clarify my position on the kinds of data being discussed. Without their input, the dissertation would not be what it is today, and I am deeply grateful for it.

In addition to my academic mentors, I also thank Kendall Vogh and Neil Banerjee for taking the time to read the first draft of this dissertation and provide stylistic feedback. I appreciate all the effort expended on my behalf!

To my fellow PhD students and candidates at York and UofT, I thank you most for providing me with a social life over my many years as a student. I would not have had one without you guys. I'm especially grateful to my former roommates, Jean François Juneau and Sabel Peters with whom I shared music, beer, and much invigorating conversation. Jida Jaffan, Liam Donohue and Kinza Mahoon, without your friendship, I might not have made it through this in one piece. I'd also like to thank Ana-Maria Jerca, Dakota Wing, Brittney O'Neill, and my fellow formalist at York, Anda Neagu, for keeping me sane throughout Ontario's many long quarantines – thank goodness for Thursday nights! Thank you all for the friendship and intellectual stimulation you've shared with me.

Beyond Toronto, I must also thank the CreteLing Summer School not only for its formative impacts on my thinking (see Chapter 6 in particular) but also for introducing me to an international community of scholars who remain treasured colleagues and friends. I can't name everyone, but Andrija Petrović, Angelina Ioannidou-Tsiomou, Eirini Chrysovalantou Foti and the rest of our CreteLing crew, I hope you know how much I appreciate our friendship and our intellectual engagements.

And of course, it's not just my friends in the academy who have gotten me through all of this, to my friends who may think I'm crazy for doing this whole academic thing, but who nonetheless let me ignore them for most of the year because I was 'doing me' thanks for letting me do me. Nuff love!

And finally, last but certainly not least, I cannot begin to express my gratitude for my family. Over the many years of my (seemingly interminable) education, my mom, dad, sister, and best friend Narendra have stood by me, patient and supportive even when I was far from at my best. I cannot thank you enough. And I especially owe this dissertation to my mom without whose boundless support I could never have gotten these 215 pages down during a global pandemic.

It's impossible to thank everyone that has played a role in this dissertation individually, but I hope that everyone who has come in contact with me or my work over the years knows that their every little kindness, encouragement, and healthy intellectual challenge has been tremendously valuable and so I thank you all. All remaining errors are my own.

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List of Abbreviations

1	first person	IMPF	imperfect aspect
2	second person	IND	indicative
3	third person	INF	infinitive
ACC	accusative case	INDIR	indirect evidence
ACT	active	INFL	inflection
AGR	agreement	INFOR	informal
ALLO	allocutive	LAB	labial
APPL	applicative	M	mood
ASP	aspect	NEG	negation
AUX	auxiliary	NOM	nominative case
CL	class	PART	participle
COND	conditional mood	PERF	perfective aspect
CONT	continuant	PL	plural
COR	coronal	POSS	possessive
DAT	dative case	PRECED	precedence
DEIX	deixis	PRES	present tense
DIR	direct evidence	PRET	preterite tense
DOM	differential object marker	PROG	progressive aspect
EMPH	emphatic	Q	interrogative
ENTIR	entirety	SE	reflexive
FAM	familiar	SG	singular
FIN	finite	SON	sonorant
FOR	formal	STRS	stress
FUT	future tense	SUBJ	subjunctive mood

SYL	syllable	TRANS	transitive
T	tense	UNACC	unaccusative
TH	verbal theme vowel	IMPR	imperative mood
TOP	topic		

1 | Introduction

In the descriptive literature, Spanish verbal forms have been relatively well described (Alcoba, 1999; Butt and Benjamin, 2000; Lipski, 2007; Soto, 2014), and similarly in the domain of historical linguistics the provenance of these verbal forms has been well established (Resnick and Hammond, 2011, among many others). Comparatively, Spanish verbal forms have received less attention from a Distributed Morphology (DM) perspective, with some notable exceptions (e.g., Oltra-Massuet and Arregi, 2005). With this in mind, the central issue that this dissertation addresses is how to account for the morphology of Spanish verbal inflection in the DM framework (Halle and Marantz, 1993 et seq.). Specifically, this dissertation pays focused attention to general issues in Spanish verbal inflection, while at the same time engaging in some sustained discussions on issues particular to Latin American varieties.

With regard to the more general issues, the data in (1) illustrate the kinds of data that the dissertation focuses on. In (1a), we can observe that the verbal root or stem changes in form depending on the tense and similarly, in (1b), the realization of the theme vowel also changes depending on the tense.

(1)   Issues of a more General Nature

    a. $\boxed{\textbf{hab}}$ -ía ~ $\boxed{\textbf{hub}}$ -o   (root/stem)

    b.   Com$\boxed{\text{e}}$ -mos ~ com$\boxed{\text{í}}$ -amos   (theme vowel)

The data in (1a) are important given that a central question for any theory of root/stem alternations is whether forms are derivationally related to each other (e.g., Embick, 2016), meaning that they can be captured by rules, or whether they are disparate enough to warrant the lexical storage of different stems (e.g., Siddiqi, 2006). The morphological literature (Bonet and Harbour, 2012; Embick and Noyer, 2007; Siddiqi, 2006, 2009 inter alia) is quite ambivalent about which side of the debate is to be empirically and theoretically favoured. The findings of this dissertation, though specific to Spanish, provide key insight into this more general debate within the literature and will account for a number of unaddressed stem alternations.

Next, in (1b), it is not clear whether conjugation class (e.g., the theme vowel) is purely morphological or

if it is syntactic. Previous analyses (Arregi, 2000; Calabrese, 2012; Oltra-Massuet, 1999) have analyzed the theme vowel as morphological epenthesis (the addition of structure not present in the syntax). However, Siddiqi (2006: 156) points out that it is plausible that class membership is the realization of some interpretable feature in the syntax and in all likelihood the syntactic feature would be analogous to gender. I address this debate in the dissertation along with some issues related to specific proposals; namely, the need for multiple theme vowel positions in the epenthesis analysis and the analysis of theme vowel allomorphy.

Latin American Spanish varieties display several interesting but overlooked verbal alternations as in (2), and the data raise a number of (open) questions that will be addressed in the dissertation. In (2a), the conditional (e.g., *querría*) and the imperfect subjunctive forms of modal verbs (e.g., *quisiera*) are both capable of expressing the same meaning, and in (2b) we notice an alternation in the placement of the verbs stress (e.g., penultimate stress versus final).

(2)   Issues Particular to Latin American varieties

    a.   querría ~ quisiera 'I would like'   (an equivalence between forms)

    b.   (tú) sabes ~ (vos) sabés 'you know'   (stress placement)

Current analyses (e.g.Arregi, 2000; Embick, 2012) are capable of getting morphemes in the right order for (2a), but it is not clear how they would account for the shared meaning. However, failing to account for how verbal forms are interpreted is a problem as the morpho-syntactic analyses are, then, dissociated from the semantics of the constructions in question. The issue of interpretation is largely ignored in the current morphological literature and in analyzing these data I will close a gap therein. The observed alternation in (2b) is treated as a purely morphological phenomenon (see Estomba, 2015) or a purely phonological one (see Baquero Velásquez and Westphal Montt, 2014) and each analysis only captures some of the empirical facts. The dissertation provides an analysis that explains both the morphological and the phonological facts.

With a view to capturing the empirical behaviour of Spanish verbs, the dissertation is in the spirit of the Minimalist research agenda (Chomsky, 1995, 2001, 2008) and I address the mapping from syntax to morpho-phonology, within the framework known as Distributed Morphology (Embick and Noyer, 2007; Halle and Marantz, 1993). Ultimately, the work that has already been undertaken on Spanish that is explicitly grounded in the Distributed Morphology framework (e.g., Arregi, 2000; Cowper, 2005; Embick, 2012, 2016; Estomba, 2015) does not include these alternations, (2a) in particular, and given recent theoretical advancements in the field several previously addressed issues now warrant further consideration.

1.1 Main Claims

The central claim that underlies several proposals advanced in this dissertation is that a robust understanding of the semantics of each verbal form is required to (i) link the structure of these verbal forms to their meanings (e.g., temporal and contextual), (ii) to account for contrasts that are not accounted for in the literature, and (iii) to highlight connections that are not always obvious. This approach stands in contrast to other scholars who have primarily analyzed verbal inflection as a linear arrangement of morphemes (Arregi, 2000; Calabrese, 2012; Madrid Servín, 2005; Oltra-Massuet, 1999; Oltra-Massuet and Arregi, 2005). This dissertation addresses these issues (among others) by analyzing these previously unaddressed Spanish data and also contributes to a more general debate on the necessity of bridging the divide between (morpho)syntactic and (morpho)semantic analyses.

The second more global concern addressed is the Minimalist question of how much technical/conceptual machinery is needed to provide an analysis of Spanish verbs. That is, is it possible to minimize the number of morphological operations used? My claim is that the morpho-syntax of the seven simple Spanish verbal forms can be accounted for with less conceptual machinery than previously adopted, while covering more empirical ground with this restricted set of tools. In particular, I argue against the use of readjustment rules and lexical diacritics on roots. Specifically, the readjustment rules that would ostensibly be required to derive various stem alternations (e.g., **hab**-ía~**hub**-o) can be dispensed with in favour of only using the vocabulary insertion mechanism, and by locating and encoding conjugation class on the functional head v, the use of lexical diacritics on roots, which are assumed to be uncategorized, can be avoided. Therefore, an analysis along the lines pursued in the dissertation is favourable based on parsimony.

1.2 A Note about Data Sources

Two regional varieties of Spanish are put into focus in this dissertation, Rioplatense Spanish and Equatoigunean Spanish. I first became aware of the particularities of the Rioplatense variety while living and studying in Argentina for several months, and subsequently found few or no satisfactory accounts in the morphological literature. My interest later expanded to include Equatoguinean Spanish, a sub-Saharan variety that, like Rioplatense Spanish, is conspicuously absent from the morphological literature, especially the English literature. Therefore, the morphology of these two varieties represents a gap in the DM literature that needs to be filled. Unfortunately, for reasons of scope, this brief foray into the wealth of variation that exists in the Spanish-speaking world must suffice as an entrance into the broader topic of Spanish varieties. While the dissertation is meant to cover verbal phenomena that pertain to certain varieties of Spanish,

both Latin American and Peninsular, verbal phenomena from specific varieties are not systematically addressed. In general, I cover verbal phenomena at the sort of "general Spanish" level pertinent to a range of varieties but not to any specific one (the previously mentioned varieties, notwithstanding). For further research that looks into variation in Spanish varieties, the reader is referred to Lipski (2007) for an overview of Latin American Spanish and to Lipski (2012) for a more general overview of Spanish.

Finally, a variety of additional research materials were consulted and cited as supplementary data sources. One of these, in particular, bears mentioning here: la Real academia española 'The Royal Spanish Academy' (RAE). It must be acknowledged that historically the RAE has taken on a rather prescriptivist stance, which has led to the 'othering' of different varieties of Spanish. Recently, however, they have collaborated with the Asociación de Academias de la lengua española 'The Association of Spanish Language Academies' (ASALE) and the current incarnation of their Spanish grammar, published in 2009, has taken a more descriptive orientation. It is my position that, given this recent orientation, the RAE is a valuable resource on Spanish grammar. However, I acknowledge that others may not find this to be the case.

1.3   A Description of Spanish Tense and Verbal Morphology

This section introduces the verbal forms in Spanish that are relevant to the dissertation. Spanish has both simple and complex verb forms. For instance, the progressive is constructed from the auxiliary *estar* 'to be' in one of the simple tenses (e.g., *estás*–2.SG-PRES) and the gerund (e.g., *cantando*) of the main verb in a form like *estás cantando* 'you are singing'. Likewise, the perfect verb forms are constructed from a form of auxiliary *haber* 'to have' in a simple tense (e.g., *había*–1.SG-PAST) and the past participle of the main verb in *había cantado* 'I had sung'. As is evident from the foregoing examples, the morphology of the complex verbal forms refers to the simple forms. It is, therefore, crucial to sort out all issues relating to the simple forms before tackling the (superficially) more complex ones. For that reason, this dissertation only addresses the simple verbal forms. However, its results will be relevant to any future analysis of complex verbal forms in Spanish.

Before moving on to a description of the verbal forms themselves, I discuss the Tense, Aspect and Mood (TAM) system in Spanish. The Tense forms in Spanish are the present, the simple past (or preterite), the imperfect (or co-preterite), the future, and the conditional.[1] For Spanish, Tense belongs to the indicative mood which is a grammatical mood that presents information as factual. However, as is common with linguistic descriptions of TAM, mood is used almost exclusively to talk about non-indicative moods. Turning briefly

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[1]By some authors, the imperfect is considered an Aspect form rather than a Tense form. However, according to the RAE (2009: 1743) there is no agreement on this matter and some authors treat the imperfect as a tense form (e.g., Bello 1847, Cuervo and Klassen 2016, Cowper, 2005; Soto, 2014).

to the notion of a grammatical mood, Spanish has two non-indicative mood forms: the present subjunctive and the past subjunctive. To facilitate the discussion of the TAM system, I use one verb *tocar* 'to touch/to play a musical instrument', with as many subsidiary details as possible held constant so that the precise demarcations between different TAM contrasts can be easily understood. The presentation of the Spanish TAM system here is solely meant as a general description. I, therefore, acknowledge that the TAM system is somewhat more complex than my coverage implies.

1.3.1 Indicative Forms

The simple Tense forms in Spanish are the present, the simple past, the imperfect, the future, and the conditional. A simple definition of Tense that should suffice for our purpose is as follows: tense is the temporal relation of an event (or state) to the Time of Utterance or Utterance Time (UT) (Binnick, 1991; Demirdache and Uribe-Etxebarria, 2000).[2]

I. The Present

Soto (2014: 165) states that an event in the present tense happens at or co-occurs with the UT. The condition of co-occurrence applies in cases where the present tense expresses habitual action, in that the habitual nature of the event is a situation that must be true at UT, even if the event itself is not happening then (Kearns, 2000: 151). This can be seen in Spanish in (3) where the present has both an ongoing reading and a habitual reading.[3]

(3)   **Toco**   la   guitarra
        play.PRES.1SG the guitar
        'I am playing guitar (now).' / 'I play guitar (habitually).'

Figure 1.1: The Present

BEFORE ——————————— | toco (UT) |————————————→ AFTER
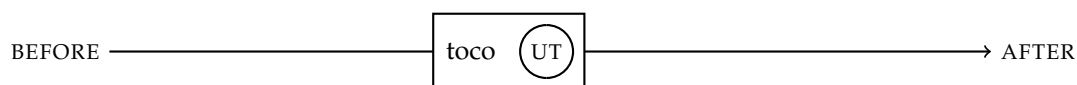
The first translation represents the ongoing reading and the second translation the habitual reading. For both readings, some parenthetical material has been added so that the English translations more accurately convey the meaning(s) carried by the Spanish verbal morphology. The event of playing guitar in (3) can be placed on a timeline as in Figure 1.1. Here the event (delineated by the square box) must *include* the UT.

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[2]For this description, I use the term *event* exclusively. That is, *event* should be understood to include both events and states. If there is a need to talk about these categories separately, the distinction will be marked in those cases.

[3]While glosses include all relevant morphosyntax information no claims are made about morphemic boundaries in these glosses as this is the focus of the dissertation.

II. The Simple Past

For the simple past (or preterite), Soto (2014: 166) notes that an event described by a given predicate happens in its entirety before the UT. In Spanish, the simple past is given in (4).

(4)   **Tocó**   la   guitarra antes
        play.PRET.3SG the guitar   earlier
        'He played guitar earlier.'

Figure 1.2: The Simple Past
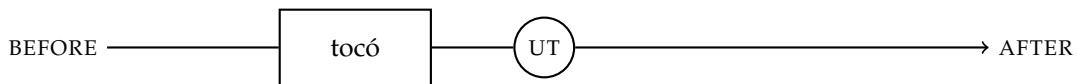
In (4) the simple past is viewed as a completed event and the implication here is that someone played the guitar earlier but is no longer playing the guitar at UT. This temporal relation can be schematized as in Figure 1.2 where the delineated event does not include the UT. Thus, the simple past contrasts with the present where the event happens at the UT (or is at least true then).

III. The Imperfect

Soto (2014: 167) explains that the imperfect communicates that an event exists side-by-side with another past event and for this reason, the tense is sometimes referred to as the *copretérito* 'co-preterite'. Consider (5).

(5)   Cuando entró,   **tocaba**   la   guitarra
        when   enter.PRET.3SG play.IMPF.1SG the guitar
        'When he came in, I was playing guitar.'

Figure 1.3: The Imperfect
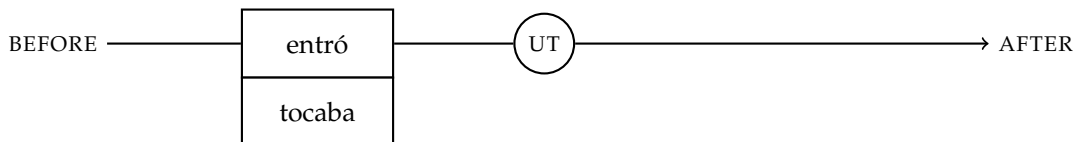
In (5) the imperfect clause (i.e., *tocaba* ...) establishes two temporal relations: one of coexistence between an event in imperfect and an event in the preterite, and another of precedence between the event in the preterite and the UT.[4]

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[4]This position, however, is not without controversy. Since the 1900s the aspectual analysis – one that treats the difference between the simple past and the imperfect to be a difference in Aspect rather than Tense – has increasingly become seen as the standard

IV. The Future

The future is felicitous if the event described by the verb has not yet taken place. Thus, future events are situated after the UT. Consider (6).

(6) **Tocaré**   la guitarra
     play.FUT.1SG the guitar
     'I will play guitar.'

Figure 1.4: The Future

BEFORE ─────────────────────── (UT) ──── | tocaré | ──────→ AFTER
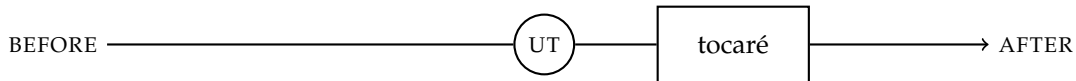
In contrast to the simple past, which can be treated as an arrow from the past to the present with a fixed history, the future is indeterminate since it constitutes a set of possibilities, as in Figure 1.4. If this characterization of the future is appropriate, then the representation of the future and the past is asymmetrical. The past and present differ in temporality, but the present and the future differ in modality.[5]

V. The Conditional

Soto (2014: 169) explains that the conditional localizes the event designated by the clause as subsequent to another past event. Consider (7).

(7) dije   que **tocaría**   la guitarra
     say.PRET.1SG that play.COND.1SG the guitar
     ' I said that I would play guitar.'

Figure 1.5: The Conditional

BEFORE ─ | dije | ────────────── (UT) ────────────────────→ AFTER
                |
          · ──── | tocaría |
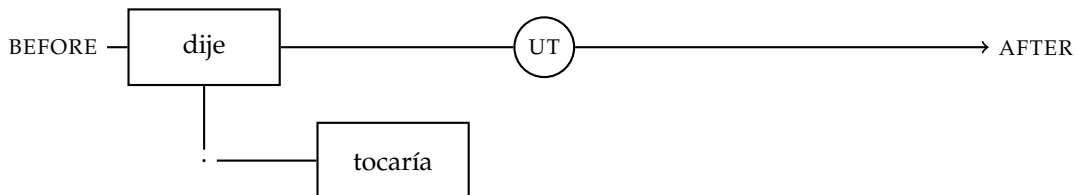
In (7), the second event, which is in the subordinate clause (i.e., *tocaría* . . .), occurs after the event denoted

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analysis. For the sake of description, I will continue in the Hispanicist tradition of treating the imperfect as a tense form, since features that characterize these verbal forms is a feature of the tense head. See Section 4.1.2, where the imperfect verb form is analyzed, for a more in-depth discussion.

[5]Note that recent discussions about futurity have treated it as a property of Mood rather than Tense (Abusch, 1985; Enç, 1996; Fleischman, 1982; Kratzer, 1981, 1991). While this position may seem somewhat controversial, more radical opinions exist in which tense itself is an epiphenomenon and modality is the primitive category. Under this view, even the past is modal (see Jaszczolt, 2009).

by the matrix clause (i.e., *dije . . .*). That is, relative to the past event, the second event is in the 'future'.

1.3.2 Subjunctive Forms

The subjunctive is a grammatical mood that typically occurs in subordinate clauses. It is an *irrealis* mood – one that does not present information as factual – and it contrasts with the indicative, a *realis* mood which does present information as factual. Here I restrict the discussion to the most canonical of these triggers, which can be subsumed under the acronym WEIRDO: Wishes, Emotions, Impersonal Expressions, Recommendations, Doubt/Denial, and *Ojalá* 'God willing'. The present subjunctive is illustrated in (8) and the imperfect subjunctive in (9).

(8)   Quiere   que **toque**   la guitarra
        want.PRES.3SG that play.SUBJ.1SG the guitar
        'She wants me to play guitar.'

(9)   Quería   que **tocara**   la guitarra
        want.PRET.3SG that play.IMPF.SUBJ.1SG the guitar
        'She wanted me to play guitar.'

The statements in (8) and (9) are true if the 'wanting' occurs at (or before) the UT but does not imply that the proposition expressed by the subordinate clause must be true. That is, in example (8), for instance, the overall proposition is still true at the UT even if no one plays the guitar. The desire itself is what needs to be true, not its outcome.

1.3.3 Verbal Morphology

Having now seen how the TAM system of Spanish works, I look at how verbs can be segmented into parts used to express information relevant to verbal inflection. Descriptively, Alcoba (1999: 4934) notes that the principal parts of a finite verb in Spanish are (i) the root, (ii) the theme vowel, (iii) TAM, and (iv) person/number agreement, as shown in (10).

(10)   CANT + a   + **ba**   + <u>mos</u>
        root   + theme vowel + **TAM** + agreement
        '<u>We</u> **used to** SING.'

Each part of the segmentation is differently rendered, and these differences are reflected in the gloss to show what meaning each Spanish morpheme contributes in English, though it should be noted that the theme vowel makes no meaningful contribution in either language. In the description to follow, the discussion is largely organized along the lines mentioned above.

According to Alcoba ([1999](#)), any verbal form in Spanish can be divided into two principal parts, the root and the inflection. The root is generally constant no matter what form the verb takes (e.g., *habl*– 'speak', *come*– 'eat', *escrib*– 'write') and it carries the lexical meaning. The inflection, on the other hand, varies for each verbal form and carries grammatical information. The infinitive is a useful form to illustrate this general high-level division between the root and inflection as it essentially consists of these two component parts. This can be seen in (11).

(11) a. habl-**ar**
          speak-INF
          'to speak'

  b. com-**er**
      eat-INF
      'to eat'

  c. escribi-**ir**
      write-INF
      'to write'

Traditionally, the ending of an infinitive (e.g. *–ar*, *–er*, *–ir*) signals what conjugation class a verb belongs to (also known as verb class). This affiliation is indicated by distinct vowels *–a*, *–e* and *–i* which correspond to verb Classes I, II and III, respectively. In the literature, these markers of verbal class are often called theme vowels. The theme vowels themselves are not static and can change depending on the tense, mood or person agreement of the verb. Consider (12).

(12) Theme Vowels in different Tenses

	Indicative	Subjunctive
Class I	habl-**a**	habl-**e**
Class II	com-**e**	com-**a**

The theme vowel in the present indicative is *–a* for class I and *–e* for class II and the opposite is true for the present subjunctive.

The morphological realization of the root itself is fairly consistent. However, a limited number of roots can change in form depending on the tense. This change does not affect the lexical content of the roots in question. Consider (13).

(13) Roots Alternations

9

	INFINITIVE	PRES	PRET
haber 'to have'	hab–	hub–
saber 'to know'	sab–	sup–

From the preceding example, it can be observed that the roots in the infinitive form, which are in bold, do not change their phonological shape in the present tense for either verb. However, when these verbs are used in the past tense another variant of the root surfaces. This change can be considered to be suppletive. There are also other types of root alternations that occur aside from the case mentioned here and some seem to be the result of certain phonological processes. For instance, there is a diphthongal alternation between a form like *querer* 'to want' and *quiero* 'I want', where the diphthong surface in the latter form. This alternation is predictable based on where verbal stress surfaces in the two forms, with the diphthong variant occurring when the verbal stress is stem-medial (e.g. *quer-ér* vs. *quiér-o*).

Spanish verbal inflection has several endings for the different TAM and person-number categories. I begin with the TAM markers in (14) before turning to the person-number markers in (16).

(14)   Tense Morphemes

	Class I	Class II	Class III
PRES		–∅	
PRET		–∅	
IMPF	–ba	–ía	
SUBJ		–∅	
IMPF.SUBJ		–ra or –se	
FUT		–ré/–rá	
COND		–ría	

For TAM, several morphemes are invariant across all three verbal classes, namely, the present, the simple past, the present subjunctive and the conditional. The three former cases all have a null marker while the latter case has the marker *–ría*. While the future and past subjunctive are also invariant across all verbal classes, there are a few other factors that warrant separate explanations. For the future, the marker *–re* occurs with both first-person forms and the informal second-plural form *vosotros* in varieties where this pronoun is used. In all other cases, the marker *–ra* is used. The imperfect subjunctive has two possible endings, *–ra* and *–se*. The two markers, however, are not interchangeable and either *–ra* or *–se* is used through the whole person paradigm. Last, for the imperfect, the marker for Class I is *–ba*, and for Class II and III, it is *–ía*.

Before turning to a discussion of the person-number markers, it is worthwhile to talk about subject pronouns in Spanish as these grammatical persons are the ones tracked by person-number agreement.

(15) Spanish Subject Pronouns

	SG	PL
1	yo	nosotros (m) / nosotras (f)
2	tú / vos	vosotros (m) / vosotras (f)
	usted	ustedes
3	él (m) / ella (f)	ellos (m) / ellas (f)

The pronoun *yo* is not marked for gender but the plural pronoun *nosotor–os/–as* is. Similarly, neither *tú* nor *vos* is marked for gender but the informal plural *vosotr–os/–as* of Peninsular varieties of Spanish is gender marked. The use of the pronoun *vos* in informal or familiar contexts is characteristic of many dialects of Latin American Spanish (Lipski, 2007). Another characteristic feature of Latin American Spanish is that *ustedes* is used in both informal and formal contexts. This usage contrasts with its use in Peninsular varieties of Spanish where it is only used in formal situations. Last, the third person pronouns are marked for gender in both the singular and the plural.

Next, I briefly discuss the agreement markers that are used in Spanish. Consider (16).

(16) Agreement Markers (adapted from Alcoba, 1999: 4925)

	SG	PL
1	–∅	–mos
2	–s	–is
3	–∅	–n

Beginning with the first person agreement markers, the first singular marker is –∅ (e.g., hablare–∅ 'I will speak') and the first plural marker is –*mos* (e.g., *hablare–mos* 'we will speak'). For the second person agreement markers, the second singular marker is –*s* (e.g., *habla–s* 'you speak') and the second plural maker is –*is* (e.g., *habla-is* 'you-all speak'). Last, for the third person agreement markers, the third singular marker is –∅ (e.g., *habla–∅* 'she speaks') and the third plural maker is –*n* (e.g., *hablan–n* 'they speak'). Although the pronouns that agreement tracks are often marked for gender, verbal agreement never marks gender and only marks person and number distinctions.[6]

Putting all the parts of the previous discussion together, we can now understand (17) and (18) where the verbs *hablar* 'to speak' and *comer* 'to eat' are used for illustration. They represent Class I and Class

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[6]Though *usted(es)* do provide 2nd person reference, from the point of view of agreement they act like the 3rd person.

II/III, respectively (these latter cases are typically similar enough to be grouped without the loss of any meaningful generalization). In each case presented below, there is a root followed by a theme vowel, a TAM marker and an agreement marker, and each inflectional category is separated by a dash (i.e., root–theme vowel–TAM–agreement).

(17)   Class I: Forms of *hablar* 'to speak' (root–TH–TAM–agr)

	1SG	2SG	3SG	1PL	2PL	3PL
PRES	habl-∅-∅-o	habl-a-∅-s	habl-a-∅-∅	habl-a-∅-mos	habl-á-∅-is	habl-a-∅-n
SUBJ	habl-e-∅-∅	habl-e-∅-s	habl-e-∅-∅	habl-e-∅-mos	habl-é-∅-is	habl-e-∅-n
PRET	habl-é-∅-∅	habl-a-∅-ste	habl-ó-∅-∅	habl-a-∅-mos	habl-a-∅-steis	habl-a-∅-ron
IMPF	habl-a-ba-∅	habl-a-ba-s	habl-a-ba-∅	habl-á-ba-mos	habl-a-ba-is	habl-a-ba-n
IMPF.SUBJ	habl-a-ra-∅	habl-a-ra-s	habl-a-ra-∅	habl-á-ra-mos	habl-a-ra-is	habl-a-ra-n
FUT	habl-a-ré-∅	habl-a-rá-s	habl-a-rá-∅	habl-a-re-mos	habl-a-ré-is	habl-a-rá-n
COND	habl-a-ría-∅	habl-a-ría–s	habl-a-ría-∅	habl-a-ría-mos	habl-a-ría-is	habl-a-ría-n

(18)   Class II: Forms of *comer* 'to eat' (root–TH–TAM–agr)

	1SG	2SG	3SG	1PL	2PL	3PL
PRES	com-∅-∅-o	com-e-∅-s	com-e-∅-∅	com-e-∅-mos	com-é-∅-is	com-e-∅-n
SUBJ	com-a-∅-∅	com-a-∅-s	com-a-∅-∅	com-a-∅-mos	com-á-∅-is	com-a-∅-n
PRET	com-í-∅-∅	com-i-∅-ste	com-ió-∅-∅	com-i-∅-mos	com-i-∅-steis	com-ie-∅-ron
IMPF	com-∅-ía-∅	com-∅-ía-s	com-∅-ía-∅	com-∅-ía-mos	com-∅-ía-is	com-∅-ía-n
IMPF.SUBJ	com-ie-ra-∅	com-ie-ra-s	com-ie-ra-∅	com-ié-ra-mos	com-ie-ra-is	com-ie-ra-n
FUT	com-e-ré-∅	com-e-rá-s	com-e-rá-∅	com-e-re-mos	com-e-ré-is	com-e-rá-n
COND	com-e-ría-∅	com-e-ría–s	com-e-ría-∅	com-e-ría-mos	com-e-ría-is	com-e-ría-n

Since we have seen that there are two second singular pronouns that both introduce the same verbal agreement marker (e.g., –*s*) we might wonder how these forms differ. While the *vos* form and the *tú* forms are indistinguishable across most of the paradigm, there is a distinction in stress placement in the present tense: for *vos*, the stress is on the final syllable whereas for the *tú* form the stress is on the penultimate syllable (i.e., *vos hablás* vs. *tú háblas*).

1.4   Overview of the Dissertation

DM analyses that present a complete account of the verbal system of a given language are relatively rare (though see Arregi and Nevins, 2012, for instance). While there have been several analyses of facets of Spanish verbal morphology these analyses are distributed through the literature and are often illustrative

analyses of a given subdomain (e.g. the verbal root) of verbal morphology. To have a more comprehensive analysis of the Spanish inflectional system, this dissertation first brings together these distributed analyses to assess the current theoretical landscape. Apart from the discussion of the theoretical background the presentation of material in the dissertation will generally proceed from the agreement markers working towards the verbal root. The only deviation from this will be the discussion of verbal class. Class makers typically occur next to the root but will be discussed before agreement as the notion of class is central to the understanding of Spanish verbs and needs to be addressed first.

Chapter 2 outlines the theoretical orientation of the dissertation and also provides a discussion of several previous DM analyses of Spanish verbs. Chapters 3 through Chapter 7 – which are discussed in more detail below – form the body of the dissertation. Given the many different focuses of previous analyses, the topics covered in these chapters must respond to this plurality of topics and are, therefore, somewhat thematically disconnected. The dissertation functions as a sort of 'connective tissue' between these different topics and obtains its central focus from analyzing aspects of the entire verbal domain as a more cohesive whole, while expanding the empirical coverage to topics that have received less attention from DM practitioners. Finally, in Chapter 8, some conclusions and directions for future work are offered.

1.4.1 Verbal Class and Agreement

Chapter 3 addresses two concerns: verbal class and agreement. In the section of the chapter that deals with verbal class, arguments are offered against the need for multiple theme vowels in Spanish – any given verb form only has one theme vowel. I also analyze category affiliation as a property of v and do not require the use of lexical diacritics. The proposed analysis eliminates these two problematic assumptions and shows that at least as much ground can be covered without them. Later, in Section 3.2.2, I show that previous approaches fail in the face of some agreement data. Following this, I look at two varieties of Spanish (i.e., Rioplatense Spanish and Equatoguinean Spanish) with interesting agreement patterns that are not generally discussed in the DM literature.

1.4.2 The Indicative and the Subjunctive

Chapter 4 covers the issues in the morpho-syntax of the indicative (excluding the future and the conditional) and the subjunctive. It elaborates on and clarifies several issues concerning the present tense, and offers a new account of both the imperfect and the simple past. For the subjunctive, the proposed analysis formalizes a recurring observation in the literature about a connection between the subjunctive and evidentials, by constructing subjunctive clauses on the syntax of evidentiality. I also explain for why the two

imperfect subjunctive forms (i.e., the *ra*-form and the *se*-form) in Spanish are mostly interchangeable even though they are argued to consist of different features.

1.4.3   The Future and the Conditional

The main claim made in Chapter 5 is as follows. The historical analysis of the Future and the Conditional – one that takes these forms to be an *haber* 'have' + infinitive construction – is not only adequate in the synchronic grammar, but also makes better predictions than the reanalysis-based approaches for Spanish. That is, ones that treat *–r* as a maker of futurity. Therefore, we need to be careful not to dismiss historical analyses wholesale, because as I demonstrate in the chapter, reanalysis approaches create several non-trivial problems with theme vowel selection and the placement of the main verbal stress.

1.4.4   Extended Uses of the Future

In Chapter 6, I build on the analysis of the future and several extended uses of the future and the conditional are analyzed. I argue that certain uses of the future are built up from the syntax and semantics of evidentiality in Spanish. I also analyze a non-canonical use of the imperfect subjunctives in Spanish as a polite conditional form. The polite interpretation is due to the presence of a speech act modifying operator that targets the speech act domain. Essentially, this operator modifies the declaration made by the speech act and makes it explicitly polite. Since the speech act domain is argued to only be present in root domains, this polite interpretation is predicted to be constrained to root domains and be unavailable in subordinate clauses.

1.4.5   Verbal ROOTs

Chapter 7 covers the morpho-syntax of various Spanish root alternations in the verbal domain. Specifically, the following alternations are addressed: (i) the irregular future and conditional stems (e.g., *ten~tend*), (ii) the stem alternations that occur in the past (e.g., *ten~tuv*), and (iii) the stem alternations that occur in the present (e.g., *ten~teng*). Since the readjustment approach makes incorrect predictions, I propose that a stem storage approach is the best analytical lens available to analyze these Spanish verbal alternations.

2 | Theoretical Background

> What has traditionally been called morphology is not concentrated in a single component of the grammar, but rather is distributed among several different components.
>
> *Morris Halle and Alec Marantz*

The aim of this chapter is to introduce the core assumptions of the Distributed Morphology framework used in this dissertation and the analyses reviewed in Section 2.2. DM is a theoretical framework within generative grammar, proposed at the beginning of the 1990s by a group of researchers (e.g., Bonet, 1991; Halle and Marantz, 1993; Noyer, 1992, among others), that consists of a set of hypotheses about the interaction between different modules of the grammar. To accomplish the task of describing DM, I keep the coverage somewhat more simple than the picture I finally assume. This simplification allows the reader to get a clearer picture of the assumptions of the papers reviewed in Section 2.2 at the time of their inception. Later sections of the dissertation include proposals from current research that expand on DM's basic proposal and extend its empirical coverage.

2.1 The Framework: Distributed Morphology

This section introduces DM, the analytical framework of this dissertation, and is divided into two main parts. The first part covers the structure of the DM grammar and the second part discusses the types of morphological operations that are available in DM. Note that the theoretical background provided here presents DM somewhat chronologically and later sections of the dissertation will include proposals from

more current DM work.

2.1.1   The Structure of the Distributed Morphology Grammar

DM is a derivational model and structure-building operations are iterative, such that the application of any operation creates a new representation that is potentially subject to further operations. The central claim of DM is that there is no divide between the construction of words and sentences, and therefore the primary mode of meaningful composition in the grammar, both above and below the word level, is syntax. The narrow syntax does *not* have access to anything similar to lexical items in the traditional sense, but rather builds syntactic structures by putting together formal features, from the set made available by Universal Grammar, via the operations Merge and Move (e.g., Halle and Marantz, 1993; Harley and Noyer, 1999). Under this architecture of the grammar, the functions of the Lexicon as envisaged in earlier generative theories of word formation are not localized but rather distributed throughout other components of the grammar. The architecture of the grammar in DM is given in Figure 2.1.

Figure 2.1: Structure of the DM Grammar
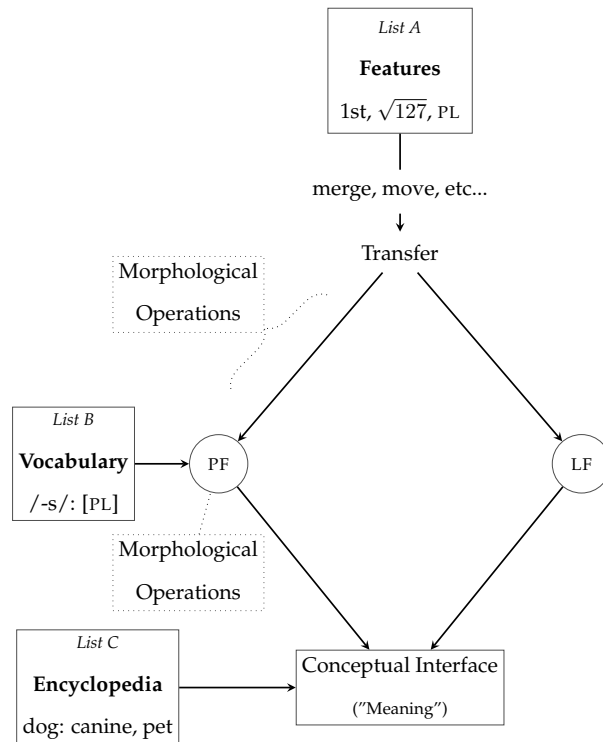
As in Minimalism, DM assumes two interface levels. The first, Logical Form (LF), maps to the Conceptual-Intentional System and deals with meaning, and the second, Phonetic Form (PF), maps to the Sensorimotor

system and deals with sound. The structures derived by narrow syntax are split into a syntactic-semantic and a phonological representation which are then sent off to LF and PF, respectively. The point at which these representations are split is called Transfer (or 'Spell-Out' in earlier work). In a derivation, morphological operations are simply those occurring after the transfer and do not constitute their own stage. At the end of the derivation, where structural and lexical knowledge about the derivation have been stored, LF and PF have come together again and are checked against List C, the Encyclopedia (Siddiqi, 2019).

The course of a derivation in DM goes as follows. The first step involves selecting formal features and roots from List A for the *numeration*, the input to syntax. Several formal features have been proposed in the literature, and some of these proposed features are given for illustration in (19):

(19) ϕ-features (Arregi and Nevins 2012: 7)

    a.   [$\pm$ author] distinguishes 1st person from 2nd and 3rd person[1]

    b.   [$\pm$ participant] distinguishes 1st and 2nd person from 3rd person

    c.   [$\pm$ formal] distinguishes 2nd person formal from 2nd person colloquial

    d.   [$\pm$ singular] distinguishes plural from singular number

    e.   [$\pm$ feminine] distinguishes feminine from masculine gender

As mentioned earlier, List A also contains roots. Roots within DM are acategorical and do not express a traditional grammatical category such as verb or adjective but rather represent a bundle of semantic features to be 'exponed'. Some examples of how roots are notated in DM are given in (20).

(20)   a. $\sqrt{\text{COMB}}$

    b. $\sqrt{\text{HAMMER}}$

    c. $\sqrt{\text{BRUSH}}$

After roots and features have been selected for a numeration, syntax combines these items into hierarchical arrangements using the operations Merge, Move and Agree in the manner familiar from Minimalist syntax (see Chomsky, 1995 et seq.). Since List A consists of formal features that are purely abstract (i.e., List A does not contain words or morphemes in the traditional sense), the resulting syntactic structures are wholly abstract bundles of features. It is only after syntax has built a morpho-syntactic representation that phonological expressions known as exponents are inserted in a process known as Vocabulary Insertion. This delay in the insertion of lexical material is known as Late Insertion.[2]

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[1]Note that there is no requirement in DM that features be specified for +/- values and privative features are also possible.

[2]Within DM, some have proposed late insertion of roots too (e.g., Acquaviva, 2009; Harley, 2014) such that syntax does not manipulate lexical semantic content (i.e., semantically individuated), the same way it does not operate on sounds (i.e., phonologically

The Vocabulary Insertion process would target the terminal nodes (e.g., X and Y) of the syntactic tree in

(21).[3]

(21)   Tree with Terminal Nodes

```
            XP
          /    \
         X      YP
               /  \
              Y    ZP
```
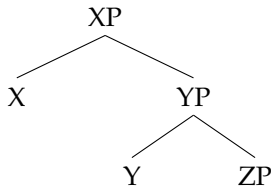
Having sorted out where exponents are inserted I briefly discuss what kinds of exponents can be inserted. The Vocabulary is consulted to provide an utterance with phonological content – a Vocabulary contains the complete set of realizable phonological exponents for the expression of abstract morphemes.[4] A Vocabulary Item expresses a relation between a phonological string and information about where that string could be inserted, as schematized in (22).

(22)   Vocabulary Insertion Schema

Context of Insertion ⇔ Signal

I return to a familiar example from Spanish to further illustrate how Vocabulary Items work. As discussed in Section 1.3.3, the theme vowel is a marker of conjugation class and it comes immediately after the root, as seen in (23).

(23)   a.   com–e–r
              eat–TH–INF
              'to eat'

        b.   escrib–i–r
              write–TH–INF
              'to write'

        c.   habl–a–r
              speak–TH–INF
              'to speak'

In DM, one analysis of (23) assumes that there are specific Vocabulary Items for these theme vowels in the grammar of Spanish:

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individuated). These roots are abstractly individuated. For ease of exposition, I treat roots as being semantically individuated for the time being.

[3]By hypothesis, ZP also contains a terminal node Z though it is not depicted in (21).

[4]As a matter of terminological clarification, the word *morpheme* in DM refers exclusively to a syntactic terminal node and its content (e.g., a bundle of features), not to the phonological expression of that terminal node as it is used outside of DM.

(24)   Spanish Theme Vowels (adapted from Arregi, 2000: 4-5)

     a.   TH ⇔ –e / Class II __

     b.   TH ⇔ –i / Class III __

     c.   TH ⇔ –a

In (24) the theme vowel exponent is inserted into a corresponding theme vowel terminal node and the contextual specification for conjugation class would allow the right theme vowel to be inserted.[5]

     The insertion of Vocabulary Items is subject to a competition between items that is governed by the *subset principle* (e.g., Halle, 1997):

(25)   **Subset Principle**: The phonological exponent of a Vocabulary Item is inserted into a morpheme…if the item matches all or a subset of the grammatical features specified in the terminal morpheme.

Phonological expressions need not be fully specified for the morphemes where they can be inserted. This is known as *underspecification*. Consequently, the notion of underspecification is central to the understanding of Vocabulary Insertion and vocabulary items are in many instances default signals inserted where no more specific form is available. An example of a default signal can be seen in (24c) where the –*a* exponent is inserted if the conditions for the insertion of the other two exponents are not met. If two Vocabulary Items compete and can be inserted into the same terminal node, then the Vocabulary Item that realizes more features of a given terminal node will be the one selected for insertion (i.e., maximal specification wins out). At the same time insertion does not occur if the Vocabulary Item contains features not present in the morpheme (i.e., if items are overspecified).

     Some additional points warrant discussion in order to fully characterize the difference between underspecification and competition; namely the ways in which functional vocabulary and contentful vocabulary are treated differently. Harley and Noyer (1999) posit two basic morphemes types, f-morphemes and l-morphemes, which essentially correspond to a division between functional and lexical categories. For f-morphemes (e.g., 3SG.PRES.) there is no choice at play for Vocabulary Insertion and their content is enough to determine a unique exponent (i.e., the spell-out of f-morphemes is deterministic). Unlike f-morphemes, l-morphemes are not deterministic and there is a choice in their spell-out. For instance, there is no single object in DM that corresponds to the pre-theoretic definition of a 'noun'. What used to be labelled as a noun (e.g., *hippopotamus*, *zebra*, *lion*) actually consists of an l-morpheme and a corresponding f-morpheme, *n*. F-morphemes in a language are a closed category and therefore the features that make them up represent

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[5]As is particular to Arregi's (2000) class would be treated as a diacritic feature on roots.

an identity condition, whereas l-morphemes are an open category and not defined by features at all. Halle (1997) notes that only f-morphemes are subject to the Subset Principle whereas Harley and Noyer (1999) point out that l-morphemes are not. Essentially, an l-morpheme's lack of features precludes the Subset Principle, which is defined in terms of features.

Additionally, there is an asymmetric grammatical relation between f-morphemes and l-morphemes. What appears to be a different part of speech (e.g., a verb or adjective) in DM is technically a single l-morpheme, or root, that only obtains a category when it occurs with a categorizing f-morpheme. That is, roots are acategorical and by definition lack any features. Thus, a root can become words of different categories depending on the syntactic context in which it occurs. For example, the roots in (20), $\sqrt{\text{COMB}}$, $\sqrt{\text{HAMMER}}$ and $\sqrt{\text{BRUSH}}$ appear as nouns when their nearest licensing f-morpheme is n, a nominalizer. However, the same roots appear as verbs when their nearest licenser is v, which 'verbalize' the roots. Insertion into root nodes is not subject to competition or the Subset Principle and only subject to licensing requirements that are, in turn, frequently provided by f-morphemes in a particular structural relation to the root.[6] For example, verbs of different classes (e.g., transitives and ditransitives among others) are licensed by different structural configurations in the syntax.

Having reached the end of the discussion on l- and f-morphemes, and the discussion on vocabulary insertion, I now discuss the final component of the DM model, the Encyclopedia. The Encyclopedia associates syntactic units with special, non-compositional aspects of meaning (i.e., non-linguistic knowledge). This list specifies interpretive operations responsible for the semantic realization of the terminal nodes of a complete syntactic derivation. For example, Nevins (2016: 48) explains that the English adjectives *compárable* and *cómparable* represent two different underlying structures. The meaning of the first is compositional (i.e., 'able to be compared'). In this case, the root is verbalized by v and then combines with the suffix *–able*. For the second meaning, the root combines directly with *–able*, giving the idiomatic meaning of 'equal', which must be taken directly from the Encyclopedia.[7]

Thus far, I have provided an overview of the canonical aspects of DM that should suffice to understand the analyses reviewed in Section 2.2. However, before proceeding with the review. The following section briefly explains several morphological operations that are available to manipulate the output of a syntactic derivation.

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[6]However, recently arguments have been made that vocabulary insertion for roots is also subject to competition (see Harley, 2014; Haugen and Siddiqi, 2013, 2016; Siddiqi, 2006, 2009).

[7]It is also possible that the meaning here is not taken from the Encyclopedia, but is an idiomatic interpretation in context such as in 'allosemy' approaches.

2.1.2   Morphological Operations

The claim that word formation is syntactic 'all the way down' should not be taken literally. DM has a rich post-syntactic morphological component that consists of various morphological operations that manipulate syntactic structures before vocabulary insertion. In the discussion to follow, the morphological operations used in the analyses presented in Section 2.2 are reviewed.

I. Fusion

The operation *Fusion* (see Halle and Marantz, 1993) takes two (or more) nodes and joins them, yielding a single node for Vocabulary insertion. This process creates a portmanteau effect where one exponent realizes two or more distinct syntactic features that would have been located on different terminal nodes in the syntax. For instance, the features [PRES] and [3SG] are realized by the English affix –*s*. Tense and φ-features inhabit distinct positions in syntax (i.e., Agr_0 and T_0) and therefore need to undergo Fusion to merge the features into a single node that satisfies the requirements for the insertion of –*s*. This process is schematized below.

(26)   a.   Fusion: $[\,\text{Agr}_{\text{3SG}}\,]\,[\,\text{T}_{\text{PRES}}\,]\ \overrightarrow{\text{FUSE}}\ \ [\text{T}_{\text{PRES}}+\text{Agr}_{\text{3SG}}]$

      b.   Vocabulary Insertion: $[\text{T}_{\text{PRES}}+\text{Agr}_{\text{3SG}}] \Leftrightarrow$ –s   (Siddiqi, 2006: 43)

In (26a), items in their distinct syntactic positions are represented to the left of the arrow and in this case, would be considered two terminal nodes for vocabulary insertion. The process of Fusion, to the right of the arrow, reduces these two nodes to a single node for vocabulary insertion in (26b).

II. Impoverishment

Impoverishment (a term introduced in Bonet, 1991) refers to a change in the feature content of a terminal node before Vocabulary Insertion, resulting in less marked feature content. This is typically accomplished by deleting a feature. A radical type of Impoverishment can also target an entire terminal node (rather than just one of its features), in which case it is referred to as 'obliteration' (Arregi and Nevins, 2012) or 'pruning' (Embick, 2010). This process results in the complete absence of the morpheme from the structure of the word.[8]

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[8]In Bonet (1991), morphosyntactic features are arranged in a feature geometry, and Impoverishment is represented as delinking. The delinking of certain features entails the concomitant delinking of dependent features. For instance, if person features > number features > gender features, then in this scenario impoverishing number entails delinking gender.

Noyer (1997) argues that this view is too restrictive and suggests that Impoverishments are feature-cooccurrence restrictions or filters. For example, the absence of a first person dual in Arabic is represented as the filter *[1 dual], and a Universal Hierarchy of Features that dictates where these features combine, because [dual] is a number feature and [1] is a (hierarchically higher) person feature, [dual] is deleted automatically.

III. Readjustment Rules

Readjustment rules (or simply readjustments) take the output of vocabulary insertion and under certain conditions change the exponent so that it has a different phonological shape. Readjustments are idiosyncratic rules, a property that prohibits their classification as canonical phonological rules, that apply only to an individual VI or class of VIs.

(27)   a.   s–**i**–ng $\overrightarrow{\text{ADJUST}}$ s–**a**–ng

          b. V_{High} $\rightarrow$ V_{Low} / [PAST] __

In (27), the readjustment in question concerns the lowering of the vowel [i] to [a] in the context of the past tense. This rule has no clear phonological motivation and the trigger for it is a grammatical category rather than some adjacent phonological segment. Moreover, this rule only targets a particular class of verbs in the past tense. That is, a verb like the past tense for a verb like *ding*, which shares the same phonological shape, is *dinged* and not **dang*. Thus, it is considered a readjustment rule rather than a phonological one.

IV. Dissociated Morphemes

Dissociated morphemes (Embick, 1997) are ones that only indirectly reflect syntactic structures. For instance, it has been argued that morphemes such as 'case' (see Marantz, 1991 for instance) do not figure in syntax proper, and can therefore be inserted in the post-syntactic component before vocabulary insertion takes place. It has also been argued that agreement morphemes are also a part of a language's dissociated vocabulary (Arregi, 2000; Calabrese, 2012, among many others). Consider (28) where an agreement position is added to the verbal complex.

(28)   a.   [TP tú (2.SG) [T –ba] [vP $\sqrt{\text{CANTA}}$]]

          b.   [TP tú (2.SG) [AGR –s (2.SG)] [T –ba] [vP $\sqrt{\text{CANTA}}$]] = (tú) cantabas

Dissociated morphemes can be seen as a 'repair' mechanism to meet, universal or language-specific, surface-level well-formedness conditions. In this case, the agreement position is required in order to have a terminal node to spell out the second singular exponent *–s*.

V. Lexical Diacritics

Lexical diacritics factor heavily into the extant morphological literature on Romance verbs (Arregi, 2000; Embick and Halle, 2005; Marantz, 1997; Oltra-Massuet, 1999). Embick and Halle (2005: 46) note that verb

class is an idiosyncratic property of the roots and the transparent implementation of this observation involves specifying roots for a diacritic feature that encodes class membership. Consider:

(29) $\sqrt{\text{ROOT}}_{[IV]}$

The hypothetical example in (29) consists of a root annotated with lexical diacritic which states that it belongs to conjugation class IV, as opposed to class III, for instance.

2.2   Previous DM Analyses of Spanish Verbs

Having presented an overview of the architecture of a DM grammar and various morphological operations, we can now outline various analyses of Spanish verbal inflection that have been proposed in the literature (e.g., Arregi, 2000; Cowper, 2005; Estomba, 2015; Madrid Servín, 2005; Oltra-Massuet and Arregi, 2005).[9] The analyses to be presented in this section specifically adopt a DM framework. Taken together these analyses represent, to the best of my knowledge, the totality of work that has addressed Spanish verbal inflection in the DM framework.

2.2.1   Features of INFL: Cowper (2005)

Cowper (2005) brings together recent work on morphosyntactic feature geometries and contrast in phonology to propose a feature-geometric analysis of the interpretable features of Inflection (INFL). She uses a small universal set of monovalent interpretable features and accounts for the tense systems of English and Spanish. She follows from work by Stowell (1995) and Schmitt (2001) who provide both syntactic and semantic justifications for their respective analyses. Specifically, Cowper proposes the schema in (30) which is the maximal dependency structure for INFL. In (30) each label represents a verbal feature made available by UG and these labels are connected to each other by entailment, from the bottom of the diagram up. In this framework, a feature is only present in a given language as long as it is contrastive.

(30)   Features of INFL (Cowper, 2005: 14)

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[9]Since Oltra-Massuet and Arregi (2005) adopt Arregi's (2000) analysis without any significant modification, I only cover the latter.

```
                         INFL
           ┌──────────────┼──────────────┐
      PROPOSITION     PRECEDENCE       EVENT
           │              │              │
        FINITE        ENTIRETY       INTERVAL
           │
       T-DEIXIS
           │
       P-DEIXIS
           │
       IRREALIS
```
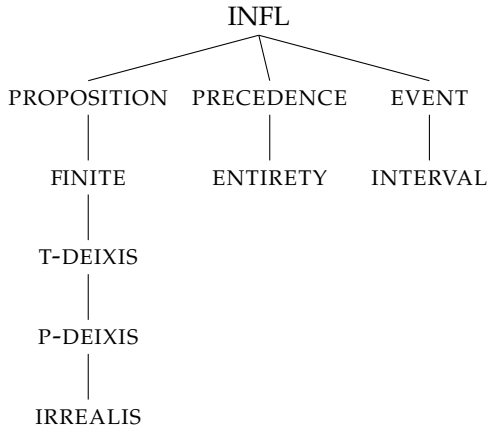
The features in (30) are grouped into Mood, Tense, and Aspect categories as follows: the first features [Proposition], [Finite], [Deixis] and [Irrealis] are Mood features. [Entirety] and [Precedence] are Tense features and [Interval] and [Event] are grammatical/viewpoint Aspect features. For Cowper (2005), all features are monovalent features with semantic content, except for [Finite] which is a purely syntactic feature. The presence of [Event] distinguishes between events and non-events (i.e., states). [Event] has a dependent feature [Interval], which encodes imperfective viewpoint aspect. In Cowper's system, a perfective event is a temporal point with no internal structure, which is represented in her system by the absence of a dependant feature for [Event]. For tense, Cowper considers the main temporal contrast to be past~non-past, represented in her system by the monovalent feature [Precedence]. The two temporal features set the temporal anchor of the clause before utterance time. [Precedence] ensures that at least one moment of the event or state precedes the temporal anchor of the clause, while [Entirety] ensures that all moments of the event or state precede utterance time.

Almost all of the remaining features are mood features save [Finite]. The feature [Finite] is entirely syntactic and its function is to license nominative Case and the phi-features of the subject. Cowper (2005) takes a proposition to be a cognitive manifestation of a state or event. The feature [Proposition] takes an event or state and "transforms it into its cognitive manifestation by linking it to consciousness" (Hall, 2001: 20). Stemming from the fact that not all clauses are propositional, the feature [Proposition] is an optional feature of INFL. The feature [Deixis] sets either the temporal and/or the personal anchor of the clause to the deictic centre of the utterance/discourse. [Deixis] can be split (e.g., in Spanish) into [T(emporal)-Deixis] and [P(ersonal)-Deixis] or can be bundled together (e.g., in English). Simply put, the feature [T-Deixis] sets the temporal anchor to the Utterance Time, while the feature [P-Deixis] is the set of propositions believed by the speaker to be true (i.e., the consciousness). These features license the indicative and the subjunctive, respectively, in Spanish. Finally, [Irrealis] establishes a marked relation between the proposition and the consciousness.

In addition to her proposed feature geometry, Cowper (2005: 41) puts forward several feature bundles for Spanish which are given in (31). These bundles are specified in such a way that the narrow set of features that she proposes come together to produce the ostensibly complex tense forms of Spanish.

(31) Correspondence between Traditional Labels and Features

     a.   Present Indicative: [P-deixis]

     b.   Imperfect: [P-deixis, Precedence]

     c.   Preterite: [P-deixis, Entirety]

     d.   Future: [Irrealis]

     e.   Conditional: [Irrealis, Precedence]

     f.   Present Subjunctive: [T-deixis]

     g.   *ra*-subjunctive: [T-deixis, Precedence]

     h.   *se*-subjunctive: [T-deixis, Entirety]

     i.   Infinitive: no features

Note that when a dependent feature is mentioned, all the features above it are assumed, so in (31a), for instance, the Present Indicative contains [Proposition], [finite], [T-deixis] and [P-deixis].

Although Cowper addresses the logical necessity behind the feature geometry and the packaging of these features as she does, she treats INFL as a single feature bundle and makes no explicit proposal for where these INFL features are merged in the course of a syntactic derivation. Moreover, Cowper does not explicitly specify what these feature bundles relate to in terms of particular exponents. If Cowper (2005) develops a theory of the semantic features of verbal forms in Spanish, for a compatible analysis of the structure of the verbal complex, we must look to Arregi (2000).

2.2.2   Morphology I: Arregi (2000)

Building on Oltra-Massuet's (1999) analysis of Catalan, Arregi (2000) provides an account of Spanish finite verbal morphology, which shows a straightforward relationship between the structure and meaning of a verbal form and its morpho-phonological realization, while also providing a unified account of the allo-morphy of verbal theme vowels and TAM markers.[10] Arregi assumes that roots are acategorical and must merge with a category-giving functional head. In the verbal domain, this head is *v* and it is responsible for various properties of the verbal domain, such as (in)transitivity and agentivity, among others. For Arregi,

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[10]There has, of course, already been some use of meaning in the morphological analysis of Spanish verbs but the claim of the dissertation is that there is a need for a further expansion of this approach for certain regularities to make themselves apparent.

a verb forms in the syntax through the successive movement of the root to functional heads c-commanding it, as illustrated in (32).

(32)   Syntax Tree with Head Movement (Arregi, 2000: 3)
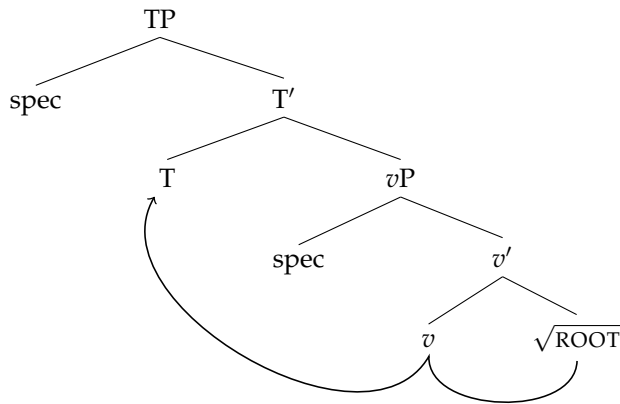
The result of this movement in the narrow syntax is the formation of a morphologically complex word. In addition to the assumptions about movement, Arregi (2000: 3 – 4) also posits two morphological well-formedness conditions for Spanish. The first condition states that in the morphology all non-defective syntactic functional heads require a 'theme' position and the other states that that subject agreement is a dissociated morpheme adjoined to T in the morphological component.[11] When these two conditions are applied to the complex head formed in the syntax, it results in the morphological structure in (33).

(33)   Morphological Structure with Conditions Applied
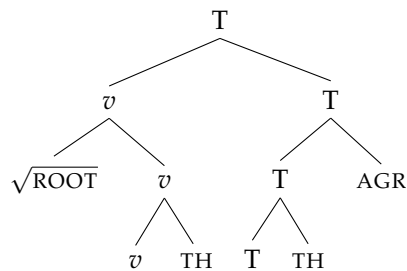
Having laid out his theoretical assumptions, Arregi first deals with the idea of verbal class and its expression via theme vowels in Spanish. He notes that the realization of the theme node is dependent on idiosyncratic properties of the root and implements this idea by assigning one of the two lexical diacritics he proposes to roots. These lexical diacritics are abstract features that allow verbal class to be analyzed as a markedness hierarchy, as in (34):

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[11]Apart from a somewhat unfortunate overlap in terms, *theme* is not related to the notion of a theme theta-role in the argument structure sense, but rather derives from the theme of the term theme vowel.

(34)   Class Features (Arregi, 2000: 4)

	I	II	III
α	–	+	+
β		+	–

Class I has the feature [$-\alpha$] while both Class II and III have the feature [$+\alpha$]. Within the [$+\alpha$] group there is a further division into [$\pm\beta$] with Class II having the feature [$+\beta$] and Class III having the feature [$-\beta$]. These diacritic class features are required in the contextual specifications of the Vocabulary Items for theme vowels, which are given in (35).

(35)   Vocabulary Items for Theme Vowels (Arregi, 2000: 25 – 26)

a.   TH $\Leftrightarrow$ –ie \ [$+\alpha$] _ [IMPF.SUBJ] or [PERF, 3PL][12]

b.   TH $\Leftrightarrow$ –i \ [$+\alpha$] _ [PAST]

c.   TH $\Leftrightarrow$ –e \ [$+\beta$] _

d.   TH $\Leftrightarrow$ –i \ [$+\alpha$] _

e.   TH $\Leftrightarrow$ –a

Arregi's proposed contrastive system is necessary to account for when Class II and Class III verbs pattern together versus when they do not. In (36), where the theme vowels have been bolded for emphasis, we can observe that certain temporal distinctions require a loss of contrast between conjugation classes.

(36)

	I	II	III
1.PL.PRES	habl–**a**–mos	com–**e**–mos	escrib–**i**–mos
2.SG.PST	habl–**a**–ste	com–**i**–ste	escrib–**i**–ste

In the present tense in (36) Classes I, II and III are distinctive and Arregi requires the Vocabulary Items in (35c) – (35e) to account for this three-way contrast in the expression of the theme vowel. In the simple past, Classes II and III are treated the same for the realization of the theme vowel. This contrast neutralization falls out from the specification of the Vocabulary Item in (35b). A similar contrast neutralization between Class II and III occurs for the past subjunctive which necessitates the VI in (35a); this VI also covers a very specific case in the simple past wherein the third plural form takes the theme vowel *–ie*.

Next, Arregi addresses the Vocabulary Items for roots and notes that these Vocabulary Items only contain unpredictable information. Therefore, for Class I there is no class feature on the root while Classes II

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[12]Note that this vocabulary item is disjunctive. Since the contexts here (i.e., _ [IMPF.SUBJ]; _ [PERF, 3PL]) do not form a natural class this vocabulary item should be understood as a convenient notation for two separate vocabulary items.

and III have the class features $[+\beta]$ and $[+\alpha]$ respectively, as in (37).

(37)   Vocabulary Items of Roots (Arregi 2000: 4)

I	II	III
habl	*com+β*	*escrib+α*

Given the disparity between the full specifications for verb classes in (34) and minimal specifications in (37), Arregi proposes several redundancy rules to fill in any predictable values of features in (38). For example, for Class I in (37), the rule in (38a) fills in the value of the root as $[-\alpha]$ even though the Vocabulary Item itself lacks this specification. These redundancy rules are necessary to account for the realization of several TAM morphemes in Arregi's analysis, as we will see shortly.

(38)   Redundancy Rules (Arregi, 2000: 4)

    a. $\emptyset \rightarrow -\alpha$

    b. $+\beta \rightarrow +\alpha$

    c. $-\beta \rightarrow +\alpha$

    d. $+\alpha \rightarrow -\beta$

Before doing so, however, I briefly discuss Arregi's treatment of the verbal agreement markers in Spanish, which are given in (39).

(39)   Agreement in Perfective and Non-Perfective Forms

	1SG	2SG	3SG	1PL	2PL	3PL
perfective	–$\emptyset$	–ste	–ó	–mos	–steis	–ron
non-perfective	–o / –$\emptyset$	–s	–$\emptyset$	–mos	–is	–n

Arregi divides the agreement markers into a perfective and non-perfective set, though perfective agreement solely covers agreement in the preterite. For the perfective set, Arregi argues that the T and AGR nodes fuse and that the observed agreement markers are in some cases a portmanteau; this idea is fleshed out in more technical detail in the simple past section of my review of Arregi's analysis. These markers reflect the person/number features of the syntactic subject for a given verb and they are inserted into the AGR node that is required of Spanish verbs in the morphological component.

The analysis of TAM morphemes is relatively straightforward and the relevant morphology is the result of the spell out of various functional heads (and their features) in the inflectional domain. Arregi accounts for the seven simple 'tenses' in Spanish which are the present, the simple past, the imperfect, the present &

past subjunctive, and finally the future & the conditional. In the following sections, I outline his analysis of these tenses.

I. The Present

The structure for the present tense includes the relevant present tense feature. However, at Morphological Structure (MS) this feature, as the unmarked case, is deleted. Since there is no Tense node present only the agreement exponents can be inserted. Consider(40), 1.PL. forms of the verbs *cantar* 'to sing' and *temer* 'to fear'.

(40)   Present: *cantamos* and *teméis*

    a. $\sqrt{cant}+v–a_{TH}–mos_{AGR}$

    b. $\sqrt{tem}+v–e_{TH}–is_{AGR}$

While Arregi's basic proposal accounts for most of the facts in the present tense, the two phonological rules in (41) and (42) are also necessary for a full account.

(41)   Theme Vowel Lowering (TVL)

    $i_{TH} \rightarrow e \ / \ \acute{V}C_0 \ \_$

(42)   Theme Vowel Deletion (TVD)

    $V_{TH}[–high] \rightarrow \emptyset \ / \ \_V[–high]$

The rule in (41) is required because the theme vowel in Class III is *–e* instead of the expected *–i* for the 2SG, 3SG and 3PL forms (i.e., *partes*, *parte* and *parten*, respectively). The rule only affects theme vowels that occur after the primary stress in a verb, thus the 1PL and 2PL forms are not affected as stress is on the theme vowel itself (e.g., *partimos* and *partís*, respectively). However, this leaves the 1SG form unaddressed (i.e., *parto*). To deal with the missing 1SG theme vowel, which also holds for classes I and II, Arregi proposes the rule in (42) which deletes a [–high] theme vowel when it occurs before a [–high] vowel. The rule is specified for height as there are cases of [+high] theme vowels before a vowel (e.g., *temías*), and of theme vowels before a [+high] vowel (e.g., *cantáis*). Last, the rules that he proposes must be ordered, which is shown in the derivation in (43).

(43)   Derivation of the 1SG form for Class III

	/partio/		/partio/
stress	pár.tio	stress	pár.tio
TVL	pár.teo	TVD	——
TVD	pár.to	TVL	pár.teo
	[parto]		*[parteo]

As this derivation shows, the rule in (41) must apply before the rule in (42) to obtain the correct surface form (e.g., *parto*), as the other possible rule order generates an ungrammatical surface form (e.g., *∗parteo*).

II. The Simple Past

The syntactic structure that Arregi's analysis requires for the simple past (i.e., $\sqrt{\text{ROOT}}$–v–TH–T–TH–AGR) is not straightforwardly reflected in the morphology. He notes that (i) T and its theme do not seem to be overtly realized and (ii) verbal agreement is not realized in the same way as in other tenses. He accounts for these discrepancies by assuming that T and AGR nodes fuse in the simple past, as in (44).

(44)   T/Agr Fusion in the Simple Past

T[PERF] + Agr[±AUTHOR, ±PARTICIPANT, ±PL] → T/Agr[PERF, ±AUTHOR, ±PARTICIPANT, ±PL]

The fusion of T and AGR yields a single node for vocabulary insertion, explaining why the simple past behaves differently from other tenses and requires the perfective set of AGR from (39). The spell out of each node for Class III and Class I in (45a) and (45b), respectively, is straightforward given (i) the fusion analysis and (ii) the details for theme vowels previously presented. Consider the analysis in (45) which uses 2PL forms of the verbs *partir* 'to leave' and *cantar* 'to sing'.

(45)   Preterite: *partiste* and *cantaste*

a. $\sqrt{part}$+v–i$_{\text{TH}}$–ste$_{\text{T/AGR}}$

b. $\sqrt{cant}$+v–a$_{\text{TH}}$–ste$_{\text{T/AGR}}$

For a form like *partiste* in (45a) the theme vowel *–i* is realized by the rule in (35d) and in (45b) the *–a* theme vowel for *cantaste* by the rule in (35e). However, there are two cases where this is not true. First, the 3SG form for Class I verbs (e.g., *cant-∅-ó* 'she sang') lacks a theme vowel altogether, although this loss is predicted due to the Theme Vowel Deletion rule (i.e., *cant-a-ó* $\overrightarrow{\text{(TVD)}}$ *cant-∅-ó*). Second, the 1SG form for Class I has an *–e* theme vowel (e.g., *cant-é* 'I sang') rather than the expected *–a*. To account for this, Arregi

posits an additional phonological rule to change –*a* to –*e* in several morphological contexts.[13]

The realization of the morphology for Class II is a slightly more complicated case as the expected theme vowel should be –*e*, because the insertion of the theme vowel is sensitive to the class feature of the root (i.e., *tem*+β). However, in actuality this theme vowel is realized as –*i* in the past tense (e.g., *tem–i–mos* 'we feared'). This observed neutralization in contrast between Class II and III is captured via an impoverishment rule. Consider (46).

(46)   a. $+\beta \rightarrow -\beta \ / \ \_ +[\text{PERF}]$

        b. $\sqrt{tem}_{+\beta}+v-\text{TH}-\text{T}/\text{AGR}_{\text{PERF}} \rightarrow \sqrt{tem}_{-\beta}+v-\text{TH}-\text{T}/\text{AGR}_{\text{PERF}}$

        c. $\sqrt{tem}+v-\text{i}_{\text{TH}}-\text{ste}_{\text{T}/\text{AGR}}$

The rule in (46a) would operate on strings like (46b), where the T/AGR complex is marked as [PRF], and then change the [+β] specification on a Class II root to [–β]. Given the redundancy rule in (38c) (i.e., $-\beta \rightarrow +\alpha$) we can insert –*i* as the theme vowel as in (46c); the relevant VI is given in (35d). Last, in both Class II and III, the 3PL theme vowel is –*ie* (e.g., *part–ie-ron* 'they left' and *tem–ie-ron* 'they feared'), rather than the expected –*i*; this is captured by the VI in (35a).

III. The Imperfect

Arregi notes that – similar to the simple past – the difference between Class II and Class III expressed by the verbal theme vowel is neutralized in the imperfect (e.g., *tem-e-r* 'to fear'~ *tem-í-a* 'I used to fear'; *part-i-r* 'to leave'~ *part-í-a* 'I used to leave') and accounts for this neutralization using his class features and underspecifiying the relevant VIs for theme vowels (see (35b) in particular).[14] The tense exponent for Class I is –*b* (e.g., *habla-b-a* 'I used to speak') and Class II and III both get the exponent, –∅ (e.g., *partí-∅-a* 'I used to leave'). This difference is accounted for in the specification of Vocabulary Items for the imperfect in (47).

(47)   a.   [PAST] $\Leftrightarrow$ –b / a$_{\text{TH}}$ __[15]

        b.   [PAST] $\Leftrightarrow$ –∅

Here (47a) has a contextual specification governing insertion of the exponent and is taken to be the more

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[13]Unlike other cases where a phonological rule is required by the analysis, no concrete formulation of this rule is provided in Arregi (2000).

[14]The careful reader might have noticed that there are two different mechanisms to derive the contrast neutralization between Class II and III in the past forms. In the simple past, Arregi uses impoverishment and redundancy while in the imperfect he posits underspecification (and redundancy, albeit implicitly, in the form of $+\beta \rightarrow +\alpha$) to get the analysis to fall out correctly. The precise reason for this disjointed formulation of the observed contrast neutralization is never addressed in the paper.

[15]Arregi's formulation of this rule treats it as being sensitive to the exponent –*a*, rather than to the class feature. It is not obvious why this should be the case. In any case, nothing is harmed by understanding the exponent to be a shorthand for the feature responsible for its realization.

specific case while (47b) is the default or elsewhere case. Under Arregi's analysis, the relation between the three classes in the imperfect is explained by the analysis in (48) which presents 1.PL. form of the verbs *cantar* 'to sing' and *temer* 'to fear'.

(48)   Imperfect: *cantábamos* and *temíamos*

   a. $\sqrt{cant}+v$–a$_{\mathrm{TH}}$–b$_{\mathrm{T}}$–a$_{\mathrm{TH}}$–mos$_{\mathrm{AGR}}$

   b. $\sqrt{tem}+v$–í$_{\mathrm{TH}}$–$\emptyset_{\mathrm{T}}$–a$_{\mathrm{TH}}$–mos$_{\mathrm{AGR}}$

IV. The Future and the Conditional

The future and conditional forms are morphologically complex requiring a Future head in addition to a distinct Tense head. The future and the conditional differ in that the future is semantically a future-plus-present form while the Conditional is a future-plus-past form. In the future and the conditional, the realization of the theme vowel following *v* is *–a* for Class I (e.g., h*abl-a-rá* 'he will speak'), *–e* for Class II (e.g., *com-e-rá* 'he will eat'), and *–i* for Class III (e.g., *part-i-rá* 'he will leave'), which is expected since this theme position is local to the root. The future head itself is realized as *–r* (e.g. *haba-r-á* 'he will speak'), and to capture this fact Arregi proposes the VI in (49).

(49)   [FUT] $\Leftrightarrow$ –r

The theme vowel of the Future head is either realized as *–a* or *–e*. In the general case, it should be realized as *–a* (e.g., *hablar-á* 'he will speak'), but for the 1SG, the 1PL and the 2PL forms it is realized as *–e* (e.g., *hablar-é-mos* 'we will speak'). To account for this Arregi uses the same phonological rule proposed for the simple past that changes an *–a* to *–e*. As T in the future is present and contains unmarked features T actually deletes. This does not happen in the conditional as T is past and therefore marked.[16] This accounts for structure in (50a) and much of (50b), which are both 2SG verb forms of *comer* 'to eat'.

(50)   Future and Conditional: *comerás* and *comerías*

   a.   FUT: $\sqrt{com}+v$–e$_{\mathrm{TH}}$–r$_{\mathrm{FUT}}$–a$_{\mathrm{TH}}$– s$_{\mathrm{T/AGR}}$

   b.   COND: $\sqrt{com}+v$–e$_{\mathrm{TH}}$–r$_{\mathrm{FUT}}$–i$_{\mathrm{TH}}$–$\emptyset_{\mathrm{T}}$–a$_{\mathrm{TH}}$–s$_{\mathrm{AGR}}$

However, in (50b), the realization of the Future theme for the conditional is *–i* for every verbal class. However, given Arregi's analysis, it is not local to the root which is the locus of class information and should

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[16]While not made explicit in Arregi's proposal, the conditional forms would have to be built with the imperfective past, otherwise we would expect fusion to occur.

receive the default theme vowel –*a*. Consider (51).

(51)   a. $\emptyset \rightarrow +\alpha$ / [FUT, _] + [PAST]

b.   [FUT]+TH+[PAST] $\rightarrow$ [FUT, $+\alpha$]+TH+[PAST]

c. $\sqrt{habl}$+*v*–a$_{\text{TH}}$–r$_{\text{FUT}}$–i$_{\text{TH}}$–$\emptyset_{\text{T}}$–a$_{\text{TH}}$–s$_{\text{AGR}}$

The rule in (51a) effectively turns Class I, the default class, into Class III. In (51b) the rule applies to the FUT node, giving it a specification of [$+\alpha$]. With this specification in place, a rule inserting –*i* can now apply (see (35c) in particular) to the future theme position as in (51c). Next, Arregi addresses the realization of T and its theme. In the future, T and its theme are not realized; rather, T is deleted as it only contains unmarked features. In the conditional, the realization of T and its theme now follows simply from the imperfect pattern. The T node, as in the imperfect, is realized by –$\emptyset$ and the theme position is realized by –*a*, which is expected since T contains no class information.

V. The Present and Past Subjunctive

Arregi asserts that the subjunctive forms are more marked than their indicative counterparts in terms of their features, though their morphological realizations are not more complex. Consequently, Arregi (2000: 24) assumes that the subjunctive feature is not active syntactically, but rather the feature is added to the highest functional head in the morphological component. This assumption accounts for the discrepancy between the features and the morphological structure. In the present tense the highest head would be *v*, as T with unmarked features is deleted, and in the past, this head would be T, as [PST], the marked feature, would not be deleted. Under this analysis, the subjunctive feature is not interpreted at LF but is rather the morphological reflex of certain syntactic structures that correlate with certain interpretations. Consider (52).

(52)   The Present Subjunctive: *cantes* and *comas*

a. $\sqrt{cant}$+*v*–e$_{\text{TH}}$–s$_{\text{T/AGR}}$

b. $\sqrt{com}$+*v*–a$_{\text{TH}}$–s$_{\text{T/AGR}}$

For Class I, in the present subjunctive, the theme vowel is –*e* and not –*a* as the analysis generally predicts. Likewise, in Class II and III, the theme vowel is –*a* and not –*e* and –*i*, respectively, as they should be for those two classes. For Class I, Arregi assumes the observed change is the result of the rule that changes –*a* to –*e*, as we have previously seen in his treatment of the simple past and the future. To account for Class II and III, Arregi proposes the impoverishment rule in (53).

(53)   Impoverishment Present Subjunctive

$+\alpha \rightarrow \emptyset \; / \; [_v \; \_, \; \text{SUBJ}]$

The rule in (53) deletes the class features of Class II and III, essentially giving them the appearance of being Class I for the realization of the theme vowel. Concerning the past (or imperfect) subjunctive, Arregi provides the analysis in (54).

(54)   The Imperfect Subjunctive: *cantaran* and *partieras*

    a. $\sqrt{cant}+v$–a_{TH}–r_{T}–a_{TH}–n_{AGR}

    b. $\sqrt{part}+v$–ie_{TH}–r_{T}–a_{TH}–s_{AGR}

For Class I, the realization of the theme vowel is expected to be *–a*, which follows naturally from the analysis. However, in Class II and III, the theme vowel is *–ie*. The *–ie* theme vowel is the same as the theme vowel for the 3PL form in the simple past, and accordingly, Arregi notes that the Vocabulary Item used in (35a) is also applicable here and for that reason he lists the imperfect subjunctive as the second context of insertion. Next, the tense theme vowel is *–a*, which is expected as there is no class feature on T. Last, in the past subjunctive T itself is realized as *–r* as in (55).[17]

(55)   [SUBJ, PST] $\Leftrightarrow$ –r

2.2.3   Morphology II: Madrid Servín (2005)

Madrid Servín (2005) provides an analysis of the present indicative, and the present subjunctive as well as the simple past tense in Spanish. While he does not provide an analysis of the entire verbal paradigm for simplex verb forms in Spanish, the contributions he does make to a theory of Spanish inflection are nonetheless worthwhile. He sketches out his analysis of Spanish verbal morphology using the verb *cantar* 'to sing' as an example. Consider (56) and note that the bracketed second plural forms are restricted to Peninsular Spanish varieties (save Andalusia and the Canary Islands), and are not in use in Latin American varieties of Spanish.

(56)   Spanish Verb Forms *cantar* 'to sing' (Madrid Servín, 2005: 70)

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[17]Recall that there are two versions of the imperfect subjunctive in Spanish, the RA-subjunctive and the SE-subjunctive. However, Arregi's analysis only covers the details of the RA-subjunctive.

	1SG	2SG	3SG	1PL	2PL	3PL
PRES	cant–o	cant–a–s	cant–a	cant–a–mos	(cant–á–is)	cant–a–n
SUBJ	cant–e	cant–e–s	cant–e	cant–e–mos	(cant–é–is)	cant–e–n
PRET	cant–é	cant–a–ste	cant–ó	cant–a–mos	(cant–a–ste–is)	cant–a–ro–n

Madrid Servín covers much the same empirical ground as Arregi's but there are several differences: (i) he accounts for Latin American Spanish agreement facts, (ii) there are some minor differences in the treatment of theme vowels and agreement, and (iii) there are some fairly minor structural differences.

Madrid Servín's analysis proposes several Vocabulary Items to account for the realization of the theme vowels and person-number marking. His Vocabulary Items for theme vowels are given in (57), and as is standardly assumed in DM, Vocabulary Insertion is governed by the subset principle.

(57)   a.   TH⇔ –ie / [CLII & III] _ [–SUBJ] [+PAST] [2/3PL]

     b.   TH ⇔ –∅ / _ [–SUBJ] [+PAST] [1/3SG]

     c.   TH ⇔ –i / [CLIII] _ [–SUBJ]

     d.   TH ⇔ –e / [CLII] _ [–SUBJ] ; [CLI] _ [+SUBJ] [–PAST]

     e.   TH ⇔ –a

Since the formulation of the VIs in (57) is rather dense in some cases, I devote some time to unpacking each one. The item in (57a) is selected for Class II and III in 3PL, past, non-subjunctive contexts in the general case; here the addition of 2PL is needed for Latin American Spanish, which lacks a 2PL conjugation that is distinct from the 3PL form (e.g., *ustedes comieron* 'you-all ate' vs. *ellos comieron* 'they ate'). In (57b), when the AGR node is either 1SG or 3SG, –∅ is inserted for all classes in past, non-subjunctive contexts (e.g., *cant-∅-é* 'I sang' or *cant-∅-ó* 'she sang'). For (57c), *–i* is inserted for Class III all in non-subjunctive contexts (e.g., *escrib-i-mos* 'we write'). The exponent in (57d) is generally inserted for Class II in non-subjunctive contexts (e.g., *com-e-mos* 'we eat') but can also be inserted for Class I in non-past, subjunctive contexts (e.g., *habl-e-s* 'you speak'). Last, the exponent in (57e) is the default (e.g., *habl-a-s* 'you speak'). Madrid Servín notes that verb class is not present in the syntactic structure but rather is inserted in the morphological structure.

Madrid Servín also proposes several VIs for person-number marking which are given in (58).

(58)   a.   AGR ⇔ –o / [–SUBJ] [–PAST] [_ , 1SG]

     b.   AGR ⇔ –e / [–SUBJ] [+PAST] [_ , 1SG]

     c.   AGR ⇔ –mos / [_ , 1PL]

     d.   AGR ⇔ –s / [_ , 2SG]

    e.   AGR ⇔ –ste / [–SUBJ] [+PAST] [_ , 2SG]

    f.   (AGR ⇔ –is / [_ , 2PL])

    g.   AGR ⇔ –o / [–SUBJ] [+PAST] [_ , 3SG]

    h.   AGR ⇔ –n / [_ , PL]

In (58a) –o is inserted into the 1SG AGR node when the context is non-past and non-subjunctive (e.g., *habl-o* 'I speak'), whereas –e in (58b) is inserted into the AGR node in the past (e.g., *habl-e* 'I spoke'). In (58c) –mos is inserted in all 1PL contexts regardless of any tense considerations (e.g., *habla-mos* 'we speak'). In (58d) –s is inserted into 2SG AGR nodes (e.g., *escribe-s* 'you write'). The item in (58e), –ste, is more specific than its counterpart in (58d) and is inserted when the context is past and non-subjunctive (e.g., *escribi-ste* 'you wrote'), though it is also specified for a 2SG AGR node. Next, in (58f), –is is inserted in 2PL contexts (e.g., *escrib-is* 'you-all write'), though this would only be applicable for Peninsular Spanish, as Latin American Spanish lacks distinct 2PL agreement morphology. In (58g) –o is inserted into a 3SG node in past non-subjunctive contexts (e.g., *habl-o* 'he spoke'). Last, in (58h) –n is a default inserted into plural AGR nodes when a more specific VI is not possible (e.g., *escribe-n* 'they write').

    In the normal course of the derivation, the Tense and Mood are distinct heads in both the syntax and morphology, as in (59).

(59) $\sqrt{cant}$–a$_\mathrm{TH}$–∅$_\mathrm{M}$–∅$_\mathrm{T}$–s$_\mathrm{AGR}$

While these heads are always present in the syntax, they are not always realized as distinct heads in the morphology. Indeed, Madrid Servín's analysis makes use of the morphological operation of Fusion. Fusion, as described in Section 2.1.2, takes two distinct terminal nodes in the syntax and reduces them to a single node in the morphological component (i.e., [M][T] → [T M]). He uses fusion in the analysis of the 2SG simple past forms presented in (60). The prescriptively correct version of the 2SG is given in (60a) and the colloquial version, which has the 2SG agreement exponent –s, is given in (60b).

(60)   a. $\sqrt{cant}$–a$_\mathrm{TH}$–ste$_\mathrm{M/T/AGR}$
          b. $\sqrt{cant}$–a$_\mathrm{TH}$–ste$_\mathrm{M/T}$–s$_\mathrm{AGR}$

We see that the insertion of *–ste* falls out straightforwardly from Madrid Servín's proposed VI in (58e) as the fusion of these individual nodes results in a complex head with precisely the features necessary to license it (i.e., [–SUBJ, +PST, 2SG]). The feature [–SUBJ] comes from the Mood head, [+PST] from the Tense head and [2SG] from the AGR node. Madrid Servín notes that speakers often produce the 2SG form in (60b). To

account for the prescriptively correct version (e.g., *cantaste* 'you sang') and the colloquial versions (e.g., *hablastes* 'you sang') an impoverishment rule is needed for *–ste* to lose its [2SG] specification. That is, after the impoverishment rule in (61a) applies, the item would be specified as in (61b) whereas it would normally appear as in (61c).

(61)   a.   [2SG] $\rightarrow \emptyset$ / [–SUBJ] [+PAST] [2SG] __ COLLOQUIAL [18]

        b.   AGR $\Leftrightarrow$ –ste / [–SUBJ] [+PAST][19]

        c.   AGR $\Leftrightarrow$ –ste / [–SUBJ] [+PAST] [2SG]

Since (61b) no longer has person/number features, it only realizes *–ste* and the *–s* can be inserted into the AGR node as in (60b); the insertion of *–s* is in turn guaranteed by the VI in (58d). For the 3PL simple past form, Madrid Servín proposes the analysis in (62).

(62)   a. $\sqrt{cant}$–a$_{TH}$–ro$_{M/T}$–n$_{AGR}$

        b.   MT $\Leftrightarrow$ ro / [_ , +PAST][3PL]

The structural analysis of the 3PL preterite is given in (62a); the plural *–n* is inserted into the AGR node. In (62b) the exponent *–ro* captures the fusion of the Tense and Mood heads. For Madrid Servín, mood is a property of INFL, which he takes to be specified for an indicative and past feature (e.g., [INDICATIVE, PAST]).

    Last, Madrid Servín points out that in Latin American Spanish the 2/3PL forms are identical. On this analysis, 2/3PL forms share the same morphological shape because in Latin American Spanish the only plural exponent marked for person is the first person and the *vosotros* form (e.g., *cantáis* you-all sing') is not used at all. Consider (63).

(63)   Latin American Spanish: 2 & 3 plural Agreement

        a.   3.PL $\sqrt{cant}$–a$_{TH}$–$\emptyset_M$–$\emptyset_T$–n$_{AGR}$

        b.   2.PL $\sqrt{cant}$–a$_{TH}$–$\emptyset_M$–$\emptyset_T$–n$_{AGR}$

Thus, the underspecification of the plural exponent for person creates a syncretism resulting in the same exponent for both 2 and 3PL forms. In both cases, the only item that can be inserted in the ARG node is *–n*, since it only has the specification [PL], which is present in the AGR node of both forms in question. This situation does not occur in Peninsular varieties of Spanish as the VI for 2PL (58f) would block the insertion

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[18]Madrid Servín does not provide a formal impoverishment rule and just supplies its output. The rule provided here is for illustrative purposes.

[19]It should be noted that number is included in the original example in Madrid Servín's paper. I assume that this inclusion is in error given the fact that Madrid Servín states that after impoverishment, *–ste* no longer has person/number features (pg. 78) and thus I have not included it here.

of *–n*, the default form.

2.2.4   Rioplatense Voseo: Estomba (2015)

Estomba (2015) provides an analysis of the Rioplatense *voseo* [bo.seo], the use of *vos* as a second person singular pronoun (including its conjugated verb form) which has been generally overlooked in the generative literature.[20] His analysis also deals with apparent gaps in the *voseo* paradigm as well as cases where either (i) the verbal *voseo* exists without a pronominal *voseo* or (ii) the pronominal *voseo* exists without a verbal *voseo*.

A Short History of *Vos*

Estomba notes that the pronoun *vos* is of Latinate origin and it had two uses. It was used as a familiar address among people of equal social rank and it was also used as a plural address, as in (64a) and (64b), respectively. Note that in (64a) the singular reading is forced by the addition of *uno de* 'one of' even though the verb is morphologically plural.

(64)   a.   Vos so-is   uno de mi-s   mejor-es hombre-s.
              2   be-2.PL one of my-PL best-PL   men-PL
              'you are one of my best men.'

        b.   Vos so-is   mi-s   mejor-es hombre-s
              2   be-2.PL my-PL best-PL   men-PL
              'you are my best men.'   (Estomba 2015: 37)

To account for the data in (64), Estomba makes an observation about different types of first person plural pronouns, shown in (65), where each type of first-person can be paraphrased to show the presence or absence of various discourse participants.[21]

(65)   Types of 1PL Pronouns

        1PL.INCLUSIVE: me (and others) and you

        1PL.EXCLUSIVE: me and others but not you

        1PL.MAJESTIC: me and no others (including you)

Drawing on the notion of a 'royal we', Estomba analyzes *vos* in medieval Spanish as a 'royal you'. He posits that *vos* can be treated as singular if the 'you' of the speech act is interpreted as enlarged or increased. That is, there is a 'you' that the discourse is directed to and several other 'yous' that surround the first one like

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[20]The Rioplatense dialect is a variety of Spanish concentrated in major metropolitan regions of Argentina and Uruguay, as well as the surrounding areas, including parts of Paraguay and all of Patagonia (Lipski, 2007).

[21]I have added a few parentheticals which are not in the original paraphrases to sharpen the divisions between them.

quasi-absent persons (i.e., you *and no other 'yous'* are one of my best men). At some point in the development of Spanish, *vosotros* (i.e., *vos (y) otros* 'you and other yous') was innovated to take on the plural reading of *vos*. However, *vosotros* was constrained to the second-person plural reference only and did not replace *vos* as the polite address to a single interlocutor (Keniston, 1937; Pountain, 2003). Consider (66).

(66) a. Vos so-is   uno de mi-s   mejor-es hombre-s.
          2   be-2.PL one of my-PL best-PL   men-PL
          'you are one of my best men.'

      b. *Vosotros so-is   uno de mi-s   mejor-es hombre-s.
          2PL   be-2.PL one of my-PL best-PL   men-PL
          'you are one of my best men.'

      c. Vosotros so-is   mi-s   mejor-es hombre-s.
          2PL   be-2.PL my-PL best-PL   men-PL
          'you are my best men.'   (Estomba 2015: 39)

Estomba notes that both forms existed but came to have specialized linguistic functions, and this pragmatically ambiguous system was brought over to the Americas by Spanish settlers.[22]

The Basic Proposal

Estomba's central proposal argues that interpretation of *vos* is the result of a morphosyntactic feature, [∗], which is a kind of PL 'focalizer' located in the plural node. To account for person contrasts, Estomba adopts Halle's (1997) analysis of person that uses two participant features. First-person is represented featurally by [+Auth(hor), +Part(icipant)], second-person by [–Auth, +Part] and third-person by [–Auth, –Part]. Estomba argues that the loss of *vos* in Spain and its (limited) presence in Latin America can be explained by attributing the full feature specification, [+PL ∗], to the pronoun. The differences between Latin American and Peninsular Spanish, then, are derived through a manipulation of these features as well as certain innovations in the second-person pronouns in the historical development of Spanish. For Peninsular Spanish, Estomba proposes an impoverishment rule which deletes, [∗], as in (67).[23]

(67)   [∗] → ∅ / [PL_, –Auth, +Part]

After this rule has been applied, the second-person plural form can no longer be construed as a courteous address to a single interlocutor.[24] On the other hand, in the Americas there would have been a different

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[22]For a more in-depth look at the historical trajectory of *vos* see Resnick and Hammond (2011) and Fontanella de Weinberg (1970).

[23]This rule could be understood as either diachronic or synchronic. If diachronic it was applied at an earlier time and its results are fossilized. However, there is reason to suspect the formulation is meant to be synchronic as this rule is needed to deal with mixed *tu-vos* facts (e.g., *tú sos* 'you are'; *vos eres* 'you are').

[24]The spirit of Estomba's proposal, though he does not say so overtly, appears to be that *vos* would need to be modified in some way so it is clear when it is functioning as a plural. Therefore '*otros*' would be added to keep this relatively new function of the pronoun

type of impoverishment rule in that the [PL] feature is deleted instead of [∗], as in (68).

(68)   [PL] → ∅ / [_∗, −Auth, +Part]

Estomba notes that this particular impoverishment rule accounts for the fact that *vosotros* does not exist in Latin American Spanish, as well as for *vos* being interpreted as singular, since the [+PL] feature is lost.[25]

Expanding the Basic Proposal: Peninsular and Latin American Spanish Compared

The loss of the [+PL] feature also has another notable consequence for Latin American Spanish in that it affects the specification of the Vocabulary Items for verbal agreement in the plural paradigm, as in (69). Observe that the vocabulary item for first person plural agreement (e.g., *habla-mos* 'we speak') is fully specified for person and number features, as in (69a). However, vocabulary item for the second and third person (e.g., *habla-n* you-all speak; *habla-n* 'they speak') is a single underspecified default plural exponent, as shown in (69b).

(69)   Latin American Spanish

    a.   [+Auth, +Part, +pl] ⇔ –mos

    b.   [+pl] ⇔ –n

The Vocabulary Items for Peninsular Spanish in (70) partially contrast with Latin American Spanish for the plural person distinctions. Comparing (69a) and (70a), we can observe that there is no difference for first person plural agreement (e.g., *habla-mos* 'we speak') in either Latin American or Peninsular Spanish. However, unlike Latin American varieties, for Peninsular Spanish the second person plural (e.g., *habla-is* 'you-all speak') is fully specified as in (70b), leaving the default plural exponent in (70c) to mark the third plural (e.g., *habla-n* 'they speak').

(70)   Peninsular Spanish

    a.   [+Auth, +Part, +pl] ⇔ –mos

    b.   [−Auth, +Part, +pl] ⇔ –is

    c.   [+pl] ⇔ –n

distinct from its other guise as a courteous singular form. Later on in the development of the language *tú* replaced *vos* as the pronoun to refer to a single interlocutor (Resnick and Hammond, 2011).

[25]Currently, *vos* is just 2SG and does not seem to have any special meaning in Riverplate Spanish. It is possible the 'augmented' feature underwent a reanalysis and came to mean something like familiar.

Voseante Varieties

Estomba notes that the major difference between the verbal *voseo* pattern in Rioplatense Spanish and the *tuteante* pattern in Spain and other areas of Latin America can be reduced to the fact that the feature [∗] survives as an 'isolate' in the singular paradigm of Rioplatense Spanish. *Voseante* in the current context refers to varieties of Spanish that use the pronoun *vos* as the informal second-person pronoun and *tuteante* refers to ones that use the pronoun *tú*. Consider (71).

(71)   Singular Person Paradigm

     a.   [+Auth, +Part, –pl] ⇔ –o

     b.   [–Auth, +Part, + ∗] ⇔ –ás, –és, –ís[26]

     c.   [–Auth, +Part, (–pl)] ⇔ –s

     d.   [–pl] ⇔ –∅

In the singular paradigm, there are no differences for any variety of Spanish between the Vocabulary items for the first singular (e.g., *habl-o* 'I speak') or the third singular (e.g., *habla-∅* 'she speaks') which are given in (71a) and (71d), respectively. There are, however, several dialectical differences between *voseante* and *tuteante* patterns. In (71b), for *voseante* varieties, the different exponents for verbal agreement for second-person *vos* (e.g., *habl-ás* 'you speak'; *sab-és* 'you know'; *escrib-ís* 'you write') are reliant on [∗] being in the structural description of the Vocabulary Item. In contrast, for *tuteante* varieties, this feature is absent and we get a different exponent for the second person singular pronoun *tú* (e.g., *habla-s* 'you speak') in (71c). Estomba points out that the Latin American and Peninsular *tuteante* paradigms are not identical even though they share the same exponent, *–s*. In Latin American Spanish, the second-person paradigm does not have the feature [±PL] specified and the bracket feature in (71c) does not factor into the VI for *tuteante* varieties. However, in Peninsular Spanish, the featural content of second persons in the singular paradigm is more specified than in *tuteante* areas of Latin America, as it requires the bracketed feature, [–PL].

Deriving a *tuteante* pattern within a *voseante* system

The *vos* pattern is slightly more complicated than it appears as there are cases where the *tú* verbal form is used with the pronoun *vos*, and there are cases when the *tú* pronoun is used with the *vos* verbal form. For these cases, Estomba argues that at the post-syntactic level there is a rule that impoverishes the feature [∗].

(72)   [∗] → ∅ / [–Auth, +Part, _]

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[26]The list of exponents represents the agreement endings for the different verbal classes in Rioplatense Spanish.

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The application of this rule to either the verbal or pronominal paradigm suffices to explain the different types of mismatches possible between pronominal and verbal *voseo*. Generally, the Buenos Aires case of 'mixed' *voseo* is characterized by maintaining the pronominal *voseo* while using the *tú* verbal form in any tense other than the present tense. The rule in (72) also explains the mismatches between pronominal and verbal *voseo* in different *voseante* areas of Latin America. We can term the two varieties in question the Santiago variant (i.e., *vos eres* 'you are') and Montevideo variant (i.e., *tú sos* 'you are'), respectively. For the Santiago variant, Estomba argues that the rule in (72) needs to apply to the verbal paradigm, which is essentially the same analysis proposed for Buenos Aires Spanish in the tenses where the *tuteante* pattern is used. In the case of the Montevideo variant, the situation would be the reverse and the impoverishment rule in (72) would apply to the pronominal paradigm, but not the verbal paradigm.

2.3   Summary and Directions

In this chapter, I have done several things: (i) I introduced the fundamental assumptions of the DM framework, and (ii) I reviewed the main contributions to Spanish verbal morphology in DM. As previously noted, I have thus far kept the theoretical coverage of DM purposefully more 'simple' and acritical than what I will finally assume in the dissertation, to allow the reader to get a clearer picture of the assumptions of the papers reviewed. The works reviewed in the previous sections represent, to the best of my knowledge, what has been said about Spanish verbs in DM. At the beginning of the following chapter, I problematize several theoretical assumptions from previous analyses of Spanish verbs that turn out to be untenable given our current understanding of morphological theory in DM. Before moving on to the next chapter, however, I lay out some of my more basic theoretical assumptions. I assume that roots are non-categorical and must merge with a category giving functional head, v in the verbal domain. A verb forms by the successive head-to-head movement of the root to functional heads c-commanding it and further that complex head formation, in syntax-centric models like DM, follows from Baker's (1985) mirror principle. Essentially, the mirror principle states that, in the normal course, morpheme order should respect the hierarchy of syntactic projections. Therefore, when the details of the syntactic analysis are not particularly interesting or noteworthy, I will simply provide a morphological parse (e.g., $\sqrt{\text{ROOT}}$-TH-INFL-Agr) for a given verbal form.

3 | Verbal Class and Agreement

This chapter begins by drawing attention to two problematic analytical choices from the previous analyses of Spanish verbs that relate to theme vowels. Specifically, there are non-trivial problems with the employment of lexical diacritics and the use of multiple theme vowels. After demonstrating that these two analytical choices are ill-motivated, I propose a new analysis of verbal class. Following this treatment of verbal class, I review the considerable variety of DM analyses of Spanish agreement, identifying several problems with each one before proposing an analysis of agreement data. The analysis of issues relating to theme vowels and agreement devised here is adopted throughout the dissertation. Finally, the last issue that this chapter concerns itself with is agreement in Rioplatense and Equatoguinean Spanish, two varieties of Spanish that have not received significant theoretical attention in the DM literature.

3.1 Theme Vowels

This section discusses some problematic aspects of previous analyses of theme vowels in Spanish, with a focus on the arguments against lexical diacritics, and provides an argument of my own against the multiple theme vowel analysis. Although the theoretical contributions I draw on do not always speak directly to Spanish verbs, they are, nonetheless, critically important for understanding the issues the use of lexical diacritics and multiple theme vowels pose.

3.1.1 Lexical Diacritics

Several authors argue that the morphological analysis of verbal class, as represented by theme vowels, involves specifying a $\sqrt{\text{ROOT}}$ for a diacritic feature that encodes class membership information (see Arregi, 2000; Calabrese, 2012; Embick and Halle, 2005; J. Harris, 1969; Oltra-Massuet, 1999; Roca, 2010; among many others). The diacritic analysis is illustrated in (73).

(73)   A Root with a Class Diacritic

$$\sqrt{\text{ROOT}}_{[IV]}$$

In (73) our hypothetical root is specified with a diacritic [IV] that indicates that this root is a member of Class IV.

However, several theoretical concerns strongly militate against the diacritic analysis. Acquaviva (2009) points out that if roots are acategorical, then any feature that ensures that roots end up with the 'right' inflection is untenable. The logic of Acquaviva's objection is as follows. If a root has a feature that pre-supposes a category, then it is not truly category-free. That is, if a diacritic, Y, is present on the root, and Y is only necessary to get the right verbal inflection, then the root itself must be verbal. There is an implicit equivalence relation (i.e., diacritic Y *iff v*). In the same vein, Bermúdez-Otero's (2013: 29) points out that the current view on diacritics "appears conspiratorial" as the root seems to know the category-giving head it will combine with in advance. This is a non-trivial problem as the acategorical nature of roots is one of the hallmarks of the DM theory.

Acquaviva (2009) points out an empirical consequence of the diacritic analysis with respect to certain Italian verbs. Verbs like *arrossare* 'to make red' and *arrossire* 'to become red' differ in conjugation class but share the same root *rosso* 'red'. Consider (74).

(74)   a. $\sqrt{\text{ROSS}}_{are}$
        b. $\sqrt{\text{ROSS}}_{ire}$

There are, in principle, two ways to account for this pattern of data. The roots in (74) are either (i) differently annotated or (ii) they are accidentally homophonous. For option (i), both roots being differently annotated leaves the root as the constant underlying the different features. If this state of affairs holds, then, diacritics themselves are not a part of the root, which obviates their necessity in the first place. On the other hand, if the diacritic is indeed a central part of the root itself, then the formal identity of these three distinct roots (including *rosso* 'red') is lost and they must be treated as accidentally homophonous, which is an undesirable result as this from meaning relation is systematic. Ultimately, we should not be so willing to subvert a central tenet of the theory to capture a surface generalization when other explanations are possible.

3.1.2   Multiple Theme Vowels

Here I briefly critique the multiple theme vowel analysis. In the context of this analysis, having multiple theme vowels means that there can be several theme vowel positions in the verbal domain in addition to the

canonical one located after the verbal stem (e.g., *com-e*) The multiple theme vowel analysis owes its genesis to the observation Tense/Mood markers always contain the vowels [a], [e] or [i], which also happen to be the verbal theme vowels (e.g., *camin-a-b-a* 'I used to walk', *camin-a-r-é* 'I will walk') and provides a unified account of allomorphy in the verbal theme vowels and the Tense/Mood markers. For Spanish, it has been argued that the main theme vowel position is local to *v* but is a discreet theme position adjoined to the *v* head in the morphology. In addition to this main theme vowel position, all non-defective functional heads also have adjoined theme vowel positions (see Oltra-Massuet, 1999 for Catalan; Arregi, 2000 for Spanish and Calabrese, 2012 for Italian). Oltra-Massuet (1999: 12), who is the seminal work in the area, formalizes this multiple theme analysis, as shown in (75).

(75)   Multiple Theme Vowel Analysis
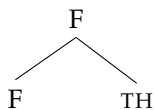
While Nie (2015) also proposes a theme vowel for French, there are some crucial differences. For Nie there is no dedicated theme position, but rather *v* itself realizes the theme vowel, and most importantly, this is the only position available for theme vowels. Apart from Nie (2015)'s analysis, the other previously mentioned work typically assumes a rather simplistic syntactic structure for verbs. That is, they do not contend with the presence of argument introducing heads in the verbal domain.

If we assume that argument structure is syntactically encoded, then a multiple theme vowel analysis would run into a non-trivial problem with regard to argument structure. There are numerous arguments for disassociating the agent argument from its corresponding verb (Kratzer, 1996; Larson, 1988). The agent argument is selected by *v* or *Voice*, which selects VP. However, there are arguments that *v* and *Voice* are not interchangeable, and the head that encodes the agent is *Voice*, while *v*'s sole function is to verbalize a $\sqrt{\text{ROOT}}$ (Cuervo, 2003; Harley, 2013). In that same vein, there have also been arguments for severing the theme argument from the verb (Jelinek, 1998; Ramchand, 1997, 1998) and this argument, too, is projected by a functional head (e.g., *Trans*), while there are *Appl* heads for benefactive arguments (Pylkkänen, 2008) and situation, or Inner *Aspect* heads for telicity (Travis, 2010). The majority of these heads have also been independently motivated by the presence of particular exponents in various languages. Given that DM posits a binary choice between l(exical) and f(unctional) morphemes it is not at all obvious that argument introducing heads should be exempt from the condition in (75).

If we take head movement (or morphological merger) to be responsible for the formation of a complex

head, then the 'maximal structure' in the verbal domain (i.e. the verb and its arguments and inflection) would be as in (76). This structure is a representative cartography of positions in the verbal domain and is not meant to be exhaustive (other languages may provide evidence for other heads to the domain). For our purposes, however, it is sufficient.

(76)   Cartography of the Verbal Domain:

$\sqrt{\text{ROOT}}$−TRANS−$\text{ASP}_{\text{inner}}$−$v$−APPL−VOICE−$\text{ASP}_{\text{outer}}$−FUT−T−MOOD

There is no sense that the maximal projection in (76) will be encoded in any one verbal form, but it is apparent that a larger subsection of these categories than is currently thought by adherents of the multiple theme vowel analysis (e.g., Arregi, 2000; Oltra-Massuet, 1999) must be present. We might be able to claim that some of these heads would constitute defective heads, as these heads do not require theme vowels, but that runs into problems as Oltra-Massuet's (1999) notion of defectiveness is not well-defined. That is, it is not readily apparent what should count as defective and what should not. Nonetheless, we will not be able to explain away the necessity of all of these heads, especially the argument introducing ones with the notion of defectiveness. Therefore, it would seem that Oltra-Massuet's (1999) proposal for theme vowels and any analysis that follows from it (e.g., Arregi, 2000) should predict many more theme vowel positions than they currently do. For instance, for a conditional verb with an object (e.g., *comería el pescado* 'I would eat the fish'), there would need to be at minimum the structure in (77a). In constrast, Arregi's (2000) analysis has the heads in (77b).

(77)   a. $\sqrt{\text{ROOT}}$ −TRANS+**TH** −v+**TH** −VOICE+**TH** −FUT+**TH** −T+**TH** −MOOD+**TH**
         b. $\sqrt{\text{ROOT}}$ −v+**TH** −FUT+**TH** −T+**TH**

A consequence of the exclusion of argument heads, the structure in (77b) could only reasonably accommodate unergatives. If, on the other hand, we were to modify their approach to accommodate the required heads, then given the expanded structure of the INFL domain, and the articulated verbal projection, the analysis would overgenerate. That is, we would expect more theme vowels than we ever see present in any Spanish verb.

Arregi (2000: 3) claims that Tense and Mood exponents always contain the vowels *a*, *e* or *i*, which also happen to be the verbal theme vowel (e.g., –*b*–*a* or –∅–*a* in the imperfect). However, concerning the generalization, it is not obvious that because the TAM exponents share the same segments as the theme vowels that the two are, in fact, the same. Different markers in a given language frequently share the same phonetic shape: take, for instance, *doer* vs. *smaller* vs. *corner*. The 'er' in the first case is an agentive marker,

in the second it is a comparative marker and in the third it has no independent meaning at all and is just a sequence of segments that happens to have the same shape as the first two. The first two 'ers' are analyzable as morphemes because they each have consistent morphosemantics. These other proposed theme vowels for TAM (save the one following the ROOT), however, are purely morphological and contribute nothing to the syntax or semantics.[1] That is, in the case of the theme vowels proposed for the TAM domain, there is a consistency of form without the concomitant consistency of meaning. Given that these particular theme vowels cannot be associated with a consistent meaning (even a purely grammatical one), an analysis that assimilates them to Tense and Mood markers is theoretically dubious at best. However, the same cannot be said for the theme vowel following the ROOT, as this vowel indicates a contrast in conjugation class (e.g., *tom-a-ble* 'drinkable' and *permis-i-ble* 'permissible').[2]

Furthermore, the multiple theme vowel analysis predicts that the future theme should be 'a' as it is not local to the root, which is contrary to fact. The same is also true for the conditional. For the future, Arregi says the 'a' raises to an 'e' for phonological reasons which he does not define. For the conditional, several redundancy rules need to be admitted to change the predicted 'a' into the observed 'i'. Consider (78).

(78) a. $\emptyset \rightarrow +\alpha$ / [FUT, _] + [PAST]

b. $[\text{FUT}]+\text{TH}+[\text{PAST}] \rightarrow [\text{FUT}, +\alpha]+\text{TH}+[\text{PAST}]$

c. $\sqrt{habl}+v\text{–a}_{\text{TH}}\text{–r}_{\text{FUT}}\text{–i}_{\text{TH}}\text{–}\emptyset_{\text{T}}\text{–a}_{\text{TH}}\text{–s}_{\text{AGR}}$ (Arregi, 2000: 9)

The rule in (78a) effectively turns a Class I verb into Class III. In (78b) the rule applies to the Fut node giving it a specification of $+\alpha$. With this specification in place, a rule inserting *–i* can now apply to the future theme position as in (78c). However, this redundancy is only needed as a requirement of Arregi's (2000) analysis (I show, in Chapter 5, that there are other ways to explain the 'conditional theme vowel' that do not involve redundancy rules). In summary, multiple theme vowels are theoretically undesirable and there is a single theme vowel slot that comes directly after the verb.

3.1.3   On Stem Vowels

Having problematized aspects of previous theme vowel analyses, this section addresses the morphology of theme vowels in Spanish. There are two competing formalizations to deal with conjugation class membership. The first involves lexical inclusion of the appropriate canonical TH within each root. The second, and

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[1]These theme vowels are *morphemes* (see Aronoff, 1994; Maiden, 2005). Morphemes have no syntactic or semantic justification and are purely morphologically motivated.

[2]For clarity's sake I only take issue with multiple theme vowels as it relates to the verbal domain. Multiple theme vowels resulting from derivational processes where each theme vowel is licensed a category defining head like *v, n, a* (e.g., comput-a + cional-$\emptyset$ + ment-e) are not at issue here.

more common option, involves specifying a $\sqrt{\text{ROOT}}$ for distinct class diacritics (e.g., J. Harris, 1969, 1980: 149; Arregi, 2000: 4). However, there are reasons to disfavour both of these options. The first option permits excessive lexical duplication, which can be seen in the example below:

(79)   Distribution of Stems and Theme Vowels for *perder* 'to lose'

context	STEM
IMPF.SUBJ & PAST.3PL.IND	perdie
PAST	perdi
SUBJ	perda
default	perde
SUBJ	pierda
IND	pierde

In (79), there are several contexts where a verb can require different theme vowels and therefore a stem would need to be stored for each one. The first two rows show the stems for the imperfect subjunctive and the 3PL form of the preterite (e.g., *perdie-ron* 'they lost'), and the general stem for the past (e.g., *perdi-ste* 'you lost'). The last four rows list stems that occur based on whether stress is stem final or stem medial. The following two rows show the stress final stems for the subjunctive (e.g., *perdá-is* 'you-all lose') and the indicative (e.g., *perdé-mos* 'we lose'), and the last two rows show stress medial stems for the subjunctive (e.g., *piérda-s* 'you lose') and the indicative (e.g., *piérde-n* 'they lose').[3] There is just too much regular correspondence to believe that the lexical inclusion of the TH with the $\sqrt{\text{ROOT}}$ is an optimal solution. The second option with its use of diacritic marking is theoretically undesirable for the reasons previously defined in Section 3.1.1.

Instead, I offer an analysis whereby morphological information can be determined by the root without being encoded on the root itself. Consider (80).

(80)   Dissociated Class Feature

    a. $v \rightarrow [\,v, \text{CL: III}\,]$ / {$\sqrt{\text{ESCRIB}}, \sqrt{\text{PART}}, \sqrt{\text{SAL}}, \ldots$} __

    b. $v \rightarrow [\,v, \text{CL: II}\,]$ / {$\sqrt{\text{COM}}, \sqrt{\text{BEB}}, \sqrt{\text{CORR}}, \ldots$} __

    c. $v \rightarrow [\,v, \text{CL: I}\,]$

Dissociated Morphemes are ones that do not figure into syntax proper, but can be inserted after syntax. In this case, a class node is added in the morphology based on what kind of root we have, such that certain

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[3]For illustration I depart from standard orthographic practice and indicate the position of stress.

roots are idiosyncratically class II or III. If a root is not on the class II or III list, then by default it is assigned to class I. This formulation is in line with the observation that newly added verbs in Spanish go to class I. Had we codified the verbs that are in class I the same as we did for the other classes, then we would not be able to account for this observation. With respect to this approach, I follow Acquaviva (2009: 5) who notes that licensing statements that apply to lists of roots, by themselves, are not more (nor less) arbitrary than explicit specifications on each root.

Arad (2003) proposes that the domain of first merge is the domain of idiosyncrasy. However, more recent work by Borer (2009) proposes that semantic idiosyncrasy is not limited to the merging of the root with the categorizing head (see also Marantz, 1997 and Harley, 2014 for this position). Rather, Borer proposes that semantic idiosyncrasy can occur until the merge of the first semantic cyclic head. Under her theory, semantic cyclic heads are non-categorizing heads. Following this postulate, we can capture the idea that thematic vowels express idiosyncratic information if we locate the thematic vowel position, as in (81).

(81)   Verbal Stem Domain
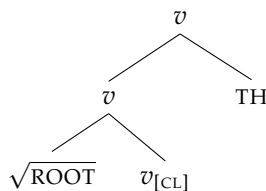
I follow Oltra-Massuet (1999) in taking the theme vowel to be the spell out of a theme vowel position inserted in the post-syntactic component.

I propose several vocabulary items for theme vowels which are shown in (82):

(82)   Spanish Theme Vowels

TH $\Leftrightarrow$ ie / CL:¬I __]$_v$ PAST]$_T$ 3PL]$_{AGR}$

TH $\Leftrightarrow$ ie / CL:¬I __]$_v$ IMPF.SUBJ]$_T$

TH $\Leftrightarrow$ i / CL:II __]$_v$ PAST]$_T$

TH $\Leftrightarrow$ i / CL:III __]$_v$

TH $\Leftrightarrow$ e / CL:I __]$_v$ SUBJ]$_T$

TH $\Leftrightarrow$ e / CL:II __]$_v$

TH $\Leftrightarrow$ a / CL:¬I __]$_v$ SUBJ]$_T$

TH $\Leftrightarrow$ a / CL:I __]$_v$

Unlike analyses that decompose theme vowels into hierarchically arranged morphological features (e.g., Arregi, 2000), I use a *not* (¬) specification to block certain classes from competing in certain cases.[4] Pesetsky and Torrego (2001, 2004) have argued that features can come valued or unvalued. If this is true then negatively targeting the value while requiring the feature is an option that should be permissible. By blocking only the value of the class feature any other class value than the one negatively specified is permissible. Class is only indirectly indicated by theme vowels and apparent class suppression effects result from competition between VIs. While this analysis is novel and does obviate the need to rely on redundancy rules to derive these contrasts, it predicts that we have accidental homophony with nearly synonymous theme vowel exponents. This conclusion, however, is similar to J. Harris' (1991) argument that grammatical gender and the class markers used in the expression of grammatical gender (these serve an analogous function in the nominal domain) must be modelled as two separate entities in Spanish because the same ending can correspond to either gender and both genders can be realized by any of the vocalic endings

While this kind of negative specification could potentially be avoided by using Arregi's class features, we would require redundancy rules, but this theoretical move would not avoid the problem of disjunction. Consider (83).

(83)   Arregi's Theme Vowels

TH ⇔ –ie \ [+α] _ [PERF, 3PL]

TH ⇔ –ie \ [+α] _ [IMPF.SUBJ]

TH ⇔ –i \ [+α] _ [PAST]

TH ⇔ –i \ [+α] _

TH ⇔ –e \ [+β] _

TH ⇔ –a   (Arregi, 2000: 25 – 26)

Therefore, an analysis that does not posit extra machinery like a battery of redundancy rules is more parsimonious since the issue of disjunction affects both analyses equally. Overall my approach is more in line with Madrid Servín's (2005) analysis, though that analysis did not generate the full gamut of theme vowel contrasts. While Arregi's (2000) covers much the same ground as the one proposed here, his use of impoverishment to achieve some contrasts and his use of a phonological rule to derive the theme vowel for Class I in the subjunctive warrant further discussion. First, his use of a phonological rule is problematic because this rule was not formalized and, therefore, it cannot be assessed on its merits. Second, Arregi proposes the follow impoverishment rule in (84) deletes the class features of Class II and III, essentially giving them the

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[4]Negative specifications have already been proposed in morphological theory. For instance, Siddiqi (2006: 75) also makes use of the ¬ specification, though his context of use is not equivalent to my own.

appearance of being Class I for the realization of the theme vowel.

(84)   Impoverishment Present Subjunctive

$+\alpha \rightarrow \emptyset \ / \ [_v \ \_, \text{SUBJ}]$

While impoverishment rules are not themselves problematic, Harley (2008) has argued that they should be reserved for situations when a competition on insertion is demonstrably inadequate. What I have offered here is a model wherein the insertion of theme exponents is entirely subject to competition. I have also eliminated the problematic use of lexical diacritics and require no redundancy rules.[5]

3.2   What to Agree with and How to Agree with it

With concerns about the analysis of verbal class out of the way, I now turn to the topic of verbal agreement in Spanish. Since the goal here is not to develop a theory of agreement, I only briefly contextualize the issue concerning two broad questions about agreement: what to agree with and how to agree with it. Broadly speaking, dependent approaches to agreement claim that when φ-features show up on the verb, we can safely assume that their provenance lies with some nominal that has shared its φ-features via some mechanism such as Agree (e.g., Béjar, 2003; Chomsky, 2000, 2001; Pesetsky and Torrego, 2007). In contrast to dependent approaches, independent approaches are ones where the features of the target are not inherently dependent on the features of the controller or vice versa. That is, in independent approaches, the presence of φ-features in the verb does not depend syntactically on the presence of matching φ-features in the agreeing argument (e.g., Ackema and Neeleman, 2018; Preminger, 2014) and may be supplied by the context of utterance, for instance. The extant data in support of either dependent or independent agreement does not currently give any wholesale indication that one approach is to be favoured over the other. Indeed, den Dikken (2011) alludes to the fact that there might not be one unified approach to φ-feature agreement. Given this observation, I remain agnostic on the issue.

3.2.1   The Mechanism

In DM, morphemes are not solely limited to the objects from the narrow syntax. Some morphemes, known as dissociated morphemes, are inserted in the postsyntactic component by language-specific rules (Choi and Harley, 2019; Embick, 2000, among others). Following Choi and Harley (2019), I refer to this type of insertion as 'node-sprouting'. As is fairly standard, node-sprouting is used to analyze agreement morphology

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[5]Roca (2010) has an OT proposal for the realization of theme vowels in Spanish. However, as this analysis has a strong phonological orientation, the evaluation of that proposal is outside the scope of the current endeavour.

(Arregi, 2000; Calabrese, 2012; Nie, 2015, among many others).

(85)   AGR-Sprouting

```
                F
              /   \
            F       AGR
          /   \
        v       F
      /   \
   √ROOT    v
```
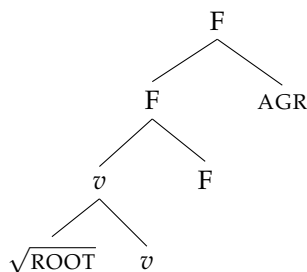
The node-spouting of an agreement morpheme happens on the highest head in the verbal domain, as in (85) where F is the highest functional head in the extended domain of the verb. This node-sprouting operation, and the morphology it produces, is typically needed for language-specific morphological well-formedness conditions. I adopt Arregi and Nevins' (2018) two-pronged theory of Agree: (i) in Agree-Link, a Probe simply establishes an Agree relation in the syntax, based on hierarchical relations and locality; it is more abstract than copying features from Goal to Probe, (ii) Agree-Copy, on the other hand, occurs in the postsyntactic module. It is here where the φ-feature values of the Goal are copied onto the Probe and a sprouted agreement node is required.[6]

3.2.2   Agreement in Spanish

With the formal mechanism for dealing with agreement now in place, I can focus on the spell out of the various agreement exponents in Spanish. In (86), I provide an overview of the analyses of agreement markers in Spanish taken from several sources (Arregi, 2000; Arregi and Nevins, 2018; Embick, 2015; Estomba, 2015; J. Harris, 1998; Madrid Servín, 2005). As I compare several analyses, I have standardized the terms used; specifically, I have opted to use 1, 2 and 3 for person contrasts and [±plural] for singular versus plural contrasts.[7] The various analyses have been organized paradigmatically and the Vocabulary Items contributed by each author are noted as follows:

- A = Arregi
- M = Madrid Servín
- H = J. Harris

- Est = Estomba
- Emb = Embick
- AN = Arregi and Nevins

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[6]Theories of agreement relations are generally subject to c-command. The Agree relation can be established when the target c-commands the controller (e.g., Chomsky, 2000; Preminger, 2013) which can be termed Downward Agree. Alternatively, the controller could c-command its target (e.g. Bjorkman and Zeijlstra, 2014; Wurmbrand, 2012) which can be termed Upward Agree. Over the range of data examined in the previously mentioned papers, there are strong arguments for both approaches. I take no firm position on this issue here.

[7]This view is, in principle, compatible with several theoretical treatments of person (e.g. Noyer, 1992; Harley and Ritter, 2002; Halle, 1997; Ackema and Neeleman, 2018; Harbour, 2016).

Where there is a consensus, this is noted with the universal quantifier symbol (∀). Additionally, it is worth pointing out that J. Harris (1998) only covers the plural agreement markers in his analysis. The results are summarized in (86).

(86)　　Spanish Vocabulary of Agreement

	−PL	+PL
1	[1 −PL] ⇔ –o (A/Est/Emb) [−SUBJ, −PAST, 1 −PL] ⇔ –o (M) [−SUBJ, +PAST, 1 −PL] ⇔ –e (M) [1 −PL] ⇔ –∅ (AN)	[1 +PL] ⇔ –mos (∀)
2	[2 −PL] ⇔ –s (∀) [2 +FAM] ⇔ –ás, –és, –ís (Est) [−SUBJ, +PAST, 2 −PL] ⇔ –ste (A/M)	[2 +PL] ⇔ –is (∀) [+PAST, 2 +PL] ⇔ –steis (A)
3	[−PL] ⇔ –∅ (Est/Emb/AN) [−SUBJ, +PAST, 3 −PL] ⇔ –o (A/M)	[+PL] ⇔ –n (∀) [+PAST, 3 +PL] ⇔ –ron (A)

As shown in (86), there is consensus on how to deal with the agreement markers *–mos*, *–is*, *–s* and *–n* and furthermore each author has a proposal for these exponents that is largely cross-compatible. However, it is less clear how to treat the remaining forms (i.e., the singular forms), as there is considerable variation in the analyses presented and the range of facts they seek to cover. In the following discussion, I evaluate these proposals to see which one(s) best capture the empirical facts.

First, Estomba's (2015) analysis of the agreement morphology of the *vos* form treats stress as being lexically specified. The main difference between the two second singular verbal forms in Spanish is in the placement of the primary stress. The *tú* form has penultimate stress (i.e., *tú sábes*) while the *vos* form has final stress (i.e., *vos sabés*). Estomba (2015) accounts for this stress pattern for *vos* by having the agreement exponents for *vos* marked with stress, as in (87).

(87)　　[2 +FAM] ⇔ –ás, –és, –ís (Est)

If one assumes a derivational approach to metrical structure such as the single-bracketed grid theory of Idsardi (1992) and Halle and Idsardi (1995) which constructs metrical grids by projecting syllable heads and organizing them into constituents, then Estomba's proposal, which treats stress in the verbal domain as a 'phonetic' feature, is at odds with the notion that Spanish stress assignment is algorithmic and is

'calculated' in some sense (see also Doner, 2017; Oltra-Massuet and Arregi, 2005, among many others). Another issue that arises from Estomba (2015) is that the analysis also misses the generalization that –*ás*, –*és*, –*ís* are analyzable as –*á/é/í*+*s*. Since –*s* is the only shared form between the items, it is therefore the only coherent exponent for the second person. Moreover, the vowels (i.e., a, e, and i) are analyzable as the theme vowels for each conjugation class (e.g., *habl-á-s* 'you speak'; *sab-é-s* 'you know'; *escrib-í-s* 'you write'), and are therefore entirely predictable.

Second, there are also two related issues regarding the first person singular agreement marker that needs to be addressed. The first issue concerns the VI proposed in (88).

(88)   [1 –PL] ⇔ –o (A/Est/Emb)

This vocabulary item is too general and for that reason it overgenerates. The agreement exponent –*o* only shows up in first person singular contexts in the present tense whereas the formulation of this VI says it should be inserted anytime there is a first-person singular. Consider (89).

(89)   Partial Distribution of Agreement Marker –*o*

	PRES	IMPF	PRET
1SG	habl –∅ –o	*habla –ba –o	*habl –e –o

Therefore, these data demonstrate that the analysis in (88) is not empirically supported. The second issue concerns Arregi and Nevins' (2018: 633) argument (in a footnote) that for the present tense there is a TAM-specific allomorph (i.e., –*o*) for first person singular, which alternates with the VI in (90).

(90)   [1 –PL] ⇔ –∅ (AN)

While this is an adequate analysis, there is an important factor that suggests a different analysis. The chief concern is that Arregi and Nevins (2018) fundamentally miss the generalization that there is broad 1-3 syncretism by proposing separate null vocabulary items for both first-person and third-person singular agreement. Ackema and Neeleman (2018: 250) notes that 1-3 syncretisms are typologically rare but that they do exist; an example would be plural verbal agreement in standard German (i.e. 1st –*en*, 2nd –*t*, 3rd –*en*). Schematically, the representation of 1-3 syncretisms is as follows /∅//a//∅/ or /a//b//a/ where /a/ is obviously more marked than /∅/ or /a/ has some features content but /b/ is the more marked category. Consider (91).

(91)   1-3 Agreement Syncretism in Singular paradigm

	1SG	2SG	3SG
FUT	comeré–∅	comerá–s	comerá–∅
COND	comería–∅	comería–s	comería–∅
SUBJ	coma–∅	coma–s	coma–∅
IMPF.SUBJ	comiera–∅	comiera–s	comiera–∅
IMPF	comía–∅	comía–s	comía–∅

Under this approach, the 1-3 syncretism is reduced to a case of accidental homophony rather than a deep property of the system, or a Metasyncretism following Harley (2008). I have not included the preterite in (91) but rather discuss how it fits into this pattern of 1-3 Metasyncretism in the following paragraphs. Specifically, I argue that by collapsing Arregi's (2000) perfective and non-perfective paradigm into a single one we can see evidence of this syncretism.

Arregi's (2000) treatment of the verbal agreement markers in Spanish which is organized paradigmatically as in (92). The perfective set arises from a fusion of Tense and Agreement in the postsyntactic component.

(92)   Arregi's (2000) Paradigm

	1SG	2SG	3SG	1PL	2PL	3PL
perfective	–∅	–ste	–ó	–mos	–steis	–ron
non-perfective	–o / –∅	–s	–∅	–mos	–is	–n

Although Arregi divides his analysis into perfective and non-perfective sets, it is not readily apparent that this is a conceptual necessity. Two issues come immediately to mind: (i) there is a good amount of repeated information between the two sets and (ii) this kind of organization results in a loss of generalization about the 1-3 syncretism. By collapsing Arregi's paradigms, as in (93), we can see evidence of a 1-3 syncretism in Spanish and see the potential to simplify duplicated information, which would be a desirable result.

(93)   Simplified Paradigm

	1SG	2SG	3SG	1PL	2PL	3PL
perfective		–ste			–ste+**is**	–ro+**n**
	–o / –∅		–o / –∅	–mos		
non-perfective		–s			–is	–n

Taking this conceptualization of the Spanish verbal agreement pattern seriously, one where there is only a single agreement paradigm, then there are several candidates for simplification. The second-plural form and the third-plural form can plausibly be decomposed as *–ste+is* and *–ro+n*, respectively. If the parse for

the third-plural form and the second-plural form is correct, then we are forced to say something about the status of *–ste* and *–ro*. I leave aside a discussion of what to do with second-singular agreement (e.g.,*–ste*/*–s*) for the moment but will return to this issue shortly. Nonetheless, the evidence of a 1-3 syncretism in the singular is apparent for the preterite.

Indeed, Madrid Servín ([2005](): 71) suggests that there is a different parse for *–ro* and that the exponent is a fusion of the Tense and Mood nodes inserted in the context of third-plural agreement.[8] This would imply that one need not posit the following VI at all:

(94)   [+PAST, 3 +PL] ⇔ –ron (A)

Given the parse for *–ro*, Madrid Servín and Arregi's treatment of *–ste* as an agreement marker, as in (95a), could be revised in favour of it being a T/M exponent, which would logically necessitate a revision of the VI in (95b).[9]

(95)   a.   [–SUBJ, +PAST, 2 –PL] ⇔ –ste (A/M)
          b.   [+PAST, 2 –PL] ⇔ –steis (A)

This thought, pushed to its logical conclusion, could also be easily applied to the VIs for the first person (e.g., *trabaj-é* ' I worked') and third person singular (e.g., *comi-ó* 'she ate') in the past in (96a) and (96b), respectively.

(96)   a.   [–SUBJ, +PAST, 1 –PL] ⇔ –e (M)
          b.   [–SUBJ, +PAST, 3 –PL] ⇔ –o (A/M)

Except for the treatment of *–ro*, what I suggest is mere conjecture and, at this point, I have not substantiated any of my claims. With that in mind, I make an argument in favour of treating these perfective 'agreements' as T/M markers by examining *–ste* more carefully and then extrapolating my findings to the other cases.

A very common phenomenon in everyday Spanish is the use of forms such as *cantastes* 'you sang' as the second-person singular form in the past tense (Elizaincín and Díaz, [1979](); Lipski, [2007](); Madrid Servín, [2005](); Morales, [1998](); Moyna, [2009]()). Traditionally, this fact has been explained by analogy with second singular forms of other tenses/moods, which have an *–s* (e.g., *canta-s* 'you sing'; *cantaría-s* 'you would sing').[10]

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[8]Recall that for Madrid is for grammatical mood is a property of INFL and is specified for indicative (i.e., [INDICATIVE, PAST]) contrasting with the subjunctive (i.e., [SUBJUNCTIVE, PAST], for instance.

[9]With respect to the postulated revision, an analysis along the lines of [PRF.PAST] ⇔ –ste is pursued. However, as the section is primarily concerned with agreement getting into the specific details of the analysis here would take use much too far from the present discussion. Any discussion of tense in this section stems from the fact that a mixing of tense and agreement is required by Arregi's ([2000]()) analysis. Instead, the reader is referred to Section 4.1.3 for the details of the full analysis of the preterite tense.

[10]This addition of *–s* could also be plausibly based on the fact that 2PL form has *–ste* and the 2PL marker *–is* (e.g., *cataste-is* 'you-all

Consider (97).

(97) a. $\sqrt{cant}$–a$_{TH}$–ste$_{M/T/AGR}$

   b. $\sqrt{cant}$–a$_{TH}$–ste$_{M/T}$–s$_{AGR}$

   c. $\sqrt{cant}$–a$_{TH}$–ste$_{M/T/AGR}$–s$_{AGR}$

In Madrid Servín's analysis of the canonical simple past in (97a) –*ste* is analyzed as an agreement marker.[11] For the colloquial version of the simple past, he derives the colloquial version of the simple past by impoverishing the 2 person features of the VI for –*ste*. However, it is rather difficult to fully evaluate Madrid Servín's proposal regarding impoverishment, as there is some confusion about the details of the analysis. There are two ways to understand Madrid Servín's analysis and these two analytical choices are represented by (97b) and (97c), respectively.

   If the details of Madrid Servín's analysis are as in (97b), which is what is illustrated in the paper, then impoverishment cannot be at work, as the analysis says that –*ste* is a fused T/M exponent and not an AGR morpheme. However, if the structure is as argued in (97b), then several things follow naturally. Consider (98).

(98) a.   …–ste$_{M/T}$ + –$\emptyset$ $_{AGR}$

   b.   …–ste$_{M/T}$ + –s_{AGR}

   c.   …–ste$_{M/T}$ + –is_{AGR}

In the prescriptively correct version in (98a), there is a null second singular exponent in the AGR node. That AGR node can also be optionally realized by the overt exponent –*s*, as in (98b). Clearly –*ste* cannot be a second singular exponent or else we would lose the ability to explain what is happening to the plural in (98c). It would be contradictory for –*ste* to be singular in one case (this is an unavoidable consequence of the fusion analysis) but not be singular in the case of –*ste+is*. Conversely, if we were to assume that –*steis* is a single unit, then the fact that the string 'ste' occurs in both singular and plural contexts is accidental. However, Embick's (2003: 156) principle of avoiding accidental homophony states that learners seek to avoid accidental homophony and that absent evidence to the contrary they treat identities in form as systematic. Therefore, both options (i.e., 'singular' –*ste* and 'plural' –*steis*) are equally untenable. Arregi and Nevins (2018: 633) suggest another possibility in a footnote: that the perfective past has a TAM-specific allomorph (i.e., –*ste*) for the second person singular. However, this analysis is empirically contradicted. Indeed, the

sing').

[11]Specific to his analysis the heads T, M and AGR are fused into a single morpheme, effectively allowing him to treat –*ste* as a past allomorph of –*s*.

common co-occurrence of *–ste* with regular second person exponent *–s* in the past directly contradicts the allomorph analysis which would require these agreement makers to be in complementary distribution. The data have a more natural fit if we posit a null morpheme in the AGR node which we know must be available since this AGR node is often filled by the overt exponent *–s*. This is only possible if we treat *–ste* as a T/M marker on a par with *–ro*.

Given what must be true about *–ste* and what was already concluded for *–ro*, then an analysis along the lines of (99) is not only possible but has the advantage of simplifying the grammar of agreement and maintaining a strong 1-3 syncretism even in the simple past.

(99)   a. $\ldots -o_{M/T} + -\emptyset_{AGR}$

          b. $\ldots -e_{M/T} + -\emptyset_{AGR}$

          c. $\ldots -i_{M/T} + -\emptyset_{AGR}$

Taking into account the reanalysis I have just argued for, my proposal for the complete paradigm of the simple past is given in (100).

(100)   Preterite paradigm: *hablar* 'to speak' and *comer* 'to eat' (root –TH –T –agr)

	−PL		+PL	
1	habl –a –e –$\emptyset$	com –i –i –$\emptyset$	habl –a –$\emptyset$ –mos	com –i –$\emptyset$ –mos
2	habl –a –ste –$\emptyset$/s	com –i –ste –$\emptyset$/s	habl –a –ste –is	com –i –ste –is
3	habl –a –o –$\emptyset$	com –i –o –$\emptyset$	habl –a –ro –n	com –ie –ro –n

As we can see in (100), the structure of the paradigm becomes quite regular and there is no need to propose additional vocabulary items for agreement to account for the data.[12] Additionally, like most other tenses in Spanish, save the present tense, there is a 1-3 syncretism.

The analysis argued for here was the outgrowth of just one of the analytical possibilities allowed for by Madrid Servín's treatment of *–ste*. We could just as easily assume the other analytical possibility in (97c), repeated here as (101), which follows from Madrid Servín's prose statement about impoverishment, though we would need to add a few caveats to get the details to fall out correctly.

(101) $\sqrt{cant}$–a$_{TH}$–ste$_{M/T/AGR}$–s$_{AGR}$

Impoverishment would have to target number only in order to leave *–ste* with person in its representation. While we can surmise, albeit cautiously, that the overall analysis should follow the structural analysis

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[12]I assume there is some general process of vowel hiatus resolution responsible for deleting the crossed-out vowels in red. For further discussion see Section 4.1.1.

presented in (97b), the prose version of events (my caveats included) should not be dismissed out of hand. It seems the prose version of Madrid Servín's analysis, when followed to its logical conclusion (even if that was not the original intention), calls for double-pronged agreement (i.e., ste$_{AGR}$+s$_{AGR}$ and ste$_{AGR}$+is$_{AGR}$) which is known as multiple or extended exponence.

Multiple exponence refers to the realization of a feature by more than one morpheme in a given word (A. C. Harris, 2008: 266). An example of multiple exponence can be seen in Old Georgian in (102).

(102)   da ušǰulo x-i-kmm-n-es
      and iniquity 3-UNACC-do-PL-3.PL
      'and iniquities were committed'   (A. C. Harris, 2008: 266)

A. C. Harris (2008) notes that there are two examples of multiple exponence in (102). The first deals with number as can be seen in the suffixes which both mark plurality. The *n* suffix marks plurality in the subjects of unaccusative verbs and the objects of transitive verbs and the –*es* suffix marks plurality of third-person subjects. The second example deals with person: the prefix *x*– marks person for the nominal and person is also encoded in the –*es* suffix (i.e., both mark person for the same argument). Multiple exponence as an explanation for the Spanish data is at least plausible as the pattern that emerges is identical to the one previously shown for the simple past in (100). The only difference would be that the exponent after the root (e.g., –*ste* and –*e*) would be treated as agreement instead of a tense+mood category. I will pick a side momentarily, but first the details of my analysis of agreement are presented as they shed some light on what option to choose.

Based on the discussion in this section, the final version of the VIs for agreement in Spanish is given in (103).

(103)   Vocabulary Items for Spanish Agreement[13]

         a.   [PRES, 1 –PL] ⇔ –o / [DEIXIS]

         b.   [2 –PL] ⇔ –s

         c.   [–PL] ⇔ –∅

         d.   [1 +PL] ⇔ –mos

         e.   [2 +PL] ⇔ –is

         f.   [+PL] ⇔ –n

From the exploration of the previous analyses of Spanish agreement coupled with observations about the

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[13]While these items appear numbered here, this is not an indication that they are ordered. This was done solely to have an easy way to refer to particular items. This is a convention I adopt throughout. If items are required to be ordered, I will explicitly mention this where needed.

1-3 syncretism, I was able to simplify the grammar of agreement and provide a unified perspective for the majority of tenses (i.e., the present and past subjunctive, imperfect, conditional, future, and preterite) the present tense having a unique exponent for the first person. I capture the general 1-3 syncretism with an underspecified vocabulary item in (103c) which acts as a default in most cases, but competes with the items in (103a) in the present tense and with the item in (103b) more generally. This approach renders first person agreement in the present tense a small 'imperfection' in an otherwise uniform system.[14] Given the fairly consistent 1-3 syncretism, the extended agreement exponence analysis is disfavoured on the grounds of simplicity – it is an unreasonable solution to complicate this area of the grammar when an alternative solution is available and covers the same ground. I believe this final analysis adequately reflects the grammar of Spanish verbal agreement.

3.3 The Forgotten Varieties of Spanish

Before concluding this chapter, in the section, I discuss two 'forgotten' varieties of Spanish; namely, Rioplatense Spanish and Equatoguinean Spanish. I acknowledge that 'forgotten' might be a rather loaded characterization; what I intend to say is that these two varieties are conspicuously absent from the morphological literature. Therefore, the morphology of these two varieties represents a gap in the DM literature that needs to be filled.

3.3.1 Rioplatense Spanish

Voseo [bo'se.o] refers to the use of *vos*, including its associated conjugated verb form, as an informal second-person singular address.[15] *Voseo* is used in a number of Latin American countries but is most characteristic of the Spanish spoken in the broader Río de la Plata (River Plate) region. Lipski (2007) notes that the Rioplatense variety is concentrated in major metropolitan parts of Argentina and Uruguay, and regions of Paraguay. The majority of work concerning the usage of *voseo* has been from a more descriptive perspective (e.g. Fontanella de Weinberg, 1970, 1976, 1977, 1979; Lapesa, 1970; Morales, 1998). From a theoretical perspective, the *vos* form has received less attention, with the analyses of Estomba (2015) and Baquero Velásquez and Westphal Montt (2014) being two major exceptions. Estomba (2015) notes that the American *voseo* poses a variety of problems such as the distinction between the verbal and pronominal *voseo*. While

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[14]Underspecification is not warranted here because first plural forms do not take the –*o* suffix, and there is no way to restrict the item to –*o* first singular contexts without specifying [-PL].

[15]Though I will use Rioplatense Spanish as an exemplar of *voseo* usage in Latin America it should be noted that the countries that make up this region (e.g., Chile, Argentina, Uruguay) and not the only Latin American countries that use *vos*, an informal second singular pronoun. For a discussion of regions of Latin America that use *vos* the interested reader is referred to Lipski's (2007) survey of Latin America Spanish, and for a formal treatment of *vos* (among other second-person forms in Spanish) the reader is referred to Bembridge and Peters (2022).

these problems are largely addressed in his analysis (see Section 2.2.4 for details), an issue relating to the stress pattern of the *vos* verbal form needs to be addressed.

The placement of the primary stress is the main distinguishing factor between the *tú* and *vos* verbal forms in Spanish. Consider (104) and (105).[16]

(104)   a.   tú   sábes
              2SG.NOM know.PRES.2SG

         b.   vos   sabés
              2SG.NOM know.PRES.2SG
              'you know'

(105)   a.   tú   escríbes
              2SG.NOM write.PRES.2SG

         b.   vos   escribís
              2SG.NOM write.PRES.2SG
              'you write'

In (104) and (105), in the *tú* form, primary stress is on the penultimate vowel, while in the *vos* form stress is on the final vowel in the present indicative. In other tenses, there is no clear distinction between the *tú* and *vos* form of the verb.[17] Estomba (2015) accounts for this stress pattern for *vos* by having the agreement exponents for *vos* marked with stress (e.g., *–és*), a proposal at odds with the notion that Spanish stress assignment is 'calculated' in some sense (e.g., Doner, 2017; Oltra-Massuet and Arregi, 2005). At the point this issue was first introduced, I deferred dealing with how stress obtains in the verbal domain. In the following paragraphs, I address the placement of stress in these forms and begin by looking at Baquero Velásquez and Westphal Montt (2014) who address exactly this matter in their analysis.

Baquero Velásquez and Westphal Montt (2014) analyze the Rioplatense and Chilean *voseo* facts from a phonological perspective. They argue that the *voseo* form is derived from an underlying representation that coincides with the *tú* form, with the difference in accentuation (i.e., penultimate vs. final) being captured by the phonological rule in (106).

(106)   V   →   [+accent] /]$_{\text{V-stem}}$ __   (Baquero Velásquez and Westphal Montt, 2014: 24)

Baquero Velásquez and Westphal Montt (2014: 16) note that in certain regions of the Río de la Plata the pronominal *voseo* occurs with the *tú* verbal conjugation (e.g., *espero que vos vengas temprano* 'I hope that you come early'). They note that the hypothesis stating that these forms derive from the informal second-

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[16]In the case of the *tú* forms, I depart from standard orthographic conventions by indicating stress with an acute accent.

[17]In fact, the present subjunctive exhibits a small degree of variation in the placement of stress. Typically, subjunctive forms are not distinct from *tuteo* forms (e.g. *hables*). However, stress-final subjective forms (e.g., *hablés*) do occur, but they are restricted to negative imperatives and certain types of subordinate clauses (see Johnson, 2015; Moyna, 2009; Fontanella de Weinberg, 1979 *inter alia*).

personal plural form (e.g., Morales, 1998) would have to systematically explain the changes in accentuation from final stress to penultimate stress: *vengáis → vengás → véngas*. Since this option is untenable in their view, they argue that the rule in (106) would apply to the underlying representations (indicated by forward slashes) in (107).

(107)   Derivation of *hablás* and *vivís*

	/hablas/	/vivis/
R:(106)	hablás	vivís
	[hablás]	[vivís]

This rule, then, accounts for the stress placement of the *vos* verbal form, yielding the phonetic representations (indicated by square brackets) in (107).

Although Baquero Velásquez and Westphal Montt (2014) present a novel analysis for deriving the stress pattern of both the *tú* and *vos* forms, there are several issues with their proposal.[18] They note that "las formas del [voseo rioplatense] . . . no derivan de la segunda persona plural, sino que comparten la misma representación subyacente con las formas del tuteo" (Baquero Velásquez and Westphal Montt, 2014: 24).[19] However, their underlying representation is for *vivir* 'to live' is /vivis/ instead of the expected /vives/. Since the underlying representation should be /vives/ they would then need a rule to turn –*e* into –*i*. Also, given the formulation of the rule in (106), it is not at all obvious that we should ever get *tú* forms (e.g., **sáb-es*). That is, if the underlying representation coincides with the *tú* form and the context for its application is just the vowel after the verbal stem, then this rule predicts that we should only get *vos* forms (e.g., *sab-és*). Something more would have to be said to derive the *tú* form, a fact they acknowledge but never formalize. Last, the data in (108) are hard to explain on an analysis that treats the *tú* and *vos* forms as the same at underlying representation.

(108)   a.   tú   eres
                2SG.NOM be.PRES.2SG
                'You are'

         b.   vos   sos
                2SG.NOM be.PRES.2SG
                'You are'

Given the issues we have identified, we are forced to conclude that Baquero Velásquez and Westphal

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[18]Our critiques of Baquero Velásquez and Westphal Montt's (2014) analysis are solely constrained to the Rioplatense *voseo*. The facts for the Chilean *voseo* are quite different from the Rioplatense *voseo* and may indeed be amenable to the kind of analysis that they argue for. Carefully evaluating the arguments for the Chilean *voseo* is left for future research.

[19]"The forms of the rioplatense *voseo* do not derive from the second person plural, but share the same underlying representation with the forms of the *tuteo*" [translation mine].

Montt's analysis is not an adequate account of the facts. Consequently, in what follows, I propose an account that covers the same empirical ground, without the drawbacks just discussed.

Typically, I will systematically ignore how stress is derived in the verbal domain as a more general discussion of stress would take us much too far afield of the topic of verbal morphology. This point notwithstanding, the *vos* form (e.g., *sabés* 'you know') in comparison to the *tú* form (e.g., *sábes* 'you know') seems to be marked by a difference in stress placement and thus I briefly comment on verbal stress here. In their analysis of verbal stress, Oltra-Massuet and Arregi (2005: 48) make the generalization that stress falls on the vowel preceding the syntactic node T in Spanish. Consider (109) and (110).

(109) Stress in the Imperfect

$\sqrt{\text{ROOT}}+v$	Th	T	Th	Agr
cant	á	b	a	mos

(Oltra-Massuet and Arregi, 2005: 51)

(110) Stress in the Present (1/2PL)

$\sqrt{\text{ROOT}}+v$	Th	T/Agr
cant	á	mos/is

(Oltra-Massuet and Arregi, 2005: 60)

We see that in (109) their stress generalization predicts that stress is the vowel preceding T in the imperfect, and this is also true for the first and second person plural forms of the present tense in (110). For the remaining forms of the present tense a stress-shifting rule is required to derive the correct stress placement. I leave the technical implementation of this rule aside and show its output in (111).

(111) Stress in the Present (elsewhere)

$\sqrt{\text{ROOT}}+v$	Th	T/Agr
cánt	a	s

(Oltra-Massuet and Arregi, 2005: 60)

Since a stress-shifting rule is required for second-person singular forms, Oltra-Massuet and Arregi (2005: 61) note that stress placement for *vos* must be stipulated (in their account and in the various alternative accounts they considered) because the stress-shifting rule does not apply to the *vos* form (e.g., *cantás*).

While Oltra-Massuet and Arregi's approach is novel and makes a clear prediction, there are some nontrivial objections one could make. Doner (2017: 234) points out that Oltra-Massuet and Arregi's a metrical algorithm needs direct access to the entire morphosyntactic structure, which contradicts strong modularity by allowing extensive interaction between morphosyntax and phonology. Indeed, the approach violates the well-motivated Principle of Phonology-Free Syntax (Pullum and Zwicky, 1988; Zwicky and Pullum, 1986), which states that syntactic rules do not make reference to phonology. Conversely, if the formation of their generalization is phonological, then it violates the Indirect Reference principle (Inkelas, 1989), which states

that phonological rules can only refer to syntactic structures via prosodic constituency (e.g., the phonological phrase). If the morphology module mixes syntax and phonology in this way, then the empirical observations that motivate the Principle of Phonology-Free Syntax and the Indirect Reference principle cannot be explained. Consequently, given the violation of these principles, I do not adopt Oltra-Massuet and Arregi' s (2005) account.

With respect to the contrast between *vos* and *tú* forms, I argue that the difference in stress placement between the two second-singular forms is illusory. As previously noted, Estomba's (2015) analysis misses the generalization that *–ís* is analyzable as *–í+s*. Nevertheless, I adopt that analysis, though with some critical modifications. First, I separate the feature [*], the focus feature responsible for the *vos* interpretation, from the feature bundle (i.e, [2 −PL, *]) that Estomba proposes. I take this separation to be the result of the morphological operation Fission (see Noyer, 1992). Fission accounts for situations where a single morpheme corresponds to more than one VI by creating an additional position of exponence. I, therefore, revise Estomba's proposed VI for this variety of Spanish as in (112).

(112)   Revised Vocabulary of Rioplatense Agreement

    a.   [2 −PL] ⇔ –s

    b.   [*] ⇔ [+SYLLABIC]

Concretely, in (112b), the syntactic feature [*] realizes a feature-sized morpheme with the phonological feature [+SYLLABIC]. This feature is typical for vowels, but can be used for syllabic consonants such as in the Japanese word *tabun* 'probably', which has a syllabic 'n' (i.e., ta.bu.n). The idea that underlies my proposal follows from Akinlabi (1996: 273), who presents interesting data where phonological features function as morphemes. Consider (113).

(113)   Terena

    unae   +   [+NASAL]   →   *ũnãẽ*

    boss   1SG.POSS   'my boss'

The Terena word at the right of the arrow can be analyzed as the association of a base form with the feature [+NASAL], an autosegment representing the morpheme for the first person singular.

Next, stress in the verbal domain is not inherently a part of the AGR morpheme but rather it is derived (see Doner, 2017). In autosegmental phonology (Clements and Keyser, 1983; Goldsmith, 1990) rather than segments being the smallest units of realization, distinctive features are used (e.g., [+voiced]), but in the interest of space, I use the IPA as a convenient shorthand here. Consider (114).

(114)   Description of *Vos* Metrical Structure

```
                                      *
metrical tier:        *         *         *
CV tier:          C   V   C   V   C   V
                  |   |   /\  |   |   |
segmental tier:   h   a  (b l  á   s   ∅)
```

After fission has taken place and the relevant exponents are inserted we get the information represented on the segmental tier. Syllabification would divide individual segments up into units that would be later grouped into prosodic feet; feet are represented with brackets. Stress is then assigned to the left-most element in a foot, starting from the right edge of the word. The contribution of the *vos* feature [*] is the phonological feature [+SYLLABIC], which licences the final V position. This feature cannot be pronounced and it is therefore phonetically null. It does not end up being realized overtly as a least marked, or unmarked, vowel because even in that case manner features (e.g., vowel height or front-back distinctions) would be required. In (114), the placement of the primary stress receives a straightforward analysis. The stress is expected on the theme vowel in the *vos* form, which underlyingly is the penultimate vowel, the same pattern of stress as the *tú* form. The upshot to this analysis is that the placement of stress does not have to be stipulated and follows from the general mechanism of stress assignment in Spanish.[20,21]

Last, this analysis has the advantage of also explaining the previously noted discrepancy between *(tú) víves* and *(vos) vivís* with respect to theme vowels. Here I am assuming Arregi's (2000) vowel lowering rule that changes an 'i' to an 'e' when 'i' is preceded by a stressed vowel in the verbal domain. I provide a derivation of the *tú* and *vos* forms in (115).

(115)   Derivation of *víves* and *vivís*

	tú	vos
	/vivis/	/vivisV/
Str	vívis	vivísV
VL	víves	——-
	[víves]	[vivís]

The application of the vowel lowering (VL) rule is ordered so that stress assignment *feeds* it. For the *tú* form, the context of the rule is met, yielding the output *(tú) víves*. However, given the details of my analysis, the underlying representation for *vos* contains a phonetically unrealized V position and when stress is applied the penultimate vocalic element is the one that receives the primary stress, yielding the output *(vos) vivís*. In this case, since there is no 'i' preceded by a stressed vowel, the VL rule does not apply.

3.3.2 Equatoguinean Spanish

Equatoguinean Spanish is the variety of Spanish spoken in Equatorial Guinea and is the only Spanish variety that holds status as an official language in Sub-Saharan Africa (Lipski 2004: 115).[22]

Figure 3.1: Equatorial Guinea

There are some notable phonological and lexical features that constitute the Equatoguinean variety of Spanish (see Lipski, 1985, 2008, 2014). For our purposes, the most interesting aspect of Equatoguinean Spanish is its unique pattern of second-person verbal agreement. Lipski (1985: 115, 2004: 122, 2008: 97) observes that the combination of *usted* plus the second singular verb form is quite common. Found less frequently is the combination of *ustedes* plus second person plural verb form, as well as *vosotros* plus the third person plural verb form (though the described situation is not representative of the Spanish of all speakers of this variety). In (116), I focus on those patterns that are distinct from other varieties of Spanish such as Peninsular Spanish which can be seen in (117).

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[22]Map source: Equatorial Guinea GQ-EPS-02-0001 available at https://freevectormaps.com/equatorial-guinea/GQ-EPS-02-0001?ref=atr

(116)	The Equatoguinean Pattern	(117)	The Peninsular Pattern
	a. usted hablas		a. usted habla
	b. ustedes habláis		b. ustedes hablan
	c. vosotros hablan		c. vosotros habláis

With respect to if *usted* and *tú* contrast for formality, Lipski (2008: 97) notes that this kind of mixing or 'categorical insatiability' though frequent is not a part of every speaker's idiolect. From this statement, I infer that the Equatoguinean speech community does have a contrast in formality which is not always reflected in pronoun and agreement (for some speakers). The picture painted is seemingly one of diglossia, a situation in which two languages (or two varieties of the same language) are used under different conditions within a community, often by the same speakers. I suspect that there might be more variation or nuance at play than (116) would suggest but the exact range of the variation is unfortunately not discussed in detail in the literature. Indeed, Lipski (2000) notes the dearth of work from a descriptive linguistic perspective.[23]

Before looking at these patterns in theoretical terms, the Vocabulary items for agreement germane to the present discussion are repeated in (118). That is, these are the items needed to account for second person exponents.

(118) Spanish Agreement (second person only)

  a. $[2 -\text{PL}] \Leftrightarrow -\text{s}$

  b. $[2 +\text{PL}] \Leftrightarrow -\text{is}$

  c. $[-\text{PL}] \Leftrightarrow -\emptyset$

  d. $[+\text{PL}] \Leftrightarrow -\text{n}$

Typically, *usted* has second person reference but third-person morphosyntax, a holdover from its historical source *vuestra merced* 'your grace' (Resnick and Hammond 2011: 184); this would necessitate some kind of impoverishment rule to remove second-person form the feature bundle (e.g., $2 \rightarrow \emptyset$ / [__, $\pm$PL, FORMAL]).[24] The effect of this rule is shown under the Standard heading of the example (119). However, for Equatoguinean Spanish the agreement marker for *usted* and *tú* can be the same and this is illustrated under the Equatoguinean heading of the example in (119).

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[23]The classic definition of diglossia (e.g., Fishman, 1967) is that it arises from generations of societal multilingualism, resulting in two varieties distinguished as High (e.g., the language of the elite) and Low (e.g., the local vernacular) that are spoken in distinct domains of interaction. It is possible that Equatoguinean Spanish is the Low language and Standard Spanish the High Language, according to the previously mentioned criteria but the documentation for Equatoguinean Spanish is so sparse that there might not be sufficient evidence to call this situation diglossic. Perhaps, at most, based on the extant literature, we can reliably say that Equatoguinean Spanish is a vernacular variety.

[24]see Section 4.1.1 for further discussion of the Impoverishment analysis.

(119)　Second-Singular Agreement

	Standard		Equatoguinean	
	AGR	AGR	AGR	AGR
	|	|	|	|
	[φ: **2.−PL**.INFOR]	[φ: ~~2.~~**−PL**.FOR]	[φ: **2.−PL**.INFOR]	[φ: **2.−PL**.FOR]
	|	|	|	|
	s	∅	s	s

Concretely, the vocabulary item in (118a) results in the same agreement marker (i.e., *–s*) being inserted for both *tú* and *usted*.

　This pattern is also replicated in the plural forms in (120). That is, no impoverishment rule would need to apply for the *ustedes+is* pattern, nor would it apply for *vosotros+is* the pattern. Again, in the standard case, an impoverishment rule is required to remove second-person from the feature bundle. The effect of this rule is shown under the Standard heading, and the Equatoguinean pattern is illustrated under the Equatoguinean heading.

(120)　Second-Plural Agreement

	Standard		Equatoguinean	
	AGR	AGR	AGR	AGR
	|	|	|	|
	[φ: 2.**+PL**.INFOR]	[φ: ~~2.~~**+PL**.FOR]	[φ: 2.**+PL**.INFOR]	[φ: **2.+PL**.FOR]
	|	|	|	|
	is	n	is	is

Here, the vocabulary item in (118b) results in the same agreement marker (i.e., *–is*) being inserted for both *vosotros* and *ustedes*. For the second plural, for (116c) it has been noted that *vosotros hablan* occurs infrequently and *ustedes habláis*, as in (116b), is by far the more common pattern or usage. In this situation, the impoverishment rule that produces the *ustedes+n* pattern can be applied to informal second plural agreement nodes to produce the infrequent *vosotros+n* pattern. All other verbal agreement falls out from the agreement Vocabulary Items and impoverishment rules proposed in Section 3.2.2. These data demonstrate the rather loose connection between pronouns and verbal agreement discussed earlier and add further support to the approach to agreement I have adopted in this dissertation.

3.4 Summary

Having concluded the discussion of these forgotten varieties of Spanish, I now summarize what was accomplished in this chapter:

1. I addressed some problematic assumptions which have been implicated in the analysis of Spanish verbs and show that we can cover at least as much ground without them.

2. I simplified the multiple existing agreement analyses into a single coherent analysis, one that is also consistent with the broader theoretical context regarding agreement.

3. I considered various issues in the verbal paradigms of understudied Spanish varieties.

The next chapter of this dissertation addresses the morphology of the indicative and subjunctive verbal forms.

4 | The Indicative and the Subjunctive

> The task is not so much to see
> what no one has yet seen; but to
> think what nobody has yet
> thought, about that which
> everybody sees.
>
> Erwin Schrödinger

Having completed my analysis of Spanish verbal class and agreement, this chapter details my analysis of the indicative and subjunctive verbal morphology. For the indicative, I address the morphosyntax of the present, the imperfect, and the simple past – I leave an analysis of the future and the conditional to Chapter 5. For the subjunctive, I address the morphosyntax of the present subjunctive and the two forms of the past subjunctive.

4.1 The Indicative

4.1.1 The Present

My view of the present tense is presented in (121). I largely follow Arregi (2000), but I do modify that analysis to account for some theoretical and empirical concerns that were not considered in Arregi's analysis.

(121)   Present paradigm: *hablar* 'to speak', *comer* 'to eat' and *escribir* 'to write' (root –TH –T –agr)

	−PL			+PL		
1	habl –a –o	com –e –o	escrib –i –o	habl –a –∅ –mos	com –e –∅ –mos	escrib –i –∅ –mos
2	habl –a –∅ –s	com –e –∅ –s	escrib –i –∅ –s	habl –a –∅ –is	com –e –∅ –is	escrib –i –∅ –is
3	habl –a –∅ –∅	com –e –∅ –∅	escrib –i –∅ –∅	habl –a –∅ –n	com –e –∅ –n	escrib –i –∅ –n

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The underlying forms of the present consist of a root followed by the theme vowel followed by tense and agreement. In the normal course, tense is null and a separate exponent from agreement, save for the first singular form where these two categories are jointly expressed by the exponent –*o*. However, given the organization of the paradigm in (121), there are several minor discrepancies to be accounted for. First, we must address the missing 'i' from the second plural form of Class III verbs (e.g., *escribís*). Second, we must address why Class III verbs will surface with an 'e' theme vowel even though my analysis takes it to be an 'i' underlyingly (e.g., *escribes*, *escribis). Third, we need to account for the missing theme vowel for the first singular forms (e.g., *hablo*). Several morphophonological solutions to the problems mentioned above have already been proposed.

First, the missing 'i' from the second plural form can be accounted for by a series of phonological processes that delete the 'i' that is a part of the agreement exponent (i.e., –*is*). Oltra-Massuet and Arregi (2005: 60) point out, in a footnote, that the vowel of the second plural agreement exponent would be syllabified as a nucleus, but this nucleus would be in an unstressed position and therefore subject to a rule that would turn it into a glide when preceded by a vowel (i.e., [par.tí.is] → [par.tíjs]).[1] The application of the preceding rule feeds the deletion of the glide as Spanish does not allow long vowels (i.e., [par.tíjs] → [par.tís]). Thus, the deletion of the 'i' from the agreement exponent –*is* falls out from regular phonological processes in the language and is not, otherwise, unexpected.

Second, the issue of Class III verbs surfacing with an 'e' theme vowel can be resolved by adopting Arregi's (2000)'s lowering rule in (122). The rule states that if 'i' follows a stressed vowel, ignoring any intervening consonants, then it is lowered to an 'e'.

(122)   (Theme) Vowel Lowering (VL) :

$\qquad$ i → e / $\acute{V}C_0$ _   (Arregi 2000: 16)

Since the analysis of the deletion of the 'i' in –*is* appears in Oltra-Massuet and Arregi (2005), the rule in (122) and the rules implicated in the process described in the preceding paragraph were not originally ordered. However, leaving these rules unordered is problematic. Rule ordering is necessary when the application of a particular rule either generates a phonological form that triggers another rule or removes a context in which another rule could have applied, resulting in an incorrect surface form. The two rules need to be ordered less the application of the rule in (122) *counterbleed* the application of the process for deriving *partís*. In a counterbleeding order the application of rule B, (122) in this case, prevents rule A from being able to apply; in the current example, this would yield ∗*parties* as the output.

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[1] See J. Harris (1969: 22- 36) for a formulation of these facts. For our purposes, the precise technical formalization of the gliding rule is not as important as the fact that the 'i' from the agreement exponent is the one that is deleted.

Third, the issue of the missing theme vowel for the first singular forms can be resolved with the deletion rule in (123), a dissimilation process which serves to resolve illicit vowel hiatus – this rule only applies to non-high vowels.[2]

(123)   (Theme) Vowel Deletion (VD) :

V[–High] → ∅ / _ V[–High]   (Arregi 2000: 17)

It is worth noting that resolving these kinds of illicit vowel hiatus sequences is not a Spanish-specific phenomenon and Vigário (1999: 223), for example, has proposed a deletion rule to address this exact issue in Portuguese. The rule in (123) also needs to be ordered with the rule in (122) to derive the correct outputs. For these phonological rules, only the order on the left-hand side of (124) is able the produce the correct surface forms.[3]

(124)   Phonological Derivation

	/cantao/	/comeo/	/partio/		/cantao/	/comeo/	/partio/
stress	cántao	cómeo	pártio	VD	canto	como	——
VL	——	——-	párteo	stress	cánto	cómo	pártio
VD	cánto	cómo	párto	VL	——	——	párteo
	[cánto]	[cómo]	[párto]		[cánto]	[cómo]	∗[párteo]

Here the Vowel Lowering rule feeds the Vowel Deletion rule which can be observed for class III verbs. In a feeding order, the output of one rule (i.e., the Vowel Lowering rule) creates the input for the Vowel Deletion rule.[4] With this last phonological rule in place, I have now accounted for the three issues that were identified earlier.[5]

I now move on from discussing the phonology responsible for deriving the surface forms of verbs in the present tense, to discuss the morphological structure. Specifically, the next problems addressed are related to the structure and interpretation of T, which is expressed by a null exponent (i.e., –∅). There are two main accounts proposed for the features of the present tense in Spanish: Arregi (2000) and Cowper (2005). Arregi

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[2]Bermúdez-Otero (2013) takes a slightly different view on the formulation of the observed deletion. However, I remain agnostic about which approach is better, for my purposes it is a distinction without much of a difference.

[3]There are, of course, other logical possibilities for the order of the three rules not shown here (i.e., Stress/VD/VL, VL/Stress/VD, VL/VD/Stress, VD/VL/Stress). However, none of these orders generate the right surface form either.

[4]Though see Bermúdez-Otero (2013: 37) for another formulation of the observed vowel deletion.

[5]The application of the vowel lowering rule and the theme vowel deletion rule seem to result in an ordering paradox. For the deletion rule to apply to [i], [i] must lower, but [i] only lowers post stress, cf. (118), and before [i] deletes. However, given Doner (2017) stress algorithm which is adopted in this dissertation the stressed syllable isn't penultimate and so the lowering rule would not apply bleeding the application of the deletion rule. If we adopt Bermúdez-Oteros 2013 view that stress assignment is cyclical, then a stress would be assigned to the root domain allowing these rules to apply as stated. The head responsible for introducing the surface stress pattern is only relevant on the second cycle and which provides a resolution to the potential paradox.

([2000](#)) has a feature for the present but he assumes it deletes in the morphology because it is unmarked. In contrast, Cowper ([2005](#)) deals with the unmarked nature of the present tense in a different manner. She argues that in the present T is unmarked and when the clause is temporally anchored via the feature [DEIXIS] it returns a simultaneous interpretation. These two analyses present two options: under Arregi's analysis the feature is semantically contrastive but is not active in the morphology and under Cowper's analysis the feature is not semantically contrastive but it is an open question as to whether it is morphologically active or not. I argue that neither of these approaches is quite adequate. The present feature must be both semantically and morphologically active since, as I have argued previously the vocabulary item in [(125)](#) must make reference to it:

(125)   [PRES, 1 –PL] $\Leftrightarrow$ –o / [DEIXIS]

Accordingly, I propose the structural analysis in [(126)](#) where the T in the present tense has a [PRESENT] feature.

(126)   The Present Tense
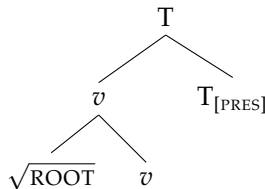
This analysis follows Cowper ([2005](#)) in that a clause is temporally anchored to the time of utterance via the feature [DEIXIS], and it differs in that [PRES] is responsible for the ambiguous reading of the present in Spanish (e.g., *toco la guitarra* 'I (am) play(ing) the guitar'). For Cowper ([2005](#)), T is unmarked in the present and the clause anchored by [DEIXIS] returns a *simultaneous* interpretation. However, this implies that the event must occur at the time of utterance. However, if [PRES] denotes that the event *holds* at the time of utterance, then it is ambiguous if the event occurs (i.e., simultaneous) then or is simply true, but not happening then; the interpretations are disambiguated contextually. Last, for the insertion of a present tense exponent, I take it to get a default zero exponent. Trommer ([2012](#)) argues that if there is no realization rule for some morpheme, then the morpheme is exponed via an elsewhere zero, a process he calls *Wu Wei zero-Exponence*. It is also quite possible that there is simply no morph to expone for the present in which case there would be no default zero exponent – there does not seem to be any particular upshot to favour one approach over the other here.

Before concluding the discussion of the present tense, the last concern to be addressed is that of agreement 'mismatches' with *usted* 'you'. Den Dikken (2011: 862) points out that there can often be mismatches between the reference of a given pronoun and the morphological marking thereof. This mismatch is typical of polite second-person pronouns such as Dutch *U* or German *Sie*, which are both third-person in their syntax. The same is true of *usted* in Spanish. Resnick and Hammond (2011: 184) explain that *usted* originates from *vuestra merced* 'your grace' which is etymologically third-person from a morphosyntax perspective even though the form denotes a second-person reference. This phenomenon can be easily illustrated in Latin American Spanish since the 2PL and 3PL forms are identical morphologically. Consider (127).

(127)   a.   3.PL $\sqrt{cant}$–a$_{\text{TH}}$–$\emptyset_{\text{M}}$–$\emptyset_{\text{T}}$–n$_{\text{AGR}}$
         b.   2.PL $\sqrt{cant}$–a$_{\text{TH}}$–$\emptyset_{\text{M}}$–$\emptyset_{\text{T}}$–n$_{\text{AGR}}$

J. Harris (1998: 31) observes that Latin American varieties "systematically lack second person plural morphology: every semantic/syntactic second person plural item is realized overtly with third-person plural morphology". This description corresponds to Harley's (2008: 255) definition of a meta-syncretism, a syncretism that holds for a particular set of features in a language, regardless of any particular instance of the syncretism.

Concerning this syncretism, Madrid Servín (2005) notes that only the first-person plural Vocabulary Item (i.e., [1 +PL] ⇔ –*mos*) is marked for person, and there is no second-plural Vocabulary Item (e.g., [2+PL] ⇔ –*is*) to block the insertion of –*n* in Latin American Varieties of Spanish. This syncretism is not restricted to agreement affixes and it also affects forms such as clitics in (128) and possessive determiners in (129).

(128)   Dative Clitics

	SG	PL
1	me	nos
2	te	
		les
3	le	

(129)   Possessive Determiners

	SG	PL
1	mi	nuestro/a
2	tu	
		su
3	su	

Generalizing Madrid Servín's approach to these data, only the first-person plural clitic and determiner would be marked for person, and there is no second-plural feature in the morphology due to Impoverishment to block the insertion of *les* and *su*. J. Harris (1998) proposes the Impoverishment rule in (130) that removes the second-person feature from plural agreement nodes.[6]

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[6]We have generalized the rule abstracting away from each author's precise technical implementation.

(130)   Second Person Plural Impoverishment:

$2 \rightarrow \emptyset / [\_\_ +\text{PL}]$ (J. Harris, 1998: 32)

The impoverishment rule in (130) makes second-person plural and third-person plural morphemes identical prior to Vocabulary Insertion, resulting in identical morphological forms in Latin American Spanish. Remember that impoverishment is a purely morphological operation and it does not affect the semantic representation.

However, neither analysis accounts for the fact that, in the singular, *usted* and the third person forms are identical in terms of verbal agreement (clitics and possessive determiners). Consider (131).

(131)   a.   tú habla-s

         b.   usted habla-∅

         c.   él/ella habla-∅

The main difference here is that Latin American Spanish does exhibit a full range of second-person singular morphology, but *usted* does not use it. This requires us to be able to separate the two singular second-person forms so that only *usted* ends up behaving like a third-person form. Arregi and Nevins (2018) exploit the property of formality (*tú/vos* is informal singular and *usted* is formal singular) to propose the impoverishment rule in (132).

(132)   Formal Impoverishment:

$2 \rightarrow \emptyset / [\_\_ \pm\text{PL}, \text{FORMAL}]$

With this rule we are now able to fully capture the empirical facts as, –∅, the VI for [–PL], can be inserted in the resulting [–PL, FORMAL] node. Since this rule can account for the syncretism in the second singular and second plural it is the optimal solution based on empirical adequacy.

In Peninsular Spanish, there is a four-way contrast in number and formality in the agreement for the second person. The application of the rule in (132) to several agreement nodes is illustrated in (133).

(133)   Second-Person Agreement: Peninsular Spanish

	Singular		Plural	
AGR	AGR	AGR	AGR
|	|	|	|
[φ: ~~2~~.**SG**.FOR]	[φ: 2.**SG**.INFOR]	[φ: ~~2~~.**PL**.FOR]	[φ: **2**.**PL**.INFOR]
|	|	|	|
$\emptyset$	s	n	is

This rule applies to all AGR nodes that contain [FORMAL] in their structural description and its application is indicated with crossed-out second-person features. For any informal meaning, this rule would not apply as the context of its application is not met. Without this rule, in Peninsular Spanish, one would expect *–s* to be inserted into all nodes containing second-singular features (i.e., *∗usted hablas*) and for *–is* to be inserted into all nodes with second-plural features (i.e., *∗ustedes habláis*).

4.1.2 The Imperfect

In this section, I take a closer look at the imperfect. I begin the discussion by briefly reviewing the details of Arregi's (2000) analysis in (134). The 1PL form of *cantar* 'to sing' and *temer* 'to fear' are given in (134a) and (134b), respectively.

(134)   Morphological form of the Imperfect (Arregi 2000):

    a. $\sqrt{cant}$–a$_{TH}$–b$_T$–a$_{TH}$–mos$_{AGR}$

    b. $\sqrt{tem}$–í$_{TH}$–$\emptyset_T$–a$_{TH}$–mos$_{AGR}$

For Arregi (2000), without the theme vowel position between T and AGR, the morphological transparency between these two Imperfect forms is lost. Based on this transparency, he proposes the following Vocabulary items:

(135)   a.   [PAST] $\Leftrightarrow$ –b / a$_{TH}$ __

    b.   [PAST] $\Leftrightarrow$ –$\emptyset$

While this type of analysis is capable, in principle, of accounting for the empirical facts, some considerations force us to reevaluate several analytical choices. Indeed, as I have previously discussed in Section 3.1.2, there are reasons to believe that the multiple theme vowel proposal is theoretically undesirable. To recap, the theme vowels posited for functional heads in the TAM domain are purely morphological and contribute nothing to the syntax or semantics and cannot be associated with a consistent meaning (even a purely

grammatical one), therefore an analysis that assimilates them to Tense and Mood markers is untenable.

When these concerns about the multiple theme vowel analysis are taken together with my analysis of agreement markers in Spanish, the following organization of the imperfect paradigm emerges:

(136)   Imperfect paradigm: *hablar* 'to speak' and *comer* 'to eat' (root –TH –T –agr)

	−PL		+PL	
1	habl –a –ba –∅	com –i –∅a–∅	habl –a –ba –mos	com –i –∅a –mos
2	habl –a –ba –s	com –i –∅a–s	habl –a –ba –is	com –i –∅a –is
3	habl –a –ba –∅	com –i –∅a –∅	habl –a –ba –n	com –i –∅a –n

There is still a b ~ ∅ alternation, but with multiple theme vowel positions ruled out, and my previous points about agreement taken into account, this now appears more clearly as a phonological consideration rather than a purely morphological one. Accordingly, I pursue this alternate analysis, as represented in (136), by considering how the general properties of syllabification and stress assignment bear on these data, and by looking at the historical literature about the formation of the imperfect in Spanish.

Concerning syllabification, Arregi (2000: 6) argues in a footnote that the *–i* theme vowel in the imperfect must be *exceptionally* marked as syllabic, because it is in a position where it should form a complex nucleus with the following vowel (i.e., *temía* is [te.mi.a] not *[te.mia]). I argue that the syllabification facts here fall out from the general process of syllabification in Spanish; therefore, this case is not exceptional in any relevant sense. My claim is that there is still an underlying onset consonant in the final syllable of a form like *temía*, and I appeal to a ghost segment analysis to account for the data. Szpyra (1992) explains that ghost segments are segments that have certain phonological effects but never surface overtly. Consider (137), an example from French.

(137)   a.   nos héros [noero] 'our heroes'
          b.   *nos héros [nozero] 'our heroes'

The liaison of the final [z] sound, as in (137b), is typical of French phonology, though ungrammatical in this case, and, in (137a), the grammatical form, it does not occur. Fagyal et al. (2006) note that, for French, it has been argued that a silent letter (i.e., *h*-aspiré) between a word's first vowel and the final vowel or consonant of the preceding word is responsible for stopping the processes of contraction and liaison from occurring.

Turning to Spanish, historically, *–ba* was used for all three verbal classes (e.g. *temíbamos* and *hablábamos*) and the [b] of the imperfect was lost in the following context: / í _ a (Resnick and Hammond, 2011: 187). Similar to the analysis proposed for French, I claim the deleted [b] in the Spanish imperfect, for Class II/III

verbs is a ghost segment. Consider (138).

(138) a. [DEIXIS, PRECEDENCE] ⇔ –Ca / CL:¬1 __

       b. [DEIXIS, PRECEDENCE] ⇔ –ba

The default exponent for the imperfect is *–ba* and the *–Ca* exponent is specified for an incompatibility with Class I. Concretely, the exponent in (138a) has a C position without any associated phonetic content on the CV-tier (see Clements and Keyser, 1983 for a discussion), appearing next to the overt segment *–a*, as in (139).

(139) b-aspiré

     C V

         |

         a

Next, I show that this ghost segment neatly captures both syllabification, though it never surfaces overtly. Consider (140).

(140) a. /caminaba/ $\overrightarrow{\text{SYL}}$ ca.mi.na.ba = [caminaba]

       b. /temiCa/ $\overrightarrow{\text{SYL}}$ te.mi.Ca = [temía]

With regard to syllabification, if there is ghost segment in (139), then there is nothing exceptional happening, as the [i] is never in a position where it is expected to form a complex nucleus with the following vowel.

    For stress assignment, I follow Doner (2017) and take prosodic feet in Spanish to be constructed from the right edge of the word with stress being assigned to the left-most element in a foot. The right edge of the stress domain is indicated by a right square bracket. She argues that the stress domain in both verbs (and non-verbs) is lexically parametrized either to include the entire word, or to be limited to the stem, excluding morphemes which encode only φ-features. In examples (141) to (143), the various edge parameters proposed to account for verbal stress are given.

(141) Edge parameter: RRR(S)

            x

       x   (x   x**)**   x

      can. ta. ba.]   mos
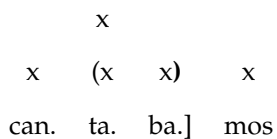
(142) Edge parameter: LLR(S)

```
                x
        (x    x    (x
        can.  ta.  re]
```

(143)   Edge parameter: RRR(W)

```
                x
        x     (x    x )
        can.  ta.]  mos
```

The metrical algorithm can then select either the stem in (141) and (142), or the word in (143). The stress patterns in all Spanish verbs are derivable for these three parameters and Doner takes these parameters to be introduced via lexical diacritics on the relevant tense exponents. It might seem simpler to construct prosodic feet in the opposite direction but this would yield the wrong stress pattern for both first-person plural forms (i.e., *há.bla.ba.mos* and *há.bla.mos*), because the stress would still need to be assigned to the left-most foot.

In a form like *temía* 'I used to fear', the accent marking is structure-preserving – it preserves the foot, the locus of nuclear stress – and ensures that the two vowels do not form a diphthong, as they are a part of different feet.[7] This is not an *ad hoc* mechanism, but rather a general mechanism in Spanish that marks accented or stressed vowels with unique derivational histories. Consider (144).

(144)   a.   1PL IMPERFECT: ha.(blá.ba.) mos = *hablábamos*

        b.   1PL PRESENT: ha.(blá. mos) = *hablamos*

Under the assumption that RRR(W) is the unmarked case for verbs since the simplest morphological form (i.e., the present) appears with it, when stress occurs in the expected position (i.e. penultimate), the vowels bear tone but do not require an orthographic accent. Conversely, for the imperfect the edge parameter RRR(S) is sensitive to the stem and ignores agreement suffixes. As a result, the stress is not in the generally expected place and the stressed vowel must be accented.

Before closing out the discussion of the imperfect, I must discuss the verb *ir* 'to go' which seems at first blush to be an exception as this form retains the [b] segment of the –*ba* exponent (i.e., *íbamos* 'we used to go' vs. *íamos*). However, in order to count as an exception *ir* would need to be considered a Class III verb, and is not obvious that this is the case. María Cristina Cuervo (p.c.) points out that a Class I analysis more consistent for *ir* not only with the imperfect (e.g., *íbas*, *íbamos*) but also the present (e.g., *vas*, *vamos*). The [i-]

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[7]The function of the accent-marked tone-bearing vowel can be considered the requirement of a faithfulness constraint of a particular sort (e.g., MAX-IO$_{Foot}$).

in *ir* seems to belong to the $\sqrt{\text{ROOT}}$ rather than the theme vowel, and it is replaced by [b] in several forms (e.g., *voy*, *vayamos*). If *ir* is a Class I verb, as the data suggest, then we must explain why the –*a* theme vowel does not appear since the expected form (e.g., **iábamos*) is ungrammatical. I address the lack of theme vowel for *ir* with the impoverishment rule in (145).

(145)   TH $\rightarrow \emptyset$ / $\sqrt{\text{I}}$ __ [PRECEDENCE]

The rule in (145) takes care of this problem by deleting the inserted TH-node in the context of the imperfect feature [PRECEDENCE].

Interestingly, Pato (2018) notes that the –*ba* of imperfect is also retained for Class II and Class III in some varieties of Spanish (e.g., the Canary Islands), though its presence is more commonplace with verbal roots that end in a vowel. Consider (146).

(146)   a.   Yo queriba   ser   la chica de tus   sueños.
               I   want.IMPF.1SG be.INF the girl   of your dreams
               'I wanted to be the girl of your dreams.'

         b.   Había   un barco que te   llevaba   todos los días a Mahón y   te
               have.IMPF.3SG a   ship   that you take.IMPF.3SG every day   to Mahon and you
               traíba.
               bring.IMPF.3SG
               'There was a ship that took you every day to Mahon and brought you back.'

In this case, Pato argues that the retention of the exponent –*ba* can be understood on the basis of analogy with the retained exponent in the *ir* forms of the imperfect. Millar and Trask (2015) notes that analogical changes are often not single step processes, but rather multiple irregularly applied, idiosyncratic changes that 'match' another form or a pattern observed in other forms perceived to be similar. Here the analogical process translates to a generalization to vowels and a neutralization of class contrasts, in addition to other potentially relevant changes.

As first noted in Section 1.3.1, the dissertation adopts the temporal analysis of the imperfect. Soto (2014: 167) explains that the imperfect communicates that an event exists side-by-side with another past event and for this reason the tense is sometimes referred to as the copretérito co-preterite. Consider (147).

(147)   Cuando entró,   tocaba   la guitarra
         When   enter.PRET.3SG play.IMPF.1SG the guitar
         'When he came in, I was playing guitar.'

This position, however, is not without controversy. Since the 1900s the aspectual analysis – one that treats the difference between the simple past and the imperfect to be a difference in Aspect rather than Tense –

has increasingly become seen as the standard analysis. However, in the progressive (e.g., *estoy habl-a-n-do* I am speaking) the *–n* exponent can be analyzed as a marker of aspect when compared to the perfect (e.g., *he habl-a-ø-do* I have spoken); under this approach the fact that the sequence *–do* occurs in both the past and present participle is not accidental (see Section 7.3.1 for further discussion). If an Asp head were present for the imperfect forms, then, one might expect this *–n* exponent to show up in these cases as well. The explanation for why this should be the case follows form Cowper (2005: 30) who argues that "the Spanish imperfect does not spell out any aspectual features, instead receiving its apparently aspectual force from the fact that it contrasts with the preterite, which spells out the feature [ENTIRETY], a dependent of [PRECEDENCE] in the narrow tense system". Under this analysis, which is adopted in the dissertation, the relevant features then are a property of the Tense head.

4.1.3   The Simple Past

My analysis of Spanish's indicative morphology continues and, in this section, I address the morphology of the simple past. For the simple past, previous analyses have advocated for a fusion-based analysis of the T and AGR node (e.g., Arregi, 2000; Madrid Servín, 2005). However, as I have previously argued, this particular view of the morphology of the simple past is untenable. I refer the reader to Section 3.2.2 for the details of that discussion. However, based on the conclusions made there, I take (148) to be the correct paradigmatic organization of the simple past.

(148)   Preterite paradigm: *hablar* 'to speak' and *comer* 'to eat' (root –TH –T –agr)

	−PL		+PL	
1	habl –a –e –∅	com –i –i –∅	habl –a –∅ –mos	com –i –∅ –mos
2	habl –a –ste –∅/s	com –i –ste –∅/s	habl –a –ste –is	com –i –ste –is
3	habl –a –o –∅	com –i –o –∅	habl –a –ro –n	com –ie –ro –n

These data also require the vowel deletion rule and the process that prevents long vowels that were first introduced in Section 4.1.1. Vowel deletion, which deleted the first non-high vowel of a two non-high vowel sequence, would apply to the first singular (e.g., *hablé*) and third singular (e.g., *habló*) forms of Class I verbs and the process that reduces long vowels would apply to the first singular form of Class II and III verbs (e.g., *comí*).

While I concluded, in Section 3.2.2, that we are dealing with a form of temporal allomorphy for exponents such as *–ste*, a choice motivated on maintaining the consistent 1-3 agreement syncretism in Spanish, I did not address the details of this solution then. However, I shall endeavor to do so now and, accordingly,

I propose the Vocabulary Items in (149) to account for the observed temporal allomorphy.

(149)   Preterite

    a.   [DEIXIS, ENTIRETY] ⇔ –e /[1SG]

    b.   [DEIXIS, ENTIRETY] ⇔ –i / [1SG] _ { List A }

    c.   [DEIXIS, ENTIRETY] ⇔ –∅ / [1PL]

    d.   [DEIXIS, ENTIRETY] ⇔ –ro / [3PL]

    e.   [DEIXIS, ENTIRETY] ⇔ –o / [3SG]

    f.   [DEIXIS, ENTIRETY] ⇔ -ste

The realization of T, with its feature [ENTIRETY], in the simple past tense is conditioned by person and number distinctions. Here I treat the *–i* as an irregular exponent of the [1SG] and list the context in which this would occur, in the same fashion that the irregular plural *–en* would have its context of occurrence listed (see for example Halle and Marantz, 1993). Concretely, List A refers to Class II and Class III verbs minus the exceptions I note in the following paragraph. Finally, my account takes *–ste* to be the default, which allows us to impoverish the second singular AGR node in the simple past as in (150).

(150)   Perfective Impoverishment:
    2 → ∅ / [ENTIRETY] + [__ –PL]

The rule in (150) applies to the standard version (e.g., *hablaste*) but it would not apply at all for the non-standard version (e.g., *hablastes*) nor would it apply in the plural (e.g., *hablasteis*). The rule removes the second person specification in the morphology but does not affect the semantics. Therefore, the second singular interpretation is retained. This gives us the *appearance* of a perfective second-person allomorph. Thus, this analysis captures the observed pattern without the form-meaning inconsistencies previously noted for *–ste*. That is, analyses that treat *–ste* as directly encoding singular agreement force a state of affairs where the informal second person form is both singular and plural at the same time (i.e., *-ste* = SG + *-is* = PL).

    There are also several verbs (e.g., *andar* 'walk' and *querer* 'want') that do not conform to the typical pattern in the simple past.[8]

(151)   Irregular Preterite paradigm: *andar* 'to walk' and *querer* 'to want' (root –TH –T –agr)

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[8]A full list of verbs with stem alternations in the simple past can be found in Section 7.1 of Chapter 7 which closely examines various stem alternations in Spanish.

	−PL		+PL	
1	anduv –i –e –∅	quis –i –e –∅	anduv –i –∅ –mos	quis –i –∅ –mos
2	anduv –i –ste –∅/s	quis –i –ste –∅/s	anduv –i –ste –is	quis –i –ste –is
3	anduv –i –o –∅	quis –i –o –∅	anduv –ie –ro –n	quis –ie –ro –n

The main irregularities among these verbs are that they all have irregular stem allomorphs, and that the first-singular and third-singular forms have stress on the stem whereas their canonical equivalents typically have final stress.[9] Additionally, the two Class I verbs (i.e. *andar* and *estar*) use the *–i* theme vowel here which is not typical of the class. In these two cases, the stem is also augmented with *–uv*, which I take to be responsible for the change in class. On the issue of stress placement and its effect, I make use of the vowel lowering rule that was proposed for the present tense as well as the vowel deletion rule (see Section 4.1.1). A sample derivation is given in (152), bearing in mind that the ordering of these rules must be the one previously argued for.

(152)   Phonological Derivation

	/escribi/	/quisie/
stress	escribí	quísie
VL	——	quísee
VD	——	quíse
	[escribí]	[quíse]

Arregi (2000: 23) notes that the fact that the vowel lowering rule also captures the pattern of irregularity exhibited by these forms can be considered strong independent evidence in support of these rules and for the analysis presented here.

4.2   The Subjunctive

4.2.1   An Overview of the Data

Broadly speaking, the subjunctive can be divided into the intensional (or lexically-selected subjunctive), the polarity subjunctive and the operator subjunctive – a term I am using here as a catch-all for other subjunctive triggers. I begin the survey of the relevant data by looking at the intensional subjunctive.[10]

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[9]Some authors have taken the use of *–e* for the first-person singular with Class II and III to constitute an irregularity. However, given the overall regularity of the past temporal inflection, it strikes me as somewhat odd to call something that follows the more general pattern an irregularity.

[10]My coverage of the subjunctive will by necessity be representational rather than exhaustive, as issues about the subjunctive could themselves be the subject of a full dissertation. For an extensive overview of the Spanish subjunctive data, see Fábregas (2014).

While my focus is on the intensional subjunctive, the polarity subjunctive and the operator subjunctive are discussed for completeness' sake.

The Intensional Subjunctive

The intensional subjunctive is most commonly found in complement clauses and it is introduced by a verb in the main clause that serves as its lexical trigger. Consider (153).

(153) a. Marcela **se alegra**   de que la   hayan   invitado
Marcela SE be glad.PRES.3SG of that her have.IMPF.SUBJ.3PL invited
'Marcela is glad that they have invited her.'

b. Victoria **quiere**   que Marcela venga   al   picnic
Victoria want.PRES.3SG that Marcela come.SUBJ.3SG to+the picnic
'Victoria wants Marcela to come to the picnic'

c. Sofia **duda**   que Rafael pueda   venir
Sofia doubt.PRES.3SG that Rafael can.SUBJ.3SG come
'Sofia doubts that Rafael can come.'

d. Victoria **sugiere**   que salgan   temprano.
Victoria suggest.PRES.3SG that leave.SUBJ.3PL early.
'Victoria suggests that they leave early.'   (Villalta 2008: 470)

As we can observe in (153) there is a significant amount of variation in the triggers (bolded) for the intensional subjunctive which includes: emotive factive predicates in (153a), predicates of desire in (153b), predicates of doubt in (153c), and predicates of suggestion in (153d), among several others.

The Polarity Subjunctive

In contrast to the intensional subjunctive, which is triggered by particular types of predicates, several 'polarity' items have been argued to trigger what is often called the polarity subjunctive. Consider (154).

(154) a. No hay   nadie que **sepa**   chino   en la clase
NEG have.PRES.3SG nobody that know.SUBJ.3SG Chinese in the class
'There is nobody that speaks Chinese in the class'

b. ¿Hay   alguien que **sepa**   chino   en la clase?
have.PRES.3SG anyone that know.SUBJ.3SG Chinese in the class
'Is there anyone that speaks Chinese in the class?'   (Fábregas 2014: 32)

Among these polarity triggers, we find that negative contexts such (154a) and interrogative contexts such as (154b) may also trigger the subjunctive.

The Operator Subjunctive

Last, the operator subjunctive is a group of subjunctive triggers that (i) are not verbal as is the case with the intensional subjunctive and (ii) have not been otherwise classified as polarity triggers. Consider (155).

(155)   a.   Posiblemente haga   frío.
                    possibly   make.SUBJ.3SG cold
                    'It might be cold.'

             b.   En caso de que venga
                    In case of that come.SUBJ.3SG
                    'In case she comes'   (Fábregas, 2014: 8)

Fábregas (2014) notes that one possibility is that the operator is actually the adverb (155a), the conjunction (155b), and another is to assume that the operator is somewhere else in the structure and that it is introduced by the adverb or the conjunction.

4.2.2 Previous Approaches to the Subjunctive

In this section, I review approaches that discuss verbal mood in complement clauses, as this domain is where the empirical and theoretical issues have been most clearly articulated. Fábregas (2014: 11) notes that the individual contrasts are relatively well understood and the real challenge is in determining if there is a single consistent meaning contribution for all the uses of the subjunctive. Since my goal here is to try to assign a consistent featural analysis of the subjunctive morpheme (as I have for other verbal inflections), I leave aside the literature on these individual contrasts, which is not especially useful or necessary for our purposes. Instead, I concentrate on work that elucidates what such morphosemantic consistency would entail. There are two main approaches that I evaluate: the indicative-as-default camp and the subjunctive-as-default camp.

Proponents of the subjunctive-as-default view take the position that there is no uniform semantics to the subjunctive mood but rather that the subjunctive is lexicalized when there is no way to spell out the indicative; this leaves the subjunctive as the default or unmarked form (see Cowper, 2005; Lunn, 1989; Portner, 1997; Siegel, 2006, 2009). For example, Cowper (2005) suggests that a feature [p-deixis] is required for indicatives but that this feature is missing from subjunctives. Fábregas (2014: 25) suggests that "being indicative means projecting some fairly high heads that carry assertive force or informativeness; being subjunctive might be interpreted as lacking these projections". In contrast, the indicative-as-default camp takes the position that the indicative is the unmarked form and surfaces when the contextual conditions for subjunctive lexicalization are not met (Giorgi and Pianesi, 1997; Kempchinsky, 2009; Quer, 1998, 2001,

2009). Quer ([2001](#), [2009](#)) argues that we need not examine each individual context in which the subjunctive is used, but rather we need to provide an account for the fact that what is specific to all those contexts is a shift in the interpretive model used to evaluate a given proposition. Kempchinsky's ([2009](#)) analysis follows from Quer's ([2001](#)) semantic analysis, further formalizing the facts in the narrow syntax.

An interesting commonality is that both camps have honed in on the concept of perspective being important. Quer ([2001](#)), and by extension Kempchinsky ([2009](#)) formalize the notion of perspective with a personal anchor. A model shift is accounted for by linking different worlds to the discourse. The C-domain contributes a feature, $[W_r]$, which corresponds to the actual world (e.g. realis) or a feature, $[W_{su}]$, which does not pertain to the actual world (e.g. irrealis, doxastic, bouletic, or deontic). $[W_{su}]$ anchors the discourse to the worldview of the matrix subject and *not* the real world; that is, it reflects a shift in model anchored to the matrix subject. This idea is remarkably similar to Cowper's ([2005](#)) notion of [P-deixis], which denotes that a proposition is viewed from the speaker's perspective (i.e., the consciousness). Similarly, Speas and Tenny ([2003](#)) argue that the subjunctive requires 'sentience'. While Laca ([2010](#): 208) does not propose an analysis, she also points out that the single unifier in intensional subjunctive contexts is the notion of evaluation. Despite the fact that each of the particular analyses has different naming conventions, they all point to a similar general concept that is necessary for licensing the subjunctive. I term this general concept "evaluative semantics", which should be understood as a heuristic device to bring these different names under a single umbrella term. In what follows I further explore this notion of evaluative semantics and eventually propose an analysis of the intensional subjunctive using the syntax of evidentiality.

4.2.3   Evidentiality

While the notion of evaluation is critical for the lexicalization of the subjunctive, we must speak to *how* this evaluative component is structured syntactically (see Section [4.2.4](#)). First, I provide a general discussion of evidentiality. Following this, I empirically validate the idea that there is a connection between the subjunctive and evidentials by examining data from Italian and German.

Crosslinguistically, evidentials express pragmatic information about the speaker's evidence for an assertion. They also share semantic properties with epistemic modals, as they sometimes express inference and seem to imply degrees of certainty of the speaker (see Aikhenvald, [2004](#); Willett, [1988](#)). Willett ([1988](#): 57) surveys several languages and posits a hierarchy of types of evidence, the coarse divide being between direct and indirect evidence. Evidentials have two component parts: a reference situation that constitutes the speaker's evidence for a prejacent proposition and the prejacent proposition itself. We can represent these component parts as *p*, which represent the prejacent proposition, and EV, which represents the evi-

dential proposition. Consider the following examples from Quechua in (156) and Wanka Quechua, spoken in southern Peru, in (157).

(156) para-sha-n-**mi**[11]
       rain-PROG-3SG-**DIR**
       p = it is raining
       EV = speaker sees that p   (Speas 2010: 128)

(157) Daañu pawa-shra-si   ka-ya-n-**chr**-ari
       field   finish-part-even be-IMPF-3SG-**INDIR**-EMPH
       '(I infer that) the field might be completely destroyed .'   (Aikhenvald 2004: 43)

In (156) we have an example of direct evidential and in (157) we have an indirect evidential. Direct sources of evidence are 'witnessing' experiences that include the reported event whereas indirect sources of evidence are typically some state of affairs from which the reported event can be inferred.

With respect to the semantics of evidentials, there is consensus that the source of information is not *at-issue*, for all types of evidentials (Faller, 2002; Izvorski, 1997; Koev, 2017; Matthewson et al., 2007; Murray, 2017, among others). At-issue propositions can be directly challenged, while propositions that are not at issue cannot be directly challenged (i.e., non-challengeability). In the case of evidentials, this means that the prejacent proposition is directly challengeable, but the evidential contribution is not. Consider (158).

(158) Bulgarian (Izvorski, 1997: 7-8)

    A: Ivan izkara-l   izpita
        Ivan passed-INDIR the.exam
        'Apparently, Ivan passed the exam.'

    B: ✓ It is not true that Ivan passed the exam.

    B: # It is not true that it is said/ you infer that Ivan passed the exam.

Note that in (158) the judgements refer to the challengeability of the evidential proposition and not the truth conditions of the proposition or the grammaticality of the sentences.

Along with this property of non-challengeability, evidentials are also argued to be non-deniable. Faller (2002: 200) has claimed that evidentials contribute to the truth conditions because denying the evidential proposition is "an evidential version of Moore's paradox". Moore's paradox sentences are infelicitous but not semantic contradictions. Consider (159).

(159) Moore's paradox

    # It is raining but I don't believe/know that it is raining.

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[11]I will show *p* and EV for the first example but I will not continue this practice throughout for reasons of brevity.

It is quite possible to imagine a set of circumstances under which the situation presented in (159) is true since the second conjunct clashes with some set of circumstances that is not a part of the first. Murray (2017: 23) points out that (159) can be easily made felicitous by embedding them under an attitude verb like *suppose*. Attitude verbs are used to report on the mental state or a communicative act of an individual, while an *attitude holder* is an individual who bears an attitude towards a proposition. Consider (160).

(160)   Suppose it is raining but I don't believe/know that it is raining.

In contrast to the Moore's paradox data in (159), Murray (2017: 23) argues that denying the evidential proposition, as in (161), is a semantic contradiction. Since the evidential meaning is carried by a morphological exponent, the English examples have been modified with the addition of an attitude verb in the form *I believe* to indicate this effect. Consider (161a).

(161)   a. # It is raining, I believe, but I don't believe it is raining.

         b. # Suppose it is raining, I believe, but I don't believe it is raining.

The sentence in (161a) cannot be 'rescued' by embedding it under a verb like *suppose*, as in (161b). According to Murray (2017), this asymmetry with embedding under *suppose* is only expected if there is an actual semantic contradiction here. What is clear from the data in (161) is that the evidential proposition is non-deniable.

   With this brief introduction to the properties of evidentials now complete, I now look at data from Italian and German to support the idea of a connection between indirect evidentials and the subjunctive. Giorgi and Pianesi (2004) note that while the complements of communication verbs are almost exclusively in the indicative in Italian, these clauses can appear in the subjunctive, as in (162), when the main verb is used as an evidential expressing the source of the assertion in the embedded clause.

(162)   Dicono   che sia   una stupida
         say.PRES.3PL that be.SUBJ.3SG a   stupid
         'They say that she is stupid'   (Giorgi and Pianesi, 2004: 205)

Similarly, Fabricius-Hansen and Sæbø (2004) note that German can use a subjunctive form in a complement clause when the clause reports someone else's speech, such as with assertion verbs in (163).

(163)   Er   behauptete,   dass jemand   das Auto angefahren habe
         3SG.NOM claim.PRET.3SG that somebody the car   on-driven have.SUBJ.3SG
         'He claimed that somebody had driven into the car'   (Fabricius-Hansen and Sæbø, 2004: 213)

Both the German and Italian data, which use subjunctive morphology in these contexts, look remarkably like what one would expect of an evidential system that marks indirect evidence. Given this similarity, in the following section, I argue that the subjunctive can be built over the same syntactic structure used for evidentials. Though we don't have direct evidence for this evidential use in Spanish, as in the preceding examples, the analysis will nonetheless show how the Spanish subjunctive can be accounted for in an evidential framework. The upshot of this proposal is that we now have a concrete way to express the notion of evaluation that is required for the analysis of the subjunctive.

4.2.4 Towards an Analysis

I take as my point of departure, the line of argument stating that we need not specify all the contexts in which the subjunctive is used but rather account for what is specific to all those contexts. Consequently, I largely follow Quer (2001) in taking the subjunctive to be the marker of a model shift from the actual world to the subjective evaluative model of the matrix subject. I add a concrete structural correlate to this semantic analysis that allows the notion of evaluation to be derivable by using the syntax of evidentials.[12]

However, before launching wholesale into my analysis, I briefly review Kempchinsky (2009), the first analysis to offer a syntactic formalization of Quer's (2001) semantic analysis of a model shift. Kempchinsky begins her analysis by examining logophoric, or perspective centres, noting that in the matrix clause the speaker is the logophoric centre, whereas in embedded clauses there is a *shift* from the speaker to the matrix subject as the logophoric centre. Building on the notion of logophoricity and the possibilities it allows for perspective shifting, she formalizes the idea of a model shift by using features to denote what evaluative model a predicate is to be interpreted in. Specifically, the feature W_r denotes the evaluative model of the speaker, whereas W_{su} denotes the evaluative model of the subject of the matrix clause. She locates this W feature in Force.[13] Consider (164).

(164) $\ldots V_{[iW]}$ [CP [ForceP Force$_{[uW]}$ [FinP [Fin$_{[uW]}$ op] [IP (DP) [MoodP [V+T+M$_{[iW]}$] [TP $\ldots$]]]]

The verb selects a Force$_0$ of a particular kind and the uninterpretable feature on Force$_0$ is checked by the interpretable feature on Mood$_0$; a similar checking relationship holds between Fin$_0$ and Mood$_0$. The operator in Fin, which Kempchinsky terms a quasi-imperative operator, licences obviation by having an anti-subject orientation effect on the embedded subject. This anti-subject orientation was modeled on the basis of the imperative, where having an overt second person subject is ungrammatical (e.g., (**tu*) *habla*!) even though

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[12]This analysis is refined and adapted from an analysis I submitted as part of my qualifying examination in 2016.

[13]In a split-CP system the "force" of the clause is a functional head that minimally encodes the specification that a given clause is declarative or interrogative etc (Rizzi, 1997).

the subject is understood to be second person.

A Revisionist History

Villalta ([2008](#)) argues that a predicate selects the subjunctive mood in its embedded proposition if that proposition, p, is compared to a set of contextually relevant alternatives, q, on a scale introduced by the predicate, rather than simply being compared with ~p following Heim's ([1992](#)) conditional semantics. Given the need for alternatives, in the sense of Rooth ([1992](#)), subjunctive-selecting predicates are focus-sensitive in an analogous fashion to focus-sensitive operators such as *only*. That is, for subjunctive-introducing predicates there is a difference in the focus structure of the embedded clause, when compared to indicative-introducing predicates, that has a truth-conditional effect, and this is as true for factive-emotives as it is for their less troublesome counterparts. I notate this focus operator as OP_{only} since it encodes the same kind of properties as only.[14] Consider [(165)](#).

(165)   Complement Clauses

   [v [CP OP_{only} C [FinP OP_{subj} Fin [$TP_{complement}$ ⋯

The operator OP_{only} attaches to the C domain and would need to co-occur with the subjunctive licensing operator OP_{subj}. Suffice to say, the operator introduces a set of contextually salient alternatives relevant to the calculation of the truth-value of the proposition. These alternatives are constrained by a scale that is introduced by the predicate (e.g., doxastic, bouletic, or deontic). To illustrate how this proposal works we must consider the scenario that Villalta ([2008](#): 276) mentions in [(166)](#). In this scenario, we are being asked to compare more than one alternative.

(166)   Sofia has promised to bring a dessert to the picnic. Victoria believes that there are three possibilities for what she may actually do. She could prepare a chocolate cake, even though Victoria considers that extremely unlikely because it represents far too much work. She might bring an apple pie, which Victoria considers very likely since she can just buy it at the bakery nearby. Or Sofia might bring ice cream, which seems most likely to Victoria, since she usually has some in her freezer. Victoria prefers the chocolate cake over the apple pie and the apple pie over the ice cream.

Schematically, the figure in [(167)](#) illustrates the two scales relevant to this scenario, desirability, and likelihood, according to Victoria. Given this schema, Sofia bringing a chocolate cake is the most desirable and least likely alternative while Sofia bringing ice cream is the least desirable and most likely alternative.

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[14]This is a notational choice and is not otherwise meant to indicate that there is literally an only operator in subjunctive clauses.

(167)   Desirability and Likelihood According to Victoria (Villalta, 2008: 477)

+ desirable	Chocolate cake	- likely
	Apple pie	
- desirable	Ice cream	+ likely

The author notes that in this situation the sentence in (168) is intuitively judged to be false.

(168)   Victoria wishes Sofia would bring AN APPLE PIE.   (Villalta, 2008: 477)

Counterintuitively, Heim's conditional semantics for *wish* predicts that this sentence should be true in this scenario. That is, the sentence (168) is true "iff for all worlds w' that are compatible with Victoria's beliefs, the worlds in which Sofia brings the apple pie are more desirable than all the minimally different worlds in which she doesn't" (Villalta, 2008: 477). Given the scenario, this is true as the closest worlds where Sofia doesn't bring an apple pie are ones where she brings ice cream. However, this set cannot contain worlds in which Sofia brings chocolate cake as Victoria considers them extremely unlikely and therefore they are not minimally different. Consequently, a conditional semantics does not make the correct predictions for this scenario. Accordingly, Villalta (2008) concludes that the semantics of the predicates under discussion involves comparison of p with the set of its contextual alternatives q rather than with just ~p. Under this analysis, the calculation of the contextual alternatives introduced in the embedded clause is overtly marked by the verb in this domain being spelled out as a subjunctive form. I, therefore, adopt Villalta's (2008) as my starting point, as this view is compatible with the line of argument that seeks to account for what is specific to all subjunctive contexts.

The next issue that I address is the difference between the operators necessary for subjective lexicalization. Kempchinsky (2009: 1807) points out that there must be some operator in Fin (associated with finiteness and modality; see Rizzi, 1997) responsible for subjunctive lexicalization, but it is not obvious that this operator should be characterized as quasi-imperative. On this point, I agree with Kempchinsky (2009) and I argue that her quasi-imperative operator (i.e., $op_{q\text{-imp}}$) should be collapsed with Villalta's subjunctive operator (i.e., op_{subj}). As previously explained, this anti-subject orientation of the quasi-imperative operator was modeled on the basis of the imperative. However, J. Harris (1998) argues that there is no imperative paradigm separate from the subjunctive paradigm in Spanish given both the morphological and syntactic complementary distribution of the forms conventionally known as the 'imperative' and the 'subjunctive'. Accordingly, he proposes the complementary distribution is controlled by the rule in (169).

(169)   Imperative Morphology

          [SUBJ] → ∅ / __ [2pers]]$_C$

The idea behind J. Harris' impoverishment rule is that the property of being a subjunctive is basic and therefore a requirement for imperative inflection.[15] Given his assessment, then, we can reduce the operator to op$_{subj}$ without any obvious consequence. The upshot of this proposal is that I maintain the ability to account for the obviation facts, which were not considered in Villalta's analysis.

On the notion of a model shift, I offer a proposal that is not tied to feature, but rather to heads responsible for the evaluation of 'evidence', thus drawing from the literature on evidentiality.[16] In general, semantic treatments of evidentiality are currently far more developed than syntactic ones. However, Speas and Tenny ([2003](#)) do have a proposal for the syntax of evidentials. In their analysis, the evaluative component of evidentials can be encoded syntactically by putting two heads, Eval(uation)$_0$ and Evid(ence)$_0$, together which can collectively be called the sentience domain, as in [(170)](#).

(170)   The Sentience Domain (Speas & Tenny, [2003](#))

          [SpeechActP [**EvalP** S-O-K Eval$_0$ [**EvidP** Evid$_0$ [EpistemologicalP. . .]]]]]

Naturally, they argue that this portion of the structure "encodes judgements and evaluations by a sentient mind" (Speas and Tenny, [2003](#): 333). Additionally, they argue that the Eval head licenses an implicit argument called the 'seat of knowledge', which I have abbreviated as S-O-K here. The kinds of judgments that they envision as possible are explicitly formulated in one of Speas' later papers. Specifically, Speas ([2004](#)) notes that the evaluative head indicates the speaker's evaluation of a reported event as 'good', 'lucky' or 'bad'. It should not have escaped the reader's notice that these judgements appear to be the same kinds of notional categories implicated in verbs that select for the subjunctive. Consider [(171)](#).

(171)   a.   Me alegro   de que estés   aquí.
             SE be glad.PRES.1SG of that be.SUBJ.2SG here
             I am glad that you are here

        b.   Lamento   que María esté   enferma.
             regret.PRES.1SG that María be.SUBJ.3SG sick
             'I'm sorry Maria is sick.'

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[15]It is a well-established fact that the subjunctive and imperative do interact in some sense. However, I do not consider imperatives nor their interaction with the subjunctive in the present investigation, as they have been suitably addressed in J. Harris ([1998](#)). I view Harris' analysis as compatible with the view of Spanish Morphology being developed here with only minimal modification.

[16]As noted in Speas ([2010](#)), specific evidence type is not a primitive of the evidential system and almost anything can therefore be considered evidence.

Since the subjunctive requires evaluative semantics (Cowper, 2005; Kempchinsky, 2009; Laca, 2010; Quer, 2001, 2009; Speas and Tenny, 2003; Villalta, 2008), and since the sentience domain allows for the right kinds of judgements, I take (170) as my starting point.

To account for a model shift, I argue that there is a Sentience domain, which I condense to a Sentience Phrase for brevity, embedded in the complement of attitude verbs as in (172). Whereas Speas and Tenny (2003) did not allow the sentience domain to be embedded, my proposal differs from theirs in that it allows SentienceP to be embedded (see also Zu, 2018). The addition of the sentience domain to the embedded clauses affords us the ability to derive the model shift without recourse to specific features.

(172) a. Main Clauses

[SaP SPEAKER Sa' [ADDRESSEE [SenP S-O-K Sen [CP [TP$_{root}$ ...[17]

   b. Complement Clauses

[Attitude Holder [v $\sqrt{\text{ROOT}}$ [SenP S-O-K Sen [CP [TP$_{complement}$ ...

If we allow for an embedded sentience domain, then the attitude holder whose mental state is taken into account would have to be the matrix subject and not the SPEAKER, as the matrix subject is more local. This translates quite straightforwardly to Sells' characterization of logophoricity. Sells' (1987: 455) argues that there is no unified notion of logophoricity and that instead there are three more primitive roles in discourse, the SOURCE, the SELF, and the PIVOT. The SOURCE is the one who makes the report (for example, the speaker). The SELF represents the one whose mind is being reported; the PIVOT represents the one from whose point of view the report is made. Consider (173).

(173)   Mary wants me to come to John's party.

In (173) the speaker is the SOURCE but the matrix subject is the perspective centre of the report making them the SELF and the PIVOT; if someone makes a report with *Mary* as PIVOT, that person is understood as standing in *Mary's* shoes.

Touching on previously mentioned semantic features of evidentials, recall that at-issue propositions can be directly challenged but propositions that are not at issue cannot be directly challenged. Therefore, the prejacent is directly challengeable but the evidential contribution is not. Consider (174).

(174)   Spanish

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[17]Following Goffman (1981: 133), I use the term addressee instead of hearer. "Hearer" does not limit a communicative event to the addressed recipient, as there might be overhearers and eavesdroppers; addressee more adequately captures the intuition of the analysis.

A: quiero   que cante   un canción
   want.PRES.1SG that sing.SUBJ.3SG a   song
   p: she sings a song/ EV: Speaker wants that *p*

B: ✓ It is not true that she sings a song

B: # It is not true that you want that she sings a song.

The judgements in (174) refer to the challengeability of the evidential proposition and not the truth conditions of the prejacent proposition or the grammaticality of the sentences. The idea here is that no one is required to sing a song because someone wants them to, so it might not be true that anyone sang at all. However, what you cannot challenge is the idea that you wanted someone to sing. In addition to non-challengeability, the speaker cannot deny having the relevant evidence. Consider (175).

(175)   # (Suppose) she is singing, I desire, but I don't desire that she sings.

Here we find the two properties argued to define evidentials in the literature, non-challengeability and non-deniability.

The question remains about whether these semantic properties of the subjunctive are simply derivable from the fact that subjunctives require two clauses, in contrast to evidentials which are a single clause. On this point, Fábregas (2014: 60) notes that a claim central to the analysis of the intensional subjunctive is that it is contained in a subordinate clause that can only be licensed if the subjunctive clause establishes a direct dependency with a constituent in the main clause, thereby producing a configuration where it, in some sense, belongs to the main clause. A particularly strong version of this idea is advanced by Progovac (1993) who argues that the transparency effects of the intensional subjunctive are triggered when the subordinate CP node is deleted at LF. This deletion is possible because the force and temporal interpretation of the subordinate clause are entirely determined by the properties of the main predicate, rendering CP and TP superfluous for the interpretation. Another less strong incarnation of this idea does not delete the embedded complementizer, but does require that the verb be interpreted at the phasal edge of the embedded clause at LF (Kempchinsky, 2009).

Overall, I take the view that the intensional subjunctive is the reflex of the clausal architecture I have argued for associated with en evidential interpretation. This approach addresses the core aspects of Kempchinsky's proposal and, as I will demonstrate in Section 6.1.4, affords us the ability to tie the evidential uses of the future (e.g., *Juan estará enfermo* 'John must be sick') to the same underlying structure that we posited for the subjunctive and to explain the use of the subjunctive in future-oriented subordinate clauses (e.g., *Jugaré cuando este listo* 'I will play when I am ready'). However, this connection between the sub-

junctive and the future in Spanish is less easily explained if we maintain the Kempchinsky (2009) analysis. Therefore, this alternate account is not only warranted but also theoretically desirable and has independent motivation in the grammar of Spanish.

4.2.5 Morphology of the Subjunctive

This final section of the chapter looks more closely at how the various subjunctive exponents are morphologically realized. My view of the morphological paradigm for the present and imperfect subjunctive is given in (177) and (176), respectively.

(176)   Subjunctive paradigm: *hablar* 'to speak' and *comer* 'to eat' (root –TH –T –agr)

	–PL		+PL	
1	habl –e –∅ –∅	com –a –∅ –∅	habl –e –∅ –mos	com –a –∅ –mos
2	habl –e –∅ –s	com –a –∅ –s	habl –e –∅ –is	com –a –∅ –is
3	habl –e –∅ –∅	com –a –∅ –∅	habl –e –∅ –n	com –a –∅ –n

(177)   Imperfect Subjunctive paradigm: *hablar* 'to speak' and *comer* 'to eat' (root –TH –T –agr)

	–PL		+PL	
1	habl –a –ra/se –∅	com –ie –ra/se –∅	habl –a –ra/se –mos	com –ie –ra/se –mos
2	habl –a –ra/se –s	com –ie –ra/se –s	habl –a –ra/se –is	com –ie –ra/se –is
3	habl –a –ra/se –∅	com –ie –ra/se –∅	habl –a –ra/se –n	com –ie –ra/se –n

The first issue that needs to be addressed concerns the interchangeability of the two past subjunctive forms (e.g., *hablara*; *hablase*).[18] While the two past subjunctive forms are generally treated as being interchangeable, Cowper (2005: 28) points out that these forms are only essentially interchangeable for *some* speakers but "for some [other] speakers the distinction between them is relatively clear, and consistent with the hypothesis that the SE-subjunctive spells out Entirety while the RA-subjunctive carries Precedence". Consider (178).

(178)   a.   Les   sorprendió   que no lo   supiera.
             3PL.DAT surprise.PRET.3SG that NEG 3SG.ACC know.IMPF.SUBJ.3SG
             'They were surprised she didn't know.'   (Butt and Benjamin, 2000: 224)

         b.   Entré   sin   que me   viese   nadie.
             enter.PRET.1SG without that 1SG.ACC see.PRET.SUBJ.3SG no-one
             'I entered without anyone seeing me.'   (Butt and Benjamin, 2000: 220)

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[18]Resnick and Hammond (2011: 217) note that both past subjunctive forms in Spanish come from the past perfect in Latin. The RA-subjunctive comes from the indicative form (e.g., *amaveram*), whereas the SE-subjunctive comes from the subjunctive form (e.g., *amavissem*). For example, *amaveram* was simplified to become *amaram* which meant 'I had loved' is the source of this form *amara*. Jardón Pérez (2016) notes that the past perfect use of *amara* is still attested in the Spanish spoken between the Eo and Navi rivers in Asturias, Spain.

For Cowper ([2005](#)) there are two past features [PRECEDENCE] for the imperfect and [ENTIRETY] for the preterite and accordingly her analysis predicts that there should be two versions of the subjunctive. Here I add some additional empirical support for there being a featural difference between the two past subjunctive forms. There is a non-canonical use of the imperfect subjunctive as a polite conditional form where this so-called free variation is not possible – specifically, the use of the SE-subjunctive form is ungrammatical. Consider (179).

(179) Quisie–ra/(*–se)   hablar   con el encargado
        want.IMPF.SUBJ.1SG speak.INF with the manager
        'I would like to speak with the manager.'   (adapted from Butt and Benjamin, [2000](#): 319)

I argue that the RA-subjunctive is acceptable for this polite conditional meaning because it has the feature [PRECEDENCE], which is a subset of the features of the conditional (i.e., [MODALITY, FINITE, PRECEDENCE]). The SE-subjunctive is unacceptable because it has the feature [ENTIRETY] which is not a part of the conditional feature set. I do not discuss these data further here as an analysis of this use of the RA-subjunctive requires a careful study of conditional. Details of the future and conditional verb forms can be found in Chapter 5 and a full analysis of this use of the past subjunctive is presented in Section 6.2.

Although there are some clear differences between the two past subjunctive forms as in (179), the fact remains that in the vast majority of contexts the two forms can be used interchangeably. This overlap should strike us as somewhat puzzling. I argue that the answer to this puzzle lies in the denotations of the relevant features. Following Cowper ([2005](#)), these features are defined as sets of moments in time. In (180a), the feature [ENTIRETY] denotes universal quantification of a time t that occur before t^*, which contrasts with the feature [PRECEDENCE] in (180b) which denotes existential quantification of the t that occurs before t^*.

(180)   a.   [ENTIRETY] = $\forall t \rightarrow t < t^*$

         b.   [PRECEDENCE] = $\exists t \wedge t < t^*$

         c.   [ENTIRETY] $\cap$ [PRECEDENCE] = $\{t1\}$

The interchangeability arises because the moment that needs to occur before t^* can be the same moment for both features. That is, it is the intersection of the two features as in (180c). This case is possible, but not necessary which allows for the observed flexibility.

With the general structural and interpretative details in place, I now account for the inflectional morphology of both the present and past subjunctive. Accordingly, I propose the vocabulary items in (181).

(181)   Subjunctive

    a.   [FINITE, PRECEDENCE] ⇔ –ra

    b.   [FINITE, ENTIRETY] ⇔ –se

    c.   [FINITE, PRES] ⇔ –∅

Cowper's (2005) two different tense features that characterize the subjunctive, takes care of the contrast between the two past subjunctive forms. The present subjunctive requires a specification of [PRES], a feature which I have previously argued to be necessary. Last, there is a consensus in the literature that the subjunctive, in and of itself, is neither a modal operator nor the spell out of a modal operator but rather a verbal form that occurs in the presence of a modal operator (Fábregas, 2014; Moltmann, 1997, 2008; Portner, 2011; Richard, 2001; Stowell, 1993; Villalta, 2008). Consider (182).

(182)   a.   Posiblemente haga   frío.
             possibly   makes.SUBJ.3SG cold
             'It might be cold.'

      b.   En caso de que venga
             In case of that come.SUBJ.3SG
             'In case she comes'

      c.   Te   ordeno   que vengas.
             2SG.ACC order.PRES.1SG that come.SUBJ.2SG
             'I order you to come.'   (Fábregas, 2014: 8)

Fábregas (2014) notes that there are two ways to interpret these data. One possibility is that the operator is actually the adverb (182a), the conjunction (182b), or the main verb (182c). The other possibility, and perhaps a more logical option according to Fábregas is to assume that the operator is somewhere else in the structure and that it is introduced by the adverb, the conjunction or the verb. Therefore, with respect to the data in (182c), the operator that I argued for in (165), repeated here as (183), ensures that the verb spelled out in this domain will be a subjunctive form.[19]

(183)   Complement Clauses

    [**SenP** [ForceP   **op$_{only}$**   Force$_0$ [FinP op$_{subj}$ Fin$_0$ [TP [ModP [vP …]]]]]]

I take this approach as we need a consistent morphological realization of the subjunctive exponents, while allowing the contexts that trigger this realization to be rather variable. For Arregi (2000) the subjunctive is the morphological reflex of certain syntactic structures which are associated with certain interpretations.

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[19]J. Harris (1998) mentions in a footnote that there are a few idiomatic discourse connectives that have initial 'undominated' subjunctives like *o sea* and *sea como sea/fuere*. He notes that these constructions are syntactically anomalous like their English counterparts such as *so to speak* and *be that as it may/were* and thus they do not invalidate the generalization.

Unfortunately, these structures and interpretations are left undefined and, therefore, it is not obvious how subjunctive lexicalization occurs. In contrast, the analysis I argue for makes explicit what I believe to be the structure and interpretation of the intensional subjunctive. What becomes clear from my analysis is the importance of various operators for licensing the subjunctive both syntactically and morphologically.

4.3 Summary

This chapter has detailed my analysis of the indicative and subjunctive verbal morphology. Specifically, I have done the following:

1. I elaborated on and clarified an issue concerning the present tense, and offered a new account of both the imperfect and the simple past.

2. I examined the subjunctive and formalized a recurring observation in the literature that there is a connection at some level between the subjunctive and evidentials.

3. I offered an explanation for why the two imperfect subjunctive forms in Spanish are (mostly) interchangeable even though they have different features.

Next, in the following chapter of the dissertation, I discuss the morphology of the future and conditional forms.

5 | The Future and the Conditional

> different levels of analysis,
> different levels of squinting at the
> world, reveal different rules,
> regularities and even vocabularies
> for speaking [about the world]
>
> ———————————————
>
> Sean Carroll

Chapter 4 addressed problematic aspects of previous DM analyses of Spanish verbs and then analyzed several simple tenses in Spanish (e.g., the present and the imperfect), excluding the future and conditional. In this chapter, I address the morphosyntax of the future and conditional in Spanish. The chapter begins with an overview of the general properties of the future and the conditional, including a discussion of the diachronic development of these verbal forms in Romance. Following this overview of the data, I review the details of the existing DM analyses of the future and conditional in Spanish before offering a critique thereof. Based on this critique I offer a different analysis of the future and conditional forms in Spanish. Specifically, I present evidence in favour of analyzing the future and the conditional verbal forms as an infinitive + *haber* 'have' construction.

5.1 Background on the Future and the Conditional in Spanish

The study of the future (and conditional) is not without its difficulties, due to its multiple usages that do not seem to have a core of shared meaning. This section lays out some general background knowledge on the future and conditional verbal forms in Spanish. For illustrative purposes, I present the core use of the future (while acknowledging that this is a gross oversimplification).[1] Following this, I discuss some aspects

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[1] For an in-depth overview of the many proposed uses of the future in Spanish, see Matte Bon (2006), who surveys several descriptive Spanish grammars.

of the historical development of these forms.

5.1.1 An Overview of the Data

In Spanish, a fairly common way of expressing future time is to use the future tense.[2] The future communicates that the event described by the verb has not yet taken place. Thus, future events are situated after the Time of Utterance. Consider (184).

(184)   Esta noche iremos   al   cine
        this night go.FUT.1PL to+the cinema
        'Tonight we'll go to the movies.'

The major temporal use of the conditional verb form is seen in (185) where it is used as a 'future in the past'. The future-in-past reading arises when there are two events in the past and the second event, which is in the subordinate clause, occurs after the event denoted by the matrix clause. That is, relative to the first event, the second event is in the 'future' (Resnick and Hammond, 2011: 196).

(185)   a.   dijo   que lo   haría   luego
             say.PRET.3SG that 3SG.ACC do.COND.3SG later
             'He said he would do it later.'

        b.   dijo   que lo   podría   hacer luego
             say.PRET.3SG that 3SG.ACC be able.COND.3SG do.INF later
             'He said he would be able to do it later.'

The conditional is also used to express an idea that is dependent on some condition, whether this condition is overtly mentioned, or merely implied like in the example in (186).

(186)   preferiría   no tomar   el tren
        prefer.COND.1SG NEG take.INF the train
        'I would prefer not to take the train.'

With these main uses of the future and the conditional established, in the following section, I look at how these two forms developed from Latin.

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[2]It is worth pointing out that not all varieties of Spanish have temporal uses of the future verb form (see Escandell-Vidal, 2010, 2014, 2018; Laca, 2016; Rivero, 2014 for a discussion). Typically, Latin America Spanish varieties (though not all) lack the temporal uses of the future and only have conjectural uses of the future verbal form. Aaron (2010: 17) notes that as periphrastic futures started competing with synthetic futures, they began pushing synthetic futures out of the realm of futurity and into the realm of epistemicity. The conjectural use of the future is discussed in Chapter 6.

5.1.2 Notes on The History of the Future in Romance

Resnick and Hammond (2011: 195) note that, historically, the simple future in Romance did not descend from analogous forms in Latin, but rather from a periphrastic construction formed by adding *habere* to an infinitive (e.g., *cantare habeo* 'I will sing'). Maiden (1995: 158) points out that the loss of the Latin simple future is one of "the most striking morphological discontinuities" between Latin and the Romance languages. This periphrastic construction was not originally an expression of futurity but rather one of possibility, and then later of obligation and necessity (Bourova & Tasmowski, 2007). Thus, *cantare habeo* began by meaning 'I may sing' and developed an obligation/necessity interpretation associated with either deontic modality (e.g., 'I must sing') or a reference indicating a planned future eventuality (e.g., 'I am to sing').

The example in (187) shows the development of the future and conditional forms from Late Hispanic Latin through to Modern Spanish.

(187)   Vulgar Latin Future Periphrasis of *cantare* 'to sing'

	Late Hispanic Latin	Medieval Spanish	Modern Spanish	English Meaning
FUT	cantare habeo	cantar he	cantaré	'I will sing'
COND	cantare habe-**b**-am	cantar (hab) í-~~b~~-a	cantaría	'I would sing'

In (187) the future reading arises when the form of the verb *habere* appearing after the infinitive is a present tense form and the conditional reading when *habere* is in the imperfect. While the facts concerning the historical development of the future form are relatively straightforward, the development of the conditional is slightly more complex. The two reasons for this complexity are: (i) its relationship to the imperfect and (ii) the loss of part of the *habere* stem.[3] Concerning the first point, the imperfect in Latin was represented by *–ba* in all four conjugations, but *–ba* is only retained in the first conjugation in Spanish. In the second and third conjugation, where *-ba* followed 'e' and 'i' the 'b' was lost.[4] This is relevant as *haber* is a verb in the second conjugation which means that the conditional inherits these properties. Heine (1993: 106) notes that "once a lexeme is conventionalized as a grammatical marker, it tends to undergo erosion; that is, the phonological substance is likely to be reduced in some way and to become more dependent on surrounding phonetic material". This process of phonetic erosion includes (i) loss of autonomy and adaptation to adjacent units and (ii) phonetic simplification. In this case, phonetic erosion results in the loss of part of the *haber* stem (e.g., *hab–*). Indeed, the conditional only retained the *–ía* and the agreement endings.

Having discussed the phonological evolution of the future and conditional forms, I now focus on the

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[3]The letter 'h' does not represent any sound in modern Spanish so there is effectively no stem for *haber* in the present tense.
[4]The only exception to this otherwise general rule is *ir* 'to go' which retains the 'b' in the imperfect (e.g., *iba* 'used to go').

process of grammaticalization that took Medieval Spanish's periphrastic construction to Modern Spanish's synthetic one. Öhl (2014: 13) views grammaticalization as the result of the recategorization of lexical elements as functional heads. The process by which a word leaves its class and enters another occurs by a gradual series of shifts known as a cline. Roberts and Roussou (2002: 37) use the Italian example of *ameró* 'I will love' to sketch out their analysis of the historical development of the Romance future. Roberts and Roussou discuss a total of four stages in the cline, though I only discuss the final two in (188) and (189).[5]

(188) Tense affix HABERE + infinitive
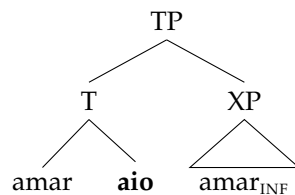
(189) Agreement affix HABERE + future
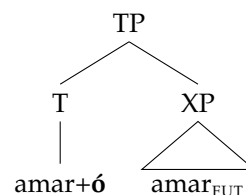
In (188) the modal verb *habere* was reanalyzed as a syntactic affix, and then eventually became an agreement affix on lexical verbs already inflected for the future as in (189). That is, in (188) the infinitive *amare* would move into T forming a complex head with the affix *–aio* which is all that remained of *habere*, whereas in (189) we are further along on the cline an *–aio* is reinterpreted as an agreement marker *–ó* and the verbal form is treated as having distinct future inflection.[6] The analyses presented in the following section take different positions about how far along the cline the future is. As we shall see shortly, Arregi's (2000) analysis is positioned closer to (189), while Nie (2015) and J. Harris (1998) are positioned closer to (188).

5.2   Previous DM Approaches to the Future and Conditional

Having established some necessary background details, I now review several morphological analyses of the future and conditional. Specifically, I engage with the contributions of Arregi (2000) and J. Harris (1998) who both analyze Spanish verbs in addition to Nie (2015) who analyzes French verbs, offering a counterpoint to the approaches advocated in the analyses of Spanish.

5.2.1   The Approaches: Arregi (2000); Harris (1998); Nie (2015)

According to Arregi (2000), the future and conditional are both the spell out of a 'Future' head, which is distinct from the tense head. The future and the conditional differ in that the future is derived from the

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[5]The first two stages do not contribute information that is materially different from the discussion in the preceding section and for that reason, they were omitted from direct consideration here. I borrow Nie's (2015: 34) labels for each stage.

[6]The assumption here seems to be that the *–r* is also reinterpreted as a marker of futurity.

Future plus the present tense, while the conditional is the Future plus the past tense (see also Abusch, 1985; Iatridou, 2000; Wurmbrand, 2014). Consider (190).

(190)   Future and Conditional

    a.   FUT: $\sqrt{tem}_{[cl:II]}+v–e_{TH}–r_{FUT}–a_{TH}–s_{T/AGR}$

    b.   COND: $\sqrt{tem}_{[cl:II]}+v–e_{TH}–r_{FUT}–i_{TH}–\emptyset_{T}–a_{TH}–s_{AGR}$ (Arregi, 2000: 9)

The realization of the theme vowel adjacent to the verbal root, which is the locus of class information, is –*a*, –*e* and –*i* for Class I, II and III, respectively. Conversely, if a theme vowel position is not local to the root and its associated class information, then it can only receive the default, or the Class I, theme vowel –*a*. As T in the case of the future is present and contains unmarked tense features it fuses with AGR. This does not happen in the conditional as T is past and therefore marked. In the conditional, the realization of T and its theme follow from the imperfect pattern. The T node, as in the imperfect, is realized by –$\emptyset$ and the theme position is –*a*.

Under Arregi's analysis the Future head is realized as –*r*, which he accounts for with the Vocabulary Item in (191):

(191)   –r $\Leftrightarrow$ [FUT]   (Arregi, 2000: 9)

The theme vowel adjacent to the Future head is realized as –*a*, except for the following cases: the 1SG, the 1PL and the 2PL forms of the future where it is realized as –*e*, and the conditional where this theme vowel is realized as –*i*. To account for these changes, Arregi assumes several rules. For the future he posits a phonological rule that changes the –*a* to –*e* in this morphological context. For the conditional he proposes a rule that changes the default theme vowel into an –*i*, effectively turning Class I into Class III. Consider (192).

(192)   a. $\emptyset \rightarrow +\alpha$ / [FUT, _] + [PAST]

    b.   [FUT]+TH+[PAST] $\rightarrow$ [FUT, $+\alpha$]+TH+[PAST]

    c. $\sqrt{habl}+v–a_{TH}–r_{FUT}–i_{TH}–\emptyset_{T}–a_{TH}–s_{AGR}$ (adapted from Arregi, 2000: 9)

The rule in (192a) applies to the Future node giving it a specification of [$+\alpha$] and this process is represented in (192b). With this specification in place, Arregi's rule for inserting –*i* can now apply to the future theme position as in (192c), since it has been given class information.

J. Harris' (1998) analysis of the future is quite similar to Arregi's.[7] Compare his analysis of the future in

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[7]Both Arregi (2000) and J. Harris (1998) use equivalent Vocabulary Items for the realization of –*r* and a number of theme vowels,

with Arregi's in .

(193) a. $\sqrt{am}+v-a_{TH}-r_{FUT}-a_T- s_{AGR}$ (J. Harris, 1998: 45)

      b. $\sqrt{tem}+v-e_{TH}-r_{FUT}-a_{TH}- s_{T/AGR}$

Similarity notwithstanding, there are some key differences. For J. Harris there is no second TH after the Future head and T does not fuse with AGR. J. Harris' analysis accounts for a difference in the realization of T in the future with the two related Vocabulary Items in (194).

(194) a. $-e \Leftrightarrow$ [T] / [FUT] _ [1]

      b. $-a \Leftrightarrow$ [T] / [FUT] _   (J. Harris, 1998: 44)

In some cases, T is realized as –*e* and in the general case, it is realized as –*a*. When T is realized as –*e*, as in (194a), which is the more specific case, the realization of T in the future is conditioned by having first person as part of the contextual specification, whereas in the elsewhere case in (194b) this is not required.

Nie (2015) analyzes verbal morphology in French from a DM perspective and argues that the future (and conditional) is synchronically a modal verb + infinitive construction, as it was historically. This is in contrast to the position that assumes that future is not synchronically an *habere* 'to have' + infinitive construction but rather that the –*r* suffix has been reanalyzed as a marker of the future tense/modality (Arregi, 2000; Fleischman, 1982; J. Harris, 1998; Oltra-Massuet and Arregi, 2005; Roberts and Roussou, 2002). Nie (2015: 44) points out that this latter kind of analysis necessitates two homophonous inflectional suffixes with the same distribution, which is undesirable. Consider (195).

(195) The Distribution of the –*r* Exponent in French: *partir* 'to leave'

	$\sqrt{root}$	TH		
Infinitive:	part	–i	–**r**	
Future:	part	–i	–**r**	–a

In (195), notice that the distribution of –*r* for the infinitive and for the future is similar with the *r* in both cases immediately following the $\sqrt{root}$ + theme vowel complex.

Nie makes the astute observation that the synthetic future in (196a) and the periphrastic future in (196b) have the same meaning and only differ in their morphological realization:

(196) a. elle   partira
             3SG.NOM.F leave.FUT.3SG

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for instance.

b. elle   va   partir
    3SG.NOM.F go.PRES.3SG leave.INF
    'She will leave.   (Nie, 2015: 30)

She claims that the source for both the synthetic and periphrastic future is *aller* 'to go' in French. Since the meanings in (196) are the same, and their morphology arguably derives from the same source (a modal form of *aller*, realized either as an affix or as an auxiliary), she contends that the synthetic and periphrastic futures can be united in their representations. As for the syntax of the future, Nie (2015) points out that the Romance future is similar to the WOLL-future/conditional in English (i.e., I will/would sing). Given this similarity, Nie argues that the modal head would select an infinitival complement. That is, Nie proposes there are two INFL heads in the structure for the future and the conditional and the structurally higher of the two selects a non-finite T (i.e., [TP T [ModP Mod [InfP ...]]]). The result of her analysis is that the –*r* exponent is not a marker of the future, but rather a marker of the infinitive.

5.2.2 Issues Arising from the Previous Approaches

This section considers the implications of these morphological analyses of future and conditional. While the previous analyses provide much insight into the grammatical workings of future and conditional in Spanish, there are problems with each. For reasons of brevity, I constrain the discussion to specific issues from the analyses reviewed, though the issues of a more general nature (e.g., multiple theme vowels) outlined in Section 3.1 also remain relevant.

I. Second Plural and Modal *ir* 'go'

To begin, I address an issue relating to a lack of empirical coverage in J. Harris' (1998) analysis and another relating to the use of *go* as a modal verb in Nie's (2015) analysis. First, J. Harris' (1998) account, in (197), undergenerates, as it cannot account for the second plural forms in Peninsular varieties of Spanish (e.g., *amar- é -is* 'you-all will love').

(197)   a. –e ⇔ [T] / [FUT] _ [1]
        b. –a ⇔ [T] / [FUT] _

Second, Spanish, like French, also has a periphrastic construction with *ir* 'go' that can be used to indicate a future time (e.g., *voy a hacerlo luego* 'I will do it later.'). However, if we were to adopt Nie's (2015) analysis of the future for Spanish and use the verb *ir* 'to go' as a modal verb, then at least some of the resulting morphological forms would be ungrammatical. Consider (198) where a conjugated forms of *ir* occur to the

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left of the plus symbol and the infinitival form of *cantar* 'to sing' occurs to the right.

(198)   *ir* 'go' + INFINITIVE

		−PL				+PL		
1	v-oy + cantar	→	∗cantar-oy	v-amos + cantar	→	*cantar-amos
2	v-as + cantar	→	cantar-as	v-ais + cantar	→	*cantar-ais
3	v-a + cantar	→	cantar-a	v-an + cantar	→	cantar-an

Observe that both first person forms would not be the expected *cantaré* 'I will sing' and *cantaremos* 'we will sing' nor would second person plural form be *cantaréis* 'you-all will sing'. Therefore, an adequate analysis needs to account for second plural future forms and it cannot adopt *go* as the modal verb for the Spanish construction (though a version of the historical analysis is still possible as I show in Section 5.3).[8]

II. Theme Vowels

Arregi's analysis runs into trouble on the subject of theme vowels, here as the theme vowel for the conditional is not *–a* as the analysis predicts, but rather *–i*, the theme vowel of Class III. To account for this discrepancy, he proposes several redundancy rules. Redundancy in and of itself is not problematic *per se* and can be tolerated to the extent it is shown to be needed. However, this redundancy seems to only be necessary because of the analytical choices made. If a redundancy reduction is possible for reasons of economy and parsimony (e.g., Chomsky, 1995), without losing any empirical ground, then this would be the preferable solution; I propose an analysis along these lines in Section 5.3. Additionally, as previously mentioned, Arregi's analysis predicts that the future theme should be *–a*. This is generally true, except for the 1SG, 1PL and 2PL forms, where the theme vowel is *–e*. To account for this discrepancy, Arregi suggests that *–a* changes to an *–e* for phonological reasons. However, these phonological reasons are never discussed, and it remains quite mysterious why this should occur. In fact, it is not readily apparent that such a rule could even be coherently formulated since the triggers for the rule do not form a natural class of any sort. In this case without 2SG we do not get the natural class of discourse participants.

III. Homophony

Nie's (2015) analysis raises an interesting point about what she views as unnecessary homophony. While homophony is not itself problematic, the question is whether it is necessary. Given that an analysis that derives both the future/conditional and infinitive inflectional affixes from the same source is desirable, we

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[8]It is worth pointing out that an account for second plural forms is only needed if one is interested in accounting for dialects that use *vosotros* as I am.

must consider carefully whether declaring all of these forms to be homophonous is not an unnecessary assumption. Consider (199).

(199) a. –r ⇔ [FUT]   –r ⇔ [INF]

b. –r ⇔ [FUT]

c. –r ⇔ [INF]

That is, instead of having an analysis like (199a) which posits (accidental) homophony, we could envision an analysis like (199b) where *–r* is only related to the FUT and the INF is part of that meaning, or like (199c) where *–r* is related to INF and FUT is somehow a part of that meaning. The desiderata for such an analysis are as follows: we should not lose any empirical coverage, and this reduction should accomplish more than merely reducing the observed homophony. Homophony is not enough of an issue to warrant a reduction without some independent value being added to merit its necessity, lest we be accused of parochial 'homophone-o-phobia'.

One attempt to reduce this arguably unnecessary homophony is Martínez Vera's (2016) proposal. He reduces the homophony of Arregi's (2000) analysis by arguing that the *–r* exponent is the spell out of the FUT head in all cases, including the infinitive. For infinitives, Martínez Vera argues that their so-called 'tensed' interpretations are possible in *de* + infinitive clauses because infinitives contain a future modal head (see Wurmbrand, 2014). Consider (200) and (201).[9]

(200) a. Si cocino   en Navidad, haré   pavo.
           if cook.PRES.1SG on Christmas make.FUT.1SG turkey

b. De cocinar   en Navidad, haré   pavo
           of cook.INF on Christmas make.FUT.1SG turkey
           'If I cook on Christmas, I'll make a turkey.'

(201) a. Si cocinaría   en Navidad, haría   pavo.
           If cook.COND.1SG on Christmas make.COND.1SG turkey

b. De cocinar   en Navidad, haría   pavo
           of cook.INF on Christmas make.COND.1SG turkey
           'If I were to cook on Christmas, I would make a turkey.'   (Martínez Vera, 2016: 6–7)

Since the meaning of *de* + infinitive sentences are synonymous with the *if*-clause sentences, Martínez Vera concludes that a single Vocabulary Item can account for the infinitive, the future and the conditional, as each verbal form contains a FUT head.

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[9]With respect to the data in (201a), it should be noted that this is a variant not used by all. The Imperfect Subjunctive is the usual form for conditionals (e.g. *si cocinara en navidad, haría pavo* 'If I were to cook on Christmas, I would make a turkey.') not the conditional, which goes in the consequent.

While an account treating the realization of the *–r* exponent as spelling out a single FUT morpheme is attractive at first blush, the data in (202) are hard to explain on such an analysis as discussed below.

(202)　　The *–r* Exponent: *caber* 'to fit'

INF	cab-e-r
COND	cab-Ø-r-ía
FUT	cab-Ø-r-é
FUT SUBJ	**cup**-ie-r-e

Martínez Vera does not consider that all irregular future subjunctive forms use a putative 'past' stem (e.g., ***cup–iere***), which is the same stem used in the past subjunctive (e.g., ***cup–iera***).[10]

The other future forms, however, do not use the past stem (e.g., ***cab–ré***), which is puzzling, as these forms and the future subjunctive all spell out the FUT head. This asymmetry is unexpected on an analysis that treats *–r* as the morphological reflex of a FUT head. At this point, we can do several things. We can conclude that the Martínez Vera analysis, treating all the data in (202) as FUT, is untenable. There is a clear asymmetry between the future subjunctive, the future/conditional and the infinitive. J. Harris' (1998) analysis and Arregi's (2000) analysis, specifically as it relates to his treatment of the future and conditional, are also untenable for the same reason. The remaining option for reduction is the one advocated by Nie (2015) wherein the *–r*, for the first three cases in (202), is the marker of the infinitive. We can further conclude at this point that the conceptual motivation for treating the *–r* exponent of the infinitive and future/conditional as similar is supported by the distribution of stems.[11] This in turn demonstrates that the reduction of homophony is not only desirable but also conceptually necessary, which meets our second desiderata.

5.3　When Synchrony Meets Diachrony: An Analysis of Future and the Conditional

Given the perhaps surprising result that a version of the historical analysis seems to still make the best predictions in the synchronic grammar of French, I extend the quasi-historical analysis to Spanish and show that such an approach also makes better predictions for verbal stem choice in the Spanish Future and

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[10]While the future subjunctive is not used anymore, it illustrates an interesting point, about what you should predict all things being equal. Later, I argue that this point still holds for modern Spanish because *quisiera ir al cine* 'I would like to go to the movies' is best treated as conditional. In Chapter 6, I argue that its distribution is not the same as the subjunctive proper. Thus, the asymmetry I am trying to show here still holds.

[11]Strangely enough, we are still left with an analysis that looks like (199a), though we can now say that the infinitive and future/conditional pattern together, whereas the future subjunctive is a class onto itself. I delve more into what this means for the observed root asymmetries in the analysis in Chapter 7.

Conditional. Specifically, I argue for the paradigmatic organization presented in (203). The verb *hablar* 'to speak' is representative of the future paradigm and *comer* 'to eat' the conditional.

(203)   Future and conditional paradigm: *hablar* 'to speak' and *comer* 'to eat' (root –TH –Inf–Mod–T–Agr)

	−PL		+PL	
	FUT.	COND.	FUT.	COND.
1	habl –a –r –∅ –é –∅	com –e –r –í –∅a –∅	habl –a –r –∅ –e –mos	com –e –r –í –∅a –mos
2	habl –a –r –∅ –á –s	com –e –r –í –∅a –s	habl –a –r –∅ –é –is	com –e –r –í –∅a –is
3	habl –a –r –∅ –á –∅	com –e –r –í –∅a –∅	habl –á –r –∅ –a –n	com –e –r –í –∅a –n

These forms are invariant across verbal class; for this reason, it is not necessary to organize this paradigm according to verbal class.

5.3.1   The Infinitive

To motivate my approach to the future, I first establish that the modal meaning comes from a position structurally higher than the infinitive marker since the *–r* exponent cannot be a marker of the future, given the discussion toward the end of Section 5.2.2. Wurmbrand (2014: 413) argues that (some) infinitives contain a future modal head WOLL$_0$, and the presence of this head accounts for their 'tensed' interpretation, although WOLL does not have any independent tense features. This non-finite future, shown in (204), is only minimally different from the finite future in (205) which has tense in T.

(204)   Non-Finite Future
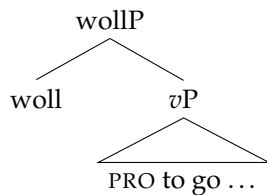
(205)   Finite Future
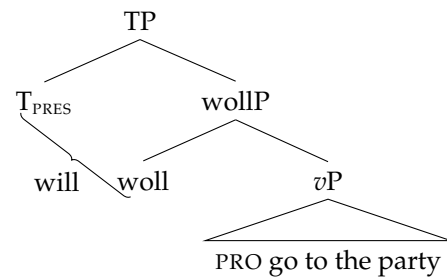
While Wurmbrand does not take any particular position on the infinitival marker *to* itself, her analysis does take WOLL to be structurally higher than infinitival *to* in English. She notes in a footnote that if a syntactic head is required for each morpheme, then plausible options for the infinitival maker include InfP (Kayne, 1989) or an aspectual projection (Travis, 2010). For our present purposes, we need not resolve whether we are dealing with InfP or an aspectual head, but I will discuss the evidence for the existence of this syntactic

head, whatever its properties.

According to Travis (2010: 77), the comparison of French and English provides evidence for a position between negation and certain adverbs which is the target of infinitives in French and the infinitival marker *to* in English. The arguments for this position come from Pollock (1989), coupled with one of Travis' observations. Consider (206).

(206) a. Jean (n') aime   **pas** Marie.
           Jean (NEG) like.PRES.3SG NEG Marie
           'Jean doesn't like Marie.'

       b. Jean embrasse   **souvent** Marie.
           Jean kiss.PRES.3SG often   Marie
           'Jean often kisses Marie.'

       c. Ne **pas** sembler heureux est   une condition pour écrire   des romans.
           NEG NEG seem.INF happy   be.PRES.3SG a   condition for   write.INF the novels
           'To not seem happy is a condition for writing novels.'

       d. *Ne sembler **pas** heureux . . .

       e. Parler   **á peine** l'italien   aprés cinq ans d'étude dénote   un manque de don
           speak.INF hardly   the Italian after five years of study indicate.PRES.3SG a   lack   of gift
           pour les langues.
           for   the languages
           'To hardly speak Italian after five years of study shows a lack of a gift for languages.'

From these data, we can conclude that there is a syntactic head between the position of negation and the adverb. This position is diagnosed by the placement of the verb relative to the negative marker *pas* and certain adverbs. Finite verbs appear before both *pas* and adverbs as in (206a) and (206b), while infinitives appear after *pas* but before the adverbs as in (206c) – (206e). Although Pollock explains that there is no verb movement in English infinitives, Travis points out that the position between the negative marker *not* and sentential adverbs is occupied by *to* in English.[12]

(207) a. **Not** to seem happy
       b. To **hardly** speak Italian

Travis (2010: 77 – 8) argues the position is related to the lack of finiteness. That the future and the conditional in French both include the infinitival marker is not accidental on a view in which morpheme order is determined through head movement, as the infinitival morphology indicates movement through a functional head linked to infinitival marking. The infinitival marker *to* in English is a free morpheme found in the same position as the French bound infinitival marker *–r* and does not trigger verb movement.

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[12]Travis does note that there are cases where *to* can appear before *not* (e.g., to not leave would be difficult). She suggests that these cases may be instances of constituent negation.

Other tensed interpretations of infinitives than the ones countenanced by Wurmbrand's analysis are also possible. Evidence from Portuguese and Dominican Spanish shows that when infinitives are given overt lexical subjects and/or agreement, they can take on certain modal properties. In Caribbean varieties of Spanish like Dominican Spanish, overt lexical subjects are possible with infinitives (Ortiz-López and Aponte, 2018; Suñer, 1986; Toribio, 2000) though these varieties lack the agreement on the infinitive present in Portuguese.[13] Borrowing terminology from Cowper (2016), Portuguese has an inflected infinitive, as in (208), whereas Dominican Spanish has a personal infinitive as in (209).

(208) a. João pede   que ajudemos   na   loja
        João ask.PRES.3SG that help.1PL.SUBJ at+the store
        'John asks us to help at the store.'

     b. João pede   para ajuda-r-mos na   loja
        João ask.PRES.3SG for help-INF-1PL at+the store
        'John asks us to help at the store.'

(209) a. Es   importante que como pueblo entendamos   todo   lo que
        be.PRES.3SG important   that as   a people understand.SUBJ.1PL everything that
        conlleva
        entail.PRES.3SG
     b. Es importante **nosotros como pueblo entender** todo lo que conlleva.   (Ortiz-López and
        Aponte, 2018: 133 - 4)

Portuguese inflected infinitives can stand in for the subjunctive and Dominican Spanish personal infinitives show a similar effect. For both sets of data, the (b) sentences have the same meaning as the (a) sentences, which are their standard counterparts. Despite some minor differences between these data, it is interesting that a seemingly non-finite form can be used for a subjunctive meaning. Additionally, infinitive and subjunctive alternate systematically in complement clauses, with infinitive the option being used in cases of subject coreference and a subjunctive clause is used there is an implicature that there will not be coreference (Fábregas, 2014: 49). Consider (210)

(210) a. *pro$_i$*   quiero   que *pro$_{*i/j}$* esté   allí.
        1SG.NOM want.PRES.1SG that 1SG.NOM be.SUBJ.1SG there
        Intended: 'I want to be there myself.'

     b. *pro$_i$*   quiero   PRO$_{i/*j}$ estar allí
        1SG.NOM want.PRES.1SG 1SG.NOM be.INF there
        'I want to be there myself.'

These data force us to consider the nature of finiteness. At least one understanding of finiteness is the view

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[13]This pattern is also a fairly typical property of other Romance varieties (e.g., Romanian, Alboiu, 2006, and some Italian dialects, see Ledgeway, 1998; Mensching, 2000; Sitaridou, 2002)

advocated by Cowper ([2005](#), [2012](#)) who argues that finiteness simply licenses structural case for the subject and φ-feature agreement on the verb. Given that it is probably unwarranted to call these cases finite in the traditional sense, Cowper ([2016](#)) has dubbed these cases as pseudo-finite, as they share some of the properties of finiteness without being 'fully' finite.[14,15]

I propose that, in Spanish, if one of these pseudo-finite constructions is modified so that it is fully finite, with independent temporal anchoring and agreement, it gives a future or conditional form. Consider (211).

(211)   From Pseudo-finite to Finite

    (FUT-)INFINITIVE: PRO habla –r   (–WOLL)

    (SUBJ-)INFINITIVE: tú habla –r   (–WOLL)

    FUT/COND: *pro* habla –r   –WOLL   –PRES/PAST   –AGR

In (211) a typology of 'extended' infinitival meanings begins to emerge. There are basic, intermediate and advanced cases. Additionally, for each case, there are two possible structural configurations, each with a differing interpretation. The relevant data are introduced in (212).

(212)   a.   Hoy hice   todo mi   trabajo para hablar   con el encargado mañana.
            today do.PRET.1SG all   1SG.POSS work   for   speak.INF with the manager   tomorrow
            'I did all my work today to talk to the manager tomorrow.'

    b.   Hablar   de morfología no es   saludable.
            speak.INF of morphology NEG be.PRES.3SG healthy
            'speaking about morphology is not healthy.'

    c.   Eso te   pasa   por tú   ir   demasiado rápido.
            that 2SG.DAT pass.PRES.3SG for 2SG.NOM go.INF too   fast
            'That's what you get for you going too fast.'

    d.   Es   importante nosotros como pueblo entender   todo lo que conlleva.
            be.PRES.3SG important 1PL.NOM as   people understand.INF all   that   entail.PRES.3SG
            'It is important for us as a people to understand everything that it entails.'

In the basic case, there is a PRO-subject and the two interpretations depend on the presence versus absence of the WOLL head. When WOLL is present, these infinitives can have a future-oriented reading as in (212a) and when it is absent, they lack this reading as in (212b). The intermediate case differs in that both interpretations require overt lexical subjects, but the difference between an indicative reading in (212c) or a subjunctive reading in (212d) also depends on the presence or absence of WOLL. Last, the advanced cases can also have lexical subjects, though *pro*-drop is typical, but the presence of WOLL is not optional. The

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[14]The idea that notional grammatical categories can fall on a continuum of the kind Cowper advocates is not entirely new. For a proposal that takes transitivity to be on a continuum of intransitive to transitivity, see Hopper and Thompson ([1980](#)).

[15]Note that other views correlate finiteness with clause size (e.g., Alboiu, [2009](#), [2020](#); V. Hill and Alboiu, [2016](#); Pesetsky, [2021](#); Satik, [2021](#))

difference between the future and conditional meanings in these cases relies on a contrast in tense: the future requires the present tense and the conditional the past. Given the addition of independent temporal anchoring, I expect AGR to be possible in such cases. These last cases are explored further in the following section.

5.3.2 The Future and the Conditional

The analysis of the Future and Conditional forms follows Cowper (2005) in the use of interpretable INFL features, though I take them to be spread over diverse functional heads. To briefly recap, the temporal feature [PRECEDENCE] sets the temporal anchor of the clause to before the utterance time, ensuring that at least one moment of the event or state precedes the temporal anchor of the clause that is fixed to the deictic centre of the utterance or discourse by the feature [DEIXIS]. The feature [MODALITY] provides quantification over possible worlds. The future/conditional is modal and is comprised of a Mod(al) head that is the functional equivalent of WOLL. Mod_0, with the feature [MODALITY], takes an infinitival complement which I have represented here as INFINITIVE. [MODALITY] coincides with the utterance time via [DEIXIS] (accounting for the future) and can also include [PRECEDENCE] (accounting for the conditional). The use of [PRECEDENCE] in this case is the 'fake' past usage that is characteristic of counterfactual conditionals (see Iatridou, 2000).

Before presenting the analysis of the future (and conditional) forms, I briefly look at clitics placement in European Portuguese (EP).[16] These data show that the inflectional domain of the future has two INFLs. When a clitic follows a verb inflected for future or conditional in EP, it is inserted before what is taken to be a person/number affix, instead of appearing at the end of the inflected verb. This pattern is illustrated in (213):

(213)   European Portuguese Mesoclisis

    a.   perceberia
        understand.COND.3SG
        'He would understand.'

    b.   perceber -te-   ia
               -2SG.DAT-
        'He would understand you.'

    c.   *perceberia -te
                −2SG.DAT
        'He would understand you.'   (Vigário, 1999: 222)

Given the placement of dative clitic in (213b), we can diagnose an INFL domain after the –*r* as Romance

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[16]Like other Romance languages (see Section 5.1.2), the future/conditional in EP developed from the same historical source in Latin.

clitics are INFL/T-oriented (Kayne, 1991; Roberts, 2010; Sportiche, 1995 *inter alia*). The placement of the clitic in (213c) is generally ungrammatical, though Vigário (1999: 235) also points out that at least some speakers of EP also find that clitic placement acceptable (e.g., *falarias-lhe* 'you would speak to him/her'). Since clitics can target two positions, this provides evidence that there must be a second INFL in the future and conditional forms.[17]

Having shown that there are two INFL positions in the Romance future forms, I simplify the representation in (214). That is, I only show the fine structure of the 'future' part of the verbal complex; the detailed structure of the infinitive is discussed in Chapter 7.

(214)   Morphological Structure of the Conditional:
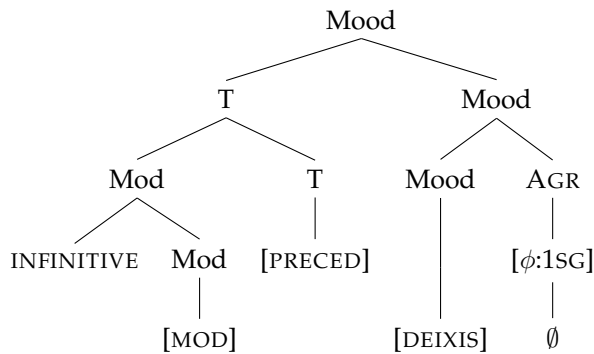
Following Baker's (1988) mirror principle, the morphological structure in (214) is the opposite of what is seen in the syntax. I assume that head movement forms a complex head and that INFINITIVE is spelt out first in a cyclical theory of spell out (e.g., Embick, 2012) wherein the innermost node is inserted first. The result of this proposal is that the root cannot be sensitive to anything but the first INFL domain, INF is the marker of the Infinitive in the context of the Future and the Conditional, and MOD contributes the modal meaning.

An infinitive is not inflected for agreement or finite tense in Spanish, but when functioning as a stem it takes on the properties of *haber*, which is a class II verb. I implement this idea in much the same way I did for verbal class and posit a dissociated class morpheme that is inserted in mod_0. This is illustrated in (215).

(215)   Mod → [Mod, CL: II] / INF $]_v$ __ $]_{MOD}$

In Chapter 3, I suggested that there is a way to explain the 'conditional theme vowel' that do not involve

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the redundancy rules required by Arregi's (2000) multiple theme vowel analysis. In short, the multiple theme vowel analysis predicts that the conditional theme vowel should be 'a' since it is not local to class information present on a root, but this prediction is contrary. To rectify this discrepancy, several redundancy rules are required to change the predicted 'a into the observed 'i'. Consider (216a).

(216)   Arregi's (2000: 9) Analysis (not adopted)

    a. $\emptyset \rightarrow +\alpha$ / [FUT, _] + [PAST]

    b.   [FUT]+TH+[PAST] $\rightarrow$ [FUT, $+\alpha$]+TH+[PAST]

    c. $\sqrt{habl}$+v–a$_{\text{TH}}$–r$_{\text{FUT}}$–i$_{\text{TH}}$–$\emptyset_{\text{T}}$–a$_{\text{TH}}$–s$_{\text{AGR}}$

The rule in (216a) effectively turns a Class I verb into Class III. In (216b) the rule applies to the Fut node giving it a specification of $+\alpha$. With this specification in place, a rule inserting –*i* can now apply to the future theme position as in (216c). However, since I do not assume the multiple theme vowel analysis (see Section 3.1.2 for arguments against this position), a simpler solution can be proposed. Consider (217).

(217)   a.   Mod $\Leftrightarrow$ i / __ [PRECEDENCE]

    b.   Mod $\Leftrightarrow \emptyset$

In (217), Mod either spells out -*i* in the context of the feature [PRECEDENCE] as in (217a), otherwise, it is realized by a null exponent as in (217b). The upshot of this proposal is that it does not require the use of redundancy rules. Last, in (218), I make use of the vocabulary item for imperfect that I proposed in Section 4.1.2.

(218)   a.   [DEIXIS, PRECEDENCE] $\Leftrightarrow$ –Ca / CL:¬1 __

    b.   [DEIXIS, PRECEDENCE] $\Leftrightarrow$ –ba

Given the historical connection between the imperfect and the conditional, it is perhaps unsurprising that [PRECEDENCE] also spells out the imperfect exponents in the context of the conditional.

    In contrast to the conditional, the derivation for the future is somewhat more complex and the realization of T in the future can be accounted for with the two related Vocabulary Items given in (219).

(219)   a.   [PRES] $\Leftrightarrow$ –e / MOD]$_v$ __]$_{\text{T}}$ 1]$_{\text{AGR}}$

              [PRES] $\Leftrightarrow$ –e / MOD]$_v$ __]$_{\text{T}}$ 2PL]$_{\text{AGR}}$

    b.   [PRES] $\Leftrightarrow$ –a / MOD]$_v$ __]$_{\text{T}}$

T is variably realized as *–e* or as *–a*. When T is realized as *–e*, as in (219a), it is conditioned by having specific person features as part of the contextual specification, whereas in the elsewhere case in (219b) this is not required. As previously noted, J. Harris did not account for the second plural forms, a matter resolved by adding the relevant contextual specification to the VI in (219a).

To conclude the analysis of the future/conditional, one last factor must be addressed. There are several verbs that do not retain the typical infinitival theme vowel in the future and conditional; these verbs are listed in the table below:

(220)   TH-loss in the Future

VERB	1SG	VERB	1SG	VERB	1SG
poner 'put'	pond_ré	venir 'come'	vend_ré	saber 'know'	sab_ré
salir 'leave'	sald_ré	caber 'fit'	cab_ré	querer 'want'	quer_ré
tener 'have'	tend_ré	haber 'have'	hab_ré	decir 'say'	di_ré
valer 'cost'	vald_ré	poder 'be able'	pod_ré	hacer 'do'	ha_ré

The underscore in (220) marks where the missing theme vowels should have gone, and in each case we use the first singular form for illustration. Resnick and Hammond (2011) observe that short unstressed vowels were deleted in certain contexts. They note that if the syllable adjacent to a stressed vowel had a short vowel, then the vowel was deleted in polysyllabic words – this change occurred regularly only if one of the adjacent consonants was a liquid or a nasal. Consider (221).

(221)   Unstressed Vowel Deletion

    a. $\bar{V} \rightarrow \emptyset \ / \ \_\_ \ C_0\acute{V}$

    b.   poněré $\overrightarrow{\text{Del}}$ pon_ré

Resnick and Hammond mention that the loss of the [e] or [i] occurred wherever the language tolerated the resulting consonant cluster. Thus, many 'contracted' future and conditional infinitives were produced (e.g., *recibré* 'I will receive' and *vivré* 'I will live') but the regularizing force of the language made almost all recover the lost vowel from the 16th century.

Given this development trying to deal with the missing theme vowel phonologically seems ill-motivated and instead to account for the missing theme vowel, I obliterate (e.g., Arregi and Nevins, 2012) or delete the *v* position with the rule in (222), which is conditioned by the presence of the future head MOD and the list of the affected verbs.[18]

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[18]Acquaviva (2009: 5) notes that licensing statements that apply to lists of roots are not any more (or less) arbitrary than explicit

(222)   *v*-obliteration in the Future/Conditional

$$v \rightarrow \emptyset \ / \ \{\sqrt{\text{PON}}, \sqrt{\text{SAL}}, \sqrt{\text{TEN}}, \dots\} \ \_\_ \ \text{MOD}$$

Now I go through a derivation and compare the future/conditional and the infinitive forms, using *poder* 'be able' for illustration. Consider (223).

(223)   a. $\sqrt{\text{POD}} + v_{[\text{CL}]} + \text{INF} + \text{MOD} \ \ \overrightarrow{\text{DEL}} \ \ \sqrt{\text{POD}} + \text{INF} + \text{MOD} \ = \ $ pod –r –é

      b. $\sqrt{\text{POD}} + v_{[\text{CL}]} + \text{INF} \ \ \ \ \ \ \ \ \ \ \ \text{——} \ \ \ \sqrt{\text{POD}} + v_{[\text{CL}]} + \text{INF} \ = \ $ pod –e –r

Since the expression of theme vowels is due to the class feature in *v*, the deletion in (223a) results in these verbs losing the ability to express class information via a theme vowel. For the infinitive in (223b), the *v*-obliteration rule from (222) does not apply and thus the *v* position is realized which allows a theme vowel exponent to be inserted.

Essentially, my proposed analysis is the historical analysis and as I have shown it still makes the best predictions. Therefore, we need to be careful to not just dismiss historical analyses wholesale. The synchronic approach that treats *–r* as the future marker actually creates several non-trivial problems that are hard to resolve. Indeed, Kiparsky (2006) notes that there seems to be a perennial disagreement over the appropriate scope of synchronic and diachronic explanations in linguistics. With this in mind he proposes an 'amphichornic' program. Under this view of the grammar synchronic and diachronic explanations feed each other. The following quote illustrates what he feels are tensions in the current theoretical landscape.

> survivals and revivals of 19th century historicism, in the form of doctrines that reject the validity of synchroinc explanation or assign diachronic explanation some kind of epistemological priority . . . encounters 20th century superstitions that historical explanations are unprincipled and/or uninteresting, that synchronic explanation is the only kind there is (Lightfoot, 2000), that even countenancing the possibility of competing historical and synchronic explanations is a "category mistake" (Gill et al., 2004), and that providing a historical explanation for a generalization amounts to reducing it to an "accident".

My analysis supports this amphichornic view and adds further data illustrating the necessity of Kiparsky's research program. Moreover, it adds another language to a spate of diachronic-synchronic analyses of the future and conditional (see Nie, 2015 for French and Vigário, 1999 for Portuguese).

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specifications on each root. See Section 3.1.3 for a discussion on why the diacritic option is untenable.

5.4 Summary

Thus concludes my treatment of future and conditional forms in Spanish. The main claim advanced in the analysis of these two related verbal forms is as follows:

1. I conclude that the *–r* exponent in the future and conditional forms is the same as the infinitive and not a marker of futurity. This conclusion is supported by the distribution of stems (e.g., *cab-ré* vs. ***cup****-iere*).

2. I establish that the modal meaning comes from a position structurally higher than the infinitive marker since the *–r* exponent cannot be a marker of the future.

3. I argue that the future/conditional verbal form is an infinitive + modal verb construction.

Having concluded this basic examination of the future and conditional verbal forms in Spanish, I move on to Chapter 6 which focuses on various extended uses of the future and conditional forms.

6 | Extended Uses of the Future

Having presented my core proposal for the morphology of the future (and conditional) in the previous chapter, I now look at some specialized uses of the future and the conditional. Specifically, I analyze the ability of the future form to express indirect evidentiality and the morphology of the non-canonical verbal form used to express a polite conditional meaning.

6.1 The Conjectural Future

In what follows, I examine several extended uses of the future and argue that there is, in fact, a shared meaning for them. First, I lay out the key data and then we resolve a tension between viewing the extended uses of the future as either epistemic modality or evidentiality. Following this, I review the previous analyses of these extended uses of the future. Finally, I present my analysis; my main claim for the semantics is that the meanings of theses extended use of the future can be built on top of the temporal/modal relations of the standard future that I argued for in Section 5.3.2, as modified by the contribution of Sen_0, the perspective head. Before addressing the semantics, however, I deal with some issues relating to the morphosyntax of these extended future cases.

6.1.1 The Key Data

Apart from the future and conditional forms of the verb being used to situate an event in a future time or refer to counterfactual happenings, respectively, they also have conjectural, reportative and mirative uses.

I. Conjectural/Inferential

Let us first borrow an example from Rivero (2014: 197–8) who explains the context for the data in (224) as follows: Helen walks into a room that her mother is in; Helen does not look well. Reflecting on her daughter's appearance, the mother could utter either (224a) if the deduction is about the present or (224b)

if her deduction is about the past.

(224) a. Tendrá   fiebre. Voy   a por el   termómetro.
           have.FUT.3SG fever. go.PRES.1SG to for the thermometer
           'She may/might/must have a temperature. I'll get the thermometer'.

       b. Tendría   fiebre. No se me ocurrió   ponerle   el   termómetro.
           have.COND.3SG fever. NEG SE me occur.PRET.3SG put.INF+her the thermometer.
           'She may/might/could have had a temperature. It did not occur to me to check it.'

This usage of the Spanish future and conditional forms has been termed *un Futuro de conjetura* 'a Conjectural Future' (Fernández Ramírez, 1986) or an epistemic future (Butt and Benjamin, 2000). It has also been called, among other names, an inferential (Rivero, 2014) or evidential future (Escandell-Vidal, 2010).

II. Reportative/Quotative/Hearsay

There are some clear cases of an evidential use of the conditional, as in (225). Bermúdez (2016: 43) argues that the conditional in (225) is a marker of secondhand news and can be straightforwardly understood as a reportative or hearsay evidential.

(225) a. Simon soltó   su bomba: Humala tendría   un hijo   extramatrimonial
           Simon drop.PRET.3SG his bomb: Humala have.COND.3SG a   child extramarital
           'Simon dropped his bomb: (it has been said that) Humala has an extramarital child.'

       b. Los jugadores no entrenan   y   el presidente renunciaría   esta noche
           The players   NEG train.PRES.3PL and the president resign.COND.3SG this night
           'The players don't train and (it has been said that) the president resigns tonight.'

In (225), the reports do not comment on the veracity of the prejacent proposition, but rather indicate that the speaker is not the source of the information. Bermúdez (2016) explains that for reportative usage one can interpret the information as highly doubtful or as true, depending on the context. Assumptions about the veracity of the information would be the result of an evaluation based on context but are not included in the semantics (see Dendale, 1993 for a similar take). Speas (2018) points out that this behaviour is fairly typical of reportative evidentials crosslinguistically.

III. Mirative

The hearsay use above contrasts with a related use, which has been termed mirative, that is used to express surprise (among other things), as in (226). The relevant context for the interpretation of (226b) is given in (226a).

(226) a. Juan era   el   mejor cantante
         John be.IMPF.3SG the best   singer
         'John was the best singer.'

     b. Sería   el   mejor cantante, pero no   votaron   por él
         be.COND.3SG the best   singer   but   NEG vote.PRET.3PL for he
         'He may/might have been the best singer, but they did not vote for him.'   (Rivero, 2014: 199)

The use of the conditional in (226b) indicates the speaker's surprise that the audience did not vote for Juan although he was the best singer. The classification of the mirative as an evidential, however, is not without controversy. Some include it as an evidential (Escandell-Vidal, 2010; Rivero, 2014), while others suggest that the mirative is a modal, but not evidential marker since it does not mark the mode of access to information but to what extent the speaker is prepared to perceive something (Plungian, 2001; Rodríguez Rosique, 2015, 2018). DeLancey (1997, 2001) proposes that the mirative should be recognized as an independent grammatical category, separate from both epistemic modality and evidentiality. Given the lack of clarity on how the mirative data should be characterized, I leave a formal treatment of the mirative use to future work.

6.1.2   The Differences between Epistemic Modality and Evidentiality

There is some debate on whether the data in Section 6.1.1 should be treated as epistemic modality or cases of evidentiality. This tension is unsurprising as the notions of epistemic modality and evidentiality are closely related (see Speas, 2018 for a discussion). Epistemic modality expresses the possibility of a proposition being true, given what a speaker already knows, *and* it indicates the speaker's degree of commitment to or evaluation of that proposition (Palmer, 1986). However, several authors have argued that there is a distinction between marking the source of the information (the evidential component) and the degree of commitment a speaker has to their utterance (Aikhenvald, 2004; de Haan, 1999, 2001, 2005; Dendale, 1993; Speas, 2018; Squartini, 2004). In comparison to epistemic modality, evidentiality only requires the evidential component.

Since the concepts of epistemic modality and evidentiality have been implicated in the presentation of the basic data in Section 6.1.1, it is necessary to sort out what grammatical category we are actually dealing with. Laca (2016) argues that the Conjectural Future (CF) is distinct from epistemic modality in Spanish along several properties: (i) incompatibility with epistemic adverbs, (ii) interrogative contexts, (iii) Non-Deniability, (iv) scope under negation, and (v) restrictions on embedding. I largely follow Laca's (2016) presentation of the relevant Spanish facts, supplemented with commentary from other authors where warranted.

I. Epistemic Adverbs

Laca (2016: 15) compares the CF with epistemic modals in Spanish showing their (in)compatibility with epistemic adverbs. Consider (227) and (228).

(227) a. Decididamente/indudablemente, la culpa de todo debe tenerla ella.
Decidedly/undoubtedly, the fault of everything should.PRES.3SG have.INF+it she
'Decidedly/undoubtedly she should be blamed for everything.'

b. #Decididamente/indudablemente, la culpa de todo la tendrá ella.
Decidedly/undoubtedly the fault of everything 3SG.ACC have.FUT.3SG she
'Decidedly/undoubtedly, she should be blamed for everything.'

(228) a. Necesariamente, tiene que haberse imaginado la escena. Es imposible que
Necessarily must have.INF+SE imagined the scene be.PRES.3SG impossible that
la haya visto.
3SG.ACC have.SUBJ.1SG seen
'The scene must necessarily have been imagined. It is impossible that I have seen it.'

b. #Necesariamente, se habrá imaginado la escena. Es imposible que
Necessarily SE have.FUT.3SG imagined the scene be.PRES.3SG impossible that
la haya visto.
3SG.ACC have.SUBJ.1SG seen
'The scene must necessarily have been imagined. It is impossible that I have seen it.'

The contrasts in (227) and (228) that the CF is incompatible with the epistemic adverbs of certainty or necessity.

II. Interrogative Contexts

Rivero (2014) suggests that interrogative contexts can distinguish between items that contribute to propositional content and illocutionary/parenthetical expressions. She notes that semantic embedding under a question operator is not possible for illocutionary expressions, but is possible for expressions that contribute to the propositional content of an utterance. Consider (229).

(229) a. #¿Debe haber venido ayer?
must.PRES.3SG have.INF come yesterday
'Must he have come yesterday?'

b. ¿Habrás venido ayer?
have.FUT.2SG come yesterday
'Did you come yesterday?' (Laca, 2016: 15)

According to Rivero (2014: 202), items like the necessity modal in (229a) do not contribute to the propositional content and are thus excluded from interrogative contexts, whereas inclusion of the CF in (229b)

indicates that it is not an illocutionary expression.

III. Non-Deniability

Laca (2016: 16) notes that, in some cases, the CF behaves like necessity modals, but it differs from possibility modals on two properties. First, as should be familiar from Section 4.2.3, evidentials (among other categories like certain modals) are known to show a non-deniability effect. That is, denying the evidential proposition results in a semantic contradiction (Murray, 2017: 23). Consider (230).

(230)   a.   Pudo   haber   entrado por la ventana, pero no   creo   que
                    can.PRET.3SG have.INF come in for the window but   NEG believe.PRES.1SG that
                    haya   entrado por ahí
                    have.SUBJ.3SG come in there
                    'He could have come in through the window, but I don't think he came in there.'

             b.   #Debe   de haber   entrado por la ventana, pero no   creo   que
                    must.PRES.3SG of have.INF come in for the window but   NEG believe.PRES.1SG that
                    haya   entrado por ahí
                    have.SUBJ.3SG come in there
                    'He must have come in through the window, but I don't think he came in there.'

             c.   #Habrá   entrado por la ventana, pero no   creo   que haya
                    have.FUT.3SG come in for the window but   NEG believe.PRES.1SG that have.SUBJ.3SG
                    entrado por ahí
                    come in there
                    'He must have come in through the window, but I don't think he came in there.'

Note that possibility modals, as in (230a), do not give rise to the non-deniability effects, but the effect does appear with necessity modals (230b). Finally, (230c) shows an independent declarative containing the CF cannot be continued with a denial of one's belief in the expressed proposition.

IV. Scope under Negation

The second difference between the CF and possibility modals is that the CF cannot fall under the scope of negation. The data in (231) show the various scope relations of the CF and modals categories with respect to negation and the prime sentences represent Laca's (2016) analysis of the scope effects. The ◊ is the logical symbol for possibility, the □ is the symbol for necessity, FUT is used for evidentiality here, and the symbol ¬ is for negation.

(231)   a.   No habrá   entrado por ahí
                    NEG have.FUT.3SG come in there
                    'He must not have come in there.'

             a′.   FUT ¬ p

b.   No debe   de haber   entrado por ahí
       NEG must.PRES.3SG of have.INF come in there
       'He must not have come in there.'

b'.   □ ¬ p

c.   No pudo   haber   entrado por ahí
       NEG can.PRET.3SG have.INF come in there
       'He could not have come in there.'

c'.   ¬ ◊ p   (Laca, 2016: 16)

The CF cannot fall under the scope of negation (231a), any more than necessity modals can (231b), but this is, of course, possible with the possibility modal in (231c). That is, for (231a) and (231b) both necessity and evidentiality have scope over negation while for (231c) negation has scope over possibility. Scope is relevant if the CF is contributing genuine propositional content, not if it is illocutionary/parenthetical expression. In general, modals take a somewhat arbitrary lexical scope (e.g. *must* outscopes negation, but neither *will* nor *have to* does) – we might think that the scope of modals is partially predictable from their force. Thus in this case the conjectural future looks like a necessity modal.

V. Evidential Restrictions

Last, there are various restrictions on whether the CF can be embedded, as can be observed in the data in (232) through (234). Here the labels CAUSAL, CERTAINTY, and SUPPOSITION represent the particular kinds of complementation being considered.

(232)   CAUSAL

         a.   Releí   el manuscrito porque podía/debía   haber   un error.
             reread.PRET.1SG the manuscript because can/must.IMPF.3SG exist.INF an error
             'I reread the manuscript because there could/must be a mistake.'

         b.   #Releí   el manuscrito porque habría   un error.
             reread.PRET.1SG the manuscript because exist.FUT.3SG an error
             'I reread the manuscript because there must be a mistake.'

(233)   CERTAINTY

         a.   Pedro está   convencido de que María puede/debe   estar mintiendo.
             Pedro be.PRES.3SG convinced of that Maria can/must.PRES.3SG be.INF lying
             'Pedro is convinced that Maria may/must be lying.'

         b.   #Pedro está   convencido de que María estará   mintiendo.
             Pedro be.PRES.3SG convinced of that Maria be.FUT.3SG lying
             'Pedro is convinced that Maria must be lying.'

(234)   SUPPOSITION

a. Pedro se figura   que María puede/debe   estar mintiendo.
Pedro SE figure.PRES.3SG that Maria can/must.PRES.3SG be.INF lying'
'Pedro figures that Maria may/must be lying'

b. Pedro se figura   que María estará   mintiendo.
Pedro SE figure.PRES.3SG that Maria be.FUT.3SG lying'
'Pedro figures that Maria must be lying'   (Laca, 2016: 17)

In (232) we see that the CF is not valid in causal complements.[1] Most tellingly, however, is the fact that the CF is not valid in certainty contexts in (233) but is acceptable in supposition contexts as in (234). Given that a core component of epistemic modality is a commentary on the certainty of a proposition, the fact that the CF is banned from certainty contexts but accepted in supposition contexts supports the idea that the CF is not a form of epistemic modality.

Summary

The conclusions that can be drawn from the preceding discussion are quite mixed, but there are several key points to highlight. Of note are the restrictions on embedding in certainty contexts and the mixed results on necessity and possibility in several categories. These findings are summarized in Table 6.1.

Table 6.1: Comparison of Future and Epistemic Modals

	CF	Necessity	Possibility
Epistemic Adverbs	N	Y	–
Interrogative	Y	N	–
Non-Deniability	Y	Y	N
Scope	N	N	Y
Restrictions	Y	N	N

That the properties of the CF differ from those of epistemic modals of both necessity and possibility indicates the CF does not correspond to a case of epistemic modality (this is commensurate with Rivero's (2014) observation that though the CF and epistemic modals share various properties they are also different in several ways). Nonetheless, given the overlapping properties, it is also clear that CF is a modal category of some sort. This finding tracks well with the literature (see Speas, 2010, for instance) as it has been suggested that evidentials encode aspects of a modal base, although in this case, it does not seem clear that the modal base is the same as the one for traditional epistemic modals.

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[1] For the purposes of this discussion, I have only reviewed a few of the many contexts in which embedding is restricted for the CF. For a larger view of these restrictions, see Laca (2016).

6.1.3   Previous Analyses of the Conjectural Future

Having presented the key CF data, I now review several analyses of the CF that have been proposed in the literature to get an understanding of the current theoretical landscape and access what gaps need to be filled.[2] The earliest analysis for Spanish that seeks to explain both the temporal and modal uses of the future and conditional, and perhaps the seminal work in this area, belongs to Gennari (2000). Her basic proposal is that for any occurrence of either the future or the conditional, both temporal and modal specifications are present. That is, there is no temporal use of the future or conditional independent from a modal one. The likelihood of either the temporal or the modal interpretation being more salient than the other depends on the aktionsart of the verb and the context of utterance. Gennari treats the future as an operator evaluated relative to the utterance time, and the conditional as an operator evaluated relative to some contextually salient reference time. The modal portion of the meaning requires the sentence modified by the future or the conditional to follow from the assumptions in the conversational background (i.e., the context of utterance). The conversational background is therefore responsible for several of the different interpretations possible.

Bermúdez (2016) takes a different approach than Gennari (2000) and argues that the semantic domain of evidentiality can be defined from the same three parameters that define spatial deixis: direction, distance, and reference points. Bermúdez (2016) notes that since evidentiality as a deictic category does not locate objects in space but rather information with respect to individuals, these parameters are interpreted metaphorically.[3] Consider (235).

(235)   The Semantic Domain of Evidentiality

Method of accessing the information:	sensory	$\longleftrightarrow$	cognitive
Distance to the source of information:	internal	$\longleftrightarrow$	external
Access to the source of information:	exclusive	$\longleftrightarrow$	universal

The direction parameter is reinterpreted as the direction of accessing the information. That is, whether it is sensory or cognitive. The second parameter of distance is treated as the distance to the information source, and reference points in this view refer to individuals with or without access to the information. An important aspect of this model is that these parameters are independent, which predicts a whole spectrum of possible combinations. Furthermore, these parameters form a continuum along which intermediate points can be identified. For instance, an inference is a cognitive elaboration based at least partially on

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[2]Giannakidou and Mari (2018) argue that in Italian these kinds of extended uses of the future can be analyzed as expressing epistemic modality. However, given the preceding discussion this cannot be true for Spanish, as we are dealing with an evidential category.

[3]For much the same view for Spanish see alsoEscandell-Vidal (2014). See Speas (2010) for a similar view. Though that analysis does not speak to the Spanish facts directly, it does draw the same conclusion about the deictic nature of verbal inflection.

sensory stimuli, or endophoric evidence (such as wishes and dreams, etc.) that is halfway between sensory impression and cognitive elaboration.

Escandell-Vidal's (2010, 2014, 2018) analysis posits that the future in Spanish can be uniformly analyzed in terms of evidentiality. Her strong claim is that the future tense in Spanish is becoming (and in some cases has already become) a marker of evidentiality. Concretely, she argues that the future no longer locates an event after the time of utterance, nor does it mark a switch to another possible world as it does in modal accounts. Instead, the future functions as an instruction that the evidence for propositional content is information that exists in the evaluative model of the speaker. This is informally expressed in (236).

(236)   FUT (p) = (p) & [Source (p): S] & [MKnow (p): II]   (Escandell-Vidal, 2014: 226)

The future tense (FUT) indicates that the propositional content (p) under its scope has the speaker (S) as its only source and that the manner of knowing is an intuitive inference (II). Critically, in the semantic representation in (236), which describes the various components of a future-tensed sentence, the evidential meaning is not part of the propositional content.

Rivero (2014), on the other hand, argues that (i) the CF in Spanish does contribute to the propositional content of an utterance (i.e., affects truth conditions) and (ii) the CF cannot be reduced to either necessity or possibility. Given this argument, a central part of her analysis is the idea that the denotation of the CF contains a gradable or degree modal expression. The notion of gradability, coupled with the idea, following from Kratzer (2012), that there are realistic and informational ordering sources, allows for necessity and possibility readings. Specifically, recourse to realistic ordering sources gives rise to strong interpretations (i.e., necessity), while recourse to informational ordering sources gives rise to weak interpretations (i.e., possibility).

However, in contrast to Rivero's (2014) analysis, Laca (2016) argues that Rivero's main motivation for the possibility of the CF falling under the scope of other truth-conditional operators and/or appearing in subordinate clauses is untenable. She views these data as ungrammatical except for a severely limited number of cases. Unlike the other analyses discussed, which formulate their analyses primarily via semantic notation, Laca is unique in providing a syntactic structure for her semantic analysis.[4] This structure is given in (237).

(237)   Laca's Cartography of Future heads

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[4]Laca (2016: 27) notes that Escandell-Vidal's (2014) analysis of the Future in Spanish is largely compatible with her semantic analysis. For this reason, I shall not devote specific attention to that portion of Laca's (2016) analysis and instead I refer the interested reader to Laca's paper for details.

```
                    ForceP
                   /      \
              FUT1         FinP
                          /    \
                      FUT2      TP
                               /  \
                           FUT3    VP
```
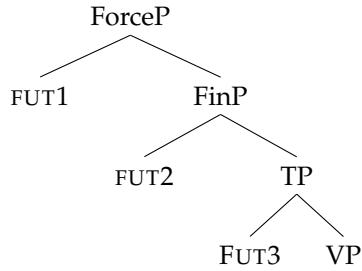
<div align="right">(Laca, 2016: 30)</div>

In (237), FUT3 encodes universal quantification over metaphysical alternatives (possible developments of the evaluation world from the Anchor Time). FUT2 encodes universal quantification over epistemic alternatives (uncertainty alternatives) possible in reliable, deductive inferences. Last, FUT1 deals with a speaker's comment about low subjective probability, or intuitive inference, as the only evidence for the associated proposition.

6.1.4 The Conjectural Future: An Analysis

In my estimation, the previous analyses all get facets of the complete picture correct but largely function in isolation. Accordingly, in what follows I integrate certain parts of these analyses to form a more cohesive whole and introduce several necessary, albeit subtle, changes and clarifications to shore up minor empirical and theoretical issues with the previous analyses. The analysis of the CF in this section proceeds as follows. First I deal with the morphosyntax of the CF followed by the semantics, before rounding out the section with a discussion of the commonalities between the subjunctive and the future.

While Laca (2016) offers the sole syntactic contribution to the analysis of the CF, this analysis is not without issue. She states that "una de las razones de que el futuro de conjetura no pueda aparecer en subordinadas es que estas carecen de proyección Fuerza" (Laca, 2016: 18).[5] There are at least two concerns here. First, the argument that the embedded domain in Spanish lacks a Force projection cannot be correct given the requirement for an overt complementizer *que* 'that' in cases of subordination.[6] Indeed, we see that the omission of *que* results in ungrammaticality as in (238).[7]

(238)   No   creo   (*que) viniera.
        NEG think.PRES.1SG (that) come.IMPF.SUBJ.3SG
        'I don't think he came.'   (Fábregas, 2014: 53)

---

[5]One of the reasons that the conjectural future cannot appear in subordinate clauses is that they lack a Force projection [translation mine]

[6]Here I assume following Rizzi that complementizers sit in the force head given that they seem to introduce clauses of certain types (e.g., declarative *que* 'that' or interrogative *si* 'if').

[7]While there are cases of *que* omission with subjunctive clauses, these cases are far from the typical one where the complementizer is required. It is quite possible that the force projection is required even if *que* is omitted in these cases.

Cartographic approaches to syntax (e.g., Rizzi, 1997) would place *que* in the Force head, Force$_0$, a fact that rules out the idea that embedded clauses lack this projection. Second, the locus of the evidential head is at odds with the literature on the syntax-pragmatics interface, which positions the evidential head higher than Force$_0$ (e.g., Speas and Tenny, 2003; Zu, 2018). Consistent with the literature, I position the evidential head, Sen$_0$, as in (239).

(239)   [SenP Sen [ForceP Force [MoodP Mood [TP T [ModP Mod [*v*P ...]]]]]]

The restrictions on embedding in this domain are lexical in much the same way that only certain predicates licence the subjunctive. In the case of the CF, these embedded readings are only licensed by predicates that are suppositional (e.g., *Pedro se figura que María estará mintiendo* 'Pedro figures that Maria must be lying' vs. #*Pedro está convencido de que María estará mintiendo* 'Pedro is convinced that Maria must be lying'). Morphologically speaking, what we have is a case of one morphological affix that covers two intimately related uses. Consider (240).

(240)   a.   tendrá   treinta años [Temporal]
               have.FUT.3SG thirty   years
               'She will be thirty years old.'

         b.   tendrá   treinta años [Evidential]
               have.FUT.3SG thirty   years
               'She is likely thirty years old.'

We need not modify the vocabulary item that were proposed earlier in the chapter as the future meaning is always available even if it is not the most relevant meaning in a given context. Given the availability of this meaning, my previously proposed vocabulary item is already underspecified enough to cover both the canonical and extended uses of the future. Consider (241).

(241)   a.   [PRES] ⇔ −e / MOD]$_v$ __]$_T$ 1]$_{AGR}$

               [PRES] ⇔ −e / MOD]$_v$ __]$_T$ 2PL]$_{AGR}$

         b.   [PRES] ⇔ −a / MOD]$_v$ __]$_T$

As mentioned in Chapter 5, T is variably realized as *–e* or as *–a*. When T is realized as *–e*, as in (241a), it is conditioned by having specific person features as part of the contextual specification, whereas in the elsewhere case in (241b) this is not required (for a fuller discussion of the structures and Vocabulary items proposed for the future and the conditional, I refer the reader back to Chapter 5 where the basic analysis assumed here is worked out in detail).

Having addressed the morphosyntax, I now focus on the semantics of the CF. I argue that it is possible to calculate the CF meaning based on the inherent temporal/modal relations of the standard future as modified by the contribution of Sen_0. I define the future's basic temporal semantics in Reichenbachian terms. In a Reichenbachian analysis (i.e., Reichenbach, 1947), Tense is a relation between a reference time (RT) and speech time (ST), whereas Aspect is a relation between the RT and an event time (ET). Under this approach, the semantics of the canonical future is given in (242).

(242)   Semantics of the Simple Future
         ST *precedes* RT
         RT *includes* ET

As we can see in (242), the primary relations for Tense and Aspect are precedence and inclusion. ST refers to the moment of speech and RT, in this case, refers to a time after ST. The RT and ET refer to the same time (i.e., after the moment of speech) as the ET is included in the RT.

Speas (2010) notes that there are parallels between evidentials and a Reichenbachian analysis of tense and aspect. Specifically, she argues that the primary relations for evidentials are inclusion and accessibility. She views precedence as equivalent to accessibility since the inferences needed for evidentials are a case of one situation 'following from' another. Following Speas (2010), I define the basic evidential meaning of the future in terms of the relations of inclusion and accessibility of the following situations: the Speech Situation (SS), a Reference situation (RS) and the Evaluated Situation (ES). The CF in (243a) and the reportative use of the conditional in (243b), both previously introduced in Section 6.1.1, can be subsumed under the same analysis.

(243)   a.   Tendrá   fiebre.
              have.FUT.3SG fever
              'She may have a temperature.'

         b.   Los jugadores no   entrenan   y   el presidente renunciaría   esta noche
              The players   NEG train.PRES.3PL and the president   resign.COND.3SG this night
              'The players don't train and (allegedly) the president resigns tonight.'

The consensus in the formal semantics literature on evidentials is that the traditional labels for different types of evidence such as, inferential or direct, are not primitives of the system (see Aikhenvald, 2004; Speas, 2018). Instead, the Sen_0 introduces a generalized relation between an evaluator and some relevant piece of evidence (Speas, 2010). Consider (244) and (245).

(244)   CF: Inferential Evidential

SS (i.e., now) *precedes* RS (= seeing someone look unwell)

RS *precedes* ES (= She may have a temperature.)

(245)   CF: Reportative Evidential

SS *precedes* RS (= telling me the president resigns tonight)

RS *precedes* ES (= allegedly, the president resigns tonight.)

In (244) and (245), the RS is the relevant situation from which the proposition in the ES is derived (i.e., the ES follows from the RS) and the SS is the situation in which the sentence is being uttered. From this kind of representation, it is fairly easy to see how evidentials encode aspects of the modal base, which Speas (2010) characterizes as a situation or set of situations accessible from the situation of which the proposition (i.e., the one expressed by the ES) is true. The analysis also requires that we change the aspectual part of the semantics of the future, given in (242), from *includes* to *precedes*. In the standard semantics, since the RT *includes* the ET, we only have a single proposition. Here the change from *includes* to *precedes* is essentially a restriction placed on the semantics by the addition of 'evidential' head Sen_0 as the head requires that some evidence be evaluated. That is, it requires that the ES follow from some set of facts (i.e., from the RS). This is schematized in (246).

(246)   a.   Evidential Proposition (*ev*): I have evidence that *p*

b.   Prejacent Proposition (*p*): ES

This requirement can be thought of as a necessary relaxation of Escandell-Vidal's (Escandell-Vidal, 2014) semantics that takes the manner of knowing *p* to be an intuitive inference. As originally stated, her claim is too strong. Reportative evidentials, for instance, cannot have the requirement for an intuitive inference since the relevant evidence can be directly told to you.

Next, I address how the two evidential interpretations are derived out of a single future form with the same underlying semantics. Recall that Speas (2010) characterizes the modal base as the situation or the set of situations accessible for the situation of which the proposition is true. Given this characterization, I take the modal base to follow from the assumptions in the conversational background, or the context of utterance (Gennari, 2000). Informally, we can define this state of affairs as follows:

(247)   a. $[\![\text{inferential}]\!]^c$ = is defined if *c* provides an evidential modal base that includes the inferential evidence.

a′.   *c*: Helen walks into a room that her mother is in; Helen does not look well.

b. $[\![\text{reportative}]\!]^c$ = is defined if *c* provides an evidential modal base that includes the relevant

report.

b'. *c*: A journalist has received a statement from an external source.

Therefore, the conversational background is responsible for two possible interpretations of the Spanish future under consideration, or said more precisely, the conversational background restricts the modal base so that only particular types of evidence hold.

I now address the mixed results on necessity and possibility in several categories that were noted in Table 6.1, repeated here as Table 6.2. The notion of gradability can explain how we arrive at the mixed effects.

Table 6.2: Comparison of Future and Epistemic Modals

	CF	Necessity	Possibility
Epistemic Adverbs	N	Y	–
Interrogative	Y	N	–
Non-Deniability	Y	Y	N
Scope	N	N	Y
Restrictions	Y	N	N

I follow Rivero (2014) in pairing the notion of gradability with the idea that there are realistic and informational ordering sources that allow for necessity and possibility readings, respectively. While Rivero (2014) does not provide the relevant scale that gradability occurs on, I take gradability to function on the scales defined in Bermúdez (2016). The independent parameters that he proposes (e.g., method of accessing the information and distance/access to the source of information) allow for a spectrum of possible combinations. Consider (248); R stands for reportative and I for inferential.

(248)   Points and Parameters
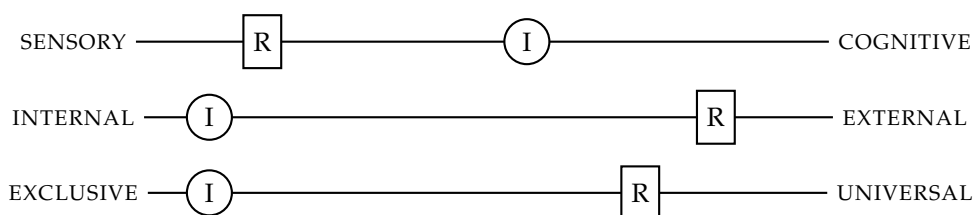
Along the sensory-cognitive dimension, for reportative evidentials, the relevant evidence is something that was said and so this point falls towards the sensory end of the spectrum, whereas for the inferential category there can be some kind of sensory stimulus (such as looking at a potentially sick person) but the main evidence is reasoning and thus this point sits somewhere in between sensory and cognitive. Along the internal-external dimension, for inferential evidence the distance to the source of information is internal as it

is a cognitive process, and for reportative evidence it is external since it is an auditory stimulus. Last, along the exclusive-universal dimension, inferential evidence is exclusive since, again, it is cognitively bound it cannot be experienced by anyone else, whereas reportative evidence is universal as the same report could be heard by multiple people. Thus, it follows that if these parameters form a continuum, then we would expect the mixed behaviour that is noted in the table above.

Last, I clear up some confusion in the literature about whether the CF contributes to the propositional content of the utterance (Gennari, 2000; Rivero, 2014) or not (Escandell-Vidal, 2010 et seq.; Laca, 2016) and, whether it has independent temporal readings (Bermúdez, 2016; Gennari, 2000; Laca, 2016; Rivero, 2014) or not (Escandell-Vidal, 2010 et seq.). The observation that sometimes the evidential meaning seems to contribute to the propositional content and other times it does not and instead seems to function like an illocutionary operator has a simple explanation. Potts (2003) argues that sentences can convey information that does not affect the truth conditions of the prejacent proposition but is also not an illocutionary operator. Potts calls this '*not-at-issue* content'. Consider (249).

(249)   Non-challengeability & Non-denialability

    A: Tendrá   fiebre
        have.FUT.3SG fever
        p: She has a temperature. / EV: Speaker infers that *p*

    B: ✓ It is not true that she has a temperature.

    B': # It is not true that you infer that she has a temperature.

    C: # But I have no evidence for that.

In general, the assumption is that evidentials have two components parts, a prejacent proposition and an evidential proposition (Faller, 2002; Izvorski, 1997; Matthewson et al., 2007; Murray, 2017). One relevant property is the notion of non-challengeability. That is, *at-issue* propositions can be directly challenged (B), and propositions that are *not-at-issue* cannot be directly challenged (B'). The other relevant property is non-denialability. The speaker is committed to the evidential proposition as it would be contradictory to use a from that indicates that you have evidence for an assertion only to deny having said evidence (C). Thus, for the evidential future, there is a contribution to the evidential proposition which is *not-at-issue* and gives the appearance that we are dealing with an illocutionary operator. Therefore, the controversy about whether the evidential reading of the future contributes to the propositional content of the utterance or not is *not-at-issue*: evidentials contribute to the evidential proposition but not to the prejacent proposition.

The second controversy, about whether there are independent temporal readings associated with the future and conditional, is also easily resolved. Escandell-Vidal's (2010) strong claim is that there are only

evidential meanings of the future, including ones where the future does not seem to straightforwardly have an evidential meaning. This claim, however, is too strongly formulated. Consider (250), where the reference time for each sentence is the past.

(250)   a.   Pedro dijo   que vendría
             Pedro say.PRET.3SG that come.COND.3SG
             'pedro said he would come.'

       b.   Un año más tarde se convertiría   en presidente, en 1995
             one year later   SE become.COND.3SG in president   in 1955
             'A year later he became president, in 1955.'   (Bermúdez, 2016: 39)

With respect to the data in (250), accounts from various perspectives (e.g., Butt and Benjamin, 2000; Soto, 2014) have indicated that the conditional form is required if you want a future in the past reading due to Sequence of Tense. Thus, it is not at all obvious that we have more than a 'temporal' (i.e., future) reading here. What seems particularly challenging for Escandell-Vidal's approach is the part of her denotation for the future that states that there needs to be some kind of intuitive inference. The idea that these cases, and (250b) in particular, require any kind of intuitive inference seems conceptually ill-motivated.

Before rounding the section out, some connections between the future and the subjunctive are considered. In Section 4.2.4, I proposed an analysis of subjunctive using the syntax of evidentials. Apart from accounting for that data, another reason for the adoption of that analysis is that it affords us the ability to unify the underlying structure for the subjunctive and the CF. I argue that this unification sheds light on the well-known fact that in Spanish the subjunctive is required in temporal subordinate clauses with a future orientation. Consider (251).

(251)   Jugaré   cuando esté / *estaré   listo mentalmente.
       play.FUT.1SG when   be.SUBJ.1SG / be.FUT.1SG ready mentally
       'I'll play when I am ready mentally'   (Fábregas, 2014: 57)

We can note that this phenomena is tense related as the licensing of the subjunctive cannot be reduced to the presence *cuando* 'when'. Notice also that when the action in the main clause is either habitual or in the past *cuando* does not trigger the subjunctive:

(252)   a.   Llama   a   su mamá cuando está   triste.
             call.PRES.3SG DOM his mom   when   be.PRES.3SG sad
             'He calls her mom when she feels sad.'

       b.   Llamó   a   su mamá cuando estaba   triste.
             call.PRET.3SG DOM his mom   when   be.IMPF.3SG sad
             'He called her mom when she felt sad.'

My analysis of the fact that Spanish rejects the future in these contexts begins with an observation made about the triggers for the subjunctive. Villalta (2008: 507) notes that the operators that trigger the subjunctive are similar to each other in some way. In my view, the relevant similarity is suitably explained by Rizzi's (2011: 224) proposed quantificational chain for relativized minimality intervention effects. He notes that quantificational features characterize quantifier-variable dependencies (and other scope-taking elements), whereas modifier features describe adverbial positions. Consider (253).

(253)   a.   *Quantificational*: **Wh**, **Neg**, **Focus**, Measure . . .

            b.   *Modifier*: Evaluative, Evidential, . . . Manner, Measure, Frequency, Neg, . . .

Rizzi argues that there is a limited amount of cross-classification since certain adverbials (which are typically modifiers) are also quantificational, while other adverbials are not. Consider (254) adapted from Rizzi (2011: 224).

(254)   a.   Combien$_{quant}$ a-t-il   attentivement$_{mod}$ conlulté   [<combien$_{quant}$> de livres]?
                how many   has-he attentively   consulted <how many>   of books
                'How many books has he carefully consulted?'

            b.   *Combien$_{quant}$ a-t-il beaucoup$_{quant.mod}$ conlulté [<combien$_{quant}$> de livres]?

If certain related elements cross each other the result is ungrammatical, but this is not true with elements of a different type. Ultimately, these intervention effects demonstrate that there is a similarity between quantificational elements.[8]

We can deduce, then, that there is a sort of proto-feature, which I term $[\psi]$, that relates these categories. Thus, we can expect the subjunctive to be uniformly triggered by an operator without the requirement that the contexts be the same.[9] This state of affairs would produce a distribution like the one in (255).

(255)   a.   op$_{wh}$ - polarity subjunctive (no obviation)

            b.   op$_{neg}$ - polarity subjunctive (no obviation)

            c.   op$_{foc}$ + op$_{subj}$ - intensional subjunctive (obviation)

The asymmetry in terms of obviation can be reduced to the differences in features that make these items up while the overall similarity would be the result of a feature like $[\psi]$.

Returning to the matter of the subjunctive in future-oriented subordinate clauses, the source of the

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[8]The insight that there is something similar about the bolded categories in (253) is further supported by Hernanz (2010) who proposes a FOCUS-criterion that subsumes both the WH-criterion and the NEG-criterion.

[9]While I have more carefully localized what is similar about subjunctive triggers, I leave to future investigation precisely what kind of feature $[\psi]$ should be. Also, it should be noted that these cases only cover a portion of the subjunctive triggers and my coverage here is, by design, non-exhaustive.

contrast in (251) is that the addition of *cuando*, with its WH-feature that scopes over the verbal domain of a clause with an underlying evidential structure. Gennari (2000) argues that both the modal and temporal meaning is always available for the future but which meaning is salient depends on certain contextual factors.[10] Compare the structure of the future clause in (256a) with the structure of the subjunctive in (256b).

(256) a. [**SenP** [ForceP *cuando*$_{WH}$ Force$_0$ [FinP [TP [ModP [vP <*cuando*$_{WH}$> [vP …]]]]]]]

      b. [**SenP** [ForceP   **op**$_{FOC}$ Force$_0$ [FinP op$_{SUBJ}$ Fin$_0$ [TP [ModP [vP …]]]]]]]

As I previously noted in Section 4.2.5, there is consensus in the literature that the subjunctive, in and of itself, is neither a modal operator nor the spell out of a modal operator but rather a verbal form that occurs in the presence of certain operators (Fábregas, 2014; Villalta, 2008, among others). Under my proposal, the similarity of the contexts is transparent and a subjunctive form, instead of a future form, is predicted. The key ingredients are the sentience domain and an operator of the right type. These data, then, represent compelling independent evidence for the analysis of the subjunctive as an evidential category that I put forward in Chapter 4. I delay providing a morphological account for the moment in order to introduce further data that exhibit a similar pattern with the goal of providing a more general analysis.

Crosslinguistically, this connection between the future and the subjunctive is not limited to Spanish and in certain contexts the past subjunctive and the conditional are synonymous in Romanian (Mihoc, 2012). For example, the choice of verb in an *if*-clause can either be the past subjunctive construction realized via *fi* 'be' an aspectual auxiliary as seen in (257a) or the conditional as seen in (257b).[11]

(257) a. Să -ţi   fi   cerut   eu, nu -mi   dădeai.
           SUBJ 2SG.DAT be.AUX ask.PAST.PART I   NEG 1SG.DAT give.IMPF

      b. Dacă ţi   -aş   fi   cerut   eu, nu -mi   dădeai.
           If   2SG.DAT COND be.AUX ask.PAST.PART I   NEG 1SG.DAT give.IMPF
          'If I asked you, you wouldn't give it to me'.

In Romanian, the conditional and optative moods have identical forms, thus being commonly referred to as the optative-conditional mood (Mihoc, 2012 and the reference therein). This overlap is reflective of Palmer's (1986) idea that the optative mood is a portmanteau morpheme expressing the subjunctive mood plus other features like a speaker's epistemological commitment. Given what we have discussed then we might expect to see some connection between the conditional and the subjunctive and in the following

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[10]What is important for us here is the fact that both meanings are available. It is less important to explicate how the particular reading might be constrained; I refer to Gennari (2000) for a detailed discussion.

[11]These data were provided by Anda Neagu (p.c.).

section, I demonstrate that under certain conditions the conditional and the past subjunctive can stand in for each other in Spanish.[12]

6.2 The Polite Conditional

This section discusses the relevant facts for a 'non-canonical' conditional in Spanish. That is, a conditional reading that arises from a form other than the one discussed in Section 5.1.1. First, I introduce the non-canonical conditional and discuss its morphosyntactic properties. I then briefly pivot to a discussion of politeness marking in Japanese as it sheds light on how to analyze these Spanish data. Following this, I outline the details of the analysis of this non-Canonical conditional.

6.2.1 The Imperfect-Subjunctive-For-Conditional

Butt and Benjamin (2000: 19) point out that the imperfect subjunctive verbal forms can be used for a conditional meaning, though unlike in earlier stages this use is somewhat limited in modern Spanish. Currently, this usage is restricted to the modal verbs *querer* 'want', *deber* 'need/ought to', and *poder* 'be able', as in (258a) and (258b) and contra (258c) and (258d).

(258)   a.   No quisiera   volver   a nacer
               NEG want.IMPF.SUBJ.1SG return.INF a be born.INF
               'I wouldn't like to be born again.'

    b.   Arturo quisiera   un aumento de sueldo
               Arturo want.IMPF.SUBJ.3SG an increase of salary
               'Arturo would like a raise.'[13]

    c.   *Cupiera   que fuera   cierto
               conceivable.IMPF.SUBJ.3SG that be.IMPF.SUBJ.3SG true
               Intended: 'it would be conceivable that it is true.'   (Fábregas, 2014:40)

    d.   *Arturo pidiera   un aumento de sueldo
               Arturo ask for.IMPF.SUBJ.3SG an increase of salary
               intended: 'Arturo would like a raise.'

I next explore some of the Imperfect-Subjunctive-For-Conditional's properties. I discuss (i) the form's modal restriction, (ii) its use as a courtesy or polite form, (iii) the fact that only the RA-form of the imperfect subjunctive is permitted, and (iv) the fact that Imperfect-Subjunctive-For-Conditional cannot be embedded.

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[12]Additionally, there is the issue of non-standard use of conditionals instead of subjunctive in the if-antecedent in Spanish (e.g., *Si llovería, iría.* 'if it were raining, I'd go.').

[13]The RAE notes that any of the following verbal forms: *pediría / habría pedido / hubiera pedido / pudiera pedir / quisiera pedir / debiera pedir* could be substituted for approximately the same meaning (RAE, 2009: 1810).

Haber and the Modal Restriction

The RAE (2009) note that a periphrastic *haber* 'have' + past participle construction exists for expressing this conditional meaning (e.g., *I would . . .*) for verbs that cannot do so directly in the modern language. Data illustrating the conditional use of the *haber* + past participle construction is given in (259a), with the canonical rendering of the same sentence given in (259b).

(259)   a.   lo hubiera   hecho, si me hubieras   avisado
                it have.IMPF.SUBJ.1SG done   if me have.IMPF.SUBJ.2SG advised
                'I would have done it, if you had advised me.'

          b.   lo habría   hecho, si me hubieras   avisado
                it have.COND.1SG done   if me have.IMPF.SUBJ.2SG advised
                'I would have done it, if you had advised me.'

As we would expect based on the modal verbs, *haber* must be conjugated in the imperfect subjunctive form when expressing this meaning. Even so, the *haber* + past participle construction seems like the odd one out when all other verbs exhibiting this imperfect-subjunctive-for-conditional reading are modals.

However, Bosque and Torrego (1995) argue that *haber* behaves more like a modal than an auxiliary, which distinguishes it from other Romance languages. They compare the properties of auxiliary 'have' in Spanish and Italian which are given in (260) and (261), respectively.

(260)   Has   tenido que verlo.   (Deontic / Epistemic)
        have.PRES.2SG had   that see.INF+it
        'You must/should have seen it.'

(261)   Hai   dovuto vederlo.   (Deontic /∗Epistemic)
        have.PRES.2SG had   see.INF+it
        'You should have seen it.'   (Bosque and Torrego, 1995:)

The data in (260) shows that both deontic and epistemic modals can be expressed in Spanish with *haber* in Spanish. Bosque and Torrego call this the 'compound modal' usage and note that it is not possible in Italian, as epistemic modals consistently reject compound tenses, as illustrated in (261). As pointed out in Bosque (1980), Spanish *haber* allows for an imperative use with an illocutionary force and a counterfactual interpretation. This is done by overriding the prospective meaning characteristic of imperatives, but keeping the syntax, as in (262).

(262)   a.   Haberlo   dicho!
                have.INF+it said
                You should have said it!

b. No haberlo hecho!
NEG have.INF+it done
You should not have done it! (Bosque and Torrego, 1995:)

Other modal uses of *haber* can be seen in (at least) two other constructions. The first is the *haber que* + infinitive 'to be necessary to' construction in (263) and the second is the *haber de* + infinitive 'have to' construction in (264).

(263) Hay que hacer la tarea
have.PRES.3SG that do.INF the homework
'you have to do homework.'

(264) a. Has de comer
have.PRES.2SG de eat.INF
'you have to eat.'

b. La campana ha de sonar
the bell have.PRES.3SG de ring.INF
'The bell has to ring.'

The main difference between the two constructions is that the one in (263) is defective: it can only have a third-person singular form. If this characterization of *haber* in Spanish is correct, then the periphrastic *haber* + past participle construction can be grouped with other modal verbs. When the evidence regarding these verbs, along with *haber*, is taken all together, it is clear that this particular non-canonical conditional usage is restricted to modal verbs of a particular subtype in Spanish.[14]

Courtesy

The next usage I discuss is intimately related to, though nonetheless distinct from, the first. In certain contexts, the imperfect subjunctive (of the sub-class of modal verbs) can be used to express courtesy (DiTullio, 2005: 229), as seen in (265a). Again, notice that in (265b) non-modal verbs are prohibited in this usage.

(265) a. quisiera hablar con el encargado
want.IMPF.SUBJ.1SG speak.INF with the manager
'I would like to speak to the manager.'

b. *te recomendara la sopa
2.SG.DAT recommend.IMPF.SUBJ.1SG the soup
Intended:'I would recommend the soup (to you).'

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[14]While this usage applies only to modal verbs, it does not apply to the entire natural class of modal verbs in Spanish. That is, the alternation does not include *saber* 'to know' or *soler* 'to be in the habit of'. *Querer, deber, poder* and *haber* are forms which to a certain extent pattern more closely with Germanic style modals: *können* (be able to/can), *müssen* (to have to/must), *sollen* (to ought to/should) and *wollen* (to want to). This patterning suggests that they could, in principle, have modal properties that would not be readily applicable to *soler* and *saber*.

According to the Royal Spanish Academy, the use of the imperfect subjunctive as a courtesy form is essentially synonymous with its use as a conditional (e.g., *querría hablar con el encargado* 'I would like to speak to the manager.').

The RA/SE Alternation

There are two verb forms for the imperfect subjunctive, the RA-form and the SE-form. Latin American Spanish tends to prefer the RA-form almost exclusively while the SE-form is used predominantly in Peninsular varieties. Aside from this broad dialectal difference, the two forms are generally considered to be interchangeable as can be seen in (266).

(266) a. Mi hermana me   lo   dio   en caso de que lo   quisie-**ra/-se**
         My sister   1SG.DAT 3SG.ACC give.PRET.3SG in case of that 3SG.ACC want.IMPF.SUBJ.1SG
         más tarde
         later
         'My sister gave it to me in case I wanted it later.'

      b. me alegraba   de que estuvie-**se/-ra**-s   ahí
         SE glad.IMPF.1SG of that be.IMPF.SUBJ.2SG there
         'I was glad you were there.'

Despite the interchangeability, when the imperfect subjunctive of modal verbs is used for a conditional meaning only RA-form is permitted. Consider (267).

(267) debie-ras/(*-ses)   hacerlo
       should.IMPF.SUBJ.2SG do.INF+it
       'you should do it.'

Resistance to Embedding

It has been noted that there are some limited cases when the subjunctive can appear in a 'main' clause, namely, in exhortative and desiderative contexts. It has been proposed that these sentences contain in some form an implicit main predicate, a strongly intensional verb which subordinates the material (Ross, 1970). Typically, *que* 'that' is required for grammaticality in exhortative and desiderative contexts in Spanish. However, if we compare the data in (268), we can note that trying to coerce a desiderative reading of (268a) results in ungrammaticality, as demonstrated in (268b).

(268) a. quisiera   un billete para México.
         want.IMPF.SUBJ.1SG a   ticket to   Mexico
         'I would like a ticket to Mexico.'

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b. ∗Que quisiera   un billete para México.
   that   want.IMPF.SUBJ.1SG a ticket to   Mexico
   Intended: 'May you have desired a ticket to Mexico.'   (Fábregas, 2014: 39)

The data in (269) further support the idea that imperfect-subjunctive-for-conditional forms cannot be embedded. In general, the imperfect subjunctive form can be embedded as in (269a); however, again, when we try to embed the imperfect-subjunctive-for-conditional, the result is ungrammatical, as in (269b).

(269)   a.   Me   gustaría   que viniera   a la fiesta
            1SG.DAT like.COND.3SG that come.IMPF.SUBJ.3SG to the party
            'I would like her to come to the party.'

        b.   *Me   gustaría   que quisiera   un billete para México
            1SG.DAT like.COND.3SG that want.IMPF.SUBJ.1SG a   ticket to   Mexico
            Intended: 'He would like that I would like a ticket to Mexico.'   (Fábregas, 2014: 39)

Based on (i) the facts surrounding the restriction of *que* in (268), and (ii) the data presented in (269), we can conclude that imperfect-subjunctive-for-conditional resists embedding.

Summary

Given the preceding discussion, we can see a pattern of complementary distribution between the imperfect-subjunctive-for-conditional and the standard imperfect subjunctive which demonstrates that there is a fundamental difference between the two. I summarize these points in Table 6.3.

Table 6.3: Summary of the Imperfect Subjunctive for Conditional

	Imperfect Subjunctive for COND	Imperfect Subjunctive
Modal Restriction	Y	N
Courtesy (i.e., COND)	Y	N
Embedded	N	Y
Alternation	N	Y

The next step is to argue for what factors are responsible for the observed complementary distribution. In order to do so, I first talk about politeness marking in Japanese which offers some useful insights into the syntax and semantics of politeness that will help us tease apart the workings of these Spanish data.

6.2.2   Politeness Marking in Japanese

I now look at politeness marking in Japanese and show that despite some crucial differences the behaviour of the Spanish data is comparable. Japanese can be roughly separated into two levels of politeness: casual speech and polite speech (Martin, 1975). Consider (270).

(270)   a.   Peter-wa hataraki-masi-ta.
Peter-TOP work-ALLO-PAST
'Peter worked.'

        b.   Peter-wa hatarai-ta
Peter-TOP work-PAST
'Peter worked.'   (Miyagawa, 2012: 86)

In (270a) the verb is marked with *–mas*, the politeness marker in the verbal domain, whereas this marking is absent in the informal version in (270b). Politeness marking, then, is the only discernible difference between the data in (270). Harada (1976: 553) calls this polite form a 'performative honorific' because the speaker must be aware of and decide to actively manipulate several pragmatic factors (e.g., social status and context of utterance).

Miyagawa (2012) argues that the performative honorific marker *–mas* is a form of addressee-oriented agreement called allocutive agreement. He proposes that in Japanese there is an allocutive probe in the Speech Act domain, a cluster of functional projections high in the clausal structure that connect the narrow grammatical system to context-based notions such as speaker and addressee. Consider (271).

(271)   The Speech Act Domain (Miyagawa, 2012: 85)
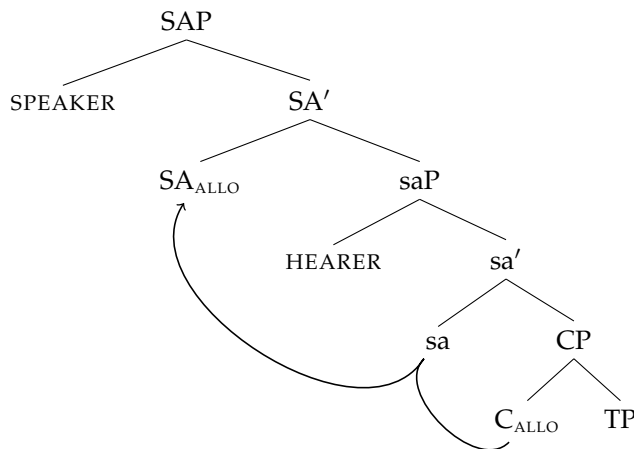
This allocutive probe raises to the head SA as the result of head-raising of C and c-commands its goal which is an implicit HEARER. Once this probe-goal checking relationship is satisfied in the syntax then *–mas* is morphologically realized as a suffix on the verb. Miyagawa (2012) notes that similar to prototypical cases of allocutive agreement (see Oyharçabal, 1993 for Soultin Basque), allocutive agreement in Japanese is generally limited to the main clause. Consider (272) taken from Miyagawa (2012: 89).

(272) Hanako-wa [dare-ga   ku-ru/*ki-<u>**mas**</u>-u   ka] sitte-i-mas-u.
      Hanako-TOP   who-NOM come-NON.PAST/-**ALLO**-NON.PAST Q   know-ALLO-NON.PAST
      'Hanako knows who is coming.'

Observe that in Japanese –*mas* cannot typically occur in a complement clause, save ones that are understood to be direct discourses (e.g., the complement of *say*). Miyagawa ([2012](#)) ties this restriction on –*mas* to the allocutive probe's presence on the Speech Act head, which is only present in root clauses.

Turning to the semantics of the performative honorific, Potts ([2003](#)) offers an analysis of the performative honorific in Japanese. Consider [(273)](#).

(273)   Mary-ga   ringo-o   tabe-masi-ta
          Mary-NOM apple-ACC eat-ALLO-PAST

  i.   'Mary ate the apple.'

  ii.   'I am speaking nicely to you.'   (Potts and Kawahara, [2004](#): 254)

The two-line translation represents the idea that the contribution of the honorific is separate from the content of the sentence that contains it. That is, (i) is the sentence content and (ii) is the honorific contribution. Potts suggests that performative honorification is characterized in a way that suggests that the upper layer of our discourse structures is key to understanding their contribution, especially given the root-clause restriction. That is, a performative honorific modifies the utterance relation since the speaker utters a given sentence politely. Potts defines a suitable semantics for the honorific contribution which is given in [(274)](#).

(274) $\ulcorner$perf-hon$\urcorner$ = λS · $\ulcorner$politely$\urcorner$($\ulcorner$utter$\urcorner$ (S)($\ulcorner$the-speaker$\urcorner$) : $\langle$u, t$\rangle$ (Potts, [2003](#): 248)

Potts' ([2003](#)) semantics for the performative honorific is a function from utterances to truth values, and he assumes that the performative morphology contributes directly to this meaning. An utterance is interpreted as true if the speaker said S politely, else it is interpreted as false. Potts ([2003](#)) notes that these performative honorifics contribute an equivalent kind of meaning as an utterance-modifying adverb (i.e., the SPEAKER is saying something in a particular way).

Abstracting away from the details, the Japanese data and the imperfect-subjunctive-for-conditional arguably share two comparable properties: (performative) politeness as in [(275a)](#) and a main clause restriction as in [(275b)](#).

(275)   a.   quisiera   un billete para México.
               want.IMPF.SUBJ.1SG a   ticket to   Mexico
               'I would like a ticket to Mexico.'

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b. ∗Que quisiera   un billete para México.
   that want.IMPF.SUBJ.1SG a ticket to   Mexico
   Intended: 'May you desire a ticket to Mexico.'   (Fábregas, 2014: 39)

The phenomenon of politeness marking in Japanese and the obvious similarities it has to the imperfect-subjunctive-for-conditional begs the question about whether these shared properties are, in fact, subject to a similar analysis. In the next section, I argue that a similar analysis is indeed possible, though some minor technical details differ.

6.2.3 The Imperfect-Subjunctive-For-Conditional: An Analysis

My analysis begins by following up on Potts' (2003) observation that performative honorifics contribute an equivalent kind of meaning as an utterance-modifying adverb. Essentially, the observation about the meaning equivalence between –*mas* and utterance-modifying adverbs gives us a clear approach to account for the polite meaning in Spanish even though the Spanish data do not involve agreement. Furthermore, these kinds of adverbs have precisely the kind of clause restriction observed for the imperfect-subjunctive-for-conditional, a fact that I also tie to the presence of a Speech Act head. Last, I look at the morphology of this form and explain why the polite meaning is restricted to the RA-form of the imperfect subjunctive.

I. Semantics and Pragmatics

I begin by examining the properties of the conditional and building up this particular polite meaning on top of it since, according to the Royal Spanish Academy, the use of the imperfect-subjunctive-for-conditional as a courtesy form is synonymous with its use as a conditional (RAE, 2009). The use of the conditional to express politeness can be argued to be a politeness strategy that relies heavily on conversational implicature (Grice, 1975). Consider (276).

(276) a. Me   gustaría   ir   al   cine   (si quieres   ir/   si la nueva
           1SG.DAT like.COND.3SG go.INF to+the movies (if want.PRES.2SG go.INF/ if the new
           película de Bond ya   está   en el cine)
           Bond film   already be.PRES.3SG in theatres)
           'I would like to go to the movies (if you are amenable / if the new Bond film is out.)'

       b. Quiero   ir   al   cine
           want.PRES.1SG go.INF to+the movies
           'I want to go to the movies.'

In (276), at least two continuations are possible. The implied continuation *si quieres ir* 'if you are amenable' in (276a) can be interpreted as an indirect request. These implied requests allow interlocutors to manage

threats to their self-esteem, or face (Brown and Levinson, 1987). For instance, if the addressee responds with 'I don't want to go to the movies' then the speaker could state that they actually wanted to see the new Bond film, saving face by cancelling the implicature that a request was made. In comparison, the present tense in (276b) does not easily allow interlocutors to manage threats to their face in Spanish. The RAE (2009: 1750) notes that "es oportuno resaltar que no deja de constituir una convención verbal el hecho de que el presente se prueba asociar – así sea veladamente – con la rudeza o la brusquedad, lo que sucede en español, pero no en otras lenguas".[15] Therefore, there is no way to negate the idea that a demand was placed into the common ground (Chafe, 1976).

What allows the conditional to permit this conversational implicature is the feature [MODALITY] which introduces the semantics of possible worlds thereby reducing "the degree of certainty associated with the proposition denoted by the clause it appears in" Cowper (2012: 8). While this effect is true of both conditional forms in Spanish, several consultants report that they find the imperfect-subjunctive-for-conditional to be more polite than the conditional.[16] Arguably, the reason for this falls out from the restriction on the modal verbs that allow for this polite meaning. The verbs *querer* 'want to', *deber* 'should', *poder* 'can' are the ones in Spanish that pattern closely with Germanic modals: *wollen* 'want to', *sollen* 'should' and *können* 'can', which can have volitive (a subcategory of deontic) uses. Volitive modality indicates the speaker's desire or wish to do something (Palmer, 1986: 116–117). In this case, it indicates their wish to be polite, given pragmatic factors such as social status of the addressee and the context of utterance. The situation just described, then, is very close to that of performative honorifics in Japanese.

Recently, there has been a renewed interest in Ross' (1970) Performative Hypothesis in the generative literature. What all of the syntax-centric approaches to the discourse to be discussed have in common is that they argue for a Speech Act projection or a projection that serves an analogous function. Some approaches take the SPEAKER to be more structurally prominent than the HEARER, also called the ADDRESSEE in some analyses (Haegeman, 2014; V. Hill, 2007; Speas and Tenny, 2003; Zu, 2018), while others take the opposite to be true (Wiltschko, 2018; Wiltschko and Heim, 2016). Still other approaches argue that there is no fixed ordering between the SPEAKER and the ADDRESSEE (Portner et al., 2019). It is unnecessary to settle on which approach is better motivated and for our purposes, we only need to consider that there is such a structural position. For simplicity's sake, I assume the structure in (277).

(277)   Speech Act Domain

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[15]It should be noted that it is still a verbal convention that the present tense tends to be associated - even if it is veiled - with rudeness or abruptness, this happens in Spanish, but not in other languages [translation mine].

[16]Judgements vary along broad geographic lines. Latin American speakers favour the imperfect-subjunctive-for-conditional (i.e., the RA-form of 'the imperfect subjunctive') while Peninsular speakers favour the canonical conditional for the highest degree of politeness. This result is in line with Fábregas's (2014) observation that the non-canonical construction is unproductive in Peninsular Spanish.
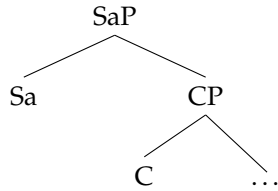
I give a semantic analysis of the politeness effect and argue for a politeness operator in the Speech Act domain which marks the Speech Act directed to the ADDRESSEE as polite. The semantics account is formalized as in (278).

(278)   ∃e (SPEECH ACT (speaker, utterance, addressee, e) ∧ POLITE (e))

That is there exists a declarative speech event for which (i) the SPEAKER is the agent of the declaration, (ii) the utterance is what is declared (i.e., the theme), (iii) the ADDRESSEE is the recipient of the declaration (i.e., the goal), and (iv) the declaration to the ADDRESSEE is polite. Essentially, this is Davidsonian semantics of event modification (see Davidson, 1967). That is, the argument structure of (action) verbs contains an event argument *e*. Consequently, adverbial modifiers at the VP level (i.e., event modifiers) can be treated as predicates of events. This should be a plausible semantics for what is occurring since, following Speas and Tenny (2003), the Speech Act is by definition verbal. Given that a Speech Act is something that is *performed*, we can conclude that the Speech Acts are not stative. If we are orthodox about Speas and Tenny's (2003) proposal, then, logically we should be able to modify the event argument of the Speech Act itself.[17,18]

II. Utterance-Modifying Adverbs and Root Clauses

With the semantics of the imperfect-subjunctive-for-conditional in place, the next step is to account for the clause restriction. Here I look at the distribution of Utterance modifying adverbs as they have precisely the kind of clause restriction observed for the imperfect-subjunctive-for-conditional. Ultimately, I argue that restriction is directly tied to the presence of a Speech Act head.

Schreiber (1972) provides some relevant examples of the distribution of speaker/addressee-oriented adverbs (i.e., *frankly*, *truthfully*, *candidly*, *confidentially*, *honestly*, *truly*, *briefly*, and *bluntly*) that are germane to the present discussion. Consider (279) to (281) from Schreiber (1972: 323).

(279)   a.   Frankly, Merlin is a genius.

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[17] Here I assume a rather limited formal apparatus as a more nuanced picture of the semantics is unnecessary; this 'coarse' semantic representations will suffice. Suitable nuanced treatments of the semantics of expressives of the type mentioned here can be found in Potts (2007); Potts and Kawahara (2004) and Portner et al. (2019), among others.

[18] This approach is warranted as the denotation given in Potts (2003) is for the polite exponent *–mas* and is therefore not a suitable approach for Spanish.

b. Truthfully, is Merlin a genius?

(280) a. I tell you frankly that Merlin is a genius.

b. I request of you that you tell me truthfully whether Merlin is a genius.

(281) a. Sam noted that unfortunately/possibly/apparently the dodo is extinct.

b. *Sam noted that candidly/bluntly/confidentially the dodo is extinct.

Speaker/addressee-oriented adverbs are available in root clauses as in (279). They are also licensed in embedded if a direct discourse as in (280), but are banned from any other embedded contexts, as shown in (281). This pattern is replicated in Spanish, as shown in (282), taken from Fábregas (2014: 14).

(282) a. Francamente, Juan está   harto.
       frankly,   Juan be.PRES.3SG fed.up
       'Frankly, Juan is fed up.'

b. Juan dice   que francamente esto le   ha   parecido un desastre.
   Juan say.PRES.3SG that frankly   this 3SG.DAT have.PRES.3SG seemed   a disaster
   'Juan says that frankly this has seemed like a disaster to him.'

c. *Juan no   cree   que francamente esto le   pareciera   un
   Juan NEG believe.PRES.3SG that frankly   this 3SG.DAT seemed.IMPF.SUBJ.3SG a
   desastre.
   disaster
   Intended:'Juan does not believe that frankly this seemed to be a disaster to him.'

If the polite meaning is some kind of operator/adverb with the distribution of an utterance-modifying adverb then the restriction is accounted for. Here I follow V. Hill (2007) who argues that adverbs that impart a speaker-oriented reading such as *sigur* 'surely' in Romanian only do so in the presence of the Speech Act head and its absence is concomitant with the lack of a speaker-oriented reading. Consider (283).

(283) a. *(Me   gustaría   que) quisiera   un billete para México
         1SG.DAT like.COND.3SG that want.IMPF.SUBJ.3SG a ticket to Mexico
         Intended: 'I would like that he would like a ticket to Mexico.'

b. *(Te   aconsejo   que) debieras   hacerlo de otra forma
   2SG.DAT advise.PRES.1SG that should.IMPF.SUBJ.2SG make-it of other way
   Intended: 'I advise that you should do it another way.'   (Fábregas, 2014: 39)

The Speech Act projection is only present in root clauses and is responsible for root clause phenomena across languages (Miyagawa, 2012; Potts, 2003; Zu, 2018; Portner et al., 2019). Consider (284).

(284)   [SaP op$_{POLITE}$ [SaP [SenP [ForceP [FinP [TP [ModP [vP [∗(SaP)/SenP . . .]]]]]]]]]]

A root clause should be understood in the sense of Emonds (1969: 8) who defines a root as "either the highest S in a tree, an S immediately dominated by the highest S, or the reported S in direct discourse". Notice that in the tree in (284), SaP is not permitted in embedded environments that are not direct discourses but a projection like SenP is. The idea that embedded clauses have less (or perhaps different) functional structure than main clauses is not new and is also consistent with the notion that subjunctives are cases where the normal functional sequence of a clause is not fully projected (see Avrutin and Babyonyshev, 1997; Hinzen and Sheehan, 2011; Kempchinsky, 2009; Raposo, 1985).

III. The INFL Domain

Now that I have addressed the semantics of imperfect-subjunctive-for-conditional and dealt with the observed main clause restriction, we need (i) to look at the morphology of this form, explaining why we can only have the RA-form and not the SE-form of the imperfect subjunctive, and (ii) to address the morphology of the subjunctive in future-oriented subordinate clauses, which I have delayed until this point.

The verbal complex for the canonical future and conditional contains the features [MODALITY, DEIXIS (FINITE, PROPOSITION), PRESENT] and [MODALITY, DEIXIS (FINITE, PROPOSITION), PRECEDENCE], respectively. To account for these subjunctive imposters, I propose the impoverishment rules in (285) where [DEIXIS] becomes null in the context of the relevant operators.

(285)   Subjunctive Imposters

    a.   [DEIXIS] $\rightarrow \emptyset$ \ Mod]$_{\text{MOD}}$ __ op$_{politely}$

    b.   [DEIXIS] $\rightarrow \emptyset$ \ Mod]$_{\text{MOD}}$ __ *cuando*$_{\text{WH}}$

We have already seen that WH was considered a part of the operators the trigger the subjunctive in Section 6.1.4, so I shall not rehash the details of that discussion here. I also consider op$_{politely}$ a relevant operator that can licence the subjunctive on a par with items like other *tal vez* 'maybe' and *ojalá* 'I hope'. Consider (286).

(286)   Es   de buena educación que saludes   a   tu   madre cuando llegue
          be.PRES.3SG of good education that greet.SUBJ.2SG DOM your mother when   arrive.SUBJ.3SG
          a casa
          home
          'it's polite for you to greet your mother when she gets home.

Given that *educación*, which expresses the idea of politeness or good manners, is able to trigger the subjunctive, it does not seem unreasonable to think that op$_{politely}$ should be a trigger as well, assuming as we
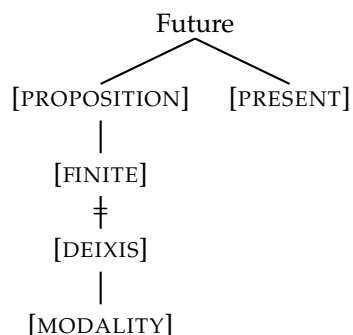
do that they have related semantic content. Now that I have defined these impoverishment rules, I turn to how these permit us to insert the right exponents.

I adopt Cowper's (2005) feature geometry, and, accordingly, I take the features of INFL to be hierarchically organized as in (287) and (288). Cowper (2005: 21) notes "the presence of the dominating features is crucial at the point of vocabulary insertion, where in some cases a vocabulary item is inserted that matches, not the feature or features of the original LI, but rather one of the features it entails".

(287)   Features of the Conditional

$$\text{Conditional}$$

[PROPOSITION] [PRECEDENCE]

[FINITE]

‡
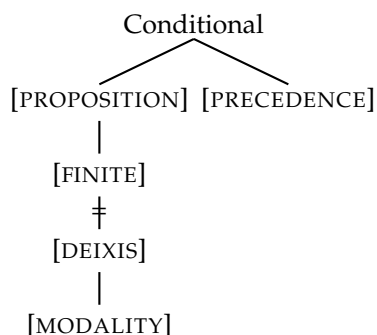
[DEIXIS]

[MODALITY]

(288)   Features of the Future

$$\text{Future}$$

[PROPOSITION]   [PRESENT]

[FINITE]

‡

[DEIXIS]

[MODALITY]

Thus, if you delete [DEIXIS] from the future or conditional, the concomitant delinking of [MODALITY] is a direct result of the entailment relation. Impoverishment, in this case, leaves precisely the feature bundle which would yield the subjunctive (i.e., [FINITE (PROPOSITION), PRECEDENCE] or [FINITE (PROPOSITION), PRESENT]). For the conditional, impoverishment *bleeds*, in the sense of Kiparsky (1968), the application of the rule of exponence for the imperfect/conditional and the future.[19] Moreover, if we are simply impoverishing features of the conditional, then –*se* is ruled out as its featural makeup (i.e., [FINITE (PROPOSITION), ENTIRETY]) will not allow for the correct temporal/modal behaviour.

Impoverishment is further motivated because underspecification fails to account for the observed behaviour. I talk about the conditional here for expository purposes but the same kind of explanation holds for the future as well. First, we need to consider the structure for the imperfect subjunctive and the Imperfect-Subjunctive-for-Conditional, which are given in (289a) and (289b), respectively.

(289)   a.   [MoodP Mood$_{[\text{FINITE}]}$ [TP T$_{[\text{PRECEDENCE}]}$ [vP v $\sqrt{\text{ROOT}}$]]]

          b.   [MoodP Mood$_{[\text{DEIXIS (FINITE)}]}$ [TP T$_{[\text{PRECEDENCE}]}$ [ModP Mod$_{[\text{MODALITY}]}$ [vP v $\sqrt{\text{ROOT}}$]]]]]

For an underspecification account, we would need to posit a single Vocabulary Item general enough to be

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[19]The original formulation of impoverishment (Bonet, 1991) also used geometrically organized morphosyntactic features and treated impoverishment as delinking. However, Noyer (1997) notes that these types of geometries are too restrictive and proposes that impoverishment is better understood as feature-cooccurrence restrictions. I remain agnostic here as to which approach is better, as they both amount to the same thing at least as far as the Spanish data are concerned.

inserted in the context of both the imperfect subjunctive and the Imperfect-Subjunctive-for-Conditional, as in (290).

(290)   [FINITE, PRECEDENCE] ⇔ ra

However, under such an account, *–ra* would always fail to win a completion of vocabulary insertion as the structure for the Imperfect-Subjunctive-for-Conditional, a conditional form, includes the feature [DEIXIS] and would put the item in (290) in direct competition with the vocabulary item for the imperfect. Consider (291).

(291)   a.   [DEIXIS, PRECEDENCE] ⇔ –Ca / CL:¬1 __
         b.   [DEIXIS, PRECEDENCE] ⇔ –ba

Given the fact that the syntactic structure for the Imperfect-Subjunctive-for-Conditional requires the feature [DEIXIS] and the exponents for the imperfect are specified for exactly those features (i.e., [DEIXIS (FINITE, PROPOSITION), PRECEDENCE]) then the subset principle states that the most highly specified Vocabulary Item would win the competition on insertion. Therefore, an approach that tries to underspecify the Vocabulary Item for the Imperfect-Subjunctive-for-Conditional so that it is a subset of the features for the imperfect subjunctive is untenable. On the other hand, if the rules in (285) applies to all feature bundles that match its structural description before lexical insertion, then the feature [MODALITY], and, by extension, [DEIXIS], are never present by the time Vocabulary Items are inserted.

Under this analysis, the target for impoverishment is the same but the triggers are different. For the imperfect-subjunctive-for-conditional I account for the polite conditional interpretation of the imperfect subjunctive and also explain the main clause restriction and lack of alternation. This analysis brings this polite conditional squarely into the typology of phenomena that occur 'mainly in the main clause' to borrow a term from Miyagawa (2012). For the future, I show how subjunctive morphology obtains in this context, given that the future and the subjunctive share the same underlying structure. The future analysis is potentially applicable to a wider range of data. Other adverbials related to time (e.g., *en cuanto* 'as soon as' and *hasta que* 'until') also show a similar effect; they trigger the subjunctive when they refer to a future time (e.g., *Amir va a llamar en cuanto llegue* 'Amir will call as soon as he arrives.'), otherwise they introduce the indicative (e.g. *Amir llamó en cuanto llegó* 'Amir called as soon as he arrived'; *Amir siempre llama en cuanto llega* 'Amir always calls as soon as he arrives.'). However, further research will be necessary before any firm conclusions can be drawn.

6.3   Summary

Having concluded my examination of the extended uses of future and conditional verbal forms in Spanish, I summarize the key points of this chapter:

1. I argue that certain uses of the future are built up from the syntax and semantics of evidentiality in Spanish.

2. Further, I have made connections between the subjunctive and the future/conditional, showing that they operate on the same abstract syntactic-semantic system, but minimally differ, as the intensional subjunctive requires a focus operator that is not necessary for the future and conditional.

3. Last, I analyze a non-canonical use of the imperfect subjunctives in Spanish as a polite conditional form.

Next, I move on to Chapter 7 which focuses on various stem alternations relevant to Spanish verbal morphology.

7 | **Verbal ROOTs**

Until this point the dissertation has focused on the morphology of the inflectional domain in Spanish, addressing all of the simple tenses. In this chapter, various stem alternations that are relevant to Spanish verbal morphology are addressed. I begin by presenting the key data before introducing, in general terms, two approaches to dealing with stem alternation in DM – namely, the readjustment approach and the stem storage approach. Following this, I go through various arguments that have already been proposed in favour of each of these two options for Spanish. Ultimately, I propose that a suppletive or stem storage model is the best lens available to analyze these Spanish verbal alternations. Despite the fact that the storage approach accounts for most of the data, there are several cases where asymmetries in stem variants require further explanation. I address these latter cases in the final substantive section of this chapter.

7.1 The Data

The Spanish verbal domain has several stem alternations in the following areas: the past and present tense (including the subjunctive), and the future and the conditional. The first two sections present the stem alternants with a simple tense-based trigger, whereas the remaining stem alternants can have a more complicated trigger involving tense and other grammatical categories. To the best of my knowledge, in the DM literature, this particular class of stem alternations has not yet been addressed for Spanish. Therefore, the analysis of these forms will contribute to the ongoing debate on these kinds of alternations, and fill a current gap in the literature on Spanish verbal forms.

7.1.1 The Past Tense

In the past tense, several verbs have irregular stems and these same stems are also used for the imperfect subjunctive. Consider (292).

(292)   Forms of *Pensar* 'to think' and *Venir* 'to come'

	1SG	2SG	3SG	1PL	2PL	3PL
PRET	pens-é	pens-áste	pens-ó	pens-ámos	pens-astéis	pens-áron
	vin-e	vin-iste	vin-o	vin-imos	vin-isteis	vin-ieron
IMPF. SUBJ	pens-ara	pens-aras	pens-ara	pens-áramos	pens-arais	pens-aran
	vin-iera	vin-ieras	vin-iera	vin-iéramos	vin-ierais	vin-ieran

For a verb like *pensar* the infinitival form, the simple past, and the imperfect subjunctive all share the same stem (i.e., *pens*), whereas for *venir* the stem for the infinitive (i.e., *ven*) is different from the stem for the past and the imperfects subjunctive (i.e., *vin*). A full listing of verbs that follow the same pattern as *venir* is given in (293). For each verb listed, the stem for the infinitive, which can be considered the default stem, appears before its irregular past stem.

(293)   Irregular Past and Imperfect Subjunctive Stems

INF.	PST.	GLOSS	INF.	PST.	GLOSS	INF.	PST.	GLOSS
and	anduv	'walk'	ven	vin	'come'	tra	traj	'bring'
est	estuv	'be'	hac	hic	'do'	quer	quis	'want'
ten	tuv	'have'	cab	cup	'fit'	sab	sup	'know'
hab	hub	'have'	dec	dij	'say'			
pon	pus	'put'	pod	pud	'can'			

Descriptively, several generalizations can be made about the forms in (293). For instance, the following pairs of irregular stems can be grouped together: (i) *haber* and *poder*, (ii) *venir* and *hacer*, and (iii) *andar* and *estar*. For the first group, a non-high vowel in the root becomes the high vowel, [u]. Similarly, the second group follows the same pattern as the first, though the high vowel is [i] in this case. Last, for the third group, the stems are augmented with what appears to be an –*uv* exponent. The remaining forms have a less clear relation between the base form and the past variant.[1]

7.1.2   The Future and the Conditional

The last set of stems that have a single tense-based determinant is the irregular stems for the future and the conditional. Consider (295).

(294)   Forms of *Pensar* 'to think' and *Tener* 'to have'

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[1]In addition to the verbs listed above, verbs derived from the bound root –*ducir* (e.g., *traducir* 'translate'), and verbs derived by prefixation to the ones listed (e.g., *componer* 'compose') also exhibited the same stem alternations in the simple past.

	1SG	2SG	3SG	1PL	2PL	3PL
FUT	pens-aré	pens-arás	pens-ará	pens-aremos	pens-aréis	pens-arán
	tend-ré	**tend**-rás	**tend**-rá	**tend**-remos	**tend**-réis	**tend**-rán

For *pensar* and most other verbs, the infinitival form and the future and conditional forms share the same stem (i.e., *pens*). However, for verbs like *tener*, the stem for the future and conditional (i.e., *tend*) differs from the stem for the infinitive (i.e., *ten*). All verbs that follow this pattern are given in (295). Again, for each verb listed, the stem for the infinitive appears before its irregular future/conditional stem.

(295) Irregular Future Stems

INF.	FUT.	GLOSS	INF.	FUT.	GLOSS
pon	pond	'put'	ven	vend	'come'
sal	sald	'leave'	dec	di	'say'
ten	tend	'have'	hac	ha	'do'
val	vald	'cost'			

For several of the listed verbs in (295), the only discernible difference between the future and conditional stem is the addition of an epenthetic [d] to the end of the canonical stem. The verb *hacer* 'do' is different and we can observe that the final [s] of the stem is absent.[2] Last, for *decir*, the final [s] of the stem is also absent and the [e] stem vowel of the base form is raised to [i].

7.1.3 The Present Tense

Finally, I introduce a group of stems with triggers primarily involving tense but also including agreement (in the present indicative). Consider (296).

(296) Forms of *caber* 'to fit'

	1SG	2SG	3SG	1PL	2PL	3PL
PRES.IND	**quep**-o	cabes	cabe	cabemos	cabéis	caben
PRES.SUBJ	**quep**a	**quep**as	**quep**a	**quep**amos	**quep**áis	**quep**an

Beginning with the case in the present indicative that includes agreement as a trigger, observe that the first person singular form of *caber* in the present tense has an irregular stem. Notably, this irregular present indicative stem is also the one used for the present subjunctive, which is often described in pedagogical

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[2]In some peninsular varieties of Spanish this final sound would be pronounced as [θ].

material as being 'constructed' on the first singular form. The verbs in this class are given in (297).

(297)　　Irregular Present (Subjunctive) Stems

INF.	PRES.	GLOSS	INF.	PRES.	GLOSS
cab	quep	'fit'	sal	salg	'leave'
ca	caig	'fall'	tra	traig	'bring'
hac	hag	'do'	val	valg	'cost'
pon	pong	'put'	ven	veng	'come'

For verbs that end with a final lateral [l] or a final nasal [n], the epenthesis of a voiced velar consonant [g] is typical and for verbs that end with a final vowel, the segment [ig] is inserted after the root. For the verb *caber*, the change from the stem of the infinitive (i.e., [kab]) requires that the vowel [a] be raised to [a] and that [b] be devoiced.

7.2　Root Suppletion in Spanish

Having presented the data this chapter is concerned with, this section provides an analysis of them. First, I give an overview of the two main sides of the debate on how to analyze irregularities in roots more generally (i.e., stem storage or readjustment) before briefly reviewing two papers that advocate for one of these two positions in Spanish. Ultimately, I propose a storage-based approach as the appropriate analysis of the Spanish data. However, before presenting the details of that analysis it is necessary to cover some background related to the notion of locality as it relates to suppletion.

7.2.1　The Debate

Suppletion can be divided into "strong" and "weak" classes (e.g., *go~went* vs. *run~ran*), which are distinguished by the degree to which the allomorphs are phonologically related. Of the two, only the former case would be suppletive in the traditional sense since true suppletion requires maximal phonological irregularity and maximal semantic regularity (Corbett, 2007). Thus, one question that has been of interest in the DM literature on roots centres on defining the boundary (if any) between suppletion and the phonological readjustment of a root in the pair such as *run~ran*. For these weak cases, more 'mainstream' DM analyses usually countenance phonological readjustments in favour of suppletion (Embick and Halle, 2005; Harley and Tubino Blanco, 2013; Marantz, 1997). However, the use of these readjustment mechanisms is not uncontroversial, and several authors have argued that the suppletive model is preferable (Bermúdez-Otero,

2013; Haugen, 2016; Haugen and Siddiqi, 2013, 2016). Similar to the aforementioned alternation in English, the Spanish data are seemingly of the weak variety, though it is not obvious whether the phonological disparity between them is enough to require canonical suppletion or simply require readjustment operations. Before sorting this out for Spanish, we first need to delve deeper into the workings of these two analytical approaches.

Beginning with the readjustment approach, its adherents (e.g., Borer, 2014; Embick, 2016; Embick and Marantz, 2008; Marantz, 1997, among others) take the contrast between two phonologically related forms like *sing~sang* to be the result of a phonological process. That is, readjustments (in whatever form they may occur) take the output of vocabulary insertion and under certain conditions change the inserted exponent so that it has a different phonological shape.[3] Calabrese (2012: 12) notes that several properties distinguish readjustment rules from canonical phonological rules: (i) they are conditioned by both morphosyntactic and root-specific information, and (ii) they are idiosyncratic only applying to an individual VI or a specific class of VIs. Consider (298).

(298)   Stem Readjustment Rule: *sing~sang*

$i_{[High]}$ $\rightarrow$ $æ_{[Low]}$ / __ [PAST]

This readjustment rule lowers the high vowel [i] of *sing* to the low vowel [æ] in the context of the past tense in English. The readjustment approach owes its genesis to the claim that suppletion must be limited to the functional vocabulary (Embick and Halle, 2005; Marantz, 1997). Indeed, several authors argue that a constraint on language acquisition prohibits Root suppletion because learners assume that there is no synonymy. Thus, if two Roots have disparate phonological realizations they cannot be linked to the same concept. This principle of non-synonymity is what makes acquiring words possible (Harley and Noyer, 1998; Marantz, 1997).

In contrast to the readjustment approach, the other conceptual option is suppletion which necessitates the storage of different stems (e.g., Harley, 2014; Haugen, 2016; Haugen and Siddiqi, 2013). However, if suppletion must be limited to the functional vocabulary, then the strong prediction of this postulate is that we should not find any suppletive roots. This prediction, however, has been empirically falsified (see Aronoff, 2012; Bobaljik, 2012; Harley, 2014; Haugen and Siddiqi, 2013, among others). Consider (299).

(299)   Suppletive number marking in Hopi nominals (K. C. Hill and Black, 1998: 865)

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[3]I am assuming a rule-based formalism in my presentation of the issue, though others have accounted for readjustments in other ways; see Raimy (2000) for example.

SINGULAR	DUAL	PLURAL	Gloss
sino	sino –t	sino –m	'person'
wúuti	wúuti –t	momoya –m	'woman'
tiyo	tiyo –t	tooti –m	'boy, young man'

The dual form involves suffixation of –t to the Root and likewise, the plural takes suffix –m. However, the phonological forms of the plural stems do not bear an obvious relation to nominal and dual stems. To the extent that root suppletion was countenanced, it was only thought possible for light verbs whose semantic bleaching allows them to be treated like functional items (Marantz, 1997). However, the meanings of these suppletive stems have fairly robust semantics (i.e., *woman* and *young man*) in comparison to the non-suppletive stem which has light meaning (i.e., *person*). This example provides strong evidence that root suppletion does exist and thus there is no principled reason to suspect that roots are not also subject to competition like any other vocabulary items. Under such an approach root suppletion uses the same mechanism proposed for the allomorphy of functional morphemes and we could propose an analysis like the one in (300).

(300) a. $\sqrt{\text{SING}} \Leftrightarrow$ sang / __ [PAST]
       b. $\sqrt{\text{SING}} \Leftrightarrow$ sing

Under this analysis the items *sing* and *sang* would compete for insertion into the $\sqrt{\text{SING}}$ morpheme, with the most highly specified item winning the competition – here I take a contextual specification of past to be more highly specified than an item that lacks such a specification.

While these two approaches set out to solve the same conceptual problem, there are some Spanish data that do not seem amenable to a storage approach even if such an approach is generally possible. In particular, there is an idiosyncratic alternation whereby certain verbs with monophthong stem vowels alternate with the diphthong variants when stressed. This well-known class of alternations is traditionally known as *los verbos de cambio radical* or stem-changing verbs. Consider (301) where the verb *pensar* 'to think' is representative of this class.[4]

(301) Forms of *pensar* 'to think'

	1SG	2SG	3SG	1PL	2PL	3PL
PRES	**piéns**-o	**piéns**-as	**piéns**-a	pens-ámos	pens-áis	**piéns**-an
IMPF	pens-ába	pens-ábas	pens-ába	pens-ábamos	pens-ábais	pens-ában

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[4]We depart from standard orthographic conventions by indicating stress with an acute accent throughout.

The stress-based alternations observed in these data are the focus of the two papers to be reviewed in the following paragraphs and my purpose in introducing them into this discussion is to try to separate the two formal mechanisms on empirical grounds. The specific analyses that are compared are Embick (2016) who argues for readjustment and Bermúdez-Otero (2013) who argues for a storage model. I begin with Embick (2016) as he points out the problem that these data pose for a storage approach, before moving on to Bermúdez-Otero's (2013) take on the data.

Embick (2016) points out that since the two alternants (i.e., *piens~pens*) share most of their phonological material, positing a suppletive account is questionable. Specifically, an account that analyzes the observed diphthongization with two contextually specified allomorphs of the root $\sqrt{\text{PENS}}$ is untenable given the assumption that insertion at the root node must occur before insertion at outer nodes. That is, the choice between *pens* versus *piens* at the root node requires a calculation of world-level stress which cannot be computed until insertion at the outer nodes (i.e., *v*–TH–INFL–AGR) has taken place. Therefore, having two distinct stems stored in the 'lexicon' is not possible in this case. Instead, he argues that this alternation can be captured by using lexical diacritics on items like $\sqrt{\text{PENS}}$ that specify that these items undergo diphthongization after stress is calculated. That is, the phonological component reads this diacritic on $\sqrt{\text{PENS}}$ as an instruction to activate a rule along the lines of (302).[5]

(302)   Stem Readjustment Rules

    a.   o $\rightarrow$ ue/__ [+stress]

    b.   e $\rightarrow$ ie/__ [+stress]

Crucially, the lexical diacritics that Embick proposes are only operative in the phonological component and for this reason, they are invisible to the process of Vocabulary Insertion. That is to say, these diacritics 'wait out' the process of Vocabulary Insertion. He views this as a necessary step to ensure that these diacritics can produce a 'Disjoint Conditioning' of morpho-phonological rules, which is not necessary for Vocabulary Insertion. Specifically, only Vocabulary Insertion needs to uniformly insert phonological material, while the diacritic, needs to make reference to that inserted material and act on specific forms.

Bermúdez-Otero (2013: 80), however, has levelled criticism against readjustment rules in this case (and more generally) because they "carry out arbitrary string transformations". Contra Embick (2016), he claims that stem alternations in (301) do involve the storage of two distinct stems for the verbs affected and that the choice of alternant is phonologically driven. He illustrates the details of his analysis with a nominal form. Consider (303).

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[5]Strangely, Embick (2016) does not provide a formal rule for dealing with the diphthong alternation.

(303)   [{ cont–a / cuent–a } dor {∅ / e}]   (Bermúdez-Otero, 2013: 52)

At the earliest stage of the derivation, no choice between *cont* versus *cuent* at the root node is made. Both allomorphs are inserted at the appropriate place in the underlying representation, and the phonological component resolves the disjunction. Instead of proposing specific rules, Bermúdez-Otero uses Optimality Theory to determine the right choice in each case. Consider (304).

(304)   OT Tableau (adapted from Bermúdez-Otero, 2013: 56)

input: {cónta/cuénta}.dor	*PEAK$_{\text{FOOT}}$	*C.NUC
→ conta.dór	(*)	
cuenta.dór	(*)	*!

Phonologically speaking, these low-ranked markedness constraints kick in, ensuring that there is a preference for diphthongs in stressed syllables and monophthongs in non-stressed syllables. Here the exclusion of diphthongs in unstressed positions is driven by *C.NUC(LEOLAS), a markedness constraint prohibiting complex nuclei.[6] While Bermúdez-Otero provides no derivation for verbal forms, in particular, the analysis holds equally for nouns, adjectives and verbs that exhibit this same stress-based stem alternation. I will not devote any time to reviewing the phonological evidence he discusses, but suffice to say, it is possible to capture this alternation in a stem storage model.[7]

    If the most compelling case for a readjustment approach in Spanish is also quite plausible under a stem storage approach, then it is not obvious that anything compels us to adopt the readjustment approach over other plausible alternatives. I, therefore, pursue a stem storage analysis as the appropriate account for stem alternants in Spanish. For the moment, I delay motivating this particular choice in order to introduce some background on locality as it relates to suppletion necessary to understand my basic proposal for a storage analysis. Later, in Section 7.3.1, I extend the basic proposal to look at the future/conditional and the imperfect and show that the storage approach can adequately capture some challenges inherent in the data.

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[6]Bermúdez-Otero (2013) notes that the avoidance of the monophthong in stressed syllables may be interpreted as a sonority effect since diphthongs are more sonorous than pure vowels.

[7]Bermúdez-Otero (2013) argues that in DM the cyclical domain of stress assignment makes incorrect predictions for the distribution of stem alternants. However, this critique is largely based on his view of phonology. Since other analytical choices are possible this objection is not particularly strong. Nonetheless, there is a non-trivial interaction between morphology and phonology and thus careful study of the cyclical predictions of DM would have to be undertaken. I leave the working out of this particular line of inquiry for future work.

7.2.2 Suppletion and Locality

Since I pursue a storage-based approach to the Spanish stem alternations, I am obliged to discuss the current understandings of structural locality as it relates to root suppletion. If the insertion of lexical items is done at terminal nodes (e.g., Halle and Marantz, 1993), then suppletion points to some 'spooky action at a distance' as one node α influences the realization of another node β. However, most recent thinking about suppletion has argued that it is a local process. Broadly speaking, two different views of locality have been proposed in the literature. The first is quite restrictive and advances the position that two syntactic nodes, α and β, are local if and only if they are adjacent (Bobaljik and Harley, 2017; Calabrese, 2015; Embick, 2010). The second view takes a more relaxed approach to locality and defines it in terms of a relevant grammatical domain like INFL (Haugen and Siddiqi, 2016; Merchant, 2015; Svenonius, 2016). For the strictly local view, I take Embick (2016) as representative of the class, and, for the relaxed view, I discuss Merchant's (2015) contribution.

Embick (2016) posits that suppletion obeys a morphological locality condition, which he states in terms of the concatenation (immediate linear adjacency) of morphemes. For suppletion, morphemes X and Y can only interact when X is concatenated with Y (i.e., $X \frown Y$). The past tense form of *sing* is used as a more concrete example of this analysis. Consider (305).

(305)   Derivation of *Sang*

    a.   Structure: $[[[\sqrt{\text{SING}}]\ v]\ T_{[+\text{past}]}]$

    b.   Pruning: $[[[\sqrt{\text{SING}}]\ \emptyset]\ T_{[+\text{past}]}]$

    c.   Linearization: $\sqrt{\text{SING}} \frown T_{[+\text{past}]}$

    d.   Output: [sang]

The basic structure passed to the morphological component is given in (305a). Under this approach, v is not phonologically realized and can therefore be pruned or deleted, as in (305b). Pruning occurs before Linearization, a process that replaces hierarchical relations for linear ones, as in (305c). This deletion forces a configuration for Vocabulary Insertion whereby, T[+past] is in a local configuration with the Root, allowing it to condition the observed Root allomorphy. The output of the full derivation is given in (305d). Thus, the essential idea for this approach is that the Root and T need to get into a local configuration, regardless of if they started that way and deletion ensures that this occurs.

Turning to the relaxed view, Merchant (2015) notes that Greek verbs have differing stems that are sensitive to a combination of aspect and voice distinctions, as in (306).

(306)   Greek Suppletive Stems

IMPERFECTIVE	ACTIVE PERFECTIVE	NON-ACTIVE PERFECTIVE	meaning
tro(γ)	fa(γ)	faγo-θ	'eat'

Since aspect and voice features reside on different heads in the syntax the locality constraints proposed in the adjacency analyses are too strict to account for these data. Merchant concludes that the definition of locality needs to be relaxed to account for the Greek data. The upshot of this relaxation is that he is then able to posit lexical insertion rules sensitive to these features – these rules are provided in (307).

(307)   a. $\sqrt{\text{EAT}} \Leftrightarrow$ fa(γ) / __ Voice$_{[+\text{Act}]}$ Asp$_{[+\text{Perf}]}$

      b. $\sqrt{\text{EAT}} \Leftrightarrow$ faγo / __ Voice$_{[-\text{Act}]}$ Asp$_{[+\text{Perf}]}$

      c. $\sqrt{\text{EAT}} \Leftrightarrow$ tro(γ)

It is clear from these Vocabulary Items that we cannot determine which stem to use without access to the Asp$_0$ which is separated from the stem by the Voice$_0$. Moreover, the perfective non-active morpheme $-\theta$ is overt and consequently it cannot be pruned. Thus, there is no choice but to formulate the rules as given in (307) since the strict adjacency approach will not work here. This account relies on the notion of a ***span***, which is a complement sequence of heads in a single extended projection, excluding specifiers and adjuncts, and the ***Span Adjacency Hypothesis***, which states that allomorphy can only be conditioned by an adjacent span.

    Turning briefly to Spanish, there are also some data that militate against the strictly local approach. Indeed, the need to realize verbal theme vowels causes a non-trivial issue for deletion operations (e.g., pruning) that would be needed to remove intervening nodes to enforce strict locality. In (308), I work through the details for the imperfect subjunctive form *cupiera*.

(308)   a.   Structure: $[[[\sqrt{\text{CAB}}]\ v]\ T_{[+\text{past}]}\ ]$

      b.   Pruning: $[[[\sqrt{\text{CAB}}]\ \emptyset]\ T_{[+\text{past}]}\ ]$

      c.   Linearization: $\sqrt{\text{CAB}} \frown T_{[+\text{past}]}$

      d.   Output: [cup(*ie)ra]

The structure passed to the morphological component is given in (308a). Then in (308b), *v* would need to be pruned, before Linearization in (308c). At this point, T is local to the Root and can trigger the allomorphy of it – that is, to ensure $\sqrt{\text{CAB}}$ is realized as *cup*. While this derivation accounts for the morphology of the root, the output in (308d) would nonetheless be ungrammatical as there is no theme vowel (i.e., *∗cupra*). Remember that I take the theme vowel to be morphologically realized from a feature of *v* (see Chapter 3

for a more detailed discussion). Thus, if the *v* were deleted in (308b), then the ability to express verbal class via theme vowels is lost. Therefore, the adoption of a relaxed model is warranted here as a more local calculation would force a situation that generates unattested forms. Based on the reality that all but the relaxed approach are far too local to capture the Spanish and Greek data, I adopt said approach going forward.
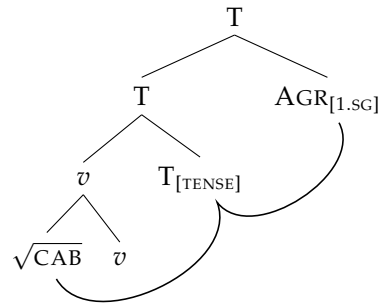
7.2.3 Analysis: Past and Present Stems

Having demonstrated that a stem storage model of suppletion is possible and having discussed the locality requirements of such an approach, we are now in a place to talk about stem alternations in Spanish. A stem storage analysis predicts that different realizations of a root (e.g., *ten~tuv*) are separate vocabulary items and crucially are not derivationally related by readjustment rules but rather compete for insertion into a terminal node in the same way as functional items (see Siddiqi, 2006). I abstract away from the fine-grained structural details for the moment as, for the present purpose, the structures in (309) and (310) are sufficient to communicate the basic idea that grammatical features higher than the root can condition its allomorphy.

(309)   The Present/Past Subjunctive

$$
\begin{array}{c}
\text{T} \\
v \qquad \text{T}_{[\text{TENSE}]} \\
\sqrt{\text{CAB}} \quad v
\end{array}
$$

(310)   The Present Indicative

$$
\begin{array}{c}
\text{T} \\
\text{T} \qquad \text{AGR}_{[1.\text{SG}]} \\
v \quad \text{T}_{[\text{TENSE}]} \\
\sqrt{\text{CAB}} \quad v
\end{array}
$$
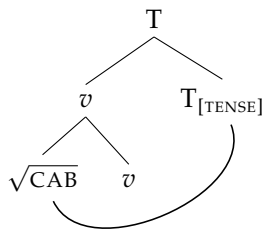
Based on these structures, I propose the Vocabulary Items in (311), which provide more fully specified contextual information about where these irregular stems occur.

(311)   Vocabulary Items for Roots

    a. $\sqrt{\text{CAB}} \Leftrightarrow$ quep / __ $\text{T}_{[\text{PRES}]}$–$\text{Mood}_{[\text{FIN}]}$ or __ $\text{T}_{[\text{PRES}]}$–$\text{Mood}_{[\text{DEIX}]}$–$\text{Agr}_{[1.\text{SG}]}$

    b. $\sqrt{\text{CAB}} \Leftrightarrow$ cup / __ $\text{T}_{[\text{ENTIR}]}$[8]

    c. $\sqrt{\text{CAB}} \Leftrightarrow$ cab

Under this analysis *cab* 'fit' is the default stem alternant. Recall I adopted Cowper's (2012) set of inter-

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[8]In Section 7.3.1, I update this Vocabulary item to avoid a potential case of disjunction as other features (e.g., [PRECEDENCE], [MODALITY]) also trigger this stem. I employ the notion of a contrastive feature hierarchy to group these contexts, resulting in an new contextual specification of [η], which updates the one here. For further details on this [η] specification, see Section 7.3.1.

pretable features which account for the tense systems of Spanish. In the simple past, T has the feature [ENTIRETY], which requires all moments associated with the event denoted by the clause to precede the temporal anchor. Under this view, the subjunctive typically lacks [DEIXIS] and is anaphoric on the tense of the main clause, whereas indicatives do not have this relation. Thus, the spans that condition the root alternation differ in that [DEIXIS] is required for the indicative but not the subjunctive, which only requires [FINITE]. Since Vocabulary Insertion proceeds from the inside-out, insertion at the root can only be jointly conditioned by the morphosyntactic features of outer nodes because these nodes do not have phonological content at that stage (Merchant, 2015). The vocabulary item for *quep* 'fit' has two contexts where the stem can occur (i) in the present subjunctive and (ii) in the 1SG slot of the present indicative paradigm. This formal analysis captures the intuitive notion that the present subjunctive is 'built' on the basis of the 1SG indicative form.[9]

The verbs covered under the proposed analysis are summarized in (312). Note that the blank spaces in the example would be filled with stems that are not germane to the discussion, but they are not otherwise meant to indicate that there are no available stems to fill these slots. These spots would be filled by the default stem, which consists of infinitive form minus the final vowel-consonant sequence.

(312) Irregular Past and Imperfect Subjunctive stems

VERB	PAST	PRES	VERB	PAST	PRES	VERB	PAST	PRES
andar 'walk'	anduv	(and)	querer 'want'	quis		venir 'come'	vin	veng
saber 'know'	sup		estar 'be'	estuv		hacer 'do'	hic	hag
tener 'have'	tuv		salir 'leave'	(sal)	salg	caber 'fit'	cup	quep
haber 'have'	hub		valer 'cost'		valg	poner 'put'	pus	pong
decir 'say'	dij		caer 'fall'		caig			
poder 'can'	pud		traer 'bring'	traj	traig			

Although the analysis holds for all verbs mentioned, most verbs do not have both irregular past and present alternates. For the five verbs with both irregular past and present the full analysis in (311) is required. However, for the other verbs, we get some combination of the relevant pieces of that analysis. For verbs with irregular past Vocabulary items of the (311b) and (311c) are required whereas for verbs with irregular present subjunctive (311a) and (311c) are required.

While a readjustment approach could be posited, it is ill-motivated on conceptual grounds. First, the

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[9]The situation described for the two contexts where we find *quep* is a disjunction. This disjunction would violate principles of parsimony since it implies that we really have two separate items that have the same basic meaning – this is a limitation of the current analysis.

notion of 'closeness' that is invoked to justify readjustments has been challenged and Haugen and Siddiqi (2013: 496) question whether intuitions about the relative closeness of stem alternants can be formalized. Essentially, since researchers can make different calls on what constitutes close, we seemingly reduce the desiderata for the readjustment approach to what a given researcher evaluates as being close. This move is extremely dubious. Second, the evidence for readjustments is unconvincing from a phonological perspective. For instance, for the present subjunctive, we could insert an epenthetic [g] for stems ending with a final lateral or nasal (i.e, [l] or [n]), or an epenthetic [ig] for stems ending with a final vowel. However, Roca (2010: 424) points out there is not any good synchronic justification for these specific 'rules'. Indeed, Haugen (2016) argues more broadly that these kinds of 'regularities' are historical fossilizations that offer little in the way of meaningful synchronic generalizations. In sum, readjustments weaken the validity of phonological theory by carrying out unconstrained string transformations for dubious reasons.

7.3   Suppletion and Root Asymmetries

This section extends the basic proposal to the future/conditional and the imperfect and ultimately demonstrates that a storage model can adequately account for some challenges arising from these data. Several unexpected asymmetries – in that the expected grammatical trigger fails to licence the expected verbal stems – are addressed. I focus the discussion on the verb *querer* 'want' and illustrate this issue with previously proposed analyses of future and the future subjunctive in (313) and (314), respectively.

(313)   The Future

quer+v+$\emptyset$ $_{[TH]}$+r$_{[FUT]}$+e$_{[TH]}$+$\emptyset$ $_{[T/AGR]}$ = querré   (Adapted from Arregi, 2000)

(314)   The Future Subjunctive

quis+v+ie$_{[TH]}$+r$_{[FUT]}$+e$_{[TH]}$+$\emptyset$ $_{[T/AGR]}$ = quisiere   (Adapted from Martínez Vera, 2016)

Superficial differences aside, the gross morphological structure of the forms in (313) and (314) is the same, including the temporal feature of the Fut$_0$ or T$_0$. Since the future is characterized semantically as a FUT/WOLL + PRES (Iatridou, 2000) and the same is equally true for the future subjunctive (Laka, 1990), it is odd that the future subjunctive uses a different stem (i.e., *quis*) from the future (i.e., *quer*). Several asymmetries of this type are summarized in (315).

(315)   The Distribution of Present and Past Stems

	+PRES	+PAST
Past stem (e.g., *quis-*)	FUT.SUBJ.	
Non-past stem (e.g., *quer-*)	FUT.	COND. & IMPF.

The rest of this section will proceed as follows. First, I look at the future/future subjunctive asymmetry and argue that the historical analysis of the future argued for in Chapter 5 explains the distribution of the stem alternations. Following this, I deal with the observed future/conditional stem alternations. Last, I address the noted asymmetry in the imperfect stems.

7.3.1 The Future/Conditional and the Future Subjunctive

My main argument here is that the asymmetry in the realizations of the stem for the future/conditional and the future subjunctive is due to a difference in the number of INFL domains present for each verbal form. For the future/conditional, there is more than one INFL domain (see the details of the analysis in Chapter 5), whereas there is only a single domain for the future subjunctive. Since my argument relies on there being two INFLs in the future/conditional, I first provide evidence for this claim by looking at a closely related Ibero-Romance language to Spanish, European Portuguese (EP). Consider (316).

(316)   European Portuguese Mesoclisis

    a.   perceberia
        understand.COND.3SG
        'He would understand.'

    b.   perceber -te-   ia
                 -2SG.DAT-
        'He would understand you.'

    c.   falarias   -lhe
        speak.COND.2SG –3SG.DAT
        'you would speak to him/her.'   (adapted from Vigário, 1999: 222)

Vigário (1999: 222) notes that when a clitic follows a verb inflected for future or conditional in EP, it is typically inserted before what is taken to be a person/number affix as in (316b), though its placement at the end of the inflected verb in (316c) is possible, for at least some speakers. Given that Romance clitics are INFL/T-oriented (Kayne, 1991; Roberts, 2010; Sportiche, 1995 *inter alia*), the variable placement of dative clitic in (316), indicates that there are two separate INFL domains for the future and the conditional. This conclusion follows if the Romance future/conditional form is built over an infinitival stem (i.e., the historical analysis).

    Until this point in the dissertation, I have not addressed the inflectional properties of the non-finite

forms in Spanish. I take the non-finite forms to be morphologically complex, and studying this complexity should allow us to determine what heads the features to be proposed reside on. Indeed, this discussion is necessary because specific to the analysis, the features of the non-finite domain ultimately determine what kind of stem (i.e., past vs. non-past) is licensed. For illustration, the verb *purificar* 'to purify' is used as an example in (317).

(317)   The Distribution of non-finite Exponents

      INFINITIVE: pur   –ifica   **–r**

      GERUND: pur   –ifica   –n   **–do**

      PARTICIPLE: pur   –ifica   **–do**

From the morphological parse in (317), we can observe that the position of the exponent *–n* to the right of the verbalizer *–ifica* indicating that it must have originated in a position higher in the syntactic structure than v and the inner aspect (*aktionsart*) head, which is located between v and the VP domain (Travis, 2010). Thus, the position of *–n* rules out its characterization as an inner aspect marker. Second, the position of exponents *–r* and *–do* is to the right of this non-finite aspectual domain and thus reside in T. Indeed, Travis (2010) notes that the infinitival *to* in English, which is in complementary distribution with other tense elements (e.g., modal verbs), is found in the same position as the moved infinitival verb in French. Thus, the distribution of these exponents leads to the structural analysis in (318).[10]

(318)   Structure of the Infinitive

```
                    TP
            ┌────────┴────────┐
      T_non-finite          AspP
                        ┌─────┴─────┐
                   Asp_outer       vP
                               ┌────┴────┐
                               v      √ROOT
```
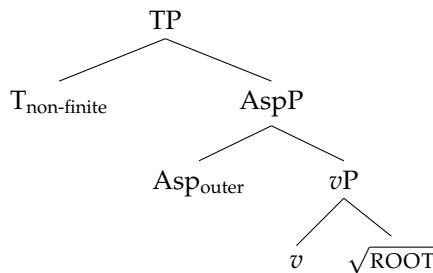
With the structure clarified, the inflectional features of non-finite T are [INFINITIVE] and [PARTICIPLE], and the inflectional feature of Asp is [IMPERFECTIVE]. Using these features, I propose Vocabulary Items given in (319).

(319)   Vocabulary non-finite INFL

      a.   [INFINITIVE] ⇔ **–r**

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[10]Other options for this head include InfP (i.e., Kayne, 1989) or a non-finite projection (i.e., Oltra-Massuet and Arregi, 2005).

b.   [PARTICIPLE] ⇔ –do

c.   [IMPERFECTIVE] ⇔ –n

Assuming a contrastive organization of these exponents as I do in (319), there is no need to propose a perfective exponent proper, though nothing would be lost by proposing a null exponent. The system here is contrastively organized such that *–r* contrasts with *–do* and then *–n* contrasts with *–∅*. If this is the case then the fact that *–do* occurs in these two places is not an accident, which would be implied by the *–ndo* analysis. The upshot of this analysis is that we avoid positing accidental homophony, which is a more parsimonious analysis.

Having laid the details of my analysis of the infinitive (and other non-finite forms), we are now in a position to talk about an intervention effect. Specifically, I argue that for the future/conditional a non-finite T blocks the structurally higher T from triggering a change in the root. According to Relativized Minimality (Rizzi, 2004), a local relation must be satisfied in the smallest environment possible. Consider the structural configuration in (320).

(320)   ...X...Z...Y...

A local structural relation cannot hold between *X* and *Y* if *Z* is a potential bearer of the relevant relation and *Z* intervenes between *X* and *Y*. Intervention is defined as follows: *Z* intervenes between *X* and *Y* iff *Z* c-commands *Y* and *Z* does not c-command *X*. Consider (321), which is a simplified representation of the analysis of the future and conditional defended in Section 5.3.2. Specifically, I ignore any structure beyond T_2 as it is not needed for the argument being developed here.

(321)   Morphological Structure of the Conditional: *querría*
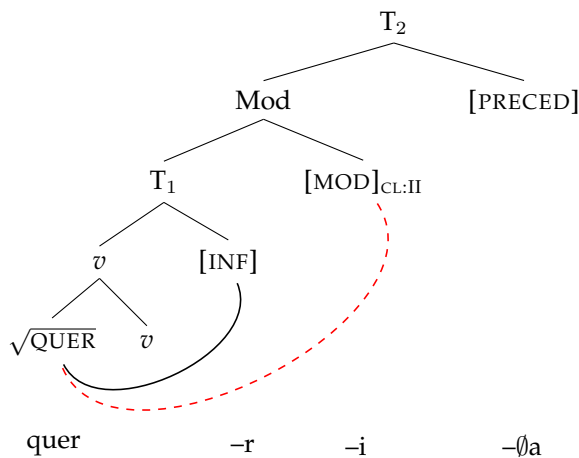
For concreteness, the Vocabulary items and impoverishment rule responsible for the exponents listed along the bottom of (321) are given below:

(322)   a. $v \rightarrow \emptyset$ / {$\sqrt{\text{QUER}}, \sqrt{\text{SAL}}, \sqrt{\text{TEN}}, \ldots$} __ MOD

        b.   [INFINITIVE] $\Leftrightarrow$ –r

        c.   [MODALITY] $\Leftrightarrow$ –i /__ [PRECEDENCE]

        d.   [PRECEDENCE] $\Leftrightarrow$ –$\emptyset$a / CL:¬1 __

In (321) there are two INFLs for the future and conditional forms: the first domain ends with T_1 and the other domain begins at Mod. Since Vocabulary Insertion proceeds from the inside-out, insertion at the root can only be sensitive to morphosyntactic features of outer nodes because these nodes do not have phonological content at that stage (Embick, 2010). The lower of the two INFLs is local to the root and has a T-related inflectional feature, [INFINITIVE]. This feature intervenes and, consequently, the higher INFL consisting of Mod_0 and its feature [MODALITY] is not sufficiently local to condition the allomorphy of the root.

In contrast, for the future subjunctive in (323), there is only one INFL and the root and the features that condition its allomorphy (i.e. [MODALITY]) are, in fact, local.

(323)   Morphological Structure of the Future Subjunctive: *quisiere*
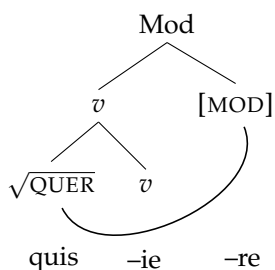
This account is only possible if the so-called historical analysis is still viable as I argue in Chapter 5 and it neatly captures the observed pattern.

I could have plausibly argued that under a span-conditioned theory of allomorphy (Merchant 2015), the higher INFL is in a different extended projection from the first and therefore unable to trigger the observed root alternation. However, the notion of extended projection is hard to tease apart in this particular case because it is not immediately obvious what to treat as the extended projection for the future/conditional. There are at least two options to consider here. The first option would be to say that each INFL constitutes its own extended projection. Under that assumption then nothing further needs to be said and we would still be able to adequately derive the observed asymmetry concerning the choice of stem inserted. However, it

seems equally likely that we could consider the extended projection of the root the amalgam of both INFLs that make up the future/conditional forms. Given that the notion of an extended projection is subject to these two interpretations, the approach I advocate here is preferable as it eschews this complication.

Turning back to the future subjunctive, I now explain how it ends up with an ostensibly past stem. The bolded inflection features indicated in the vocabulary Items in (324) predict the choice in stem, which can be seen on the right.

(324)   Subjunctive

Vocabulary Items		1PL form
[FINITE, **MODALITY**]	⇔ –re	**quis**-ie-re-mos
[FINITE, **ENTIRETY**]	⇔ –se	**quis**-ie-se-mos
[FINITE, **PRECEDENCE**]	⇔ –ra	**quis**-ie-ra-mos
[FINITE, PRESENT]	⇔ –∅	quer-a-∅-mos

Since these three contexts where the past stem occurs do not seem to form a natural class, we seem obliged to posit several separate but similar Vocabulary Items with homophonous exponents as in (325).

(325)   Vocabulary Items (quer~quis):

   a. $\sqrt{\text{QUER}}$ ⇔ quis __ [MODALITY]

   b. $\sqrt{\text{QUER}}$ ⇔ quis __ [ENTIRETY]

   c. $\sqrt{\text{QUER}}$ ⇔ quis __ [PRECEDENCE]

Homophony is in and of itself tolerable in the grammar, but this particular kind of homophony would require accidental homophony since for root morphology there needs to be identity between these root alternants. While a readjustment approach – the other logical option for dealing with these data – would avoid this problem entirely, it is not without its own inherent drawbacks. Recall that readjustment rules are conditioned by both morphosyntactic and root-specific information, and they are idiosyncratic, only applying to an individual VI or specific class of VIs (Calabrese, 2012: 12). Consider (326), where various rules turn the underlying form /quer/ into the phonetic form [quis].

(326)   Stem Readjustment Rules (quer~quis):

   a.   qu_**er** → qu_**is** / __ [MODALITY]

   b.   qu_**er** → qu_**is** / __ [ENTIRETY]

   c.   qu_**er** → qu_**is** / __ [PRECEDENCE]

Notice that the contexts that would trigger these rules are the same ones as in (325) and , therefore, the readjustment approach also fails to capture the data without resorting to multiple similar rules to account for the same fact. The consequence of this kind of analysis is a theoretically undesirable loss of generalization. Thus, it is not clear that this account actually fairs better since it requires three readjustment rules to derive the correct forms. The problems of both approaches could be avoided if there were a way to position all three contexts as somehow similar.

If a speaker is obliged to learn that there is a relation between these disparate contexts, then they must posit some level of abstraction that allows them to bring these contexts together, less the clear grammatical relation between items be treated as accidental. That is, if paradigms are an epiphonema then the relation of metatheoretical paradigm cells are the result of similarity in features, therefore these data seem to force the conclusion that there is a kind of "proto feature" that relates these categories together. Jaszczolt (2009) has proposed that tense itself is an epiphenomenon and modality is the primitive category. Under this view, the past and the future are equally modal in the sense they represent a certain "detachment from the certainty of *now*" (Jaszczolt, 2009: 32). The present is not modal because "the now is certain, while modal and temporal shifts are second-order concepts that assume this certainty of now" (Jaszczolt, 2009: 67). If things are as Jaszczolt (2009) argues then it is probably not accidental that the precise features we need to group are past (i.e., [PRECEDENCE] and [ENTIRETY]) and future (e.g., [MODALITY]) features. If this were not the case then, the other alternative would require that we allow for disjunctive Vocabulary Items or that we countenance some, albeit limited, accidental homophony. In the following paragraph, I show how this grouping can be accomplished.

For the contrastive organization of features, we follow Cowper and Hall (2019) who treat morphosyntactic hierarchies as contrastive hierarchies (e.g., Dresher, 2009) instead of feature geometries (e.g., Harley & Ritter 2002).[11] The Successive Division Algorithm provides an explicit procedure for constructing a contrastive hierarchy.

(327)   Successive Division Algorithm (Dresher, 2009: 16)

    a.   Begin with no feature specifications: assume all sounds are allophones of a single undifferentiated phoneme.

    b.   If the set is found to consist of more than one contrasting member, select a feature and divide the set into as many subsets as the feature allows for.

    c.   Repeat step (b) in each subset: keep dividing up the inventory into sets, applying successive

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[11]Harley (1994) has noted that morphosyntactic features show evidence of hierarchical dependencies and has represented these dependencies using feature geometries like those used in autosegmental phonology (e.g. Goldsmith, 1990). However, the explanatory value of morphosyntactic feature geometries has been called into question (Harbour, 2011, 2016).

features in turn, until every set has only one member.

Feature dependencies, whether they deal with units of sound or units of meaning, like morphosyntactic features, are the result of a generic system for acquiring language-specific contrasts. Consider (328).

(328)   Contrastive Organization of Spanish INFL
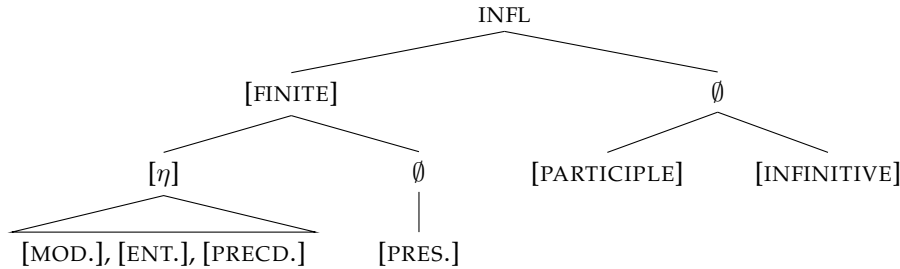
The [FINITE] divides finite forms from non-finite forms and the case of interest here only occurs with finite forms. Thus, with the notion of contrast and a single posited [η] feature, corresponding to Jaszczolt's superordinate notion of modality that connects the past and the future, we get a natural class since [MODALITY] is the feature that characterizes the future and [ENTIRETY] and [PRECEDENCE] are the features that characterize the two past tenses (i.e., the preterite and the imperfect). I am assuming a further division of the features [MODALITY], [ENTIRETY] and [PRECEDENCE] which is not depicted here as this division is not relevant for the present argument. Following from this discussion, I propose the Vocabulary Items in (329).

(329)   a. $\sqrt{\text{QUER}} \Leftrightarrow$ quis __ [η]
         b. $\sqrt{\text{QUER}} \Leftrightarrow$ quer

Thus, what is described as a past stem in Spanish is not actually related to any notion of 'pastness'. This is in line with Aronoff's (1992) claim that stems are forms without meaning. Last, further support for this approach comes from Portuguese, a closely related Romance language with a productive future subjunctive. Consider (330).

(330)   Past, Future Subjunctive and Future of *querer* 'to want'

	1SG	2SG	3SG	1PL	2PL	3PL
PAST	quis	quis	quis	**quis**emos	quiseram	quiseram
FUT.SUBJ	quiser	quiseres	quiser	**quis**ermos	quiserem	quiserem
FUT	quererei	quererás	quererá	**quer**eremos	querereis	quererão

I highlight the first plural forms for the simple past form and future subjunctive in (330), as the contrast is particularly easy to observe.[12] The proposed analysis can be extended to these Portuguese stem alternation data without any significant modification since the Portuguese future form also derives from the have + infinitive construction like Spanish.

As previously noted, the other option to account for these data would require the use of various readjustment rules. We would need to spell out the unmarked root first and then in the context of the marked features, we have a rule such as (331) that turns this output into the right one. Again, adopting the [η] feature, we can now write this rule with a single context.

(331)   Stem Readjustment Rules (quer~quis):

        qu_**er** → qu_**is** / __ [η]

In (331), the readjustment process turns [e] into [i] and a [r] into [s]. However, such an approach is not without consequence, putting aside for the moment that it is not obvious that this process is phonologically coherent. Nonetheless, I discuss some derivations with these rules to see if they yield the correct surface forms in (332).

(332)   a.   Input: quer –ie –ra

              Output: quis –iera

       b.   Input: quer –r –i –ba

              Output: *quis –ría

At this stage, all insertion has taken place and the structure is concatenated so that hierarchy relations are exchanged with linear relations. If these rules simply manipulate strings then anytime we have a relevant string in the context of a relevant trigger the rule should apply as its structural description is met – it is not obvious that having additional segmental material is relevant to the calculation. The readjustment approach would correctly account for a form like *quisiera* but it incorrectly predicts a form like **quisría*. The same is true of the imperfect form and readjustment also predicts the form **quisía*, since T also contains the feature [PRECEDENCE]; I address the question of why the imperfect has the unmarked stem (i.e., *quería*) even though [PRECEDENCE] is an [η] feature in Section 7.3.3.[13]

What is at least questionable about the readjustment approach is the fact that these rules require access to certain kinds of grammatical information that must be legible to phonology such as an element

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[12]Many thanks to Kevin Reynolds for alerting me to the existence of this particular set of data.

[13]It is possible to imagine a scenario where readjustment rules could be cyclically applied and would then only apply to the first INFL domain. While this option is possible it is not one that I have seen advocated in the literature.

having resided in INFL in the syntax. However, if this information is totally inaccessible then it does not seem possible to formulate a coherent notion of a readjustment rule. This is, if readjustment rules are simple phonological rules, then they seem to violate the Indirect Reference principle (Inkelas, 1989), which states that phonological rules can only refer to syntactic structure via prosodic constituency. On the other hand, if readjustment rules are mophosyntactic then they seem to violate the well-motivated Principle of Phonology-Free Syntax (Pullum and Zwicky, 1988; Zwicky and Pullum, 1986), which states that syntactic rules do not make reference to phonology. If the morphology module mixes syntax and phonology in this way, then the empirical observations that motivate the Principle of Phonology-Free Syntax and the Indirect Reference principle cannot be explained.

While this last objection to readjustment rules and others raised in the chapter are valid, the resolution to which approach to favour, perhaps, lies in Haugen and Siddiqi's (2016: 348) comparison of the stipulative nature of two approaches. They point out that both readjusment and listing approaches are equally stipulative. However, all grammar models stipulate that words are listed with their phonology. The listing approach adds no new stipulations and neither does it make claims about explanatory adequacy, whereas readjustment does. Given that readjustment is a generative mechanism it needs to be explanatory to warrant its existence; the same cannot be said of listing which is not generative and therefore different in its character. Given these considerations, Haugen and Siddiqi (2016) conclude that making less parsimonious assumptions to expand the empirical coverage of the model without truly explaining that data, is a violation of Occam's razor.[14] All things being equal, then, the listing approach, which I adopt here, is at least the more parsimonious of the two.

7.3.2 The Future/Conditional

The previously adopted analytical position concerning how the domain restriction predicts the η-stem does not absolve us of the obligation to explain the kinds of stem alternations that we do get in the future/conditional. Since this discussion is thematically related, I address it here before turning to a discussion of stem asymmetries in the imperfect in the following section. The relevant verbs with stem irregularities in the future/conditional are listed in (333).

(333)   Irregular Future Stems

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[14]While I cannot devote too much space to this topic besides the remarks I make here, the reader is referred to Haugen and Siddiqi (2016) and the reference therein for an extensive critique of the readjustment approach.

INF.	FUT.	GLOSS	INF.	FUT.	GLOSS
pon	pond	'put'	ven	vend	'come'
sal	sald	'leave'	dec	di	'say'
ten	tend	'have'	hac	ha	'do'
val	vald	'cost'			

The so-called irregular future stems are historically derived from the infinitive and this 'residue' in the modern grammar is a holdover from an earlier period (Butt and Benjamin, 2000). However, of these stems, only *hacer* 'do' and *decir* 'say' seem to be strong candidates for the storage approach.[15] The other option would be to treat them with a more phonological approach, though there does not seem to be any compelling reason to delete the final consonant [s/θ] in either case nor is there any plausible justification for the raising of the vowel [e] to [i] in the case of *decir*.[16] The other verbs, however, can be accounted for phonologically, though I will return to this point shortly.

If we take an approach that assumes the grammar can tolerate indeterminate spell out (see Bermúdez-Otero, 2013) then we can easily account for the stem alternation facts. As I have argued previously, due to locality, the INF node with its [INFINITIVE] feature gets to condition the allomorphy of the root, so the only options we should have at this point are variants of the infinitive. The output at the root for this phase of the derivation yields the representation in (334), where both variants of the root are inserted.

(334)   Indirect Access Approach
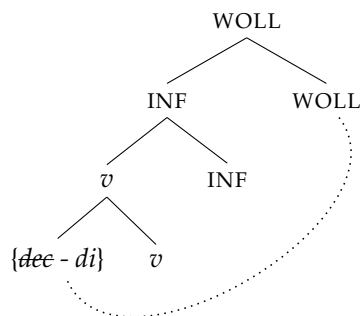
In the course of the derivation, this indeterminacy will need to be resolved. This resolution in favour of the 'future' stem happens in the context of the future head, WOLL, present in the higher INFL domain. Here the dotted line indicates that a feature is capable of resolving an indeterminate insertion at a prior stage of the derivation. Concretely, this resolution is addressed with an impoverishment rule that deletes the 'c-variant'

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[15]Resnick and Hammond (2011: 197) point out that the source of the future stem for *hacer* is Vulgar Latin *fare* 'to do' which existed alongside *facĕre* 'to do' which is the Latin source of *hacer* in all other contexts.

[16]There are regional distinctions in the pronunciation of the orthographic 'c' in this context. Broadly speaking Peninsular varieties of Spanish would pronounce it as [θ], whereas Latin American varieties would pronounce it as [s].
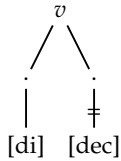
of the stem. Consider (335).

(335)   Impoverishment in the Future

$[dec] \rightarrow \emptyset /$ __ INF WOLL

The impoverishment rule in (335) acts on the morphological representation in (336), which is an explicit formulation of what is going on in the stem domain in (334).

(336)   Stem Domain of Indeterminate Insertion

Here impoverishment is represented as delinking (see Bonet, 1991; Halle, 1997; Harley, 1994) and, consequently, the delinking of [dec] is seen as an instruction to delete it in the phonological component as licensing requirements generally require structures to be licensed at every level of phonological representation.

Turning briefly to the remaining verbs, the alternations in question seem to be phonologically motivated. Recall that historically short unstressed vowels were deleted in the context of the infinitive. The loss of the [e] or [i] occurred wherever the language tolerated the resulting consonant cluster. However, in Chapter 5, I chose to deal with that issue morphologically, as the precise phonological rule required would be untenable in the synchronic grammar.[17] This deletion leads to illicit consonant clusters, and, as a result, an epenthetic [d] is inserted to break up sonorant clusters that would otherwise be difficult to articulate.[18] A rule and derivation for this process are given in (337).

(337)   *d*-Epenthesis

$\emptyset \rightarrow$ [lab, **-son**, -cont] / [cor, **+son**, -rhotic] __ [cor, **+son**, +rhotic]

          /ponre/

(epen)   pondre

          [pondré]

---

[17]Resnick and Hammond (2011) note that if the syllable adjacent to a stressed vowel had a short vowel, then the vowel was deleted in polysyllabic words – this change occurred regularly only if one of the adjacent consonants was liquid or nasal.

[18]It should be noted that other verbal forms based on these verbs also exhibit the same irregularity in the future (e.g., *mantener* 'support' $\rightarrow$ *mantendré* 'I will support').

The rule assumes distinctive features as they clearly illustrate the phonetic naturalness of this kind of rule. Unlike readjustment rules (which are questionable given their lack of clear phonological underpinning), epenthesis does have sufficient phonological justification to be warranted as an approach here – phonotactically, its function is to break up illicit sonorant sequences (e.g., [lr] and [nr]).

7.3.3   The Imperfect

With the discussion of future/conditional stems now complete, I continue with the discussion of stem Spanish asymmetries with the imperfect. The RAE (2009) notes while the imperfect is currently analyzed in terms of aspect in most modern reference grammars, up until recently most descriptive works in the Hispanic sphere have characterized this tense as the *co-pretérito* following Bello's (1847) grammar. This characterization stems, in part, from the fact that the imperfect is considered the present in the past. Recently, there has been a revival of the temporal analysis of the imperfect (e.g., Cowper, 2005; Cuervo and Tough, 2020; Soto, 2014) for various reasons that I shall not review here. In support of this revivalist position, we offer up a morphological argument centering around the fact that we do not get a marked stem in the imperfect where, all things being equal, we should expect one. The analysis that I propose for the imperfect is close in spirit to the one I proposed for the future (and conditional).

There is a clear contrast between the imperfect and the simple past concerning the acceptability of certain temporal adverbs. The RAE (2009) notes that temporal adverbs such as *mañana* 'tomorrow', which indicate a planned future eventuality, are acceptable with the imperfect but are ungrammatical with the simple past. Consider (338).

(338) mi   avión salía   / *salió   mañana   a las 23:50
       1SG.POSS plane leave.IMPF.3SG / leave.PRET.3SG tomorrow at DEF 23:50
       'My plane was leaving tomorrow at 11:50.'   (RAE, 2009: 1751; 23.11k)

Copley (2008) notes that cross-linguistically the imperfective aspect licences these futurate meanings but this is not possible with the perfective aspect. While this is an attractive proposition to account for the observed contrast, it generates an ungrammatical result. The main hurdle for this approach is the fact that there is some independent evidence for the imperfective aspect exponent (i.e., *–n*) from present participles in Spanish progressives (*estoy comiendo* 'I am eating'), which begs the question about why this exponent does not get spelt out here (e.g., **quer-n-ía*), as the inflected verb would have to move through this aspect position (if it exists outside of the progressive construction).

Conversely, if the imperfect is a temporal form contrasting with the simple past then there is simply no imperfective aspect able to license *mañana* in (338). However, under an analysis where we posit that

there is a present tense node in the representation of the imperfect then both the futurate reading and the presence of the unmarked stem are expected. Consider (339).

(339)   Imperfect-Tense
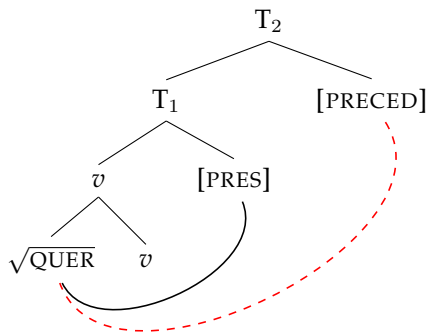
First, unlike what we saw with the aspect, there is no exponent for the present tense in (339).[19] Additionally, this structural analysis contrasts with the structure of a simple past form as it possesses an intervening non-η feature to trigger the occurrence of the default stem.

Last, I assume that **local dislocation** of v must take place so that the node is in the conditioning domain of [PRECEDENCE]. I schematize this verbal class insensitive dislocation process in (340).

(340) v-dislocation in the Imperfect

$$v_{[\text{CL}]} + \text{T} \rightarrow \text{T} + v_{[\text{CL}]}$$

This dislocation captures the idea that the root domain is 'present' but the inflectional domain proper is 'past' allowing all rules for the imperfect that I argued for in Chapter 3 to apply as originally stated. The first rule required is given in (341).

(341)   a.   TH $\Leftrightarrow$ i / CL:II __]$_v$ PAST]$_\text{T}$
                TH $\Leftrightarrow$ i / CL:III __]$_v$

This rule ensures that we can properly licence the past theme vowel –*i* for Class II verbs (e.g., *temía*) and were it not the case for the dislocation then we would expect the –*e* theme vowel (e.g., **teméa*).[20] The last item required here are the vocabulary items for the imperfect exponent that I argued for in Section 4.1.2. Consider (342).

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[19] An alternative to the insertion of a $\emptyset$-VI is what Trommer (2012) calls "Wu Wei zero-Exponence". For Wu Wei zero-exponence, if there is a no realization rule for some morpheme, then the morpheme is exponed via an elsewhere zero.
[20] This is not a problem for class I or Class III verbs.

(342)   a.   [DEIXIS, PRECEDENCE] ⇔ –Ca / CL:¬1 __

          b.   [DEIXIS, PRECEDENCE] ⇔ –ba

The default exponent for the imperfect is *–ba* (e.g., *hablaba*) and the *–Ca* exponent is specified for an incapability with Class I (e.g., *temía*; *escribía*). Concretely, the exponent in (342a) has a C position without any associated phonetic content on the CV-tier appearing next to an overt vowel (i.e., *–∅a*).

7.4   Summary

In this chapter, I have analyzed several stem alternations that, to the best of my knowledge, have not yet been addressed for Spanish. The main findings are:

- I proposed that a stem storage approach is the best analytical lens available to analyze these Spanish verbal alternations.

- Though there were several asymmetries in stem variants requiring explanations, I showed that the stem storage approach also accounts for these data.

Having explored various issues in Spanish verbal inflection, in Chapter 8, I close out the dissertation by offering some final remarks and directions for future work.

8 | Conclusion

This dissertation analyzes various issues in the morphology of Spanish's seven simple verb forms. The central claim advanced is that a robust understanding of the temporal and broader contextual meanings of each verbal form is necessary to (i) link the structure of the Spanish verbal forms considered to their (social) meanings. Having focused more on the semantics of each verbal form, several seemingly disparate forms, such as the future and the subjunctive or the conditional and the imperfect subjunctive, are shown to be related to each other and this relationship reveals regularities about their structure. Overall the approach I take stands in contrast to other scholars who have primarily studied verbal inflection focused on syntactic and morphological structure and the linear arrangement of morphs (Arregi, 2000; Calabrese, 2012; Madrid Servín, 2005; Oltra-Massuet, 1999; Oltra-Massuet and Arregi, 2005) and highlights the necessity of bridging the divide between (morpho)syntactic and (morpho)semantic analyses in morphological theory. In addition to these broad concerns, the dissertation proposes several novel solutions to data that have proven recalcitrant in prior analyses thus making an important contribution to the theoretical literature on Spanish verbal morphology.

Chapter 3 provided an analysis for verbal class and agreement and eliminated the use of two problematic devices (e.g., multiple theme vowels and lexical diacritics) used in previous analyses. Contra the multiple theme vowel analysis, I demonstrate that an adequate account of Spanish verbs can be devised while only requiring that verbs have a single theme vowel. I also analyze category affiliation as a property of v which obviates the use of lexical diacritics. Thus, the proposed analysis eliminates these two problematic assumptions and shows that at least as much ground can be covered without them.

Chapter 4 covers the issues in the morpho-syntax of the indicative and the subjunctive and offers a new account of both the Imperfect and the Preterite. For the imperfect, I claim that there is an underlying onset consonant in the final syllable of a form like *comía*. While it has been claimed that the *–i* theme vowel in *comía* must be exceptionally marked as syllabic because it is in a position where it should form a complex nucleus with the following vowel, under my proposal there is no exceptionality. That is, syllabification falls out from

the general process of syllabification in Spanish. The accent marking is structure-preserving – it preserves the foot. For the Preterite, I resolve a puzzle concerning the meaning of *–ste*, which was left unaddressed by the previous analyses. Any analysis that posits that *–ste* itself is sensitive to number is untenable because the common co-occurrence of *–ste* with regular second person exponent *–s* (e.g., *hablastes* 'you spoke') in the past directly contradicts the allomorph analysis which would require these agreement makers to be in complementary distribution. For the subjunctive, the analysis formalized the noted connection between the subjunctive and evidentials, by constructing subjunctive clauses on the syntax of evidentiality. This approach affords us the ability to tie the evidential uses of the future (e.g., *Juan estará enfermo* 'John must be sick') to the same underlying structure as the subjunctive and to explain the use of the subjunctive in future-oriented subordinate clauses (e.g., *Jugaré cuando este listo* 'I will play when I am ready').

Chapter 5 addresses the morphology of the future/conditional forms. The main claim made in Chapter 5 is as follows. The historical analysis of the Future and the Conditional – one that takes these forms to be an *haber* 'have' + infinitive construction – is not only adequate in the synchronic grammar, but also makes better predictions than the reanalysis based approaches for Spanish. That is, ones that treat *–r* as a maker of futurity. Therefore, we need to be careful to not dismiss historical analyses wholesale, because as I demonstrate in the chapter, reanalysis approaches create several non-trivial problems. Kiparsky (2006) notes that there seems to be a perennial disagreement over the appropriate scope of synchronic and diachronic explanation in linguistics. With this in mind he proposes an 'amphichornic' program. My analysis supports this amphichornic view and adds further data illustrating the necessity of Kiparsky's research program. Moreover, it adds another language to a spate of diachronic-synchronic analyses of the future and conditional (see Nie, 2015 for French and Vigário, 1999 for Portuguese).

In Chapter 6, I build on my analysis of the future and analyze extended uses of the future and the conditional, showing that these uses are not randomly distributed but rather are constructed on forms whose basic feature specifications allow for these extensions. I argue that certain uses of the future are built up from the syntax and semantics of evidentiality in Spanish. I also analyze the polite use of the 'imperfect subjunctive' (e.g., *quisiera* 'I would like'). Typically, this form is treated as an imperfect subjunctive since it shares the same morphological shape, and the polite meaning is treated as a lexical idiosyncrasy (Fábregas, 2014). However, I propose that the meaning of this form is central to its morphosyntactic identity, and work from the idea that it is a conditional form in imperfect subjunctive's clothing. The polite interpretation is due to the presence of a speech act modifying operator that targets the speech act domain. This analysis contributes to a growing line of inquiry that seeks to model how contextual information interacts with and is incorporated into the grammatical structure of an utterance in a given language (Choi and Harley, 2019; Miyagawa, 2012; Portner et al., 2019; Zu, 2018).

Last, Chapter 7 covers the morpho-syntax of various Spanish root alternations in the verbal domain. Specifically, the following alternations are addressed: (i) the irregular future and conditional stems (e.g., *ten~tend*), (ii) the stem alternations that occur in the past (e.g., *ten~tuv*), and (iii) the stem alternations that occur in the present (e.g., *ten~teng*). An analysis of these data is somewhat recalcitrant, as the contexts where these items need to appear cannot easily be grouped into a natural class. In the analysis of one of these difficult patterns, I make use of the notion of a contrastive hierarchy and with a single posited [η] feature, corresponding to Jaszczolt's (2009) superordinate notion of modality that connects the past and the future, we are afforded the ability to form a natural class since [MODALITY] (e.g., *quis-iere*) is the feature that characterizes the future and [ENTIRETY] (e.g., *quis-iese*) and [PRECEDENCE] (e.g., *quis-iera)* are the features that characterize the two past tenses. Consequently, this approach allows us to resolve this particular disjunction in contexts where these suppletive roots occur. What is typically described as a past stem (*quis-iera*) in Spanish is not actually related to any notion of 'pastness', a finding in line with Aronoff's (1992) claim that stems are forms without meaning.

The analytical choices made in this dissertation are ones that would not be obvious had a more careful analysis of meaning and featural specification for verbal not been central to the enterprise. In the case of the preterite, this overall choice has allowed me to resolve the previously noted paradox. In the case of the subjunctive, it has allowed me to posit structural regularities between forms that would not have otherwise been obvious, and, in the case of the analysis of stems, it has allowed me to solve an issue of disjunction. In addition to this focus on meaning, throughout these chapters the other main issue I address is the minimalist question of how much technical/conceptual machinery is needed to provide an analysis of Spanish verbs and show that the morphosyntax of the seven simple Spanish verbal forms can be accounted for with less conceptual machinery than previously argued, while covering more empirical ground with this restricted set of tools. Specifically, I show that analysis of the facts is possible without the need for readjustment rules, multiple theme vowels or lexical diacritics on the root, yielding a more parsimonious analysis of Spanish verbs.

While I cover a lot of ground in the dissertation, there are several interesting topics that could not be touched upon for reasons of scope. These topics, which have been listed here, are viable directions for future research:

- I have more carefully localized what is similar about certain subjunctive triggers, positing a unifying feature [ψ]. However, it is yet to be determined precisely what kind of feature [ψ] is. In order to do so, it would be worth looking into other subjunctive triggering contexts for similarities or differences.

- Bermúdez-Otero (2013) argues that in DM the cyclical domain of stress assignment makes incorrect

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predictions for the distribution of stem alternants. However, this conclusion seems premature and thus careful study of the cyclical predictions of DM would have to be undertaken. This work would pave the way for a storage analysis of stem-changing verbs in DM.

- The morphology of the complex verbal forms refers to the simple forms and thus it was crucial to sort out all issues relating to the simple forms before tackling the (superficially) more complex ones. Having now done so the results of this dissertation will be relevant to any future analysis of complex verbal forms (e.g., *estás cantando* 'you are singing' and *había cantado* 'I had sung').

In sum, in this dissertation I have provided an analysis of Spanish verbal inflection, with the hope of shedding light on the interaction between linguistic form and meaning in the context of morphological analysis. For now I shall close out my investigation of various issues in Spanish verbal inflection. If you have made it this far, thanks for coming along on the journey. Perhaps, like me, you are fond of the destination!

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A | List of Vocabulary Items

This appendix contains a list of the vocabulary items, features, impoverishment rules and sprouted nodes that have been proposed in this dissertation and is organized by head.

A.1   Root

I. Impoverishment Rules

Impoverishment in the Future   Section 7.3.2, page 175

$[dec] \rightarrow \emptyset /$ __ INF WOLL

II. Vocabulary Items

Root/Stems   Section 7.2.3, page 162

$\sqrt{\text{CAB}} \Leftrightarrow$ quep / __ $T_{[\text{PRES}]}$–$\text{Mood}_{[\text{FIN}]}$ or __ $T_{[\text{PRES}]}$–$\text{Mood}_{[\text{DEIX}]}$–$\text{Agr}_{[1.\text{SG}]}$

$\sqrt{\text{CAB}} \Leftrightarrow$ cup / __ $T_{[\text{ENTIR}]}$

$\sqrt{\text{CAB}} \Leftrightarrow$ cab

η Contextual Specification   Section 7.3.1, page 171

$\sqrt{\text{QUER}} \Leftrightarrow$ quis __ $[\eta]$

$\sqrt{\text{QUER}} \Leftrightarrow$ quer

A.2 v + TH

I. Impoverishment Rules

TH-obliteration in the Imperfect   Section 4.1.2, page 80

TH $\rightarrow \emptyset / \sqrt{\text{I}}$ __ [PRECEDENCE]

$$v \rightarrow \emptyset \ / \ \{\sqrt{\text{PON}}, \sqrt{\text{SAL}}, \sqrt{\text{TEN}}, \ldots\} \ \_\_ \ \text{MOD}$$

II. Dissociated Morphemes

$$v \rightarrow [\ v, \text{CL: III }] \ / \ \{\sqrt{\text{ESCRIB}}, \sqrt{\text{PART}}, \sqrt{\text{SAL}}, \ldots\} \ \_\_$$

$$v \rightarrow [\ v, \text{CL: II }] \ / \ \{\sqrt{\text{COM}}, \sqrt{\text{BEB}}, \sqrt{\text{CORR}}, \ldots\} \ \_\_$$

$$v \rightarrow [\ v, \text{CL: I }]$$

III. Vocabulary Items

$$\text{TH} \Leftrightarrow \text{ie} \ / \ \text{CL:}\neg\text{I} \ \_\_ \ ]_v \ \text{PAST} \ ]_\text{T} \ 3\text{PL}]_\text{AGR}$$

$$\text{TH} \Leftrightarrow \text{ie} \ / \ \text{CL:}\neg\text{I} \ \_\_ \ ]_v \ \text{IMPF.SUBJ} \ ]_\text{T}$$

$$\text{TH} \Leftrightarrow \text{i} \ / \ \text{CL:II} \ \_\_ \ ]_v \ \text{PAST} \ ]_\text{T}$$

$$\text{TH} \Leftrightarrow \text{i} \ / \ \text{CL:III} \ \_\_ \ ]_v$$

$$\text{TH} \Leftrightarrow \text{e} \ / \ \text{CL:I} \ \_\_ \ ]_v \ \text{SUBJ} \ ]_\text{T}$$

$$\text{TH} \Leftrightarrow \text{e} \ / \ \text{CL:II} \ \_\_ \ ]_v$$

$$\text{TH} \Leftrightarrow \text{a} \ / \ \text{CL:}\neg\text{I} \ \_\_ \ ]_v \ \text{SUBJ} \ ]_\text{T}$$

$$\text{TH} \Leftrightarrow \text{a} \ / \ \text{CL:I} \ \_\_ \ ]_v$$

A.3   Asp (outer)

I. Features

II. Vocabulary Items

A.4   Mod/woll

I. Features

[MODALITY]   Section 5.3.2, page 114

II. Dissociated Morphemes

Mod → [Mod, CL: II] / INF]$_v$ __]$_{MOD}$ Section 5.3.2, page 114

III. Vocabulary Items

Future/conditional   Section 5.3.2, page 115

Mod ⇔ i / __ [PRECEDENCE]

Mod ⇔ ∅

A.5   T (finite and non-finite)

For finite and non-finite T several features exist on the T head. These features are listed as follows:

I. Features

[PRESENT]   Section 4.1.1, page 73

[PRECEDENCE]:   Section 4.1.2, page 78

[ENTIRETY]   Section 4.1.3, page 82

[INFINITIVE]   Section 7.3.1, page 166

[PARTICIPLE]   Section 7.3.1, page 166

II. Vocabulary Items

Imperfect   Section 4.1.2, page 78

[DEIXIS, PRECEDENCE] ⇔ –Ca / CL:¬1 __

[DEIXIS, PRECEDENCE] ⇔ –ba

Preterite   Section 4.1.3, page 82

[DEIXIS, ENTIRETY] ⇔ –e /[1SG]

[DEIXIS, ENTIRETY] ⇔ –i / [1SG] _ { List A }

[DEIXIS, ENTIRETY] ⇔ –∅ / [1PL]

[DEIXIS, ENTIRETY] ⇔ –ro / [3PL]

[DEIXIS, ENTIRETY] ⇔ –o / [3SG]

[DEIXIS, ENTIRETY] ⇔ -ste

Subjunctive

[FINITE, PRECEDENCE] ⇔ –ra

[FINITE, ENTIRETY] ⇔ –se

[FINITE, PRES] ⇔ –∅

T in context of Mod

[PRES] ⇔ –e / MOD]$_v$ __]$_T$ 1]$_{AGR}$

[PRES] ⇔ –e / MOD]$_v$ __]$_T$ 2PL]$_{AGR}$

[PRES] ⇔ –a / MOD]$_v$ __]$_T$

Non-finite INFL:

[INFINITIVE] ⇔ –r

[PARTICIPLE] ⇔ –do

A.6   Mood/Fin

I. Features

[DEIXIS]

[FINITE]

[PROPOSITION]

II. Impoverishment Rules

Subjunctive Imposters

[DEIXIS] → ∅ \ Mod]$_{MOD}$ __ op$_{politely}$

[DEIXIS] → ∅ \ Mod]$_{MOD}$ __ *cuando*$_{WH}$

A.7 Agr (sprouted)

I. Features

[φ:]

II. Impoverishment Rules

Formal Impoverishment:

2 → ∅ / [__ ±PL, FORMAL]

Perfective Impoverishment

2 → ∅ / [ENTIRETY] + [__ −PL]

III. Vocabulary Items

Agreement:

[PRES, 1 −PL] ⇔ −o / __ [DEIXIS]

[2 −PL] ⇔ −s

[−PL] ⇔ −∅

[1 +PL] ⇔ −mos

[2 +PL] ⇔ −is

[+PL] ⇔ −n

Rioplatense Agreement

[2 −PL] ⇔ −s

[*] ⇔ [+SYLLABIC]