6-2014

The Degree of Certainty System in Written Spanish in Mexico

Jaseleen Ruggles
Graduate Center, City University of New York

How does access to this work benefit you? Let us know!

Follow this and additional works at: https://academicworks.cuny.edu/gc_etds

Part of the Linguistics Commons

Recommended Citation
Ruggles, Jaseleen, "The Degree of Certainty System in Written Spanish in Mexico" (2014). CUNY Academic Works.
https://academicworks.cuny.edu/gc_etds/278

This Dissertation is brought to you by CUNY Academic Works. It has been accepted for inclusion in All Dissertations, Theses, and Capstone Projects by an authorized administrator of CUNY Academic Works. For more information, please contact deposit@gc.cuny.edu.
THE DEGREE OF CERTAINTY SYSTEM IN WRITTEN SPANISH IN MEXICO

by

JASELEEN RUGGLES

A dissertation submitted to the Graduate Faculty in Hispanic and Luso-Brazilian Literatures and Languages in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

2014
This manuscript has been read and accepted for the Graduate Faculty in Hispanic and Luso-Brazilian Literatures and Languages in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

Ricardo Otheguy

Date Chair of Examining Committee

José del Valle

Date Executive Officer

José del Valle

Gabrielle Salfati

Eva Fernández

William McClure

Supervisory Committee
Practitioners in threat assessment have considered direct threats as being high-level threats of future violence (O’Toole 2000: 9), but empirical studies testing the predictive validity of direct threats have contradicted this intuition (Dietz, Matthews, Martell et al. 1991; Smith 2006). Studies that include analyses of the deployment of English verbal roots (such as kill, hurt, etc.) have failed to show significant correlations between lexical choices and the occurrence of realized outcomes (Dietz, Matthews, Martell et al. 1991; Scalora, Baumgartner, Zimmerman et al. 2002a: 1360; Scalora, Baumgartner, Zimmerman 2002b: 46, Smith 2006). This analysis focused on inflectional affixes, rather than on lexical stems and aimed to uncover how formal choices made in specific acts of language use could predict the likelihood of realization of violent acts. Offender writings containing verb forms under study were collected from 201 crime scenes. A total of 169 were cases of single homicide.
Acknowledgements

Thank you to José del Valle, Gabrielle Salfati, Eva Fernández and William McClure for their unwavering support throughout this process.

A very special thank you is extended to Ricardo Otheguy, without whom this study would not have been possible.
# Table of Contents

List of Tables .................................................................................................................. xi

List of Figures .............................................................................................................. xiii

Chapter 1—Introduction ............................................................................................... 1

1. Introduction ............................................................................................................. 1

2. Narco Culture in Mexico ....................................................................................... 3

3. Forms Under Analysis ............................................................................................ 7
   3.1 Periphrastic Future as a kind of SP ................................................................. 8
   3.2 Present Perfect as a kind of SP ....................................................................... 8

4. Problem Under Analysis ......................................................................................... 10

5. Research Questions ................................................................................................. 12

6. Hypothesis ............................................................................................................... 13
   6.1 Certainty ............................................................................................................. 13

7. Scholarly Significance ............................................................................................. 13

8. Outline of Remaining Chapters .............................................................................. 14

Chapter 2—Traditional Treatments of Verb Endings in Terms of the Category of Time 16

1. Introduction ............................................................................................................. 16

2. Traditional Treatment of the Pret .......................................................................... 17

3. Traditional Treatment of the SP ........................................................................... 19

4. Traditional Treatment of the MF .......................................................................... 24

5. Summary and Preview of Next Chapter .................................................................. 28

Chapter 3—Verb Endings Have No Time Meanings ...................................................... 30

1. Introduction on Counterexamples to the Traditional Meaning Hypothesis .......... 30
   1.1 Event Complexes set in the Past ..................................................................... 31
   1.2 Event Complexes set in the Present ............................................................... 38
   1.3 Event Complexes set in the Future ................................................................. 40

2. The Practice of Naming Counterexamples ............................................................ 42

3. Mismatch of Tenses ............................................................................................... 44

4. Modality .................................................................................................................. 45

5. New Meanings for the Past Morphology ............................................................... 46
6. New Meanings for the Present Morphology ........................................... 49
7. New Meanings for Future Morphology ..................................................... 51
8. Notion of Tense Versus Notion of Time .................................................. 55

Chapter 4—The Semantic Substance of Degree of Certainty ...................... 57
1. Introduction ................................................................................................. 57
2. The Inapplicability of the System of Probability ....................................... 59
3. What is Meant by Certainty? ..................................................................... 68
4. Existing Literature on Degree of Certainty ............................................. 68
5. A Columbia School Analysis .................................................................. 75
6. Qualitative Evidence for the Degree of Certainty Meaning over Time ......... 76
   6.1 Examples of Pret Compatible with the Meaning HIGH DEGREE OF CERTAINTY 76
   6.2 Examples of SP Compatible with the Meaning MID DEGREE OF CERTAINTY ... 80
   6.3 Examples of MF Compatible with the Meaning LOW DEGREE OF CERTAINTY 84
   6.4 Minimal Pairs ....................................................................................... 86
7. Interpretation of Pret in Isolation Without Time Adverbs .............................. 92
8. The Three-Member Hypothesis for Spanish ............................................. 94
9. Failure to Disprove the Certainty Hypothesis .......................................... 96

Chapter 5—Supporting Degree of Speaker Certainty—General Newspaper Sample ..... 98
1. Introduction ................................................................................................. 98
2. Literature Review ....................................................................................... 98
   2.1 Introduction to Theoretical Frameworks ................................................. 98
   2.2 Summary of Literary Review ................................................................. 101
3. Research Question ..................................................................................... 101
4. Methods ...................................................................................................... 102
   4.1 Introduction ........................................................................................... 102
   4.2 Object of Study ..................................................................................... 102
   4.3 Sample .................................................................................................. 103
   4.4 Overall Frequency Counts for the General Newspaper Sample .......... 104
   4.5 Three-Member Meaning Hypothesis .................................................... 104
   4.6 Statistical Analysis ............................................................................... 104
   4.7 Independent Variables ......................................................................... 105
List of Tables

Table 5.1: Verb Form in General Newspaper Sample.......................................................... 104
Table 5.2: Cross-Tabulation of Verb Form by Number......................................................... 109
Table 5.3: Cross-Tabulation of Verb Form by Subjunctive Following in a Subordinate Clause .................................................................................................................. 111
Table 5.4: Cross-Tabulation of Verb Form by Subjunctive Following in a Subordinate Clause (Excluding Relative Clauses) ........................................................................................................ 112
Table 5.5: Cross-Tabulation of Verb Form by Main/ Subordinate Clause in a Complex Sentence ........................................................................................................................................... 114
Table 5.6: Cross-Tabulation of Verb Form by First/ Second Conjunct Clause ...................... 116
Table 5.7: Cross-Tabulation of Verb Form by Presence of Indirect Reported Speech . 118
Table 6.1: Verb form in Narcomessages Sample........................................................................ 142
Table 6.2: Cross-Tabulation of Verb Form by Number of Victims ........................................ 151
Table 6.3: Cross-Tabulation of Verb Form by Presence of Victim’s Body Wrapped in Tape ........................................................................................................................................... 152
Table 6.4: Cross-Tabulation of Verb Form by Presence of Victim’s Body Wrapped in Blanket ........................................................................................................................................... 153
Table 6.5: Cross-Tabulation of Verb Form by Presence of Victim’s Body Wrapped in Plastic Bag ........................................................................................................................................... 153
Table 6.6: Cross-Tabulation of Verb Form by Presence of Beheading..................................... 154
Table 6.7: Cross-Tabulation of Verb Form by Presence of Scattered Body Parts ............. 155
Table 6.8: Cross-Tabulation of Verb Form by Victim Hanging from Bridge ......................... 156
Table 6.9: Cross-Tabulation of Verb Form by Presence of Message in Automobile...... 157
Table 6.10: Cross-Tabulation of Verb Form by Presence of Message in Trunk of Automobile

Table 6.11: Cross-Tabulation of Verb Form by Presence of Animals

Table 6.12: Cross-Tabulation of Verb Form by Outcome
List of Figures

Figure 1.0: Three Member Grammatical System for Degree of Certainty ..........................96

Figure 2.0: Three Member Grammatical System for Degree of Certainty ..........................132
CHAPTER 1
INTRODUCTION

1. Introduction

This dissertation aims to uncover how formal choices made in specific acts of language use can predict the likelihood of realization of violent acts. Ideations of violence are believed to be expressed in language first, followed by realized actions. Davis states, “violence starts with thoughts and moves first to language then to actions” (Davis 1997: 13). The dissertation works toward this aim by advancing new hypotheses regarding the semantic considerations that guide the choices made by language users between several Spanish verbal inflections. The FBI has considered direct threats (e.g. I intend to shoot the principal) as being high-level threats of future violence (O’Toole 2000: 9), but empirical studies testing the predictive validity of direct threats have contradicted this intuition (Dietz, Matthews, Martell et al. 1991; Smith 2006). Previous linguistic studies of violent threats have failed to provide relevant insights regarding verb forms; this makes sense, as direct threats are typically composed of lexical choices indicating a desire to harm the victim. But then again, studies that include analyses of the deployment of English verbal roots (such as kill, hurt, etc.) have failed to show significant correlations between lexical choices and the occurrence of realized outcomes (Dietz, Matthews, Martell et al. 1991; Scalora, Baumgartner, Zimmerman et al. 2002a: 1360; Scalora, Baumgartner, Zimmerman 2002b: 46, Smith 2006). In view of this, the analysis here focuses on inflectional affixes, rather than on lexical stems.
In this dissertation, we examine the relationship between linguistic expressions of speaker certainty—as coded in a set of Spanish verbal inflections, and the presence of preparatory actions in cases of single homicide and staged crime scenes without victims. Since coded linguistic certainty, that is, certainty that is part of the meaning of verbal inflections—is understood as the degree of speaker certainty with regard to the occurrence of an event, in the context of threatening communications the event in question would be an act of targeted violence requiring offense planning in order to generate certainty. Crucial to understanding how linguistic certainty relates to violent acts is mediating the relationship between knowledge, language, and behaviour. This analysis views this relationship as being composed of structured knowledge pertaining to the offender’s anticipated goal, whose likelihood of occurrence is assessed linguistically through verbal inflections signalling speaker certainty, and which consequently are realized in preparatory behaviours indicative of planning.

This dissertation thus has three main concerns. The first will be to present a meaning analysis of the Spanish verb forms commonly known as the preterite (Pret), the simple present (SP), and the morphological future (MF) (e.g. canté ‘I sang’, canto ‘I sing’, cantaré ‘I will sing’). The analysis takes some distance from the traditional understanding that these forms differ along a time dimension (as their names suggest), and proposes instead that they differ along a scale of speaker certainty regarding events. In the course of this analysis, we also present a new categorization for the forms known as the periphrastic future (e.g. yo voy a cantar ‘I’m going to sing’) and the present perfect (e.g. yo he cantado ‘I have sung’). The new categorization regards these constructions as kinds of SP, and not as individual signals or constructions of their own. The second
concern is to analyze the occurrence of the Pret, SP, and MF, in relation to the presence of crime scene behaviors indicative of planning. The third concern of this study will be to analyze the communicative intent (as it relates to realized outcomes) of narcomessages written by the Mexican cartels that appear at crime scenes, since the authors of these types of communications frequently use the verb forms under analysis to issue threats of violence against rival cartel members.

For the first goal, that is, for the meaning analysis of Spanish Pret, SP, and MF, we rely on the theoretical framework of the Columbia School (CS), which has proven quite useful when the goal is to understand the choices that speakers make between different grammatical forms in the course of on-going communications. Columbia School is a meaning-based approach to language that was developed by William Diver in the 1960s (see Diver 1975, Huffman & Davis 2012). As it is common practice in CS analyses, we will be studying the distribution of these forms in naturally occurring discourse. This dissertation has an interest in two types of discourse data: 1) general newspaper articles; and 2) narcomessages. The General Newspaper Sample will be used to advance hypotheses regarding meanings of Certainty for the three Spanish forms under study, and to generalize how they are used in Spanish in contexts unrelated to violence. The CS meaning analysis of the Pret, SP and MF, is then used for the purpose of obtaining a better understanding of narcomessages and the actions of their authors.

2. Narco Culture in Mexico

The security situation in Mexico remains unstable. According to the Secretaría de Gobernación (SEGOB) cartel related homicides in Mexico totaled 18, 147 in 2013 (SESNSP, 2014). These persistent trends of violence are due to an ongoing war between
rival groups for control over territory and narcotic trafficking routes into the United States (Bunker 2011b: 11). Cartel groups have used written communications as a means to garner public support from local communities, to instill fear, and to issue warnings against rival groups or against the government. There are many types of narcopropaganda used by the Mexican cartels. *Narcomensajes* ‘narcomessages’ are written messages left near the victim’s body at a crime scene, or at times these messages are written on the victim’s body with marker or paint. Narcomessages can also be found at staged crime scenes where no victim bodies are present. In these cases the purpose of the staged crime scene is to garner public attention. Often these messages issue warnings or threats against rival groups or particular individuals, as in examples (1)-(2) below which have been transcribed exactly as they appeared in the original texts at the original crime scenes.

(1) Esto es lo que les va a pasar a los que anden con la F.M, ya ven putos de la F.M no les ayudan en nada y siguen ustedes: Martin, Celia, Alvaro, Orejas, Gallo, Wini y contigo vamos a acabar Carlos, por puto, entiéndanlo aliniense, la plaza es nuestra (“Encuentran dos “encajuelados,” 2010)

‘This is what is going to happen to those that run round with the Michoacan Family (FM). Now you see, the fucks from the FM can’t help you and you’re next: Martin, Celia, Alvaro, “Ears”, Gallo, Wini and we’re going to do away with you, Carlos, for being a fuck, understand it, align yourselves, the plaza is ours.’

(2) Por no jalar con papa “Nico” sigues tu (“Dos ejecutados entre,” 2008)

‘For not hanging with poppa Nico you’re next’.
The term *narcomanta* ‘narcobanner’ refers to messages written on the surface of large banners or sheets. *Narcomantas* frequently appear without victim bodies, hanging over bridges and display messages addressed to the government, or messages intended to gain public support from the local community, as in examples (3)-(5) below.

(3) SENOR FELIPE CALDERON Con todo el respeto que se merece deje de ayudarnos, el veneno se combate con el mismo veneno Atte. Fusion de Carteles de Mexico unidos contra los “Z” despues de que acabemos continue siguiendonos. RETIRE AL EJERCITO. (“Fusión de cártel”,” 2010, para. 3)

‘Mister Felipe Calderon with all due respect stop helping us, poison is best fought with poison attentively, the union of Mexican Cartels united against the “Z” after we finish continue (sic) to follow us. WITHDRAW THE ARMY.’

(4) El dolor de los Michoacanos nos lastima no mas atentados en contra de la poblacion inocente pagaran por sus actos “Zetas” atte: La Fam Mich. P.D.

Todos juntos con La Familia Michoacan saldra adelante (“Más narcomantas,” 2008, para. 4)

‘The pain of the Michoacans hurts us no more attacks against the innocent population you will pay for your actions ‘Zetas’. Attentively, the Michoacan family. PS Everyone together with the Michoacan family will prevail.’

(5) Atenta invitacion a toda la sociedad mexicana a unirse con un frente comun para acabar alos Zetas nosotros ya Familia Michoacana grupo de Resistencia Milenio Golfo La Familia Guerrerense Familia Guanajuatense y Familia Mejiquense proximamente seremos La Familia Mexicana vamos todos juntos contra las bestias del mal (Madriz, 2010, para. 4)
'Serious invitation to the entire Mexican society to unite with a common front in order to do away with the Zetas we the Michoacan family, Resistance Group, Gulf, the Guerrero Family, the Guanajuato Family and the Mexiquense Family will become the Mexican Family. We are all going against the bad beasts.'

*Narcopintas* or *narcografiti* are terms used to refer to spray-painted messages that appear on walls near a crime scene, as in examples (6)-(7) below.

(6) Inspector General de la PFP Raymundo Agustín Guzmán y Suboficial Raúl Mendoza Vázquez, lo mismo les va a pasar a ustedes, mugrosos que lo apoyan. Atentamente "La línea" (“Sicarios asesinan,” 2010, para. 7)

‘Inspector General of the Federal Preventive Police Raymundo Agustín Guzmán and non commissioned officer Raúl Mendoza Vázquez, the same thing is going to happen to you and the filth that supports you. Attentively ‘The Line’.

(7) Señor Gobernador venimos a limpiar la plaza de Chihuahua. Atte La Gente Nueva el pueblo pide y vive al 100% (“Se extiende el cartel,” 2011, para. 1)

‘Dear Governor, we came to clean the Chihuahua plaza. Attentively, the new people. The people ask and live at 100%.’

As we will see in Chapter 6, the kind of crime scene in which narcomessages appear will become relevant for our linguistic analysis. The types of crime scenes in which *narcomensajes, narcомantas*, and *narcopintas* appear vary with respect to the types of behavioral evidence found at the crime site. For example, types of behavioral evidence include beheading of the victim’s body, dismemberment of the body, wrapping
it in blankets or in tape, deliberate positioning of the body, etc. In fact, the Mexican media has begun using specific terms to refer to these different kinds of victims found at crime scenes. *Encintado* or *enteipado* refers to a victim’s body whose face has been wrapped with tape; *encajuelado* refers to one found in the trunk of a car; *empaquetado* to one that has been positioned inside a cardboard box; *encobijado* to a victim’s body that has been wrapped with a blanket; *calcinado* to one that has been set on fire; and *pozoleado* refers to a body that has been dissolved in acid (Bunker et al. 2011a: 146).

To date, there has been only one empirical study that has attempted to systematically analyze the content of narcomessages. Martin (2012) categorized narcomessages according to the offender’s motivation. However, studies in investigative psychology have expressed concerns over analyzing offender motivation (Canter 2000: 234-236). According to Canter (2000: 236), without any direct observation by the investigator, or access to direct contact with the offender, an interpretation of the offender’s motive remains purely speculative. But while it is true that motivation cannot be ascertained, studies in investigative psychology have shown that inferences about the psychological characteristics of an offender can be derived from aspects of the crime scene (Canter 2000: 85, Salfati 2008: 68). Therefore, a linguistic analysis of the grammatical forms used by narcomessage authors when referring to the occurrence of an event can provide a better understanding of how behavioral patterns of violence co-occur with particular linguistic strategies in language use.

3. **Forms Under Analysis**

Following the principles of CS the Pret, SP, and MF are not taken as pre-analytical givens, but as themselves hypothesized signals. With this in mind, this
dissertation will propose below, a new categorization for the form commonly known as the periphrastic future. In particular, we consider the traditional auxiliary of the periphrastic future and the present perfect as forms of the SP.

3.1 Periphrastic Future as a kind of SP

We propose a categorization for the traditional periphrastic future that is different from the traditional one (RAE 2009: 2116, Zagona 2002: 33). In the tradition, the sequence \( ir + a + \) infinitive is understood as a single whole, that is, as a construction with the meaning future reference (Zagona 2002: 33). We propose that the periphrastic future, rather than being a form by itself, is a kind of SP. This use of SP + a + infinitive in this study will be parsed following examples (8)-(9) below.

(8) Ella va (SP) a Paris

‘She goes to Paris’

(9) Ella va (SP) a trabajar en Paris

‘She is going to work in Paris’

The readers should note that the proposed meaning hypothesis presented in Chapter 4 is able to provide a unified account for the distribution of the form SP as it occurs in all environments, including those in examples (8) and (9).

3.2 Present Perfect as a kind of SP

We also propose a new categorization, different from the one offered by the tradition, for the form commonly referred to as the present perfect. The so-called present perfect form is traditionally analyzed as a Past tense form that alternates with the Pret (Bello 1984: 202, RAE 2009: 1721), and is claimed to communicate anteriority with present relevance. However, several studies have recognized the independent
contributions that both aspect and tense make when discussing the present perfect (see Higginbotham 2008, Jespersen 1924, Condoravdi 2002 as cited in Demirdache & Uribe-Etxebarria 2008: 100). According to Jespersen (1924: 269), the present perfect is the present tense of a perfect aspect, that is, a variety of the present and not of the past. Jespersen argues this point by illustrating that the adverb now can be used with the present perfect, as in “Now I have eaten enough” (1924: 270). Following this line of thought, other authors have stressed the role of the present tense on the auxiliary, and defend the position that the present perfect is primarily a semantic present (Giorgi & Pianesi 1997: 86). Comrie (1976: 107) claims the present tense of the auxiliary verb conveys the meaning PRESENT, whereas the past participle communicates past action (Comrie 1976: 107). The position defended in this dissertation is that the perfect aspect of the present perfect has misled readers to wrongfully assume it is a Past tense form. Instead, this dissertation aligns itself with the authors listed above in as much as the present perfect is taken here to be primarily a so-called present tense form with the aspectual feature of perfectivity being contributed by the past participle. However contrary to the authors outlined above, the meaning proposed for the simple present is not Present, but rather, MID DEGREE OF CERTAINTY. In this study, we adhere strictly to the observed morphology of the auxiliary and will regard the present perfect as a kind of SP, following examples (15) - (16) below. As a kind of SP this form is accounted for by the Certainty meaning hypothesis for the SP proposed in Chapter 4. Again, similar to the new categorization for the periphrastic future outlined above, the proposed meaning hypothesis presented in Chapter 4 is able to account for the distribution of the form SP as it occurs in environments such as those in (10) and (11).
(10) Ella canta (SP)
    ‘She sings’
(11) Ella ha (SP) cantado
    ‘She has sung’

4. Problem Under Analysis

As we will see in Chapter 2, traditional grammars appear to assign temporal meanings to the forms Pret, SP, and MF (Butt & Benjamin 2011; De Bruyne 1995, Llorach 1999; RAE 2009). A temporal meaning hypothesis is visible in the labels for the forms given by the tradition: preterite, present, and future. However, the tradition is not explicit as to whether those labels should be understood simply as a naming mechanism used to refer to the forms, or, more seriously, as analytical claims regarding meanings from a semantic substance of Time of which these forms are signals.

The problem of the traditional analysis concerning the verb forms Pret, SP, and MF is twofold. If we take the temporal rubrics of preterite, present, and future as simple identifying labels, the distribution of the forms remains unexplained. On the other hand, if we take them as meanings from the semantic substance of Time, we soon realize they fall short, again leaving the distribution of the forms unexplained. We find these forms used in contexts where their expected temporal interpretation is apparently absent, as in (12)-(14) for the Pret, (15)-(16) for the SP, and (17)-(18) for the MF. The reader should note that the examples presented below are not drawn from a corpus, but rather, they are taken from grammar books that use them for presentational purposes, without seemingly, however, drawing any conclusions regarding the infelicity of the labels present, preterit, and future.
Cuando llegue, llegó (Pret) (Butt & Benjamin 2011: 211)  
‘(She/he) will be here when (she/he) is here, and that’s that!’

Para las dos ya lo acabé (Pret). (Lope Blanch 1991 in Butt & Benjamin 2011: 211)  
‘I will have it finished by two o’clock’

Nos fuimos (Pret). (Butt & Benjamin 2011: 211)  
‘(We) are going/ (We) are leaving right now (lit. ‘we left’)’

Te veo (SP) luego. (Butt & Benjamin 2011: 205)  
‘(I) will see you later’

Salvador Dalí muere (SP) en el año 1989.  
‘Salvador Dalí dies (SP) in the year 1989’

Serán (MF) las nueve y media. (Butt & Benjamin 2011: 219)  
‘(It) must be 9:30’

Pase usted, por favor. Siéntese. Estará (MF) cansado. (Butt & Benjamin 2011: 219)  
‘Please come in. Sit down. (You) must be tired.’

Prior authors have also noted that the traditional meaning hypothesis centered on time is flawed, as Lyons states: “it is no exaggeration to say that there is probably no tense, mood or aspect in any language whose sole semantic function is the one that is implied by the name that is conventionally given to it in grammars of the language” (1977: 682). Traditional grammars have created terms like ‘historical present’ or ‘future of conjecture’ to account for examples like the ones listed above. However, these labels simply state the problem without solving it; that is, they are the names of counterexamples to the
meanings, which are left in place thinking that the naming of the problem solves it. In Chapter 3 of this dissertation we present a detailed analysis of the shortcomings for the temporal meaning hypothesis implicit in the labels assigned by the tradition for the forms under discussion and also argue that assigning names to counterexamples does not provide a solution to the meaning hypothesis problem.

5. Research Questions

The research questions guiding this dissertation are the following:

Question 1. What are the stable, coded linguistic meanings for the forms Pret, SP, and MF?

Question 2. What are the independent linguistic-contextual variables that condition the choice made by the speaker between the forms Pret, SP, and MF?

Question 3. What is the relationship between plan knowledge, language and behaviour?

Question 4. Which independent crime scene variables should be included in the selection criteria and what justifies their classification as planning variables?

Question 5. What are the independent behavioural evidence variables that correlate with the choice of verb form by the speaker?

Question 6. Is the choice of verb form correlated to a violent outcome that did occur?

Question 7. What is the relationship between the linguistic forms used to articulate plans by offenders and the kinds of behavioral actions these offenders engage in at the crime scene?
6.0 Hypothesis

The present analysis offers two hypotheses presented below.

6.1 Certainty

In Chapters 4 and 5 we will propose that the three forms Pret, SP, and MF express different degrees of speaker Certainty with regard to the occurrence of the event. This hypothesis will be based on a newly hypothesized grammatical system called the Degree of Certainty System, formulated within the CS approach and presented in Chapter 4. While the position held by the grammatical tradition is that the Pret means PAST, the SP means PRESENT, and the MF means FUTURE, we advance the view that this traditional hypothesis is not supported by the observable distribution of these forms and needs to be replaced by a different analysis.

7. Scholarly Significance

The existing literature by traditional grammars has failed to provide a comprehensive meaning analysis for the forms Pret, SP, and MF that can account for their entire distribution in the data. A unified meaning account for these forms is still needed. This dissertation offers an alternative analysis for the forms under study related to the semantic substance of speaker Certainty that does succeed in providing a unified meaning account, including occurrences of the SP in so-called periphrastic future and present perfect constructions. Moreover, the validity of using lexical choices in verbal roots as predictors for violent acts has shown to be statistically insignificant. This dissertation bridges a gap in the existing literature by offering a grammatical study based on inflectional affixes as a correlator for violent behaviour. What is more, in order to understand the cognitive processes leading to violent acts, linguistic strategies related to
the expression of speaker Certainty should be examined in relation to not only the realization of violent acts, but also more specifically the types of behaviors displayed by offenders that participate in violence. Although previous studies on offender writings have examined the relation between various linguistic variables and whether or not the violent outcome was realized (see Smith, S. 2008, Gales 2010), an analysis focused on linguistic variables in offender writings and the presence of behavioural evidence found at the crime scene is still needed. In particular, no empirical studies exist that quantifiably measure types of behavioural evidence and linguistic expressions. Chapter 6 of this dissertation provides this much needed analysis in the literature by examining the relationship between language use and physical actions.

**8. Outline of Remaining Chapters**

In Chapter 2 we review the traditional treatments of the forms Pret, SP, and MF, focusing on the semantic substance of Time that is widely believed to explain the distribution of these forms. Chapter 3 argues that this traditional meaning analysis is flawed. Chapter 4 presents a new meaning hypothesis related to speaker Certainty. Chapter 5 provides quantitative testing of the new meaning analysis using the data from the General Newspaper Sample. Chapter 6 further tests the Certainty hypothesis in relation to the cognitive process of planning by using the Narcomessages Sample. Chapter 7 summarizes our overall conclusions for this study.

We will begin Chapter 2 by introducing qualitative evidence that appears to support the traditional meaning hypothesis claiming that the Pret, SP, and MF mean **PAST, PRESENT, and FUTURE** in the semantic substance of Time. However, a closer analysis of the examples presented in Chapter 2 will illustrate that the temporal
interpretations for these forms is actually stemming from contextual elements such as adverbs, and not from the forms themselves, paving the way for the postulation of a semantic substance other than Time.
CHAPTER 2

TRADITIONAL TREATMENTS OF VERB ENDINGS IN TERMS OF THE CATEGORY OF TIME

1. Introduction

The focus of this chapter is (a) the traditional treatments offered in the literature for the verb forms under analysis in terms of a semantic substance of Time; (b) the display of examples that support these treatments; and (c) the demonstration that, in all the data shown here the Time element in the message can be seen as coming, not from the verb suffix, but from adverbial elements found in the immediate context. The data here do not contradict, but neither do they provide strong support for, the traditional Time hypothesis for Spanish verbs. After showing here the examples that do not contradict the tradition, this study in turn, in subsequent chapters, to data that cannot be handled by the traditional analysis.

Traditional grammars of Spanish distinguish between the preterite (Pret), as past tense morphology, the simple present (SP), as present tense morphology, and the morphological future, as future tense morphology (Butt & Benjamin 2011: 202-211, 216; Comrie 1985: 36; De Bruyne 1995: 437, Llorach 1999: 195; Zagona 2002: 15, 33). One author comments: “Present tense is happening now … Past (Preterite) is what happened. Future is what will happen” (Norton 2011: 7). We look now at the names given to these forms by traditional grammars, as possible hints to their meanings. Seen from the perspective of Columbia School (CS), it is reasonable, and revealing, to take these names as a hypothesis that the Pret, SP, and MF have the temporal meanings of PAST, PRESENT, and FUTURE respectively.
2. Traditional Treatment of the Pret

We begin by studying the use of the Pret. Examples (1)-(5) seem to support the traditional hypothesis, in as much as the forms in these examples appear to contribute to the communication of a message partial involving past time. The first example illustrates a message partial regarding a meeting that is said to have taken place the previous month in Doha. The author chooses to use the Pret in addition to the temporal marker *el mes pasado*, ‘last month’.

(1) *El mes pasado, en Doha, mantuvimos* (Pret) en marcha negociaciones sobre el clima. (AFP, 2013, para. 2)

‘Last month, in Doha, we continued with negotiations about the climate.’

This example contains a contextual element, the adverbial phrase, which indicates an element of past time, and is interpreted by the reader as being situated in the past. Similarly, in example (2) we see that the author is recounting an event where Jennifer had previously extended the olive branch to her friends Sheryl and Christina, and is now prepared to do the same for Angelina. Once again, the context is easily interpretable as being located in the past by means of the adverb *anteriormente*.

(2) Jennifer quiere extender una rama de olivo a Angelina y, aunque sabe que nunca serán grandes amigas, está dispuesta a prestarle toda la ayuda que *anteriormente dirigió* (Pret) a sus grandes amigas Sheryl Crow y Christina Applegate, quienes pasaron por el mismo procedimiento que Angelina. (Organización Editorial Mexicana, 2013, para. 6)

‘Jennifer wants to extend an olive branch to Angelina, and although she knows they will never be great friends, she is willing to give her all the help she
previously gave her good friends Sheryl Crow and Christina Applegate, who went through the same procedure that Angelina is going through.’

Example (3) shows the use of the Pret visitaron alongside the temporal adverbial el año pasado, ‘last year’, a contextual element that allows it to be understood as situated in the past.

(3) El ministro de Industria y Turismo, José Manuel Soria, dijo el miércoles que 58 millones de extranjeros visitaron (Pret) España el año pasado, un 3% más con respecto a los casi 57 millones de 2011. (AP, 2013, para. 2)

‘The Secretary of Industry and Tourism, José Manuel Soria, said on Wednesday that 58 million tourists visited Spain last year, a 3% increase in comparison to the almost 57 million in 2011.’

Example (4) is reporting a birth announcement by the singer Elton John and his partner that had taken place the day before, as indicated by the phrase ayer miércoles.

(4) El cantante británico Elton John y su pareja, David Furnish, revelaron (Pret) ayer miércoles que han sido padres por segunda vez, tras recurrir nuevamente a una madre de alquiler. (Organización Editorial Mexicana, 2013, para. 1)

‘The British artist Elton John and his partner, David Furnish, revealed yesterday, Wednesday, that they have become parents for a second time through a surrogate mother.’

The next example focuses on the humorous audio accounts by former Governor Granier that had been revealed the previous week. Once again, the author chooses to use the Pret in what has become a message partially situated in the past by virtue of a contextual temporal phrase.
La semana pasada fueron revelados audios donde el ex gobernador Granier alardeó que en su guardarropa hay unos 400 pares de zapatos, 400 pantalones, 300 trajes y mil camisas, todos de marca, posteriormente aclaró que “había exagerado” debido a que estaba “pasado de copas”. (Hernández & El Sol de México, 2013, para. 3)

‘Last week audio tapes were revealed in which ex governor Granier boasted that he has 400 pairs of shoes, 400 pants, 300 suits, and 1,000 shirts, all brand names, in his closet. Afterwards he clarified that he ‘had exaggerated’ due to having had “too much to drink”.

Examples (1) - (5) show cases where the author chose to use the Pret in addition to a past temporal adverbial, resulting in the inference by the reader of a message partial set in past time. These examples appear to be in line with what can be taken to be the traditional hypothesis that the Pret means PAST.

3. Traditional Treatment of the SP

We look now at the use of the SP. Examples (6) - (8) show the SP used with the temporal adverb ahora, ‘now’. These examples appear to offer support for what one can consider the traditional hypothesis that the SP means PRESENT. Example (6) discusses the current problems that Cuban travellers face today while flying abroad. The author uses the SP with the temporal adverb.

Los cubanos pueden, por primera vez en 50 años, viajar al extranjero sin pedir permiso a su gobierno desde este lunes, y ahora afrontan los problemas habituales de cualquier viajero o emigrante: el precio de los billetes y que los
países de destino, Estados Unidos y España principalmente, les concedan una visa. (Organización Editorial Mexicana, 2013, para. 1)

‘Since this Monday, for the first time in 50 years Cubans can travel to foreign countries without permission from the government and are now faced with the habitual problems of any traveler or immigrant: the value of the currency and that destination countries, mainly the United States and Spain, grant them a visa.’

Example (7) refers to a musician and the desire to have a mariachi group.

(7) Ahora tengo (SP) mis shows por toda la República Mexicana y tengo ganas de tener mi propia banda compuesta de mariachi y grupo. (Hernández, 2013, para. 3)

‘Now I have my gigs all around Mexico and I would like to have my own band made up of mariachis and a group.’

Example (8) is focused on the Boeing corporation, which currently holds first place in aviation design and has outranked Airbus’ 787 Dreamliner.

(8) Preguntado sobre la pérdida del primer puesto mundial, que ahora ocupa (SP) su competidor estadounidense Boeing, cuyo último aparato, el 787 Dreamliner, ha tenido que quedarse en tierra a raíz de una serie de averías surgidas en los últimos días, el presidente de Airbus aseguró que no es un problema. (AFP, 2013, para. 9)

‘When asked about the loss of the first global position, which is now held by the American competitor Boeing, whose last machine, the 787 Dreamliner, had to be grounded due to breakdowns which have occurred in the last few days, the President of Airbus assured that it is not a problem.’
Example (9) – (10) show the use of the SP with the present context adverb hoy, ‘today’.

These examples also support the notion that the SP means PRESENT. Specifically, example (9) refers to a current epidemic in the United States.

(9) La secretaria de Salud confirmó que hasta el día de ayer no se tenía ningún caso reportado de esta enfermedad; sin embargo, reconoció que se estará vigilante para evitar que alguna persona pueda ser contagiada o se desate un problema mayor como la epidemia que hoy se vive (SP) en los Estados Unidos. (Organización Editorial Mexicana, 2013, para. 7)

‘The Secretary of Health confirmed that since yesterday there have been no reported cases of this illness; however, she recognized that she will be on alert in order to avoid the possibility of anyone being infected or that a bigger problem breaks out like the epidemic that the United States is experiencing.’

Example (10) refers to a rehabilitation centre that exists today for people with disabilities.

(10) Pero hoy cuentan (SP) con un centro de rehabilitación que cambiará historias de vida; yo he conocido muchas personas con discapacidad y les puedo asegurar que tienen una gran capacidad para dar, para salir adelante y son un ejemplo, porque todos los días demuestran que el que quiere, puede. (Organización Editorial Mexicana, 2013, para. 3)

‘But today they rely on a rehabilitation center that will change life stories; I have met many individuals with disabilities, and I can assure them that they have a great capacity to give, to succeed, and they are an example, because everyday they demonstrate that where there is a will, there is a way.’
The following examples, (11) - (15), show uses of the SP with the adverb *actualmente*, ‘presently’. The context in example (11) deals with dogs who have received all their shots and who currently find themselves in perfect health conditions.

(11) Se subraya que los perros en cuestión cuentan con atención veterinaria y todas sus vacunas correspondientes, por lo que actualmente se encuentran (SP) en perfectas condiciones de salud. (González, 2013, para. 4)

‘Emphasis is placed on the fact that the dogs in question have veterinary attention and all their vaccines up to date, which is why they are presently in perfect health.’

Example (12) refers to the current legal limit of the United States debt. The current-time interpretation is communicated by the adverb *actualmente*.

(12) Actualmente el límite legal de la deuda estadounidense está (SP) situado en 16,4 billones de dólares, un tope que se alcanzará a fines de febrero. (Organización Editorial Mexicana, 2013, para. 4)

‘Currently the legal debt limit in the United States is set at 16.4 trillion dollars, a limit which will be reached by the end of February.’

Example (13) is about 57 dogs that currently find themselves at the Canine Control Centre in Iztapalapa. The current-time interpretation in this example stems from the adverb *actualmente*.

(13) Respecto a los 57 perros que se encuentran (SP) actualmente en el Centro de Control canino de Iztapalapa, acotó que la SSP “No tiene injerencia directa; toda vez que ya fueron entregados en posesión a la delegación Iztapalapa, por parte de
la Procuraduría General de Justicia del Distrito Federal”. (González, 2013, para. 6)

‘With regard to the 57 dogs which are currently at the Iztapalapa Canine Control Center, (he) noted that the Secretariat of Public Security (SSP), “Does not have direct interference; inasmuch as they were already turned in to the delegation of Iztapalapa, by the Attorney General’s Office of the Federal District.’

Example (14) refers to a disease known as multiple myeloma (MM) that is presently incurable. The present- or current-time interpretation is communicated by the adverb *actualmente*.

(14) El MM es tratable, aunque *actualmente sigue* (SP) siendo incurable.

(Organización Editorial Mexicana, 2013, para. 5)

‘Multiple Myeloma (MM) is treatable, although it is still currently incurable.’

Example (15) refers to current accounts being investigated by the Planning and Finance Committee. The current-time interpretation is given by the adverb *actualmente*.

(15) Ante esto, *actualmente* Planeación y Finanzas se *encuentra* (SP) investigando las cuentas de la Secretaría de Salud, de Educación y de Seguridad Pública entre otras que reciben aportaciones federales, para ver cómo y dónde se invirtieron los recursos. (Magaña, 2013, para. 4)

‘In response, Planning and Finances is currently investigating the accounts of the Secretariat of Health, Education, and Public Security, among others which are receiving federal support, in order to see how and where the resources were invested.’
Examples (11) - (15) show uses of the SP in contexts that are interpretable by the reader as being situated in the present time by means of the contextual elements of present context adverbs found in each example. All of them are compatible with what one can take to be the traditional hypothesis that the SP has a meaning of PRESENT.

4. Traditional Treatment of the MF

We now look at examples of the MF used in future message contexts. Examples (16) - (27) appear to support the traditional proposal that the MF means FUTURE. Specifically, examples (16) - (18) show cases of the MF being used with the adverb posteriormente, ‘afterwards’.

Example (16) – (18) refers to a closing Gala that will take place after 9pm. Here the authors uses the MF with the future context adverb posteriormente.

(16) Posteriormente, a las 21 horas, se llevará (MF) a cabo la Gala de Clausura del Festival Mundial de Cine Extremo, con la premiación, el reconocimiento a Gabriel Retes como realizador independiente y la premier nacional de la película El Sacristán, de Fabrizio Prada, en el teatro Francisco Xavier Clavijero, ubicado en la calle Emparan, en el centro histórico. (Redacción, 2013, para. 9)

‘Subsequently, at nine o’clock, the Closing Ceremony of the Global Film Festival will take place, with the award in recognition of Gabriel Retes, for independent producer, and the national premier of the movie El Sacristan, by Fabrizio Prada, in the Francisco Xavier Clavijero theater, located on Emparan street, in the Historic Center.’
Los profesores interpondrán (MF) los amparos posteriormente a las movilizaciones ya que esos recursos legales lo harán en las distintas zonas del país. (Cruz & Gandaria, 2013, para. 15)

‘The professors will file the appeals after the demonstrations since those legal resources will be done in different areas of the country.’

Rajoy participará (MF) posteriormente en la cumbre entre los bloques europeo y latinoamericano y aprovechará la presencia de otros líderes para mantener diversos encuentros bilaterales. (AFP, 2013, para. 5)

‘Rajoy will participate afterwards in the Summit between the European and Latin American blocs and will take advantage of the presence of other leaders in order to hold various bilateral meetings.’

In example (19), we see the author used the MF with the adverb mañana, ‘tomorrow’, leading to a future interpretation.

La Dirección General de Salud implementará (MF) a partir de mañana el programa “Promueve tu Salud”, dirigido a los dos mil 307 policías adscritos a la Secretaría de Seguridad Pública. (Redacción / El Mexicano, 2013, para. 1)

‘After tomorrow the Health Protection Directorate-General will implement its program “Promote your health”, directed at the 2,307 police officers belonging to the Secretariat of Public Security.’

In examples (20) - (23) the author uses the MF with various temporal adverbials such as: en los próximos días, ‘in the next few days’, hasta principios de la próxima semana, ‘until the beginning of next week’, durante los dos próximos meses, ‘during the next two
months’, *en fechas próximas*, ‘in future dates’. Examples (20) – (23) all involve message partials related to future time.

(20) La zona euro entregará (MF) en los próximos días 9.200 millones de euros a Grecia. (Organización Editorial Mexicana, 2013)

‘In the next few days, the European zone will give 9.2 billion euros to Greece.’

(21) Los resultados definitivos no se anunciarán (MF) hasta a principios de la próxima semana. (AFP, 2013, para. 17)

‘The final results will not be announced until the beginning of next week.’

(22) Las autoridades creen que durante los dos próximos meses de un total de 100 millones de personas pasarán (MF) por la ciudad temporal que cubre un área más grande que Atenas en una amplia ribera. (Organización Editorial Mexicana, 2013, para. 3)

‘Authorities believe that during the next two months a total of 100 million people will pass through the temporary city that covers an area greater than Athens in a wide bank.’

(23) En este acto que se desarrolló en la Universidad Virtual, el rector Jaime Valls Esponda entregó las becas, estímulos y boletos de avión a un grupo de alumnos de esta casa de estudios, quienes en fechas próximas viajarán (MF) al extranjero y a otras partes de la República para efectuar una estancia académica. (El Heraldo De Chiapas, 2013, para. 2)

‘In this ceremony, which was developed in the Virtual University, the president Jaime Valls Esponda gave scholarships, incentives, and airline tickets to a group
of university students, who in the following days will travel to foreign countries and other parts of the Republic to study abroad.’

In examples (24) - (27), all of which receive a future time interpretation, we see the MF used with specific dates such as: noviembre próximo, ‘next November’, el próximo 7 de julio, ‘next 7th of July’, el lunes próximo, ‘next Monday’, and el jueves próximo, ‘next Thursday’.

(24) México es un importante miembro de esta organización, que celebrará (MF) en noviembre próximo 40 años de existencia, ya que lleva a cabo importantes proyectos de cooperación con diversos países de América Latina y el Caribe en materia de energías renovables, eficiencia energética y sistemas de estadística e información energética. (La Prensa, 2013, para. 3)

‘Mexico is an important member of this organization, which will celebrate 40 years of existence next November, since it carries out many important cooperative projects with diverse Latin American and Caribbean countries in renewable energy, energy efficiency, and statistical and energy information systems.’

(25) Ernesto Cordero Arroyo consideró que su remoción de la coordinación de la bancada del PAN en el Senado se da en el peor momento político, ante la cercanía de las elecciones que se realizarán (MF) en los 14 estados del país el próximo 7 de julio. (Carrasco & Colón, 2013, para. 6)

‘Ernesto Cordero Arroyo considered that his dismissal from the coordination of the National Action Party (PAN) group in the senate occurred at the worst political moment, with the elections so close, taking place on the following 7th of July in the country’s 14 states.’
(26) El objetivo de la campaña, que iniciará (MF) el lunes próximo, es prevenir el escándalo, por lo que toda persona que viole norma se hará acreedora a una multa que va de los 11 a 200 salarios mínimos, o un arresto de 24 horas. (González, 2013, para. 2)

‘The objective of the campaign, that will begin next Monday, is to prevent a scandal, so that any person that violates the law will receive a fine 11 to 200 times the statutory monthly minimum wage, or be arrested for 24 hours.’

(27) Para el jueves próximo, de 12 a 19 horas se realizará (MF) la exhibición de largometraje bloque 2. Ficción. (Redacción, 2013, para. 4)

‘Next Thursday, from 12:00-7:00 pm, the exhibition of the full-length film Bloque 2. Fiction will take place.’

5. Summary and Preview of Next Chapter

The examples presented above of the Pret, SP and MF seem to support the Time hypothesis that is implicit in the tradition for the meanings of Pret, SP, and MF. That is, on the basis of these examples we can assume that the traditional labels, when taken together and regarded as testable hypotheses, present an accurate picture of the Spanish verb forms under discussion.

However, under closer scrutiny the examples provided in (1) - (27) can be analysed from a different perspective. These examples show that the message element of past, present, and future time, for the most part, comes from the context, specifically from identifiable adverbs found in the passages, not from the verb forms. Assigning the temporal interpretation to the verb ending rather than to contextual adverbs is a characteristic of traditional analyses, which tend to ascribe to grammatical affixes
elements of the message that in fact can be traced to adverbs and other lexical contextual elements. This is not to say that the examples presented in this chapter are not compatible with the traditional position that these verb forms have temporal meanings. The point being raised here is that the presence of adverbials raises the question of where exactly the temporal element is coming from.

The presence of temporal adverbials problematizes the origin of the temporal element in the message. In Chapter 3, we propose that the traditional meaning hypothesis for these forms is flawed. The focus of Chapter 3 is no longer simply to question where the temporal element is coming from in the message, but rather, to propose that the temporal element must stem from the contextual adverbs. In contrast to what we have seen in this Chapter, the evidence provided in the next Chapter shows examples that do not appear to be compatible with the traditional meaning hypothesis. These examples illustrate a mismatch between the forms and their assumed temporal interpretations and are not restricted to their assumed temporal interpretation implicit in the traditional meaning hypothesis understood by the labels of the forms. To anticipate one example among many, we will see that the form SP, when found in contexts with future temporal adverbs, contributes to a message partial set in the future, not the present. Examples of this kind that show verb forms co-occurring with unexpected temporal adverbs, serve as evidence that the temporal message element does not stem from the verb forms but rather from the context. A separate concern, the interpretation of these forms in examples where temporal adverbials are absent, will be addressed in Chapter 4, where we go on to show that the verb forms themselves do not signal time meanings at all.
CHAPTER 3

VERB ENDINGS HAVE NO TIME MEANINGS

1. Introduction on Counterexamples to the Traditional Meaning Hypothesis

In Chapter 2 we saw that when the traditional labels are taken as meaning hypotheses, there is preliminary supporting evidence for the traditional position that the preterite (Pret) means PAST, the simple present (SP) means PRESENT and morphological future (MF) means FUTURE. We also saw in Chapter 2 that, upon closer examination, the temporal element in the message in all the texts under study can be traced back to the context in which the verb forms appear, specifically the accompanying adverbs, and not the verb forms themselves.

The goal of this Chapter is to present the preliminary considerations that are necessary before introducing the hypothesis at the center of this dissertation that the inherent, stable meanings of the Spanish verb forms Pret, SP, and MF have to do, not with the semantic substance of Time, but of Certainty. This Chapter thus has two purposes. First, we present evidence that does not support the traditional meaning hypothesis. We show that the hypothesized meanings the tradition gives for these forms do not fit the data, as all three of the verb forms under analysis occur in message partials set in all three time spots, past, present and future. This chapter uses qualitative data sourced for the most part from the traditional academic grammar (RAE 2009) as well as some informally observed examples added for presentational purposes. The second purpose of this Chapter is to review the very extensive literature that, in a variety of frameworks, including Columbia School, has also pointed out the flaws of the traditional
analysis. This review includes an attempt to untangle the notions of time and tense that seem to have been conflated by the tradition.

In almost all the counterexamples to the traditional analysis that we list below, labels are provided, in RAE and other grammars, that in fact acknowledge the lack of fit between the examples and the hypothesis embodied in the traditional label. This serves to extend the life of the hypothesis without recognizing its weaknesses. Among these labels are: ‘shift in reference point’, ‘historical present’, ‘future of conjecture,’ ‘present of recent past events,’ and many others. In the sets of examples that follow, these names given by the tradition to the counterexamples are listed for each set. A full discussion of the traditional practice of naming rather than confronting counterexamples is offered in Section 2.

1.1. Event Complexes set in the Past

We begin by looking at examples of the MF and SP that are set in the past. The reader should bear in mind that instances where the MF and SP lead to a message partial set in the past should not occur, since they stand in direct contradiction to the meanings FUTURE and PRESENT that are implied by the traditional labels. The present discussion parallels that of Huffman (1989), which notes the shortcomings of the traditional labels as claims about the meanings of verb forms in English.

Examples (1)-(5) illustrate the MF being used in event complexes that are set in the past. These examples were taken from RAE (2009), which acknowledges that they are problematic and lists them under a section of special uses for the MF where a shift of reference setting is said to have occurred.
In example (1), published in 1996, the author uses the MF to make reference to a new ballet scheduled to premier in London in the year 1919.


‘Again in Madrid, now at 119 Lagasca Street, Falla is working on a super important ballet for the Russian Ballet Company of Sergio Diaghilev. With the Russians he guides us through his beloved Andalucía and finally feels “de visu”, in the Court of Lions, the fascination of the Alhambra and of Granada. “The Three-Cornered Hat” will premier in London in 1919 with expected resounding success, but shortly afterwards, Falla will move to Carmen de Santa Engracia in Granada.’

In example (2) the author uses the MF with a past participle. The interpretation given by the RAE is that the person being referred to was ‘probably’ sick at a given moment in time in the past. The observation that the MF has an interpretation related to probability will be discussed in further detail in Section 7.0 of this Chapter, as well as in Chapter 4 of this dissertation. Example (3) is a straight use of the MF for a message partial set in the past.
(2) **Habrá** (MF) estado enfermo (= ‘Probablemente ha estado enfermo) (RAE 2009: 1771)

‘(He) will have been sick’ (= he has probably been sick)

(3) Me pregunto si lo **habrá** (MF) tenido alguna vez (RAE 2009: 1851)

‘I ask myself if (he) may have had it sometime.’

Examples (4)-(5) show cases where the MF is used inside direct speech. Here again the form is involved with a message partial set in past time. These examples are sometimes said to support the traditional Future label because they are to be understood as ‘futures of the past’. That is, these examples are said to represent a shift in reference point that sets the event in the past rather than in the moment of speaking, projecting a correct future use of the MF based on the new reference point.

(4) Rosa creyó: “**Podré** (MF) irme para poder regresar al juicio” (RAE 2009: 1843)

‘Rosa thought: “I will be able to leave to return to the trial” (Rosa thought: “I may be able to leave to return to the trial”.)’

(5) Dijo: “**Llegaré** (MF) temprano” (RAE 2009: 1843)

‘(He/she) said: “(I) will arrive early.”’

We now look at examples of the SP used in past contexts. Note that this should not occur, as according to the tradition’s hypothesis the meaning of the SP is **present**. Traditional grammars have labeled the uses of the SP that we are about to see as the **presente histórico**, or ‘historical present’, as it relocates the moment of speaking to a time in the past (RAE 2009: 1715).

Example (6) illustrates the SP being used to refer to an event complex set in the past, indicated in a straightforward way by the mention of the year 1899.
En 1899, Romeu *interviene* (SP), accidentalmente, como pianista en una fiesta habanera que amenizaba la orquesta Cervantes (Orovio, *Música*) (RAE 2009: 1715)

‘In 1899, Romeu intervenes, accidently, as a pianist, at party in Havana where the Cervantes Orchestra was playing.’

A similar use of the SP has been labelled the *presente narrativo*, or ‘narrative present’ described as a stylistic recourse in narratives to describe past events to be shown as if they are present. This use of the SP is frequently found co-occurring with other past verb forms (RAE 2009: 1719). We begin with a presentation of examples (7)-(8), which are illustrations of this use of the SP.

(7) Ayer mismo me dio un horroroso susto […] Pues *llego* (SP) a casa, *entro* (SP) en el corral y me *dice* (SP) Eulogia que el señor Capitán se había ido por la parte de abajo (Galdos, *Episodios*) (RAE 2009: 1719)

‘Just yesterday I had horrible scare…well I get home, I come into the corral, and Eulogia tells me that the Captain had left through the lower level.’

(8) Me *estaciono* (SP) unos metros antes de la casa, del otro lado. *Miro* (SP) el reloj: son las ocho de la noche. *Espero* (SP), […] No *dudo* (SP) más. *Avanzo* (SP) con cautela hacia la puerta negra; *fuerzo* (SP) la cerradura con un gancho: no *tarda* (SP) en ceder (Volpi, *Días*) (RAE 2009: 1719)

‘I park a couple of meters before the house, on the other side. I look at the clock: it is 8 in the evening. I wait…I do not doubt anymore. I advance cautiously towards the black door; I force open the door with a hook: it does not take long to open.’
A third type of use of the SP to denote event complexes set in the past is labeled by the traditional grammars as the *presente de sucesos recientes/presente de pasado inmediato*, or ‘present of recent events/present of immediate past’, as in examples (9)-(10) below. In these cases the SP is used to express facts that have taken place at a certain time in the recent past near the moment of speaking (RAE 2009: 1717).

(9) Mi hija me explica (SP) en su carta que tuvieron algunos problemas con la casa (RAE 2009: 1717)

‘My daughter explains to me in her letter that they had a couple of problems with the house.’

(10) Saca (SP) un córner Juanito. Pirri remata (SP) de media vuelta sin jugar peligrosamente, y Rivas instintivamente, para protegerse la cara, rechaza (SP) el balón con las manos. El penalti lo transforma (SP) el propio Pirri a la derecha de Paco (*Pais [Esp] 11/9/1977*) (RAE 2009: 1718)

‘Juanito takes the corner. Pirri takes a scissor-kick shot without playing aggressively, and Rivas instinctively blocks the ball with his hands to protect his face. Pirri himself converts the penalty to the right of Paco.’

In a similar fashion, examples (11)-(13) of the SP below, appeared in newspaper headlines to refer to completed events set in the recent past. Although these examples were taken from online Mexican newspapers used in the General Sample of this dissertation, and not from the RAE, the reader should note that they fall under the RAE’s definition of the label ‘present of recent events/present of immediate past’.
(11) Mexicana de Aviación llega (SP) a acuerdos para su reestructuración  (Lino, 2011)

‘Mexican Aviation reaches an agreement regarding its restructuring.’

(12) Diálogo nuclear con Irán concluye (SP) en punto muerto  (Organización Editorial Mexicana, 2011)

‘Nuclear dialogue with Iran concludes in a standstill.’

(13) Palestinos furiosos lanzan (SP) huevos y zapato a canciller francesa

(Organización Editorial Mexicana, 2011)

‘Infuriated Palestinians launch eggs and a shoe at the French Minister of Foreign And European Affairs.’

As previously mentioned, the construction commonly referred to as the periphrastic future is treated in this dissertation as a kind of SP (see Chapter 1 for this discussion). As we see in examples (14)-(21) below, the SP found in occurrence with the preposition a, ‘to’, and an infinitive also appear in event complexes set in the past. In example (14)-(15) below, we see another instance of the so-called ‘shift in reference point’. In examples (16)-(21) the RAE considers this use of the SP with the preposition and infinitive as taking on an evidential interpretation, rather than one related to futurity. By evidential the RAE is referring to an interpretation with the paraphrasis ‘it is evident that’ (RAE 2009: 2159).

(14) Carrillo en realidad nos va (SP) a independizar, en el aspecto de códigos, de España, en el año mil ochocientos cuarenta y uno (...). [YS: 310] (Pitloun 2005: 5)

‘In reality Carrillo will free us, in the matter of codes, from Spain in the year 1841.’
(15) En mil novecientos surge una nueva generación que es la que va (SP) a darle por la pluma de Rodó (...) el planteamiento más claro que hasta entonces se hace sobre los problemas latinoamericanos. [YS: 302] (Pitloun 2005: 5)

‘In 1900 a new generation surges, which will give the pen to Rodó… the clearest approach which up to now is effected regarding the Latin American problems.’

(16) ¿Cómo se va (SP) a haber olvidado de nosotros? (Caballero, Quinteto) (RAE 2009: 2159)

‘How is he going to have forgotten about us?’ (How could he have forgotten about us?)

(17) ¿Pero cómo no te voy (SP) a haber dicho yo que te amo, Isabel? (Pombo, Ventana) (RAE 2009: 2159)

‘But how was I not going to have told you that I love you, Isabel?’ (But how could I have not told you that I love you, Isabel?)

(18) Cómo voy (SP) a haber estado aquí, señor Legrand. (Pérez Merinero, Días) (RAE 2009: 2159)

‘How am I going to have been here, mister Legrand’ (How could I have been here, mister Legrand)

(19) ¿De dónde voy (SP) a haber sacado yo la llave del departamento de los señores Feliu? (Bryce Echenique, Martin Romaña) (RAE 2009: 2159)

‘Where am I going to have gotten the key to Mr. and Mrs. Feliu’s apartment?’ (Where would I have gotten the key to Mr. and Mrs. Feliu’s apartment?)

(20) Pagué yo como siempre ¡Quién va (SP) a ser, si no! (PF) (RAE 2009: 2116)

‘I played as usual Who else would it be, if not!’
We see in examples (14)-(21) the SP + a + infinitive used in past contexts. Example (21) shows the RAE’s own suggested interpretation is that this use of the SP should be understood as a set in past time.

1.2. Event Complexes set in the Present

We now look at examples of the Pret and the MF used in event complexes set in the present. Once again, according to the traditional labels when taken as hypotheses, these forms should not give rise to present time interpretations. Example (22) below, taken from overheard conversation, shows the Pret used in a message partial set in the Present.

(22) Me fui (Pret)

‘(I) am leaving (right now)’

Example (22) is frequently heard in a situation where the speaker is in the act of getting up from a chair. Therefore, the act of leaving has not been completed at a moment in time in the past; on the contrary, it is taking place at the moment of speech.

The MF is also used in event complexes set in the present. Traditional grammars sometimes refer to this particular use of the MF as the futuro de conjectura/ futuro de probabilidad/ futuro epistémico, or ‘future of conjecture/future of probability/ epistemic future’. This usage is labelled as such because it introduces a supposition of the speaker relative to the present (RAE 2009: 1771), and it too will be discussed below. Zagona (2002: 33) suggests that this use of the MF asserts probability in the present. The
observation that the MF can receive an interpretation related to probability will be discussed in Section 7.0. We begin with an illustration of examples of this usage provided in (23)-(26) below.

(23) Serán (MF) las ocho (= ‘Probablemente son las ocho’) (RAE 2009: 1771)
‘(It) must be eight o’clock (= Probably it is eight o’clock)’

(24) Estarán (MF) en la cafetería (= ‘Tal vez están en la cafetería) (RAE 2009: 1771)
‘(They) must be (MF) in the cafeteria (= Maybe they are in the cafeteria)’

(25) Su Merced tendrá (MF) frío (Donoso, Casa) (RAE 2009: 1771)
‘You must be (MF) cold’ (You (formal) are probably cold)

(26) En este momento entrará (MF) por la puerta de su casa (= ‘seguramente está entrando’) (RAE 2009: 1771)
‘At this moment (he/she) must be entering the door of their house (= surely he/she is entering)’

A similar use of the MF in event complexes set in the present is referred to by the RAE as the ‘alternation between present and future’, as in examples (27)-(29) below. This alternation is said to take place in cases where the MF introduces immediate actions. In these cases, the RAE claims its meaning (what we would call its effect in the message) resembles the SP, and sometimes the conditional (RAE 2009: 1770).

(27) Te diré (MF) que aquí llegan unas noticias terroríficas sobre el frío que hace en Europa (Piglia, Respiración) (= ‘te digo que…’)(RAE 2009: 1770)
‘I will tell you that here we get terrifying news about the cold in Europe (I tell you that…)’
(28) Ahora te pediré (MF) que vayas a esa vida para agotar todas las emociones que te están perturbando (Cabouli, Terapia) (RAE 2009: 1770)

‘Now I will ask you to go to that life to exhaust all the feelings that have been disturbing you.’

(29) Reconoceré (MF) que el día de la votación estaba algo nerviosilla (ABC Cultural 5/7/1996) (RAE 2009: 1770)

‘(I) will recognize that on voting day (I) was somewhat nervous.’

These examples show the MF used in contexts with a Present interpretation.

1.3. Event Complexes set in the Future

We now look at examples of the Pret and SP that are set in the future, contradicting the traditional hypotheses. As have the other counterexamples to the traditional meanings that we discuss in Section 2.0, the use of the Pret in messages partials interpreted with future time, has been given a label by the traditional grammars, which refer to these cases as the interpretación anticipativa, or ‘anticipative interpretation’ (RAE 2009: 1738). Examples (30)-(34) below are illustrations of this usage.

(30) Ya lo agarraron (Pret) (RAE 2009: 1738)

‘(They) caught him already (=before they catch the person)’

(31) ¡Ya está, nos fuimos (Pret)! –dijo el viejo. Los dos entraron al cuarto de don Juan (Montenegro, E., Ventura) (RAE 2009: 1738)

‘It’s done, we left!’ said the old man. Both went into Don Juan’s room.’
Trataron de curarlo pero ni el salvarsán podía salvarlo. “Me morí (Pret)”, dijo él sencillamente (Cabrera Infante, Habana). (RAE 2009: 1738)

‘(They) tried to cure him but not even the Arsphenamine could save him. “I died”, he said simply (= before the person actually dies).

Ya caímos (Pret) (= Vamos a caer inmediatamente) (RAE 2009: 1738)

‘(We) already fell (= (We) are going to fall immediately)’

Ya nos descubrieron (Pret) (=Nos van a descubrir ahora mismo) (RAE 2009: 1738)

‘(They) discovered us already (= (They) will discover us now)’

Moreover, the SP is found in examples of event complexes set in the future, as in (35)-(37) below. Traditional grammars have labelled this use of the SP as the *presente prospectivo/ presente pro futuro*, or ‘prospective present/ pro future present’. This usage is characterized by alluding to facts that are set at a moment in time after the moment of speaking (RAE 2009: 1720).

Nosotros—dijo—nos quedamos (SP) este verano en Vetusta (Clarín, Regenta) (RAE 2009: 1720)

‘We—(he/she) said—we will stay this summer in Vetusta’

Hay que dormir temprano, te dejo con tu hermano y mañana regreso (SP) antes del amanecer (Hernández, L., Trovadores) (RAE 2009: 1720)

‘(You) must go to sleep early; I will leave you with your brother and will return tomorrow before dawn.’

Esta semana termina (SP) en aquellos lugares sus dos meses de agotador rodaje (ABC 27/11/1987) (RAE 2009: 1720)
‘[...] This week marks the end of his two months of exhausting filming in those places.’

2. The Practice of Naming Counterexamples

We see in the examples provided above that the Spanish forms Pret, SP and MF are used for message partials set in all three time settings, past, present and future. The problem is, simply, that the traditional position, when taken as a meaning hypothesis, fails to predict that these examples should occur in these time settings. These occurrences act as counterexamples to the traditional meaning hypothesis for these forms.

As the reader has seen throughout the data presented in this Chapter, when traditional grammars are faced with the problem of counterexamples, they frequently name them with labels such as the ‘preterite with anticipative interpretation’, ‘reference shift’, ‘historical present’, ‘narrative present’, ‘present of the immediate past’, ‘alternation between present and future’, ‘prospective present’, ‘progressive present’, ‘future of probability’, ‘future of conjecture’, and ‘future of the past’. One could group the examples associated with these labels into three classifications: 1) examples that wrongly predict the temporal interpretation of the form; 1a) a sub-classification of examples that wrongly predict the temporal interpretation and which rely on the notion of ‘reference shift’; and 2) examples which appear to signal a semantic substance other than temporality. We will discuss these three types of labelled examples below.

We begin with an analysis of the examples in Group 1) mentioned above. The list of labels presented in this Chapter which are used to refer to examples that wrongly predict the temporal interpretation of the verb form include: ‘preterite with anticipative interpretation’, ‘historical present’, ‘narrative present’, ‘present of the immediate past’,
‘alternation between present and future’, ‘prospective present’, and ‘future of the past’.
The RAE has noted that examples that have been given these labels do have a time
interpretation, however, not the one implicit in their tense name. For example, according
to the RAE, the SP used for the ‘present of the immediate past’ does involve a time
meaning, namely that of Past, however, these uses of the SP fail to signal the meaning
Present which is implicit in the form’s traditional tense label. A discussion on the existing
literature that has questioned the traditional meaning analysis, but that still proposes an
analysis based on temporality is presented in Sections 5.0-7.0 below. Moreover, although
the RAE has provided labels for counterexamples that appear to signal temporal
meanings, although not the temporal meanings implicit in their tense labels, the tradition
has failed to account for the observation that the forms Pret, SP, and MF, appear in
message partials in all three time settings. That would lead one to conclude that the
traditional analysis that views the meaning of the forms Pret, SP, and MF as inherently
temporal, is flawed. Chapter 4 of this dissertation will present a detailed argument in
favour of a meaning analysis for the forms Pret, SP, and MF that is unrelated to
temporality.

A sub-classification of the types of examples discussed in the paragraph above
relates to occurrences that the tradition has explained by proposing the notion of
‘reference shift’. These include the ‘historical present’ and ‘future of the past’. These
examples are sometimes said to support the traditional Future and Present labels. These
uses are said to represent a shift in reference point that sets the event in the past rather
than in the moment of speaking, projecting a correct future use of the MF, or a correct
present use of the SP, based on the new reference point. But it would appear that this
claim would render all time hypotheses untestable, since every temporal counterexample could be saved by appealing to a shift in reference point. The fact remains that the observable data shows the MF and the SP being used in message partials set in the past, something that according to the hypothesis should not occur, and that shows the analysis based on the notion of Time to be flawed.

We will now discuss labels given to counterexamples that appear to signal a semantic substance other than temporality. Labels such as ‘future of conjecture’, ‘future of probability’, or the evidential interpretations of the form SP when it appears with the preposition *a* and an infinitive, provide an indication to the reader that the traditional tense analysis based on the notion of Time is flawed. The so-called modal interpretations of the forms under analysis are discussed in Sections 5.0-7.0 below.

3. **Mismatch of Tenses**

The issue discussed in the preceding sections has attracted the attention of scholars working in several linguistic frameworks who have also recognized that verb forms do not always receive the interpretations expected from the labels of past, present and future. Lyons states, for example, “it is undoubtedly the case that the terms conventionally used to describe the functions of the tenses, moods and aspects in certain languages are very misleading” (1977: 682). Authors refer to this observation as the “mismatch of tenses” (see Jaszczolt 2009). This literature has in part argued that meanings for the verb forms Pret, SP, and MF are temporal, although not necessarily based on the temporal divisions set out by the tradition of past, present and future. For example, some authors have seen the temporal division as being Non-Past; Past (see Lyons 1977: 678, McClure 2008), or in addition to those divisions also Past, Before; and
Non-Past, Before (Diver 1963, Huffman 1989) (see Section 6.0 in this chapter for this discussion). The second line of thought articulated in the “mismatch of tenses” literature is related to the notion of modality, where the proposal is that the meaning being communicated is more closely related to modality rather than temporality. The notion of modality will be defined in the following Section.

4. Modality

The notion of modality applied in this dissertation refers to epistemic modality (Palmer 2001: 8), the speaker’s “judgments about the factual status of a proposition”.1 The term modal is understood in this dissertation as related to semantic substances such as, Probability, Certainty, Possibility, Confidence, Doubt, Irrealis, which are related to speaker judgments about propositions; it does not invoke the a priori notion of grammatical mood. That is, and in keeping with Columbia School’s position regarding the flaws of the categories of the tradition, the present work is not explicitly stated in terms of traditional modality, even though in many ways it does propose what might be seen as a modality rather than a tense analysis of the Spanish verb forms.

As previously outlined, the position taken in this dissertation is that in Spanish, Certainty is expressed syntactically by means of the verb forms under analysis. That is not to say that the verb forms are the only way Spanish expresses semantic substances that can be related to the term modality, but simply that Pret, SP, and MF are one of the tools available to speakers to express certainty. Bybee & Fleischman note that modality can be expressed in language morphologically, syntactically, lexically or by intonation (1995: 2). The reader should also note that although the literature review presented in the

---

1 See also Jaszczolt 2009: 38
following sections identifies a lot of the flaws of the traditional labels, only some of the authors referenced intend to present a new proposal as to the content of these forms.

In the Sections 5.0-7.0 below, we will review the existing literature that has questioned the traditional analysis of tenses, but that, to some extent, still adheres to the notion of temporality in the meanings of the verb forms under analysis. Moreover, we will also refer to the literature that has recognized the use of these verb forms in modal contexts.

5. New Meanings for the Past Morphology

We begin by presenting the literature of the verb form Pret that views this form as signalling a temporal meaning, although not necessarily the meaning Past. According to Lyons (1977: 682), the form commonly known as the past tense in English has certain functions that are not covered by the definition of its label ‘past tense’. For example, Jespersen noted that the so-called preterite had a functional meaning, capable of conveying five different notions: 1) past time; 2) unreality at present time; 3) future time; 4) shifted present time; 5) all times (Jespersen 1924: 56).² In Guéron’s analysis of modal verbs in English the -ed suffix can situate the verb form’s interpretation in the present or past time depending on the local reference time (2008: 145). Under the CS framework, De Jonge’s analysis of the Spanish imperfect and preterite verb forms argues that the opposition between these two forms is in fact a change in the level of Focus being signalled, where the form Pret signals EVENTUALITIES IN FOCUS and the imperfect signals the meaning SUPPORTIVE EVENTUALITIES which is equivalent to a low degree of Focus (2000: 235). Reid’s CS analysis of the French passé simple and imparfait verb forms also

² See Binnick 1991 Chapter 2 for a full review of Jesperson’s analysis of tense.
posits an opposition of degree of Focus between the meanings HIGH versus LOW levels of verbal Focus (1977: 14). Although De Jonge (2000) and Reid (1977) propose meanings related to the semantic substance of Focus for the preterite and imperfect verb forms, both studies still accept that these forms also signal the meaning Past in addition to Focus (Reid 1977: 15; Bob De Jonge, Personal Communication, January 3, 2014). The reader will see in Chapter 5 that the hypothesis presented in this dissertation rejects altogether the notion that the form Pret signals Past and, therefore, differs from the proposals of De Jonge and Reid.

More closely related to the position taken in this dissertation are prior studies that have recognized the modal interpretations signalled by the form Pret. De Haan (2006: 51) notes that although the so-called past tense is typically understood as being purely temporal, there is, in spite of this, a connection between past tense and modality.³ Palmer states that past morphology often has a modal function to express unreality, tentativeness, and potentiality (2001: 13, 203). Ludlow argues that the past is inherently modal, in that past morphology is actually an evidential marker that tells us something about the type of evidence we have available at the present time (1999: 161-162). Guéron & Lecarme have recognized that past morphology verb forms can take an irrealis value behaving like non-tensed verbs (2008: 1).

Several studies (James 1982, Steele 1975, Waugh 1975, Langacker 1978) have claimed that in languages where the Pret is used in hypothetical environments, in lieu of the meaning Past being signalled, this form signals the meaning REMOTENESS FROM

³ See also Jaszczolt 2009: Section 2.4 about how past markers express detachment from the certainty of the now.
We also see the term *fake past* used to refer to the Pret in environments where it does not signal a Past meaning (Iatridou 2000: 235). These environments include conditionals and wishes as in examples (38)-(39) below.

(38) If you *left* (Pret) tomorrow, you would get there next week. (Iatridou 2000: 235)

(39) Kostas wishes he *drove* (Pret) a red car. (Iatridou 2000: 239)

In example (38) we see that the event of leaving does not receive a past interpretation regardless of the past morphology inflected on the verb. In example (39) the Pret ‘drove’ carries a past morphology but the past temporal interpretation is absent. Example (39) does not communicate that Kostas has already driven a red car at some moment in time prior to the moment of speaking. In this case, the wish of driving the car, communicated by the Pret, remains unfulfilled in the real world. The term *fake past* is used by Iatridou to refer to past morphology that does not receive a past interpretation. Iatridou does present a new proposal as to the content of the form Pret. The hypothesis set forth by the author is that the Pret does not signal the meaning Past, but rather, has as its meaning a functional relation between the topic time and the utterance time (2000: 268). Therefore, the past tense morpheme is hypothesized to always have the same meaning but the domain in which it operates varies according to the environment and the past interpretation does not stem from the form Pret itself, but rather, it is derived from the presence of this form in combination with other interpretive elements in the environment (2000: 245). Rather than viewing the meaning of the Pret as a functional relationship, as does Iatridou (2000), the meaning hypothesis presented in Chapter 4 of

---

4 See also De Haan 2006: 51.
this dissertation postulates the meaning signalled by the form Pret relates to the epistemic notion of speaker Certainty.

Bybee (1995a: 506) analyses the modal use of the Pret in English. According to Bybee, Prets can signal an atemporal meaning when they leave the interpretation vague whether or not the predicate event was completed, as in example (40) below.

(40) I wanted to ask you a question. (Bybee 1995a: 508)

In example (40) there are two possible readings: 1) where I no longer wish to ask you a question, the event of wanting has been completed; and 2) where I want to ask you a question at the present moment. This use of the Pret without a temporal interpretation is said to be its polite/deferential use (1995a: 508). As is frequently done by traditional grammars, the author Bybee assigns a label to this use of the Pret.⁵

We can see that various studies have recognized the verb form Pret can signal atemporal meanings more closely related to modality. In Chapter 4 of this dissertation, we will see that the meaning hypothesis proposed in this dissertation provides a unified account for the form Pret rooted in the notion of speaker Certainty and which does not include a temporal element.

6. New Meanings for the Present Morphology

We now look at the literature on the verb form SP that views this form as signalling a temporal meaning, although not necessarily the meaning Present. Within the CS framework, Huffman’s (1989) analysis of the English tenses presents a revised version of Diver’s (1963) analysis of the chronological system of the English verb. According to Huffman (1989: 26), the English simple present signals the meaning NON-

⁵ See also De Haan 2006: 51 for references.
PAST rather than the traditional meaning Present. Similarly, and outside of the CS framework, C. Smith also notes that present morphology allows for flexible interpretation as either Present or Future depending on the temporal adverbial used (2008: 236), as in example (41) below, whereas it also allows for a Past interpretation if used with a past adverb (2008: 233), or as in the so-called uses of the historical present, as in example (42).

(41) Mary is working now/ tomorrow. (Smith, C. 2008: 233)

(42) The allies win WW1 in the year 1918.

The positions taken by Huffman (1989) and C. Smith (2008) that the simple present signals the temporal meaning NON-PAST or that it allows for flexible temporal interpretation differs from the hypothesis for the form SP outlined in Chapter 4 in that these analyses still include a temporal element.

Following a similar line of thought as the hypothesis set forth in Chapter 4 of this dissertation, is the literature that recognizes the atemporal uses of the form SP. Lyons has noted that the so-called present tense does not generally imply contemporaneity, but rather, it is through the use of an adverb of time that the SP receives its present interpretation (1977: 678). Authors in sociolinguistics have recognized these so-called ‘exceptional uses’ of the forms Pret, SP and MF. Bentivoglio & Sedano (2011: 175) state that the SP + a + infinitive correlates with epistemic certainty; and Méndez Vallejo (2008: 19) claims that the SP + a + infinitive has a modal use to communicate probability.
In the field of semantics, Recanati (2007: 70) argues that the present tense is unlike the past or future because it is temporally neutral, and Williams describes it as “the zero case of time indication” (1989: 172 as cited by Recanati 2007: 70). Moreover, Jaszczolt (2009: 38) proposes that the present tense signals epistemic modality. Waugh’s (1975) analysis of the French tenses incorporates the notions that the present is temporally neutral and can also communicate epistemic modality. According to Waugh (1975: 444), the temporal element of in messages stems from contextual elements such as time words, and not from the verb forms themselves. Waugh (1975: 479) presents a new proposal as to the meaning of the form simple present in French which views it as an unmarked form, with respect to the features restrictedness and objectiveness that are signaled by the verb forms imperfect, future, and conditional. As we will see in Chapter 4, Waugh’s (1975) analysis is similar to the meaning hypothesis proposed in this dissertation in that both studies reject the notion of temporality being signaled by the verb forms. However, Waugh analyzes the meaning of the simple present as the absence of two semantic substances, namely restrictedness and objectiveness, whereas in this dissertation the meaning for the form SP is hypothesized to be the presence of the semantic substance of Certainty.

7. New Meanings for Future Morphology

We now look at the literature on the MF that views this form as signalling a temporal meaning that in some instances can also take on an atemporal meaning. Binnick argues that there are no semantic grounds for a three tense distinction in English, since the so-called future tense can be used to communicate present events and timeless

---

6 As also cited by Jaszczolt 2009: 43.
truths, and since, similarly, the so-called present tense can be used to communicate future events, past events and timeless truths (1991: 8). According to C. Smith, in order for a verb form to receive future interpretation in some languages, overt temporal information is needed in the context (2008: 246). Hornstein (1990: 38) argues that the English will is an ambiguous morpheme that can sometimes act as a future tense marker and other times function as a modal.\(^7\)

Under the variationist approach, the MF is referred to as a future and the assumption is that this form expresses the temporal meaning of Futurity (Cacoullos 2011: 148). However, these studies have also noted that in addition to the temporal meaning of futurity, certain uses of the MF also express certainty meanings. The idea is that the MF is a future that sometimes changes category from tense to mood (Cacoullos 2011: 157). Bentivoglio & Sedano (2011: 175) argue that the MF correlates with epistemic uncertainty and temporal distance of the future event. The variationist approach has noted that in some circumstances the SP and MF change grammatical categories, but has also shown a commitment to abide by the traditional tense categorizations.

In an intermediate position, between temporality and modality, is Waugh’s (1975) analysis of the future tense in French, which does present a new proposal as to the meaning of the form. Waugh notes that the future tense in French can be used in past settings, this use is labeled “Future in the past” (1975: 466). However, according to Waugh, the temporal element stems from contextual elements (1975: 444). Waugh argues that the future form in French does not signal the temporal meaning Future, but rather it is defined by having the feature objectiveness (1975: 475). Objectiveness is defined as

\(^7\) As also cited by Jaszczolt 2009: 58.
the speaker’s viewing that “the narrated situation as having an objective, independent existence outside of the subjective reality of the speech situation” (Waugh 1975: 465). Therefore, the meaning hypothesis proposed by Waugh is compatible with an interpretation at the message-level of epistemic modality, such as probability, but does not include this semantic substance in the meaning of the form.

More closely related to the hypothesis proposed in this dissertation are the studies that view the future tense as being inherently modal. In the generative literature, Lyons (1977: 677) claims that future verb forms never have purely temporal interpretations.\(^8\) According to Lyons, the future necessarily includes an element of prediction (1977: 677-688). Declerck (2006: 102) argues that future forms always have an element of modality since speaking about the future involves the speaker’s subjective judgment about the likelihood of an event occurring at a later time.\(^9\) Fleischmann’s (1982) analysis of the Romance languages shows that future tense forms do not simply denote future time but are also related to irrealis modalities (1982: 21).\(^10\) De Haan (2006: 49) notes that future events can be expressed both temporally and modally.\(^11\) Hilpert (2008: 183) has shown that Germanic future constructions can signal a range of both temporal and modal meanings including intention, obligation and weak epistemic modality. Ludlow (1999: 159 as also discussed in Jaszczolt 2009: 44) argues that future tense forms in Indo-European languages were modals in origin and also remain modals in current usage. Ludlow notes that in Italian the future form is used to express possibility or uncertainty (1999: 159), this observation by the author can also be extended to Spanish as

---

\(^8\) As also cited in C. Smith 2008: 233.
\(^9\) As also cited in Jaszczolt 2009: 52.
\(^10\) As also referenced by Jaszczolt 2009: 42.
\(^11\) See also Jaszczolt 2009: 60-61.
in example (43) below. With regard to the categorization of the Spanish form MF in particular, Ludlow argues that Spanish has an irrealis marker –ar- on future verb forms in addition to the future inflectional ending (1999: 158), as in example (44) below.

(43) Serán (MF) las ocho (adaptation of Ludlow 1999: 158).

‘(It) must be eight o’clock right now.’

(44) habl +ar + é vs. habl + aré (adaptation of Ludlow 1999: 158 and Jaszczolt 2009: 44).

‘(I) will speak’

Following a similar line of thought as the meaning hypothesis presented in Chapter 4, Yavas (1982: 411) notes that what has traditionally been considered the future tense in Turkish is actually better understood as having a modal meaning related to degree of Certainty and the type of source where the information originated.12 Yavas (1982: 414) argues that rather than having two homophonous forms in Turkish marking for future and modality, a unified account for this form can be provided based on speaker Certainty. The analysis by Yavas (1982) is similar to the meaning hypothesis presented in Chapter 4, which makes a distinction between the notions of tense versus time. Whereas Yavas’ (1982) analysis focuses on the future form exclusively, however, the analysis presented in this dissertation includes the forms Pret, SP, and MF. In the following Section we will present our argument in favour of separating the notions of tense and time.

12 See also C.S. Smith 2008: 233.
8. Notion of Tense Versus Notion of Time

This section will address the issue of conflating the notions of tense and time. One way of explaining the traditional meaning hypothesis implicit in the labels Pret, SP and MF is that traditional grammars have conflated the notions of tense and time so as to present an account of tense in which temporality is inherent. Accounts by traditional grammars demonstrate that the three-tense, three-time analysis of verb forms has become engrained in Western grammatical tradition (Binnick 1991: 8). Prior studies have noted that traditional grammars have obscured the difference between semantic and grammatical categories (Binnick 1991: 9, 10, 55, Fleischmann 1982:8).¹³

According to Binnick the distinction between (grammatical) category and (time) notion is important (1991: 55), and the notions of tense and time need untangling. Accepting the traditional tense labels as meanings for the actual forms obscures the difference between the meaning of the form and its various uses (Binnick 1991: 55). Fleischman (1982: 8) proposes that time is a mental construct whereas tense is a grammatical category. Similarly, Jaszczolt notes that tense is a grammaticalized expression, whereas, time is an ontological and psychological notion (2009: 82).

Moreover, temporality can be inferred from different sources, some contextual, for example time adverbs, and some left unspoken. Contextual elements such as time words, for example, specify the temporality of a situation without relying on tense to contribute temporal meanings (Jaszczolt 2009: 91), this is especially true in tenseless languages (Jaszczolt 2009: 82, 83). Time interpretations can also stem from aspectual markers (see Jaszczolt 2009: 86). In the case of the preterit, Ludlow argues that the so-called past tense

¹³ See also Binnick (1991: Chapter 1), Declerck (2006: Section 2.1), Fleischman (1982: Section 1.2.1.) and Jaszczolt (2009: Section 2.5.1) for a full discussion on tense.
morpheme in English is actually an aspectual marker which signals that the event in question has culminated, not the meaning Past (1999: 160)\textsuperscript{14}. As we will see in Chapter 4, this dissertation makes a clear distinction between the notions of tense and time so that the verb forms under study are not inherently accepted as having temporal meanings.

In this chapter we have seen evidence that goes against the traditional meaning hypothesis. Tenses can be used to refer to more than one temporal orientation (Binnick 1991: 55, Tynan & Delgado 1997: 117-118 in Jaszczolt 2009: 90). Specifically, examples of the Pret, SP, and MF have been shown to occur in message partials set in the past, present and future. We have also seen in this Chapter that the temporal meanings can be traced back to contextual elements such as temporal adverbs. The existing literature has recognized the so-called non-canonical uses of these forms and in some cases acknowledged the modal interpretations signaled by the verb forms under analysis. In the next Chapter of this dissertation we will attempt to provide a unified meaning hypothesis that can account for the complete distribution of the forms Pret, SP, MF, which is not rooted in the notion of temporality, but rather, focuses on degree of speaker Certainty.

\textsuperscript{14} As also cited by Jaszczolt 2009: 46.
CHAPTER 4

THE SEMANTIC SUBSTANCE OF DEGREE OF CERTAINTY

1. Introduction

This chapter aims at answering research Question 1, stated in Chapter 1, which asked what were the stable, coded, meanings for the forms Pret, SP, and MF. The bulk of this chapter is devoted to laying the groundwork necessary for presenting our proposal regarding the meanings of the Spanish indicative verb forms Pret, SP, and MF. By hypothesis, these forms share a semantic substance (in the sense given the term in Columbia School theory) called Degree of Speaker Certainty. Within the substance, the Pret means HIGH (that is, high degree of certainty), the SP means MID, and the MF means LOW.

In the study of verb forms in a variety of languages, a traditional distinction is made between the concepts of tense and modality. By tense it is generally meant the “grammaticalised expression of location in time” (Comrie 1985: 9); by modality “the status of the proposition that describes the event” (Palmer 2001: 1). In Spanish, the tradition holds that the difference between indicative and subjunctive verb forms is one of modality, but that within the indicative (and within the subjunctive) the difference is one of tense. For the indicative Spanish forms under study, the traditional analysis in terms of the notions of past, present, and future is an analysis of tense. However, and as mentioned in previous chapters, there is considerable evidence that the Spanish Pret, SP, and MF should not be analysed in terms of tense. Still, and in line with the generally sceptical position of Columbia School (CS) regarding traditional grammatical categories, the present study of these indicative forms is not explicitly stated in terms of traditional
modality either, though in many ways it does propose what might be seen as a modality rather than a tense analysis. Thus tense, in the sense of time, is not a grammaticalised notion here; it is relegated to being a property of the communication, of what CS calls the message. This proposal amounts to saying that, at least for the indicative forms under study, tense in the sense of time is not as a property of the linguistic system, that is, not a semantic substance embodied in forms of the Spanish language.

In Chapter 3 we saw that the potential for verb forms to express modal interpretations has been well noted in the literature (Steele 1975, Lyons 1977, Langacker 1978, Fleischmann 1982, James 1982, Hornstein 1990, Bybee 1995a, Ludlow 1999, Iatridou 2000, Palmer 2001, De Haan 2006, Bentivoglio & Sedano 2011, Cacoullos 2011, Declerck 2006, Guéron & Lecarme 2008, Hilpert 2008). In this Chapter we too will focus on a semantic substance that can be seen as related to traditional modality, namely, Degree of Speaker Certainty (henceforth Certainty, or speaker Certainty, for short). Before delving into our definition of what Certainty is, we will describe what it is not. To this end, we start by providing technical descriptions of two semantic substances that the CS literature has viewed as being closely related to Certainty, namely Probability and Occurrence Questioned, in order to differentiate them from Certainty. As the reader will see in Section 2 below, previous authors in CS have used the term Probability to refer to semantic substances that fall outside the definition of the notion of probability as defined by most authors in most other fields in the study of semantics.

In Section 3, we will provide a definition of the CS semantic substance of Certainty that is at the center of the present dissertation. Section 4 will review the existing literature on certainty and situate our analysis along the spectrum of existing work done
on this notion. In Section 5 we will present the basic theoretical elements needed for a CS meaning analysis. Section 6 provides qualitative examples, in context, of the Spanish Pret, SP, and MF, and the data will be analyzed from the perspective of Certainty rather than Time. In Section 7 we address common assumptions related to the interpretation of the form Pret in sentences without time adverbs. In Section 8 we present our Certainty meaning hypothesis, following the CS presentational convention. Lastly, in Section 9 we recapitulate the current stage of our analysis following our exposition of qualitative evidence in Section 6.

2. The Inapplicability of the System of Probability

In this section we will review the CS literature on Probability beginning with a review of Goldberg’s (1991, 1995) work, followed by a review of Diver (1992/2012b) with the goal of comparing their use of the term Probability and how their understanding of this term is not compatible with our definition of speaker Certainty, and therefore does not require us to include the Spanish subjunctive under our semantic substance of Certainty.

Prior studies on the semantics of forms signalling epistemic knowledge have included in their analyses some or all of the terms probability, possibility, certainty, or confidence (Dowty 1979, Goldberg 1991, Diver 1992/2012b, Copley 2002, Jaszczolt 2009). In this dissertation, however, only the term Certainty is used to describe the semantic substance signalled by the verb forms under analysis. In this Section we distinguish between the semantic substance of Certainty that we apply to the Spanish indicative verb forms Pret, SP, and MF and those semantic substances that in other CS analyses have been proposed for subjunctive verb forms in Spanish (Goldberg 1991) and
in Latin (Diver 1992/2012b). Specifically, we argue that even though Goldberg and Diver use the term ‘certainty’ in their analyses of subjunctives, Certainty is different from the semantic substance of subjunctives that they have at different times called Occurrence Questioned or Probability. This analysis thus centers on a semantic substance that is different from that of subjunctive forms and is properly circumscribed to the three indicative forms under study. The present study is not about the modal difference between the Spanish indicative and the Spanish subjunctive, but about the modal difference that we propose exists within the indicative forms Pret, SP, and MF.

Goldberg focuses on the Spanish verbal inflections known as the past subjunctive (e.g. cantara/ cantase, both ‘sang’, ‘had sung’) and of the alternation of these forms with the present indicative. Her analysis is posited for the Spanish subjunctive more generally and includes also what the tradition calls the present subjunctive (cante ‘sang, would sing’). The difference between the so-called past and present subjunctive forms, both of which share for Goldberg the meaning of Probability, is related to the interlock that she posits between the System of Probability and the System of Time, which will be discussed later in this Section. In addition to signaling Probability and Time, in Goldberg’s treatment the past subjunctive morpheme -ra also signals the meaning Emphasis (1991: 47).

Goldberg defines Probability as “an estimate of the likelihood that an activity described by a verb will occur or has occurred” (1995: 48). This definition requires two comments. On the one hand, we readily acknowledge that this definition of Probability could apply to our Certainty. On the other hand, once Goldberg works out this definition of Probability, we see that what is involved in the Spanish subjunctive is not probability
but rather something closer to the notion of ‘unexpected’ or ‘surprising’. This element of unexpectedness or surprise is absent from the meanings of Certainty of the forms Pret, SP, and MF.

Goldberg’s (1991, 1995) analysis of the Spanish subjunctive can be broken down into three important parts that are relevant to the present study: the first being the claim that the meanings of the subjunctive involve the speaker’s awareness of alternative possible outcomes to the event; the second involves the element of unexpectedness or surprise in the meaning of the subjunctive; and the third involves the inclusion of the semantic substance of Time.

We begin reviewing Goldberg’s notion of alternative possibilities. The notion of alternative possibilities is referred to by Goldberg using several labels including communicative strategy (1991: 137), concept (1991: 175), message (1991: 87, 136), situations/contexts (1991: 82, 89). But confusingly, the author also uses this term to refer to the meaning of the forms (1991: 98, 168, 193-194). Our interpretation of the term ‘alternative possibilities’, as it is presented in Goldberg’s qualitative data, is the latter. That is, we take the position that Goldberg intends ‘alternative possibilities’ as part of the semantic substance signaled by the subjunctive forms. Central to Goldberg’s analysis of the subjunctive, where the substance of Probability is subdivided into meanings that range from Most Probable to Least Probable (1991: 56), is that it is used in situations where the outcome of the event has alternative possibilities (1991: 82). Speakers use Probability forms when the outcome of a situation is unknown and there is more than one possible result (1991: 64). “[T]he use of Probability indicates that there is an element of uncertainty about the event; the situation has alternative possibilities which
the speaker chooses to recognize” (Goldberg 1991: 134). If speakers wish to make explicit statements of alternatives, or wish to communicate messages of alternative possibilities, they will make use of Probability forms (1991:134, 136). Not only does Goldberg’s notion of Probability imply the presence of alternative possibilities, it also implies that the number of alternative possibilities is known (1991: 145, 175).

Goldberg has conflated the notions of probability and possibility, by assuming that probability implies the presence of alternative possibilities: “Possibility is another representation of Probability” (Goldberg 1991:82). Possibility, in turn, involves the speaker’s assessment of the likelihood of an event. However, it is hard to see why the assessment of the likelihood of an event requires the presence of alternative possibilities. One can provide a complete definition for a semantic substance of Probability without necessarily invoking the presence of alternative possibilities. (In fact, the presence of alternative possibilities can be viewed as an addendum to the notion of probability, an addendum that appears to make room for what would be a semantic substance of Unexpectedness or Surprise, or perhaps for a semantic substance of Alternative Possibilities.) For this reason, we conclude that Goldberg’s semantic substance of Probability is in fact not probability, but instead a different semantic substance that would be better understood if referred to by a different name. The reader should note that, in contrast to Goldberg’s, the meaning analysis proposed in this dissertation does not include a notion of alternative possibilities.

We now move to the second theoretical element in Goldberg’s analysis, namely that the meaning of the subjunctive involves an element of unexpectedness or surprise, something that is absent from the meanings of the forms Pret, SP, and MF. Goldberg
refers to the subjunctive’s ability to invoke an interpretation related to surprise through the use of Probability forms to describe events that are contrary to expectation (1991: 312, 315). It seems clear that the element of surprise, or contrary to expectation, falls outside the scope of Goldberg’s own definition of Probability. The definition refers to the assessment of likelihood by the speaker; it does not include an element of unexpected, unanticipated, surprising, or shocking outcome. For this reason, we propose, here again, that the semantic substance referred to Goldberg as Probability, is in fact something else, perhaps more closely related to the notion of Unexpected, Surprise, or Alternative Possibilities.

One could counter our position by saying that the meaning intended for the subjunctive by Goldberg is actually likelihood, and that surprise is simply a default interpretation at the message level. But the question would then arise, why should an event whose likelihood is low but does occur lead to an interpretation containing an element surprise. If we look at this intuition in terms of entailment relations, we can see that surprise is not a logical consequence of low likelihood. An entailment relation shows whether a statement logically follows from another statement, specifically, whenever A is true B is also true, that is, a situation describable by A must also be describable by B, so that A and not B is contradictory (Chierchia & McConnell-Ginet 2000: 18-19). We can say that an event whose likelihood of occurrence is low, but that does occur entails an outcome related to surprise (the occurrence of the event is surprising to the speaker), as in: low likelihood + occurrence |= surprise; or, as in: there is less than 1% chance Earth will be hit by an asteroid, but an asteroid does hit earth, therefore I am surprised by the event of an asteroid hitting Earth took place. However, the entailment relation is not
verified in both directions, as in an interpretation of surprise does entail having the meaning low likelihood and the event actually having occurred, since you can have an event whose likelihood is high yet does not occur that leads to an interpretation with an element of surprise. Since surprise does not logically follow from the meaning low likelihood + occurrence of the event, we are entitled to conclude that the notion of surprise or unexpectedness in Goldberg’s analysis is not a message effect, but rather a meaning signaled by the linguistic forms.

The third theoretical component in Goldberg’s analysis of the subjunctive, which is relevant to this dissertation, is the semantic substance of Time. For Goldberg the Spanish subjunctive forms also signal Time meanings (1991: 397). According to the author, the meanings of Time and Probability are interlocked and cannot be analyzed separately (1991: 60). Here again, Goldberg’s analysis differs from the meaning hypothesis presented in the present dissertation, in that the argument that has been developed in previous chapters is that the forms Pret, SP, and MF do not signal Time meanings. One could also provide counterexamples against Goldberg’s position that the subjunctive has a time meaning, as for instance in cases where the past subjunctive does not receive a Past interpretation, as in examples (1)-(2) below. Similar to the observations noted in Chapter 3, and based on counterexamples such as the ones provided below, we can argue that the subjunctive forms in Spanish do not signal temporal meanings, contrary to the position taken by Goldberg.

(1) Si ella llegara, yo se lo diría

‘If she arrived, I would tell her.’
Quién pudiera volver a ser joven!

‘Who could go back to being young.’

Further differences between Goldberg’s analysis and the present study include the observation that in Goldberg’s analysis the indicative forms are said to be neutral to Probability (1991: 66, 134), whereas in this dissertation they are shown to signal varying levels of speaker Certainty. Another difference is that Goldberg uses the term certainty to refer to three communicative strategies, known as ‘positive certainty’, ‘negative certainty’, and ‘uncertainty’ (1991: 61). This is a clear distinction between Goldberg’s analysis and the present study. For Goldberg, certainty is a communicative strategy, but in this dissertation Certainty constitutes the semantic substance signaled by the verb forms Pret, SP, and MF. Moreover, since the meanings for the Spanish subjunctive worked out by Goldberg appear to be actually related to unexpectedness or surprise, the message elements related to certainty do not appear to be plausible inferences. To plausibly infer a message category related to Certainty, the semantic substance being signaled would need to in fact be Probability, not the substance that in fact Goldberg proposes.

We are now in a position to see why the Spanish subjunctive, and the modal difference between it and the indicative, are properly excluded from the present dissertation, even though at the level of simple definition Certainty (our semantic substance for the Spanish indicative) and Probability (Goldberg’s semantic substance for distinguishing indicatives from subjunctives, and differences within the subjunctive) may appear to show considerable overlap. The position taken here is that while Goldberg’s stated definition of Probability is compatible with our understanding of speaker Certainty,
when we look at the actual meanings signaled by the subjunctive, which in Goldberg include the notions of alternative possibilities and unexpected outcomes, we realize that Goldberg has misused the term Probability. The problem of what exactly are the semantic substances interlocked in the Spanish subjunctive is of course outside the scope of responsibility of the present study. But Probability is not very likely to be one of them. And neither is Certainty.

We will now review Diver’s (1992/2012b) analysis of the Latin subjunctive, again with the goal of comparing Diver’s use of the term Probability and how his understanding of this term, though at first seemingly superficially compatible with our definition of speaker Certainty, does not require us to include the Spanish subjunctive under our semantic substance of Certainty.

Goldberg modeled her analysis after Diver’s (1992/2012b) analysis of the Latin subjunctive. According to Diver, the Latin subjunctive signals Probability and Time meanings (1992/2012b: 188). In this analysis we see once again that the subjunctive is used to express the unexpected, or unanticipated. Diver’s analysis of the subjunctive illustrates that “when such an event is presented in the subjunctive, it is with the recognition of the possibility that the event might not have occurred, or was not expected to occur, or might have occurred different from the way in which it actually occurred” (Davis & Huffman 2012: 182). Here again, one could argue that the semantic substance being signaled by the subjunctive in Latin is in fact not Probability, but rather something else that could accommodate the contrary to expectation usages in its definition.

Further differences between Diver’s analysis and the one presented here, include, for example, that similar to Goldberg, Diver postulates an interlock between the semantic
substance of Probability and that of Time (182). Therefore, like Goldberg, the semantic substances of Probability and Time in Latin need to be analyzed together, not independent of each other. Moreover, similar to Goldberg again, Diver argues that the indicative is neutral to Probability; it does not make a claim as to whether there is an occurrence questioned of the event being communicated (184). With regard to the use of the term certainty, Diver reserves it to refer to messages, whereas in the current study we use it to refer to the meanings of the forms (187). That is, for Diver certainty is a message category; for us it is the semantic substance of Certainty. Moreover, we can see that if the semantic substance for the Latin subjunctive was in fact something related to surprise, occurrence questioned, or contrary to expectation, then using the term Certainty to refer to message categories for this semantic substance is not a plausible inference. Similar to our critique of Goldberg, having message categories related to Certainty only makes sense if the semantic substance signaled by the forms is Probability.

A review of Diver’s (1992/2012b) study on the Latin subjunctive leads us to the same conclusions we derived from Goldberg’s analysis. What the authors refer to as Probability is compatible with the notion used in this dissertation of speaker Certainty. However, the argument being developed here and in the previous Section is that the authors have misused the term Probability to define a different semantic substance. The true identity of the semantic substance signaled by the subjunctive in Latin and in Spanish falls outside the scope of this dissertation. However, we can still maintain that whatever that semantic substance may be, it is not Probability and it is not Certainty. In the following Section we will provide a working definition of the term Certainty as it is used in the present study.
3. What is Meant by Certainty?

The notion of Certainty taken in this dissertation is one of subjective Certainty. The role that subjectivity plays in epistemic knowledge has been noted in the literature (see Jeffrey 2004: xi; Givón 2005; Nuyts 2006: 13; Simon-Vandenbergen & Aijmer 2007: 33; Burdzy 2009: 19). In particular, Certainty is defined as the speaker’s subjective qualification over an event. It manifests itself as the speaker’s judgment of a degree of certainty with regard to the information being conveyed. The notion of certainty used in this analysis is also one of graded certainty. That is, by hypothesis, there are varying degrees of speaker Certainty ranging from low to high. The graded notion of modality was first introduced by Kratzer (1981, 1991), and the meaning hypothesis presented in Section 9.0 of this Chapter applies the idea of a semantic substance divided into scalable parts.

4. Existing Literature on Degree of Certainty

In this section we review the existing literature on certainty and confidence. Our purpose is to test whether the literature offers an analysis based on the notion of certainty that (1) can account for the entire distribution of the verb forms with a unified meaning; (2) can account for the choice speakers make between the Spanish Pret, SP, and MF by providing a graded notion of certainty; and (3) can dispense with the notion of temporality, since, as we have seen in previous chapters, a semantic substance of Time cannot account for the entire distribution of the Spanish forms under study. We show that even though there are several analyses that, under a variety of theories, come close to meeting these criteria, none fulfills them completely, leaving room for the CS proposal made in this dissertation.
The notion that particular verb forms signal Certainty meanings have been noted by prior studies (Diver 1964, Ultan 1972, Bybee et al. 1994, Werth 1997, Givón 2005, De Haan 2006, Simon-Vandenbergen & Aijmer 2007, Jaszczolt 2009). Givón (2005: 163) proposes that certainty scales can be built around verb forms in Spanish with modal adverbs. Bybee et al. (1994: 247-248) and De Haan (2006: 49) note that there are several languages (such as Agau, Caddo, Inuit, Maung, Pangasinan, Tucano) in which more than one future form is available to denote varying shades of speaker Certainty, sometimes also called Confidence.\(^{15}\) According to Werth (1997: 112), English \textit{will} can denote near-certainty on the basis of available information or past experience.\(^{16}\) Ultan notes that future forms signal varying degrees of uncertainty that is compatible with the inherent uncertainty of the future itself, whereas the past tense generally refers to completed and therefore, certain events (1972: 105-106).\(^{17}\)

Even though the authors mentioned above have all noted particular uses of verb forms that signal speaker Certainty, and even though in some cases the analyses include the notion in a gradient (Ultan 1972, Bybee et al. 1994, Givón 2005, De Haan 2006), a serious problem remains. A very important underlying commonality in these analyses is that they all appear to posit more than one meaning for each form, one temporal and one modal, or that they perhaps postulate homophonous forms, one signalling the meaning Future and the other signalling the meaning Certainty. This relaxed approach to the postulation of meanings and forms makes it difficult to square these works with the constraints imposed by CS theory that are adopted in the present study.

---

\(^{15}\) See also Jaszczolt 2009: 45.
\(^{16}\) See also Jaszczolt 2009: 49.
\(^{17}\) See also Jaszczolt 2009: 60 for a discussion on Ultan.
Because of these flaws, we are still in search of a semantic analysis of verb forms that can solve the problem of mismatched tenses by proposing a meaning hypothesis that, like mine, is void of any temporal element. Jaszczolt (2009) appears to provide an adequate solution by arguing that in English temporality should be best understood to mean degree of speaker Certainty. Jaszczolt (2009) recognizes that prior literature has acknowledged that time and modality are interconnected (as was shown in Chapter 3 of this dissertation). But she goes one step further by explicitly claiming that time is modality. According to the author, speakers conceptualize time in terms of certainty and possibility (Jaszczolt 2009: 32). Under this view, temporality is derived from modality, and the notions of past, present and future are analysed as derivative of degrees of detachment from Certainty (2009:36). The verb forms are considered to express the speaker’s judgement of a degree of Certainty regarding the proposition being expressed (2009:38). The varying degrees of certainty that can be signalled by the speaker originate from the fact that speakers can produce utterances based on various sources: reliable knowledge, vague belief, or assumptions (2009:57). The temporal interval of now holds the most Certainty, any detachment from now will also result in a detachment of Certainty (38), therefore, the present morphology signals the highest degree of Certainty. The past is viewed as more certain than the future because as time passes the number of possibilities is reduced (35). Nevertheless, any departure from the now results in levels of uncertainty (35), and the uncertainty of the future is paralleled to the uncertainty of the past.

Jaszczolt’s analysis is thus very similar to ours. But an important difference remains in the arrangement of the scale of Certainty. Whereas Jaszczolt proposes a
distribution of SP, Pret, MF with the meanings HIGH, MID, LOW, this dissertation argues for a different order. We will argue, as mentioned above, that the Pret signals HIGH, the SP signals MID, and the MF signals LOW. Thus Jaszczolt and the current author make different proposals regarding the placement of forms along the scale of Certainty.

Until this point, we appear to have found in Jaszczolt an analysis that, for the most part, meets the criteria we set out to find in the beginning of this Section. The author presents a graded account of Certainty, and her analysis also defines time in terms of Certainty by arguing that one is the other. However, once Jaszczolt begins to formalize her semantic analysis, we note that it significantly differs from the meaning hypothesis proposed in Section 8.0 of this Chapter. Although Jaszczolt presents an extensive argument in favour of dispensing with the category of Time for the semantic analysis of verb forms, her formal account of how this semantics would apply to examples in the data makes use of a what the author calls the “default reading” of the forms, which in turn, acts as a solution to still incorporate the temporal element (Jaszczolt 2009: 148). According to the author, the default interpretation (or cognitive default associated with the form) of English will is future-time reference, and of the present tense is present-time reference (Jaszczolt 2009: 148, 154-155). As we can see, Jaszczolt’s use of what she calls the default reading of these forms leaves us with a meaning hypothesis that is in fact still based on temporal meanings, or at least partly based on the notion of temporality.

Yavas’ (1982) analysis of future reference by the so-called future-tense form in Turkish provides a more promising view. Rather than positing homophonous forms, one being a future form and one being a modal, Yavas argues that the traditional Turkish future tense marker is better understood as having a modal rather than a temporal
meaning (1982: 411, 426). Yavas (1982: 412) argues that the Turkish future signals a mid degree of certainty and that in addition it differentiates itself from the other two forms, which can also be used in future messages, in that the other two forms also indicate whether or not the event has been planned and scheduled; in other words the other forms indicate the knowledge base for the prediction (Yavas 1982: 411-412, 425-426). We see that Yavas (1982) meets our initial criteria; it presents unified, graded meaning, and one that is based on certainty rather than temporality. However, there remains one shortcoming in Yavas’ (1982) analysis, in that it focuses on a degree of certainty scale only for verb forms used for future reference. By failing to include verb forms such as the traditional simple present or preterite, his analysis cannot account for the choice between verb forms that signal certainty meanings. As previously stated, the Spanish Pret, SP, and MF can all receive modal interpretations. We must continue to look for a unified, graded analysis based on certainty that does not include a temporal component, and that also includes the full range of verb forms that signal certainty meanings, not simply those with future message interpretations.

Ludlow (1999) appears to the type of analysis we sought out to find with our initial criteria. Ludlow (1999) presents a strong position vis-à-vis the elimination of the notion of time as interpretation for verb forms in the semantics of languages in general. In fact, Ludlow takes the dismissal of temporality one step further, arguing that temporal adverbs, temporal anaphora, tense morphemes, and locating adverbs such as specific dates can all be stripped of the notion of temporality (1999: 125, 157). In other words, the proposition defended by the author is that there are no time referring expressions in language. According to Ludlow, we can trace back the practice of conflating the notions
time in to tense to early western philosophical tradition (1999: 157). Specifically, the
author claims that as linguists we have taken the assumption that there must be such
things as a future and a past, and have reached from this assumption the conclusion that
there must be linguistic forms that allow speakers to communicate about these temporal

According to Ludlow, linguistic forms that have commonly been assigned
temporal meanings can actually be better understood in terms of modality and aspect
(1999: 157). Speakers evaluate past and future tenses based on current evidence they
have about the world (1999: 143). Ludlow argues that future tense forms are modals
referring to dispositions, whereas past tense forms include an aspectual marker and signal
an evidential meaning (1999: 160-162). Central to Ludlow’s analysis is the claim that
every sentence has an implicit or explicit temporal adjunct clause (1999: 12).
Specifically, all tensed sentences have an implicit when-clause that functions to provide
temporal anaphora (1999: 134). These when-clauses do not express time, but a general
proposition that is not dependent on particular moments in time (1999: 11), as in example
(3) below.

(3) The last class is July 4, 1995.

‘The last class is when [standard calendar systems indicate July 4, 1995].’

(Ludlow 1999: 125)

We will now review Ludlow’s position on other linguistic forms commonly
understood as time referring expression. Temporal anaphors such as then, before, after,
for example, arguably do not refer, but rather, stand as proxies for when-clauses,
according to Ludlow (1999: 11). Similarly, locating adverbs, such as specific dates, are
also treated as constituents of a *when*-clause, as we saw in example (1) above (1999: 125). Temporal adverbs such as *yesterday*, are treated in Ludlow’s semantics as predicates, not as referring expressions that refer to a specific day.

Ludlow’s (1999) claim that temporal adverbs, temporal anaphora and time referring expressions such as dates are void of any temporal interpretation is not a position maintained in this dissertation, but one that certainly merits contemplation in future research. For the purposes of the current study, contextual elements such as time adverbs are taken to contribute a temporal interpretation at the message level.

Ludlow’s (1999) analysis meets our first criterion set out in the beginning of this Section, in that the author presents an account for the entire distribution of the verb forms with a unified meaning analysis based in modality which eliminates the temporal element. As previously outlined, our second criterion was to find an analysis that could account for the choice between verb forms that all signal the meaning Certainty by applying a graded notion of modality. Although Ludlow’s (1999) analysis does not explicitly make use of a graded notion of modality, it also does not prevent us from taking his theoretical position as an orientation for analyzing the forms Pret, SP, and MF on a graded scale of Certainty meanings. In the following sections we will attempt to provide such an analysis, which as we have seen in the discussion provided in this Section, is still missing in the existing literature. In order to develop this type of analysis of the verb forms under study, we will rely heavily on the methods of CS theory as a guideline for our analytical presentation.
5. A Columbia School Analysis

A Columbia School analysis should include three components: *observations*, *orientations*, and *hypotheses* (Diver 1990/2012a: 454). Following a CS framework, the first step in the analysis is to preliminarily identify the units of communication to be studied, that is, to identify in a tentative fashion the signal side of the hypothesized sign (Diver 1990/2012a: 465). CS relies heavily, though, as in this case, not always, on an existing categorization of morphemes as the focus of a grammatical analysis (1990/2012a: 490).

The next step is to collect a large number of examples of these morphemes in context (1990/2012a: 509); these constitute the first component of the CS analysis structure: observations (1990/2012a: 487) and are used for qualitative testing (1990/2012a: 512). CS analyses usually rely on long prose texts that provide abundant contextual information (1990/2012a: 487). The goal is to provide an explanation for the motivation that leads speakers to produce a particular sequence of sound waves (1990/2012a: 453), in other words, what motivates the appearance of a particular morpheme in a particular context (1990/2012a: 460). The explanation is said to lie in the meaning of the signal or morpheme. This explanation is referred to as the hypothesis (1990/2012a: 454). The function of the hypothesis is to show the ways in which the orientations influence the observable data (1990/2012a: 454). These orientations are defined as bodies of knowledge, which exist independently of the linguistic analysis (1990/2012a: 455). The collection of meanings signaled by the morphemes under analysis constitutes a *semantic substance* (1990/2012a: 482). The semantic substance
being presented is carved into exhaustive parts and assigned to each morpheme under analysis (1990/2012a: 494).

The next step is to support the qualitative evidence with quantitative testing using raw counts (1990/2012a: 513-514). Finally, a conclusion is reached which either supports or does not support the signal-meaning hypothesis. If evidence from the qualitative and quantitative testing does not show support for the postulated meaning hypothesis, the conclusion is reached that the hypothesized signal, the hypothesized meaning, or both, are wrong (1990/2012a: 450).

6. Qualitative Evidence for the Degree of Certainty Meanings Over Time

We will now begin our qualitative analysis of the forms under study as they appear in context. Sections 6.1-6.3 will present evidence pointing to the advantages of a Certainty meaning hypothesis for the forms Pret, SP, and MF, over an analysis centered on the semantic substance of Time. In these sections we will view examples, similar to those presented in Chapter 3, that appear problematic to the Time meaning hypothesis, but that we will see, are not contradicted by the Certainty hypothesis. In addition, we will see examples where contextual elements, such as adverbs, also contribute to message partials associated with certainty. In Section 6.4 we will see the distribution of these forms in minimal pairs where the Certainty meanings can be easily interpreted.

6.1. Examples of Pret Compatible with the Meaning High Degree of Certainty

Our proposal, as we have seen, is that the forms Pret, SP, and MF signal meanings related to the substance of Degree of Certainty by the speaker, with the Pret having the most Certainty and the MF the least, the SP occupying a middle degree. In Chapter 3 we saw that the traditional hypothesis that the Pret means Past does not fit the observations,
since message partials associated with this form can be set in the present or the future as well as in the past, a fact that becomes especially clear when we note the presence of temporal adverbials indicating time settings other than past. In other words, there is a direct mismatch between the meanings of the adverbials and that of Past, strongly suggesting that the meaning is contradictory to the message, that is, the meaning hypothesis is wrong. However, if we consider that the form Pret signals the meaning **HIGH DEGREE OF CERTAINTY**, the presence of this form in these examples is no longer problematic and the examples provided below stop contradicting the meaning hypothesis.

(4) Para las dos ya lo **acabé** (Pret). (Lope Blanch 1991 in Butt & Benjamin 2011: 211)

‘I will have it finished by two o’clock’

(5) Nos **fuimos** (Pret)

‘(We) are leaving (right now)’

(6) ¡Mañana ya **llegó** (Pret) el día! (L. Rafael Sanchez, Puerto Rico, dialogue in Butt & Benjamin 2011: 211)

‘Tomorrow has come! (that is, tomorrow is the day)’

In examples (7)-(9) below, we see a different but related situation. In these uses of the Pret we do not find the mismatch between temporal adverbials and the notion of past. But we do find contextual elements indicating certainty such as **confianza, gran confianza**, and the phrase **estar seguro** in co-occurrence with the verb token under analysis. Both the verb token of the Pret under analysis and the contextual element indicating certainty have been underlined in the examples below.
(7) Esta demarcación, encabezada por el alcalde del PRD, Matías Quiróz Medina, es parte de los de los municipios que enfrentan amenazas de grupos de delincuentes que operación (sic) en la región y que buscan el control de la zona y las autoridades. El secretario de Gobierno expresó (Pret) su confianza que antes que concluya el mes de enero, los cabildos de los otros 32 municipios den su aprobación al Mando Único. Aclaró que no se trata de que los municipios renuncien a la facultad constitucional de dotar de seguridad a sus habitantes, ya que los ayuntamientos continuarán estando a cargo de las policías de tránsito y proximidad. (Sánchez, 2013, para. 2)

‘This demarcation, headed by the mayor of the PRD (The Party of the Democratic Revolution), Matías Quiróz Medina, is part of the municipalities that have faced threats from groups of delinquents that operation (sic) in the region and look for control of the region and the authorities. The secretary of the interior expressed his confidence that before the end of January, the departments of justice of the other 32 municipal districts will give their approval of a single command. He clarified that the municipalities are not required to renounce their position to the constitutional faculty for the security of its inhabitants since the town halls will continue to be in charge of the transit and local police.’

(8) Sin embargo, parece que París y Berlín consiguieron entenderse sobre la sucesión del luxemburgués Jean-Claude Juncker al frente del Eurogrupo: el lunes debía aceptarse por consenso la candidatura del holandés Jeroen Dijsselbloem (apoyado por Schauble), indicó el domingo el ministro de Economía francés, Pierre
Moscovici, quien no ocultó sus reservas respecto a este casi desconocido. Por otro lado, Schaube afirmó (Pret) tener una “gran confianza” en Francia, en un momento en que numerosas voces se inquietaron en Alemania ante una caída económica de su vecino. "Francia es un país poderoso que resolverá sus problemas", estimó en una entrevista publicada este lunes en los diarios alemán Süddeutsche Zeitung y francés Le Monde. (AFP, 2013, para. 2)

‘Nonetheless it seems that Paris and Berlin reached an agreement regarding the succession of Luxemburgian Jean-Claude Juncker in charge or the Euro group; On Monday the dutch native Jeroen Dijsselbloem’s candidacy (supported by Schauble) should receive approval by consensus stated the French Economic Secretary, Pierre Moscovici, who did not hide his reservations about this pseudo stranger. On the other hand Schaube affirmed that he had great confidence in France, at a time when many expressed concerns in Germany due to the economic fall of its neighbor. “France is a powerful country that will resolve its problems”, he stated in a public interview this Monday in the German newspaper paper Suddeutsche Zeitung and the French Le Monde.’

(9) En el marco de su visita de trabajo por Alemania, Ruiz Massieu explicó al secretario alemán la estrategia de promoción turística que lleva a cabo el gobierno de la República, y señaló que el presidente Enrique Peña Nieto presentó, en febrero pasado, la nueva Política Nacional Turística, y declaró a esta actividad como una prioridad estratégica en la agenda nacional. El secretario Burgbacher dijo (Pret) estar seguro que los alemanes que viajan a México, “lo aman”, pero sostuvo que falta una mayor promoción de los destinos mexicanos. "La
competing por el turismo en el mundo es feroz y las cosas buenas y hermosas que tiene México deben ser más conocidas y apreciadas por los alemanes”, subrayó. (La Prensa, 2013, para. 2)

‘Within the framework of his work visit to Germany, Ruiz Massieu explained the strategy for promoting tourism, which is carried out by the government, to the German Secretary, he signaled that the president Enrique Pena Nieto presented the new National Tourism policy last February, and declared this activity as a priority to the strategic national agenda. Secretary Burgbacher said he was sure that the Germans that travel to Mexico “love it”, but maintained that there is a lack of increased promotion for Mexican destinations. “The competition for tourism in the world is fierce, and the good and beautiful things that Mexico has to offer, should be appreciated by the Germans.”, he stressed.’

The reader should note that although examples of the type ‘dijo no estar seguro’ or ‘afirmó tener muy poca confianza’, are entirely possible, the point being made here, however, is that the patterns of co-occurrence shown in examples (7)-(9) above are observable tendencies we find in the sample.

6.2. Examples of SP Compatible with the Meaning Mid Degree of Certainty

We now look at examples of the SP used in contexts where temporal adverbials indicating time settings other than present co-occur with the verb token under analysis, as in (10)-(12) below. In these examples, the tradition’s temporal hypothesis for the form SP fails to explain the observations. However, if we consider our hypothesis where the SP
means MID DEGREE OF CERTAINTY we can see that the examples contradict an explanation in terms of Time, but do not contradict an explanation in terms of Certainty.

(10) Salvador Dali muere (SP) en el año 1989.

‘Salvador Dalí dies in the year 1989’

(11) Llueve mucho en Irlanda (Butt & Benjamin 2011: 203)

‘It rains a lot in Ireland’

(12) Mañana vamos a California (Butt & Benjamin 2011: 205)

‘Tomorrow (we) go to California’

As previously mentioned in Chapter 3, the tradition explains the occurrence of example (8) of the SP above by assigning the label ‘historical present’. However, if we invoke a meaning hypothesis based on Certainty rather than time, we quickly realize that the practice of assigning labels to counterexamples is no longer needed. The entire distribution of the form SP, including its so-called ‘historical present’ uses, can be accounted for through its compatibility with the meaning MID DEGREE OF CERTAINTY.

Moreover, the SP frequently co-occurs with contextual elements indicating certainty such as probablemente, no tener duda, and quizás no es tan claro. Examples (13)-(15) can be differentiated from the earlier use of the Pret in context. The speaker appeared to indicate a higher degree of speaker Certainty while using the Pret, and only a mid degree of speaker Certainty when using the SP.

(13) La mayoría de los esqueletos se halló dentro de cistas (fosas), junto con casi 30 piezas de cerámica", informó un comunicado de la dependencia gubernamental mexicana. Los entierros, localizados a unos 20 km de Chichén Itzá, uno de los mayores centros de desarrollo de la cultura maya, corresponden (SP)
probablemente a entre los años 600 y 800 de nuestra era, de acuerdo con el Instituto. Estos descubrimientos y otros realizados en la zona han permitido "establecer que hace más de mil 200 años había una densidad poblacional importante, dispersa en asentamientos cercanos", añadió el comunicado. (AFP, 2013, para. 2)

‘The majority of the skeletons were found in common graves, together with almost 30 pieces of ceramic” informed a press release of the Mexican Government Agency. The burials, located approximately 20km from Chichen Itza, one of the major centers of the development of the Mayan culture, probably correspond somewhere to between 600 and 800 A.D. according to the Institute. These discoveries and others in the area have permitted “to establish that over 200 years ago there was a important population density, dispersed in nearby settlements”, said the press.’

(14) Luego de recordar que tiene un cariño entrañable por el IPN, ya que su padre estudió en esta institución, Peña Nieto admitió que lograr articular este esfuerzo de invertir más en ciencia y tecnología y de aplicar ese conocimiento precisamente en la innovación para la productividad de nuestro país. “No tengo duda (SP) de que México en los próximos años podrá dar pasos muy firmes en el camino hacia un mayor desarrollo”, así como hacia el crecimiento sostenido y hacia una mayor productividad. Refrendó el compromiso del gobierno de la República con el impulso a la ciencia, la tecnología y la innovación para tener un país más productivo que genere mayor riqueza. (Colón, 2013, para. 2)
‘After remembering the affection that he has for IPN (National Polytechnic Institute), since his father studied in this institution, Pena Nieto admitted that to achieve this effort to invest in science and technology and to apply this knowledge precisely on the innovation for the productivity of our country (sic).

“I have no doubt that Mexico in the next couple years will take solid steps forward on the road towards greater development”, as well as sustainable growth and greater productivity. He endorsed the government’s agreement with momentum toward science, technology, and innovation in order to have a more productive country and that generates more riches.’

Beyer Flores dijo que en un estudio se detectó que los científicos mexicanos piensan que hay baja producción científica en el país, por la "falta de dinero, financiamiento inadecuado, y bajos salarios de los investigadores. Es decir, se considera que el factor dinero está relacionado con la baja producción cuantitativa, pero quizás no es (SP) tan claro.” Sin embargo, al presentar un estudio internacional en el que se hace un análisis de los presupuestos que reciben los investigadores en otros países, detectó que el dinero que se otorga en México es superior al que reciben España y Argentina, y la producción científica es mayor en esos países que en México. (Gómez, 2013, para. 2)

‘Beyer Flores said that a study detected that Mexican scientists think that there is low scientific productivity in the country due to “lack of funds, inadequate financing, and low salaries of the investigators. In other words, money is regarded as the factor that is related to low quantitative production but perhaps it is not clear.“ However, by presenting an international study which analyzes
the budgets of scientists in other countries, it was detected that the money that is paid in Mexico is higher than what they receive in Spain or Argentina, and scientific productivity in those countries is higher than that of Mexico.’

Here again, the reader should note that although examples using the certainty adverbs listed above with other verb forms than the SP are possible, the point is that the patterns of co-occurrence shown above are observable tendencies in the data.

6.3. Examples of MF Compatible with the Meaning Low Degree of Certainty

We now look at examples of the MF in contexts where the tradition’s meaning hypothesis that this from means Future fails to explain the complete distribution, as in examples (16)-(18) below. Contrarily, if we consider the MF to mean low degree of certainty, these examples do not contradict the Certainty meaning hypothesis.

(16) *Serán* (MF) las nueve y media. (Butt & Benjamin 2011: 219)

‘(It) must be 9:30 (right now)’

(17) *¿Qué hora será* (MF)? (Butt & Benjamin 2011: 219)

‘(I) wonder what time it is (right now)’

(18) *Ya habrán* (MF) comido, ¿no? (Butt & Benjamin 2011: 219)

‘I guess (you/they) have already eaten?’

In examples (19)-(20) below we see the MF used in context with contextual elements signalling low degree of speaker certainty such as *incertidumbre* and *casi seguro*. These examples differ from the use of the Pret and SP in context because here the speaker wishes to show a low degree of Certainty regarding the information being conveyed.
La UE recordará que es "importante abstenerse de aplicar medidas proteccionistas (...) y hará hincapié en la importancia de fomentar el libre comercio", precisó el bloque en un comunicado. La incertidumbre sobre la salud del presidente venezolano, Hugo Chávez, operado hace más de un mes por cáncer en La Habana, también pesará (MF) sobre el encuentro. Más de 43 mandatarios europeos y de la CELAC, en representación de 60 países, entre ellos la canciller alemana Angela Merkel y el mandatario español, Mariano Rajoy, se reunirán en Santiago de Chile con el fin de impulsar las inversiones y el comercio con la región. (AFP, 2013, para. 2)

‘The EU is reminded that it is “important to take measures to protect (...) and will emphasize the importance of promoting free trade”, said the bloc in a press release. The uncertainty regarding the health of the Venezuelan president, Hugo Chavez, operated a month ago due to cancer in Habana Cuba, will also affect the meeting. More than 43 European leaders and the CELAC (Community of Latin American and Caribbean States), representing 60 countries, among those the German Chancellor Angela Merkel and the Spanish leader Mariano Rajoy, will meet in Santiago Chile with the goal of promoting investment and trade with the region.’

"Diciembre demostró ser inusualmente cálido (en el hemisferio norte), y el pronóstico para el resto de la temporada sigue siendo más cálido de lo normal", indicó Morgan Stanley. “De cara a estos pronósticos, nuestra estimación tácticamente al alza del gas (para el primer trimestre) casi seguro no se materializará (MF)”, agregó. (Organización Editorial Mexicana, 2013, para. 3)
“December showed to be warmer than usual (in the northern hemisphere), and the forecast for the rest of the season is still warmer than normal”, stated Morgan Stanley. “Due to the forecast, our tactical estimate of the rise of gas (for the first trimester) almost certainly won’t materialize”, he added.’

Similar to the observations noted for the Pret and SP, the reader should note that examples of the certainty markers listed above with other verb forms than the MF are possible, however, the distributional patterns shown in the examples of the MF above are tendencies we find in the sample.

In Sections 6.1-6.3 above, we have presented qualitative evidence of the Pret, SP, and MF, where the examples contradict an explanation in terms of Time, but do not contradict an explanation in terms of Certainty. In the next Section we will analyze the distribution of the forms Pret, SP, and MF in minimal pairs in the hopes of highlighting the application of the Certainty meanings in a controlled linguistic environment.

6.4. Minimal Pairs

In this Section we begin by looking at the occurrence of the Pret, SP, and MF, in artificially constructed minimal pairs. Our goal is to be able to note changes in the level of communicated certainty as the form changes but the linguistic context in which the form occurs stays the same. The increases and decreases in certainty are supported by the effect on the English translation, not by contextual material.

We start by looking at examples that were already presented in Chapter 3 as evidence that the Time meaning hypothesis did not fit the data. The purpose of revisiting these examples is twofold: (1) to illustrate that the qualitative data that proved problematic for Time is not so for Certainty; and (2) that the fact that the Certainty
meaning hypothesis has three grades can explain the speaker’s choice between the forms Pret, SP, and MF in ways that Time cannot. We revisit the examples in this section and provide a translation that, in light of the new meaning hypothesis, reflects the element of Certainty in the message. We do so by adding Certainty adverbs in the English translation.

Example (21) is one of the many uses of the Pret that the RAE labels ‘anticipatory function’. Here the speaker is referring to a person who has not yet been caught, but that surely will be caught in the immediate future; in other words, the Pret, with its traditional meaning of past, is associated with a message partial involving the notion of future. By hypothesizing that the meaning signalled by Pret is related to Certainty and not Time, example (21) ceases to be contradictory. Furthermore, we see that by providing translations that reflect the element of Certainty in the message, the interpretation related to the degree of speaker Certainty decreases as we move from the Pret in example (21), to the SP in example (22), to the MF in example (23), in the same linguistic context. The reader should note that example (21) is taken from the RAE, whereas examples (22) and (23) are created by me in order to make the point; the same applies to the remaining examples of this section. The translations are all ours.

(1) Ya lo agarraron (Pret) (RAE 2009: 1738)

Already him DO seize PRET 3PL

‘(They) surely are about to catch him’

(2) Ya lo agarran (SP)

Already him DO seize SP 3PL

‘(They) will catch him soon’
(3) Ya lo agarrarán (MF)

‘(They) will perhaps catch him soon’

As reflected in the translations, in (19)-(21) the speaker is the most certain that the person being referred to in the discourse will be caught when the message is communicated using the Pret, the least certain when the message uses the MF, and in an intermediate level of Certainty when the message uses the SP.

We see the same patterns of interpretation in examples (24)-(26) below. The discourse context for this example is that the speaker is telling someone that they have decided to leave a certain location. If we take example (24), which appeared originally in the RAE, and we modify it to include the use of the SP in (25) and the MF in (26), we see that, in light of our new translations, the interpretation changes in terms of certainty, supporting the proposal that the verb forms deployed in (24)-(26) are not related to a semantic substance of Time but rather to one of speaker Certainty.

(4) ¡Ya está, nos fuimos (Pret)! —dijo el viejo.

‘It’s done, we are certainly leaving!’ said the old man. Both went into Don Juan’s room.’
Los dos entraron al cuarto de don Juan.

‘It’s done, we should leave!’ said the old man. Both went into Don Juan’s room.’

Similarly, example (27), also from Chapter 3, also originally appeared in the RAE as yet another illustration of the ‘anticipatory function’ of the Pret in message partials with a future interpretation. Here the speaker is telling someone that they are about to be discovered. If we amplify example (27) to include the use of the SP in (28) and the MF in (29), we see in our new translations that the interpretation for the message changes based on the level of Certainty the speaker wishes to communicate.

Ya nos descubrieron (Pret) (=Nos van a descubrir ahora mismo)

(RAE 2009: 1738)

‘(They) surely are about to discover us already (= (They) will discover us now)’

Ya nos descubren (SP)

Already us DO 1PL discover SP 3PL

‘(They) are likely about to discover us now’
(9) Ya nos descubrirán (MF)

Already us DO 1PL discover MF 3PL

‘(They) are maybe about to discover us now’

Along these same lines, example (30) was part of the data used in Chapter 1 to illustrate the problems of the Time meaning hypothesis, as this example is an occurrence of the Pret used with a future interpretation. Here the speaker is telling someone that by two o’clock they will surely be finished with a particular task. If we amplify example (30) to include the use of the SP in (31) and the MF in (32), we see that our new interpretations for the message changes based on the level of Certainty the speaker wishes to communicate.

(10) Para las dos ya lo acabé (Pret). (Lope Blanch 1991 in Butt & Benjamin 2011: 211)

PREP the two already it DO finish SP 1SG

‘I will surely have it finished by two o’clock’

(11) Para las dos ya lo acabo (SP).

PREP the two already it DO finish SP 1SG

‘I will likely have it finished by two o’clock’

(12) Para las dos ya lo acabaré (MF).

PREP the two already it DO finish MF 1SG

‘I will maybe have it finished by two o’clock

Examples (33)-(35) below, shown here for the first time, are used here to illustrate again the change in certainty when one of the verb forms under analysis is interchanged for another, this change is reflected in our new translations. The discourse context is a
speaker identifying a burglar of a bank. In example (33), using the Pret, the speaker is highly certain that the man he is identifying was the actual person who robbed the bank. As we swap the Pret for the SP in this example, we see that the level of certainty lowers to an intermediate position. Finally, when the MF is used, the interpretation is signals the lowest certainty regarding the identity of the accused.

(13) **Fue** (Pret) él que robó el banco.

Be PRET 3SG REL rob PRET 3SG the bank

‘It was certainly him who robbed the bank’

(14) **Es** (SP) él que robó el banco.

Be SP 3SG REL rob PRET 3SG the bank

‘It was likely him who robbed the bank’

(15) **Será** (MF) él que robó el banco.

Be MF 3SG REL rob PRET 3SG the bank

‘Perhaps it was him who robbed the bank’

The examples provided in Sections 6.1-6.4 are designed to show that the Certainty hypothesis is not contradicted by qualitative evidence as is the Time hypothesis. Providing temporal translations for these examples would actually be misleading, and therefore, by providing new translations in English that reflect the element of Certainty in the message, the data is now able to be explained by our new meaning hypothesis. Moreover, Section 6.4 illustrated that when the linguistic context is kept the same and only the verb form is changed, the message partial associated with the verb form, as indicated by the translation, varies on a scale from high to low levels of certainty with mid occupying the intermediate position. In the next section we will see that contrary to
general belief, when sentences with the Pret are presented in isolation, they are not always given a past interpretation.

7. Interpretation of Pret in Isolation Without Time Adverbs

We begin by looking at the evidence that supports the idea of a ‘default’ past reading for the Pret. We first look at sentences where the Pret appears on its own, without any adverbials, and that receive a past interpretation, as in example (36) below.

(16) Supo (Pret) la respuesta.

‘(He/she) knew the answer’

Most speakers would interpret example (36) above as a message partial set in a past time. Why is it that uses of these verb forms in contexts without temporal adverbials are commonly understood as having temporal interpretations?

The answer lies in the fact that, as discussed above, temporality can be conceptually derived from modality (Jaszczolt 2009: 35). In other words it has been argued that humans conceptualize time in terms of something else more basic, namely the epistemic notion of modal certainty (36). Therefore, although at the message-level the speaker interprets example (36) as having a temporal element, at the level of the linguistic system the form Pret contributes a meaning related to degree of Certainty, not Time. According to Ultan, the past tense generally refers to completed and therefore, certain events (1972: 105-106). Jaszczolt notes that the certainty of a judgement increases with the passage of time (2009: 61). Therefore, one could say that an explanation as to why the general belief is that sentences with the Pret are interpreted as past time messages is because events communicated with linguistic forms signalling higher
Certainty tend to be about events that have taken place in the past, not because messages are communicated using linguistic forms whose meanings signal Past.

Another reasoning as to why we commonly believe that sentences out of context using the form Pret are associated with past messages may have to do with perfective (i.e., completive) aspect. Ludlow (1999: 160) argues that many of the so-called past tense morphemes are actually perfect aspecual markers, as the morpheme –ed in English. Bybee (1995b: 446-447) argues that aspect has a greater morphophonemic effect on the stem of verbs in Spanish over tense markers. We can take Bybee’s analysis one step further by proposing that Pret forms such as puso, quiso, supo, would all be composed of an aspectual morpheme –u- or –ui- indicating perfectivity in addition to a suffixal inflection. Even more in line with our argument here, we can argue that forms such as supo as in example (34) above are composed of an aspectual morpheme –u- and suffixal Certainty morpheme signalling HIGH DEGREE OF CERTAINTY. If this categorization were correct, it would explain why examples of the Pret in isolation without the presence of time adverbs are sometimes interpreted as Past messages. In other words, speakers interpret the perfect aspect of the verb in addition to the signal HIGH DEGREE OF CERTAINTY and infer that the message is set in a Past time context.

In Sections 6.1-6.4 we saw that the qualitative evidence does not contradict the Certainty meaning hypothesis. We can now show that the qualitative evidence does contradict the assumption that sentences with the Pret in isolation without time adverbs are always interpreted as Past messages. Examples (37)-(39) below show the Pret used in examples without time adverbs. Examples (39) is taken from Chapter 4 and originally appeared in the RAE to illustrate an exceptional use of the Pret in Future messages.
(17) Me fui (Pret).

‘(I) left’ (I am leaving) (= said by a speaker before they get up from a chair to leave the room)

(18) Gané (Pret) yo.

‘(I) won’ (I am definitely going to win) (= said by a speaker before the game is over but who is predicted their sure victory)

(19) Me morí (Pret)

‘I died’ (I am surely going to die soon) (= said before the speaker is dead)

As we have seen in this Section, there are several explanations as to why the Pret in isolation appears to be interpreted as Past messages. However, we now also see that this is only a tendency, not a categorical fact. In fact, the assumption that the Pret in isolation, without the presence of time adverbs, is always interpreted as Past messages is simply not true. In the next section we are ready to propose a new meaning hypothesis for the forms Pret, SP, and MF.

8. The Three-Member Hypothesis for Spanish

We are now in a position to argue that the three forms Pret, SP, and MF are members of the three-member grammatical system called Degree of Certainty. The semantic substance is Degree of Certainty and it refers to the speaker’s level of certainty regarding the occurrence of an event. The three-member meaning hypothesis only has the Pret, SP and MF as members. The hypothesis takes very seriously the observed morphology, thus the traditional periphrastic future is an instance of SP every bit as much as the traditional Present. The three-member hypothesis rejects the traditional categorization and denies the existence not only of the meaning of future for the
periphrastic future, but also the very existence of any form of the language called periphrastic future. The reader should remember that this dissertation does not aim to explain the choice between the periphrastic future & SP, but rather, the choice between the Pret, MF, and SP. This is so because by hypothesis the periphrastic future is considered a kind of SP and, therefore, since it is only a single form no choice exists between periphrastic future & SP.

Figure 1.0 is an illustration of the three-member hypothesis. In interpreting Figure 1.0, it is important to remember that the terms Pret, SP, and MF are the names of morphological paradigms, or signals in the CS sense. The terms are used following convention and do not imply any analytical stance other than the one proposed here in terms of Degree of Certainty.
9. Failure to Disprove the Certainty Hypothesis

As previously stated in Sections 6.1-6.4 of this chapter that the qualitative evidence appears to not support a hypothesis related to Time, but the data does not contradict a meaning hypothesis related to Certainty. The reader should note that we are not claiming that the Certainty hypothesis has been proven correct, since a meaning hypothesis can never be proven or disproven, it can simply be shown that the data support or contradict by the data. Our point, then, is that we have failed to disprove the Certainty meaning hypothesis.

In this chapter we have laid the theoretical foundation for a meaning hypothesis based on degree of speaker Certainty. We fulfilled the first step in a Columbia School analysis, which is to present qualitative evidence of the forms in context. In Chapter 5 we will test the proposed meaning hypothesis for the degree of Certainty system by
quantitatively testing this hypothesis through independent linguistic variables. The independent variables of the General Sample of this dissertation will be discussed in further detail in the following chapter.
CHAPTER 5

SUPPORTING DEGREE OF SPEAKER CERTAINTY – GENERAL

NEWSPAPER SAMPLE

1. Introduction

Chapter 4 presented a meaning analysis based on Degree of speaker Certainty for the forms Pret (e.g. canté ‘I sang’), SP (e.g. canto ‘I sing’), and MF (e.g. cantaré ‘I will sing’). The problem under analysis is that the traditional meaning hypothesis centered on the notion of Time fails to account for the complete distribution of the forms. The overall goal of this dissertation is to analyze the communicative intent of narcomessages written by the Mexican cartels. However, before we can make inferences about how the authors of these messages use the verb forms under analysis, we begin by studying how these forms are used in Spanish in general.

The present chapter describes the theoretical and methodological approaches taken in the analysis of the written corpora on which this dissertation is based. As mentioned in Chapter 1, the dissertation makes use of two newspaper samples, the General Newspaper Sample, which acts as the control corpus, and the Narcomessages Sample. The approach to the General Sample is described here and our focus is to quantitatively test the meaning hypothesis presented in Chapter 4.

2. Literature Review

2.1 Introduction to Theoretical Frameworks

This dissertation is informed by two main linguistic theories, Columbia School (CS) theory and variationist sociolinguistics. This section presents the theoretical
backgrounds for CS theory; the principles of variationist sociolinguistics are described in subsequent paragraphs.

A central goal of this dissertation is to come to an understanding of the choices of Spanish verb forms made by writers in general and by writers of narcomessages in particular. (Why is this threat in the present tense rather than in the future? Why is this other one in the future? Why is this incident described in a past tense and not in a present perfect? Why does this message use a periphrastic future and not a morphological future? And so on and so forth.) Given this goal and its explicit concern with language use, a theoretical framework is required that places at the center of its interest the linguistic choices made by language users and the distributions produced by those choices in actual discourse. The approach best suited for such a discourse-centered enterprise is the Columbia School framework (henceforth CS), a semiotic, meaning-centered approach to language whose theoretical constructs, to be described presently, are directly designed to account for the distribution of forms in communication.

Meanings for forms follow the CS stylistic convention of being presented in small caps. The term *meaning*, as it is used in this study, will be defined in the following paragraphs. The hypotheses presented in Chapter 4 argued that the three Spanish verb tenses under discussion contain meanings from the semantic substance of Certainty, and not, as implied in the tradition and strongly suggested by the names of the forms, from the semantic substance of Time. In the analysis that is developed in this dissertation, the Pret is hypothesized to mean HIGH DEGREE OF CERTAINTY, the SP is hypothesized to mean MID DEGREE OF CERTAINTY, and the MF is hypothesized to mean LOW DEGREE OF CERTAINTY.
CS is a meaning-based approach to language that was founded by William Diver in the 1960s (see Diver 1975, Huffman & Davis 2012). The analytical goal of a CS analysis is to explain why certain linguistic forms, over other forms, occur where they do, or alternatively, why they do not simply occur at random (Contini-Morava 1995: 3). The theory views the structure of language as being composed of *signals* and *meanings* (Diver 1975: 3; 1980/2012c: 47), notions that connect directly to the construct of the Saussurean *sign*. CS thus locates the unit of grammatical analysis at the level of the formative or morpheme (and, in some cases, their relative position) rather than at the level of the sentence. As part of this move away from the sentence, CS regards as unsupported the traditional sentential categories, and does not use assume their relevance in analyses unless explicitly and independently justified. Moreover, the position adopted in CS theory is that the linguistic signal itself is a hypothesis that is arrived at as a result analysis and is not assumed to exist a priori (Diver 1980/2012c: 54). This feature of the theory plays an important role in the treatment in this dissertation of the constructions frequently referred to as the periphrastic future and the present perfect, which will be discussed further on.

A signal in CS is hypothesized to be a constant indicator of a particular meaning (Diver 1990/2012a: 478). In contrast to *meaning*, the term *message* refers to the idea or conceptual partial that is inferred by the hearer or reader on the basis of the meanings and the contextual surroundings (Diver 1975: 4; 1980/2012c: 48). Under CS theory, the term message is thus used to refer to what most other semantic theories call meaning. CS is a non-compositional theory of language, that is, a message is not understood as being
composed of the sum of the individual meanings of the linguistic signs used by the speaker or writer (Contini-Morava 1995: 6, Reid 1991: 40).

The foregoing amounts to saying that in CS the explanation for the distribution of forms involves hypothesizing the signals that the forms represent, hypothesizing their meanings, and illustrating the relation between the meanings and the messages to which they make a partial contribution (Contini-Morava 1995: 4). An application of CS theory to the analysis of the Spanish of newspapers will be presented later in this chapter.

The second linguistic theoretical framework used in this analysis is that of variationist sociolinguistics (Labov 1969). This approach is applied in Chapter 6 to examine the data, not as a theoretical point of departure. In the present study, the term independent variable will be used, in its familiar sense, to refer to the internal and external conditioning factors that favor the choice of one linguistic form over the other. The three different verb forms being chosen constitute the dependent variable. The dependent variable here thus has three variants, the Pret, SP, and MF.

2.2 Summary of Literature Review

A review of the theoretical literature has provided us a framework to analyze the choice of form made by language users based on the meanings they wish to express. This framework gives rise to the research question for this chapter presented below.

3. Research Question

The analysis in this chapter aims at answering research Question 2 from Chapter 1 that asked which independent linguistic-variables conditioned the choice made by the speaker between Pret, SP, and MF. In response to this research question, and by
identifying the independent variables that have a statistical influence on the choice of verb form, we will also be testing the Degree of Certainty hypothesis.

4. Methods

4.1 Introduction

This section describes the methodological approaches taken in the analysis of the first written corpora of this dissertation, the General Newspaper Sample.

We begin with a description of the object of study in this analysis. Followed by a description of the sample and overall frequency counts for the sample. Section 4.5 provides a summary of the meaning hypothesis already presented in Chapter 4 for the forms under study. Section 4.6 describes the statistical analysis to be performed and in section 4.7 outline the list of independent variables included in this study. Section 4.8 outlines the overall predictions for this study with regard to the forms Pret, SP, and MF and the independent variables

4.2 Object of Study

In the present study, we use CS to hypothesize the existence of invariant meanings associated for the Spanish verb forms commonly referred to as the preterite (Pret), the simple present (SP), and the morphological future (MF), as in examples (1) - (5) below.

(1) the preterite (Pret)

  e.g. canté

  sing-HIGH CERTAINTY-1sg

  ‘(I) sang’
(1) the simple present (SP)

   e.g. canto

   sing-MID CERTAINTY-1sg

   ‘(I) sing ’

(1) the present perfect as a kind of simple present (SP)

   e.g. he cantado

   have-MID CERTAINTY-1sg sing-past participle

   ‘(I) have sung ’

(1) the periphrastic future as a kind of simple present (SP)

   e.g. voy a cantar

   ir-MID CERTAINTY-1sg a sing-infinitive

   ‘(I) am going to sing ’

(1) the morphological future (MF)

   e.g. cantaré

   sing-LOW CERTAINTY-1sg

   ‘(I) will sing ’

4.3. Sample

We will be studying the distribution of the forms Pret, MF, and SP in naturally occurring discourse. The General Sample is described as follows:

i. General Newspaper Sample. To be used as a control sample. Tokens were collected from two online Mexican newspapers: 1) La Prensa, and 2) El Sol de México. All tokens of the forms Pret, SP, and MF that appeared in these online
publications were collected between the dates Jan 14, 2013 through Jan 21, 2013. Articles related to the topic of violence were excluded from the analysis in order for this sample to act as a control to the Narcomessages Sample.

Although the sample outlined above is used in this dissertation to quantitatively test the meaning hypothesis presented in Chapter 4 for the forms Pret, SP, and MF, we also make use of secondary data examples for presentational purposes, taken from the research literature and from the standard grammars.

### 4.4. Overall Frequency Counts for the General Newspaper Sample

A total of 13,983 verb tokens were collected for the analysis of the General Newspaper Sample. The distributional frequencies are presented in Table 5.1 below.

<table>
<thead>
<tr>
<th>Verb Form in General Newspaper Sample</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preterit</td>
<td>5468</td>
<td>39%</td>
</tr>
<tr>
<td>Simple present</td>
<td>7391</td>
<td>53%</td>
</tr>
<tr>
<td>Morphological future</td>
<td>1124</td>
<td>8%</td>
</tr>
<tr>
<td>Total</td>
<td>13983</td>
<td>100%</td>
</tr>
</tbody>
</table>

### 4.5 Three-Member Meaning Hypothesis

As also previously stated, we propose that the forms divide up the semantic substance of Degree of Speaker Certainty (or Certainty for short), and that Pret means HIGH (that is, High Degree of Speaker Certainty), SP means MID, and MF means LOW.

### 4.6 Statistical Analysis

The methodology of this chapter consists in testing the possible associations (using cross tabulations) between the occurrence of the Pret, SP or MF and five independent linguistic variables. The chi-square analysis identifies whether the observed
values differ from the expected values in a contingency table (George & Mallery 2001: 84).

4.7. Independent Variables

We now list the independent variables that are used in this analysis along with each of the factors associated with each variable. Alongside the name of each independent variable, an abbreviated name for the variable is provided. The justification and the predictions for each of these variables will be presented later.

**Independent Variable 1. Grammatical Number of the Verb Token (Number).**

Factors for this variable:

- singular;
- plural.

**Independent Variable 2. Co-occurrence with Subjunctive Verb Forms in the Following Clause (Subjunctive).**

Factors for this variable:

- subjunctive verb form present in the following clause;
- indicative verb form present in the following clause.

**Independent Variable 3. Verb Token Under Analysis in Main/ Subordinate Clause (Main/Subordinate).**

Factors for this variable:

- main clause in a complex sentence;
- subordinate clause in a complex sentence.
Independent Variable 4. Verb Token Under Analysis in First/ Second Conjunct Clause (Conjunct).

Factors for this variable:

- first conjunct;
- second conjunct.

Independent Variable 5. Presence of Indirect Reported Speech (Reported Speech).

Factors for this variable:

- indirect speech present;
- indirect speech absent.

4.8 Overall Predictions

In direct relation to the three-member hypothesis, we expect that each independent variable will show scalable tendencies that increase across the three forms Pret, SP, and MF. And we expect the higher frequencies to appear with the forms at each end of the Certainty system. However, we do not expect that the differences between any two pairs of adjacent forms will be statistically significant in every case.

5. Results

5.1 Cross-Tabulation Tables for Independent Variables

In this section we present the quantitative analysis of the five independent variables described above. Additional independent variables were analyzed but did not reach statistical significance. As previously mentioned, each of the three forms under analysis, Pret, SP, and MF, represents a factor of the dependent variable.

We now specify the independent variables and their factors, and provide a justification for their use in the present study. Each variable will be named in full and
with a one- or two-word abbreviation. For each independent variable, qualitative examples illustrating the expected tendencies will be presented first, followed by a cross-tabulation contingency table. Each cross-tabulation table will present a Chi-Square value and a probability value in order to show whether the observed distribution of the forms is statistically significant (e.g. not due to random chance). A summary and discussion of the results will be presented at the end of this chapter.

**Independent Variable 1. Grammatical Number of the Verb Token (Number).**

Factors for this variable:

- singular
- plural

The variable whose name we abbreviate as ‘Number’ is taken from previous studies that analyzed the SP, MF and periphrastic future as alternative ways of expressing futurity in Spanish (Orozco 2005, 2007, Gudmestad & Geeslin 2011). The reader should remember from Chapter 2 that in the present study the periphrastic future is taken as a kind of SP. Orozco (2005) found that singular subjects favoured the use of the SP, whereas plural subjects favoured the use of the MF. Although Orozco (2005) did not present any predictions for this variable, the author did offer an explanation for the observational patterns found in his results. According to Orozco, the MF appears more frequently with plural subjects because such subjects, especially when they are found with what Orozco calls a null pronoun subject, tend to have less specific referents (2005: 61).

The present study predicts the **High Certainty** Pret to favour verbs in the singular over verbs in the plural more than will the **Mid Certainty** SP and the **Low**
CERTAINTY MF, in that order. Example (1) below shows the more likely expected tendency for the Pret (Pret with a singular verb) and example (2) shows the less likely expected tendency (Pret with a plural verb).

(1) Solicité (Pret) mi pasaporte y me han dicho que estará en unos 15 días.

(Organización Editorial Mexicana, 2013, para. 5)
‘I applied for my passport and they told me it would be ready in 15 days.’

(2) Durante enero-septiembre los excursionistas aumentaron (Pret) 4.7 por ciento en su gasto medio, en comparación con el mismo periodo de 2011. (Organización Editorial Mexicana, 2013, para. 4)
‘During January-September travellers’ average spending increased 4.7 percent compared to the same period in 2011.’

The reasoning for this prediction is as follows. The meaning signalled by the forms labelled ‘singular’ and ‘plural’ have been hypothesized to carry the meanings of ONE and MORE THAN ONE (Reid 1991). Following a CS line of thought, we predict that speakers will have higher Certainty with regard to statements about singular subjects because the speaker is only responsible for the knowledge of the actions of one person. As more referents are introduced into the discourse the speaker’s level of Certainty decreases because having accurate knowledge over the activities of more than one person becomes more difficult. A similar line of reasoning applies to inanimate referents where speakers are expected to have higher Certainty in statements about inanimate singular subjects. The cognitive burden of knowing more precise information about any referent, whether animate or inanimate, is lessened when the referent is singular and the speaker is only responsible for having precise information over one discrete referent. The logic behind
this argument is that as the number of referents in the discourse increases, the speaker’s precision of knowledge decreases (Table 5.2).

### Table 5.2
Cross-Tabulation of Verb Form by Number

<table>
<thead>
<tr>
<th>Number</th>
<th>Pret</th>
<th>MID</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Singular</td>
<td>4502</td>
<td>82%</td>
<td>5229</td>
</tr>
<tr>
<td>Plural</td>
<td>966</td>
<td>18%</td>
<td>2159</td>
</tr>
</tbody>
</table>

\[\chi^2 = 242.11, df = 2, p < .001\]

The prediction is amply confirmed in the results in Table 5.2. The table shows that of all Prets, the vast majority (82 percent) are in the singular, whereas the percentage of singulars diminishes in the SPs (71 percent) followed closely by the MFs (70 percent). Thus the table confirms the expectation that the \texttt{HIGH} Certainty Pret should be the form to most co-occur with the meaning \texttt{ONE}. The table shows that the use of singular forms diminishes in a direct correlation with the diminishing strength of hypothesized Certainty contained in the meanings of the verb forms. However, the reader will have noted that the table does not confirm the prediction with regard to the difference between the SP and the MF; there is no contradiction of the prediction, but no confirmation either, as the percentage of singular SPs is only barely larger than the percentage of singular MFs.

In regards to Table 5.2, it is important for the present analysis to note that whereas the Certainty hypothesis can readily explain the stronger singular favouring by the Pret and the weaker singular favouring by the MF, these distributional tendencies do not seem to connect at all with a meaning hypothesis related to Time, where the Pret would be
presumed to signal the meaning Past and MF the meaning Future, and where neither
temporal setting would appear to be connectable with the semantic substance of Number.

**Independent Variable 2. Co-occurrence with Subjunctive Verb Forms in the**

**Following Clause (Subjunctive).**

Factors for this variable:

- subjunctive verb form present in the following clause;
- indicative verb form present in the following clause;

This independent variable analyzes whether the first finite verb that appears in the
following clause of a complex sentence is in the subjunctive or the indicative. This
skewing has not been studied by previous literature. This study predicts that the **LOW CERTAINTY** forms of the MF will have a higher frequency of co-occurrence than the SP or the Pret when the verb following it is in the subjunctive. An example of the favoured
tendency is in (3) below (MF with a following subjunctive); an example of the
disfavoured tendency is in (4) below (MF with a following indicative).

(3) El secretario general de las Naciones Unidas, Ban Ki-moon, dijo que **presionará** (MF) a los líderes mundiales para que **logren** un acuerdo vinculante, de aquí a 2015, para combatir el calentamiento global. "El mes pasado, en Doha, mantuvimos en marcha las negociaciones sobre el clima.” (AFP, 2013, para. 1)

‘The secretary of the United Nations, Ban Ki-moon, said that he will pressure world leaders to come to a binding agreement, from now to 2015, to combat global warming. “‘Last month, in Doha, we continued with negotiations about the climate.’”
(4) La operación le demandará (MF) a LAN, que el año pasado se fusionó con la brasileña TAM para formar la línea aérea LATAM, una inversión de 3.500 millones de dólares. (AP, 2013, para. 4)

‘The operation will require LAN, who merged with the Brazilian TAM to form LATAM last year, to invest 3.5 billion dollars.’

The reason for this prediction is that verbs in the subjunctive are seen in the present study as carrying meanings of Surprise or Contrary to Expectation, as previously mentioned in Chapter 4, and therefore are compatible with the lower Certainty meanings signaled by the MF. Speakers do not often code a facet of an event as unexpected or surprising; but when they do, they are more likely to combine it with a form that codes the other facet of the event as less certain about the outcome. As the frequency of the use of the subjunctive increases, the Degree of Certainty communicated by the speaker should decrease.

Therefore, the use of the subjunctive in the following clause should co-occur most frequently with the use of the MF, followed by the SP and ending with the Pret (Table 5.3).

**Table 5.3**
*Cross-Tabulation of Verb Form by Subjunctive Following in a Subordinate Clause*

<table>
<thead>
<tr>
<th>Type of Clause</th>
<th>HIGH</th>
<th>MID</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pret</td>
<td>MID</td>
<td>MF</td>
</tr>
<tr>
<td>Subjunctive following in a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>subordinate clause</td>
<td>96</td>
<td>121</td>
<td>19</td>
</tr>
<tr>
<td>Indicative following in a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>subordinate clause</td>
<td>1694</td>
<td>1078</td>
<td>114</td>
</tr>
<tr>
<td>Total</td>
<td>1790</td>
<td>1199</td>
<td>133</td>
</tr>
</tbody>
</table>

χ² = 31.97, df = 2, p < .001
Table 5.3 compares the presence the subjunctive and the indicative in the following clause, and we find our expected tendencies just outlined confirmed regarding the favouring of the MF. The table shows that whenever the subjunctive is used, it co-occurs most often with the MF (14 percent), followed by the SP (10 percent), and then by the Pret (5 percent). The table shows that the use of the subjunctive increases in a direct correlation with the diminishing strength of the hypothesized Certainty contained in the meanings of the forms Pret, SP, and MF. Again, these distributional patterns regarding the mood of the verb in the following clause can be explained under a Certainty meaning hypothesis but do not appear to be explainable using a Time hypothesis for the forms Pret, SP, MF.

Moreover, we also provide a cross-tabulation for this variable that excludes cases of relative clauses, as the use of the subjunctive in non-restrictive relative clauses is expected to be infrequent (Table 5.4).

**Table 5.4**

Cross-Tabulation of Verb Form by Subjunctive Following in a Subordinate Clause (Excluding Relative Clauses)

<table>
<thead>
<tr>
<th>Type of Clause</th>
<th>Verb Form</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HIGH</td>
<td>MID</td>
<td>LOW</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pret</td>
<td>SP</td>
<td>MF</td>
<td></td>
</tr>
<tr>
<td>Subjunctive following in a subordinate clause</td>
<td>45</td>
<td>53</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Indicative following in a subordinate clause</td>
<td>957</td>
<td>190</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1002</td>
<td>243</td>
<td>36</td>
<td></td>
</tr>
</tbody>
</table>

χ² = 93.95, df = 2, p < .001

Table 5.4 above excluded cases of relative causes and the results show similar numerical tendencies as Table 5.3 that did include these environments. The results provided in
Table 5.4 above further support our predictions that the subjunctive would co-occur more often with the form MF.

**Independent Variable 3. Verb Token Under Analysis in Main/ Subordinate Clause (Main/Subordinate).**

Factors for this variable:

- main clause in a complex sentence;
- subordinate clause in a complex sentence.

The independent variable Main/ Subordinate is taken from previous studies (Díaz-Peralta & Almeida- Suárez 2000, Orozco 2005). This variable was included in this study to determine whether the type of clause where the verb token appears affects the distribution of the forms Pret, MF, and SP. The prediction is that the **HIGH CERTAINTY Pret** will occur more frequently than the **MID CERTAINTY SP** and **LOW CERTAINTY MF** in main clauses, in that order. Example (5) below shows the more likely expected tendency for the Pret, whereas example (6) below shows the less likely distributional expectation.

(5) Otros contingentes que también se unieron a la movilización **fueron** (Pret) los estados de Tlaxcala, Zacatecas y Puebla. (Cruz & Gandaria, 2013, para. 4)

‘Other contingents that also united to the movement were the states of Tlaxcala, Zacatecas, and Puebla.’

(6) Los resultados del banco fueron impulsados por menores provisiones por deudas incobrables, que **cayeron** (Pret) a 2.200 millones de dólares desde los 2.900 millones de un año atrás. (Reuters, 2013, para. 4)

‘The bank’s results were driven by decreased provisions resulting from bad debt, which fell to 2.2 billion dollars from 2.9 billion dollars a year ago.’
The reasoning for this prediction is that more important information will be communicated via the main clause and less important, secondary information, will be communicated via the subordinate clause. The speaker will likely describe as more certain the information they consider to be important, and as less certain the information they deem to be of secondary importance (Table 5.5).

Table 5.5
Cross-Tabulation of Verb Form by Main/Subordinate Clause in a Complex Sentence

<table>
<thead>
<tr>
<th>Type of Clause</th>
<th>Verb Form</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HIGH</td>
<td>MID</td>
<td>LOW</td>
<td>HIGH</td>
<td>MID</td>
</tr>
<tr>
<td></td>
<td>Pret</td>
<td>SP</td>
<td>MF</td>
<td>Pret</td>
<td>SP</td>
</tr>
<tr>
<td>Main clause in a complex sentence</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>1404</td>
<td>61%</td>
<td>811</td>
<td>29%</td>
<td>111</td>
</tr>
<tr>
<td>Subordinate clause in a complex sentence</td>
<td>914</td>
<td>39%</td>
<td>1974</td>
<td>71%</td>
<td>385</td>
</tr>
<tr>
<td>Total</td>
<td>2318</td>
<td>100%</td>
<td>2785</td>
<td>100%</td>
<td>496</td>
</tr>
</tbody>
</table>

$\chi^2 = 597.53, df = 2, p < .001$

The meaning hypothesis articulated in this dissertation led to a prediction of greater co-occurrence of the meaning High Certainty with the presence of more important information, and a greater co-occurrence of the meanings Mid and Low Certainty with the presence of less important, secondary information. That is, we expected to find the High Certainty Pret co-occur more often with main clauses over the other two verb forms. The predictions just outlined are confirmed in Table 5.5. The table shows that of all the three tenses, the Pret co-occurs most with main clauses (61 percent), followed by the SP (29 percent), and then by the MF (22 percent). The use of main clauses diminishes in a direct correlation with the diminishing strength of hypothesized Certainty in the meanings of the verb forms. Moreover, the table also shows that the use of subordinate
clauses increases in a direct correlation with the diminishing strength of the hypothesized Certainty in the meanings of the verb forms. A Certainty meaning hypothesis is able to explain these tendencies regarding main and subordinate clauses; however, the reader should note that a Time hypothesis leaves these observations unexplained.

**Independent Variable 4. Verb Token Under Analysis in First/Second Conjunct Clause (Conjunct).**

Factors for this variable:

- first conjunct;
- second conjunct.

This independent variable has not been studied in previous literature. It is included in this dissertation to determine whether the use of first and second conjuncts influences the occurrence of the verb forms Pret, SP, and MF. The prediction is that the Pret will occur more often in first conjuncts, followed by the SP, then the MF, in that order. Example (7) below shows the more likely distributional tendency for the Pret, whereas example (8) shows the less likely expectation.

(7) *El amparo del STUNAM fue* (Pret) interpuesto por el equipo jurídico del sindicato y tiene como asesor al abogado laboral Manuel Fuentes, entre otros. ‘The protection of STUNAM was brought by the legal department of the union and it its assessor is the labor lawyer Manuel Fuentes, among others.’ (Cruz & Gandaria, 2013, para. 11)

(8) *Las estrellas realmente dieron un paso más esta temporada y asumieron* (Pret) muchos riesgos. (Reuters, 2013, para. 11) ‘The stars really went a step further this season and took a lot of risks.’
The reason for the prediction that higher Certainty forms will co-occur more often than lower Certainty forms with first conjuncts is because first conjunct environments communicate primary, important information that the speaker is likely to regard with a higher Degree of Certainty. Lower Certainty forms are expected to co-occur more often in second conjunct environments because the speaker will be have less Certainty over secondary, less relevant information (Table 5.6).

Table 5.6
Cross-Tabulation of Verb Form by First/Second Conjunct Clause

<table>
<thead>
<tr>
<th>Type of Clause</th>
<th>Verb Form</th>
<th>HIGH</th>
<th>MID</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pret</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>First conjunct</td>
<td>345</td>
<td>60%</td>
<td>245</td>
<td>46%</td>
</tr>
<tr>
<td>Second conjunct</td>
<td>233</td>
<td>40%</td>
<td>287</td>
<td>54%</td>
</tr>
<tr>
<td>Total</td>
<td>578</td>
<td>100%</td>
<td>532</td>
<td>100%</td>
</tr>
</tbody>
</table>

$\chi^2 = 33.13$, $df = 2$, $p < .001$

The meaning hypothesis proposed in this dissertation led to a prediction of greater co-occurrence of the meaning **HIGH CERTAINTY** over lower Certainty meanings and primary information communicated in first conjunct environments. The prediction is confirmed in the results presented in Table 5.6. The table compares the presence of the verb token under analysis as it appears in either first conjuncts or second conjuncts. It shows that the use of first conjuncts co-occurs most often with the Pret (60 percent), followed by the SP (46 percent), and then by the MF (35 percent). This table shows that the use of first conjuncts diminishes in a direct correlation with the diminishing strength of hypothesized Certainty contained in the meanings of the verb forms. Table 5.6 also shows that the use of second conjuncts diminishes in a direct correlation with the increasing strength of the hypothesized Certainty contained in the meanings of the forms Pret, SP, and MF. Again,
these observable patterns in the data regarding first and second conjunct clauses can be explained under a Certainty meaning hypothesis but are not likely to be explainable under a hypothesis centred on Time.

**Independent Variable 5. Presence of Indirect Reported Speech (Reported Speech).**

Factors for this variable:

- indirect speech present;
- indirect speech absent.

This independent variable was included in this study to determine whether the occurrence of indirect speech supports the Degree of Certainty meaning hypothesis. It has not been studied in previous studies. This study predicts the **LOW CERTAINTY** MF will favor the presence of indirect speech over the **MID CERTAINTY** SP and the **HIGH CERTAINTY** Pret, in that order. Example (9) below shows the more likely distributional tendency for the MF.

(9) Finalmente, dijo que la información de las acciones y los programas será (MF) información pública, de manera tal que la gente de cada comunidad sepa a qué se van a destinar esos recursos, cuántos recursos y quién va a gastarlos. (Reuters, 2013, para. 11)

‘Finally, (he) said that the information of the actions and the programs will be public information, so that the people of each community know what those resources will go towards, how many resources, and who will spend them.’

The reason for this prediction is that speakers will have lower Certainty when communicating information that is second hand and therefore, will select lower Certainty meanings (Table 5.7).
Table 5.7
Cross-Tabulation of Verb Form by Presence of Indirect Reported Speech

<table>
<thead>
<tr>
<th>Reported Speech</th>
<th>HIGH Pret</th>
<th>MID SP</th>
<th>LOW MF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect speech present</td>
<td>573 10%</td>
<td>1653 22%</td>
<td>335 30%</td>
</tr>
<tr>
<td>Indirect speech absent</td>
<td>4891 90%</td>
<td>5735 78%</td>
<td>788 70%</td>
</tr>
<tr>
<td>Total</td>
<td>5464 100%</td>
<td>7388 100%</td>
<td>1123 100%</td>
</tr>
</tbody>
</table>

$\chi^2 = 404.54, df = 2, p < .001$

The prediction just outlined is confirmed in Table 5.7. The table compares the presence and absence of indirect reported speech. It shows that the presence of indirect speech co-occurs the most with the LOW CERTAINTY MF (30 percent), followed by the MID CERTAINTY SP (22 percent), and then by the HIGH CERTAINTY Pret (10 percent). This table shows that the use of indirect speech to communicate second-hand information diminishes in direct correlation with the increase in strength of hypothesized Certainty signaled by the meanings of the verb forms. As with our previous variables, a Time meaning hypothesis cannot explain the tendency for the MF to co-occur more with indirect speech, however if we look at the meaning of the form MF as related to Certainty, these observational facts can be readily explained.

5.2 Summary of Findings

A total of 13,983 tokens were collected in the General Newspaper Sample. These tokens were analyzed across five independent variables. We saw that the variables Grammatical Number of the Verb Token Under Analysis, Co-occurrence with Subjunctive Verb Forms in the Following Clause, Verb Token Under Analysis in Main/Subordinate Clause, Verb Token Under Analysis in First/Second Conjunct, and Presence
of Indirect Reported Speech all provided results that were in support of the meaning hypothesis proposed in this dissertation. All of the variables included in this analysis with the exception of Number, showed scaled numerical tendencies in line with a three-member Certainty hypothesis. However, the reader should note that although most of the variables provided evidence in favour of the three-member Degree of Certainty system, the results for the variable Number supported a two-member Degree of Certainty system rather than a three-member system, since the frequencies for the SP and MF were only slightly different from each other. These five independent variables reached statistical significance in the chi-Square analyses.

6. Discussion

The distributional patterns found in the results for the independent variables in this analysis cannot be explained by a meaning hypothesis centered on the semantic substance of Time. However, if we view the meanings of the forms Pret, SP and MF as being related to Degree of speaker Certainty than these distributional tendencies can be readily understood. For this reason, we view this chapter as providing quantitative support for the Degree of Certainty meaning hypothesis.

The results provided in the current study can contribute to the existing literature on the meanings of the verb forms under analysis. The findings in this chapter suggest that a meaning hypothesis centered on modality, as previous authors have noted, is better suited for the analysis of the forms Pret, SP and MF, rather than a meaning hypothesis centered on the notion of Time.
7. Conclusion

The chapter aimed at answering research Question 2 from Chapter 1 that asked which independent linguistic-variables conditioned the choice made by the speaker between Pret, SP, and MF. In response to this research question, we can say that the variables Grammatical Number of the Verb Token Under Analysis, Co-occurrence with Subjunctive Verb Forms in the Following Clause, Verb Token Under Analysis in Main/Subordinate Clause, Verb Token Under Analysis in First/Second Conjunct, and Presence of Indirect Reported Speech all condition the choice of verb form made by the speaker. These results illustrate how speakers use these forms in Spanish in general.

In the following chapter we will analyze whether the dependent variable will show a statistical skewing in the Narcomessages Sample with regard to behavioural variables found at the crime scene.
CHAPTER 6
SUPPORTING DEGREE OF SPEAKER CERTAINTY – NARCOMESSAGES
SAMPLE

1. Introduction

In this dissertation we have so far presented a Columbia School (CS) meaning analysis of the three forms in Spanish commonly referred to as the preterite (Pret, e.g. canté ‘I sang’), morphological future (MF, e.g. cantaré ‘I will sing’), and the simple present (SP, e.g. canto ‘I sing’). As previously mentioned in chapters 4 and 5, the forms Pret, SP, and MF signal, by hypothesis, the meanings HIGH, MID, and LOW Degree of Speaker Certainty. As previously stated in Chapter 1, a grammatical study of verbal inflections is still needed in the existing literature on threat assessment.

The current chapter focused on establishing a theoretical relationship between plan knowledge, language and behaviour. As this one of the first studies in the literature to examine the meanings signaled by verbal inflections in written threats in relation to behaviours at the crime scene, our analysis of narcomessages is meant in this first instance to be a correlational study, observing how linguistic features, namely verbal inflections, may correlate with behavioural features. This study did not pretend to infer any claims of causation, or any assertions about behaviour. Our broad goal was simply to uncover possible correlations between the language used in threatening communications, behaviours observed at the scene, and whether or not the outcome of the threat was realized in real life. This preliminary study of narcomessages, aimed at uncovering possible correlations, can be used in future research to further our understanding of narcomessages by attempting to provide a baseline upon which further explorations can
move on from looking at the behaviours offenders who author narcomessages engage in. Nine crime scene behaviours were selected for analysis because they were what was observable to the analyst at the scene, and this provided an objective measure for analysis. We took these behaviours as possible indicators of offense planning, according to our own definition of the term planning.

This chapter is organized as follows: Section 2. Review of the literature; Section 3. Research questions for this study; Section 4. Methods; Section 5. Results; Section 6. Discussion; and Section 7. Conclusion.

2. Literature Review

2.1 Introduction

The way offenders communicate threats may correlate with behaviours found at the crime scene and also whether or not the violent outcome of the threat is realized (see Smith 2008, Gales 2010). Specifically there may be a correlation between expressions of linguistic Certainty and behavioural variables that may be possible indicators that offense planning has taken place. Central to understanding how the language used in threatening communications correlates to knowledge about the offense, behaviours at the crime scene, and the realization of future acts of violence is understanding the relationship (see Morris & Ward 2005) between thought, language, and behaviour, and the role that cognitive planning plays in this interaction. We begin our review by studying this complex relationship and note that that many authors have looked at cognitive planning and found that it is mediated by language as a symbolic representation (Das, Kar & Parrila 1996, Miller, Galanter & Pribam 1960, Benson 2009), and is an underlying process that affects behaviour (Sacerdoti 1977, Vygotsky 1978, Davies 2005).
2.3 we suggest that there is a relationship between cognitive planning and linguistic certainty in general, and more specifically in the environment of threatening communications. In Section 2.4 we examine the existing literature on offense planning, we note that several studies have looked at offense planning and provided their own criteria for the selection of variables considered to be indicative of planning. In Section 2.5 we provide definitions for the terms plans and planning according to the existing literature, and we also present our own definitions for these terms. The definitions we provide in this section will allow us to later justify the selection of crime scene variables included in this analysis. In Section 2.6 we provide a brief introduction to the theoretical framework used in this analysis before finally concluding our literature review with a summary of what we have looked at and link it back to our overall aim stated directly below.

This chapter aims to determine whether there is a relationship between plan knowledge, and language and behaviour in general, and more specifically, whether there is a relationship between a particular manifestation of language (linguistic Certainty) and a particular manifestation of knowledge (plan knowledge) in the context of threatening communications that correlates with behaviours found at crime scenes. By establishing this relationship we will be justified in hypothesizing that behavioural variables that we consider indicative of offense planning may correlate with linguistic Certainty meanings in written threats. This study will provide the groundwork for future research to improve our findings from simply a correlational study to eventually being able to make assertions about these behaviours.
2.2 Thought, Language, Behaviour and the Planning Process

In order to understand how linguistic certainty, as encoded in the Certainty meanings of the Spanish verb forms under study, relates to behaviours that we take as indicative of offense planning, we begin by examining the relationship between thought, language and behaviour, and cognitive planning. We break down this complex relationship by first examining thought and language in Section 2.2.1, followed by plan knowledge and language in Section 2.2.3, and lastly the mental representations of plans, behaviour and language use is discussed in Section 2.2.4.

2.2.1 Thought and Language

Throughout the last century of linguistic study, the connection between thought and language has been a scholarly concern in linguistics and psychology dating back to the early fifties. One of the earlier works by Carroll (1953) stated that language is one of the modes of thought and speech is one of thought’s possible outcomes (104). For Carroll, language and thought were not inseparable, but rather, the author viewed language and thought existing in constant interaction (1953: 104). Luria’s (1976) work followed Carroll’s (1953) analysis, stating that language mediates human perception and that linguistic units carry with them semantic meaning but also the consciousness reflecting the external world (9). By the eighties, Vygotsky’s (1986) seminal work noted the connection between thought and speech. For Vygotsky thought was embodied in speech, and speech was the means by which thoughts are formed and by which they are expressed (1986: 212, 218). Vygotsky also argued that word meaning was the basic unit that unites thought and word, making meaningful speech a union of word and thought (1986: 212).
In summary, the positions taken by these authors are relevant here as they illustrate the role that language plays in the process of thinking. Our position here, and in line with the authors stated above, is that language is related to thought and knowledge encompasses thought. Therefore, circling back to our overall goal of this chapter, we are now claiming that language is related to knowledge. In the next section we will continue our attempt to understand the relationship between plan knowledge, language and behaviour by focusing on only one manifestation of thought known as plan knowledge and its relationship to language.

2.2.2 Plan, Knowledge and Language

We move now to the relationship between a particular materialization of thought, namely plan, knowledge and language. This section argues that cognitive planning constitutes knowledge and, moreover, that language symbolically represents the mental process of plan formation. Plans and planning are described as a set of conceptual abilities that reflect knowledge (Schonlick & Friedman 1987: 29). Plans have been viewed as ordered knowledge structures which encode purposive sequences of actions or behaviours (Sacerdoti 1977: 5; Abelson & Black 1986: 3, Galambos, Abelson & Black 1986: 101, Miller, Galanter & Pribam 1960: 18). Most importantly, perhaps, is that scholars have argued that planning is a cognitive function mediated by language (Das, Kar & Parrila 1996: 104; Miller, Galanter & Pribam 1960: 38, Benson 2009: 44).

Prior literature has noted that one of the central roles of language is to organize higher mental processes, one of which is cognitive planning (Das, Kar, Parrila 1996: 107). Several scholars have noted the relationship between language use and cognitive planning (Berger 1997, Benson 2009, Kopp 2009, Scholnick & Friedman 1987). Plans
are understood as acting as the connection between knowledge, evaluation and speech (Morris & Ward 2005: 3). In fact some authors have argued that the origins of cognitive planning are attributable to the acquisition of language (Scholnick & Friedman 1987: 30). Cognitive plan formation involves a self-conscious use of language (Miller, Galanter & Pribam 1960: 104). Literature in first language acquisition has noted that in early development, children verbally produce planning speech prior to carrying out an action. In this case, the linguistic output of children as related to planning guides their ensuing behaviour (Das, Kar & Parrila 1996: 110). Gradually as the child develops, their external verbalization of plans becomes internalized and mediated by inner speech (Vygotsky 1978: 25-27; Das, Kar, & Parrila 1996: 110). When children acquire the ability to turn speech inward, they learn to mentally plan their activities (Vygotsky 1978: 28-29). The role of language in cognitive planning is essential as planning would not be possible without a semiotic mediation for the formation of plans to occur (Das, Kar & Parrila 1996: 111). Therefore, cognitive plans are mediated by language that results in the production of planning speech by the speaker, a process that is acquired in early childhood.

To summarize, the authors cited above show the relationship between one particular kind of knowledge, namely, plan knowledge, and language. Specifically, their studies established that language plays an important role in cognitive planning, as it is by means of language that plan formation is mediated. We have so far established the relation between knowledge, plan knowledge and language, what is still missing is an understanding of how behaviour plays a role in this complex interaction. The next section
will be centred on the relationship between mental representations of plans, behaviour and language use.

2.2.3 Mental Representations of Plans, Behaviour and Language Use

In the previous section we analysed the relationship between cognitive processes related to planning (thought) and their symbolic representation (language). In this section, we focus on the relationship between cognitive plans, behaviour and language use. As previously stated in Section 2.3, a connection between language and thought has been articulated in the literature, and since knowledge encompasses thought, a connection between language and knowledge has also been inferred. Prior studies have argued that plans are the interconnection between knowledge and behaviour (Morris & Ward 2005: 14). It has been argued that future action is first planned symbolically prior to being realized (Das, Kar, Parrila 1996: 111). Both knowledge and behaviour are said to have hierarchical organization (Morris & Ward 2005: 3, 14, 15) and as such plans are best conceived within a framework of understanding the structure of behaviour (Morris & Ward 2005: 15).

Existing literature suggests that plans are the necessary building blocks of structured behaviour and action (Morris & Ward 2005: 3, 17). Plans have been viewed as “conduct controllers” (Bratman 1999: 29) that organize, control, direct and shape behaviour (Miller, Galanter, Pribam 1960: 17; De Lisi 1987: 83, 105; Berger 1997; Bratman 1999: 2, 28). The act of planning implies that the agent is able to regulate their behaviour according to the plan (Das, Kar & Parrila 1996: 108). Bratman (1999:2) notes that as humans we have the ability to devise and execute plans, and determine in advance plans regarding the future.
In our current study we take Morris & Ward’s (2005: 15) argument that plans are best conceived within a framework of understanding the structure of behaviour even further, by proposing that if knowledge is best understood within the framework of behaviour, so too must language be understood within this same delimitation since language is the symbolic representation of knowledge structures. The literature has noted that language is a communicative tool used by speakers and a person’s use of tools has been argued to shape their behaviour (Sacerdoti 1977: vii). Moreover, it has been claimed that the use of language leads to a specific structure of behaviour (Vygotsky 1978: 40). Specifically, future action is initially planned symbolically using language prior to following through on physical actions (Das, Kar, Parrila 1996: 111).

Studies in cognitive psychology have shown that the verbalization of plans positively influences the occurrence of structured, goal-directed behaviour (Davies 2005: 42, 44). For example, Gagne & Smith (1962) conducted an experiment aiming to uncover the effect of verbalization on problem solving by asking a group of participants to verbally their reason for each move in a circle task and also verbally provide a statement once the task was over. The authors found that requiring the verbal group to verbalize their reasoning throughout the experiment led to significantly better performances in the problem solving task (1962: 17). Berardi et al. (1995) asked participants in a control group to verbally explain their solution to a problem. The authors found increased results with participants who verbally explained their solution, however this verbalization needed to be directed towards process rather than the problem itself (1995: 205). Similarly, Davies (2000: 1199) found that verbalization significantly improves problem solving ability only when it is directed at evaluating of moves. In addition, the production
of an utterance has been viewed as part of the planning process since the utterance would achieve the goal of communicating certain intentions (Wilensky 1983: 9). These studies are relevant here because they showcase the role, albeit indirect, that language plays in planning tasks related to problem solving. In this study, we view language as a reflection of knowledge structures that guide behaviour.

In summary, in this section we have seen that there is a relationship between thought and language, and between knowledge and language as knowledge encompasses thought. Moreover, we have also noted that a particular manifestation of thought is plan knowledge, which is formed using language and mediated symbolically by language. In addition, we saw that the cognitive plans mediated by language can act to guide and shape behaviour. The preceding studies allow us to establish the relationship between plan knowledge, language and behaviour. In the following section we will focus on whether there is a relationship between a particular manifestation of language (linguistic Certainty) and a particular manifestation of knowledge (plan knowledge) in the context of written threats.

2.3 Cognitive Planning and Linguistic Certainty in the Environment of Threats

In this section we propose that there is a relationship between cognitive planning and certainty since one of our guiding research questions in this chapter is to study the possible correlations between behaviours indicative of planning and linguistic forms signalling Certainty meanings. We begin this paragraph by proposing that future actions in general (not specific to acts of violence) should be viewed as plans. In the following paragraph we will situate this discussion within the framework of threatening communications. In line with prior literature, we argue that plans represent a speaker’s
beliefs and intentions regarding a goal (Carberry 1990: 17). They are mental representations of what we want to do (National Advisory of Mental Health Council, 1995 as cited in Friedman & Scholnick 2009: 3, Berger 1997: 25). Intentions have been defined as those (general / non-violent) behaviours that are yet to be performed by the speaker from an initiated plan (Morris & Ward 2005: 15). Bratman (1999: 4) notes that future-oriented intentions are set in present time intentional activities. Therefore, when a speaker expresses the intention to do something at a later time, they must also be doing something at the present moment as a preliminary step to facilitate their future conduct (Bratman 1999: 4). Planners project via plans possible future outcomes based on their knowledge of the present world and their intentions (Wilensky 1983: 20; Morris & Ward 2005: 23). Intentions have been viewed as the building blocks of plans (Bratman 1999: 8). Therefore, future actions have been at times been labelled plans (Wilensky 1983: 21).

The proposition presented in this dissertation is that linguistic Certainty, as coded in the Spanish inflections of the verb forms under study, is the verbalization of the speaker’s assessment of cognitive plans since it has already been noted that the act of planning involves assessing a situation (Wilensky 1983: 5). It has been argued that explicitly mentioned events are said to be part of plans (Wilensky 1983: 5). In the environment of threatening communications, plans constitute the future actions of the speaker. Within the confines of written threats, the lexical stem of the verb token under study represents the overall future action (plan) and the verbal inflection represents the assessment by the speaker that this action will be realized at a future time (the act of threatening is always future-oriented). The assessment by the speaker on whether the event will or will not occur in the future is conceived on a certainty scale (see Berger
1997: 7) and linguistically signalled by the inflectional forms Pret, SP and MF whose meanings include HIGH, MID, LOW Degree of Certainty (see Chapter 4).

To summarize, this section proposed that there is a relation between linguistic certainty and verbal realizations of the assessment of plans since Certainty meanings are hypotheseized to be signalled via verbal inflections, thus bringing us one step closer to conducting an analysis of narcomessages. However, what is still needed is an understanding of behavioural planning in violent offenses in order to justify our correlating our behavioural variables found at the crime scene with the language used in narcomessage. In the next section we will focus on developing an understanding of offense planning as it pertains to violent crimes.

2.4 Offense Planning

Offense planning has been identified by previous studies as a relevant factor in the study of homicide (see Salfati & Bateman 2005; Salfati & Park 2007; Sorochinski & Salfati 2010; Salfati, Sorochinski & Labuschagne in press 2014). Prior literature on interpersonal violence has suggested that planned offenses involve the offender’s willingness to pre-emptively prepare or arrange to commit violence prior to the occurrence of the crime (Block 1999 as cited in Salfati & Park 2007: 1451). Although some studies in serial sexual murder (Ressler et al. 1986) and serial murder (Canter et al. 2004) have either been invalidated themselves or have helped to invalidate the claim that planning behaviours were the most common underlying factor in offenses, others have found evidence validating the planning typology in different geographical areas and in relation to different crime types as well. For example, Salfati (2003) conducted a study on single homicides in the UK and found that the majority of behaviours present in these
cases (variables 50% and above) reflected evidence of unplanned or impulsive actions by the perpetrator, whereas the behaviours with lower frequency of occurrence (10% to 30% of cases) reflected more purposeful and directed actions by the offender (2003: 503, 506, 509). With regard to serial homicide in the US, Salfati & Bateman (2005) analyzed the effect of planning behaviours in serial murder in America and found a high frequency (30% to 50%) of planning behaviours present in these cases (Salfati & Bateman 2005: 128). The idea is that serial offenders engage in higher levels of planning because their ultimate goal is to commit another offense as opposed to offenders in cases of single homicide where the evidence suggests these crimes are more impulsive (Salfati & Bateman 2005: 130). Salfati & Park’s (2007) focused on a particular cultural environment with its own set of cultural norms. Within the delimitation of Korean homicides, the authors suggested that behavioural variables related to homicide are better understood using two frameworks: expressive/instrumental aggression and planned/unplanned violence (1448). Although the abovementioned studies focused on different crime types (single versus serial homicide), and different geographical locations (UK versus US versus Korea), overall they have shown that planning is an underlying process present in the study of homicide. Before providing our own definition of offense planning, we look at which independent variables prior studies have taken to be indicative of planning.

Sorochinski & Salfati (2010) suggest that behaviours related to offense planning can be divided into pre-offense actions aimed at avoiding detection, or post-offense actions aimed at covering up the crime (116). This study categorizes behavioural variables such as: avoiding and removing forensic trace evidence; bringing the weapon to
scene; staging the crime scene; preparatory acts; and transporting the body away from the scene, as being associated with planning (either pre-planning or post-planning) (Sorochinski & Salfati 2010: 119, 121).

The preceding studies have identified offense planning as a relevant factor in the study of homicide. Specifically, we have seen that single homicide shows a higher frequency of unplanned behaviours, whereas serial homicide shows evidence of pre-offense and post-offense planning. The findings from these studies suggest that an analysis of planning variables in crime scenes where a narcomessage is found is merited. What we need now is our own definitions for the terms plans and planning in order to justify our selection of crime scene variables. The following section will present our definitions of these terms as they are used in this dissertation.

2.5 Definition of Relevant Terms

We begin this section by providing definitions for the terms plans and planning as they are understood in prior literature and as we use them in this dissertation.

2.5.1 Plans

In prior literature plans have been defined as a series of actions that a person would perform in order to achieve a particular goal (Schank & Abelson 1977: 71; Wilensky 1983: 6; Abbott & Black 1986: 130; Morris & Ward 2005: 1). They are understood as being hierarchically structured and cognitively represented (Berger 1995: 7; Bratman 1999: 29). In Miller, Galanter and Pribam (1960: 16) plans are described as the hierarchical process that controls the order in which a sequence of actions is to be performed.
For our purposes in this study, we define plans as a future action by the speaker. In the environment of narcomessages, a plan is defined as the lexical stem of the verb found in the threat. However, for our purposes, the relevant factor is not the plan (lexical stem) itself, as previous literature has already noted that an analysis of lexical verb stems is not significant (Diet, Matthews, Martell et al. 1991: Scalora, Baumgartner, Zimmerman et al. 2002a; Scalora Baumgartner, Zimmerman et al. 2002b). Important for us here, rather, is the epistemic assessment of the likelihood that the future action will occur. This assessment is expressed on a Certainty scale by the inflectional affixes on the verb. In this study we will focus on the analysis of the linguistic assessment (Certainty affix) attached to the future action/plan (lexical verb stem).

2.5.2 Planning

In prior literature, planning is described as a set of activities that anticipate and regulate behaviour (Scholnick & Friedman 1987: 3). Wilensky (1983: 2) describes planning as the process by which speakers select a course of action by formulating a sequence of actions to achieve a goal (Wilensky 1983: 2; Carberry 1990: 17). The product of a planning process is a plan itself (Berger 1997: 26). Carroll (1953: 88) has described the process of planning as beginning with the intentional behaviour of the speaker, leading to encoding behaviour, followed by the message production, then the decoding behaviour of the hearer and concluding with the interpretive behaviour. Galambos, Abelson & Black (1986: 101) note that the activity of planning implies a choice among alternative plans. It should be noted that the parallel is not perfect between, on the one hand, psychological theories where encoding, decoding, and interpretation play an important role and, on the other hand, linguistic theories such as Columbia
School that distinguish sharply between the coded meaning and the inferred message. But the parallel is close enough so as to make both types of theories useful for the research questions of this study outlined in Section 3 below.

In this dissertation we define planning as the set of observable behaviours found at the crime scene that we take as being indicative of pre-planning, premeditation, or foresight by the offender. The behaviours we select to study suggest that without deliberate participation by the offender the crime scene would have appeared differently. That is, the offender pre-planned to bring materials to stage the crime scene, or brought a weapon to the crime scene to commit the crime that otherwise would not have been accessible, or the offender scouted a location to stage the victim’s body. Additionally, the offender could have invested the time to engage in these behaviours at the original crime scene if the body was later transported. In addition, we also pay close attention to the location where the narcomessage was discovered as evidence of planning. For example, if a narcomessage was discovered inside car or trunk, we consider this evidence of planning by the offender. All of these scenarios are taken here to be indicative that some degree of planning by the offender took place. A list of our crime scene variables and a justification for their inclusion in this study is presented in Section 4.7 below.

The preceding definitions lay the groundwork for our selection of crime scene variables to be studied in relation to the linguistic forms signaling speaker Certainty. In the following section we provide an introduction to the theoretical framework we apply in our analysis of narcomessages.
2.6 Introduction to the Theoretical Framework

The analysis of narcomessages presented here is informed by the principles and methods used in investigative psychology. Offender profiling is a subfield in investigative psychology that aims to link the offender’s actions at a crime scene to his or her likely psychological characteristics (Salfati 2008: 68). Behavioral consistency focuses on identifying similar subsets of actions that appear at crime scenes. These actions are then linked to subsets of offender characteristics (Salfati 2008: 68). In this chapter we use the subset of actions that appear at the crime scene as the independent variables related to the occurrence of the forms Pret, SP, and MF in the narcomessages found at the crime scene. This chapter will also serve to test the Columbia School meaning analysis for the forms Pret, SP, and MF, developed in chapters 4 and 5.

2.7 Summary of Literature Review

A review of prior studies showed that authors have claimed that language is related to thought since speech is the means by which thoughts are formed and by which they are expressed (Vygotsky 1986). Moreover, prior literature showed the relationship between one particular kind of knowledge, namely plan knowledge, and language. Their studies established that language plays an important role in cognitive planning, as it is by means of language that plan formation is mediated. (Das, Kar & Parrila 1996). We also saw that cognitive plans mediated by language can act to guide and shape behaviour (Miller, Galanter, Pribam 1960; De Lisi 1987; Berger 1997; Bratman 1999). We used the information provided by prior studies to propose a relationship between cognitive planning and certainty. Specifically, we suggested that there was a relation between linguistic certainty and the verbal realizations of the assessment of plans since Certainty
meanings are hypothesized to be expressed via verbal inflections. A better understanding of behavioural planning in violent offenses was brought about by a review of the work done in investigative psychology. Prior studies identified offense planning as a relevant factor in the study of homicide (see Salfati & Bateman 2005; Salfati & Park 2007; Sorochinski & Salfati 2010; Salfati, Sorochinski & Labuschagne in press 2014). We were able to provide our own definitions for the terms plans and planning that will lead us to a selection of different behavioural variables than those previously selected in studies of offense planning. An introduction to the general theoretical framework to be used in our analysis of narcomessages indicated that our focus should be on a subset of observable actions found at the crime scene.

Our understanding of the literature gives rise to research Question 3, which asks what the relationship is between plan knowledge, language, and behaviour. A review of prior studies has shown that there is reason to posit a relationship between plan knowledge, and language and behaviour in general, and more specifically, between linguistic Certainty and plan knowledge in the context of threatening communications. This aim will be repeated in our next section outlining the research questions (Section 3 below) and revisited again in the conclusion of this chapter (Section 7). Moreover, we now find it justified to outline the remaining research questions of this chapter that have now arisen from this review of the literature.

3. Research Questions of the Study

The purpose of this chapter is to provide answers to research Questions 3-7, first stated in Chapter 1, and repeated below.
Question 3. What is the relationship between plan knowledge, language and behaviour?

Question 4. Which independent crime scene variables should be included in the selection criteria and what justifies their classification as planning variables?

Question 5. What are the independent behavioural (planning) evidence variables that correlate with the choice of verb form by the speaker?

Question 6. Is the choice of verb form correlated to a violent outcome that did occur?

Question 7. What is the relationship between the linguistic forms used to articulate plans by offenders and the kinds of behavioral actions these offenders engage in at the crime scene?

In response to these research questions, this chapter analyzes the communicative intent of narcomessages written by members of Mexican cartels, which appear at crime scenes, since the authors of these types of communications frequently use the forms Pret, SP, and MF to issue threats of violence against rival cartel members or government figures. We also analyze the occurrence of these forms in correlation to the presence of crime scene behaviors indicative of planning, and in correlation to the realized outcome of threats of violence.

In the next section we present an overview of the methodology used in this study’s analysis of narcomessages along with a presentation of the behavioural independent variables to be used.
4. Methods

4.1 Introduction

The section describes the methodological approaches taken in the analysis of the second written corpora, the Narcomessages Sample, on which this dissertation is based. As mentioned in Chapter 1, the dissertation makes use of two newspaper samples, the General Sample, which acts as the control corpus and has been presented in Chapter 6, and the Narcomessages Sample, which is described here.

We begin with a description for the criteria of the object of study in section 4.2. Followed by a description of the sample in 4.3 and the overall frequency counts for the sample in section 4.4. Section 4.5 provides a reiteration of the meaning hypotheses already presented in Chapter 5 for the forms under analysis. Section 4.6 outlines our overall predictions for this study with regard to the forms Pret, SP, and MF and the independent variables. In section 4.7 we describe the statistical analysis to be performed and in section 4.8 we outline our selection of independent crime scene variables and justify their inclusion in this study.

4.2 Criteria for Object of Study

4.2.1 Linguistic

As outlined in Chapter 4, the present study we rely on CS theory to hypothesize the existence of invariant meanings associated for the Spanish verb forms commonly referred to as the preterite (Pret), the simple present (SP), and the morphological future (MF), as in examples (1) - (3) below.
(1) the preterite (Pret)

e.g. canté

sing-HIGH CERTAINTY-1sg

'(I) sang'

(2) the simple present (SP)

e.g. canto

sing-MID CERTAINTY-1sg

'(I) sing'

(3) the morphological future (MF)

e.g. cantaré

sing-LOW CERTAINTY-1sg

'(I) will sing'

In this chapter the verb forms outlined above are studied as they appear in message partials associated with narcomessages. For the purpose of this analysis a message partial is the clause in the narcomessage which constitutes the actual threat and which contains exactly one finite verb under analysis, as in example (4) below for the SP, and example (5) for the MF. Note that the data is presented as found, without any attempt being made to correct errors in Spanish conventional spelling, accentuation, or syntax.

(4) Sigues (SP) tú, Vargas. (Agencia Fronteriza de Noticias, 2008, para. 2)

‘You are next Vargas’
(5) Oscarin tu... seras (MF) el proximo atte: la manta (sic) (“Aparece otra narco,” 2010)

‘Oscarin you will be who is next sincerely: the blanket’

Although message partials with the use of the Pret in theory can occur, as in example (6)-(7) below, they did not appear at crime scenes that met the selection criteria listed that required threats to be found in a single clause with one verb token and a maximum of one victim (see Section 6.3.2.). Therefore, it was due to the strict criteria established at the outset of this study that ended up excluding cases of the Pret.

(6) Empzó (Pret), la limpia, se terminó (Pret) la extorsión y el secuestro atte C.D.G (sic) (“En Los Reyes La Paz,” 2013)

‘The cleaning has begun, extortion and kidnapping are over sincerely C.D.G.’

(7) Ratas, lakras, vandidos, la hora se les llegó (Pret) (sic) (“Encuentran 2 ejecutados,” 2010)

‘Rats, scum, and thieves, the time for you has come.’

4.2.2 Crime Scene

All of the narcomessages taken for analysis in this sample had to appear at a crime scene with either zero, or, no more than one victim. Some scenes only were found with only narcomessages and no victims present, these counted as zero victim. Moreover, a narcomessage with two or more victim bodies present at the scene was not included in the sample. The reason for excluding scenes with more than one victim present was to isolate the correlation between the verbal affix and the particular behaviour.
4.3 Sample

ii. Narcomessages. These messages were collected from a list of newspaper websites and online blogs. The first objective was to collect primary source documents with legible images of the narcomessage. If the narcomessage was not legible in the image, the attempt was made to find three articles with matching transcriptions of the narcomessage embedded in the text.

4.4 Overall Frequency Count for Narcomessages Sample

A total of 201 narcomessages containing threats were collected for the analysis of the Narcomessages Sample. The distributional frequencies are presented in Table 6.1 below.

<table>
<thead>
<tr>
<th>Verb Form</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pret</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>SP</td>
<td>167</td>
<td>83%</td>
</tr>
<tr>
<td>MF</td>
<td>34</td>
<td>17%</td>
</tr>
<tr>
<td>Total</td>
<td>201</td>
<td>100%</td>
</tr>
</tbody>
</table>

As can be seen from Table 6.1, the majority of the sample (83%) was message partials using the SP and only a small percentage (17%) using the MF. There were no instances of the Pret.

4.5 Hypothesis

This section outlines the relevant meaning hypothesis applied in the analysis of the Narcomessages Sample.
4.5.1 Three-Member Meaning Hypothesis

The meaning hypothesis for the forms Pret, SP, and MF, originally presented in Chapter 5, and repeated here below, relates to the Degree of speaker Certainty. The *semantic substance* is Degree of Certainty and it refers to the speaker’s level of certainty regarding the occurrence of an event. The three-member meaning hypothesis only has the Pret, SP and MF as members. Figure 2.0 is an illustration of the three-member hypothesis. In interpreting Figure 2.0, it is important to remember that the terms Pret, SP, and MF are the names of morphological paradigms, or signals in the CS sense. The terms are used following convention and do not imply any analytical stance other than the one proposed here in terms of Degree of Certainty.

**Figure 2.0** THREE-MEMBER GRAMMATICAL SYSTEM FOR DEGREE OF CERTAINTY

```
Degree of Certainty
```

```
HIGH - Pret (*Preterite*)
MID - SP (*Simple present*)
LOW - MF (*Morphological future*)
```

4.6 Statistical Analysis

The methodology of this dissertation consists in testing the possible associations (using Cross tabulations) between the occurrence of the SP or MF and nine independent crime scene variables presented below. The reader should note that these variables did not reach statistical significance at the $p < .05$ level, however the numerical tendencies support the meaning hypothesis and statistical significance can potentially be achieved in
future research using a larger sample size. As in all quantitative testing of hypotheses, it is not the case here that each and every one of our predictions is fulfilled; most are, but some are not. This predominance of correct predictions, in terms of numerical tendencies only and not statistical significance, suggests very strongly that our hypothesis is essentially correct, but that there are, nonetheless, one or two areas where we do not yet fully understand the choices being made by language users. It should also be noted that some of the behaviors involved in the predictions are infrequent, and that therefore our tables sometimes have very low Ns; we are therefore looking for the direction of the behavior, without necessarily having large enough Ns to obtain significance values of \( p < .05 \).

4.7 Independent Crime Scene Variables

In response to Research Question 4., that asked which independent crime scene variables should be included in the selection criteria and what justifies their classification as planning variables, we present a list of these variables below along with a justification for their inclusion in this study. Although some of the variables presented below also relate to the interaction between the offender and the victim, as well as the variables relating specifically to the crime scene, the general similarity across all of them is their classification as being indicative of planning which is the focus of this study.

**Independent Variable 0. Number of Victims.**

Justification for inclusion: This variable is included in this study only to show the overall frequency of the sample in terms of how many narcomessages were placed at a crime scene where no victim body was present, compared to the number of crimes where both a
narcomessage and victim body was found. This variable is not considered to be indicative of planning according to our definition provided in Section 2.5.2.

**Independent Variable 1. Presence of Victim’s Body Wrapped in Tape (Tape).**

Justification for inclusion: This variable relates to the offender’s interaction with the victim. This variable was coded for whether the victim’s body was found at a crime scene with a narcomessage wrapped in tape. For this variable to be coded as present, the victim’s face or face and torso needed to show evidence of being wrapped in tape. We considered this variable indicative of planning based on our definition in Section 2.5.2. because the offender either invested the time to wrap the victim’s body at the original crime scene, or transported the tape as a material to wrap the body at the secondary dump site. Both scenarios would lead us to characterize this variable as being indicative of some degree of planning by the offender.

**Independent Variable 2. Presence of Victim’s Body Wrapped in Blanket (Blanket).**

Justification for inclusion: This variable relates to the offender’s interaction with the victim. Similar to Independent Variable 1. above, this variable was coded for whether the victim’s body was found at a crime scene with a narcomessage wrapped in a blanket. For this variable to be coded as present, the victim’s torso and face needed to show evidence of being wrapped in a blanket. Again, we considered this variable indicative of planning based on our definition in Section 2.5.2. because the offender either invested the time to wrap the victim’s body at the original crime scene, or transported the blanket as a material to wrap the body at the secondary dump site. Again, both scenarios would lead us to characterize this variable as being indicative of some degree of planning by the offender.

Justification for inclusion: This variable relates to the offender’s interaction with the victim. Similar to Independent Variables 1 and 2. above, this variable was coded for whether the victim’s body was found at a crime scene with a narcomessage wrapped in a plastic bag. For this variable to be coded as present, the victim’s torso, head, or extremities needed to show evidence of being wrapped in a plastic. Similar to Variables 1-2 above, we considered this variable indicative of planning based on our definition in Section 2.5.2. the offender either invested the time to wrap the victim’s body at the original crime scene, or transported a plastic bag as a material to wrap the body at the secondary dump site. Again, both scenarios would lead us to characterize this variable as being indicative of some degree of planning by the offender.


Justification: This variable relates to the offender’s interaction with the victim. This variable was coded for whether the victim’s body was found showing evidence of beheading at a crime scene with a narcomessage. We considered this variable indicative of planning based on our definition in Section 2.5.2. because the offender either invested the time to behead the victim at the original crime scene (rather than a quicker cause of death, say gunshot wounds which are very common in cartel homicides) and later transported the victim’s beheaded body to a secondary site, or transported the weapon to be used to commit the beheading to the crime scene (see Salfati & Bateman for more on the variable weapon brought to scene). Both scenarios would lead us to characterize this variable as being indicative of some degree of planning by the offender.
Independent Variable 5. Scattering of Victim’s Body Parts (Scattered).

Justification: This variable relates to the offender’s interaction with the victim. This variable was coded for whether the victim’s body was found showing evidence of dismemberment and the victim’s body parts were found scattered at different locations, one of which was a crime scene with a narcomessage present. For this variable to be coded as present, the victim’s extremities (arms, legs) or head had to have been removed from the torso and found at separate locations. We considered this variable indicative of planning based on our definition in Section 2.5.2. because the offender invested the time to scatter the victim’s body parts across different locations. Both scenarios would lead us to characterize this variable as being indicative of some degree of planning by the offender.

Independent Variable 6. Presence of Victim’s Body Hanging from Bridge (Bridge).

Justification: This variable relates to the offender’s interaction with the victim. This variable was coded for whether the victim’s body was found hanging from a bridge near the presence of a narcomessage. We considered this variable indicative of planning based on our definition in Section 2.5.2. because the offender invested the time to scout the location where the victim’s body would be discovered (see Salfati, Sorochinski & Labuschagne in press 2014). Two possible alternatives arise, either the victim’s body was transported and later hung off the bridge, or the offender was required to bring rope to the scene in order to hang the victim off the bridge (see Salfati & Bateman for more on bringing weapon to scene). Both scenarios would lead us to characterize this variable as being indicative of some degree of planning by the offender.
Justification: This variable relates pertains only to the crime scene. It was coded for whether the narcomessage was found placed inside an automobile (except the trunk). We considered this variable indicative of planning based on our definition in Section 2.5.2. because placing the narcomessage inside of a parked car indicates the offender selected this location. This scenario leads us to characterize this variable as being indicative of some degree of planning by the offender.

Justification: This variable pertains only to the crime scene. Similar to Variable 7 above, this variable was coded for whether the narcomessage was found placed inside of the trunk of an automobile. We considered this variable indicative of planning based on our definition in Section 2.5.2. because placing the narcomessage inside of the trunk of a parked car indicates the offender selected this location. This scenario leads us to characterize this variable as being indicative of some degree of planning by the offender.

Justification: This variable pertains only to the crime scene. Similar to Variable 7 above, this variable was coded for whether the narcomessage was found placed near animal parts. We considered this variable indicative of planning based on our definition in Section 2.5.2. because placing the narcomessage at a location near animal parts requires the offender to have transported these animal parts to the scene, transported the animal to the scene to dismember, or brought the weapon to the scene to be used to dismember the
animal. This scenario leads us to characterize this variable as being indicative of some degree of planning by the offender.

**Independent Variable 10. Outcome.**

Justification: This variable coded for whether the targeted threat of violence communicated in the narcomessage occurred or did not occur in a six month period after the message was discovered. This variable was included in order to measure whether verbal inflections can be used as a correlator for violent acts.

**4.8 Overall Predictions for Narcomessages Sample**

We predict that narcomessages will use verb forms indicating higher levels of Certainty in crime scenes where there is evidence of higher amounts of planning and higher amount of violence. In these scenes, this will be manifested in a stronger preference for **Mid** Certainty verb forms (SP) than **Low** Certainty verb forms (MF). That is, we predict that narcomessages using forms with meanings of **Mid** Degree of Certainty will occur more frequently than narcomessages using forms with meanings of **Low** Degree of Certainty in crime scenes that show a high number of planning variables present. The justification for this prediction is the assumption that speakers will communicate written threats with **Mid** Degree of Certainty when aspects of the crime have been pre-arranged, thought out or planned. Second, we predict that narcomessages with **Mid** Certainty meanings will co-occur more frequently than **Low** Certainty meanings with violent outcomes that are realized. The reader should note that these predictions are based on possible correlations; we are not proposing a causality relationship between Certainty and Planning. We are simply hypothesizing that when certain linguistic forms are present they will correlate with particular behaviours also
being present. We do not include predictions for the High Certainty Pret as this form did not occur in the narcomessages sample.

5. Results

This section presents the cross-tabulation results for the independent variables listed above. Section 5.1 will present the results for the Outcome variable separately. A summary of the findings will be provided in Section 5.3.

5.1 Cross-Tabulation Tables for Planning Variables

This section is guided by our Research Question 5, which asked what are the independent behavioral (planning) evidence variables that correlate with the choice of verb form by the speaker. This question will be revisited and answered in the discussion and conclusion of this chapter (Sections 6 and 7). Behavioural evidence variables are included in this study following the rational provided by Salfati (2000). The author proposed that observable behaviours be used as the objective unit of study in crime scene analysis (Salfati 2000: 267). All of our crime scene variables were dichotomous, coded as a 0 when the element under study was absent and as a 1 when it was present. Three variables pertaining to only the crime scene were coded across 201 cases. Moreover, a total of six variables reflecting behaviours of the offender’s interaction with the victim were coded across 179 cases since this was the total number of single homicide crime scenes in the sample. Cases where missing data impeded the justifiable coding of a variable as either present or absent were excluded from the presentation of the data below.
Independent Variable 0. Number of Victims.

This variable is included to show overall frequency counts for the sample. It does not fall under our classification of planning. As stated in Section 4.2.2 above, the selection criteria for message partials previously stated that the original crime scene could either have the presence of a single victim body (single homicide) or no victim bodies at all (crime scene with only the presence of the threatening communication). An overall frequency count of verb form by victim number is presented below (Table 6.2).

Table 6.2
Cross-Tabulation of Verb Form by Number of Victims

<table>
<thead>
<tr>
<th>Number of Victims</th>
<th>Verb Form</th>
<th>MID</th>
<th>%</th>
<th>LOW</th>
<th>%</th>
<th>SP</th>
<th>%</th>
<th>MF</th>
<th>%</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>149</td>
<td>89</td>
<td>20</td>
<td>59</td>
<td>169</td>
<td>84</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
<td>18</td>
<td>11</td>
<td>14</td>
<td>41</td>
<td>32</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>167</td>
<td>100</td>
<td>34</td>
<td>100</td>
<td>201</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$\chi^2 = 19.50$, $df = 1$, $p < .001$, $\phi_c = .30$

We see in Table 6.2 above that the majority of the sample (84%) consisted of narcomessages found at single homicide crime scenes. Only 16% appeared at crime scenes where no victim body was found. Moreover, with regard to the use of the SP and MF, we see in the table that both forms appeared more often (89% and 59%, respectively) in narcomessages found at single victim crime scenes. However, the favoring of the SP in one-victim messages is much stronger (89%) than in no-victim messages. Although this variable was intended to show only overall frequency distributions, we can interpret the greater favouring of the higher certainty form in crime scenes with single victims as being compatible with the Certainty meaning hypothesis for
the form SP, as staging a location with a body requires pre-planning and results in a more intimidating scene concurrent with higher certainty threats.

**Independent Crime Scene Variables 1-3. Presence of Victim’s Body Wrapped in Tape (Tape); Presence of Victim’s Body Wrapped in Blanket (Blanket); Presence of Victim’s Body Wrapped in Plastic Bag (Bag).**

We begin with the analysis of variables associated with the interaction of the offender with the victim. These variables code for the presence of the victim’s body found wrapped in tape, blankets or plastic bags. They are presented here together because the reasoning for their inclusion in this study is the same. The terms for these behaviours have been labeled *encintado, enbolsado, encobijado* by the Mexican press and suggest a high frequency of occurrence in order to have been assigned particular labels. These variables are included in this analysis because covering the victim’s body demands acquiring the materials to wrap the body and the effort of actually wrapping the body indicative of planning. Our prediction is that victims whose bodies appear wrapped will co-occur more often with the meaning MID Degree of Certainty than with the meaning LOW Degree of Certainty (Table 6.3, Table 6.4, Table 6.5).

**Table 6.3**

*Cross-Tabulation of Verb Form by Presence of Victim’s Body Wrapped in Tape*

<table>
<thead>
<tr>
<th>Tape</th>
<th>MID</th>
<th></th>
<th>LOW</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Verb Form</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SP</td>
<td></td>
<td>MF</td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>30</td>
<td>21%</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>Absent</td>
<td>112</td>
<td>79%</td>
<td>17</td>
<td>85%</td>
</tr>
<tr>
<td>Total</td>
<td>142</td>
<td>100%</td>
<td>20</td>
<td>100%</td>
</tr>
</tbody>
</table>

\[ \chi^2 = .662, df = 1, p > .05, \phi_c = .06 \]
Table 6.4  
Cross-Tabulation of Verb Form by Presence of Victim’s Body Wrapped in Blanket

<table>
<thead>
<tr>
<th></th>
<th>Verb Form</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MID</td>
<td>LOW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SP</td>
<td>MF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blanket</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>12</td>
<td>8%</td>
<td>1</td>
<td>5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absent</td>
<td>133</td>
<td>92%</td>
<td>19</td>
<td>95%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>145</td>
<td>100%</td>
<td>20</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$\chi^2 = .744, df = 1, p > .05, \phi_c = .07$

Table 6.5  
Cross-Tabulation of Verb Form by Presence of Victim’s Body Wrapped in Plastic Bag

<table>
<thead>
<tr>
<th></th>
<th>Verb Form</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MID</td>
<td>LOW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SP</td>
<td>MF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plastic Bag</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>21</td>
<td>15%</td>
<td>2</td>
<td>11%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absent</td>
<td>123</td>
<td>85%</td>
<td>17</td>
<td>89%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>144</td>
<td>100%</td>
<td>19</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$\chi^2 = .535, df = 1, p > .05, \phi_c = .06$

Our prediction is supported by the numerical tendencies presented in Tables 6.3-6.5 above. Although offenders in general tend to favour the absence of these behaviours, when evidence of these actions is present the distributional trend supports our prediction. Offenders appear to wrap their victims with tape (21%), blankets (8%) and plastic bags (15%) more often when they use the SP than when they use the MF. Offenders have higher Certainty when communicating written threats that appear at scenes where the appearance of the victim has been deliberately concealed and when the offender has invested time to purchase materials needed to this goal. A larger sample size is needed to test for statistical significance.
Independent Crime Scene Variables 4-5. Beheading of Victim’s Body (Beheading); Scattering of Victim’s Body Parts (Scattered).

These variables code for the presence of beheading on the victim’s body and the presence of scattered body parts found at different locations. They are considered here as being indicative of planning because with regard to beheading, the offender either invested time to behead the victim at the original crime scene and later transported the victim’s beheaded body to a secondary site, or transported the weapon to be used to commit the beheading to the crime scene (see Salfati & Bateman 2005 regarding the variable bringing weapon to scene). With relation to the scattering of body parts, the offender invested the time to scatter the victim’s body parts across different locations. We characterize both of these variables as being indicative of some degree of planning by the offender. Our prediction is that victims whose bodies have been beheaded and dismembered body parts have been scattered across several locations will co-occur more often with the meaning MID Degree of Certainty (Table 6.6, Table 6.7).

Table 6.6
Cross-Tabulation of Verb Form by Presence of Beheading

<table>
<thead>
<tr>
<th>Beheading</th>
<th>Verb Form</th>
<th>MID</th>
<th>SP</th>
<th>%</th>
<th>LOW</th>
<th>MF</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>35</td>
<td>24%</td>
<td>3</td>
<td>15%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absent</td>
<td>111</td>
<td>76%</td>
<td>17</td>
<td>85%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>146</td>
<td>100%</td>
<td>20</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$\chi^2 = 1.092$, $df = 1$, $p > .05$, $\phi_c = .08$
Table 6.7
Cross-Tabulation of Verb Form by Presence of Scattered Body Parts

<table>
<thead>
<tr>
<th>Scattered Body Parts</th>
<th>Verb Form</th>
<th>MID</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SP</td>
<td>SP</td>
<td>MF</td>
</tr>
<tr>
<td>Present</td>
<td>7</td>
<td>5%</td>
<td>0</td>
</tr>
<tr>
<td>Absent</td>
<td>131</td>
<td>95%</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>138</td>
<td>100%</td>
<td>20</td>
</tr>
</tbody>
</table>

$\chi^2 = 2.215, df = 1, p > .05, \phi_c = .12$

The numerical tendencies in Tables 6.6-6.7 above support our predictions. Although in the majority of cases where a narcomessage is found with a victim’s body these behaviours tend to be absent, in the cases where they are present the distributional patterns support our predictions. Offenders appear to mutilate the victim’s body more frequently by beheading (24%) when they use the SP in the narcomessages found at the scene than when they use the MF. Moreover, after dismemberment they proceed with scattering the victim’s body parts across several locations, at least one of these locations that also contain a narcomessage using the SP (5%) over the MF. These behavioural tendencies are indicative of a planning process that falls in line with the meaning MID Degree of Certainty signaled by the SP. Again, a larger sample size is needed to test for statistical significance.

Independent Crime Scene Variable 6. Presence of Victim’s Body Hanging from Bridge (Bridge).

This variable codes for the presence of the victim’s body found hanging from a bridge near the message partial. This variable is included because the act of scouting the location where the victim’s body will be discovered requires preparatory actions (see Salfati, Sorochinski & Labuschagne in press 2014: 12). Most of the bridges appear
overhead a highway that provides maximum exposure to the public and a horrifying scene for driving civilians. Our prediction is that victims found hanging from a bridge will co-occur more often with the meaning Mid Degree of Certainty than with the meaning Low Degree of Certainty (Table 6.8).

Table 6.8
Cross-Tabulation of Verb Form by Victim Hanging from Bridge

<table>
<thead>
<tr>
<th>Victim Hanging from a Bridge</th>
<th>Verb Form</th>
<th>MID</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>SP</td>
<td>MF</td>
</tr>
<tr>
<td>Present</td>
<td>2</td>
<td>1%</td>
<td>0</td>
</tr>
<tr>
<td>Absent</td>
<td>146</td>
<td>99%</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>148</td>
<td>100%</td>
<td>20</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 2.334, df = 1, p > .05, \phi_c = .12 \]

The table shows that in this very low-incidence phenomenon, the behavior in the few cases we found is consistent with our meaning hypothesis but a larger sample size is still needed. Two instances of victims hanging from a bridge were recorded in the sample. But on both occasions the narcomessage used the SP over the MF. In line with our Certainty hypothesis, offenders have higher Certainty when communicating written threats when they invest effort into scouting the crime scene and into hanging a victim’s body from a public bridge than when they do not make such efforts.


We now move to the analysis of variables that operate at the scene-level. These independent variables code for whether the narcomessage was placed inside an automobile at the scene (excluding the trunk), or inside the trunk of the car. We include this variable in our analysis because the act of staging the placement of the message
partial is indicative of planning. The offender invests the time to carefully select the scene where the narcomessage will possibly discovered by authorities or the public. Our prediction is that narcomessages found inside automobiles at the crime scene will co-occur more often with the meaning MID Degree of Certainty than with the meaning LOW Degree of Certainty (Table 6.9-6.10).

**Table 6.9**
Cross-Tabulation of Verb Form by Presence of Message in Automobile

<table>
<thead>
<tr>
<th>Message in Automobile</th>
<th>Verb Form</th>
<th>MID</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SP</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Present</td>
<td>6</td>
<td>6</td>
<td>4%</td>
</tr>
<tr>
<td>Absent</td>
<td>158</td>
<td>158</td>
<td>96%</td>
</tr>
<tr>
<td>Total</td>
<td>164</td>
<td>164</td>
<td>100%</td>
</tr>
</tbody>
</table>

\[\chi^2 = 2.353, df = 1, p > .05, \phi_c = .11\]

**Table 6.10**
Cross-Tabulation of Verb Form by Presence of Message in Trunk of Automobile

<table>
<thead>
<tr>
<th>Message in Trunk</th>
<th>Verb Form</th>
<th>MID</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SP</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Present</td>
<td>4</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>Absent</td>
<td>162</td>
<td>162</td>
<td>98%</td>
</tr>
<tr>
<td>Total</td>
<td>166</td>
<td>166</td>
<td>100%</td>
</tr>
</tbody>
</table>

\[\chi^2 = 2.067, df = 1, p > .05, \phi_c = .10\]

Tables 6.9 and 6.10 again reflect an infrequent phenomenon and a larger sample size is needed for statistical significance. But when the behavior does occur, the numerical tendencies are consistent with our meaning hypothesis. That is, although the overall tendency is for these variables not to occur, when they are present the distributional patterns go in the direction of our predictions. The table shows a categorical distribution
for messages appearing inside of automobiles and trunks occurring with the SP over the MF. Once again, a Certainty meaning hypothesis for the form SP can explain these distributional patterns. Offenders express higher Certainty when communicating written threats when they have arranged access to an automobile to stage the scene than when they do not.


This independent variable codes for whether the narcomessage appeared near dismembered animal parts at the crime scene. We include this variable in our analysis because the act of transporting animal parts to the location where the message partial is discovered, or bringing the weapon to dismember an animal at the scene is indicative of preparatory planning (see Salfati & Bateman 2005 for more on the variable weapon brought to scene). Our prediction is that the presence of animal parts at the crime scene will co-occur more often with the meaning Mid Degree of Certainty expressed by the SP (Table 6.11).

**Table 6.11**

Cross-Tabulation of Verb Form by Presence of Animals

<table>
<thead>
<tr>
<th>Animals</th>
<th>Verb Form</th>
<th>MID</th>
<th>SP</th>
<th>%</th>
<th>LOW</th>
<th>MF</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td></td>
<td>4</td>
<td>3%</td>
<td>N</td>
<td>3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absent</td>
<td></td>
<td>156</td>
<td>97%</td>
<td>34</td>
<td>97%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>160</td>
<td>100%</td>
<td>35</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ \chi^2 = .276, \ df = 1, p > .05, \phi_c = .04 \]

Again here the occurrence is infrequent, and now our prediction is neither supported nor contradicted in Table 6.11. The results indicate that the presence of animal parts is generally disfavoured in scenes where narcomessages are found. However, of all the
times animal parts were present there is an equal distribution between the SP (3%) and the MF (3%) used in narcomessages. A larger sample is needed in future research to see whether this variable continues to support a null hypothesis with more data.

5.2 Independent Variable 10. Outcome.

This section is guided by Research Question 6. which asked whether the choice of verb form correlated to a violent outcome that did occur. An answer to Question 6. will be provided later in the discussion and conclusion of this chapter (Sections 6 and 7). Prior studies in linguistic threat assessment have measured the association of linguistic variables found in threatening communications and whether or not the violent act was realized (see Gales 2010, Smith, S. 2008). The variable Outcome in this study was first coded dichotomously across the 184 message partials using a 0 if the outcome did not occur or a 1 if there was justifiable evidence that the outcome did occur within a six month time period. As previously shown in Table 6.1, we began our analysis with 201 narcomessages. The reason for removing 17 messages from the Outcome variable is because those 12 were copies of narcomessages posted at different locations in the cities in which they were found. The copies did not affect the crime scene variables as each location where a message partial was found constituted it’s own crime scene, it would exaggerate the results from the Outcome variable. Moreover, for five messages the six-month time period has not yet lapsed. Our prediction is that narcomessages with the meaning MId Degree of Certainty signaled by the SP would co-occur more often than the Low Certainty MF with realized outcomes (Table 6.12).
Table 6.12
Cross-Tabulation of Verb Form by Outcome

<table>
<thead>
<tr>
<th>Outcome</th>
<th>MID</th>
<th>LOW</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SP</td>
<td>MF</td>
<td>N</td>
</tr>
<tr>
<td>Occurred</td>
<td>22</td>
<td>10</td>
<td>32</td>
</tr>
<tr>
<td>Did not occur</td>
<td>128</td>
<td>24</td>
<td>152</td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td>34</td>
<td>184</td>
</tr>
</tbody>
</table>

\( \chi^2 = 4.195, df = 1, p < .05, \phi = .14 \)

Table 6.12 does not support our prediction. We see that for both verb forms the distributional preference is for the outcome not to be realized (85% and 71%). This finding is in line with existing literature (Smith, S. 2008, Baumgartner et al. 2001, Scalora et al. 2002). However, it also shows that when violent outcomes were realized they occurred in cases where the linguistic threat used the form MF (29%) more often than the SP (15%). A discussion of these results is presented in Section 7.0 of this chapter.

5.3 Summary of Findings

A total of 201 message partials were collected for the Narcomessages Sample. Surprisingly, 83% of the message partials used the SP and only 17% used the MF. Moreover, the High Certainty form Pret did not occur in the narcomessages sample and this observation will be discussed below.

A total of ten variables indicative of offense planning were analyzed in relation to the choice of verb form used by the speaker. Cases where missing data impeded the justifiable coding of a behavior as either present or absent were excluded from the presentation of the data. These variables did not reach statistical significance, however,
their numerical tendencies did go in line with our predicted correlations in relation to our Certainty meaning hypothesis and will be listed below.

Six variables reflecting behaviours of the interaction between the offender and victim were coded across 179 cases since this was the total number of single homicide crime scenes in the sample. The variables included: Victim’s Body Wrapped in Tape; Victim’s Body Wrapped in Blanket; Victim’s Body Wrapped in Plastic Bag; Presence of Beheading; Presence of Scattered Body Parts; and Victim’s Body Found Hanging from Bridge. These variables suggest that preparatory acts related to the staging of the crime scene where the narcomessage was found took place. Moreover, three variables indicative of planning pertained only to the crime scene and were coded across 201 cases: Message found in Automobile; Message found in Trunk of Automobile; and Presence of Animal Parts. Our prediction was that all nine of these variables would co-occur more often with the meaning M10 Degree of Certainty signaled by the SP in message partials. The distributional results supported our prediction and will be discussed below.

As previously mentioned, our overall predictions stated that a higher degree of Certainty meanings would co-occur with a higher number of planning variables present at the crime scene. This prediction was supported by the numerical tendencies and a larger sample size is needed to render these results statistically significant. Overall low counts for the presence of these variables are due to the general tendency for these behaviours not to occur and a more accurate assessment of their distributional significance is needed using a larger data sample.
Moreover, we predicted that the realization of violent outcomes would co-occur with the use of the form SP in message partials, and we saw that this prediction was not supported by the results. This finding is discussed below.

6. Discussion

In this section we discuss our results summarized above and later provide an answer to Research Question 5 that asked which planning variables correlated with the choice of verb form by the speaker. We found that the High Certainty form Pret did not occur in the narcomessages sample. The absence of this form can partly be explained by the strict criteria that we initially set to delimit our focus. As mentioned previously, we only included single clause threats that appeared at crime scenes with a maximum of one victim body present. As we saw in examples (6)-(7), the Pret is used in narcomessages referring to future acts that have not yet been completed. Moreover, our prediction that higher Certainty forms would co-occur with a higher number of planning variable present at the scene was supported in terms of the numerical tendencies for these variables, and this suggests that behavioural actions related to offense planning correlate with linguistic meanings of MID Certainty. This correlation makes sense as offenders are more likely to have more Certainty relating to threats of violence when they engage in time consuming preparatory actions used to make the crime scene where the message partial was found appear more gruesome and intimidating. However, a larger sample size is still needed to reach statistical significance.

We are now in a position to provide an answer to research Question 5, which asked which independent behavioral (planning) evidence variables correlate with the choice of verb form by the speaker. In response to this we can say that in terms of
numerical tendencies, the following variables correlate with the choice of verb form as seen in the raw counts: Victim’s Body Wrapped in Tape; Victim’s Body Wrapped in Blanket; Victim’s Body Wrapped in Plastic Bag; Presence of Beheading; Presence of Scattered Body Parts; Victim’s Body Found Hanging from Bridge; Message found in Automobile; Message found in Trunk of Automobile.

With regard to our independent variable Outcome, which measured whether or not the violent act was realized, we saw that the LOW Certainty MF correlated more with realized outcomes over the MID Certainty SP. Research Question 6. which asked whether the choice of verb form correlated to a violent act that did occur. In response to this question, we can say that the choice of verb form does correlate with violent acts that do occur. However, the choice made by language users to select the MF over the SP in threats with realized outcomes is something we do not yet understand. Further research is needed to understand the psychology of this choice in the context of threatening communications.

The results from this study contribute to the existing literature on linguistic threat assessment. The current study is one of the first to analyze detailed behaviours found at the crime scene in relation to linguistic forms used by offenders. Moreover, this study is also the first to provide a meaning analysis for the verbal inflections Pret, SP and MF and studying the co-occurrence of these forms with both behaviours at the crime scene and whether or not the violent outcome was realized. Future studies should bridge the gap between the psychological assessment of violent behaviours and the grammatical forms used to communicate threats of violence.
In the following section we will revisit the answers provided in this chapter for research Questions 3-6 and also address our remaining research Question 7.

7. Conclusion

Our literature review in this chapter was guided by research Question 3, which asked what the relationship was between plan knowledge, language and behaviour. We answer this question by stating that language should be viewed as the symbolic articulation of knowledge, and following this line of thought, linguistic output plays a role in shaping speakers’ behaviours. Our presentation of the independent crime scene variables was guided by research Question 4, that asked which independent crime scene variables should be included in our classification of planning variables. Based on the definition of planning we provided in this study, we presented argumentation in favour of categorizing the following variables as being indicative of offense planning: Victim’s Body Wrapped in Tape; Victim’s Body Wrapped in Blanket; Victim’s Body Wrapped in Plastic Bag; Presence of Beheading; Presence of Scattered Body Parts; Victim’s Body Found Hanging from Bridge; Message found in Automobile; Message found in Trunk of Automobile; and Presence of Animal Parts. The discussion of our results from the quantitative study addressed research Question 5 that asked which independent behavioral (planning) evidence variables correlate with the choice of verb form by the speaker. We concluded that the following variables correlate with the choice of verb form as seen in the numerical tendencies: Victim’s Body Wrapped in Tape; Victim’s Body Wrapped in Blanket; Victim’s Body Wrapped in Plastic Bag; Presence of Beheading; Presence of Scattered Body Parts; Victim’s Body Found Hanging from Bridge; Message found in Automobile; Message found in Trunk of Automobile. Our discussion of the
results also provided an answer to research Question 6. that asked whether the choice of verb form correlated to a violent act that did occur. Our answer to this question is yes as the choice of verb form does correlate with violent acts that do occur. However, the choice by language users to select the MF over the SP in cases of realized outcomes is something we do not yet fully understand and remains an area for future research.

Finally, research Question 7. asked what the relationship was between the linguistic forms used to articulate plans by offenders and the kinds of behavioural actions these offenders engage in at the crime scene. In this chapter we found that there is a relationship between the use of forms signaling linguistic Certainty meanings and the types of behaviours offenders engage in at the crime scene. As this study was set out to be a correlational study, all we can say is that higher Certainty forms correlate more than lower Certain forms with the collection of variables we have deemed to be indicative of offense planning. Further research is needed to achieve a better understanding of this relationship. Chapter 7 will follow with overall conclusions for the entire dissertation.
CHAPTER 7
CONCLUSIONS

1. Summary of Relevant Insights

This study has shown that a grammatical study of inflectional affixes, rather than on lexical stems, is better suited for the analysis of threatening communications. The present study has provided several relevant insights that are best summarized by revising research Questions 1-5 originally presented in Chapter 1.

1.1 Research Questions

Question 1. What are the stable, coded linguistic meanings for the forms Pret, SP, and MF?

As we saw in Chapter 2, traditional grammars appear to assign temporal meanings to the forms Pret, SP, and MF (Comrie 1985; De Bruyne 1995, Llorach 1999; Zagona 2002; RAE 2009; Butt & Benjamin 2011). A temporal meaning hypothesis is visible in the labels for the forms given by the tradition: preterite, present, and future. However, if we take these labels as meanings from the semantic substance of Time, we realize they fall short, leaving the distribution of the forms unexplained. In fact, in Chapter 2 we found that the temporal interpretations for these forms is actually stemming from contextual elements such as adverbs, and not from the forms themselves.

In Chapter 4 we saw that the inherent, stable meanings of the Spanish verb forms Pret, SP, and MF have to do, not with the semantic substance of Time, but rather with the substance of Certainty. Chapter 4 presented a new alternative meaning hypothesis where the forms are viewed as sharing a semantic substance called Degree of Speaker Certainty. Within the substance, and by hypothesis, the Pret means HIGH (that is, high degree of
certainty), the SP means Mid, and the MF means Low. In Chapter 4 we revisited examples from Chapter 3 that originally were found to be problematic for the Time hypothesis, but that could easily be explained under the rubric of speaker Certainty. In fact, the Certainty hypothesis was able to account for the complete distribution of the form SP, even as it occurred in the so-called periphrastic future and present perfect constructions. For this reason, we proposed a new categorization for the traditional periphrastic future and present perfect that treated the uses of the SP in these environments as just that, particular kinds of SPs. We found no justification to view these ‘constructions’ as signals in and of themselves associated with their own meanings. As our overall conclusion, and in response to Question 1, we determined that the meanings for the forms Pret, SP, and MF are High, Mid, and Low Degree of Certainty, and that the complete distribution of these forms does not appear to contradict these hypothesized meanings (as it does the Time meanings).

**Question 2. What are the independent linguistic-contextual variables that condition the choice made by the speaker between the forms Pret, SP, and MF?**

Chapter 5 presented a quantitative analysis of 13,983 tokens from the General Newspaper Sample in order to test the Certainty meaning hypothesis proposed in Chapter 5. We saw that the variables Co-occurrence with Subjunctive Verb Forms in the Following Clause, Verb Token Under Analysis in Main/ Subordinate Clause, Verb Token Under Analysis in First/ Second Conjunct, and Presence of Indirect Reported Speech all provided results that were in support of the meaning hypothesis proposed in this dissertation. Grammatical Number of the Verb Token Under Analysis supported a two-member Degree of Certainty system rather than a three-member system, since the
frequencies for the SP and MF were only slightly different from each other. Overall, we found that the HIGH Certainty Pret co-occurred most with the singular subjects, main and first conjunct clauses. The LOW Certainty MF co-occurred more often than the Pret and SP with the use of the subjunctive in the following clause. These distributional tendencies, although unexplainable by a Time hypothesis, were reasoned by adhering to the hypothesized meanings related to speaker Certainty. A regression model suggested that the collapsed variable Clause most influenced the distribution of the choice of form, however no reasoning was provided for this variable ranking.

**Question 3. What is the relationship between plan knowledge, language and behaviour?**

Chapter 6 analyzed the relationship between plan knowledge, language and behaviour. We argued that planning constitutes knowledge and, moreover, that language symbolically represents the cognitive process of plan formation. We also saw that the role of language in planning is essential as planning would not be possible without a semiotic mediation for the formation of plans to occur (Das, Kar & Parrila 1996: 111). Prior studies argued that plans are the interconnection between knowledge and behaviour (Morris & Ward 2005: 14). And both knowledge and behaviour are said to have hierarchical organization (Morris & Ward 2005: 3, 14, 15) leading us to believe that plans are best conceived within a framework of understanding the structure of behaviour (Morris & Ward 2005: 15). Moreover, since plans have been viewed as “conduct controllers” (Bratman 1999: 29) that organize, control, direct and shape behaviour (Miller, Galanter, Pribam 1960: 17; De Lisi 1987: 83, 105; Berger 1997; Bratman 1999: 2, 28), we extend this same argument to language, as the symbolic articulation of
knowledge, by viewing linguistic output as playing a role in shaping speakers’
behaviours.

**Question 4. Which independent crime scene variables should be included in the
selection criteria and what justifies their classification as planning variables?**

Based on the definition of planning we provided in Chapter 6, we presented
argumentation in favour of categorizing the following variables as being indicative of
offense planning: Victim’s Body Wrapped in Tape; Victim’s Body Wrapped in Blanket;
Victim’s Body Wrapped in Plastic Bag; Presence of Beheading; Presence of Scattered
Body Parts; Victim’s Body Found Hanging from Bridge; Message found in Automobile;
Message found in Trunk of Automobile; and Presence of Animal Parts. A full
justification of their inclusion is listed in Section 4.7 of Chapter 6.

**Question 5. What are the independent behavioural evidence variables that correlate
with the choice of verb form by the speaker?**

Chapter 6 presented a quantitative analysis of 201 tokens from the Narcomessages
Sample in order to test the Certainty meaning hypothesis proposed in Chapter 4 and also
to uncover possible associations between behavioural evidence variables and the
speaker’s choice of verb form. Our first finding suggested that in general speakers choose
the form SP, meaning **MID** Certainty, more frequently than the MF, meaning **LOW**
Certainty, when they articulate threats. We saw that the **HIGH** Certainty form Pret was not
used in the Narcomessages sample and was due to the strict entry criteria we established
at the outset of the study. We also found that narcomessages are generally appear
alongside a single victim body rather than at a crime scene where there is no victim body
present, regardless of the choice of verb form. Single homicide crime scenes, in particular, however, favored the presence of narcomessages using the SP over the MF.

We predicted that the Mid Certainty form would co-occur more often than the Low Certainty MF with nine behavioural variables indicative of planning. These variables included: Victim’s Body Wrapped in Tape; Victim’s Body Wrapped in Blanket; Victim’s Body Wrapped in Plastic Bag; Presence of Beheading; Presence of Scattered Body Parts; Victim’s Body Found Hanging from Bridge; Message found in Automobile; Message found in Trunk; and Presence of Animal Parts. For all variables the general tendency was for these behaviors not to occur, however, when they did occur the numerical tendencies showed support for our prediction across all nine variables. These results did not reach statistical significance and future research is needed using larger sample sizes; but the patterns do nevertheless suggest that there is a relationship between linguistic Certainty meanings and physical actions related to planning.

**Question 6. Is the choice of verb form correlated to a violent outcome that did occur?**

In Chapter 6 we analyzed whether or not the violent act mentioned in the narcomessages was realized at a future time, and whether this outcome correlated to the choice of verb form. Specifically, we predicted that the realization of violent acts would co-occur with the use of the form SP. This prediction was not supported by the data. Overall, we found that for both verb forms the distributional preference is for the outcome not to be realized, in line with previous research (Smith, S. 2008, Baumgartner et al. 2001, Scalora et al. 2002). In general, when the violent act did occur, it did so in cases where the threat had been communicated using the Low Certainty form MF more
often than the Mid Certainty form SP. The choice by language users to select the lower Certainty form in cases with realized outcomes is something we do not yet fully understand. Future research is needed to gain a better understanding of the psychology behind using lower Certainty meanings in threats where the violent outcome is eventually realized.

**Question 7. What is the relationship between the linguistic forms used to articulate plans by offenders and the kinds of behavioral actions these offenders engage in at the crime scene?**

In our analysis of the Narcomessages Sample in Chapter 6 we found that there is a relationship between the use of forms signaling linguistic Certainty meanings and the types of behaviours offenders engage in at the crime scene. Offenders communicated with more Certainty when their actions reflected a higher degree of planning. We conclude by saying that the language used by offenders to articulate plans of violence is related to distributional tendencies associated with actions reflecting cognitive planning. However, the relationship between realized outcomes and the meaning low Degree of Certainty remains unexplained and would benefit from future research.

**2. Suggestions for Future Research**

This study has contributed to the existing literature in both linguistics and threat assessment. We provided a unified new meaning hypothesis for the Pret, SP and MF based on Degree of Certainty that can account for the entire distribution of the forms. Moreover, the new meaning analysis was also able to account for the uses of the form SP as it occurs in so-called periphrastic future and present perfect constructions. With regard to the use of these forms in threatening communications by offenders, we were able to
provide a correlational account for the occurrence of these forms and the behaviours found at the scene. This study is the first to in the existing literature to include this level of detail regarding the behaviours we analyzed at the scene and their relation to the language used by offenders. What is more, although we were unable to provide an explanation for the results of our Outcome variable, we did find that realized outcomes co-occur more often with lower Certainty meanings than Mid Certainty meanings. This finding is counterintuitive and although we cannot yet understand why this is so, it remains a descriptive fact that can be useful to threat assessment practitioners. The study is only the second empirical analysis of narcomessages to be included in the existing literature.

Future studies on the meanings of the forms Pret, SP, and MF should focus on extending the Certainty meaning hypothesis to other types of corpora. Moreover, future work can also test the proposed Certainty meaning hypothesis by using non-corpus research and forming experimental studies where participants are primed to produce elicited responses. We also recommend an analysis under the framework of formal semantics of these forms in terms of being modal operators. Future research should investigate whether the forms Pret, SP and MF behave the same way as other modal operators.

The use of the forms Pret, SP and MF in the context of written threats can still benefit from a better understanding of the psychology behind the choice of form and the observable crime scene behaviours. Future work from a psychological perspective can provide an assessment of the behaviours we find at scenes when the forms under analysis are used. Moreover, future work in psychology can help provide a better understanding of
why offenders would choose a lower Certainty meaning in threats where violent outcomes are eventually realized.

Overall, we suggest that future research should continue to focus on the influence of grammatical features in threatening communications rather than lexical choices. Moreover, more studies are needed that study language use in relation to the types of behaviours associated with violent acts and not limited to the occurrence of realized outcomes. Larger samples of data would provide more stable results for this type of study. More linguistic studies on language use in cases of interpersonal violence in order to complement the work that has been done in psychology are still needed. Since language is the tool used to articulate plans for future actions, human behaviour should be studied within a framework of the structure of language.
References


