AGREEMENT REFLEXES OF EMERGING OPTIONALITY IN HERITAGE SPEAKER SPANISH

By

DIEGO PASCUAL CABO

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Para vosotros, Teo y Pau, porque lo sois todo.
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This study contributes to current trends of heritage speaker (HS) acquisition research by examining the syntax of psych-predicates in HS Spanish. Broadly defined, psych-predicates communicate states of emotions (e.g., to love) and have traditionally been categorized as belonging to one of three classes: class I-*temere* ‘to fear’, class II-*preoccupare* ‘to worry’, and class III-*piacere* ‘to like’.

In addition to the notorious structural opacity of class III psych-verbs, a large body of literature has documented them as being problematic for Spanish HSS. Considering this, I propose a novel analysis that aims to explain the patterns observed; i.e. class III psych-verbs —those that only have an unaccusative syntax in monolingual grammars— have been reanalyzed as class II psych-verbs —which have available both an agentive and unaccusative syntax. In other words, there is a simplification of the Spanish system of psych-predicates (in the sense of reducing three classes to two). As a result of this adjustment, Spanish HSS should be able to project an optional agentive syntax for *gustar*-like verbs (a use deemed ungrammatical by monolingual speakers) which is akin
to other verbs like *asustar* ‘to scare’ or *molestar* ‘to bother’ (typical class II psych-predicates).

To test this prediction, a total of 114 completed a battery of tests that examined the participants’ knowledge and use of (un)grammatical items in relation to the syntactic and morphosyntactic reflexes that should obtain if the hypothesized analysis is on the right track. For example, I predict that Spanish HSs will (variably) accept passive constructions with *gustar*-like.

The data presented reveal trends that are consistent with this prediction. Furthermore, the results seem to indicate that a particular feature of change in 1st generation immigrant input providers, the loss of dative “a” marking, seems to be what gives rise to the change in syntax by the HS generation. The data, as well as the pairing of the groups which include child and adult aggregates, further contribute to the current debate in formal HS acquisition regarding the sources of variability.
CHAPTER 1
INTRODUCTORY REMARKS

1.1 General Introduction

Language is a complex human-specific trait. Despite its complexity, successful attainment of a mature linguistic system is manifested at a very early age (e.g., Hyams 1986; Guasti 2002; Synder 2007 for review from the generative perspective). Moreover, linguistic development seems to follow a delimited path universally; that is, irrespective of the language, children reach the same milestones at roughly the same times independent of socioeconomic status, overall intelligence and social context (at least in true linguistic terms). This observation raises important questions concerning the nature of our linguistic knowledge and the possible domain-specificity of language.

A reasonable explanation is to hypothesize that humans are genetically predisposed to acquire language. That is, all humans are biologically endowed with an innate language faculty that constraints our linguistic development, enabling (if not obliging) us to converge on fully developed linguistic systems. This is the perspective put forward by the Chomskyan approach to linguistics, also referred to as Universal Grammar (henceforth UG) or generative grammar, the theoretical framework under which this dissertation is carried out (e.g., Chomsky 2004 for discussion of this theory from its genesis to its then current state).

From the generative point of view, the language faculty is understood as an independent, modular subsystem of the mind. This mental system of abstract computation interacts with other cognitive systems, but is argued to be fully encapsulated (e.g., Fodor 1984). That is, although our linguistic endowment can use input from other cognitive systems and even provide relevant outputs for other cognitive
domains, it exists as its own entity of modular-specific design. This language faculty represents the true initial state of language acquisition for each individual and includes a set of universal principles and parameters (however one envisions this to be). Principles are truisms of Language, that is, they are fundamental and immutable rules, so to speak, that constrain the forms all languages can take. Parameters are also universal constraints on competence formation. These, however, embody the locus of observable crosslinguistic variation via their enumeration of restricted choices for the realization of any given property. Parameters are set via the interaction of the particular grammatical facts available in primary linguistic input and the possibilities, or settings, enumerated within UG. Principles, on the other hand, having no options, simply restrict grammatical formation in every language equally, although evidence of such restrictions or the Principle’s visible instantiation can depend crucially on language specific facts\(^1\).

The most direct evidence in favor of the existence of UG comes from the so-called logical problem of language acquisition (e.g., Schwartz and Sprouse 2000 \textit{inter alia}), also known as Plato’s problem (e.g., Chomsky 1965, 1972, 1986). This line of argumentation involves the acquisition of complex and subtle linguistic knowledge (e.g., semantic entailments that fall out from syntactic structure, see Sprouse 2005 for how these properties embody a true, in his words, “bankruptcy of the stimulus”) that cannot be attributed solely to experience, since it “extends well beyond the restricted and degenerate evidence” (e.g., Chomsky 1972:27). In other words, the primary linguistic data available to any individual are underdetermined and are therefore not sufficient to

\(^1\) For example, subjacency is no less applicable to Chinese than to any other language, but since it is a universal constraint on movement and Chinese lacks movement, then there is limited or no evidence to its instantiation in the grammar because it is simply superfluous given the particular facts of that language.
give rise in a one-to-one mapping sense to the linguistic knowledge that characterizes mature adult grammars. Consequently, if the acquisition of these subtleties cannot be reasonably accounted for through experiences with input, then it is logical to assume that such knowledge is derived from the innate language faculty.

Another important piece of evidence in favor of UG is the existence of a critical period for the development of grammar (e.g., Penfield & Roberts 1959; Lenneberg, 1967; Curtiss 1977). As mentioned above, the acquisition of one’s native language is primarily accomplished in the first years of a child’s life (e.g., Hyams 1986; Guasti 2002; Synder 2007 for reviews). During that time, interaction with other language users is paramount since it provides the raw materials needed to activate the growth of the linguistic system. Failure to be sufficiently exposed to language before the critical period, argued to be from birth to the offset of puberty (e.g., Lenneberg 1967), is hypothesized to be deterministic in terms of one’s ability to acquire grammar (e.g., Curtiss 1977 for discussion of which aspects of language might be more or less subject to this timeframe). Since it is relatively uncontroversial to claim that there is a critical period for the acquisition of a first language (L1), it is only natural to ponder the consequences of such claims for cases of language acquisition other than monolingual L1 in childhood. For example, many have sought to address the extent to which the Critical Period Hypothesis (CPH) extends to the case of adult second language acquisition (L2) as well as other subsequent cases of language acquisition (Ln) after normal L1 acquisition has taken place. Within generative SLA, this has translated into the oft-investigated question of adult UG accessibility (e.g., White 2003; Meisel 2011). There is, to date, no consensus on whether or not adults who have acquired an L1 in a
normal fashion actually lose access to UG in adulthood, thereby questioning the CPH’s extension to adult language acquisition in UG-accessibility terms (e.g., Birdsong 1999; Rothman 2008). On the other hand, another logical consequence of a strict interpretation of the CPH could be an expectation that all naturalistic language acquisition in early childhood should result in expected levels of ultimate attainment. However, formal linguistic work on heritage speaker bilingualism (Section 2.1) has consistently shown over the past two decades that such a conclusion is not totally sustainable (e.g., Montrul 2008 and references therein). This dissertation deals precisely with this latter group of individuals, namely heritage speaker (HS) bilinguals, in an attempt to examine their grammatical competence and explain, to the extent that their knowledge differs from expected outcomes, how this can be so, given that they are indeed naturalistic child language acquirers. In light of this, it is logical to ask the following two questions: first, does early naturalistic language acquisition always result in convergent monolingual-like grammars? Secondly, assuming a naturalistic and early acquisition of the heritage language (henceforth HL), what is the effect of sustained but asymmetrical bilingualism for the linguistic knowledge of either language? These questions currently guide research in the emergent field of formal heritage language acquisition, to which this dissertation will contribute.

Bilingual contexts, and bilingualism in general, tend to create conditions that give rise to linguistic outcomes that differ from those expected of monolingual speakers of the same language(s). These distinctive outcomes, which from the UG perspective are thought to largely obtain as a result of some sort of ‘incomplete acquisition’ (e.g., Montrul 2008 inter alia; also Section 2.2.2.2), are characteristic of HSS’ grammars.
Briefly defined, a HS is a bilingual individual that grows up speaking a minority language at home, which is different from the majority societal language (e.g., Montrul 2008, 2011; Polinsky & Kagan 2007; Rothman 2009). Although the HL is most often the sole chronological L1 or a simultaneous L1 (as in 2L1 acquisition), with time the societal majority language usually becomes the HS's dominant linguistic system. As a result, the home language becomes relegated to increasingly more restricted domains of use. The shift to the dominant language most typically takes place in early childhood before ultimate attainment in all domains of the HL grammar occurs. This shift has been hypothesized to be at least one primary source of HS outcome differences.

The current debate in formal HS acquisition regarding the abovementioned source of vulnerability among HSs’ grammars has been centered along the concepts of incomplete acquisition (e.g., Montrul 2008), attrition (e.g., Polinsky 2006, 2011), and missing-input competence divergence (e.g., Rothman 2007; Pires & Rothman 2009). Determining the extent to which HL grammars obtain the way they do as a result of either one or a combination of these factors is at the core of current HL acquisition research. Although no one denies that all of the aforementioned causes, among others, cannot simultaneously co-exist to form the most adequate explanation of HS grammatical uniqueness, it is reasonable to ponder the extent to which some of them might be more deterministic than others in a domain-by-domain sense.

One of the motivations for this study, therefore, was to conduct experimental research with relevant morpho-syntactic properties and across several generations in an attempt to tease apart which of the three factors mentioned above (or a combination thereof) are explanatorily deterministic for the domain of morpho-syntax under
investigation. With this in mind, the results of this research will provide for greater understanding of HS Spanish grammatical knowledge.

The data will be relevant to formal linguistic theoretical approaches to Language and its acquisition by adding to our understanding of the mental (cognitive) representation of human language in a specific subcase of bilingualism. The data will also be relevant to contact linguistic theories by reporting on the structural consequences of the bilingual byproducts of language in asymmetrical contact. Finally, the study will shed some light on the role of diachronic change and its link to attrition as well as its compounded effect as subsequent generations are provided input by speakers who themselves are undergoing attrition.

1.2 Research Problem

HSs differ from monolingual children, bilinguals in a societally balanced bilingual context, and classroom second language learners (henceforth L2ers) in several ways which include, but are not limited to, the quantity and quality of input, access to formal education in the HL and the social distribution of the HL (e.g., Beaudrie & Fairclough 2012; Montrul 2008, 2012; Rothman 2007, 2009; Valdés 2005, among others). For example, while adult L2 learners are usually primarily exposed to input from formal instructed environments, HSs typically receive little to no education in the HL (at least through high school ages). Nonetheless, HSs seem to have some competence and performance advantages over L2ers at low to intermediate levels (e.g., Montrul 2004; Montrul & Rodríguez Louro 2006). These advantages, however, tend to dissipate at more advanced levels (Montrul 2005, 2010), which is to say that the differences in competence seem to lessen as increased proficiency in the L2 rises. Regardless of the proficiency level and property examined, the benefits of examining HSs are manifold.
Such research can offer insightful contributions and can build bridges between formal language acquisition, linguistic theory, diachronic change, sociolinguistics, psycholinguistics, and cognitive science among others (e.g., Benmamoun, Montrul & Polinsky 2010; Domínguez 2009; Montrul 2008, 2011; Pires & Rothman 2009; Rothman 2007, 2009, among others).

The growing body of HL acquisition studies has shown that naturalistic acquisition in early childhood can result in significant differences in linguistic outcomes, which is an interesting fact especially within the UG paradigm. How can naturalistic acquisition in young childhood result in such differences from expected norms? Without ignoring the determinism of the HS sociolinguistic environment, theorizing about why this is so at the cognitive-linguistic level rests at the core of formal HL studies. The aim of this study is therefore to better understand, in linguistic and cognitive terms, why some structures might be more susceptible to HS difference from the monolingual model and, more specifically, what linguistic and cognitive variables might combine beyond the obvious sociolinguistic asymmetries to best explain the competence patterns observed. As is true of all cases of bilingualism, HS acquisition of course cannot be fully described or explained without understanding and then bringing together the linguistic and sociolinguistic aspects involved. However, before such enterprise can be meaningfully undertaken, it is worthwhile, especially in a nascent field such as this one, to promote investigations that narrowly address crucial questions from each side separately and exhaustively (without ignoring deterministic aspects from the complementary side that naturally come to bear). The objective of this dissertation then is to address primarily the cognitive-linguistic side of the issue by describing and explaining linguistic competence,
and providing a methodology that teases apart, to the extent possible, the source(s) of linguistic divergence. Even if I am able to (i) describe and explain the mental competence of these HSs for the structure of inquiry and (ii) map the source of the difference (e.g., incomplete acquisition or attrition), I will not be able to fully answer why this has occurred for this domain beyond what is linguistic (in its purest sense).

This study examines these questions and goals through the analysis of a somewhat understudied structure relevant to this approach, that is, the argument structure and semantic mappings of reverse psychological predicates (i.e. class III psych-predicates (Belletti & Rizzi 1988; Parodi Lewin 1991); gustar ‘to like’, encantar ‘to love’, (Chapter 3)\(^2\).

Examining HS competence with gustar-type verbs is of special interest for HS studies as they embody a possible domain of vulnerability for at least two interrelated reasons. First, they present an atypical mapping of the arguments to syntactic positions in light of the canonical predicate mapping of Spanish (e.g., Gutiérrez Bravo 2007; Parodi Lewin 1991). In turn, these unique properties render these predicates especially problematic for second language learners (e.g., Montrul 1997, 1998; Toth 2003), monolingual attriters (e.g., Cazzoli-Goeta & Young Scholten 2011), and adult HSs (e.g., Dvorak 1983; Dvorak & Kirschner 1982; De Prada Pérez & Pascual y Cabo 2011; Toribio & Nye 2006). Interestingly, however, whereas L2 learners have difficulty with gustar-type psych-verbs through development, they do achieve monolingual-like competence at higher levels of proficiency (De Prada Pérez & Pascual y Cabo

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\(^2\) Gustar-type verbs have also been described as experiential or benefactive (Fillmore 1968; Cook 1972) due to the fact that the subject does not function as an agent, but rather functions in an experiential or benefactive capacity (Dvorak & Kirschner 1983).
forthcoming). This is somewhat contrary to what has been shown for Spanish HSs (de Prada Pérez & Pascual y Cabo 2011), an interesting comparison to which I return in greater detail in subsequent chapters. Second, studies on monolingual children have shown that these verbs are not used in an adult-like fashion until approximately the age of 6;0 in monolingual Spanish (e.g., Torrens, Escobar & Wrexler 2006; but Gómez Soler 2011, 2012), an age at which most HS have already shifted to English dominance. As will be argued in subsequent chapters, these issues couple together to create an ideal situation for structural reanalysis in HS acquisition.

The focus of this study is therefore to further explore HS Spanish grammars and structural outcomes in the domain of class III psych-verbs and the properties associated with them. Building on previous work (syntactic theory, L1 acquisition, L2 acquisition, and HS acquisition), this study begins by offering a syntactic hypothesis regarding the underlying competence of class III psych-verbs in Spanish as a HL. This hypothesis also allows for testable empirical predictions beyond what has been shown previously (Section 3.3).

1.3 Research Proposal

1.3.1 Research Questions

Before providing further details regarding the theoretical background information on the acquisition and syntax of class III psychological predicates, it is necessary to contextualize this study by stating the specific research questions that guide it:

1) Are class III psych-verbs in HS Spanish undergoing a reanalysis of their argument structure? If so, in what ways and why?

2) To what extent are attrition, incomplete acquisition and/or input delimited differences at least explanatory as sources of HS differences and to what extent can these three factors be teased apart?
1.3.2 Hypotheses

Based on previous research that suggests class III psych-verbs to be problematic for this bilingual population (e.g., Toribio & Nye 2006; de Prada Pérez & Pascual y Cabo 2011), I predict that Spanish HSs will show innovations for class III psych-predicates and the properties associated to them (e.g., dative a marking, clitic agreement, theme-verb agreement). More specifically, I predict that in HS Spanish, class III psych-verbs, have been reanalyzed projecting an optional agentive reading instead of the prescribed stative reading (Belletti & Rizzi 1988; Pesetsky 1995).

1.4 Dissertation Structure

This dissertation seeks to weigh in on questions that have dominated the formal linguistic study of HS acquisition in recent years, relating mainly to determining with descriptive and explanatory adequacies what areas of linguistic competence are most susceptible to HS divergence and what linguistic factors contribute to these outcomes. With these general goals in mind, I intend to show that there is a simplification of the argument structure regarding this particular group of verbs in Spanish that is shifting towards a reduction favored by the majority language, English. As will be described in Chapter 4, this prediction is easily falsifiable given the methodology I propose. If correct, this hypothesis will be able to account for the HS variation attested in previous literature.

The remaining chapters of this dissertation will unfold the previous argument in more detail. Chapter 2 provides a comprehensive theoretical discussion of issues related to the specific nature of heritage speaker bilingualism. Chapter 3 provides the necessary theoretical background in terms of the syntactic properties related to psychological predicates in general and class III psych-verbs particularly. Before turning to the specifics of the present study in Chapter 4 (e.g., research questions, hypotheses,
description of participants, materials, etc), a review of the primary findings from most relevant research in the different domains of acquisition (L1, L2, HS) is provided. A detailed discussion of the results in terms of the proposed research questions and hypotheses is presented in Chapter 5. To conclude in Chapter 6, and after acknowledging some theoretical and methodological limitations, the main findings are summarized and future lines of investigation relevant to the field of HS bilingualism are proposed.
CHAPTER 2
BACKGROUND INFORMATION

2.1 Introduction

This chapter provides a comprehensive theoretical discussion of heritage grammars by surveying and critiquing the principal models that have been proposed to explain the linguistic outcomes that characterize heritage speaker competence, namely incomplete acquisition (e.g., Montrul 2008), L1 attrition (e.g., Polinsky 2011), and missing-input competence divergence (e.g., Rothman 2007; Pires & Rothman 2009). Prior to this discussion, however, it is necessary to operationalize the terms heritage speaker (HS) and heritage language (HL) (e.g., Polinsky & Kagan 2007; Rothman 2008 for more details), an issue which I address next.

2.2 Definition of HL and HS

To be clear from the outset, a HL is a language that is spoken at home and, crucially, is different from the dominant language spoken by the larger society (e.g., Montrul 2011, Rothman 2009, Valdés 2005). In the context of the United States (US), Spanish is unquestionably the most represented of the heritage languages (HL) studied. The increasing interest in studying Spanish HSs in the US over the past two decades is of no surprise since this population is on the rise both in number and in socioeconomic importance (e.g., Beaudrie & Fairclough 2012; Field 2011). For example, consider the recent growth of the Hispanic population, which grew from 35.3 million in the year 2000 to 50.5 million in the year 2010 (e.g., the 2010 U.S. Census for more information on this issue). But Spanish is of course not the only HL studied nor are the issues pertaining to or pursued in such research unique to Spanish HS bilingualism (e.g., Field 2011; Potowski 2010). For example, recent work on HSs has been conducted on a variety of
heritage languages including Portuguese (e.g., Pires & Rothman 2009; Rothman 2007), Russian (e.g., Polinsky, 2006, 2008a, 2008b, 2011) or Hindi (e.g., Montrul, Bhatt, & Bhatia 2012).

In spite of the current interest in the study of HS bilingualism (e.g., Benmamoun, Montrul & Polinsky 2010; Montrul 2008, 2010; Rothman 2009), it seems reasonable to consider its formal linguistic study as an emergent discipline in its initial stages (especially if compared to the fields of first language (L1) and other instances of bilingual acquisitions (e.g., second language (L2) in adulthood, childhood simultaneous bilingualism (2L1)). In light of this, and considering the increasing relevance of this field, one important theoretical issue that stands out as a current source of considerable debate is the one concerning the definition of the HS per se (e.g., Beaudrie & Fairclough 2012 and references therein for more on this issue). This is of utmost importance here since, until there is one clear definition agreed upon by all (within each specific subfield), the studies conducted and the results obtained will not be truly comparable.

In the past years, we have seen how the concept of HS has been used with different names to mean different things (e.g., Polinsky & Kagan 2007; Rothman 2008 for more on this issue). To give a few examples, HSs have also been called Ethnic community speakers (Montrul 2008), background speakers (Montrul 2008), or semi-speakers (Dorian 1989). Although the general assumptions and presuppositions regarding HSs do not change from definition to definition —for example, a HS is usually a descendant of immigrants who speaks a language at home that is different from the
language spoken outside the home—more specific ones do\(^1\). These differences tend to correspond to the specific goals in the research agendas of individual scholars, paradigms or disciplines (e.g., anthropological, socio-economic, political). Within the field of linguistics, Polinsky & Kagan (2007) make a distinction between a broad and a narrow definition for HSs. In the broad sense, an individual is considered a HS as long as she has strong cultural connections to the HL. Because this view does not necessarily take into consideration the actual linguistic knowledge of the individuals, its adoption would imply that one would have to label passive bilinguals or (non-verbal) heritage language learners as HSs even if they cannot produce language in the HL. More drastic would be the case of the latter: individuals who have strong cultural ties to a historic family language, perhaps as close as one generation before them, but have no linguistic competence whatsoever beyond some knowledge of culturally significant lexical items (presumably because despite strong cultural ties they have not received (sufficient) early naturalistic exposure to the HL).

Since the term HS includes the word *speaker*, it might seem a bit confusing to use such a label for individuals who seemingly lack the ability to productively use the language. Therefore, such (non-verbal) individuals, under a formal linguistic approach, would not be included as HSs. This is not to say that the above definition is wrong or

\(^1\) I am not excluding the possibility that young bilinguals brought up in a HL environment who themselves are not ethnically part of the HL group can be treated as HSs in the context of studies seeking to gauge linguistic mental representation. In other words, should we preclude a young English-Spanish bilingual who grows up in a predominantly Hispanic community and is functionally incorporated into Spanish in her daily life or someone who is raised with a HL caregiver other than her genetic parents to a similar way as those who are ethnically Hispanic and who likely suffers the same fate of reduced input to Spanish over time as she enters school? The answer to this of course depends on whether or not you take ethnic identity to be an inclusion/exclusion factor. However, linguistically speaking this person will share many of the same characteristics that define HSs with ethnic originals in the HL. She is a naturally acquired bilingual of a minority language in a majority language context who has some competence in the non-dominant language.
misguided; in fact, the study of such individuals and consideration of these criteria bring much to bear on other pertinent questions that fall outside the remit of formal linguistic investigations.

In the case of passive bilinguals, who are also not *speakers* by definition, there clearly is (some) underlying linguistic competence for the HL since they are, in principle, able to understand to some extent the HL. Concerned with the underlying competence of HS grammars, the question of how and why passive bilinguals do not readily produce the HL is outside the scope of this dissertation, as it likely relates to processing factors such as inhibition thresholds and access to grammatical structure in real time. And so, from a formal linguistic perspective, it is at least debatably reasonable to include passive bilinguals in the larger cohort of HSs.

Again, because the goal of this dissertation is to explain why the constitution of HS grammars take the shape they do, the broad definition offered above (Polinsky & Kagan 2007) is rendered inappropriate for this project. Admittedly, for studies focusing on other worthy questions that fit nicely into the larger enterprise of HL studies such as those on HS/HL linguistic identity, the broad definition is exactly what needs to be adopted (e.g., Valdés 1995, 2003, 2005; Valdés, Fishman, Chávez & Pérez 2006; Wiley & Valdés 2000). The narrow definition offered by Polinsky and Kagan (2007), however, is more appropriate for the present study as it takes into account actual linguistic abilities as inclusion/exclusion criteria to classify individuals as HSs. In the strict sense of the word, it is not enough for an individual to grow up in an environment that is surrounded by a (home) culture and a language that differs from the societal one to be considered a heritage speaker. Crucially, a HS must have some (at least minimal) communicative
capacity in the HL. More in line with the latter perspective is Rothman’s (2009) definition, which in turn is the one I adopt here:

A language qualifies as a *heritage language* if it is a language spoken at home or otherwise readily available to young children, and crucially this language is not a dominant language of the larger (national) society. Like the acquisition of a primary language in monolingual situations and the acquisition of two or more languages in situations of societal bilingualism/multilingualism, the *heritage language* is acquired on the basis of an interaction with naturalistic input and whatever in-born linguistic mechanisms are at play in any instance of child language acquisition (Rothman 2009: 156).

More recently, Rothman and Iverson (2010) reiterated that HSs must be members of a naturalistic bi/multilingual environment, in which there is societal imbalance of the languages involved. Such asymmetry, combined with the age of exposure to the societal language, is deterministic in an individual’s linguistic development (e.g., Montrul 2008). In terms of age\(^2\), a HS is considered (a) a simultaneous bilingual if the individual is exposed to both languages from birth or (b) a sequential bilingual (a child L2er of the majority language) when the societal language is introduced after the speaker has been developing as a monolingual in the HL (typically receiving significant input at roughly school age, so 4-5). Whether the HS is a simultaneous bilingual or a child L2er of the societal language, varying levels of dominance in the societal language are often the linguistic outcome (e.g., Montrul 2008; Pires & Rothman 2009; Rothman 2009; Valdés 1995, 1997, 2000, 2003, 2005)

In sum, for the purpose of this study, I conclude that, in order for an individual to be considered a HS, she must be able to sufficiently speak a home/minority language in addition to the language spoken by the mainstream society where she lives. Crucially,

\(^2\) For a detailed discussion on the different variables that weigh in on the issue of describing bilingual speakers in general, I refer the reader to Wei’s Dimensions of Bilingualism (2007).
acquisition of the HL must be the result of exposure to naturalistic input at an early age, and in a specific sociolinguistic environment, as discussed above. In this sense, it is fair to say that, by definition, all HSs are bilinguals, but not all bilinguals are HSs. This latter claim alone makes HSs as a group different from other bilinguals, a case especially worthy of scientific inquiry.

2.3 Importance of Studying HS Bilingualism

As Benmamoun et al. (2010) claim—and many others have pointed out—the study of HS bilingualism has not received the same degree of attention as L1 or L2 acquisition in the theoretical linguistics literature, at least until relatively recently. Nonetheless, there are numerous benefits to examining HSs, including contributions to formal acquisition and linguistic theories by gaining a better general understanding of the mental (cognitive) representation of human language, to contact linguistics by reporting on the structural consequences of contact bilingualism, to diachronic linguistic change and its link to attrition as well as its compounded effect as subsequent generations are provided input by attrited speakers, and to sociolinguistics by focusing on a particular community (e.g., Benmamoun et al. 2010; Montrul 2008, 2011; Rothman 2007, 2009; Pires & Rothman 2009; among others).

Because HSs are neither monolingual nor second language speakers, they thus fall between two groups, and the study of their bilingualism provides us with important information regarding the nature of linguistic knowledge as it develops under reduced input conditions (in the HL) in comparison to monolingual grammars.

As described, the amounting literature dealing with HL acquisition shows that naturalistic acquisition in childhood can indeed result in different paths and linguistic outcomes to a much greater degree than what can be gleaned by looking at L1
acquisition alone or even child bilingualism in societal bi/multilingual environments. That is, HSs more often than not end up displaying some linguistic forms that differ from the monolingual norms (e.g., Montrul 2008), a point of comparative fallacy to which I return in greater detail in Section 2.4.2. Trying to understand the theoretical implications that result from these differences lies at the core of current formal HL studies. For example, one important area of inquiry to which this research aims to contribute has been dedicated to understanding the sources of HSs’ so-called grammatical vulnerability (Section 2.4). In other words, one specific goal of this research is to examine HSs’ grammars and to discern between cases of attrition (Section 2.4.1) and incomplete acquisition (Section 2.4.2), as well as to study the role that differences in the HL input linguistic quality may have in the shaping of HSs’ grammars (Section 2.4.2). This, as we will see, is still a very much in-progress effort.

The study of HS bilingualism also allows us to make important claims regarding the (in)stability of the adult HL, and even of grammar in general, and the role age of exposure can play in linguistic development and ultimate attainment. The advancement of knowledge in such areas, in turn, has significant implications for some long-assumed debates regarding the existence of so-called critical periods (Lennebergh 1967) as they pertain strictly or even partially to neurobiological maturation (e.g., Montrul 2008). Briefly stated, because HS grammars can diverge from monolingual grammars to the same and sometimes even more drastic extent as typical L2 grammars despite the fact that acquisition of the HL grammar takes place in early childhood, then this allows us to question the role that age of acquisition alone confers on determining linguistic outcomes in non-native speakers. Although HS grammars are also different from L2
grammars, they do share some similarities, primarily in their differences from monolingual grammars (e.g., Montrul 2011), a fact that should not be ignored when making the claim that L1 and L2 acquisitions are fundamentally different in terms of accessibility to language specific mechanisms. What the similarities between HS and L2 grammars tell us is that, for these domains (and perhaps others), different from monolingual norms does not have to be a direct byproduct of age and the subsequent loss of neurological plasticity, as is argued by theories that maintain critical period effects for adult acquisition (e.g., DeKeyser 2000; Long 2005; Hyltenstam & Abrahamsson 2000).

In addition to re-examining age as the most deterministic factor for the success or the failure in reaching linguistic ultimate attainment, the study of HS bilingualism also forces us to examine more closely the nature and role of the input assumed to be available to the speaker, which by all accounts of acquisition is needed and delimits development and ultimate attainment. As will be seen next, differences between monolingual speakers and HSs are thought to obtain as a product of some sort of ‘incomplete acquisition’ (e.g., Montrul 2008 for a detailed discussion on this issue) but, is such a claim justified? Are these two groups really comparable in these terms? In other words, we must examine whether HSs and monolingual speakers receive the same quality of input, where quality simply refers to the linguistic composition of the input, devoid of any evaluative judgment. If not, this fact alone already forces us to question the fallacy of such comparison in the first place, a point to which I return in Section 2.4.2.
Because it is assumed that the main providers of HL input are in most cases displaced native speakers (who were first exposed to an L2 at an advanced age), we also need to consider the study of L1 attrition. In other words, we need to accept the possibility that HS input is affected by L1 attrition and begin to incorporate this possibility into our research design so as to move beyond acknowledgment to actual accounting for it (Pascual y Cabo & Rothman 2012). It has been proposed that L1 attrition may increase the variability present in the input which in turn affects the perceived (in)stability of certain (vulnerable) domains. In fact, domains of grammar that have suffered apparent L1 attrition are more likely potential candidates to undergo some kind of diachronic linguistic change in a compounded sense over time (e.g., Pires & Rothman 2009). Therefore, the study of HS bilingualism can also inform us about the role of universal linguistic mechanisms that drive linguistic reanalysis and restructuring under reduced and/or qualitatively different input conditions (Domínguez 2009; Rothman 2007; Pires & Rothman 2009), and the role of age and cognitive development in language acquisition, maintenance and loss, among others (e.g., Montrul 2011; Pires & Rothman 2009; Rothman 2009).

Although not directly related to the present dissertation project, the study of HS bilingualism also has some practical classroom applications, since a better understanding of the nature of their linguistic competence would allow us to best handle the specific needs of HSs as (re)acquirers of the HL (Montrul 2011; Polinsky & Kagan 2007; Rothman 2009; Valdés 2005). HL education is definitely an important issue to be considered since, at least in the context of the US, large numbers of HSs “have a strong desire to relearn, maintain or expand their knowledge of the language for both personal
and professional reasons” (Montrul 2008:165). As it currently stands, many of these HSs attend classes at the (post)secondary level and end up being (mis)placed in regular sections for L2ers where they are ‘taught’ their HL as if it were a foreign language (e.g., Valdés 2005 and references therein). This approach can be found in many institutions across the U.S., but because heritage language education in its own right is still in the process of building itself and developing, at least from the point of view of fulfilling their specific needs (e.g., literacy and register awareness) the issue of HS education continues to increase in popularity (e.g., Brinton, Kagan & Bauckus 2008; Carreira & Potowski 2011; Kondo-Brown 2006; Potowski 2005, 2010; Potowski & Cameron 2007; Valdés, Fishman, Chávez & Pérez 2006 as cited in Montrul 2008).

2.4 Heritage Grammars as Linguistic Systems

As discussed, one of the attested outcomes of HS bilingualism involves the competence and/or use of linguistic properties in a way that differs from that of monolingual speakers of the heritage language dialect implicated. From the generative point of view, this distinctive outcome is thought to be a product of either incomplete acquisition (e.g., Montrul 2008), L1 attrition (e.g., Polinsky 2011), or input-delimited differences (e.g., Pires & Rothman 2009). What follows is a broad review of these sources of linguistic divergence.

2.4.1 Attrition

The term ‘attrition’, often used as a synonym of general ‘language loss’, has been widely examined from different perspectives and theoretical approaches (e.g., Schmid, Köpke, Keijzer & Weilemar 2004; Köpke, Schmid, Keijzer & Doster 2007; inter alia) in reference to the linguistic erosion of phonological (e.g., Ventureyra, Pallier, & Yoo 2004), morphosyntactic (e.g., Hlavac 2003; Montrul 2002; Myers-Scotton 2007; Sorace
lexical (e.g., Schmid & Köpke 2008), semantic (e.g., Seliger 1991), or pragmatic (e.g., Schmid & Duddeldorp 2010) properties. Although comparable, ‘L1 attrition’ and ‘language loss’ do not hold a one-to-one relationship since the former refers to a state of partial language loss while the latter entails an all-or-nothing dichotomy (Schmid 2011). In other words, in the same way there is a continuum in which one can place a bilingual speaker in terms of proficiency, from low proficiency (quasi-passive) bilinguals to highly advanced (near-native) bilinguals, there are also different levels of attrition. These different levels may materialize in different degrees of language loss and/or processing consequences (e.g., lexical retrieval, morphological simplification, etc.) (e.g., Schmid 2011).

Some have argued that there can be multiple outcomes as a result of L1 attrition, in the context of HL acquisition in HSs specifically, which are generally referred to under the umbrella term ‘incomplete acquisition’ (e.g., Polinsky 1994, Montrul 2008), a topic that will be further developed in the next subsection. Such view is less concerned with the developmental differences that give rise to the distinct outcomes since it is true that both L1 attrition and true incomplete acquisition (i.e., arrested development) do converge in similar, if not the same, outcomes in adulthood when HSs are tested. However, as will be shown here, there are undesirable consequences to collapsing these two concepts, both theoretically and empirically. Crucially, for a particular property to be considered to have undergone attrition at least two conditions must be met:

1) there must be evidence indicating that the specific property examined had been acquired by the speaker prior to its erosion, and

2) there must also be evidence indicating that, after its acquisition, the speaker was able to establish a target-like use of the property for a relatively long period of time, that is, the property in question reached a state of stability.
According to these two stipulations, L1 attriters are those individuals who, after having truly acquired property X and having been able to maintain property X in a stable target-like condition for a relatively long period of time, experienced a linguistic change such that the stability of property X becomes destabilized to various degrees of possible loss. Such a change—typical among migrants (e.g., Hispanics in the US)—tends to alter the communicative needs of an individual creating therefore an ideal locus for cross-linguistic influence (e.g., Silva-Corvalán 1994; Paradis & Genesee 1996) which, in turn, may surface in the form of the reanalysis of some linguistic properties (i.e., L1 properties that may become more similar to the structures represented in the L2).

Various theoretical approaches have been proposed to try to explain attrition effects in individuals across properties and across languages. For example, earlier studies on attrition adopted different versions of the Regression Hypothesis, a theory originally put forward by Jakobson (1941) based not so much on linguistic grounds per se but on the overall cognitive nature of memory (e.g., Schmid 2002). As Köpke & Schmid put it, linguistic regression was conceptualized both in terms of chronological events (‘that which is learned last, is lost first’) and learning reinforcement (‘that which is learned best or is most often used/reinforced, is preserved longest’) (2004:16).

More recently, other work within cognitive paradigms followed this line of reasoning. For example, Paradis’ Activation Threshold Hypothesis (2004) claims that (i) the properties that are used the most, will remain more activated; and (ii) those properties that are used less commonly are more prone to being inhibited and, therefore, more prone to undergo attrition. Data from different studies showed that the
equilibrium between activation/inhibition and its relationship with frequency of use seems to play a determining role in regards to attrition (e.g., Köpke 2004; Gürel 2004).

The Interface Hypothesis (henceforth IH) has also contributed to L1 attrition theorizing (e.g., Tsimpli, Sorace, Heycock & Filiaci 2004; Sorace 2011). Briefly defined, the IH is based on the general idea that having more than one grammar represented in the mind is inevitably associated with important cognitive costs related to the allocation of finite cognitive resources. These cognitive costs can potentially result in measurable (processing-based) differences for bilinguals (e.g., Sorace 2011). Sorace identifies the properties found at external interfaces (syntax-discourse/pragmatics) as more susceptible to vulnerability. These properties are therefore more likely to be either lost earlier in the case of language attrition (e.g., Tsimpli et al. 2004) or acquired later in the case of L2 acquisition (e.g., Sorace 2011, inter alia). Core syntactic properties, on the other hand, are predicted to be less vulnerable to such linguistic erosion (e.g., Sorace 2011). In the case of the Spanish language, two such properties that can be found at the syntax-discourse interface are subject position across verb types juxtaposed against information structure (e.g., in focus environments), and mood selection with complements of negated epistemic predicates (e.g, saber ‘to know’, pensar ‘to think’, creer ‘to believe’).

Although cases of HS acquisition were not originally included in the predictions made by the IH, some have recently argued (e.g., Montrul & Polinsky 2011; Pascual y Cabo, Rothman, & Lingwall 2012) that the patterns of non-convergence and residual optionality that characterize HSs should also be included in the scope of the IH predictions, whether or not these come to support the IH itself or prove particularly
useful in accounting for HS grammars. In other words, they argue that there is no principled reason following the tenets of the hypothesis itself for which HSs should be excluded. Sorace (2012) acknowledges the validity of these claims and states that “heritage speakers are an important testing ground for the IH: the IH can make predictions for subsequent stages of attrition, as long as the differences between individual and generational attrition are clear” (Sorace 2012:214). Sorace’s proviso is on the right track, and in fact embodies one of the goals of this dissertation.

As described, language attrition is related to incomplete acquisition in the sense that there is a clear process of language loss. There are however important differences between both processes in the ways explained above. Nonetheless, the use of the term incomplete acquisition has been used freely, which has created some controversy within the field of HS bilingualism (e.g., Pascual y Cabo & Rothman 2012). To contextualize the debate, next I operationalize the term and expand on the current state of affairs.

2.4.2 Incomplete Acquisition

The term ‘incomplete acquisition’ is most often found in relation to the observable linguistic vulnerability that characterizes most, if not all, HSs in their use of the HL. Although this concept is not new, it is in its current form (Montrul 2008) arguably the most frequently used label in the study of HL acquisition. Prior to Montrul’s proposal, Schachter (1990), following Bley-Vroman (1990) and others, proposed the Incompleteness Hypothesis as a way to describe the so-called deficiency in the development of certain linguistic L2 properties (as cited in Montrul 2008). Montrul’s (2008) current definition of the term incomplete acquisition reads as follows:
In my view, incomplete acquisition and L1 attrition are specific cases of language loss across generations. What I broadly refer to as incomplete acquisition (for lack of a better term), is a mature linguistic state, the outcome of language acquisition that is not complete or attrition in childhood. Incomplete acquisition occurs in childhood, when some specific properties of the language do not have a chance to reach age-appropriate levels of proficiency after intense exposure to the L2 begins ... Although L1 attrition can also occur in childhood, I consider attrition as the loss of a given property of the language after property y was mastered with native-speaker level accuracy and remained stable for a while, as in adults (Montrul, 2008:21).

As it currently stands, the use of term 'incomplete acquisition' to describe language loss among HSs is problematic at different levels. First, we have seen that this approach is too broad and it does not appropriately account for the distinction that needs to be made between those linguistic properties that are part of the primary linguistic data and those that are not. In other words, it seems reasonable to claim that certain linguistic properties can only be acquired as long as the triggers that give rise to them are part of the input that HSs receive. If these properties are not part of the primary linguistic data, then it would be very difficult for HSs to acquire them. In light of this, Pires and Rothman (2009), arguing that Montrul’s proposal was somewhat non-specific in terms of the role of the input HSs receive, put forward a more fine-grained distinction (Section 2.4.3). Second, Montrul’s words to describe the abovementioned HS outcomes are also somewhat controversial. Although she claims that the idea of ‘incomplete’ should be understood as a mere descriptive term and not as a value judgment (2008:7), the actual choice of words inevitably carries a negative effect that is associated with the figure of the HS (e.g., Pascual y Cabo & Rothman 2012). In this sense, the dichotomy that results between the idea of complete vs. incomplete does not seem to do justice in terms of accurately reflecting a process in which a language has been naturally acquired in the exact same way that monolinguals do. From this it follows
that convergence on what one can logically converge on given the actual input they receive (and crucially not measured against the input that monolinguals receive) should always be considered complete. In that sense, the term ‘incomplete’ is imprecise if not inaccurate.

Several studies have convincingly shown that HSs’ linguistic knowledge is in fact different from that of monolingual speakers’. Consider, for example, the status of Differential Object Marking\(^3\) (DOM henceforth) in HS Spanish. Although this property has been known to represent a learnability problem for L2 learners (Bowles & Montrul 2009; Guijarro Fuentes & Marinis 2007), acquisition studies with monolingual children have revealed that DOM is acquired rather early (e.g., Rodriguez Mondoñedo 2008): by age 3, children reveal a near ceiling level accuracy (98.38%). Because HSs are exposed to Spanish from birth, one would expect early bilinguals to be equally successful in acquiring DOM (Montrul 2011). Nonetheless, Montrul’s (2011b) reexamination of the oral narrative task performed by monolingual and bilingual children (ages 6 to 11) reported in Montrul and Potowski’s (2007) study of gender agreement, suggest otherwise: while the monolingual children were 95% accurate, this level of precision decreases substantially among sequential bilinguals (62.9%) and even more drastically among simultaneous bilinguals (32.8%). These non-target-like results among

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\(^3\) DOM, also known as ‘personal a’, refers to the particular marking of Spanish direct objects when they are [+HUMAN] and [+SPECIFIC] as in (i) “ayer visité *(a) mis amigos” (yesterday I visited my friends) vs. (ii) “ayer visité *(a) unos amigos” (yesterday I visited some friends) vs. (iii) “ayer visité *(a) Atarfe” (yesterday I visited (‘to) Atarfe). In the case of (i), the sentence is ungrammatical without the ‘a’ since the object (my friends) is [+HUMAN] and [+SPECIFIC]. In the case of (ii), the sentence is ungrammatical with ‘a’ since the object (some friends) is [+HUMAN] but [-SPECIFIC]. In the case of (iii), the sentence is ungrammatical with ‘a’ since the object (Atarfe) is [-HUMAN] and [-SPECIFIC]. Sometimes the ‘personal a’ can also be used with non-human animate objects when they are interpreted as specific and individual (as with pets). I refer the reader to see Zagona 2002:12-14 for examples and a more detailed discussion on this topic.
HS children have also been shown to persist into adulthood (Montrul 2004b; Montrul & Bowles 2009).

The idea of ‘incomplete’ as Montrul herself warns, is not to be understood as a synonym of wild or rogue, since both complete and incomplete grammars are considered to be fully constrained by Universal Grammar (Montrul 2008:167). In spite of this all-encompassing view, L1 attrition and true incomplete acquisition are two different concepts and therefore should be understood and treated as such (e.g., Pascual y Cabo & Rothman 2012; Polinsky 2011). As stated, L1 attrition refers to the loss of a property (or set of properties) that had been previously acquired and mastered by an individual. True incomplete acquisition, on the other hand, refers to those instances in which acquisition of those same properties could have taken place—given input that provides the linguistic information that should result in reflex X—but for some reason the input is not utilized or ‘absorbed’ by the system to result in the specification of features that would give rise to reflex X. That being said, teasing these two processes apart without access to longitudinal data is impossible, at least in any direct way. As Pascual y Cabo and Rothman (2012) put it:

…it is virtually impossible to determine a posteriori, and recall that HSs are tested in a mature state of knowledge as adults, the course of development. That is, there is no way to know for sure working backwards if something did not develop or if it was acquired and then eroded, the former being actual incomplete acquisition and the latter being attrition (Pascual y Cabo and Rothman 2012:4)

Even so, efforts are being made to develop methodologies that would allow us to more tangibly distinguish between the two processes. For example, in her study of relative clauses among Russian HSs in the US, Polinsky (2011) examined data from child and adult HSs and compared them to age-matched control groups of monolingual
speakers of the same language. In Polinsky’s own words, both models (incomplete acquisition and attrition) make the following predictions:

a. Incomplete acquisition: If a child and an adult deviate from the baseline in the same way, it can be assumed that the feature has not been acquired.

b. Attrition: If a child performs as his or her age-matched baseline control but the adult does not, the feature can be assumed to have been acquired but may have subsequently been lost or reanalyzed. (Polinsky 2011: 306)

Such predictions can advance the field of HS study by capturing more convincingly the developmental path that we are unable to observe directly. Nonetheless, the success of her approach is not without some level of compromise; being an indirect measure, one would have to assume that the child and adult participants in her study (or in any similar study for that matter) grew up in identical (or at least comparable) language learning backgrounds and received identical (or at least exceedingly similar) quality and quantity input in each of the languages involved. Of course any method that is not based on self-reporting, is very difficult to carry out, but a detailed examination of the input received in the HL, while controlling for all other relevant variables, would be desirable, if one is to make any claims regarding the linguistic competence of heritage speakers (Pires & Rothman 2009; Domínguez 2009). This, as I describe with more detail in the following subsection, is the basis of Pires and Rothmans’s (2009) Missing-Input Competence Divergence proposal.

### 2.4.3 Missing-Input Competence Divergence (MICD)

Uncontroversially, input delimits acquisition outcomes (e.g., Pires & Rothman 2009; Rothman 2007; Sorace 2004). As described, HSs comprise a unique group of individuals with unique linguistic characteristics. But unlike monolinguals, HSs grow up in a bi/multilingual setting where the (imbalanced) societal distribution of the languages
involved, the age of exposure to the dominant language, and crucially the delimited linguistic input they receive in the home language, all play deterministic roles in their linguistic development. As stated in the previous subsection, though noticeably different from those of monolingual speakers, these outcomes cannot necessarily be described as ‘incomplete’ since this label overlooks the overall quantity and quality of the input available. To be sure, as Pires and Rothman (2009) note, the use of the term ‘incomplete acquisition’ is not entirely adequate since the line that separates true incomplete acquisition from child L1 Attrition, and even from outcomes resulting from input-differences, is not clearly established. Again, true incomplete acquisition entails that the learner fails to acquire grammatical properties that are sufficiently present in the linguistic input she receives. Once again, in the absence of ample longitudinal data that provide a detailed description of such input, it would be extremely difficult for anybody to claim with certainty whether or not a specific property is or is not available in the input.4 According to Pires and Rothman (2009), if the property is not readily available in the input, then the process of acquisition cannot be referred to as incomplete. Although Montrul (2008) does not explicitly make such a distinction, Pires and Rothman (2009) confront this issue arguing that such a term should be used to mean only “non-target-like competence outcomes when the input clearly provides triggers for such convergence but for whatever reasons it does not obtain” (2009: 22).

To support their claim, Pires and Rothman (2009) compare and contrast acquisition of inflected infinitives5 in U.S. HSs of European Portuguese (EP) and of

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4 This is particularly relevant since HS acquisition is marked by individual differences.

5 Inflected infinitives carry overt person/number agreement yet lack overt specification for tense.
Brazilian Portuguese (BP). Crucially, while this property is commonly found in EP, its use has practically disappeared in colloquial BP. In fact, speakers of BP are only exposed to it through formal education (Rothman 2007), which we know HSs do not usually receive. The implications of such groupings are clear: if inflected infinitives are prone to being a vulnerable property, then there should not be differences between both groups, that is, not only neither EP HSs nor BP HSs should use inflected infinitives, both groups should display the same negative intuitions regarding its grammaticality. If, on the other hand, there are differences in their knowledge and use of inflected infinitives, then incomplete acquisition cannot be the only reason to explain such a difference.

With this approach, Pires and Rothman (2009) claim that the source of variability in HSs competence cannot be explained solely by 'Incomplete Acquisition' because EP HSs consistently demonstrate robust knowledge of inflected infinitives, while BP HSs consistently lack such knowledge (2009:23). These results indicate that differences in the input must affect the acquisition of this property since “neither incomplete acquisition nor attrition hinders the acquisition of inflected infinitives” (Pires & Rothman 2009: 1) by HSs of Brazilian Portuguese. Target-like deviancy therefore seems to obtain as a result of a compounded effect that necessarily includes differences in the quantity and quality of the input informants receive in the heritage language.

Again, determining the extent to which HSs’ unique grammars take place as a result of any one of these possibilities (L1 attrition, incomplete acquisition, and missing-input competence divergence) is at the core of current HL acquisition research. As stated, although all these three approaches entail different aspects of 'language loss', it is extremely complicated to convincingly tease them apart. As of now, and in the
absence of extensive longitudinal data collected across different generations within the same community of speakers, this is practically impossible.

As will be shown, by conducting experimental research that adequately controls for the participants’ membership in one specific community, as well as the particular structures under study, and by testing across different generations within the same community, the current study is better positioned to document the cross-generational effects that may contribute to these unique and outcomes of HS acquisition.

2.5 Conclusion

In this chapter I have presented a broad theoretical discussion of heritage grammars, paying specific attention to both the definitions of the heritage language/heritage speaker and the different theoretical models that have been proposed to explain the linguistic outcomes that characterize heritage speaker competence, namely incomplete acquisition (e.g., Montrul 2008), L1 attrition (e.g., Polinsky 2011), and missing-input competence divergence (e.g., Rothman 2007; Pires & Rothman 2009). Chapter 3 further describes the motivation for carrying out the present study by providing a detailed description of (reverse) psychological predicates, the linguistic property under study here, and a review of the existing literature associated with the acquisition of this property in Spanish.
CHAPTER 3
SYNTAX OF REVERSE PSYCHOLOGICAL PREDICATES

3.1 Introduction

The purpose of this chapter is threefold. The first goal is to provide a detailed description of the linguistic properties of focus in this dissertation, that is, those associated with the argument structure and semantic mappings of Spanish reverse psychological predicates (or class III psych-verbs) as well as their English equivalency. The second goal is to examine the most prevalent theoretical syntactic analyses of class III psych-verbs. The third and final goal is to review the existing literature associated with their acquisition in Spanish as a first and subsequent languages. This chapter will thus lay the foundation for the empirical study that will be presented in Chapters 4 and 5.

3.2 Description of the Property

The term psychological predicate refers to a class of verbs whose lexical-semantics denote a mental/emotional state or the psychological process that results in a mental/emotional state. Verbs such as ‘to love’ in English or odiar (to hate) in Spanish are two representative examples of pysch-verbs. One important feature that characterizes this group of verbs is that, unlike common agentive predicates that subcategorize for the thematic roles of an <agent> (i.e. the doer that performs the action) and a <theme> (i.e. the entity directly affected by the action), psych-predicates subcategorize for two internal roles: an <experiencer> (i.e. the entity that receives or contains the mental/emotional state) and a <theme>\(^1\) (i.e. the entity that triggers such feeling).

\(^1\) This will be modified below following Pesetsky (1995).
In seminal work, Belletti and Rizzi (1988) proposed a three-class distinction of psychological predicates for Italian which also extends to Spanish (Parodi-Lewin 1991).

(1) **Class I** → (temere – to fear)
   
   *Gianni teme questo*  
   ‘Gianni fears this’

(2) **Class II** → (preoccupare – to worry)
   
   *Questo preoccupa Gianni*  
   ‘This worries Gianni’

(3) **Class III** → (piacere – to like, to please)
   
   a. *A Gianni piace questo*  
   ‘To Gianni pleases this’
   b. *Questo piace a Gianni*  
   ‘This pleases Gianni’

As can be seen in example (1) above, class I psych-verbs are generally treated as transitive verbs with a subject `<experiencer>` in nominative case and a `<theme>` in accusative. Some Spanish verbs that belong to this class are *temer* (to fear) or *odiar* (to hate).

(4)  
   Teo odia la lechuga  
   Teo.NOM hate.3.SG.PRES the lettuce.ACC
   ‘Teo hates lettuce’

Class II psych-verbs contain a `<theme>` with nominative case that controls verbal agreement and a postverbal accusative `<experiencer>`. Some Spanish verbs that belong to this class are *molestar* (to bother) or *asustar* (to scare). Consider example (5) below:

(5)  
   Teo molesta a Pau  
   Teo.NOM bother.3SG.PRES to Pau
   ‘Teo bothers Pau’

---

2 Both Belletti and Rizzi as well as Landau treat these verbs as regular transitive verbs, although Landau shows that they may also act as locatives in certain contexts (2010: 11–15).

3 Interestingly, as I will explain in more detail in section 3.3, class II verbs can be treated as either transitives or unaccusatives allowing for two different readings: Agentive vs. Stative.
Class III psych-predicates are also known in the literature as reverse psychological predicates (RPP) due to the reverse mapping of the arguments to the syntactic positions. That is, even if it may look like a SVO word order on the surface, verbal agreement is controlled by a postverbal <theme>⁴. This preferred word order (e.g., Gutiérrez-Bravo 2007), however, can vary and non-canonical word orders arise for discourse-pragmatic reasons. This is related to the rigidity of the Nuclear Stress Rule and the fact that Spanish has no phonotactic recourses (differently than English) (e.g., the work of Zubizarreta for a review). If a discourse environment makes salient the <theme> over the <experiencer> or vice versa, then the word order of the utterance will reflect this: the focalized element will move to sentence initial position (or the CP-layer) where these types of syntax-discourse interface elements are realized (e.g., Zubizarreta 1998 among others). Class III psych-verbs are thus no different than other verbs in this respect and hence the apparent optionality of position. e.g., in topic and foci environments, as can be seen in examples 6a-d below.

(6) Class III→ gustar (Spanish) – to like, to please
   a. A Pau le gusta esto.
      To Pau Him (DAT.CLI) likes this.
      ‘Pau likes this/He likes this’

   b. Le gusta esto.
      Him (DAT.CLI) likes this.

   c. Esto le gusta a Pau.
      This Him (DAT.CLI) pleases to Pau
      ‘This pleases Pau/him’

   d. Esto le gusta.
      This Him (DAT.CLI) likes

⁴ Despite their object-like function, dative <experiencers> in Spanish have also been referred to in the literature as logical subjects (e.g., Masullo 1992; Montrul 1995). Non-nominative subjects are licensed in languages such as Icelandic or Hindi (e.g., Bhaskararao & Subbarao 2004).
Spanish and Italian differ in this class syntactically in terms of the possibility of so-called clitic doubling. In Italian, either the dative clitic or the dative PP is used, but never both. In Spanish, if the <experiencer> is specified (as in 6a & 6c above), then it must be doubled by a clitic (indirect object pronoun). There are few verbs in Spanish that are true class III psych-verbs, that is, RPPs; however, these verbs like gustar (to like) or encantar (to love) are highly frequent. These differences bring no bearing to the properties of interest in this dissertation. Crucially for the purpose of this study, verbs that belong to this group are considered stative, that is, they cannot be used agentively, do not project vP, and are thus incompatible with passive constructions as in (7):

\[(7) \quad \text{*La película es } \text{gustada} \]
\[
\begin{array}{l}
\text{The movie be. 3SG. PRES like} \\
\text{‘The movie is liked’}
\end{array}
\]

The abovementioned reverse argument structure mapping becomes especially evident when comparing reverse psych-predicates to other more common agentive verbs such as leer (to read). For example, in (8a) the <agent> (Laurie) appears in sentence initial position and controls verbal agreement: hence, the ungrammaticality of the plural form leen (they read) in (8b). Conversely, in (9a) a postverbal thematic subject (los poemas de amor ‘love poems’) controls verbal agreement: hence, the ungrammaticality of the singular form gusta in (9b)⁵.

\[(8) \quad \text{\begin{tabular}{lll}
\text{a. Laurie} & \text{lee} & \text{los poemas de amor} \\
\text{Laurie} & \text{3\textsuperscript{RD} SG.read} & \text{the poems of love} \\
\text{‘Laurie reads love poems’}
\end{tabular}} \]

\[
\text{\begin{tabular}{lll}
\text{b. *Laurie} & \text{leen} & \text{los poemas de amor.} \\
\text{Laurie} & \text{3\textsuperscript{RD} PL.read} & \text{the poems of love} \\
\text{‘Laurie reads love poems’}
\end{tabular}}
\]

⁵ But see Ortega Santos (2006)
Therefore, a class III psych-verb contains a nominative <theme> that controls verbal agreement and a dative <experiencer> which, according to Landau (Section 3.4), is inherently and universally case marked (2010:54). The focus of this study is limited to the study of class III psych-predicates; however, as will be seen, in the experiments conducted other psych-verb classes as well as non-psych verbs are used for counterbalances.

The linguistic notion of psych-predicates is universal; that is, depending on the semantic function of the verb, it is or it is not considered a psychological verb\(^6\). As such, the equivalent English verbs are psych-predicates as well. The main difference between Spanish and English in this respect is syntactic. In other words, in English, being an Subject-Verb-Object language\(^7\) does not have dative <experiencers> that could be mistaken for subjects (White, Brown, Bruhn-Garavito, Chen, Hirakawa, and Montrul 1999: 173), the thematic (semantic) mappings are never (syntactically) reversed. That is, they are mapped onto canonical SVO word order, irrespective of the type of psych-predicate; therefore, verbal agreement is always controlled by the preverbal argument

\(^6\) I mean universal in the sense of the universality of semantics and conceptual structure (e.g., Jackendoff 2002).

\(^7\) Here, I acknowledge and put aside some rare word orders in modern English that seemingly do not have a strict SVO order. For example, some remnants of V2 structures exist giving rise to non-canonical word orders, for example with negative polarity as in Never did I know vs. *Never I did know.
(examples 5a and 5c). Any deviation to the SVO order, at least for these structures (footnote 13 below), results in an ungrammatical sentence (examples 10b and 10d).

(10) a. Drew likes dogs  
b. *Drew like dogs  
c. They like chocolate  
d. *They likes chocolate

3.3 Review of Theoretical Analyses

Researchers from different paradigms have proposed several typological, semantic, and syntactic analyses for the observable phenomena associated with psych-predicates (e.g., Arad 1998; Belletti & Rizzi 1988; Bouchard 1995; Grimshaw 1990; Landau 2010; Masullo 1992; Pesetsky 1995, among others). In this section, I present an overview of some of the most relevant analyses of psych-predicates: (i) Belletti and Rizzi (1988); (ii) Grimshaw (1990); (iii) Montrul (1995) and, (iv) Landau (2010).

3.3.1 Belletti and Rizzi (1988)

As discussed, Belletti and Rizzi put forward a tripartite classification of psychological verbs (examples 1-3 above), trying to explain in a systematic way the apparently arbitrary mappings of the thematic roles to the syntactic positions. In their analysis, which included the deep structure-surface structure division of then current syntactic theory, they proposed two different structures: one for class I psych-predicates and another for class II and III.

As can be seen on figure 3-1 below, the structure Belletti and Rizzi propose for class I is a simple transitive structure in which the <experiencer> (Gianni) appears in the subject position and the <theme> (questo ‘this’) is located inside the VP as complement of V (teme ‘he fears’).
On the other hand, the D-structure they propose for classes II and III is a double object construction where (i) the subject position is empty and (ii) both the <theme> and the <experiencer> are projected as internal arguments. See figure 3-2 below.

According to Belletti and Rizzi, while either the <theme> or the <experiencer> can raise (Belletti and Rizzi 1988:335), it is the case that the <experiencer> raises because it is structurally higher than the <theme>. Regarding its landing site, Belletti and Rizzi
provide independent evidence that demonstrates that these elements move to subject position and not higher up as topics or left dislocated elements. In this respect, Belletti and Rizzi (1988) noted the distinct properties of some elements that display most canonical subject properties except for agreement, but bear inherent case (Landau 2010:81). These elements are also known in the literature as quirky (subjects/datives). They noted that (i) while quirky datives can be quantified NPs, left dislocated cannot and (ii) that left dislocated elements only appear marginally in embedded clauses. Quirky datives, on the other hand often occur in this contexts and do not constitute a barrier for Wh-extraction.

3.3.2 Grimshaw (1990)

In light of a less syntactic-centric view, Grimshaw (1990) appealed to the interaction between the Thematic and the Aspectual Hierarchies as the cause of the reverse mapping of arguments observed for class III psych-predicates. According to Grimshaw, each hierarchy establishes and defines relations of prominence between the participating arguments, in which the external argument is always the most prominent. The Thematic Hierarchy arranges the arguments with respect to their thematic prominence, the agent being the most prominent argument.

(11) Thematic hierarchy
    (Agent[Experiencer[Goal/Source/Location [Theme]])

The Aspectual Hierarchy adds aspectual properties to predicates and distinguishes between eventive and stative predicates. As can be seen in example (12) below, the causer is the highest argument in the Aspectual Hierarchy.

(12) Aspectual hierarchy
    (Cause [other[ . . ]])
As discussed, Grimshaw attributes the inverse word order of class III psych-verbs such as *gustar* ‘to like’ (and opposed to the direct word order revealed by regular agentive verbs) to the (mis)alignment that results from the interaction between these two hierarchies. To better illustrate this idea, consider two comparable constructions: one with an agentive predicate (e.g., *lavar* ‘to wash’), and one with a class III psych-verbs (e.g., *gustar* ‘to like’), as (13 and 14) below.

(13) Agentive verbs: <agent>, <theme>

Felipe lava los coches
Felipe wash. 3SG. PRES the cars
‘Felipe washes the car’

(14) Class III psych-verbs: <experiencer>, <theme>

A Felipe le gustan los coches
To Felipe 3.sg.CLI like. 3SG. PRES the cars
‘Felipe likes the cars’

In the case of (13), the interaction between the two hierarchies is non-problematic since the most prominent arguments in each of the hierarchies align. That is, the most prominent element in the Thematic Hierarchy (the <agent> of the action) just happens to be the most prominent element in the Aspectual Hierarchy (the <causer> of the action). In other words, *Felipe* is both the <agent> responsible for washing the cars as well as the one responsible for the cars to be washed.

In the case of class III psych-verbs, as in (14), a clear mismatch takes place between the most prominent element in the Aspectual Hierarchy (i.e., the <cause> of the mental/emotional state) and the most prominent element in the Thematic Hierarchy (i.e., the <experiencer>). This mismatch, according to Grimshaw, explains the reverse structure of this particular group of verbs. Table 3-1 below illustrates Grimshaw’s (1994) analysis.
Table 3.1: Grimshaw’s analysis of psych-verbs

<table>
<thead>
<tr>
<th>Agentive verbs</th>
<th>Psych-verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thematic hierarchy</td>
<td>&lt;Agent&gt; &lt;Theme&gt; &lt;Experiencer&gt; &lt;Theme&gt;</td>
</tr>
<tr>
<td>Aspectual hierarchy</td>
<td>&lt;Cause&gt; &lt;Other&gt; &lt;Cause&gt; &lt;Other&gt;</td>
</tr>
</tbody>
</table>

3.3.3 Montrul (1995)

Focusing specifically on Spanish, and in line with other analyses (e.g., Masullo 1992), Montrul claims that dative <experiencers> are in fact more than just “logical” subjects; they are dative subjects (non-nominative subjects in Masullo’s analysis). Her discussion is largely based on the properties associated with doubled dative cilitics, obligatory in Spanish if the full <experiencer> is to be spelled out in the case of class III psych-verbs. According to her, clitics are doubled both with indirect objects (as in 15) and with dative <experiencers> (as in 16). Crucially, while the clitic is optional for non-RPP objects, its use is obligatory for <experiencers>:

(15) María (le) escribió a Katherine
María.NOM (3SG.DAT) wrote to Katherine.DAT
‘María wrote to Katherine’

(16) La música *(le) gusta a Chad
The music.NOM *(3SG.DAT) likes to Chad.DAT
Chad likes music’

The obligatory presence of the clitic in (16), Montrul claims, is related to the clitic-doubling nature of the Spanish language, a phenomenon more akin to subject doubling than to indirect object doubling (1995:184). In the case of the latter, clitics are considered the overt morphological manifestation of indirect object agreement on the verb. Clitic doubling is explained in terms of movement (to AgrIO) before or after the spell-out stage. Examples 17a and 17b below better illustrate this idea.
(17) a. Dámaris le escribió a Osmer
Dámaris Cli.3sg.DAT wrote to Osmer
‘Dámaris wrote to Osmer’

b. Dámaris escribió a Osmer
Dámaris wrote to Osmer
‘Dámaris wrote to Osmer’

In the case of (17a), the indirect object (a Osmer ‘to Osmer’) moves covertly to the spec of AgrIOP but it moves overtly in (17b), thus forcing deletion of the clitic (1995:185). A representation is given in figure 3-3 below.

![Figure 3-3. Clitic doubling in Spanish](image)

In the case of the former (dative <experiencers> with class III psych-verbs), clitics seem to be inherent (1995:185) and reveal a case of subject doubling. Since dative <experiencers> exhibit many subject-like properties, Montrul proposes that dative <experiencers> are in fact dative subjects, and that the clitic, which is base generated in AgrS, functions as another morphological property of the subject. See figure 3-4 below.
Figure 3-4. Dative <experiencers> with RPPs

3.3.4 Landau (2010)

Landau (2010) focuses on the nature of (Object) <experiencers> as entities with special grammatical properties and adopts Pesetsky’s (1995) proposal to further divide <experiencers> into (i) subject-<experiencers> and (ii) object-<experiencers>. Pesetsky argued that the thematic roles involved in each of the two subgroups are not identical, claiming the need for expanding the Thematic Hierarchy to include Causer & Target/Subject Matter (henceforth T/SM). While Subject-<experiencers> take T/SM as the object, Object-<experiencers> have a causer as the subject.

Landau builds on such previous research to provide a comprehensive, yet compact and accessible, analysis of the distinct properties associated with the syntax of psych-verbs which he refers to as psych-effects. Psych-effects are syntactic properties
associated with <experiencers> in non-agentive readings. Landau’s main claim is that all <experiencers> are mental locations in the sense that they are considered the recipients that contain the mental/emotional/psychological state expressed by a psych verb. This abstract notion is best exemplified in (18) below, where X is the <agent> and Y is the <experiencer>. As shown, (18a) can be interpreted as (18b).

(18) a. X frightens Y
b. X causes fear of X to come to be in Y.
(from Jackendoff (1990:330) as cited in Landau 2010)

And so it follows from the previous argument that, if <experiencers> are locations and locations are introduced by a preposition, then <experiencers> should also be introduced by a preposition. For the particular case of Spanish psych-predicates, such a claim is non-problematic for those <experiencers> that appear with class II and III psych-verbs because they are always headed by a preposition (Section 2). This is illustrated in (19) below. As can be seen, since class III psych-verbs are always stative, they do not project vP. The <theme> in this case is considered a Target/Subject Matter when it appears with class III psych-verbs (Pesetsky 1995)

Figure 3-5. Stative Psych-Predicates

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8 Psych-effects are syntactic properties associated with <experiencers> in non-agentive readings (e.g., Spanish Class III verbs). For example, in Greek, clitic doubling of accusative objects is generally optional but it becomes obligatory when the object is an <experiencer>? (Landau 2010:4).

9 Landau also adopts B&R’s tripartite typological classification of psych-predicates.
Recall however that the presence of the dative marker ‘a’ seems to be optional in certain cases. For example, both Spanish and Italian require the ‘a’ when the <experiencer> is spelled out but its presence would be ungrammatical otherwise. Landau’s solution for this apparent inconsistency is to claim that, in such cases, the <experiencer> is in fact “the object of a null preposition” (2010:7) which he refers to as ØΨ.

An additional issue arises with class II psych-verbs since they, as Pesetsky (1995) also noted, can alternate in their readings as either stative or eventive verbs. This alternation is shown in examples (19a & b) below where both asustar (to scare) and molestar (to bother) can be used with an agentive and a non-agentive meaning. The two readings, however, are undistinguishable morphologically.

(19) a. Diana asustó a Whitman (intentionally)
   Diana.NOM scare. 3SG. PRES. to. Whitman.ACC.
   ‘Diana scared Whitman’

   b. Diana molestó a Whitman (intentionally)
   Diana.NOM bother. 3SG. PRES. to. Whitman.ACC.
   ‘Diana bothered Whitman’

In their agentive reading, these sentences correspond to ‘Diana intentionally causes Whitman (to) fear’ (in the case of 19a) and to ‘Diana intentionally bothers Whitman’ (in the case of 19b). As seen in (19a and b), these sentences can be passivized, showing that indeed they are clearly not stative in these environment, with these specific meanings.

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10 In non-leista varieties of Spanish, these different readings can be easily teased apart by substituting the <experiencer> with its corresponding third person singular/plural accusative (lo/la/los/las) or dative (le/les) pronoun (e.g., Parodi-Lewin 1991, Parodi & Luján 2000). Speakers of leista varieties of Spanish, on the other hand, cannot make such distinctions because the indirect pronoun le/les is used in place of the direct object pronoun(lo/la/los/las) when the accusative object is [+human, + masculine] (e.g., Parodi 1991, Parodi & Luján 2000).
(20) a. *Whitman es asustado por Diana*
'Whitman is scared by Diana'
b. *Whitman es molestado por Diana*
'Whitman is bothered by Diana'

This claim has obvious syntactic consequences: if a class II psych-predicate is taken to have a stative reading, then it is treated as an unaccusative verb and, obviously, it cannot be used agentively. When that is the case, stative-unaccusative class II psych-predicates align with class III psych-verbs and follow the structure represented in figure 3-5 above. On the other hand, if a class II psych-predicate is taken to have an agentive reading, then vP is projected. Figure 3-6 below represents the relevant constructions for class II psychological predicates with agentive readings. As a consequence of this agentive reading, the <theme> argument is not a target/subject matter but a causer (e.g., Pesetsky 1995). This discussion, referring to the alternation between transitive and unaccusative structures that seemingly define class II type psych-verbs, will prove crucial to the syntactic proposal I will make for the representation of class III psych-verbs in Heritage Speaker Spanish.

![Figure 3-6. Eventive Psych-Predicates](image-url)
In structures (3-5) and (3-6) above, the null/overt preposition is responsible for the assignment of dative case (2010:21). Following Belletti and Rizzi, Landau proposes that such inherent case is quirky and that in the case of Spanish class III psych-verbs, dative <experiencers> end up in subject position\(^\text{11}\) (2010:81) and not as a topic or dislocated element (Belletti & Rizzi 1988). Conversely, other languages require DPs with nominative case in [Spec,TP] at PF (e.g., English). Consequently, Landau, in line with other analyses (e.g., Montrul 1995; Masullo1992), concludes that even if previous studies of psych-predicates have treated dative <experiencers> as objects because they do not trigger verbal agreement, they do behave like subjects in several ways. For example, preverbal datives participate in raising constructions just like normal nominative subjects do (Masullo 1992) as in (21) below.

\[
(21) \quad \text{A Adriana parece gustarle la música coral} \\
\quad \text{‘Adriana seems to like choral music’ (Masullo:1992:92)}
\]

As a result, Landau’s conclusion is that “all Experiencers are LF-subjects\(^\text{12}\)” (2010:86). Consequently, all non-nominative <experiencers> are quirky (2010:86-88), including the <experiencers> that appear with Spanish class III psych-verbs. The association established between <experiencer>-location allows Landau to conclude that movement of the <experiencer> to subject position is a case of locative inversion. In a locative inversion configuration, a locative PP and a subject DP switch positions. An example of locative inversion is given in (22).

\[
(22) \quad \text{a. Cuatro personas viven en esta casa} \\
\quad \text{‘Four people live in this house’}
\]

\(^{11}\) A Quirky subject is an argument that displays most canonical subject properties (except for agreement), but bears inherent case (Landau 2010:81).

\(^{12}\) Landau comments that the term ‘subject’ refers specifically to subject position ([SpecTP].
b. En esta casa viven cuatro personas
   ‘In this house four people live’

According to Landau, this movement is made possible by the [loc]\(^{13}\) feature that resides on the head of the <experiencer> (2010:118). In order to accommodate a landing site for this movement, and account for a PF and an LF subject, Landau proposes the occurrence of multiple projections of [Spec,TP], one for the <experiencer> and one for the <theme> (in any order). In the particular case of Spanish class III psych-verbs, the <experiencer> argument must raise overtly to [Spec,TP], and because it already has inherent case, nominative case is blocked (Landau 2010: 82-83). The <theme> could raise covertly to the second [Spec,TP]. With that said, the (LF) final representations of psych-predicates can be seen in the structures below. Figure 3-7 represents class II psych-predicates with an agentive readings. Figure 3-8 represents class III psych-predicates, as well as class II psych-predicates with stative readings.

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\(^{13}\) According to Landau, all locative relations are encoded by the feature [loc] (2010:89).
Alternatively, other languages (e.g., English, French, Hebrew) may exhibit a mirror image process of what was previously described, that is, the nominative <theme> raises overtly to subject position and the <experiencer> would later move at LF to the second projection of [Spec,TP] \(^{14}\).

As discussed, the unique properties associated with (reverse) psychological predicates have long been a topic of debate, resulting in various theoretical accounts. While most of the analyses reviewed here share certain assumptions, in varying degrees, about class III psych-verbs such as inherent case or the subject qualities of the <experiencer>, their specific approaches differ noticeably. This, however, does not mean that the analyses are incompatible or wrong. Additionally, and to be clear, the

\(^{14}\) To account for the optionality in word order discussed in section (3.1) in Spanish, one would need to simply stipulate the <theme> is the one that raises overtly and is followed by the covert movement of the <experiencer>, and of course this option is motivated by pragmatic considerations. In other words, these facts present no problem for Landau’s analysis.
goal of this dissertation is not to show evidence in support (or opposition) of one analysis over another. Rather, what is important is that clear acquisition predictions can be derived from the differences that exist between the syntactic representations of class II and class III psych-verbs. This will prove crucial to the hypothesis I advance in Chapter 4.

I will now turn from the theoretical descriptions to reviewing the acquisition literature for class III psych-verbs in Spanish.

3.4 Acquisitional Studies

Over the last decades, extensive research on the acquisition of psych-predicates has repeatedly shown that this particular domain is a challenging property to acquire. In fact, class III psych-verbs represent an important learnability problem for the language learner since she has to intuit and then acquire the associated non-canonical mapping of thematic roles to syntactic positions. The following subsections review the most relevant studies from L1 acquisition (Section 3.5.1), L2 acquisition (Section 3.5.2), and HS acquisition (Section 3.5.3). As is to be expected, the sections become increasingly more detailed as a function of their applicability to the current project. That is, I briefly review studies from the L1 and L2 literatures given their connectivity to the project in the sense of understanding the challenging nature of class III psych-verbs acquisition in general and in other instances of Spanish acquisition. However, I delve into much greater detail in the studies involving HSs since this is the target group of the current research endeavor.

3.4.1 L1 Acquisition

The majority of the studies that have examined knowledge and/or use of psychological predicates have targeted monolingual speakers with some sort of
pathological conditions such as aphasias or Alzheimer (e.g., Beretta & Campbell 2001; Manovilidou 2008; Thompson & Lee 2009). Results from these and other related studies have consistently demonstrated that these verbs are problematic for these populations.

Comparable conclusions have been reported when testing monolingual children without any linguistic or cognitive impairment. Lord (1979) and Figueira (1984), for example, independently showed that monolingual children of English and Portuguese, respectively, produce a high rate of errors in terms of mapping theta roles to their actual syntactic structures. This does not seem to be different for Spanish monolingual children. Although in testing the Maturation Hypothesis Gómez Soler (2011) reported that, in an analysis of spontaneous speech from five children from the CHILDES database, children apparently start producing gustar-constructions target-like at an early age (approximately at age 1;10), in an experimental study that analyzed the responses of 35 children to two comprehension tasks, Torrens, Escobar and Wrexler (2006), however, have argued that it is not until much later (the age of 6;0 approximately) that Spanish monolingual children start having knowledge of this type of predicates with comparable adult-like accuracy. More recently Gómez Soler (2012) used puppets to conduct a comprehension experiment (Truth-value judgment task) with 35 Spanish monolingual children ages 3-4 years old. The experiment consisted of a total of 12 items (8 critical tokens and 4 distracters) that included sentences with and without A-movement (i.e., movement of a DP into an argument position) with four different verbs (gustar ‘to like’,

\[ \text{The Maturation Hypothesis (Borer & Wexler 1987) claims that there is a maturation of certain structures within UG such that not everything is fully available from birth, for example, they claim that A-chains mature resulting in poor child performance on properties involving A-chains, e.g., passives (e.g., Wexler 1990; but see Fox & Grodinsky 1998).} \]
encantar ‘to love’, faltar ‘to lack’, and dar asco ‘to find something disgusting’). In her study, each child was presented with a statement about puppet 1 (e.g., La fruta favorita de Mickey es la naranja pero él odia la manzana ‘Mickey’s favorite fruit is oranges but he hates apples’) and then puppet 2 repeated part of the previous statement but in this case the information presented was not always true (e.g., A Mickey le gusta la naranja ‘Mickey likes oranges’; A Mickey le gusta el plátano ‘Mickey likes bananas’). After hearing the second statement, the child was asked whether puppet 2 had said the truth or not and why. Gómez Soler’s (2012) findings revealed that children did not show differences between the tokens with and without A-movement. This was taken as evidence that children as young as 3 year-old were able to handle the absence of the external argument (2012: 10). Their performance, however differed in terms of verb type, that is, they were more accurate with gustar ‘to like’ (79%) and encantar ‘to love’ (78%) than with faltar ‘to lack’ (52%) and dar asco ‘to find something disgusting’ (49%). The higher accuracy on the former verbs is explained in terms of input-frequency and markedness effects.

Although in general Gómez Soler (2011, 2012) finds high accuracy in gustar-like constructions (both production and comprehension), it is not clear how productive of a construction it actually is, meaning one cannot preclude some uses based on unanalyzed chunking. It seems reasonable to believe that it is considerably later that children use these predicates productively, closer to the claims of Torrens et al. (2006). Support for this claim comes from experimental evidence based on interpretation as

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16 The performance of the 3 year-olds (58% accurate) and 4 year-olds (68% accurate) were not significantly different (p=0.078).
well that this is a later acquired property, certainly later than normal agentive type
predicates which are fully productive very early in Spanish, as in other languages.

3.4.2 L2 Acquisition

Not surprisingly, this particular structure also poses challenges for second
language learners (White et al. 1999), especially if their L1 lacks class III psych-verbs.
In principle, the acquisition task is no different than that of the Spanish child; however,
adult L2 acquisition is complicated by, among other variables, the L1 structure that in a
sense has to be abandoned when the L1 and L2 differ in addition to the target structure
being acquired. As a result of these challenges, similar developmental patterns of
errors have been found among L2 learners from different L1 backgrounds. That is, L2
learners usually tend to adopt the <experiencer> to be the subject in cases in which it is
an object. This is not totally surprising since this pattern of error is in accordance with
the Thematic Hierarchy (example 11 above) since <experiencers> are projected higher
than <themes>.

Montrul (1997), for example, studied the acquisition of Spanish gustar ‘to like’ by
French and English natives and observed that learners from both languages revealed a
preference towards such linear word order, even though French, unlike English, has
class III psych-verbs. Similar results were also obtained by Montrul (2000), who
investigated the acquisition of Spanish by English and Turkish natives, and Quesada
(2008), who examined three different proficiency levels of English natives learning
Spanish. Their results largely support the idea that L2 learners of Spanish tend to
assume a linear sentence structure when dealing with this sort of predicates, a problem
that persists even after pedagogical interventions take place (López Jiménez 2003;
Rubio 2005). Nonetheless, Quesada (2008), in line with Montrul (1997), notes that while
L2 learners at the initial stages of acquisition tend to conceptualize object <experiencers> as the structural subjects, with time, and crucially as proficiency increases, learners go through a stage of optionality in which <experiencers> appear to function both as subjects and objects. Regarding the use of the clitic pronoun with class III psych-verbs, previous research has provided contradictory results. While Toth (2003) reported low levels of accuracy, at the initial stages, Quesada (2008) reported accurate results in terms of clitic agreement. In Quesada’s study, 30 L2 learners and 10 Spanish natives were asked to complete four production tasks: (i) a description of a short movie; (ii) a personal narrative; (iii) a personal description; and (iv) a description about future plans. In general, the results of this study revealed that both the experimental and the control groups have high accuracy means with respect to the use of the clitic with psych-verbs. With regards to verb-agreement, Quesada notes that although with time, the experimental informants’ production improves considerably, the learners still have difficulties producing target-like constructions (2008:60). Interestingly, she also notes that as a group, the native speakers also produce some non-target-like verb agreement configurations with psychological predicates. This, as we will see next has also been reported in acquisition studies with HSs.

### 3.4.3 HS Acquisition

Class III psych-verbs competence in Spanish HSs, appears to be, from the few available studies, not very different from what has been reported for English-Spanish L2 learners: the tendency is also to produce (e.g., Dvorak & Kirschner 1982; Silva-Corvalan 1994) and accept (e.g., de Prada Perez & Pascual y Cabo 2011, forthcoming; Toribio & Nye 2006) what a priori could be considered target-divergent forms. For example, Dvorak and Kirschner’s (1982), one of the first studies if not the first one to
empirically examine class III psych-verbs in HS Spanish in the US, tested the use of class III psych-verbs among 26 Puerto Rican HSs in New York City. Informants were asked to complete an English-to-Spanish translation task. Only 14 out of 50 English sentences elicited the use of class III psych-verbs in Spanish, and these were divided into four conditions: (i) singular object-singular subject (e.g., She didn’t like the book); (ii) plural object-plural subject (e.g., we don’t like those teachers); (iii) singular object-plural subject (e.g., he likes sports a lot); and (iv) plural object-singular subject (e.g., do you all like this book?).

Putting aside the obvious priming effects that a translation study might have evoked, Dvorak and Kirschner’s data revealed patterns of omission of the dative marker ‘a’ as well as a strong preference towards having the preverbal <experiencer> control verbal agreement, instead of the prescribed postverbal <theme>. Furthermore, it was observed that while the dative ‘a’ was often left out (probably causing the abovementioned innovation in the SV agreement), the dative clitic ‘le’ remained. This was taken as evidence that the HSs did not consider the preverbal <experiencer> as the subject but as the surface object. In regards to the clitic, Dvorak and Kirschner observed a tendency towards the use of the singular dative marker regardless of what would be the expected agreement pattern, that is, the third person singular form ‘le’ tended to appear invariably irrespective of whether the <experiencer> was singular (in which case only ‘le’ would be grammatical) or plural (in which case only ‘les’ would be grammatical. This gave rise to the term “invariable le”.

Toribio and Nye (2006) examined production and comprehension of psych-verb constructions among 24 Spanish HSs in the US. Participants completed a background
questionnaire and two tasks: an elicited (written) production task and a scalar grammaticality judgment task. In the written task, informants were presented with a question that contained a psychological verb and the first few words of the answer. They were asked to complete the sentence using a psychological verb. See (22) below for an example

(22) ¿A quién le encanta la salsa puertorriqueña? (mi tía)  
‘Who likes Puerto Rican salsa? (my aunt)”  
La salsa puertorriqueña…  
“Puerto Rican salsa…”

In regards to the judgment task, informants were asked to provide a judgment on 64 critical tokens (and 16 distracter tokens) according to three criteria: me suena bien ‘it sounds fine to me’, me suena más o menos bien ‘it sounds more or less fine to me’ and no me suena bien ‘it does not sound good to me’. The critical tokens were further divided into grammatical and ungrammatical tokens. The grammatical tokens included three types of items: <experiencer>-initial (as in 23a), theme-initial (animate (as in 23b) and inanimate (as in 23c)), and (clitic+)verb initial (as in 23d).

(23)  
a. A los atletas les gusta el entrenador  
‘the athletes like their coach’

b. Las chicas le gustan al joven  
‘the young boy like the girls’

c. El motor antiguo les gusta a los mecánicos  
‘The mechanics like the old engine’

d. Le gustan las rosas amarillas a la anciana  
‘the old woman like the yellow roses’

The remaining tokens targeted ungrammaticality in terms of verb agreement (24a) and clitic agreement (24b) as well as omission of the dative marker (24c), and case marking of the <experiencer> (24d), as shown in examples below.
In addition to finding strong evidence in support of Dvorak and Kirschner's (1982) invariable 'le', Toribio and Nye (2006) also obtained results that revealed three interesting tendencies: (i) indeterminacy with respect to the mapping of the arguments to syntactic positions, although a preference towards a linear word order was clear (i.e. that the <experiencer> controls verb agreement), (ii) omission of the dative a-marker, and (iii) that animate DPs are possibly taken to be the structural subject irrespective of actual grammatical function. In general, these tendencies indicate that Spanish HSs use strategies towards a more transparent mapping of class III psych-verbs, which result in a reduction of the word order possibilities existing in the monolingual varieties.

Relatedly, Montrul and Bowles (2009) studied knowledge and use of the Differential Object Marker a (DOM) among US Spanish HSs and reported a generalized lack of instantiation of such inherent case in the HSs' grammars. This finding led them to examine whether absence of DOM could also be generalizable to other instances of inherent dative case, namely class III psych-verbs. To specifically examine this issue, 13 Spanish natives and 69 HSs completed an acceptability judgment task that targeted grammatical and ungrammatical tokens related to DOM (25a,b), indirect objects (26a,b,c,d), and gustar-like verbs (27). Informants were instructed to use a 1 (non-native like) to 5 (native-like) scale to judge the tokens provided to them. Example items follow:
Their data confirmed that for these participants problems with dative marking omission seem to extend to dative<experiencers> in class III psych-verbs. This was interpreted to be a result of reduced linguistic input in childhood combined with influence from English. Following on this research, Montrul and Bowles (2010) explored the effects of instruction on dative case marking in heritage language learners. Participants (45 HL learners and 12 Spanish native speakers) completed two tasks. The first one was a written translation task targeting (i) transitive verbs (with animate and inanimate objects), (ii) ditransitive verbs, and (iii) gustar-type verbs. The second task was a 1(totally incorrect) to 5(totally correct) scalar grammaticality judgment test that targeted (i) sentences containing the so-called personal ‘a’, (ii) sentences containing the preposition ‘a’ with ditransitive verbs, and (iii) sentences containing psych-verbs. To examine the role of instruction, two versions of each task were created (e.g., pre- and
post-intervention). Each participant was asked to complete the pre-intervention version of the experiment as well as the post-intervention version. The intervention consisted of providing the learners with positive (e.g., explanation and examples) and negative (e.g., contrasts between the structures in both languages) evidence as well as practice exercises. The overall results revealed that instruction improved HS performance. This was taken as evidence that HL learners, unlike in the case of L1 acquisition, are sensitive to the effects of negative evidence and explicit feedback.

Most recently, de Prada Pérez and Pascual y Cabo (2011) tested basic subject-verb agreement and clitic-agreement with two high frequency reverse psych-predicates (gustar ‘to like’ and encantar ‘to love’). A total of 61\textsuperscript{17} experimental participants as well as 10 Spanish natives completed a scalar grammaticality judgment task. This test consisted of a total of 72 items (24 critical tokens and 48 distracters) in which the informants were presented with a short paragraph, a question, and 4 answers. The answers were distributed as follows: 1 grammatical sentence, 1 ungrammatical sentence because of verb agreement, 1 ungrammatical sentence because of clitic agreement, and 1 ungrammatical sentence because of both verb and clitic agreement. Informants were tested on sentences with 3rd person singular<experiencer>-3rd person plural <theme> (as in 28 below) and sentences with 3rd person plural<experiencer>-3rd person singular <theme> (as in 29 below).

\begin{equation}
A \text{ Katherine le gustan los kiwis} \\
\text{To Katherine her. DAT.CLI like.3\textsuperscript{RD} PL the kiwis} \\
\text{‘Katherine likes kiwis}
\end{equation}

\textsuperscript{17} In addition to the abovementioned experimental task, participants completed a sociolinguistic questionnaire and a revised version of the DELE Spanish language proficiency test. The participants’ answers to the DELE were considered as the basis for the group division (ADV.=25; INT.= 23; LOW= 13)
A mis padres les encanta la pizza de Papa John’s.
To my parents them like the pizza of Papa John’s ‘My parents love Papa John’s pizza’

Their overall responses revealed two important tendencies. First, HS participants demonstrated robust knowledge of clitic-agreement; evidence that questions the notion of the invariable ‘le’ that has been attested in previous studies (Dvorak & Kirshchner 1982; Toribio & Nye 2006). Second, HSs revealed a strong preference for the use of the third person singular verbal form, coined invariable gusta (de Prada Pérez & Pascual y Cabo 2011) regardless of actual subject-verb agreement. Consider example (30) below where the<experiencer> (e.g., Delano) is followed by the singular form of the verb (gusta ‘to like’) regardless of whether the postverbal <theme> is singular (e.g., la chaqueta) or plural (e.g., las chaquetas). While the former is prescriptively correct, the latter is not.

(30) A Delano le gusta la chaqueta/las chaquetas
To Delano DAT.CLI. Like.3RD SG the jacket/jackets
“Delano likes the jacket/s”

Most interestingly, these preferences were in some ways comparable to the group of Spanish native speakers (n=10) tested. The controls, while Spanish dominant, were L2 learners of English. This of course was an unexpected finding a priori, yet significant and influential for the present study. In other words, these results revealed the need to include, in addition to a group of monolingual speakers, a group of 1st generation immigrants since these individuals are the ones that provide the input to HSs.

As was previously established, the study of L1 attrition relates directly to HS acquisition issues. That is, HSs generally receive input from 1st generation immigrants who in turn are experiencing L1 attrition. In this context, Cazzoli-Goeta and Young-
Scholten (2011) investigated knowledge and use of sentence-initial non-nominative constructions (e.g., reverse psychological predicates) by adult Spanish speaking immigrants to the UK. Their study included 24 informants whose ages ranged from 25 to 65. Length of residence in the UK (5 to 25 years) and the level of contact/interaction with the English language (high contact and low contact) were hypothesized to play a deterministic role in terms of linguistic patterns (e.g., monolingual divergent/convergent patterns). In addition to the experimental group, 10 Spanish monolinguals (ages ranging from 15 to 70) were used for comparative purposes. Participants completed two experimental tasks: (i) a picture description task and (ii) an aural preference task. In regards to (i), participants were asked to describe 10 pictures representing different actions. The goal of this task was to elicit structures containing sentence initial non-nominatives. The goal of (ii) was to obtain grammaticality judgments on 24 pairs of sentences that targeted, among other properties, nominative and non-nominative subjects. Overall results revealed a strong preference towards nominative over non-nominative subjects. The data also showed a correlation between the acceptance rate of ungrammatical sentences and the amount of time spent in the UK as well as level of contact/interaction with the English language.

3.5 Conclusion

As I have shown in this chapter, class III psych-predicates have been documented to be inherently challenging to acquire for first, second and heritage language learners due to the non-canonical mapping of the arguments to syntactic positions. Furthermore, based on the structural differences that exist between the two languages involved (e.g., English and Spanish) as well as the results obtained in previous research (Dvorak & Kirschner 1982; Montrul & Bowles 2009; Toribio & Nye 2006; de Prada Pérez & Pascual
y Cabo 2011), I predict that Spanish HSs will show differences for class III psych-verbs and the properties associated to them.

Chapter 4 further describes the present study by providing the research questions that guide the present study as well as a falsifiable set of hypotheses and predictions that could explain the patterns of use found in the literature. Additionally, Chapter 4 includes a detailed description of the methodology specifically designed to obtain answers to the research questions put forth.
CHAPTER 4
EMPIRICAL STUDY: RESEARCH QUESTIONS AND METHODOLOGY

4.1 Introduction

The main goal of this chapter is to present a detailed account of the methodology employed in this study. The chapter begins with a review of the research questions (and corresponding hypotheses) and then discusses the subject populations, materials and test design.

4.2 Research Questions & Hypotheses

4.2.1 Research questions

In Chapters 2 and 3 I reviewed the current debate in formal heritage speaker (HS) acquisition regarding the source of vulnerability among HSs’ grammars, namely incomplete acquisition (e.g., Montrul 2008), L1 attrition (e.g., Polinsky 2006, 2011), and missing-input competence divergence (e.g., Pires & Rothman 2009). Although determining the extent to which heritage language (HL) grammars obtain as a result of either one or a combination of these possibilities is at the core of current HL acquisition research, the number of studies that has attempted to do just this is scarce (e.g., Polinsky 2011; Cuza, Pérez-Tattam, Barajas, Miller & Sadowski 2013). To fill this gap in the literature, the present study examines the argument structure and semantic mappings of reverse psychological predicates across different generations of Spanish speakers in the US.

With the above in mind, the research questions at the core of the present study are the following:

1) Are class III psychological predicates in HS Spanish undergoing a reanalysis of their argument structure? If so, in what ways and why?
To what extent are attrition, incomplete acquisition and/or input delimited differences at least explanatory as sources of HS differences and to what extent can these three factors be teased apart?

By conducting experimental research that focuses on the particular properties addressed here and, methodologically, across several generations of speakers within a single Spanish dialect, one has a better chance of teasing apart which factors or combination of factors are likely to be deterministic in the outcomes observed.

4.2.2 Hypotheses

Based on previous research (e.g., Dvorak & Kirschner 1982; Montrul & Bowles 2009; de Prada Pérez & Pascual y Cabo 2011; Toribio & Nye 2006), it is hypothesized that Spanish HSs will show differences (from the monolingual norms) for class III psych-verbs and the properties associated with them (i.e., dative marker 'a,' clitic agreement, subject-verb agreement). Since such differences are well documented already, I seek to go beyond further documentation and/or description of the differences alone, by offering from the outset a set of domain-specific hypotheses based on the syntax of class III psych-verbs (i.e., Landau 2010; Montrul 1995; Pesetsky 1995).

First, I predict that in HS Spanish, class III type psych-verbs (e.g., *gustar* ‘to like’), those that only have available RPP structures in monolingual grammars, are either reanalyzed already or in a process of being reanalyzed as class II type psych-verbs (e.g., *asustar* ‘to frighten’), which have available both an RPP and an agentive syntax (as described in Sections 3.2 and 3.3). In other words, there is a simplification of the Spanish system of psych-predicates from three classes to two according to Belletti and Rizzi’s (1988) analysis; a shift towards a reduction favored by the majority language, English.
Recall from Chapter 3 that class III psych-verbs are considered stative, that is, they cannot be used agentively, do not project vP, and are thus incompatible with passive constructions. Conversely, class II psych-verbs can alternate from having an agentive and a stative reading and therefore they do have the possibility of appearing in passive constructions. Thus, if on the right track, this hypothesis predicts that Spanish HSs should (variably) accept canonical class III type verbs (e.g., *gustar* ‘to like’) in passive constructions as an emerging reflex of the aforementioned new/optional agentive reading. In other words, having an available agentive reading should allow this subgroup of verbs to appear in passivized constructions. This sort of constructions should, *a priori*, not be allowed in monolingual grammars because this shift is not hypothesized to be taking place in monolingual environments. That is, in monolingual speakers’ grammars, class III psych-verbs (e.g., *gustar* ‘to like’) do not have an agentive syntactic structure available and therefore cannot be passivized. On the other hand, class II type verbs (e.g., *asustar* ‘to frighten’) do have an agentive syntactic structure available (even in monolingual environments) which allows them to be passivized. To illustrate these differences, consider example (1a-b) below.

(1)  
\begin{align*}
\text{a. } & \text{*La pizza es gustada por Jason} \\
& \text{‘the pizza is liked by Jason’} \\
\text{b. } & \text{Becky fue asustada por David} \\
& \text{‘Becky was frightened by David’}
\end{align*}

As discussed, example 1b above should be grammatical for Spanish monolingual speakers (as well as Spanish HSs) since *asustar* ‘to frighten’ is a class II psych-verb that can alternate from having an agentive or a non-agentive reading. Example (1a), on the other hand, should be ungrammatical for Spanish monolingual speakers since
gustar ‘to like’ is the hallmark example of class III psych-verbs which are characterized by only having a non-agentive reading available. However, if indeed class III verbs (e.g., gustar ‘to like’) are reanalyzed as class II (e.g., asustar ‘to frighten’) in bilingual environments, then HSs should be able to incorporate this optional structure in their grammars. Experiment I (Section 4.3.2.3) is designed specifically to test this\(^1\).

Second, I also predict that one might observe cases of invariable gusta (Section 3.5.3) with apparent surface retention of the dative clitic (lack of <theme>-verb agreement) as observed by de Prada Pérez and Pascual y Cabo (2011). This could be accounted for by assuming that gustar ‘to like’ is being assigned an agentive structure and that the apparent dative clitic is actually serving as preverbal agreement morphology that has nominal phi-features (what postverbal agreement morphology typically has in Spanish). This would be compatible with surface productions of the following four types (2a-d), all robustly attested in previous research (e.g., Cazzoli-Goeta & Young-Scholten 2011; Dvorak & Kirschner 1982; de Prada Pérez & Pascual y Cabo 2011; Silva-Corvalán 1994; Toribio & Nye 2006):

\[
\begin{align*}
(2) & \quad a. & (\ast) \text{Yo me gusta la pizza} & \text{I.NOM to me like.3RD.SG the pizza} \\
 & \quad b. & \text{Me gusta la pizza} & \text{to me like.3RD SG the pizza} \\
 & \quad c. & (\ast) \text{Yo me gusta las pizzas} & \text{I.NOM to me like.3RD SG the pizzas} \\
 & \quad d. & (\ast) \text{Me gusta las pizzas} & \text{to me like.3RD SG the pizzas}
\end{align*}
\]

\(^{1}\) Some other ways to test this shift (stative>agentive) would be with the use of certain adverbs such as ‘intentionally’ or ‘inteligently’.
All of these possible outputs correspond roughly to “I like pizza”. However, to the extent that an agentive syntax is being projected in (a)-(d), all are ungrammatical within monolingual Spanish even if the surface production is misleading in some cases.

Since Spanish is a null subject language and HSs have been shown to retain this property (e.g., Montrul 2008), example (2b) produces a surface form that cannot be appreciated as different from monolingual Spanish assuming that the subject is dropped and because it happens to be that the <theme>-object in this case (what should be the subject-controller of agreement) is singular and thus renders opaque the underlying structure. Cases (2a), (2c) and (2d) are clearer. Example (2a) is possible with an agentive syntax since in Spanish, subjects can be overt and under this proposal the clitic me is reanalyzed as the agreement morphology bearing the same features as the overt subject. Example (2c) is also possible with an agentive syntax for the same reasons as (2a), that is, we have an overt subject in nominative form ‘yo’ and the clitic ‘me’ has become the marker of verbal agreement. Furthermore, that the object ‘pizzas’ is plural is of no consequence since with an agentive syntax the controller of verbal agreement is the overt nominative subject. This would actually represent what in the literature has been referred to as invariable gusta (de Prada Pérez & Pascual y Cabo 2011). Example (2d) is also possible for the same reasons as (2c) but has a null subject 1st person pronoun. One might also expect HSs to be less sensitive to the ungrammaticality of a fully conjugated paradigm of class III psych-predicate with canonical Spanish agreement morphology (e.g., yo gusto ‘I like’, tú gustas ‘you like’, él/ella gusta ‘s/he likes’, etc.) in experiments, mirroring their English equivalents, although this is less attested to in previous empirical work. Notwithstanding, some
studies do provide some evidence of this very type of production in HS Spanish (e.g., Silva-Corvalán 1994) and L1 attrition (e.g., Cazzoli-Goeta & Young-Scholten 2011).

Crucially, what I do not expect HSs to accept under this account is an invariable *gusta* (examples (a) –(d) above) with omission of the once dative clitic, which under this account has been reanalyzed as (obligatory) preverbal agreement morphology. For example, in the counterparts to (b) and (d), *gusta la pizza* and *gusta las pizzas* respectively the EPP has no way to be satisfied and the derivations should crash. This approach also predicts that the dative marker *a* will be lost (as previously attested in e.g., Montrul & Bowles 2009; Toribio & Nye 2006) when the syntactic structure assigned is agentive precisely because the reanalyzed subject needs to have nominative case.

Third, because I argue that class III psych-verbs shift to class II, this means that an agentive syntactic structure is not obligatory but rather that it acquires an optional reading. As a result of this shift, one would expect to find variability whereby HSs sometimes produce and accept *gustar/encantar* used as true class III psych-verbs (stative verbs) with the prescribed/canonical syntactic structure and sometimes favor the proposed innovation (hybrid stative/agentive verbs). This would be akin to what Spanish monolingual speakers do for verbs like *asustar* ‘to frighten’ or *molestar* ‘to bother/annoy’ which can have either an RPP syntax or an agentive one.

In this section I have presented the motivation and core research questions that guide this study. Based on these questions, the study described in Section 4.3 was designed to test the viability of the hypotheses proposed here.
4.3 Methodology

4.3.1 Participants

Although I am interested in the question of HS linguistic competence for a domain of Spanish that should not show HS dialectal differences, I nonetheless designed the methodology to make use of maximally homogeneous groups. As such, because the Cuban community represents the largest Hispanic group in the state of Florida (2010 US Census briefs), all 114 informants that participated in this study were exclusively Cuban or of Cuban-descent and, at the time of data collection, all resided in either Cuba (Havana and surrounding areas) or Florida (Gainesville & Miami), respectively.

In the interest of disentangling the sources of divergence in HS grammars in this specific domain, I have adopted the methodological pairing of participant groups suggested in Polinsky (2011). As discussed, in her study, Polinsky analyzed the comprehension of relative clauses in child and adult HSs of Russian (and a baseline of child and adult Russian monolingual speakers), a group combination that provides an indirect way to separate incomplete acquisition from attrition.

Like Polinsky (2011), I also collected data from adult and child HSs, as well as adult and child Spanish monolingual speakers. Recall that, according to Polinsky, “if a child and an adult deviate from the baseline in the same way, it can be assumed that the feature has not been acquired” that being incomplete acquisition. However, “If a child performs as his or her age-matched baseline control but the adult does not, the feature can be assumed to have been acquired but may have subsequently been lost or

---

2 Although the history behind the immigration of the Cuban community is very interesting and important for studies that focus on the social and cultural aspects of this community, it falls outside of the scope of this dissertation. For a detailed discussion on this topic (as well as other sociolinguistic issues), I refer the reader to Alberts (2005), Boswell (2000), Buajásán Marrawi and Méndez Méndez (2005), Castro (1992a, 1992b), Castro and Roca (1990), De la Torre (2003), López Morales (2003, 2009), Lynch (1999, 2000, 2009), Ortega (1998), Porcel (2006).
reanalyzed” or attrition (Polinsky 2011: 306). The results of that study showed that both monolingual and HS child speakers revealed full mastery of relative clauses by age 6. Adult HSs’ performance, on the other hand, revealed that this group had problems with the structure. Based on these differences, Polinsky concluded that, for this particular domain, HS innovations emerge as a result of L1 attrition and not as a product of the fossilization of child language (i.e. incomplete acquisition). Notwithstanding its limitations, especially as compared to a longitudinal study, comparing this combination of informant groups allows us to indirectly tease apart the effects of incomplete acquisition and attrition in adult HS grammars more reliably. Thus, in trying to replicate Polinsky’s (2011) methodology, I collected data from two control groups (child and adult monolingual speakers) and two experimental groups (child and adult HSs).

Within the control groups, a total of 16 adult and 13 child monolingual speakers participated in this study. Table 4-1 below provides a summary of the basic demographic information of these groups. Data collection from these two groups of speakers took place during the month of December, 2012 in different areas of Havana, Cuba (La Altahabana, El Miramar, El Vedado and La Habana Vieja). All adult monolingual speakers (4 male and 12 female) reported being born and raised in Cuba by Cuban parents. Of the 16 informants, only one reported having lived outside the country (Norway) for a period of approximately 2 months. Additionally, besides three adult participants that reported having very basic knowledge of Russian, no other participants reported having knowledge of a foreign language, including English. In terms of education, 7 reported having completed (or being in the process of completing their college education), and 9 having completed secondary education.
Table 4-1: Monolingual adult informants

<table>
<thead>
<tr>
<th>Place of birth</th>
<th>Gender</th>
<th>Age</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td>Cuba</td>
<td>F</td>
<td>29</td>
</tr>
<tr>
<td>M2</td>
<td>Cuba</td>
<td>F</td>
<td>71</td>
</tr>
<tr>
<td>M3</td>
<td>Cuba</td>
<td>F</td>
<td>25</td>
</tr>
<tr>
<td>M4</td>
<td>Cuba</td>
<td>F</td>
<td>68</td>
</tr>
<tr>
<td>M5</td>
<td>Cuba</td>
<td>F</td>
<td>63</td>
</tr>
<tr>
<td>M6</td>
<td>Cuba</td>
<td>F</td>
<td>60</td>
</tr>
<tr>
<td>M7</td>
<td>Cuba</td>
<td>F</td>
<td>18</td>
</tr>
<tr>
<td>M8</td>
<td>Cuba</td>
<td>F</td>
<td>18</td>
</tr>
<tr>
<td>M9</td>
<td>Cuba</td>
<td>M</td>
<td>18</td>
</tr>
<tr>
<td>M10</td>
<td>Cuba</td>
<td>F</td>
<td>33</td>
</tr>
<tr>
<td>M11</td>
<td>Cuba</td>
<td>M</td>
<td>25</td>
</tr>
<tr>
<td>M12</td>
<td>Cuba</td>
<td>F</td>
<td>49</td>
</tr>
<tr>
<td>M13</td>
<td>Cuba</td>
<td>M</td>
<td>46</td>
</tr>
<tr>
<td>M14</td>
<td>Cuba</td>
<td>M</td>
<td>24</td>
</tr>
<tr>
<td>M15</td>
<td>Cuba</td>
<td>F</td>
<td>18</td>
</tr>
<tr>
<td>M16</td>
<td>Cuba</td>
<td>F</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>4 M/12 F</td>
<td>Avg. 37;1</td>
</tr>
</tbody>
</table>

In regards to the child participants, and due to the results obtained in a pilot study (Section 4.6 below) as well as the documented late acquisition of some of the properties that I am testing in this project (e.g., Pierce 1992; Fox & Grodzinsky 1998; Borer & Wexler 1997), the monolingual (n=13) and HS children (n=18) groups were limited to those who, at the time of data collection, were between the ages of 6;6 and 11;1.

As can be seen in table 4-2, all monolingual children reported (i) being born and raised in Cuba from Cuban parents, (ii) never having left Cuba, and (iii) having very minimal knowledge of English.

With respect to the heritage speaker groups, all child informants were required to have been born and raised in the US from first-generation immigrants. Table 4-3 includes most necessary biographical information from HS children.
### Table 4-2.: Monolingual child informants

<table>
<thead>
<tr>
<th>Place of birth</th>
<th>Gender</th>
<th>Age</th>
<th>Mother/Father</th>
<th>Main Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC</td>
<td>Cuba</td>
<td>F</td>
<td>8</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>MC</td>
<td>Cuba</td>
<td>M</td>
<td>10</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>MC</td>
<td>Cuba</td>
<td>F</td>
<td>10</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>MC</td>
<td>Cuba</td>
<td>F</td>
<td>10</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>MC</td>
<td>Cuba</td>
<td>F</td>
<td>9</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>MC</td>
<td>Cuba</td>
<td>F</td>
<td>11</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>MC</td>
<td>Cuba</td>
<td>M</td>
<td>7</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>MC</td>
<td>Cuba</td>
<td>F</td>
<td>7</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>MC</td>
<td>Cuba</td>
<td>F</td>
<td>7</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>MC</td>
<td>Cuba</td>
<td>M</td>
<td>6</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>MC</td>
<td>Cuba</td>
<td>M</td>
<td>6</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>MC</td>
<td>Cuba</td>
<td>M</td>
<td>7</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>MC</td>
<td>Cuba</td>
<td>M</td>
<td>6</td>
<td>Cuban/Cuban</td>
</tr>
</tbody>
</table>

Total 13 6 M/7 F Avg. 8

### Table 4-3.: Heritage child informants.

<table>
<thead>
<tr>
<th>Place of birth</th>
<th>Gender</th>
<th>Age</th>
<th>Mother/Father</th>
<th>Primary Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>HC1</td>
<td>US</td>
<td>F</td>
<td>8</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>HC2</td>
<td>US</td>
<td>F</td>
<td>8</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>HC3</td>
<td>US</td>
<td>M</td>
<td>11</td>
<td>Cuban/US</td>
</tr>
<tr>
<td>HC4</td>
<td>US</td>
<td>M</td>
<td>9</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>HC5</td>
<td>US</td>
<td>F</td>
<td>9</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>HC6</td>
<td>US</td>
<td>M</td>
<td>11</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>HC7</td>
<td>US</td>
<td>M</td>
<td>9</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>HC8</td>
<td>US</td>
<td>M</td>
<td>7</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>HC9</td>
<td>US</td>
<td>F</td>
<td>8</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>HC10</td>
<td>US</td>
<td>M</td>
<td>9</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>HC11</td>
<td>US</td>
<td>M</td>
<td>8</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>HC12</td>
<td>US</td>
<td>M</td>
<td>8</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>HC13</td>
<td>US</td>
<td>M</td>
<td>6</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>HC14</td>
<td>US</td>
<td>F</td>
<td>9</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>HC15</td>
<td>US</td>
<td>F</td>
<td>8</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>HC16</td>
<td>US</td>
<td>M</td>
<td>9</td>
<td>Cuban/Cuban</td>
</tr>
<tr>
<td>HC17</td>
<td>US</td>
<td>M</td>
<td>7</td>
<td>Cuban/US</td>
</tr>
<tr>
<td>HC18</td>
<td>US</td>
<td>M</td>
<td>7</td>
<td>Cuban/Cuban</td>
</tr>
</tbody>
</table>

Total 18 6 M/12 F Avg. 8.3
Most adult HSs were students attending Spanish classes at the University of Florida and Florida International University. Ranging in age from 18 to 24 years old (average 20;1), all adult HSs were US-born or had arrived in the U.S. before age 2;0. Crucially, as was stated above, all informants in this group were also either Cuban or of Cuban descent, thus controlling for any possible effects regarding dialectal differences that may affect the final results.

The adult HS group (n=50 participants) was further divided into advanced (n=21), intermediate (n=24), and low\(^3\) (n=4) proficiency groups according to their responses to a standardly used Spanish proficiency test. In an effort to make this project maximally comparable to other published works, the informants’ Spanish proficiency was assessed with an adapted version of the DELE that has been used in a number of previous works (e.g., the work of Rothman). This instrument is described in detail in Section 4.3.2.1\(^4\) below.

Although the monolingual data allow us to test the validity of the experimental design as a whole, as well as the theoretical descriptions that appear in the literature, this group is, admittedly, not necessarily the optimal control group for our HSs (e.g., Rothman & Iverson 2010). In fact, I argue that because HSs’ linguistic outcomes can be traced back to contact-induced changes in first generation immigrant input providers, it is crucial for studies that seek to describe and explain HS competence to include a first-generation immigrant group as a more appropriate comparison group (Pascual y Cabo & Rothman 2012). Therefore, in addition to the monolingual data (children and adults)

\(^3\) Due to the small number of informants who scored 29 or less in the proficiency test (n=4), the low HS group will not be included in this study.

\(^4\) Only the adult HS groups completed the Spanish proficiency test.
and to the experimental groups (HSs children & adults), I also collected data from a third group of adult bilinguals. This group includes a total of 16 individuals that were born and raised in Cuba as Spanish monolingual speakers, coming to the US between the ages of 15 and 41 (average 22;8) and having resided in the U.S. for at least 10 years (average 24;1 years).

This combination of participant groups improves on those examined in most HS studies since not only does it include 2 monolingual control groups (adult & children), it also adds crucial information regarding the source(s) of input that HSs receive with an additional group of 1st generation immigrants of comparable ages and socioeconomic status, and that speak the same regional variety (as suggested by Montrul 2012:113). For that reason, I believe that this procedure can further tease apart (albeit still indirectly) attrition from true incomplete acquisition and even input-delimited differences as the primary source of divergence in this domain.

To sum up this section, in this study I collected data from a total of 114 informants\(^5\) that were divided in 5 groups: (i) adult heritage speakers, (ii) child heritage speakers, (iii) adult monolingual speakers, (iv) child monolingual speakers, (v) adult L1 attriters.

Table 4-4 below summarizes the five participant groups.

<table>
<thead>
<tr>
<th>Table 4-4.: Summary of informant groups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Monolinguals</strong></td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Child</td>
</tr>
<tr>
<td>Adults</td>
</tr>
<tr>
<td>Total (n=114)</td>
</tr>
</tbody>
</table>

\(^{5}\) Recall that low proficiency HSs (n=4) were not included in this study. Thus, only 110 participants were included in the current study.
4.3.2 Materials

4.3.2.1 Language Proficiency test

As mentioned, the informants’ Spanish language proficiency was measured by means of a standardized language test\(^6\) (i.e. Diploma de Español como Lengua Extranjera or DELE). This revised version of the test consists of two different sections:

In the first section, participants were asked to provide answers to 30 multiple-choice questions that target general lexical proficiency as well as grammatical competency. Each token consists of a short sentence that contains a blank and four possible choices. These choices include lexical items and different verbal forms. An example is provided in (3) below. The reader is referred to Appendix A for the full instrument.

\[(3)\textit{Aquí está tu café, Juanito. No te quemes, que está muy_________.} \textit{(`Here you have your coffee, Juanito. Watch out, don't burn yourself because it is very_________.`)}\]

a. dulce ‘sweet’
b. amargo ‘sour’
c. agrio ‘bitter’
d. caliente ‘hot’

In the second section of the test, informants are asked to select the most appropriate answers to a contextualized cloze test. In other words, informants are presented with a text containing 20 blank spaces and they are instructed to select the correct item for each space. For this activity, participants have to pick one of 3 possible choices which include, but are not limited to, prepositions or verb tenses.

\(^6\)Other proposed methods to measure the informants’ proficiency include self-evaluation (e.g., Flege, MacKay, & Piske 2002) speech rate (e.g., Polinsky 2008; Polinsky & Kagan 2007), and sentence completion tasks (e.g., Lynch 2000; Silva-Corvalán 1994). For a detailed discussion on this topic, I refer the reader to Lynch (2012).
Hoy se inaugura en Palma de Mallorca la Fundación Pilar y Joan Miró, en el mismo lugar en donde el artista vivió sus últimos treinta y cinco años. El sueño de Joan Miró se ha _____________. (Today, the Pilar & Joan Miró foundation will be inaugurated in the same place where the artist lived the last 35 years of his life. His dream has been _____________.

a. cumplido ‘granted’
b. completado ‘completed’
c. terminado ‘finished’

The sum of both sections adds up to a total of 50 points. The cutoffs for placement for each proficiency level are typically the following: Advanced= 40 or higher, Intermediate =30-39, Low= 29 or lower.

This version of the DELE has been widely used in Spanish L2/HS acquisition generative studies in the last decade (e.g., Cuza & Frank 2011; de Prada Pérez & Pascual y Cabo 2011, 2012; Montrul 2000, 2002, 2005, 2009; Pascual y Cabo, Rothman, & Lingwall 2012; White, Valenzuela, Kozlowska-MacGregor, & Leung, 2004). Although I am aware that using such a formal task may not be the best option to test linguistic proficiency, especially considering that HSs have been exposed primarily to an informal variety of Spanish (and have low -if any- literacy skills in the language). Because I want these data to be maximally comparable to other projects, this option was chosen.

4.3.2.2 Socio-linguistic Background Questionnaire

HSs can differ from one another in terms of age of acquisition of both the HL and the societal language, domains of use of the HL, HL proficiency, and HL literacy, among other variables (e.g., Montrul 2012; Polinsky & Kagan 2007; Rothman 2009). To also control for these variables, a comprehensive sociolinguistic background questionnaire was administered (Appendix B). This questionnaire collected general information including place of birth, places and length of residence, family members, occupation
history, education background, and knowledge of other languages. It also inquired about the informants’ age during first exposure to both English and Spanish as well as day-to-day language use (with whom and in what contexts).

Keeping in mind that the remit of this dissertation is one of examining HS mental linguistic representation, these data are used when appropriate to supplement and provide more precision to my analyses based on the traditional way of testing grammatical competence given the traditions of the paradigm to which this dissertation belongs. A priori, the working hypothesis is that as time in the US and prolonged contact with English increase across the generations, more evidence of linguistic change in the domains of RPPs will emerge. Such a correlation, or lack thereof, will become significant for HS theorizing that increasingly understands the need of mapping the input to which particular HS generations are exposed to (Sorace 2004, 2012; Rothman 2007, 2009; Montrul 2008, 2011; *inter alia*).

### 4.3.2.3 Test 1: Scalar Grammaticality Judgment Task (GJT 1)

Participants (adults and children) were trained on and then asked to use a 1 (completely unnatural) to 4 (completely natural) Likert scale to rate a total of 40 sentences. Additionally, all participants also had the option to choose a ‘0’ option if they were not completely sure, did not know, or did not hear the sentence properly. The reader is referred to Appendix D for the full instrument. Of the 40 sentences, half of them were critical items and the other half served as distracters. In light of the prediction put forth above, the critical items test acceptance/rejection with respect to four types of constructions: (i) passivized transitive constructions (as in 5), (ii) passivized unaccusative constructions (as in 6), (iii) passivized RPP constructions (as in 7), and (iv) passivized psych-verb constructions (as in 8).
(5) Transitive sample token
   \emph{Esa carta fue escrita por Carol}  
   "That letter was written by Carol"

(6) Unaccusative sample token
   \*\emph{Hugo es llegado a la casa}  
   "Hugo is arrived home"

(7) RPP sample token (Class III psych-verbs)  
   \(^*(\text{1})\) \emph{La pizza es gustada por Fernando}  
   "Pizza is liked by Fernando"

(8) PP simple token (Class II psych-verbs)  
   \emph{Pau fue asustado por Jorge}  
   "Pau was scared by Jorge"

If this prediction is on the right track, we should see evidence of class III psych-verbs shifting to resemble class II verbs. This would be evidenced by HSs’ judgments converging with those of the control groups in the case of (5), since agentive verbs can appear in both active and passive voice constructions, and (6), since both Spanish and English do not allow passivization with unaccusatives. Conversely, I expect to find differences within the different HS groups (e.g., child vs. adults if attrition is the source) and/or with respect to the control group judgments in the case of (7), since class III psych-verbs (i.e., stative predicates) cannot be passivized, unless they acquire an (optional) agentive syntax. That is, if on the right track, I expect HSs to variably accept \emph{gustar}-like verbs in passive constructions as a reflex of the new available agentive reading.

The remaining 20 distracter tokens were divided in three different groups: (i) 10 tokens tested acceptance of grammatical sentences (as in 9), (ii) 5 tokens tested ungrammatical sentences due to noun-adjective agreement (as in 10), and (iii) 5 tokens that tested ungrammatical sentences due to subject-verb agreement (as in 11).
As reviewed in Chapter 2, HSs do not usually receive education in the HL. To avoid any of these possible literacy effects (obvious for children and differentially applicable for HSs), tokens were presented in a video modality. The video lasted 8 minutes 16 seconds; the first minute provided instructions in Spanish and 3 practice items. The remaining 7 minutes included a total of 40 sentences. Between one sentence and the next, there was an 8 second pause. To ensure consistency across testing sessions (e.g., controlling prosody), all subjects were asked to provide the judgments as they heard the tokens from recorded videos of one male speaker born and raised in Cuba. At the time of the recording, this speaker was 32 years old and was starting his first semester as a graduate student at the University of Florida where he was pursuing a degree in Spanish literature. All adult participants were asked to give written judgments. Child participants reported their intuitions orally. They were first asked if the sentence was ‘good’ or ‘bad’. Once they made their choice, they were asked if the sentence was ‘really good’ or just ‘good’ (or ‘really bad’ or just ‘bad’). This distinction was used to choose between a 1 and a 2 (in the case that the judgment was negative) or between a 3 and a 4 (in the case that the judgment was positive).

In trying to elicit adequate judgments for children, I followed McDaniel and Cairns’ (1996) methodological suggestions: before the start of the test, children were presented with different words and sentence-types (e.g., declaratives, questions) and were trained
to focus on form, not on content. Throughout this training period, the children received as much practice and feedback as was deemed necessary. It was only after the child’s responses consistently indicated that s/he understood the task at hand, that we began the data collection process.

4.3.2.4 Test 2: Scalar Grammaticality Judgment Task (GJT 2)

To better explain the results obtained in the previous experiment, all adult participants completed a second GJT. The main goal of this task was to examine the properties associated with class III psych-verbs in relation with the hypothesis put forth in Section 4.2.2, that is, that the dative clitic is actually serving as preverbal agreement morphology (what postverbal agreement morphology typically has in Spanish). This task included a total of 137 sentences. These sentences were divided into critical items (n=60) and distracter/filler items (n=77). The critical items are further divided equally among five conditions (5x12=60) that aim to test acceptance or rejection with respect to the proposals I spelled out in prediction (2) and (3) above: (i) the canonical use of class III psych-verbs, (ii) the omission of the dative marker a, (iii) the omission of the dative clitic le, (iv) use of gustar as fully conjugated (agentive) verb, and (v) the “new” grammatical construction that I propose with a nominative subject + clitic (reanalyzed as agreement morphology) + invariable gusta.

As was the case for GJT1, in this task all tokens were also presented in a video recording. The same person as in experiment 1 was used for this recording. The recording lasted 19 minutes and 7 seconds. The first 1.53 minutes were used as instructions and included a total of 4 practice items. Between one sentence and the next, there was a 5 second pause. After listening to each token, participants were asked to provide a 1 (completely unnatural) to 4 (completely natural) grammaticality judgment.
Participants were asked to circle the option in the answer sheet provided. As was also the case for GJT 1, participants also had the option to choose a '0' if they were not completely sure, did not know, or did not hear the sentence properly. What follows are representative examples for each of these 5 conditions.

1. **Canonical use of class III psych-verbs**: According to my predictions, HSs should still be able to accept canonical uses of RPPs since a stative reading is still available to class II type verbs.

   \[
   \text{(12) } A \text{ María le gusta/an la/las cucarachas} \\
   \text{To María DAT.CLI. Like.3}^{\text{rd}} \text{ SG/PL the cockroach/es} \\
   \text{“María likes the cockroach/es”}
   \]

   Of the 12 tokens that make up this condition, 6 appear with a 3\text{rd} person singular <experiencer> and 6 with a 3\text{rd} person plural <experiencer>.

2. **Omission of Dative marker} a**: Prediction (3) anticipates that HSs will accept gustar-type verbs in constructions that lack the dative marker a as long as the <experiencer> gets reanalyzed with nominative case. As such, I expect that they will reject gustar-type sentences that lack the dative marker but fail to be reanalyzable (the <experiencer>) as nominative: *mí me gusta, *tí te gusta (roughly ‘to me like’ and ‘to you like’ respectively).

   \[
   \text{(13) } *mí me gusta la tarta/las tartas} \\
   \text{Me DAT.CLI Like.3}^{\text{rd}} \text{ SG the cake/the cakes} \\
   \text{“(I) like the cake/the cakes”}
   \]

   Only 1\text{st} and 2\text{nd} person singular pronouns (mí & tí respectively) are tested under this condition since with the a dative-marker construction the morphological distinction from nominative disappears at the surface forms ((a)él/ella, (a)nosotros, (a) ellos/ustedes). Of the 12 tokens that make up this condition, 6 appear with mí (1\text{st}. SG) as the<experiencer> and 6 with tí (2\text{nd}. SG).
3. Clitic omission: As described in the second prediction, I do not expect HSs to accept an invariable *gusta* form with omission of the once dative clitic since, under this proposal, the clitic serves as preverbal agreement morphology in such environments. Answers to this condition will test this assertion.

(14) *A María gusta la playa*

To María Like.3rd SG the beach
“María likes the beach”

Of the 12 tokens that make up this condition, 6 appear with a 3rd person singular <experiencer> and 6 with a 3rd person plural <experiencer>. These tokens were combined with singular and plural <themes> in equal numbers.

4. Case agreement innovations: If the absence of the dative marker *a* prompts the reanalysis of the sentence initial argument as nominative, I could expect HSs to start accepting tokens such as the ones illustrated in (15a-b). In other words, *gustar*, like other class II psych-verbs, could have a fully inflected paradigm used agentively.

(15) a. (*)(1)Yo encanto la playa
I.NOM love.1ST SG the beach
“I love the beach”

b. (*)(1)Nosotros gustamos la playa.
We.NOM love.1ST PL the beach
“We love the beach”

Of the 12 tokens that make up this condition, 6 appear with a 3rd person singular <theme> and 6 with a 3rd person plural <theme>.

5. The “new” grammatical construction: Prediction (2) anticipates that in class III psych-verb constructions the sentence initial argument gets reanalyzed as nominative and appears with an invariable form of *gusta* (as observed by de Prada Pérez & Pascual y Cabo 2011). As described, this would be possible because the once dative clitic has become preverbal agreement morphology (Montrul 1995). Of the 12
tokens that make up this condition, 6 appear with a 3rd person singular <theme> and 6 with a 3rd person plural <theme>.

(16)  

\[^{(*)}Yo \quad me \quad gusta \quad la \ pizza/ las pizzas\]
I.NOM    DAT.CLI     like.3rd.SG. the pizza/the pizzas

“I like the pizza/the pizzas”

The remaining 77 tokens are divided among distracters (sentences that contain problems with verbal agreement across transitive (n=12), unergative (n=12), and unaccusative (n=12) verbs (as in 19a-c respectively)) and two types of fillers: (i) grammatical sentences (n=30) as in 17, and (ii) sentences that contain problems with adjectival agreement (n=11), as in 18.

With the distracter tokens, I aim to observe the participants’ sensitivity towards (un)grammatical items in relation to the findings from de Prada Pérez & Pascual y Cabo (2011). In other words, I aim to test whether the use of an invariable 3rd person singular form has extended to other different types of verbs (e.g., transitive, unergative, unaccusative) or whether this is exclusive of class III psych-predicates. Within each verb type, I test two different verbs: (transitive= comprar ‘to buy’, vender ‘to sell’; unergative= correr ‘to run’, trabajar ‘to work’; unaccusative= llegar ‘to arrive’, desaparecer ‘to disappear’) and within each verb I test six different pronominal subjects (Yo ‘I’, tú ‘you (informal)’, usted ‘you (formal)’, él/ella ‘he/she’, nosotros ‘we’, and ellos/ellas ‘they’). Examples (17-19) below are representative examples of the distracter tokens used in this instrument.

(17)  

Yo bailo salsa con mis amigos
(I dance salsa with my friends)

In Spanish, the formal version of the second person singular (i.e. usted) is conjugated as a third person singular. Within this condition, all informants should find this type of token acceptable.
(18) Yo bebemos café todos los días
(‘I drink (1st PL) coffee everyday)

(19) a. 1st person singular: Yo llega a casa muy tarde
(‘I arrived (3rd SG) home very late)

b. 2nd person singular (informal): Tú sale todas las noches
(‘You go out (3rd SG) every night)

c. 2nd person singular (formal): Usted sale todas las noches
(you go out (3rd SG) every night)

d. 3rd person singular: Él entra en las fiestas con facilidad
(He gets into (3rd SG) parties without any problems)

e. 1st person plural: Nosotros aparece por la tarde
(‘We appear (3rd SG) in the evening)

f. 2nd person plural: Ellos desaparece del trabajo
(‘They disappear (3rd SG) from work)

Again, because of the complex nature of this task and the attention span of children, this task was only performed with the adult participants.

4.3.2.5 Test 3: Picture Elicited production task.

The goal of this task was to elicit production of *gustar*-like verbs in different contexts and forms. The experiment included a total of 18 tokens, 6 of which served as distracters and 12 as experimental items. Each item consisted of four consecutive slides projected in a power point presentation. On the first slide, informants read a short description that contextualizes the specific sets of pictures that will appear on the three following slides. At the same time that they read this short paragraph, and to avoid any literacy issues, participants were also presented with an audio file in which a narrator also read out loud and with normal intonation the same paragraph. The narrator, who was the same Cuban male who performed the recordings for Tasks 1 and 2, was instructed to read the paragraph with normal intonation and at a normal speech. On the
second slide, the informant simultaneously saw three pictures, which from left to right represented (i) one (or two) of the characters introduced to the informant during the instruction period, (ii) an emoticon that symbolizes the character’s emotional state, and (iii) the object that triggers such emotion. The third slide served as a linking element between the second and the fourth slide as they either saw the word y… (and) or pero… (but). The fourth slide reflected the opposite idea represented in the second slide. That is, if character A liked object X in slide 2, character B disliked object X in slide 4.

The 12 critical items were equally divided in 4 conditions that alternated singular and plural themes, always in third person, with singular and plural <experiencers>, also always in third person. Tokens in each condition were designed to contain <themes> and <experiencers> differing from each other in regards to the number. That is, : (i) 3rd person singular <experiencer> with 3rd person singular <theme>; (ii) 3rd person singular <experiencer> with 3rd person plural <theme>; (iii) 3rd person plural <experiencer> with 3rd person singular <theme>; and (iv) 3rd person plural <experiencer> with 3rd person plural <theme>.

Four representative examples (one for each condition) are given in 20a-d below. In figure 4-1, the token belongs to condition (i) described above, that is 3rd person singular <experiencer> with 3rd person singular <theme>. The narrator in this token contextualizes the pictures by saying: Hoy todos van a jugar a la casa de Dilan. Su madre va a comprar helado. Pero ella no sabe cuál comprar porque… (Today, everyone is going to play at Dilan’s house. His mother is going to buy ice cream. But
there is a problem because she does not know which one to buy because…).

Informants were prompted to describe the following pictures:

Figure 4-1. Singular <experiencer>_singular <theme>

The target response was “A Esteban le gusta el (helado) de chocolate pero a Dilan no le gusta el (helado) de chocolate” (Esteban likes chocolate icecream but Dilan doesn’t (like chocolate icecream)).

Figure 4-2 below belongs to condition (iii), that is 3rd person plural <experiencer> with 3rd person singular <theme>. The narrator of the following set of slides contextualizes the pictures by saying: Hoy voy a invitar a los cuatro amigos a tomar café en la cafetería Versalles. Pero hay un problema porque yo sé que… (Today, I am going to treat the four friends to have coffee in the coffee shop Versailles. But there is a problem because I know that…). Informants were prompted to describe the following pictures:

Figure 4-2. Plural <experiencer>_singular <theme>
The target response was “A Carmen y a Esteban no les gusta el café pero a Dilan y a Lilian sí les gusta el café” (Carmen and Esteban don’t like coffee but Dilan and Lilian do (like coffee).

Figure 4-3 below belongs to condition (iii), that is 3rd person singular <experimenter> with 3rd person plural <theme>. The narrator of the following set of slides contextualizes the pictures by saying: Carmen y Esteban están hablando de insectos. Yo sé que es un problema porque… (Carmen and Esteban are talking about insects. I know this is a problem because…). Informants were prompted to describe the following pictures:

![Percy...](image)

Figure 4-3. Singular <experimenter>_plural <theme>

The target response was “A Carmen le gustan las mariposas, pero a Esteban no le gustan las mariposas” (Carmen likes butterflies, but Esteban doesn’t (like butterflies)).

Figure 4-4 below belongs to condition (iii), that is 3rd person plural <experimenter> with 3rd person plural <theme>. The narrator of the following set of slides contextualizes the pictures by saying: Para comer, la madre de Dilan ha hecho hamburguesas. Hay un problema porque ella no sabe que… (For lunch, Dilan’s mother has cooked some hamburguers. But there is a problema because she does not know that…).
The expected target response was "A Carmen y a Esteban les gustan las hamburguesas, pero a Dilan y a Lilian no les gustan las hamburguesas" (Carmen and Esteban like hamburguers, but Dilan and Lilian don’t (like hamburguers)).

The distracter items mirrored the same structure from the critical items. The only difference between the distracter items and the critical tokens is that the former did not include emoticons that would trigger class III psych-verb constructions while the latter did. As can be seen, example (20e) below illustrates a distracter item. The narrator of the following set of slides contextualizes the pictures by saying: Hoy Esteban y Carmen han ido al cine a ver la película Casablanca. Aparentemente han tenido reacciones muy distintas porque … (Today, Esteban and Carmen went to the movies to watch Casablanca. Apparently, they have had very different reactions because…).
The target response was “Esteban lloró con la película Casablanca, pero Carmen se aburrió con la película (Casablanca). “Esteban cried with the movie (Casablanca) but Carmen was bored with the movie (Casablanca)).

Prior to the beginning of the experiment, all informants received training on the task and become familiarized with the 4 characters that appear throughout this experiment. Recall that, according to de Prada Pérez and Pascual y Cabo (2011), it is not clear whether this preference towards an invariable gusta form is a byproduct of a phonological simplification in which /n/ gets weakened/elided in final position. If this were the case, one would expect similar outcomes with other words where /n/ is not functional morphology only. If not, this would suggest that this observed pattern is not a phonological simplification, but rather one related to verbal morphology. To test for the possibility of general /n/ reduction in coda position, the names of the characters used all ended in unstressed /n/ (Dilan, Esteban, Lilian, and Carmen). The prediction is that if the use of an invariable 3rd person singular verbal form (e.g., invariable gusta) is the result of a phonological reduction/elision, this elision would also be visible not only in verbal forms but in other parts of speech. Therefore, if my informants were to pronounce the /n/ in these names, this would allow me to eliminate the possibility that an invariable use of a 3rd person singular ‘gusta’ is due to a phonological simplification, at least a general one that is not specific to verbal morphology. To make sure that participants become sufficiently familiarized with the names of the 4 characters, these appear in a total of 6 slides performing different activities. During the training period, each character is recognized by means of a sign that includes his/her full name (e.g., Dilan, Esteban, Lilian, and Carmen) as well as their initial (D, E, L, and C respectively) displaced on
their chest. Once the test begins, participants are only shown the initial on their chest. Furthermore, participants also have the opportunity to practice one set of slides before the start of the test.

4.4 Procedure for Data Collection

As discussed, a total of 114 informants participated in this study. The process of data collection took place during the 2012 fall semester. All monolingual speakers, children and adults alike, were recruited through previously made contacts in the city of Havana, Cuba. Bilingual speakers were recruited from previously made contacts in the area as well as the snowballing technique in two different locations: Gainesville, FL and Miami, FL. Child participants were recruited from a (pre)school in the area.

Prior to the beginning of the interview, each informant (or the parent/guardian of the child in the case of child informants) read and signed the consent form approved by the University of Florida IRB office (Appendix C).

Testing, in the case of the adult informants (both monolingual and bilingual), consisted of all three experiments described above. Adult-informants were tested in the following order: (i) GJT 1, (ii) GJT 2, (iii) and elicited production task. The average testing period was 58 minutes. In the case of the child informants, testing consisted on only one experiment (GJT 1) described in Section 4.3.2.3. Though the length of the training periods varied depending on the age of the child, the average testing period was 21 minutes.

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8 Recall from section 4.3.1 that I opted from eliminating the data from 4 Low HSs.
4.5 Procedure for Data Analysis

Once the informants or their parent(s)/guardian(s) signed the required consent form, they were assigned random participant numbers to respect their anonymity. At that moment, all personal information was completely detached from the documents pertaining to the experiment and the participant number was exclusively used to identify the participants and their answers in the different sections of the experiment. The signed consent forms were kept secured at the investigator's home office.

The data gathered from the different background questionnaires and experiments were systematically coded and stored electronically using Microsoft Office Excel (2007). The sound files collected from the production task were stored as individual MP3 files; one for each participant. These files were transcribed by the investigator and subsequently checked for accuracy by two trained individuals. These individuals checked two different samples of approximately 10% each. In cases of disagreement, the token was transcribed again. A backup copy of all files as well as all tasks used within this project is stored on the researcher’s external hard drive, which is in not connected to any network.

Upon completion of the coding process, and as will be described in Chapter 5, statistical tests were run between and within groups. Chapter 5 will also discuss the results, which will be analyzed and compared against the claims of the theoretical descriptions present in the literature and against the hypotheses and predications presented in Section 4.2 above. The experimental subjects’ performance will be examined to see whether their judgments fall within the confidence intervals obtained from the control groups.
4.6 Pilot Study

To make sure that the proposed methodologies were valid for the target groups and the goals of this study, all experiments were successfully trialed with three HS children (ages 4;7, 4;9 and 8;6), ten adult HSs, and four 1st generation Spanish speaking immigrants. Adult informants did not find any difficulties when completing the tasks. In regards to the child HSs, it soon became evident that only the oldest participant (age 8;6) could provide appropriate grammatical judgments. Based on previous research with similar methodologies, and on what it is known from child L1 acquisition literature regarding passives in general, it was decided that only children ages 6;6 and above would be able to handle the proposed methodology. As a result, in the current study, I only collected data from child informants (HSs and monolinguals alike) that at the time of data collection were between the ages of 6;6 and 11;0. Moreover, this would ensure that monolingual children have also acquired the property at study.

Taken together, child and adult HSs’ non-target-like results contrast with the responses obtained from the Spanish natives group suggesting this to be a fruitful ground for investigation. Interestingly, the data from the Spanish natives also revealed some level of variation, albeit much less than the HS group. Since these controls for the pilot were not monolinguals, but rather clearly Spanish dominant 1st generation speakers in the US, it is reasonable to believe that such variation can have a compounding effect for HSs who receive input from 1st generation immigrants of this kind (e.g., Pascual y Cabo & Rothman 2012; Rothman 2007; Sorace 2004). This unexpected variation strongly indicated that the 1st generation group should be maintained as a formal control group. Nonetheless, as stated above, I have also
included a second control group made up by Cuban monolingual speakers residing in Cuba.

**4.7 Conclusion**

In this chapter I have presented the motivation and core research questions that guide this study. Based on these questions, I proposed an explanatory analysis informed on findings from previous studies and based on the syntax of class III psych-verbs. To test this analysis, I designed a methodology that includes 5 groups of Spanish speakers and 4 experiments. In Chapter 5 I present the results obtained from these experiments.
CHAPTER 5
RESULTS

5.1 Introduction

In this chapter, I present the empirical findings of the experiments carried out with relevance to the research questions outlined in Section 4.2.1, repeated below for convenience.

1) Are class III psych-verbs in HS Spanish undergoing a reanalysis of their argument structure? If so, in what ways and why?

2) To what extent are attrition, incomplete acquisition and/or input delimited differences at least partially explanatory as sources of HS differences? and to what extent can they be teased apart?

With these questions in mind, and adopting the pairing of participant groups suggested in Polinsky (2011) and beyond, I designed a methodology that tested the abovementioned argument structure innovation while at the same time examining the sources of possible differences among HSs’ grammars, namely incomplete acquisition (e.g., Montrul 2008), L1 attrition (e.g., Polinsky 2006, 2011), and missing-input competence divergence (e.g., Pires & Rothman 2009).

Recall that the present methodology consisted on three experimental tasks, two of these tasks tested knowledge and use of class II psych-verbs and the other one tested their production. These experiments were completed by a total of 114 informants distributed among 5 different groups: adult & child Spanish HSs, adult & child Spanish monolingual speakers, and adult 1st generation immigrants. As discussed, by examining children and adult HSs as well as children and adult monolingual speakers all from the same dialect and with the same empirical methodology, I aim to document and understand the extent to which this grammatical domain (i.e. class III psych-verbs) is possibly changing cross-generationally in a language contact situation. Recall that
following Polinsky (2011), the logic of such a comparison is the following: if a HS child and an HS adult deviate from the baseline in the same way, one can assume that the feature has not been acquired, that being, in her view incomplete acquisition. However, if a HS child performs as his or her age-matched baseline control but the HS adult does not, one can assume that the feature had been acquired but was later on lost or reanalyzed, that being attrition¹. Crucially, by bringing to the mix additional data from 1st generation immigrants from the same dialect (i.e. primary HS input providers), I believe that one is better able to map the influence of cross-generational input modifications (combined with an effect of contact with English) to explain how HS knowledge is obtained in this domain in a progressively more English-convergent and monolingual Spanish-divergent manner. Methodologically, this crucial piece of the puzzle has been largely overlooked in previous research on HS bilingualism (but see Pires & Rothman 2009; Rothman 2007). I maintain here, as I have in the past elsewhere, that without considering the effects that contact-induced changes in first generation immigrants may have on second and subsequent generations of HSs, one cannot appropriately make any concluding remarks regarding the so-called (in)complete nature of HS grammars (Pascual y Cabo & Rothman 2012).

As discussed in Chapter 2, HSs do not usually receive education in the HL and are therefore not assumed to have been exposed to formal (or standard) varieties of Spanish. And so, to avoid any possible literacy effects (obvious especially for children

¹ Though this scenario can be hypothetically true, it is also possible that both children groups may reveal the same adult-monolingual-divergent judgments. In that case, these results would not be at all supportive of claims of attrition since we know that, at least the monolingual children, end up converging in judgments that are consistent with those found in the theoretical literature. This is a shortcoming in logic that did not apply to Polinsky’s (2011) study because the children tested therein already converged on the adult monolingual grammar for relative clauses in Russian.
and differentially applicable for the adults HSs), tokens were presented in a video (oral) modality. Moreover, this methodological procedure guarantees that all participants were presented with the exact same presentational modality across the different groups. The ensuing sets of data obtained were systematically coded and then submitted to statistical analyses using SPSS 17.0. Descriptive and inferential statistics (i.e. repeated-measures ANOVA as well as a binomial logistic regression with Bonferroni post-hoc tests) were run between data sets and within group (counterbalanced) comparisons (e.g., Norman 2010 for a detailed discussion on the appropriateness of such statistical measures). Such comparisons allowed me to compare the data against the claims of the theoretical descriptions present in the literature and against the hypotheses I advanced in Section 4.2.2.

What follows is the description of the results, experiment by experiment - condition by condition, along with what these may reveal about the current status of class III psych-verbs in HS Spanish. Additionally, and with the aim to better understand the source of HS differences for this particular property, the crucial comparisons to be made involve monolingual children with bilingual children and monolingual adults with bilingual adults. A more detailed discussion of these results and what they bring to bear on larger questions as a whole is presented in Chapter 6.

5.2 Grammaticality Judgment Task 1 (GJT1)

In this section, I report the data obtained from GJT1, described in Section 4.3.2.3. The primary goal of this task is to test the prediction I put forward in Section 4.2.2 regarding the innovative use of the verb gustar ‘to like’. The prediction was that class III psych-verbs (e.g., gustar ‘to like’) have been reanalyzed as class II psych-verbs (e.g., asustar ‘to frighten’) in HS grammars. Evidence in favor of this prediction would obtain
via an experimental demonstration of class III psych-verbs taking an optional agentive syntax. As discussed, this sort of evidence was predicted to be compatible with the use of *gustar* in passive constructions. Recall that class III psych-verbs, or obligatory RPPs, are stative (unaccusative) and, just like other unaccusatives (e.g., *morir* ‘to die’, *llegar* ‘to arrive’), are incompatible with passive constructions. Conversely, class II psych-verbs have the option of being used statively or agentively and can therefore appear in passive constructions, indicating that when they are, they have an agentive syntax. Again, if on the right track, this hypothesis makes the following specific prediction: Spanish HSs should (variably) accept canonical class III type verbs in passive constructions as an emerging reflex of the aforementioned new OPTIONAL agentive reading. In other words, having an available agentive reading should allow this subgroup of verbs to appear in passivized constructions to a degree of acceptability statistically different from monolinguals who should overwhelmingly reject this.

To examine this hypothesis, participants were asked to use a 1 (completely unnatural) to 4 (completely natural) Likert scale to rate 20 critical tokens (distributed in 4 conditions that test structures relevant to the aforementioned prediction: passive constructions with transitive verbs (n=5), unaccusative verbs (n=5), class II psych-verbs (n=5), and class III psych-verbs (n=5)) and 20 distracter tokens (i.e. grammatical sentences (n=10) and ungrammatical sentences due to noun-adjective agreement (n=5) and subject-verb agreement (n=5)).

5.2.1 Distracter Items

In regards to the distracter items, which I present first to show that all participants were able to handle the task itself, a three (TYPE: Grammatical, *Verb agreement, *Adj. agreement) by six (GROUP: Advanced Adult HS, Intermediate Adult HS, Child HS,
Attriters, Monolingual Children, and Monolingual Adults) repeated measures ANOVA revealed a main effect for TYPE (F(2, 96) = 716.47, p < .001), GROUP (F(5,97) = 9.277, p < .001) and a TYPE BY GROUP interaction(F(10,194) = 9.521, p<.001). The significant effect for type was expected because grammatical tokens should yield significantly higher ratings than the ungrammatical ones. Figure 5-1 below gives the average ratings for each of the distracter conditions for each group.

As can be seen, this significant difference discussed above stems from the overall clear contrast that exists between an almost categorical acceptance of grammatical sentences and the tendency to reject ungrammatical ones. That said, results from Bonferroni multiple pairwise comparisons revealed that, for the groups tested, all three distracter conditions (including the two ungrammatical ones) differ at a
level of statistical significance (i.e., *ADJ vs. *Verb, p < .001; *ADJ vs. GRAMM, p < .001; *Verb vs. GRAMM, p < .001).

Although such general trend is also visible in the HS children data, this group stands out from all others in that the ungrammatical sentences receive higher ratings (2.41 in the case of *ADJ and 2.02 in the case of *VERB), while the grammatical sentences are judged significantly lower than the other groups (3.17). The results from Bonferroni post hoc tests indicate that within this group, these differences are statistically significant (i.e., *ADJ vs. *Verb, p < .001; *ADJ vs. GRAMM, p < .001; *Verb vs. GRAMM, p = .007). Similarly, the group of intermediate HSs also shows less categorical judgments for the ungrammatical sentences; especially those that correspond in the noun-adjective agreement (2.19). The results from Bonferroni post hoc tests indicate that within this group, these differences are also statistically significant (i.e., *ADJ vs. *Verb, p < .001; *ADJ vs. GRAMM, p < .001; *Verb vs. GRAMM, p < .001). These results, I argue, should not be taken as a sign for target-divergent performance for these two groups, since both of them do make a significant distinction between grammatical and ungrammatical tokens. Instead, they reveal some indeterminacy which may possibly result from a number of explanations.

First, one may contemplate the possibility of appealing to some sort of arrested development in the HC group since their monolingual counterparts (matched in age and dialect) clearly outperform them for the properties examined. However, if one accepts the (admittedly) hypothetical scenario in which, with time, these HS children do eventually become an equivalent version of the HS adults tested herein or simply continue to progress even if still arriving at a different grammar from adults, then one
would have to consider an alternative option since adult HSs do end up becoming more target-convergent. To be clear, because we know that adult HSs' intuitions are within the ranges of the adult monolingual group for the properties tested herein, incomplete acquisition cannot be argued to be at play in this domain. Instead, it can be reasoned that HS children may be experiencing a delay in the acquisition of the properties tested (i.e., noun-adjective agreement) possibly as a result of the difficulties associated with balancing the two grammars involved. That is, while Spanish overtly express such agreement, English does not and thus, it is possible that HS children may be engaging their Spanish lexicon on their English syntax, whereby noun-adjective agreement would need not be overtly expressed. Alternatively, it might not have anything to do with crosslinguistic interference as in the scenario just described, but be a result of a more generalizable delay stemming from bilingualism itself, that is, a temporal manifestation of having to allocate finite cognitive resources across the acquisition of multiple systems at the same time (e.g., Bialystok 2009 for review).

Another likely explanation can be found in the differential salient nature of the ungrammatical tokens themselves. That is, while problems with noun-adjective agreement in Spanish usually correspond to the absence or presence of a low perceptual salient form (e.g., a mere vowel alternation in the case of gender (i.e. most typically ‘o’ for masculine and ‘a’ for feminine), problems with subject-verb agreement in Spanish tend to be more acoustically salient. Similar morphophonological issues pertaining to variable HS performance have been discussed in previous studies examining modality alternations (e.g., Montrul 2009; Pascual y Cabo et al. 2012; Rothman, Pascual y Cabo, & Lingwall in preparation) and differential object marking
(e.g., Montrul & Bowles 2010) among comparable Spanish HS groups in the US. Moreover, the testing modality employed in this study would certainly lend support to this explanation since less salient forms tend to be easily concealed in oral speech.

Up to this point, I have shown that the informants’ responses to the distracter tokens were generally on target, though somewhat indeterminate in the case of the HS children and Intermediate HSs. That said, all groups, including the HS children and the Intermediate HSs, were successful at making the necessary distinctions between grammatical and ungrammatical utterances. I take such an important distinction as evidence that all groups were able to handle the task itself, that both the experiment and the procedure were valid for the purposes of this study, and that the informants’ grammatical representations, at least for these properties, are more or less the same. Next, I proceed to discuss the results for the critical conditions which, for ease of presentation, I describe one by one. A more general discussion of these results is offered at the end of this section; the point at which I bring together the results from all groups under all conditions.

Recall that the critical items in this experiment were distributed equally among four different types conditions. These conditions differed from one another in terms of the verb type (i.e., transitive verbs, unaccusative verbs, class III psych-verbs, and class II psych-verbs). To test for statistically significant differences, a repeated-measures ANOVA was run with the variables of GROUP and VERB TYPE. The results of this ANOVA showed a main effect for VERB TYPE \( (F(3, 95) = 265.79, p < .001) \), GROUP \( (F(5,97) = 3.021, p<.014) \), as well as a high order interaction between GROUP and
VERB TYPE \((F(15, 291) = 6.487, p < .001)\). In the next subsections, I further examine these results, condition by condition.

### 5.2.2 Transitive Predicates in Passive Constructions

To establish that informants were sensitive to the semantic and syntactic restrictions of the passive voice, they were asked to provide judgments to passive sentences with transitive verbs. Figure 5-2 below presents the average results across all groups for this condition (Section 4.3.2.3).

![Figure 5-2](image)

As expected, all groups clearly accept passive constructions with transitive verbs. This is not surprising given that Spanish and English work the same in this regard. In spite of these strong acceptance rates, one cannot help but notice a gradual decline in the judgments of these items as they go from almost categorical ratings, in the case of the monolingual groups to more moderate ratings in the case of the bilingual groups. The results from a Bonferroni post hoc test indicate that the monolingual child group
already reveal target-like accuracy with this construction as their responses do not differ statistically from those of the monolingual adults (p=1.0) or the first generation immigrants (p=1.0). On the other hand, and in spite of being generally accepting, the responses from the heritage child group do differ statistically from those of the monolingual children (p=.002) as well as those of the monolingual adults (p<.001) and first generation immigrants (p=.004).

In regards to the adult informants, it appears that all groups strongly accept the use of transitive verbs in passive constructions. This observation is confirmed statistically since no differences were found between the two adult HS groups (p=1.0), nor between the attriter group and any of the HS groups (AA vs. HS-INT, p=.993; AA vs. HS-ADV, p=1.0), nor between the monolingual adult group and the attriter group (p=1.0) or any of the HS groups (MA vs. HS-INT, p=.125) (MA vs. HS-ADV, p=.774).

Given these results, and because HS children do show differences with respect to monolingual children (p=.002) and to monolingual adults (p<.001), one could be misguided into concluding that incomplete acquisition is responsible for such differences. But, if we compare the results obtained by HS children and HS adults, one can see that the latter do eventually overcome the delays observed in the HC data. In other words, incomplete acquisition cannot be explanatory for this specific property in these specific groups either, because as adults, HSs' intuitions converge with those of their monolingual counterparts (HS-ADV vs. MA, p=.774; HS-INT vs. MA, p=.125). For the exact same reason, that is, because convergence into target-like results takes place over time, attrition cannot be identified as the source of differences either. Instead, note that the mean responses of all adult bilingual groups (AA=3.55; HS-ADV=3.38; HS-
INT=3.27) are found in between those of the monolingual adults (3.72) and the HC (2.94) and recall that such declining trend corresponds with significant p values when comparing the judgments of the HC group and those of monolingual adults (p <.001) and between the HC group and the monolingual children group (p = .002), but crucially not between the HC group and the attriters group (p=.084), the advanced HS group (p= .068) or the intermediate HS group (p = .87). Therefore, the results presented here are more in line with what the third alternative would predict (i.e., Missing-input competence divergence). That said, because it was originally thought to describe differences in ultimate attainment, to better explain the results obtained in the present context, this hypothesis is in need of modification. Thus, in the spirit of Rothman (2007) as well as Pires and Rothman (2009), differences in the input (qualitatively as well as quantitatively) may delay the time course of developmental sequencing and/or the path itself which then inevitably effects ultimate attainment. According to this view, the outcome of child heritage language acquisition is generally different from monolingual acquisition because the input does not provide the necessary primary linguistic data for “full” convergence of the properties of the monolingual dialects being examined (Rothman 2007; Pires & Rothman 2009).

Irrespective of the differences found across the groups, what is crucial here is that, so far, all groups strongly accept the grammatical constructions (i.e., passive sentences with transitive verbs as well as the grammatical sentences in the distracter tokens) and reject the ungrammatical ones. Although no conclusions can be drawn at this point, so far these results clearly indicate the design of the methodology and the procedures followed are valid for the populations tested. Left to be determined is the
extent to which the informants’ intuitions with respect to the semantic and syntactic restrictions of verbal passive sentences in Spanish are consistent with the theoretical descriptions found in the literature, an issue to which I turn next.

5.2.3 Unaccusative Predicates in Passive Constructions

As a counterbalance condition, and to further establish whether informants were sensitive to the semantic and syntactic restrictions of the passive voice, they were asked to provide judgments to passive sentences with unaccusative verbs. Figure 5-3 below presents the average results across all groups for condition 2 described in Section 4.3.2.3.

As can be seen, all groups largely reject this sort of constructions. This was the expected outcome given that unaccusative verbs—intransitive verbs that portray actions in which there is no agent involved—are incompatible with the passive voice. Moreover, and differently from the results observed in the previous condition, bilingual

Figure 5-3. Group means of passives with unaccusative verbs. HS-ADV= Advance Heritage Speakers; HS-INT=Intermediate Heritage Speakers; AA= 1st Generation immigrants/Attriters; HC= Heritage Children; MC= Monolingual Children; MA= Monolingual Adults
and monolingual children seem to behave homogenously as they both marginally reject passive constructions with unaccusative verbs (MC=1.75; HC=2.21). This observation is confirmed statistically as the corresponding p value does not reach significant standards (p=.269). In regards to the adult groups, we find differences between advanced and intermediate HSs (p=.0002) but not between the monolinguals and the attriters (p=1.0). Moreover, the adult monolingual group differs statistically from the HS-INT (p=.002) but not from the HS-ADV (p=1.0). Similarly, the attriters’ group differs statistically from the HS-INT (p=.007) but not from the HS-ADV (p=1.0). Further intragroup comparisons reveal that, in spite of this proficiency effect in adult HSs, all groups without exception make a statistically significant difference between passives with unaccusative predicates and passives with transitive predicates (Section 5.2.2 above). Such a distinction is crucial for the purposes of the present study as it provides unequivocal evidence that all groups are sensitive to the syntactic and semantic restrictions of passive sentences and that all have the ability to form argument chains which is required to move the object to subject position to properly analyze verbal passives. Having established such important transitive-unaccusative distinction, it is now time to turn the focus to the fundamental issue of interest in this study, that is, the acceptance or rejection of class III psych-verbs in passive constructions.

5.2.4 Class III Psych-predicates in Passive Constructions

Recall that *gustar* is an unaccusative verb and, as such, should be incompatible with passive constructions. But because I hypothesized that, in HS grammars, *gustar*, the prototypical class III psych-verb has shifted to a class II psych-verb which means

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2 Results from Bonferroni post hoc test: MA, p<.001; MC, p<.001; HC, p<.001; HS-ADV, p<.001; HS-INT, p<.001; AA, p <.001.
that it can take an optional agentive syntax, it was predicted that HSs should (variably) accepted strict class III psych-verbs in passive. Therefore, the informants’ responses to the sentences included in this condition were crucial to test the extent to which the aforementioned hypothesis was upheld. To support this hypothesis, in addition to showing adequate behavior in the counterbalanced tokens, a point to which I will return at the end of this chapter, HSs would have to accept passive *gustar* significantly more than other unaccusatives to a degree that is different from monolingual adults, who *a priori* should strongly reject this innovation. Figure 5-4 below presents the average results across all groups for condition 3 described in Section 4.3.2.3.

![Graph](image)

**Figure 5-4.** Group means of passives with class III psych-predicates. HS-ADV= Advance Heritage Speakers; HS-INT= Intermediate Heritage Speakers; AA= 1st Generation immigrants/Attriters; HC= Heritage Children; MC= Monolingual Children; MA= Monolingual Adults

As can be seen, all adult groups seem to reject *gustar* in passive constructions. That said, this rejection is not observed to the same degree by all groups. For example, while monolingual adults (MA=1.10) and 1st generation immigrants (AA=1.53)
categorically reject this use, HSs’ intuitions reveal some variance (HS-ADV=1.86; HS-INT=2.21).

Upon further investigation, the results from pairwise intergroup comparisons reveal statistically significant results that in turn provide important insights into the nature of these HS differences. For example, these comparisons indicate that while the responses from the two HS groups do not differ statistically from each other (p=1.0), the responses from the monolingual adults do differ at a level of statistical significance from those of both HS groups (HS-INT, p< .001; HS-ADV p=.037)). This difference is essential for the purpose of this study as it is the first indication that class III psych-predicates may have possibly undergone a reanalysis of their argument structure in the ways I hypothesized in Section 4.2.2. In other words, these results indicate that adult HSs and adult Spanish monolingual speakers differ with respect to their intuitions of gustar’s compatibility with passive constructions. Admittedly, this difference may not be as categorical as one would want it to be to indisputably confirm the abovementioned hypothesis; however, I argue that this is enough to show that these results are consistent with the proposed change in the direction that I hypothesized. This argument is based on the premise that the syntax of these HSs is dichotomous in nature and thus, it should either allow this sort of construction or reject it. Because the adult HSs show differences compared to the adult monolinguals in this respect, one can postulate that their syntax does in fact allow for this alternation. Additionally, intragroup comparisons reveal that the Advanced HSs make a statistically significant distinction between the conditions that tested acceptance of class III psych-verbs and strict unaccusative verbs in passive constructions. If the HSs’ syntax did not allow for the class III psych-
predicates in passive constructions, then they should reject it more categorically, very much the same manner that they reject passives with unaccusatives. But why is it that their grammar would allow for this construction yet their acceptance rates are not as categorical as other grammatical constructions (e.g., passives with transitive verbs)? The answer to this question may possibly correspond to a frequency effect. That is, even though these HSs have the two structures available, the agentive one is not as readily accessible as the stative one because it is not as frequent in the input, that is, these two structures are not in free variation.

So far, we have seen how all groups categorically accept passives with transitive verbs (Section 5.2.2) and generally reject passives with unaccusatives (Section 5.2.3). In this section, I have reported a few important differences in regards to the acceptance of class III psych-verbs in passive constructions. These differences have been argued to result as a reflex of the emerging availability of the agentive reading in this group of verbs. A crucial comparison that is yet to be made is between the informants’ responses to conditions 2 and 3; that is, between unaccusatives and strict class III psych-verbs. This comparison is key since class III psych-verbs are in fact unaccusatives and therefore, both conditions should be considered equally ungrammatical. If they are not treated equally, then this would constitute further evidence that the change I hypothesized is only pertinent to gustar-like verbs and does not extend to all unaccusative verbs.

It is apparent, by taking a look at the two pertinent figures, that there are differences in the direction of the change I hypothesized. That is, in passive sentences, class III psych-verbs seem to be accepted more favorably than class II psych-verbs. If
these differences turned out to be statistically significant, then this would constitute additional evidence that class III psych-verbs have in fact been reanalyzed. As expected, adult monolinguals and 1st generation immigrants do not reveal statistically significant differences between these two conditions. For them, the use of class III psych-verbs and unaccusatives in passive constructions is equally ungrammatical. Conversely, the two children groups do make a statistically significant difference between them (MC, p<.001; HC, p=<.001). Because we know that these same children do make a distinction between transitive verbs and unaccusatives in the way one would expect (Section 5.2.1.3), this second difference can be argued to indicate either changes in both children groups or perhaps simply a delay in their acquisition of class III psych-verbs. Because gustar-like verbs have been reported in previous studies as difficult to acquire even among monolingual children (Section 3.5.1), I believe that this second alternative is more plausible given that (i) adult monolinguals eventually end up converging with the descriptions found in the literature, and (ii) that adult HSs show development in the same direction.

Having established that class III psych-verbs have been reanalyzed in the HSs’ grammars, the question now becomes, which of the aforementioned sources of HS differences is responsible for this change? Recall that the current debate in formal HS acquisition regarding the source of vulnerability among HSs’ grammars has been centered along the concepts of incomplete acquisition, attrition, and missing-input competence divergence (e.g., Montrul 2008; Polinsky 2006, 2011; Pires & Rothman 2009). This is a rather challenging question to answer since individual realities and experiences differ from one another in ways that cannot be fully controlled in a study of
this kind. Moreover, the methodological nature of this study (e.g., group pairings adopted) calls for an even more cautious argumentation since in the absence of longitudinal data, all we have is an approximate estimation that is provided by indirect measures. Given this operational necessity, we are to assume that the children examined herein will eventually become a somewhat corresponding version of the adult groups included here.

That said, by looking at the data as a whole, it is safe to assume that L1 attrition alone cannot be considered as the one source of HS grammar differences since both children groups perform worse than their adult counterparts. In other words, both monolingual and HS children’s intuitions improve over time in a direction that is opposite to what would be expected had L1 attrition been the cause of these differences.

From an incomplete acquisition point of view, these results can be interpreted in a similar way. That is, both HS children and monolingual children show what a priori could be described as ‘incomplete acquisition’ since both groups alike seem to not be sensitive to the semantic and syntactic restrictions of class II psych-verbs. However, if we are to assume that (i) the methodology employed in this experiment did not alter or influence their responses which in turn are thought to be representative of their linguistic mental representations, and (ii) that these children will become an equivalent version of the adults tested herein, then ‘incomplete acquisition’ alone cannot be responsible for these differences either. That is, as adults, both monolinguals and HSs reveal improvement with respect to the intuitions of the children. If the child data obtained are due to true incomplete acquisition, then no developmental changes should surface from that moment on. But because there is unequivocal development in both groups, an
analysis that points in the direction of a delay in the acquisition of class III psych-verbs should be favored.

5.2.5 Class II Psych-predicates in Passive Constructions

The last condition of this experiment included passive sentences with class II psych-predicates. These tokens were used to compare and contrast the informants’ knowledge of passive voice, especially with respect to (class II & class III) psych-verbs. Figure 5-5 below presents the average results across all groups for this condition (Section 4.3.2.3).

![Figure 5-5](image)

As was also the case with the condition that examined the informants’ judgments towards passives with transitive verbs (Section 5.2.2), all groups tested herein clearly accept passive constructions with class II psych-predicates (asustar ‘to scare’, molestar ‘to bother’). Recall that this is a perfectly grammatical construction given their hybrid
nature (Section 4.2.2) which allows them to have both agentive or a stative readings available. Thus, when used in passives sentences, class II psych-verbs must be unambiguously interpreted as having an agentive reading.

In spite of the diverse overall rating differences that range from 3.09 (in the case of the advanced HSs) to 3.77 (in the case of monolingual adults), Pairwise intergroup comparisons reveal that none of the groups statistically differ from each other for this specific condition. I take this to indicate that all groups, holistically speaking, have full-fledged knowledge of the hybridity that characterizes class II psych-verbs.

5.2.6 General Discussion of GJT1

The main goal of GJT 1 was to examine the status of gustar in HSs Spanish as well as to test the hypothesis put forth in Section 4.2.2. Recall that the main difference between class II and III psych-verbs lies in the hybrid nature of class II which allows them to be passivized as opposed to class III verbs which cannot. With this in mind, I predicted that HSs would be more likely to accept gustar in passive constructions than other unaccusatives, but not necessarily to the same degree as other class II predicates. Monolingual adults, on the other hand, would reject this use since their syntactic representation for the lexical verb gustar only has a stative syntactic structure. To examine this prediction, informants were tested with four counterbalanced types of passive sentences: (i) passivized transitive constructions, (ii) passivized unaccusative constructions (iii) passivized constructions with gustar, and (iv) passivized constructions with class II verbs. In light of this, I expected that HSs would converge on their judgments to those of the control groups in the case of transitive verbs, (i) & (iv), since transitive (strictly transitive verbs and class II psych-verbs when they come as transitives) can appear in passive voice constructions, as well as in (ii) since both
Spanish and English do not allow passivization with unaccusative predicates.

Conversely, I expected to find differences within the HS groups (e.g., child vs. adults in a specific direction if attrition is the source) and/or with respect to the control group judgments in the case of (iii) since class III psych-predicates cannot be passivized unless they acquire an (optional) agentive syntax. To better observe the differences and similarities between the different groups, I present in figure 5-6 below the average results across all groups for all four critical conditions tested.

Figure 5-6. Group means of all four critical conditions among adult groups. TRANS= Passives with transitive verbs; UNACC= Passives with Unaccusative verbs; RPP= Passives with reverse psych-verbs; PP= Passiv with psych-verbs; HS-ADV= Advance Heritage Speakers; HS-INT=Intermediate Heritage Speakers; AA= 1st Generation immigrants/Attriters; MA= Monolingual Adults

Taken together, the data from GJT 1 show that while adult HSs informants generally exhibit monolingual-like judgments, these also differ from the judgments of the two control groups in interesting ways. As I have discussed throughout the previous subsections, all groups generally demonstrate knowledge of the syntactic and semantic restrictions of the passive voice in Spanish since they tend to accept passive sentences with canonical transitive verbs and class II psych-predicates (the only two grammatical
constructions). At the same time, all groups are generally sensitive to the grammatical violations produced by the use of unaccusative predicates in passive constructions. That said, we observe differences in the HSs’ ratings of class III psych-verbs in passive sentences. Upon further inspection, intragroup comparisons across all four conditions revealed that such performance differences correspond with statistical significant results that are consistent with changes in the argument structure of gustar in the ways that support the working hypothesis of this dissertation. To better describe these linguistic outcomes, I will first review the overall results for each of the adult groups tested.

The case of the monolinguals adults is very clear. Their judgments across the four critical conditions are unambiguously consistent with the descriptions found in the literature. That is, they strongly accept grammatical conditions (e.g., passives with transitive verbs, passives with class II psych-verbs) and categorically reject ungrammatical ones (e.g., passives with unaccusative verbs, passives with RPPs, ungrammatical distracter tokens). Like monolingual speakers, 1st generation immigrants also show sensitivity to the (un)grammaticality of all four conditions. In fact, statistically, these two groups behave as one uniform group in all four conditions. Again, this is not completely surprising since no changes are expected to take place at the level of the mental representations among the 1st generation immigrants. What is expected however is (i) that 1st generation immigrants will be less susceptible than monolingual speakers to ungrammaticality as it relates to the properties associated with strict class III psych-predicates (e.g., dative marker), and (ii) that in a production task, 1st generation immigrants’ performance will be quantitatively and qualitatively different than that of the monolingual adults. The idea is that it is precisely this hypothetical variation present in
the input provided by 1st generation immigrants (whereby sometimes the property in question will be target-like and some other times it will not) that plays a decisive role in changes to the syntactic representations in the formation of (monolingual-different) HS grammars. In other words, because this sort of input will be variable, and because variability creates ambiguity for the linguistic parser, HSs will be in a way forced to reanalyze aspects of the grammar in the most economical way; in the same sense as Lightfoot describes the role of children in diachronic change from a generative perspective (e.g., Lightfoot 1991, 1999, 2010; Lightfoot & Westergaard 2007). As Lightfoot himself puts it, “an internal language grows in a child in response to structures that are expressed in the ambient, the external language that she hears” (2010:677). And as this internal language grows, new external language(s) emerge, which in turn lead to growth of new internal representations. From this it follows that HSs differences do not necessarily obtain as a result of erosion at the level of mental representation among 1st generation immigrants per se. In fact, their mental representation may well be intact. The claim is that continuous exposure to superficial performance innovations provided in the input from the immigrant generation contribute to changes in HS grammars. Like the child in Lightfoot’s version of diachronic linguistic changes, the HS regularizes the grammar in accord with the input she is exposed to from the perspective of what the input affords the parser. In this sense, emerging variation even if at the surface level for the provider can have grammatical consequences for the next generation. Certainly, class III psych-verbs fall within this category as their inherent complex nature (e.g., reverse word order), makes them perfect candidates for surfacing with performance errors among 1st generation immigrants (e.g., Cazzoli-Goeta &
Young-Scholten 2011) and potential innovation, in the case of the HSs (de Prada Pérez & Pascual y Cabo 2011; Toribio & Nye 2006).

To sum up to this point, a subgroup of adult HSs have shown crucial differences with respect to Spanish monolingual speakers in their judgment of critical tokens for GJT 1. These differences indicate that, for these HSs, class III psych-verbs may allow for an agentive reading, very much like class II psych-verbs. These results are consistent with the predictions I articulated in Section 4.2.2. This competence difference was hypothesized to emerge as a result of L1 attrition, incomplete acquisition, and input delimited differences. In an attempt to disentangle the source of HS grammar differences, I now present in figure 5-7 the child data for all four conditions examined.

![Figure 5-7](image)

Figure 5-7. Group means of all four critical conditions among child groups. TRANS= Passives with transitive verbs; UNACC= Passives with Unaccusative verbs; RPPs= Passives with reverse psych-verbs; PPs= Passives with psych-verbs; HC= Heritage Children; MC= Monolingual Children

The child data, for the most part, show less defined intuitions concerning the (un)grammaticality of the different passive structures tested. This is specifically true for
the child HSs whose responses, in spite of following the general tendency observed by all groups, are largely in the mid-range of 2 to 3. Although as a group HC do not show categorical intuitions for either the grammatical or the ungrammatical conditions, they do make a statistically significant distinction between passives with transitive and unaccusative verbs (p < .001). As discussed, this distinction is important to show that they have general knowledge of the passive voice and its constraints. That said, they do fail to make a distinction between transitive verbs and gustar (p = 1.0), as well as between strict transitive verbs and class II verbs (p = 1.0). This, along with their general predisposition to rate these conditions more positively than negatively, is of utmost importance because it reveals that HC are treating these three conditions as one. Crucially, p values do reach statistical significance when comparing passives with unaccusative verbs and passives with class III psych-verbs, with a clear preference towards the latter (p = 0.004).

In regards to the monolingual children, they also seem to be sensitive to the semantic and syntactic restrictions of passive sentences since they make the distinction between the grammatical (i.e., passives with transitive verbs and class II psych-verbs) and ungrammatical tokens (i.e., passives with unaccusative verbs). However, what was somewhat unexpected was their higher acceptance of class III psych-verbs in passive constructions. Like the HC, monolinguals seem to be unsure about the ungrammaticality of this sort of constructions. What is certain is that as adults, these monolingual children are assumed to end up showing intuitions that converge with the descriptions found in the theoretical literature. Therefore, one must reasonable conclude that these unexpected ratings must be attributed not to some sort of arrested development but to a
delay in the acquisition of class III psych-verbs and all the properties associated with them.

To conclude this section, the data reported show that in comparison to the adult monolinguals (as well as the group of 1st generation immigrants), adult HSs are generally more accepting of the presence of class III psych-verbs in passive constructions. As an interim conclusion, this difference is consistent with the hypothesis I proposed in Section 4.2.2 as it supports the idea that this group of verbs may have undergone a reanalysis of their argument structure. Theoretically, such HS differences have been purported to obtain as a result of either attrition, incomplete acquisition, input delimited differences, or possibly a combination of all three options. Up to this point, the data available do not allow us to draw any definitive conclusions in this respect. However, we can tentatively discard some of these options. For example, because as children, both monolinguals and HSs rate class III psych-verbs equally, we cannot determine whether these differences in adulthood obtain as a result of true incomplete acquisition or a delay in acquisition in childhood.

The one option that we can discard is attrition in childhood since with time, both children groups tend to reveal improvement in a direction that is opposite to what L1 attrition would predict. That is, their judgments become more target-like with time (provided that we accept the methodological caveat that these HSs will one day become the equivalent version of the HS adults tested herein). Furthermore, one could claim that because we see no statistically significant differences between the ratings of the

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3 Recall that the cross sectional analysis offered herein assumes that HC and MC will become their adult counterparts. This is a reasonable assumption to make yet it is definitely not certain. In order to shed some light on this issue, one would have to carry out a longitudinal study.
first generation immigrants and those of the monolingual speakers, the ensuing differences in adult HS linguistic outcomes cannot be a result of input delimited differences from L1 attrition (i.e., MICD). Though this may seem like a somewhat reasonable assumption to make, I would like to argue that the opposite is true\(^4\): recall that what is being tested here is a syntactic reflex that follows from a particular mental representation (i.e., transitivity). That first generation immigrants show convergent judgments and therefore do not differ in such mental representation from their monolingual counterparts does not constitute counterevidence against this input delimited differences view since the claim is not that internal changes take place in the grammars of the 1\(^{st}\) generation immigrants. In fact, w this perspective only makes explicit predictions regarding the occurrence of differences in the input provided by 1\(^{st}\) generation immigrants. This does not necessarily imply that these differences are in fact representative of their mental representations. Note however that these interim conclusions are highly speculative and should be taken as such until confirmed with by the remainder of the experiments included in this study as well as other studies (preferably longitudinal). What is left to be determined therefore is whether the actual input that 1\(^{st}\) generation immigrants provide differs from that of the monolingual speakers. To this end, the subsequent experiments further explore the informants’ knowledge (Section 5.3) and use (Section 5.4) of class II psych-predicates.

### 5.3 Grammaticality Judgment Task 2 (GJT2)

In this section, I report the data from the GJT2 (described in Section 4.3.2.3). The primary goal of this task is to provide a more fine grained analysis of the current status

\(^4\) This will be further supported in Section 5.3 when the production data is presented.
of class III psych-verbs in HS Spanish with regard to the predictions I spelled out in 4.2.2.

Recall that the present task includes a total of 137 sentences. Of them, 60 were critical items and the rest distracters (n=77). The critical items were further divided equally among five conditions (5x12=60): (i) the canonical (grammatical) use of class III psych-verbs, (ii) * the omission of the dative marker ‘a’, (iii) * the omission of the dative clitic le, (iv) *the use of gustar as a fully conjugated (agentive) verb, and (v) *the proposed “new” grammatical construction (nominative subject + clitic (reanalyzed as agreement morphology) + invariable gusta).

Because of the more complex nature of the task and the short attention span of children (e.g., Crain & Thornton 1998 inter alia), this experiment was only completed by the adult participants. To be clear, children (HSs and natives alike) serve as comparative control groups to tease apart the possible sources of change, not as equally weighted experimental focus groups per se. The focus of this study is decisively on the adult HS grammar.

Also recall that to avoid any possible interference effect from the HS informants’ lack of literacy skills in the HL, all experimental tokens were presented in a video modality. The same person as in experiment 1 was used for this recording. After listening to each token, participants were asked to provide a 1 (completely unnatural) to 4 (completely natural) grammaticality judgment.

As was also the case for GJT 1, I first present those results that correspond to the distracter items to show that all participants were able to handle the task itself.
5.3.1 Filler Tokens

As described in Section 4.3.2.4, this experiment included a total of 77 distracter tokens. These were divided into two groups: fillers (n=41) and distracters (n=36). The fillers included 30 grammatical sentences and 11 ungrammatical sentences because of noun-adjective agreement. The distracters, the remaining 36 tokens, were designed to test whether the invariable form of the third person singular reported by de Prada Pérez and Pascual y Cabo (2011) for *gustar* had extended to other types of verbs (e.g., other unaccusatives, transitives, and unergatives). Therefore, while the latter are clearly not fillers *per se*, they also serve as distracters to the critical items described above. Figure 5-8 below shows the results obtained from all groups to the filler tokens.

Figure 5-8. Group means of distracter tokens. *ADJ* = Adjective agreement; GRAMM = Grammatical; HS-ADV = Advance Heritage Speakers; HS-INT = Intermediate Heritage Speakers; AA = 1st Generation immigrants/Attriters; MA = Monolingual Adults

In this figure we can observe a clear asymmetry in the responses of the two filler conditions tested. Generally speaking, while the informants’ responses to the grammatical tokens reach almost ceiling levels for all groups (yet we see a small decline...
among the two HS groups), the ungrammatical tokens tested herein are largely rejected. Not surprisingly, this asymmetry corresponds to statistical significance across all four groups. The results from a two by four repeated measures ANOVA with TYPE (Grammatical, *Adj. agreement) and GROUP (Advanced HS, Intermediate HS, Attriters, and Monolingual Adults) as variables, revealed a main effect for TYPE (F((1,70)=595.026, p<.001) and a TYPE by GROUP interaction (F(3,70)=11.294, p<.001). Upon further inspection, the results from Bonferroni post hoc tests indicate that Intermediate HSs’ responses differ from those of the monolingual speakers and 1st generation in both the ungrammatical (p=.003; p=.015 respectively) and the grammatical conditions (p=.002; p=.003 respectively). Notwithstanding the relevance of this statistical difference, the intermediate HSs’ still make the grammatical versus ungrammatical distinction even if less polarized.

As was also the case for the ungrammatical distracter items that tested noun-adjective agreement in the first experiment, the informants seem to not be as sensitive to this ungrammaticality as one would expect. This, again, can be explained in terms of the low salient nature of the ungrammatical tokens themselves since noun-adjective agreement in Spanish generally correspond to the absence or presence of a phonologically low perceptual form (e.g., a mere vowel alternation in the case of gender (i.e. ‘o’ for masculine and ‘a’ for feminine). As discussed above, related morphophonological issues pertaining to HS performance have been examined in previous studies examining modality alternations (e.g., Montrul 2009; Pascual y Cabo et al. 2012; Rothman et al. In preparation) and differential object marking (e.g., Montrul & Bowles 2010) among comparable Spanish HS groups in the US. Additionally, the
testing modality employed in this study would certainly lend support to this explanation since less salient forms tend to be easily masked in oral speech.

5.3.2 Distracter Tokens

Recall that in addition to the true filler tokens, this experiment also included a total of 36 (pseudo) distracter tokens. These were divided equally among three conditions with sentences that contain a mismatch in subject verb agreement whereby an invariable 3rd person singular is used across: (i) transitive verbs (n=12), (ii) unergative verbs (n=12), and (iii) (other) unaccusative verbs (n=12). As discussed, the main goal of these (pseudo)-distracter conditions was to observe the participants’ sensitivity towards the (un)-grammatical items in relation to the findings from de Prada Pérez and Pascual y Cabo (2011). In other words, with these three conditions, I aimed to test whether the use of an invariable 3rd person singular form reported for gustar-like verbs has extended to other different types of verbs (e.g., transitive, unergative, unaccusative) or whether this innovation is exclusive of class III psych-verbs. Figures 5-9, 5-10, and 5-11, below show the results obtained from all groups to these pseudo-distracter tokens divided by verb type (transitive, unaccussative, unergative) and subject pronoun (1st-SG, 2nd-SG, & 3rd-SG; 1st-PL, & 3rd-PL).

As can be seen in all three figures, and with one exception, all informant groups tend to reject these invariable forms for all three verb types and across all subject forms. The exception corresponds to the ratings of the tokens that tested the only grammatical sentence type; namely the 3rd person singular form5.

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5 As described in the methodology section, each one of these 3 conditions included 4 tokens that tested the abovementioned invariable verbal form with a subject form 3rd person singular subject (él/ella= 2 tokens; usted= 2 tokens). Because these 4 tokens are grammatical, they served as counterbalances to the remaining 8 ungrammatical tokens.
Figure 5-9. Group means of transitive distracter tokens. *ADJ= Adjective agreement; GRAMM= Grammatical HS-ADV= Advance Heritage Speakers; HS-INT=Intermediate Heritage Speakers; AA= 1st Generation immigrants/Attriters;; MA= Monolingual Adults

Figure 5-10. Group means of unaccusative pseudo-distracter tokens *ADJ= Adjective agreement; GRAMM= Grammatical HS-ADV= Advance Heritage Speakers; HS-INT=Intermediate Heritage Speakers; AA= 1st Generation immigrants/Attriters;; MA= Monolingual Adults
To statistically confirm this observation, a repeated-measures ANOVA was run with the variables of GROUP (Monolingual, 1<sup>st</sup> generation immigrants, Advanced HSs, and Intermediate HSs), VERB TYPE (Unaccusative, Unergative, Transitive), and subject type (1<sup>st</sup>-SG, 2<sup>nd</sup>-SG, 3<sup>rd</sup>-SG, 1<sup>st</sup>-PL, 3<sup>rd</sup>-PL). The results show a main effect for TYPE (F(12, 59) = 77.383; p < .001), and a significant interaction between all three variables (F(36, 822) = 2.497; p < 0.001). Upon further inspection, the results from Bonferroni post hoc tests indicate that all groups behave more or less homogeneously with respect to these conditions since only monolinguals and advanced HSs differ significantly in regards to their judgments with transitive verbs (p = .023), and 1<sup>st</sup> generation immigrants differ with intermediate HSs (p = 0.29) in regards to their judgments with unaccusative verbs. Crucially, additional intragroup comparisons show that the judgments for 3<sup>rd</sup> person singular reached a level of statistical significance with respect to all of the other subject forms for all verb types (MA, p < .001; AA, p < .001; HS-
ADV, p< .001; HS-INT, p< .001). Though not so categorical, fairly high acceptance rates are also observed among the tokens that tested the 2\textsuperscript{nd} person singular subject form. This is not surprising given that in Spanish, the only difference between conjugating a verb in the 3\textsuperscript{rd} person singular form (present indicative) and a verb conjugated in the 2\textsuperscript{nd} person singular form (present indicative) resides in the presence/absence of a final /s/.

Admittedly, this fact in of itself would probably render differences in the judgments among speakers of different dialects of Spanish monolinguals. However, recall that to control for dialectal differences, all informants in this study are of Cuban origin and, as is also the case in most Caribbean Spanish dialects, syllable and word-final /s/ tend to be phonologically weakened, if not elided altogether in Cuban Spanish (e.g., López Morales 2003).

As an interim conclusion, the informants’ responses to the fillers and distracter tokens in GJT 2 were generally on target. Though in line with the other groups’ results, the intermediate HS group seems to show less defined judgments, especially towards the ungrammatical tokens. All in all, these results are also consistent with those obtained in the GJT 1. I take this to indicate that all groups understood the task at hand as demonstrated by their success in distinguishing between grammatical and ungrammatical utterances where expected; a necessary condition that validates the experiment and procedure of this methodology. Next, I proceed to discuss the results for the critical conditions which, for ease of presentation, I again present one-by-one. A more general discussion of these results is offered at the end of this section; the point at which I bring together the results from all groups under all conditions.
5.3.3 Critical Tokens

The critical items in this experiment were distributed among five different conditions. Each condition consisted of the manipulation of a relevant grammatical property that tested the hypotheses put forth in Chapter 4. To test for statistically significant differences, a repeated-measures ANOVA was run with the variables of Group (Monolingual; 1st generation immigrants; Advanced HSs; and Intermediate HSs), and Type (Prescriptive use of gustar-like verbs; Omission of dative marker ‘a’; Omission of dative clitic; Case agreement innovation; New grammatical construction). The results of this ANOVA showed a main effect for Type (F(4, 67) = 201.93, p <.001), Group (F(3,70) = 5.139, p <.003), as well as a high order interaction between Group and Type (F(12 ,207) = 5.162, p <.001). In the next subsections, I further examine these results, condition by condition.

5.3.3.1 Canonical use of gustar-like verbs.

Recall that my hypothesis (Section 4.2.2) predicts that in HS Spanish, class III psych-verbs are possibly being reanalyzed as class II. Such a change predicted that HSs would variably accept class III psych-verbs in passive constructions. As we saw in Section 5.2.4, this prediction was partially borne out given the generalized differences found between HSs and monolingual adults. Crucially, however, because in class II psych-verbs, a stative reading (the only possibility for class III psych-verbs) is still available, the expectation is that HSs should still be able to accept class III psych-verbs used in its canonical form. Recall that the (monolingual) grammatical form often includes the presence of a dative marker as well as a dative clitic (pronoun), a preverbal <experencer>, and a postverbal <theme> that controls verbal agreement. Examples
(1a,b) below show the canonical use of class III psych-verb tokens with a singular and a plural

<theme>.

(1) a. (A Tania) le gusta el perro
To Tania DAT.CLI. Like.3<sup>RD</sup> SG the dog
“Tania likes the dog”

b. (A Tania) le gustan los perros
To Tania DAT.CLI. Like.3<sup>RD</sup> SG/PL the dogs
“Tania likes the dogs”

As discussed, informants were asked to use a 1 (completely unnatural) to 4 (completely natural) Likert scale to rate a total of 12 prescriptively correct tokens. Figure 5-12 below presents the average results for this condition.

![Figure 5-12. Group means of canonical class III psych-verb tokens. HS-ADV= Advance Heritage Speakers; HS-INT=Intermediate Heritage Speakers; AA= 1<sup>st</sup> Generation immigrants/Attriters; MA= Monolingual Adults](image)

As expected, all informant groups strongly accept sentences that reveal the canonical use of class III psych-verbs. The results of a Bonferroni post hoc test further
corroborate the absence of any statistically significant differences between any of the four groups for this specific condition. In isolation, these results are consistent with the hypothesis put forth in Section 4.2.2 since the HSs’ grammars should still allow this sort of constructions.

5.3.3.2 **Omission of dative marker ‘a’:**

Prediction II (Section 4.2.2) anticipates that HSs will be able to accept *gustar*-type verbs in constructions that lack the dative marker ‘a’ provided that —assuming their grammars however distinct from monolinguals are UG constrained— the <experiencer> can be reanalyzed to have nominative case. As such, I expected that it should be easier for doublet <experiencer> referential expressions (full DPs) in *gustar*-constructions lacking ‘a’ to be reanalyzed as nominative than it would be for 1<sup>st</sup> and 2<sup>nd</sup> person singular doublet pronouns which would be overtly marked as dative. This is true since in the case of the latter, only the morphological indication that the <experiencer> doublet is dative is the ‘a’ itself (i.e. the referential expression in isolation is otherwise morphologically the same as nominative or dative). I proposed then that when the ‘a’ is lacking for 1<sup>st</sup> and 2<sup>nd</sup> person singular doublets that the unique dative morphology that remains (*mí* and *tí* as opposed to nominative *yo* and *tú*) would block the nominative reanalysis.

Keep in mind that under the syntactic proposal of an emerging agentive syntax with class III psych-predicates the <experiencer> (semantic subject) would become the actual syntactic subject when the agentive structure is realized and thus require overt nominative case agreement. The prediction is that this does not happen with 1<sup>st</sup> and 2<sup>nd</sup> person singular precisely because what is left after the ‘a’ is phonologically reduced is overtly marked as dative as opposed to being ambiguous as is the case with the other
grammatical persons pronominally and all referential expressions. I should acknowledge that it is possible to argue that mí and tí themselves have a status in HS grammars as both nominative and dative, which would be one way to account for accepting these sentences. I offer this proposal, however, to make testable predictions given the methodology of the present task. As will be seen, the data to be presented warrant revisiting this and other possibilities, which I do later in the final analysis of the dissertation. Again, with this proposal in mind, it is predicted that all informant groups will reject gustar-type sentences that lack the dative marker but are not easily reanalyzed (the <experiencer>) as nominative: *mi me gusta, *tí te gusta (roughly ‘to me like’ and ‘to you like’ respectively). Example 2 below illustrates this a priori ungrammatical construction.

(2)  *mí me gusta la tarta/las tartas  
Me DAT.CLI Like.3rd SG the cake/the cakes  
“(I) like the cake/the cakes”

Recall that only 1st and 2nd person singular pronouns (mí & tí respectively) were tested in this condition. The logic behind this follows from the proposal reviewed above; the phonological neutralization of the dative marker ‘a’, making such reanalysis easier, for all other grammatical persons would render the morphological distinction between dative and nominative pronouns opaque at the surface level in the same way it does for referential expressions (e.g., (a)él/ella, (a)nosotros, (a) ellos/ustedes). Thus, of the 12 tokens that make up this condition, 6 appeared with mí (1st. SG) as the <experiencer> and 6 with tí (2nd. SG). Figure 5-13 below presents the average results across all groups for this condition.
Except for the monolingual group whose responses are generally consistent with the descriptions found in the literature, the rest of the informant groups do not seem to be as sensitive to the ungrammaticality that results from the absence of the dative marker ‘a’. Intergroup comparisons for this particular condition reveal that monolinguals differ in their judgments with respect to 1st generation immigrants (p=.005) and intermediate HSs (p < .001), but not with respect to advanced HSs (p = .120). No other significant differences were observed between the groups in this condition. Crucially, however, within-group comparisons reveal that with the exception of the intermediate HSs (p=.561), all groups do make a statistically significant distinction between the two conditions examined thus far (i.e., canonical use of class III psych-verbs vs. omission of dative marker: MA, p< .001; AA, p< .001; HS-ADV, p <.001). But, in spite of these statistical differences, the high ratings reported by most groups for this specific condition
seem to constitute evidence against the prediction put forth above. This is of course an unexpected outcome deserving of further consideration.

One reasonable explanation for these generalized higher acceptance rates corresponds to the low phonological saliency of the dative marker ‘a’. In a sense, this is not that surprising given that previous studies have reported a generalized lack of instantiation of inherent case in the grammars of comparable Spanish HSs (e.g., Montrul & Bowles 2009). Moreover, and as was also suggested during the analysis of the distracter conditions for both GJT 1 and GJT 2, the methodological nature of the experiment used in the present study (audio-visual) questions the impact of these results. In other words, because informants were presented with the tokens orally, and because, phonologically, the dative marker ‘a’ has low perceptual saliency, it is possible that all informants were unconsciously filling in the absence of the ‘a’ so as to make sense out of the tokens provided. So, if the low phonological salience of the dative marker ‘a’ is therefore responsible for the unexpected high ratings for these ungrammatical items among the bilingual speakers, the question then becomes, why don’t we see similar results among monolingual speakers? Though not straightforwardly, the answer to this question can be found in the different (i.e., higher) processing loads associated with bilingualism. In other words, considering the limited cognitive resources available to all individuals, then it logically follows that bilinguals must have a higher cognitive processing load as they have the additional burden of having to manage two languages within one mind. It is uncontroversial in the psycholinguistic literature to claim that all grammars are simultaneously activated whether or not one is contextually relevant for a given task at hand (e.g., Bialystok
Inhibition emerges in the case of bi/multilinguals only, which diverts some of the finite cognitive resources otherwise engaged in linguistic processing. Obviously, monolinguals do not have to divert attentional resources for the purpose of inhibition, which might manifest in the case of bilinguals as compared to monolinguals as processing based differences in task performances of this kind (e.g., Kroll & De Groot 2005 for a review).

All the experiments included in the present study are off-line measures and cannot directly comment on this real possibility. On-line measures such as self-pace reading, reaction times or eye-tracking, for example, would be needed to make any final claims in this respect. A more general discussion of this issue is offered at the end of this section.

5.3.3.3 Clitic omission

As described in the second prediction (Section 4.2.2), I did not expect HSs to accept an invariable form of gusta-like with omission of the clitic since, under this proposal, it is the presence of the once clitic itself reanalyzed as preverbal agreement morphology that licenses the invariable form (e.g., Montrul 1995 for some suggestions in line with this). Consider (3) below as an example of the tokens included in this condition.

(3) *A Jen gusta la playa
   To Jen Like. 3rd SG the beach
   “Jen likes the beach”

The informants’ judgments to the sentences included in this condition tested this assertion. Figure 5-14 below presents the average results across all four groups.
As can be seen, monolingual speakers and 1\textsuperscript{st} generation immigrants reveal judgments that are consistent with the descriptions found in the theoretical literature. That is, they strongly reject sentences that omit the obligatory dative clitic. Likewise, advanced HSs’ judgments also reveal an almost categorical rejection of this sort of tokens. This generalized rejection corresponds to non-statistical significant differences across these three groups for this specific condition. Conversely, the intermediate HS group’s averages are slightly higher (1.88). As a consequence of this somewhat unexpected acceptance, we obtain a statistically significant difference between intermediate HSs and all other groups for this condition (HS-INT vs. AA, p< .001; HS-INT vs. MA, p<.001; HS-INT vs. HS-ADV, p< .001).

As discussed, it was predicted that all informants would reject the tokens included in this condition, yet for different reasons depending on the groups. Monolinguals and 1\textsuperscript{st} generation immigrants were predicted to reject the omission of the clitic since their
mental representations include the clitic as an obligatory element with class III psych-verbs. In the case of the HS groups, it was predicted that they would reject this omission as well either because their grammars require obligatory clitics like for monolinguals or because the preverbal dative clitic had been reanalyzed as obligatory verbal morphology. By looking only at this set of data in isolation, it is impossible to determine whether these HSs may have rejected the sentences in this condition because they also know that class III psych-verbs require the dative clitic; or for some other reason. But crucially, the point to be made here is that when we compare the intragroup results across the different conditions (especially against the two innovations predicted), one can observe that the monolinguals, and to a certain extent also the 1st generation immigrants, do not have this as an option while the evidence seems to suggest that HSs do. But even if that is the case, it is not certain that this is exactly what the HSs are doing here. That said, what is certain is that by combining, comparing and contrasting all the results included in this task, that my analysis is an emerging possibility. In other words, HSs’ grammars allow for the canonical use of class III psych-verbs in addition to these other proposed alternatives. Monolinguals on the other hand only find the canonical use acceptable and none of the rest of the crucial comparisons. Generally speaking, these results suggest that their grammar does not avail itself of the options in the HS grammars.

Additionally, that Intermediate HSs tend to rate the sentences included in this condition slightly higher was perhaps an unexpected outcome since, under any circumstances, omission of the dative clitic is predicted to result in ungrammatical sentences. This finding inevitably makes us wonder about the nature of these ratings as
well as about the differences between the advanced and intermediate HSs. To fully answer this question, it is first necessary to take a closer look at the data, individual by individual. Recall that this group included a total of 24 HSs. Informants were included in this group if their proficiency scores (Section 4.3.2.1) ranged from 30 to 39 points (out of 50 possible). Of the 24 informants, 6 of them clearly accepted this condition with average scores ranging from 3.54 to 2.91. Needless to say, these 6 individuals’ scores significantly contributed to the overall higher averages of the whole group as well as to the apparent general indeterminacy of the intermediate HS group. In addition to this, by looking at the individual data, it was evident that HSs in general and intermediate HSs in particular, revealed a higher degree of variation than the monolinguals as well as the 1st generation immigrants not only within their respective groups, but also within the same individual. This, as I will discuss in more detail at the end of this chapter may be due to the different sociolinguistic realities in which these individuals have been brought up into.

So far, I have shown that (i) all informant groups categorically accept the canonical use of class III psych-verbs, (ii) that bilingual individuals in general do not notice the absence/presence of low phonological salient forms (i.e., dative marker ‘a’) possibly as a result of the higher cognitive processing load of managing two languages instead of one, and (iii) that all groups, including the HS intermediate (albeit less categorically), reject the ungrammatical tokens that result from the absence of the dative clitic when using class III psych-verbs. Next, I present the results for the condition that tested the use of gustar-like in a fully inflected paradigm.

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6 Additional evidence in favor of this analysis will come from the results of the elicited production task (section 5.3) since intermediate HS production data show similar variation.
5.3.3.4 Case agreement innovations

If on the right track, and class III psych-verbs are being reanalyzed as class II psych-verbs in Spanish HS grammars, one could also expect HSs to (variably) accept tokens such as the ones illustrated in (4a-b) below.

(4)  

a. (*) Yo encanto la playa  
   I.NOM love.1stSG.the beach  
   “I love the beach”

b. (*) Nosotros gustamos la playa.  
   We.NOM love.1stPL the beach  
   “We love the beach”

In other words, *gustar*-like verbs, like all class II psych-verbs, could also have a fully inflected paradigm used with an agentive reading. Figure 5-15 below presents the average results across all groups for the condition ‘agreement innovation’ described in Section 4.3.2.3.

![Figure 5-15. Group means for agreement innovation with class III psych-verbs. AA= 1st Generation immigrants/Attriters; MA= Monolingual Adults; HS-ADV= Advance Heritage Speakers; HS-INT=Intermediate Heritage Speakers](image)

Figure 5-15. Group means for agreement innovation with class III psych-verbs. AA= 1st Generation immigrants/Attriters; MA= Monolingual Adults; HS-ADV= Advance Heritage Speakers; HS-INT=Intermediate Heritage Speakers
As can be seen, monolinguals and 1st generation immigrants seem to reject the tokens included in this condition while both HSs are more accepting of the abovementioned agreement innovation. That monolinguals and 1st generation immigrants categorically reject this sort of tokens is not surprising because changes were not predicted to obtain in their grammars. In fact, it seems that their underlying mental representations for *gustar*-like verbs do not differ from each other since, with the exception of one condition (i.e., omission of dative marker ‘a’), their responses throughout the two experiments conducted this far have been practically identical and always consistent with the descriptions found in the theoretical literature.

What was somewhat unexpected, however, were the relatively low averages reported by the two HSs groups; specially the advanced one. These low ratings may seem to constitute counterevidence against the prediction advanced above, whereby class III psych-verbs —like class II— could surface with a fully inflected paradigm. Upon a closer look to the data, however, we can observe that both the intermediate HS group as well as the advance HS group differ in their judgments from all other groups at a level of statistical significance ((INT-HS vs. MA <.001, INT-HS vs. AA p=.003) (ADV-HS vs. MA =.004, ADV-HS vs. AA p=.00)). And crucially, these two HS groups do not differ from each other (HS-INT vs. HS-ADV p=.096). Though, the HSs’ ratings are not as polarized as one might expect, they are consistent with the predictions put forth in Section 4.2.2, providing therefore further support for the abovementioned hypothesis. Additionally, the within group comparisons reveal that only the HS groups make a statistically significant difference between the previous condition, which tested the *omission of the dative clitic, and the current one, which tests the abovementioned
emerging structure (HS-INT, p=.03; HS-ADV, p=.001). This difference is imperative because it shows that for the HS grammars tested herein, but crucially not for the control's grammars, these two sentence-types are different, whereby one can be grammatical and the other one is undoubtedly ungrammatical. Figure 5-16, below shows these differences.

![Figure 5-16](image)

**Figure 5-16 Group means for agreement innovation and clitic omission.**

<table>
<thead>
<tr>
<th></th>
<th>Agreement Innovation</th>
<th>Clitic Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA</td>
<td>1.42</td>
<td>1.45</td>
</tr>
<tr>
<td>MA</td>
<td>1.36</td>
<td>1.41</td>
</tr>
<tr>
<td>HS-ADV</td>
<td>1.98</td>
<td>1.49</td>
</tr>
<tr>
<td>HS-INT</td>
<td>2.39</td>
<td>1.88</td>
</tr>
</tbody>
</table>

- **HS-ADV** = Advance Heritage Speakers
- **HS-INT** = Intermediate Heritage Speakers
- **AA** = 1st Generation immigrants/Attriters
- **MA** = Monolingual Adults

Up until now, we have seen a trend whereby the intermediate HS group seems to consistently reveal judgments that are less categorical than those revealed by the other groups. That said, their ratings tend to be consistent with the descriptions found in the theoretical literature and/or with the predictions here anticipated. Admittedly, this was not the case in the previous condition in which the omission of the dative clitic was tested (Section 5.3.3.3). Back then, the intermediate HSs’ results were not in line with what was expected since they revealed a surprisingly high average (n=1.88/4) considering that the dative clitic is always obligatory with class III psych-verbs. To
account for this unanticipated outcome, it was noted that a small subgroup of
intermediate HSs was responsible for these higher than normal ratings. Since this was
the case for the previous condition, it is reasonable, therefore, to assume that this
imbalance may also be affecting the average results for the current condition too. Upon
further examination of the individual data in this condition, it was clear that there was
some variation across these informants, yet not as pronounced as in the previous
section. In other words, the intermediate HSs’ judgments for this specific condition are
more uniform, as indicated by the smaller standard deviation (0.72 vs. 0.54). Thus, I
take this average to be more or less representational of the group’s individual
grammars.

Taken together, these results show that the two HS groups are more accepting
than monolinguals and 1st generation immigrants when it comes to class III psych-verbs
used with a fully inflected paradigm. Since this observation was supported statistically
across conditions and within the groups, it is reasonable to claim that this emerging
structure has a basis rooted in differences in representation at some level between HSs
and the other two control groups, a point to which we will return in much greater detail.
Left to be determined is whether HSs accept the use of an invariable 3rd person singular
class III psych-verb (e.g., de Prada Pérez & Pascual y Cabo 2011) in the presence of a
nominalized <experiencer>.

5.3.3.5 “New” grammatical construction:

Recall that prediction II (Section 4.2.2) anticipated that in class III psych-verb
constructions, the sentence initial argument may get reanalyzed as nominative and may
appear with an invariable form of gusta (as observed by de Prada Pérez & Pascual y
Cabo 2011). As described, I believe this is possible because HSs are able to interpret
dative clitics as preverbal agreement morphology (Montrul 1995) as in (5).

(5)  (*Yo  me  gusta  la pizza/las pizzas
I.NOM  DAT.CLI  like.3<sup>rd</sup>SG.  the pizza/the pizzas
“I like the pizza/the pizzas”

Figure 5-17 below illustrates the average results across all four adult groups for
this condition (Section 4.3.2.3).

![Graph showing the average results across all four adult groups for the study condition.

At first sight, it appears that only the monolinguals (MA=1.54), are sensitive to the
ungrammaticality that results from the invariable use of a 3<sup>rd</sup> person verbal form
(AA=2.19; HS-ADV=2.38; HS-HS-INT=2.58). This is especially true for the intermediate
HS group whose judgments are visibly higher than the rest (HS-INT=2.58). In fact,
across the group comparisons reveal that monolinguals stand alone as the only group
with target-like ratings, as they differ in their judgments with respect to the other three
groups (MA vs. HS-INT, p < .001; MA vs. HS-ADV, p = .003; MA vs. AA, p = .003). All other comparisons resulted in non-statistically significant differences.

But to better observe the status of the innovation suggested in this condition, consider figure 5-18 below in which the data are further divided by group (MA, AA, HS-ADV, HS-INT) and by <theme> (singular, plural).

![Figure 5-18. Group means of grammatical innovation. HS-ADV= Advance Heritage Speakers; HS-INT=Intermediate Heritage Speakers; AA= 1st Generation immigrants/Attriters; MA= Monolingual Adults](image)

Recall that this condition includes 12 tokens, 6 of which appear with a 3rd person singular <theme> and 6 with a 3rd person plural <theme>. In reexamining the new variables, a repeated measures ANOVA with TYPE (Singular theme, Plural theme) and GROUP (Monolingual, 1st Generation immigrant, Advance HSs, Intermediate HSs) as variables was run. The results from this ANOVA showed a main effect for TYPE (F(1,70)=10.712; p=.002) and GROUP (F(3,70)=7.661; p<.001), but not for a TYPE by GROUP interaction (F(3,70)=1.075; p=.365). In regards to the main effect for GROUP, Bonferroni post hoc tests attributed this significant effect to the comparison between the
monolinguals and intermediate HS (p<.001), monolinguals and advanced HSs (p = .003), as well as monolinguals with the 1st generation immigrants (p = .003). As mentioned, all other comparisons resulted in non-statistically significant differences.

These results show two clear tendencies. On the one hand, we have the monolinguals whose judgments are consistent with the descriptions found in the theoretical literature. Note, however, that their target-like judgments for this specific condition are not as categorical as they were for previous ones (e.g., “Agreement innovation” (Section 5.3.3.4) but “Omission of dative ‘a’” (Section 5.3.3.2)). On the other hand, we see that the other three groups have a higher tolerance to these a priori ungrammatical sentences. Particularly interesting is the case of the 1st generation immigrants since they weren’t hypothesized to show differences with respect to the monolinguals. This outcome, however, is not completely unexpected as similar results were reported by de Prada Pérez and Pascual y Cabo (2011). In this study, the native control group highly rejected ungrammatical sentences due to verb-agreement when the target response was gusta (3rd person singular). Conversely, this was not the case when the target response was gustan (3rd person plural). In such cases, they favored the a priori ungrammatical gusta (3rd person singular) over the grammatical gustan (3rd person plural) (de Prada Pérez & Pascual y Cabo 2011:115). At the time, the argument was that the variability found in the native control data (which crucially was gathered from 1st generation immigrants and not monolinguals) was the locus of interlanguage influence (2011:118). Thus, I maintain here that HS differences, at least for the individuals and properties examined herein, can be traced back to contact-induced

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7 Similar results have also been reported in De Prada Pérez, Rodríguez Ricelli, Woodfine, and Rogers (2012).
changes in first generation immigrants. Evidence to support this includes the fact that no significant differences were found when comparing the ratings of the 1st generation immigrants with those of either the advanced (p=1.0) or the intermediate HSs (p=.254). Conversely, the p value reaches a level of statistical significance when comparing 1st generation immigrants with monolinguals (p=.003).

5.3.4 General Discussion of GJT2

The main goal of this experiment was to gain insight into the current status of class III psych-verbs in HS Spanish while testing the predictions put forth in Section 4.2.2. These predictions were guided primarily by previous findings in this domain (e.g., de Prada Pérez & Pascual y Cabo 2011) as well as by their syntactic structure (e.g., Belletti & Rizzi 1988; Landau 2010; Montrul 1995).

As described, informants were examined on five conditions, each one testing a piece of the puzzle that, when brought together, would support or cast some questions on the abovementioned hypothesis. The first condition tested for acceptance or rejection of the canonical use of gustar-like verbs. This was necessary given that all informants were predicted to have access to this structure. The results obtained were in accordance with this prediction as all groups categorically accepted it. Next, informants were tested on an ungrammatical set of sentences that included a class III psych-verb but with omission of the obligatory dative marker ‘a’. Contrary to expected trends, all groups with the exception of the monolinguals were slightly inclined to accept this condition. Though admittedly unexpected, this outcome was explained by primarily appealing to the higher cognitive processing loads for bilinguals. The third condition tested another

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8 Recall that the dative marker is only obligatory when the <experiencer> is spelled out.
set of ungrammatical sentences, this time due to omission of the obligatory clitic\(^9\). The results obtained were also consistent with the predictions advanced since all informants largely rejected these tokens. The remaining conditions examined the two proposed innovations that logically result from the hypotheses advanced; namely a case agreement innovation and a verbal agreement innovation. In regards to the first one, the data obtained are also consistent for the abovementioned hypothesis since the HS groups were more inclined to favor these case agreement innovations in comparison to other ungrammatical conditions (e.g., omission of the obligatory dative clitic). Monolinguals and 1\(^{st}\) generation immigrants, on the other hand, categorically rejected both conditions equally. Even more polarized ratings were observed in the case of the second innovation. While monolinguals strongly rejected it, all bilingual groups (AA included) favored the use of the invariable *gusta* more. Most importantly, intragroup pairwise comparisons revealed that neither the monolingual group nor the two HSs groups differed in their judgments with respect to these two innovative constructions. In other words, while for the monolinguals these two innovations are equally and categorically ungrammatical, the two HS groups variably accept them, lending therefore support for the abovementioned hypothesis.

Though not categorically, the overall findings from GJT 2 are, once again, consistent with the predictions I proposed in Section 4.2.2. Back then, I anticipated that one might observe cases of invariable *gusta* with apparent surface retention of the dative clitic (as observed by de Prada Pérez & Pascual y Cabo (2011)). This was thought to be possible by assuming that *gustar* ‘to like’ was being assigned an agentive structure and

\(^9\) Recall that, unlike the dative marker ‘a’ which is only obligatory in the case that the <experiencer> is spelled out, the clitic is always obligatory.
that the apparent clitic is actually serving as preverbal agreement morphology (Montrul 1995). The results here presented have shown that while the monolingual control group is highly sensitive to the syntactic restrictions imposed on class III psych-verbs, the HS’s groups, irrespective of their proficiency, are not. In fact, the trends clearly show how both groups of HSs tend to favor the two predicted innovations. So far, I have considered the data obtained from GJT 2 with respect to the 1st research question.

Next, I proceed to discuss the nature of the differences observed between the groups.

As discussed, in the absence of longitudinal data, it is impossible to discern whether these MAs/HSs differences are attributable to either attrition, incomplete acquisition, or input delimited differences. In this particular case, this complexity is further increased since none of the children groups that participated in GJT 1 completed this task. This precludes us from making the essential comparisons needed to allow us into observing (albeit indirectly) what HS and monolingual development look like for this particular domain. In turn, these comparisons are the only reliable indicator of when these changes begin. We do have, however, the data from 1st generation immigrants. Though often overlooked in many previous HS studies (e.g., Cuza et al. 2013, Montrul 2004, 2006; Polinsky 2011), this is another important piece of the puzzle because it allows us to observe whether these HS differences can be traced back to changes in 1st generation immigrants. If indeed we can observe these changes in the input providers, then we could safely assume that incomplete acquisition10 alone cannot be the cause of the differences (Pascual y Cabo & Rothman 2012 for detailed discussion). This is what

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10 For now, I maintain the possibility of so-called incomplete grammar under a definition where it refers to arrested development of a given property. However, I will return to problematize what incomplete acquisition actually is to the extent that the term makes little sense especially under a generative perspective of linguistic representation in Chapter 6.
we see in this task. But even if on the hypothetical scenario in which HSs and 1<sup>st</sup> generation immigrants (along with monolinguals) differed significantly in their judgments, this would not constitute sufficient evidence nor an adequate enough argument to warrant incomplete acquisition, again referring to arrested developmental outcomes, as the source of HS differences. In such cases, additional evidence from production tasks would be needed to validate that grammatical judgments do in fact mirror performance. This is the point to which I turn next.

5.4 Elicited Production Task

Recall from Section 4.3.2.5 that, in addition to the two grammaticality judgment tasks (Section 5.2 and 5.3), all adult informants were asked to complete an elicited production task. The goal of this task was to prompt informants into using class III psych-verbs in different contexts and forms. These data are important for two main reasons. On the one hand, production data can further function as supporting evidence, or not, for the results observed in the previous tasks. Additionally, because different generational groups were tested with the exact same methodology, any differences and/or similarities in their production data could also allow us to better understand the source of the HS differences observed. Put simply, if HS differences, at least partially, can be traced back to changes already observed in the production of 1<sup>st</sup> generation immigrants, then we can conclude that arrested development in the form of ‘incomplete acquisition’ as used by Montrul and others cannot be the only possible explanation of differences. Alternatively, if HSs, as adults, seem to not converge on an adult monolingual grammatical competence for property X, but rather show ultimate attainment for property X that equates to a pre-adult-like stage true of monolingual childhood development and, additionally, cannot be attributed to possible innovations
from the input they receive in language contact environments either, then one could reasonably argue for a domain of true arrested development (what Montrul 2008 refers to with the blanket term incomplete acquisition). However, showing this would not mean that true incomplete acquisition in the sense of Montrul is the only explanation. For example, one might also take (and ideally be able to show) the position advocated by Putman and Sánchez (In press) in which the course of development simply changes as a reflex of the unbalanced societal bilingual reality in which HSs find themselves.

Given the results obtained in the previous two experiments (i.e., HS variable acceptance of class III psych verbs in passive constructions as well as variable acceptance of so called invariable gusta in different environments), differences were expected to obtain between the MA group and the two HS groups. Because HSs’ representational differences are theorized to obtain (at least partially) as a result of their interpretation—their parser’s use of apparent cues in the input—of AA’s production (e.g., Lightfoot 1999, 2010; Lightfoot & Westergaard 2007), changes with respect to the monolinguals were also predicted to obtain in the speech of 1st generation immigrants. To support this claim, we should find some AA differences as well although such differences might be at levels between those of the MAs and the HSs.

The experiment consisted of a total of 18 sets of slides projected in a power point presentation, 6 of which served as distracters and the remaining 12 as experimental items. As discussed in Chapter 4, each critical token was designed to contain <themes> and <experiencers> in all four possible combinations, that is: (i) 3rd person singular <experiencer> with 3rd person singular <theme>; (ii) 3rd person singular <experiencer> with 3rd person plural <theme>; (iii) 3rd person plural <experiencer> with 3rd person
singular <theme>; and (iv) 3rd person plural <experiencer> with 3rd person plural <theme>.

All 78 adult informants completed this experiment. From these recordings, a total of 2,602 utterances were produced. These were distributed in the following manner: Monolinguals, n=541; 1st Generation immigrants, n=494; Advanced HSs, n=669; Intermediate HSs, n=898. These utterances were transcribed and coded according to the following six variables: Group (Monolinguals, 1st Generation immigrants, Advanced HSs, and Intermediate HSs), Verb type (Class III psych-verb, Other), Verb agreement (target-like, non-target-like), Clitic agreement (target-like, non-target-like), <experiencer> type (singular, plural), <theme> type (singular, plural).

The results obtained from this experiment are presented in the next subsections in a way intended to highlight the similarities/differences between the groups and the three major conditions examined, namely (i) verb agreement, (ii) clitic agreement, and (iii) absence/presence of dative marker ‘a’.

5.4.1 Verb Agreement

As was also the case for the previous two experiments, the present data were submitted to statistical analysis using SPSS. That said, because of the different nature of the data collected (i.e., categorical binomial data), it was deemed more appropriate to use a Mixed-Model Binomial Logistic Regression instead of a repeated measures ANOVA. The main advantage of using the linear Mixed-Model Binomial Logistic Regression is that it can process uneven, categorical (binomial) data while considering within-subject dependence.

Turning now to the results, figure 5-19 below includes the mean percentages of accuracy for canonical subject-verb agreement divided by group (monolinguals, 1st
generation immigrants, advanced HSs, intermediate HSs) and verb type (class III psych-verbs, other).

![Bar chart showing accuracy means for overall verb agreement](image)

**Figure 5-19.** Group means of percentage accuracy for overall verb agreement. Class III = Class III Psych-verbs; Other = Non Class III Psych-verbs; MA = Monolingual Adults; AA = 1st Generation immigrants/Attritors; HS-ADV = Advance Heritage Speakers; HS-INT = Intermediate Heritage Speakers

As can be seen, when it comes to producing subject-verb agreement, overall accuracy means are noticeably elevated for all groups. This is especially visible for verbs other than class III psych-predicates since all the groups perform at or close to ceiling levels (+90%). As expected, while these elevated means are somewhat maintained with respect to class III psych-verbs among the monolinguals and 1st generation immigrants, a decline in accuracy among the two HS groups can be observed.

To statistically discriminate what otherwise seem homogeneous results, a binomial logistic regression was run with GROUP (MA, AA, HS-ADV, HS-INT), and VERB TYPE (class III psych-verb, non-class III psych-verb) as variables. The results from this test
revealed that there is a main effect for both GROUP (F(3,83)=9.029, p<.001) and VERB TYPE (F(1,639)=11.747, p=.001) but not for the GROUP by VERB TYPE interaction (F(3,765)=1.385, p=.246). To further examine these effects, within- and across-group comparisons were made for each condition.

In regards to verb type, all groups made a statistically significant distinction in the production of subject-verb agreement between class III psych-verbs and non-class III psych-verbs (MA, F(1,616)=4.158, p=.042; AA, F(1,548)=5.023, p.025; HS-ADV, F(1,416)=20.948, p<.001; HS-INT, F(1, 2,035)=7.705, p=.006)). Post hoc Pairwise comparisons with Bonferroni adjustment reveal that the intermediate HS group seems to be different with respect to their production of subject-verb agreement with non-class III psych verbs (MA vs. HS-INT, p<.001; AA vs. HS-INT, p <.001; HS-ADV vs. HS-INT, p=.035). That said, the significance of these findings is unclear since all informant groups are at or above the 90% accuracy.

In examining class III psych-verbs, we observe a noteworthy decrease in accuracy in the production of canonical subject-verb agreement across all four groups. Visibly, the differences in the accuracy means with respect to non-class III psych-verbs are greater in the case of the HSs than in the case of MAs and AAs. This was the anticipated outcome given previous findings in related literature (e.g., Dvorak & Kirschner 1982; Montrul & Bowles 2009; de Prada Pérez & Pascual y Cabo 2011; Toribio & Nye 2006).

It should be noted that the results from post hoc Pairwise contrasts (with Bonferroni adjustment) show that the comparisons between monolingual speakers and first generation immigrants do not yield statistically significant results (MA vs. AA,
p=.608). By the same token, advanced and intermediate HSs do not differ from each other at a level of statistical significance either (HS-ADV vs. HS-INT, p=.192). That said, in a cross-examination of the control groups with the experimental groups we find that both HS groups differ significantly with respect to both the monolingual group (HS-INT vs. MA, p< .001; HS-ADV vs. MA, p< .001) and the 1st generation immigrant group (HS-INT vs. MA, p< .001; HS-ADV vs. MA, p=.001).

In general, HSs present more difficulties with respect to subject-verb agreement with class III psych-verbs than with non-class III psych-verbs. These differences reach a level of statistical significance with respect to the two control groups, which is consistent with the predictions stated in 4.2.2 as well as with other previous findings (e.g., Dvorak & Kirschner 1982; de Prada Pérez & Pascual y Cabo 2011; Toribio & Nye 2006). But to better understand the current status of class III psych-verbs in HS Spanish, it is important to cross-examine the different accuracy means by group and agreement configuration. With this in mind, a summary of means of use in percentages across the four groups tested is given in Table 5-5 below.

**Table 5-5.: Accuracy means of class III psych-verbs.**

<table>
<thead>
<tr>
<th></th>
<th>SgExp/SgTheme √/N</th>
<th>SgExp/PlTheme √/N</th>
<th>PlExp/SgTheme √/N</th>
<th>PlExp/PlTheme √/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monolinguals</td>
<td>67/67</td>
<td>72/76</td>
<td>121/121</td>
<td>100</td>
</tr>
<tr>
<td>Immigrants</td>
<td>73/73</td>
<td>84/95</td>
<td>125/126</td>
<td>52/54</td>
</tr>
<tr>
<td>Adv. HSs</td>
<td>139/139</td>
<td>80/101</td>
<td>148/178</td>
<td>79/92</td>
</tr>
<tr>
<td>Int. HSs</td>
<td>183/188</td>
<td>105/145</td>
<td>161/214</td>
<td>110/127</td>
</tr>
</tbody>
</table>

Provided in each column are (i) the number of target-like/produced tokens as well as (ii) the percentages of accuracy for each one of the four possible agreement configurations: singular <experiencer> with singular <theme>, singular <experiencer>
with plural <theme>, plural <experiencer> with singular <theme>, plural <experiencer> with plural <theme>.

In examining the first and last columns from table 5-5 above (SgExp/SgTheme and PlExp/PlTheme respectively), it becomes evident that none of the groups tested have difficulties with producing canonical subject-verb agreement with class III psych-verbs when the agreement configuration is a singular <experiencer> with a singular <theme> (with the target construction being *gusta* ‘3rd.SG. ‘like’) or a plural <experiencer> with a plural <theme> (with the target construction being *gustan* ‘3rd.PL. ‘like’). That said, the percentages are substantially lower for all groups\(^{11}\) when there is a number mismatch between the <experiencer> and the <theme>, and especially when the latter is plural and the target construction is *gustan* ‘like.3rd.PL’\(^{12}\). This, however, is not surprising given that the default verbal agreement form in Spanish seems to be that of 3rd person singular (e.g., Grinstead 2000, 2001; Villa-García 2010 *inter alia*).

Up to this point, the HSs’ production data show subject-verb agreement patterns that differ from those of the monolinguals (and to a lesser extent from the 1st generation immigrants). The evidence seem to suggest that these results are consistent with previous findings in regards to the preference towards the use of invariable *gusta* irrespective of actual verb agreement, as observed by de Prada Pérez and Pascual y Cabo (2011). Far from being random, I would like to argue that these results are consistent with the predictions put forth in 4.2.2 and indicate that HSs may have an emerging syntactic optionality when it comes to class III psych-verbs. In other words, while the canonical syntactic structure for class III psych-verbs is still accessible (and

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\(^{11}\) Note, however, that monolinguals’ results are not as polarized as the other groups.

\(^{12}\) Note, however, that this is not the case for the monolingual speakers.
perhaps even preferred over the other options), HSs seem to have syntactic options that are not available to monolinguals’ grammars. Left to be determined is whether similar tendencies are observed with respect to the other properties associated with class III psych-verbs, namely the dative marker ‘a’, and clitic agreement.

5.4.2 Dative Marker ‘a’

Recall that, in the presence of a class III psych-verb in combination with a spelled-out <experiencer>, the dative marker ‘a’ is required. In the absence of ‘a’, the utterance in principle becomes highly ungrammatical due to a case violation. Thus, to determine with accuracy the target-like use of dative ‘a’, only those utterances in which the <experiencer> was overtly expressed are included. Figure 5-20 below shows the accuracy ratings for each for each group.

![Accuracy Ratings Graph](image)

**Figure 5-20.** Group mean percentage accuracy for dative marker ‘a’. MA= Monolingual Adults; AA= 1st Generation immigrants/Attriters; HS-ADV= Advance Heritage Speakers; HS-INT= Intermediate Heritage Speakers

As can be seen, the overall accuracy means for the dative marker ‘a’ decrease with each group from 86.69% (in the case of the monolingual speakers) to slightly
above chance level (in the case of the intermediate HSs). As was also the case with the previous conditions, the differences in the proportion of accuracy were submitted to statistical analysis using a binomial logistic regression with group (MA, AA, HS-ADV, HS-INT) as a variable. The output of this test indicated that these observed differences ensued a statistically significant p-value (F (3,44)= 5.947, p =.002). To further examine this effect and determine which of the group comparison(s) yielded significant differences, post hoc Pairwise comparisons (with Bonferroni adjustment) were run between the groups. These tests revealed that p-values reach statistical significance when comparing monolinguals with 1\textsuperscript{st} generation immigrants (p=.034), Advanced HSs (p< .001), and Intermediate HSs (p < .001). Similarly, Intermediate HSs were different from Advanced HSs (p =.0013) and 1\textsuperscript{st} generation immigrants (p <.001). The only group comparison that did not result in statistically significant p value was between Advanced HSs and 1\textsuperscript{st} generation immigrants (p=.876).

In addition to these differences, another revealing piece of information is the lower than expected percentages revealed by all four groups. This outcome wasn’t completely unexpected for the two HS groups, however, and to a certain degree not for the AA group either, since previous comparable studies have found this dative marker to be differentially realized (Montrul & Bowles 2009). It is somewhat surprising, however, in the case of the monolinguals. To explain these generalized low means, it is necessary to take a second look at the methodology employed. Recall from Section 4.3.2.5, that all informants were prompted to produce sentences as they were being presented with a power point presentation. Each slide provided informants with the necessary information to produce an utterance containing a class III psych-verb (in the case of the critical
tokens). Crucially, the <experiencer(s)> always appeared on the left of the screen priming the informant therefore to start the utterance without the obligatory dative marker. Often times, the informant realized midsentence that the output was ungrammatical without the ‘a’ and restarted the sentence. Other times, and especially in the case of the HS groups, the ‘a’ was simply absent in their production. If these lower than expected accuracy means can be partially explained in terms of methodological priming on the informants, the question then becomes, why doesn’t this priming affect all informants in the same way\textsuperscript{13}? Recall that similar results were reported in Section 5.2.2.3.2 whereby bilingual informants were not as sensitive to the ungrammaticality that resulted from the omission of dative marker ‘a’. In fact, Intermediate HSs rated it above chance level (3.12 out of 4). This, again, can be explained in terms of processing limitations in real time. Whereby bilinguals have to deal with the higher cognitive costs associated with managing two languages instead of one.

All in all, these results are consistent with the predictions put forth in Section 4.2.2 whereby there is a simplification of the Spanish system of psych-predicates from three classes to two according to Belletti and Rizzi’s (1988) taxonomy. In fact, it seems logical that the absence of the dative marker ‘a’ (possibly due to its low phonological salience), triggers the abovementioned change. Because all groups, not only HSs, reveal lower than expected accuracy means in this domain, it seems unreasonable to claim that the

\textsuperscript{13} It is important to keep in mind that failure to insert an ‘a’ upon realizing the verb is gustar is not necessarily ungrammatical if there is a pause between the stated subject since the dative doublet marked by ‘a’ is optional. That is, it is possible for them to state the subject as nominative, close the sentence with a pause and not choose to use the optional doublet in completely the utterance. Ideally, I would have coded for pauses to be able to see the extent to which this is true for all the groups, but this was not done and time does not permit going back to do this at this juncture. Suffice it to say that even in the case this were to prove explanatory, we would still be left with the marked differences in performance across the groups that is worthy of explanation.
HSs’ more exaggerated trends must obtain as a result of incomplete acquisition.
Instead, these results seem to suggest that what on the surface may seem like HSs’
differences can be attributed to input differences as suggested by Rothman (2007) and

5.4.3 Clitic Agreement

Unlike in the case of the dative marker ‘a’ whose presence with class III psych-
verbs is strictly dependent on whether the <experiencer> is overtly realized or not, the
clitic must always be present and must always be in agreement with the full DP
<experiencer>; regardless of whether it is overtly realized or not. In its absence, the
outcome is always ungrammatical.

Recall from Section 4.3.2.5, that all of the agreement configurations used in this
experiment elicited the use of a 3rd person singular/plural <experiencer> in which cases
the target clitic-agreement should be either ‘le’ or ‘les’. As can be noted, the only
difference between these two forms lies in the presence or absence of the word final /-s/
which marks singular and plural number respectively. Because /-s/ elision is a distinctive
phonological characteristic of Cuban Spanish (e.g., López Morales 2003), and because
all informants examined in this dissertation are of Cuban descent, it is therefore not
possible within the methodological confines of this study to determine with precision the
exact grammatical nature of their production. In other words, the data with respect to
clitic agreement are confounded because it is impossible to distinguish between cases
of clitic-agreement violations from cases of normal /-s/ elision. As a result of this
confound, the groups’ means of accuracy for their production of clitic agreement with class III psych-verbs will not be discussed\textsuperscript{14}.

With the above in mind, however, it is important to note that this dialectal phonological trait cannot explain the cases of clitic omission. In consonance with the descriptions found in the theoretical literature, neither of the two control groups omitted the clitic. Intermediate and advanced HSs, on the other hand, produced class III psych-verbs with omission of the clitic 28 times (out of 674 utterances) and 7 times (out of 510 utterances) respectively\textsuperscript{15}. Though highly ungrammatical if evaluated against the monolingual standard, this would be a grammatical option in HS Spanish if indeed class III psych-verbs have been reanalyzed as class II psych-verbs. All in all, these results are also consistent with the predictions articulated in 4.2.2, since in HS Spanish \textit{gustar}-like verbs, just like \textit{asustar} ‘to frighten’ or \textit{molestar} ‘to bother’ seem to have this additional option.

\subsection*{5.4.4 General Discussion of Elicited Production Task}

Overall results revealed that HSs’ target-like behavior with agreement with non-class III psych-verbs (HS-Adv= 96.85 \%; HS-Int= 90\%) contrast sharply with low accuracies in terms of the presence of the dative marker ‘\textit{a}’ (HS-Adv= 70.78 \%; HS-Int= 51.63\%). When examining verbal agreement with class III psych-verbs, it was observed that HSs behave mostly target-like when both arguments are singular (HS-Adv= 100 \%; HS-Int= 97.34\%), but non-target like when the <experiencer>-<theme> combination is singular-plural (HS-Adv= 84.15 \%; HS-Int= 72.41\%), plural-singular (HS-Adv= 80.33 \%; HS-Int= 72.41\%), plural-plural (HS-Adv= 76.58 \%; HS-Int= 69.78\%)

\textsuperscript{14}Anecdotally, it should be noted that indeed most of what on the surface seem like clitic agreement violations were observed with plural <experiencers>.

\textsuperscript{15}See Appendixes F (HS-ADV) and G (HS-INT) for the transcription of sentences with omission of clitic.
75.23%), or plural-plural (HS-Adv= 85.86 %; HS-Int= 86.61%). As discussed, these were expected outcomes given the hypotheses and predictions detailed above.

On the contrary, monolingual speakers revealed a more robust knowledge of all the properties associated with class III psych-verbs (dative ‘a’ 86.69%), yet not categorically. The 1\textsuperscript{st} generation immigrants values are consistently found in between the HSs’ and the monolinguals’ results. This is especially true for the relevant conditions examined in this task: accuracy in production of dative marker ‘a’, and accuracy in production of class III psych-verbs. In terms of verb agreement with verbs other than class III psych-verbs, the mean average was categorically on target (99.31%). With class III verbs, the average was slightly lower (95.98%) yet still mostly on target. Additionally, they also revealed a robust knowledge of all the properties associated with class III psych-verbs, yet not as strongly as the monolinguals (dative ‘a’ 76.83%).

Taken together, the HSs’ production data contrast with that of the monolingual group in ways that are consistent with the predictions stated in 4.2.2. That is, both groups of HSs show evidence of distinct subject-verb agreement patterns that can be explained with the proposed shift of class III into class II psych-verbs. Additionally, both groups of HSs also show a relatively low production of the dative marker ‘a’ in contexts in which it would be otherwise obligatory. Interestingly, the data from the 1\textsuperscript{st} generation immigrants also reveal some level of variation, even if much less than the HS groups.

5.5 Summary of Empirical Data

In this chapter I presented the results obtained from three experimental tasks. The first task was designed to test the viability of the hypothesis proposed in Section 4.2.2 whereby in Spanish HS grammars, class III psych-verbs are being reanalyzed as
class II psych-verbs. The results obtained are consistent with this prediction as HSs, but crucially not monolinguals, (variably) accept *gustar*-type verbs in passive constructions; a syntactic reflex of the abovementioned simplification. The second task mainly tested for acceptance of so-called invariable *gusta* (as observed in de Prada Pérez and Pascual y Cabo 2011) in different environments. This was hypothesized to be possible by assuming that class III psych-verbs were assigned an agentive structure and that the apparent dative clitic was taken to be preverbal agreement morphology. Consistent with the predictions articulated in 4.2.2, the results showed differences between the two HS groups and the monolingual group in regards to the anticipated grammatical innovations. The third and final task was designed to further examine the production of *gustar*-like verbs in different contexts and forms. The results revealed important differences between the experimental and control groups in regards to the patterns of use of class III psych-verbs as well as the properties associated with them.

In Chapter 6 I bring together the data obtained from all three tasks and I further discuss them in relation to the research questions I articulated in Section 4.2.1. Additionally, I will address the limitations and suggest directions for future research.
CHAPTER 6
DISCUSSION AND CONCLUSION

6.1 Introduction

The purpose of this chapter is twofold. First, it aims to bring together all the data reviewed in Chapter 5 in an effort to provide a macro analysis with respect to the status of class III psych-verbs in HS Spanish. The second goal is to dissect this macro-analysis so as to address the research questions that guided this dissertation, outlined in Section 4.2.1 and repeated below for convenience.

1) Are class III psych-verbs in HS Spanish undergoing a reanalysis of their argument structure? If so, in what ways and why?
2) To what extent are attrition, incomplete acquisition and/or input delimited differences at least partially explanatory as sources of HS differences and to what extent can they be teased apart?

With this in mind, the remaining sections of this chapter are organized as follows: Section 6.2 brings the data from the 3 experiments together to provide an overarching analysis. In Section 6.3, I revisit the research questions of the dissertation and provide answers to them based on the results obtained here. In Section 6.4, I review some possible limitations of the present study as well as explore how such limitations can be addressed in future research.

6.2 Macro-analysis

In an attempt to provide an adequate explanatory analysis of the nature of the HS differences observed in this domain (e.g., de Prada Pérez & Pascual y Cabo 2011; Toribio & Nye 2006), I hypothesized that in HS Spanish, class III type psych-verbs (e.g., gustar 'to like'), have been reanalyzed as class II (e.g., asustar ‘to frighten’). Recall from Section 3.2 that, unlike class III psych-verbs which are strictly unaccusative verbs (e.g.,
Belletti & Rizzi 1988), class II psych-verbs can alternate from being interpreted with an agentive or a stative reading.

As mentioned, this semantic hybridity has syntactic consequences: if *asustar* 'to frighten' (or any other class II psych-predicate for that matter) is interpreted with a stative reading, then it is treated as an unaccusative verb and cannot be used agentively. In such cases, class II psych-verbs have the same underlying syntactic structure as canonical class III psych-verbs. On the other hand, with an agentive reading, class II psych-verbs (i) can appear with a fully inflected verbal paradigm\(^1\) thus projecting an external theta role, which, in turn, (ii) allows them to be passivized. Consequently, from this it follows that, if *gustar* and other class III psych-verbs have in fact been reanalyzed in HS Spanish as class II psych-verbs, then they would also have the same options. Therefore, as a syntactic reflex of this emerging syntactic optionality, it was hypothesized that HSs would accept, or at least have a reduced threshold for rejection of these two innovative options.

As discussed, experiment I, a GJT, was designed specifically to test the first of these predictions. The responses from the two adult control groups to this experiment revealed trends that were generally consistent with the descriptions found in the theoretical literature. That is, they were able to make precise distinctions between all relevant grammatical and ungrammatical conditions in similar ways. Recall that both the monolinguals and the 1\(^{st}\) generation immigrants categorically rejected passives with unaccusatives and class III psych-verbs, but accepted passives with transitive verbs.

\(^1\) To be clear, class III psych-verbs can already appear with a fully inflected verbal paradigm as “yo le gusto a ella” (I am liked by her) or “tú me gustas” (I like you). That said, here I am referring to a verbal paradigm that would resemble its English equivalent (e.g., ‘I like’, ‘you like’, etc.).
including class II psych-verbs. This tendency was therefore taken to indicate that their mental representations for class III psych-verbs were identical and on target\(^2\). Like the control groups, the adult HSs were also able to make a categorical distinction between grammatical\(^3\) and ungrammatical\(^4\) passive constructions (as well as with the distracter tokens). That said, they also showed a tendency to accept (though not categorically) passives with *gustar*-like verbs, a use deemed decidedly ungrammatical for the two control groups. As discussed in Section 5.2, that the HSs’ acceptance rates are not categorical for the relevant condition should not be taken as dubious evidence for the proposed reanalysis. Instead, it should be noted that their grammars allow for passivization of a specific unaccusative, even if marginally, which should be impossible unless they can optionally project a syntactic structure for this verb that would permit passivization. Crucially, if this were not one of the structures allowed in the HS grammars, then it would be rejected categorically, as was the case for them with respect to ungrammatical sentences due to subject-verb agreement violations or, more directly related to this discussion, of the ungrammatical passives with other unaccusatives. With this in mind, these results are consistent with the hypothesis articulated in 4.2.2 whereby class III psych-verbs had been reanalyzed as class II psych-verbs.

Further evidence in support of the abovementioned hypothesis comes from the results relevant to the second prediction; namely the use of class III psych-verbs with a fully inflected verbal paradigm. In an examination of the production data, it was noted

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2 The MA and AA responses to all relevant conditions across experiments also support this statement.

3 Passives with transitive verbs and class II psych-verbs.

4 Passives with unaccusative verbs.
that the abovementioned innovation was in fact produced, yet only a handful of times and only by the intermediate HSs. That said, with the data available, it is not possible to conclude with certainty whether these utterances are instances of case agreement innovations or not because, crucially, the production task only elicited the use of gustar-like verbs with 3rd person singular/plural subjects, in which cases the target subject-verb agreement forms would be gusta/gustan respectively and these forms would be the expected targets in both structures. Thus, it is not clear whether the forms elicited are a true reflection of case agreement innovation or not. That said, recall that all adult informants were also tested explicitly on this innovation in the experiment 2 (GJT2). Examining the results obtained from this condition, it became evident that the two HS groups were more inclined than MAs and AAs to accept these innovations. Their respective ratings, however, were relatively low and did not reach the cut-off value to determine their acceptance (Section 5.3.3.4). But before claiming that this is evidence against the suggested hypothesis, recall that the proposal does not imply that for the HSs, the agentive reading and/or the innovative structure for that matter is now obligatory in HS grammars. Rather, the hypothesis provides HSs’ grammars with an additional alternative, an optionality that is precluded in monolingual Spanish. As a result of this, it was predicted that one could find variability in the data, whereby HSs sometimes would favor gustar/encantar used as true stative class III psych-verbs with the prescribed syntactic structure and some other times with the proposed reflex innovation.

Indeed, the above hypothesis does not make precise predictions in regards to which option will be favored more in actual use. That said, it was argued that frequency
differences are possibly deterministic for such HSs preferences. That is, the more frequent a structure is in the input/output, the more likely these HSs are to use it.

Crucially, then, evidence in support of the hypothesis is found in HSs accepting and/or producing the reflexes that emerge in any proportion. In other words, the variability observed was, by virtue of the hypothesis, expected to be constrained in certain ways and this is exactly what was found. In fact, the data obtained from all three experiments seem to suggest the hypothesized scenario that although HS grammars can opt for an agentive reading of *gustar*, as demonstrated from the results of GJT 1, that this would not necessarily be the preferred reading. First, recall from Section 4.3.2.4 that, as part of the GJT2, all adult groups were tested specifically on the acceptance/rejection of the class III canonical structure. The results obtained clearly showed that all adult groups accepted this condition at ceiling rates. This acceptance was counterbalanced with a strong rejection of the ungrammatical distracter items as well as rejection of the condition that tested clitic omission. Also, though production data revealed somewhat elevated rates with respect to the accurate production of the properties associated with the canonical use of class III psych-verbs (i.e., subject-verb agreement, clitic agreement, dative marker ‘a’), innovative constructions of the type hypothesized in 4.2.2 were also observed

5.

With these results combined, the evidence reported thus far unambiguously suggests that while all adult groups (monolinguals, 1st generation immigrants, and heritage speakers alike) have access to the canonical class III psych-verb structure, HSs reveal some competence differences with respect to the monolingual grammars.

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5 See Appendixes F and G.
As discussed, these differences are by and large consistent with the reanalysis hypothesized in Chapter 4. That said, such reanalysis cannot fully explain all documented cases of innovation in this domain, i.e., cases of invariable *gusta* with apparent surface retention of the dative clitic as observed by de Prada Pérez and Pascual y Cabo (2011). Therefore, to explain the attested cases of invariable *gusta*, it was predicted that HSs were assigning the aforementioned agentive structure to the verb and that the clitic was actually serving as preverbal agreement morphology. This prediction was also adapted to empirical verification whereby HSs would not be expected to accept sentences with omission of the clitic since for them, it is now obligatory verbal morphology. The relevant results obtained from the grammaticality judgment task were also consistent with this prediction as both HS groups largely reject sentences with omission of obligatory clitic; yet advanced HSs more. The HS production data are also consistent with this analysis since, in spite of some anticipated clitic agreement violations, the clitic itself was only omitted 28 times by the intermediate HS group and 7 times by the advanced HS group. Crucially, whenever they omitted the clitic, they produced what on the surface seems like case agreement innovations (resembling more its English equivalent)\(^6\).

That said, these results can be interpreted in (at least) two possible ways: First, it should be noted that, while it is possible that this rejection is a reflection of the new role of the clitic (i.e., preverbal morphology), it is also certainly possible that HSs’ mental representations require the presence of the clitic with class III psych-verbs, just as is the case for AAs and MAs.

\(^6\) See Appendixes F and G.
Second, it is also possible that what I am claiming to be reanalyzed as verbal morphology when an agentive syntax is projected can be, alternatively, an allomorph of a true nominative subject form. In other words, ‘me’, for example, would not only have the status of accusative and dative clitics as in monolingual Spanish, but also nominative subject as well. In such a case, it would also have the same phi-features as ‘yo’ and its same distributional properties within the syntax\textsuperscript{7}. This account, however, would predict that “me gusta” should obtain instead of “me gusta” since otherwise, there would be an agreement-feature mismatch that the syntax should \textit{a priori} reject. At present, the data at hand only have 3\textsuperscript{rd} person forms in which this cannot be teased out with unique predictions of morphological spellout as in the cases of other grammatical persons as I have just shown. This is ultimately an empirical question that further research could pursue.

In general, the results of this study have shown that the adult Spanish HSs tested can assign an additional agentive reading to class III psych-verbs. As demonstrated by the data presented, this option is not available in the grammars of monolingual speakers of the same dialect.

As discussed, the results obtained from the elicited production task provide further evidence of the potential for HS innovation in this domain. As anticipated, the monolingual control group showed little evidence of divergence from the expected

\textsuperscript{7} To tease these two claims apart, one could expect HS acceptance of sentences like “Me gusta el chocolate” (I like chocolate) as well as “Me siempre gusta el chocolate” (I always like chocolate) because, in theory, there would be no bounded morphological relationship between “me” and “gusta” as there would be if ‘me’ were indeed inflectional morphology as I suggested or if it were a clitic as in monolingual Spanish since clitics are also bounded morphology. However, if this ‘me’ is indeed an allomorph of ‘yo’ this should in principle be possible. That is, the sentence “Me siempre gusta X” (I like X) is like any other agentive sentence, for example, “Yo siempre hablo con Hugo” (I always speak with Hugo).
target in regards to verbal agreement or use of the dative marker ‘a’. But, unlike in the case of the two grammaticality judgment tasks discussed above in which monolinguals and 1st generation immigrants exhibited an almost homogeneous behavior, the results from the elicited production task revealed differences between these two groups. Interestingly, these differences increased in regards to verb agreement with class III psych-verbs and especially with regards to the use of the dative marker ‘a’; two of the properties that were predicted to be problematic for HSs. A couple of questions emerged from this observation. First, what is the nature of these differences? And second, can these differences be related to the innovative linguistic outcomes observed in subsequent generations?

In regards to the first question, it was hypothesized that 1st generation immigrants performed differently as a result of interference from the L2 and/or other linguistic processing deficits that are a byproduct of being bilingual. Testing between these options or knowing with certainty the extent to which they both contribute, however, cannot be confirmed with the limited data available.

In regards to the second question, these differences seem to support a view in which (qualitative and quantitative) input differences are deterministic in the process of HS acquisition (e.g., Pires & Rothman 2009; Rothman 2007). As discussed, L1 attrition logically increases the variability present in the input HSs receive. Such variability is predicted to affect the perceived (in)stability of certain (vulnerable) domains (e.g., class III psych-predicates) which in turn are (re)analyzed in some way by subsequent

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8 In terms of clitic agreement (Section 5.4.3), all informant groups, monolinguals included, revealed a relatively low average for clitic agreement. This, however, was not completely unexpected as /-s/ elision in word final position has been extensively documented in Cuban-Spanish (e.g., López Morales 2003).
generations of HSs (e.g., Lightfoot 2010 inter alia). From the trends observed, it seems that monolinguals and 1st generation immigrants reveal very similar judgments in regards to both grammatical and ungrammatical conditions examined herein. That said, they do show some significant differences in the production tasks; more specifically with respect to the production of the dative marker ‘a’. This variance in the input could very well be one of the key factors that trigger the reanalysis in the process of acquisition for subsequent generations of HSs since in its absence, the preverbal <experiencer> could be interpreted, and therefore reanalyzed, as a regular nominative subject. This, however, is only one possible explanation. The exact nature of the cause needs further investigation.

Because as a whole, the data reported are generally consistent with the predictions advanced in Section 4.2.2, it is argued that the observed HS innovations are a reflection of differences at the level of mental representation with respect to the adult controls. In other words, when it comes to class III psych-verbs, HSs and MAs have distinct underlying mental representations that can license different outputs. But to be clear, though different, these two mental representations can yield identical surface structures since both of them have access to the canonical structure of class III psych-verbs. Though not always convergent with the descriptions found in the theoretical literature, it should be noted that these outcomes are systematic and still representative of UG-constrained grammars. Therefore, in an attempt to break away from the trend observed in most previous HS acquisitional studies that have described the end result of HSs as incomplete, it should be noted that these underlying differences are not to be taken as deficiencies of any kind, but rather as emerging optionalities. In fact, as will be
evident in the ensuing discussion, I argue that this particular optionality does not obtain as a result of an acquisition process that falls short of being complete at all; especially since using such a term to describe a bilingual individual who has acquired a the HL naturally in early childhood is questionable given our theoretical paradigm (Pascual y Cabo & Rothman 2012). Instead, it is proposed that HSs have acquired a fully developed linguistic system that differs from monolingual grammars of the same dialect as a result, among other things, of the nature of the input available to them (Rothman 2007; Pires & Rothman 2009). Again, and as anyone would expect, most if not all of the input available for these HSs is affected to some degree by L1 attrition which in turn produces output that can be more ambiguous for the parser. Consequently, HSs have no other recourse but to converge on grammars where compared to the monolingual varieties there has been some (re)analysis (e.g., Lightfoot 2010).

6.3 Limitations of the Study

As discussed in the previous sections, the findings of this study are important in that they contribute to our understanding of how and why HS grammars, despite being acquired naturally in early childhood, can obtain so differently from monolingual norms. Undoubtedly, these findings contribute in non-trivial ways to the current literature on formal (HS) language acquisition, syntactic theory, contact linguistics, and diachronic theory.

This contribution is however, not without limitations. For example, one important limitation of this study is the group pairing used. Though reasonable to a point, this methodology assumes that all informants (children and adults alike) have the same language learning background (Polinsky 2011:307). This can obviously not be true for
all informants. After all, a distinctive characteristic of HSs is the variation that can be found not only within groups but also within the same individuals. This variation must be representative of the different sociolinguistic realities in which these individuals have been brought up. For example, and to name just a few, differences in the quantity and quality of HL input they receive, instruction in the HL (or lack of it thereof), and/or the stigma attached with the HL in the area where they grew up. A much better alternative, which no one denies but that has not been done to date for reasons of practicality, would consist of a longitudinal study whereby one could witness knowledge and use of any given property (or lack of it) from the beginning and through the different stages of development. If attrition is truly at play then such a methodology would capture the change in real individuals across time as opposed to simply reconstructing and reasoning change out in cross-linguistic comparisons. The same comparative fallacy that applies as a limitation to Polinsky (2011) thus applies herein a priori. Differently, however, whatever shortcomings might inherently apply do not seem to be deterministic here since the data showed no indirect evidence of attrition in this domain by comparing the children to the adult HSs anyway.

Relying primarily on previous findings (i.e., invariable gusta) to shape the course of the methodology within the dissertation was both a strength as well as a limitation. In other words, although, I was able to propose a specific hypothesis that was subject to empirical verification, it soon became obvious that not all possible alternatives for the data obtained had been considered. For example, because the focus of this dissertation has been on 3rd person singular/plural agreement issues, I was not able to discard all possible explanations. For example, as discussed in Section 5.4.3, due to
the phonological characteristics of Cuban Spanish (i.e. /-s/ deletion), I was not able to
determine with precision the exact nature of the clitic-agreement violations in HS
Spanish. Thus, future studies examining knowledge and use of this property should aim
at identifying ways to include all possible verbal and clitic agreement configurations (as
well as other limitations\(^9\)) in experimental designs.

That said, in spite of these methodological drawbacks, I believe that the data here
discussed illustrate general linguistic trends of a representative group for each one of
these communities. This study therefore contributes to current linguistic research of
communities in language-contact situations.

6.4 Conclusion and Suggestions for Future Studies

As discussed throughout this study, one of the now commonplace findings of HS
bilingualism studies involves competence and/or performance differences as compared
to monolingual speakers of the HL dialect implicated (e.g., Montrul 2008 *inter alia*). The
actual source of said differences remains, however, largely unidentified. Discerning
which linguistic properties are possibly more susceptible than others to HS innovation
and providing an explanatory analysis of how and why this might come to be is at the
forefront of current HS bilingualism studies (e.g., Cuza et al. 2013; Montrul 2008; Pires
& Rothman 2009; Polinsky 2011). This is precisely what I have attempted to do in this
study in the domain of class III psych-verbs in HS Spanish.

The present project aimed to accomplish two overarching goals. The first goal
was to describe and explain the morpho-syntactic consequences of a Spanish-English

\(^9\) Other limitations of this study include the absence of critical and counterbalance items to further tease
apart or compare other alternatives. For example, informants should have been tested on the possibility
stated above in which the clitic ‘me’ has become a nominative allomorph of ‘yo’. Also, in addition to being
tested on the canonical use of class III psych-verbs, informants should have also been examined on the
canonical use of class II psych-verbs. This would have been optimal to show that there are in fact no
differences between class III and class II.
language contact environment in an examination of class III psychological predicates. This somewhat understudied property was deemed appropriate for this purpose due to the structural differences between the two languages involved and due to previous findings that have documented *gustar*-type verbs to be challenging for L2 learners (e.g., Montrul 1997, 2000, 2001) as well as HSs (e.g., de Prada Pérez & Pascual y Cabo 2011; Toribio & Nye 2006). To move us beyond further documentation and description alone, I provided a series of hypotheses that were informed by previous findings (e.g., de Prada Pérez & Pascual y Cabo 2011) as well as by syntactic theory (e.g., Belletti & Rizzi 1988; Landau 2010; Montrul 1995; Pesetsky 1995). Simply put, it was predicted that in Spanish HS grammars, class III psych-verbs had been reanalyzed as class II psych-verbs. With this in mind, the first question of this dissertation asked whether the HS differences documented in this domain could be accounted for under the formal proposed reanalysis I hypothesized. As discussed in detail in the first part of the present chapter, I believe the answer to this question is “yes”, with all the caveats in mind that have already been discussed.

The second overarching goal was to understand at a deeper level what apparent ‘incomplete acquisition’ is, which I view as a mere difference devoid of evaluative terminology, and what its source(s) might be in the morpho-syntactic domain of class III psych-verbs. With this in mind, I adopted Polinsky’s (2011) methodology which combined various experimental groups of children and adult HS participants as well as age-matched monolingual speakers from the same linguistic background. Additionally, in an attempt to control for the type of input that HSs receive, I included a group of adult 1st generation immigrants from the same linguistic background. This inclusion allowed
me to map, albeit indirectly, the possible influence of cross-generational input modifications that, combined with an effect of contact with English, explain how HS knowledge is obtained (in the domain of class III psych-verbs).

In light of this, the second question aimed to document the extent to which ‘L1 attrition’, ‘incomplete acquisition’ and/or ‘missing-input competence divergence’ can explain the differences observed in HS grammars in this domain. Recall from the discussion of experiment one that as children, both HSs and MAs showed uncertainty with respect to the innovation proposed. In examining the projected development of each of these groups, it was clear that, with time, both groups would end up revealing developmental changes in a direction that is opposite to what L1 attrition would predict.

In addition to this, the data convincingly show that, as adults, both groups of HS do have access to the canonical structure of class III psych-verbs in the same way that monolingual speakers do (Section 5.3.3.1 for the results of the grammaticality judgment task and Section 5.4 for the results of the elicited production task). This, in and of itself, renders the incomplete acquisition approach unable to explain the additional differences observed in this domain (e.g., invariable gusta).

Left to be determined is whether these HS outcomes could result from the differences in the input speakers receive from 1st generation immigrants. Although the results obtained here seem to support such a view, it is not possible to conclude this based solely on the data available since there are many other factors that influence and/or are involved in the process of acquisition. Nonetheless, the evidence suggests that this is in fact a possibility. In other words, although it is not possible to determine without further questions that changes in the input available to HSs are in fact the
defining factors that determine/motivate innovations in HS grammars, this is the only approach standing after factoring in all the data. But to be clear, this is not to say that all innovations must directly come from the input. Direct influence from English in the HS generation, distinct developmental paths as discussed by Putnam and Sánchez (in press) as well as changes that obtain as a consequence of the higher cognitive costs of bilingualism are likely primary contributors to emerging options in HS grammars also.

To conclude, this dissertation has helped us advance our understanding of Spanish HS' grammars by testing several groups of informants (i.e. HS adult & children, monolingual adult & children, 1st generation immigrants) and a wide array of properties related to class III psych-verbs (e.g., dative marker ‘a’, dative clitic, subject-verb agreement). The results presented have laid some groundwork for further studies on HS linguistic development and have raised awareness about the explanatory adequacy of the notion of incomplete acquisition as a theoretical construct within formal approaches to language acquisition. In turn, I have also attempted to reasonably generalize beyond the domain of grammar examined in an effort to increase our understanding of the nature of HS grammars, the acquisition and maintenance of multiple linguistic systems within the same individual over time and, consequently, what all of this can tell us about the general architecture of linguistic representation.

Finally, along with overcoming the limitations stated above, this project did not address the question of how processing differences may affect the use of class III psych-predicates. Certainly, an analysis of processing resources is one of the next logical steps for the current line of research since it will allow us to provide a more in-depth analysis of the acquisition of the properties associated with psychological
predicates. Furthermore, another logical extension of this dissertation is the study of other argument-structure overgeneralizations/innovations in HS grammars, such as the use of intransitive verbs (both unaccusative and unergative) in transitive configurations with lexical causative meaning. It will be interesting to see to what extent we will be able to apply the hypothesis offered here that difference in HS grammars is more reflective of emerging optionality alongside intact monolingual knowledge. Testing more domains of grammar with this same mindset will also enable us to uncover, to the extent possible, the upper limitations of treating HS grammars as such.
APPENDIX A
LANGUAGE PROFICIENCY TEST

Instructions: Each of the following sentences contains a blank space ____ indicating that a word or phrase has been omitted. From the four choices select the one which, when inserted in the space ___, best fits in with the meaning of the sentence as a whole.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Al oír del accidente de su buen amigo, Paco se puso _____.</td>
<td>2.</td>
</tr>
<tr>
<td></td>
<td>a. alegre</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. fatigado</td>
<td></td>
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<tr>
<td></td>
<td>c. hambriento</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. desconsolado</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Tuvo que guardar cama por estar _____.</td>
<td>4.</td>
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<tr>
<td></td>
<td>a. enfermo</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. vestido</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. ocupado</td>
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<td></td>
<td>d. parado</td>
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<tr>
<td>5.</td>
<td>Al romper los anteojos, Juan se asustó porque no podía _____.</td>
<td>6.</td>
</tr>
<tr>
<td></td>
<td>a. discurrir</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. oír</td>
<td></td>
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<tr>
<td></td>
<td>c. ver</td>
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<tr>
<td></td>
<td>d. entender</td>
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<tr>
<td>7.</td>
<td>Era una noche oscura sin _____.</td>
<td>8.</td>
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<tr>
<td></td>
<td>a. estrellas</td>
<td></td>
</tr>
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<td></td>
<td>b. camas</td>
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<tr>
<td></td>
<td>c. lágrimas</td>
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<td></td>
<td>d. nubes</td>
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<tr>
<td>9.</td>
<td>¡Qué ruido había con los gritos de los niños y el _____. de los perros!</td>
<td>10.</td>
</tr>
<tr>
<td></td>
<td>a. olor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. sueño</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. hambre</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. ladrar</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Yo, que comprendo poco de mecánica, sé que el auto no puede funcionar sin _____.</td>
<td>12.</td>
</tr>
<tr>
<td></td>
<td>a. permiso</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. comer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. aceite</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. bocina</td>
<td></td>
</tr>
</tbody>
</table>
13. ¡Cuidado con ese cuchillo o vas a _____ el dedo!
   a. cortarte
   b. torcerte
   c. comerte
   d. quemarte

14. Tuvo tanto miedo de caerse que se negó a _____ con nosotros.
   a. almorzar
   b. charlar
   c. cantar
   d. patinar

15. Abrió la ventana y miró: en efecto, grandes lenguas de _____ salían llameando de las casas.
   a. zorros
   b. serpientes
   c. cuero
   d. fuego

16. Compró ejemplares de todos los diarios pero en vano. No halló _____.
   a. los diez centavos
   b. el periódico perdido
   c. la noticia que deseaba
   d. los ejemplos

17. Por varias semanas acudieron colegas del difunto profesor a _____ el dolor de la viuda.
   a. aliviar
   b. dulcificar
   c. embromar
   d. estorbar

18. Sus amigos pudieron haberlo salvado pero lo dejaron _____.
   a. ganar
   b. parecer
   c. perecer
   d. acabar

19. Al salir de la misa me sentía tan caritativo que no pude menos que _____ a un pobre mendigo que había allí sentando.
   a. pegarle
   b. darle una limosna
   c. echar una mirada
   d. maldecir

20. Al lado de la Plaza de Armas había dos limosneros pidiendo _____.
   a. pedazos
   b. paz
   c. monedas
   d. escopetas

21. Siempre maltratado por los niños, el perro no podía acostumbrarse a _____ de sus nuevos amos.
   a. las caricias
   b. los engaños
   c. las locuras
   d. los golpes

22. ¿Dónde estará mi cartera? La dejé aquí mismo hace poco y parece que el necio de mi hermano ha vuelto a _____.
   a. dejármela
   b. deshacérmela
   c. escondérmela
   d. acabármela

23. Permaneció un gran rato abstraído, los ojos clavados en el fogón y el pensamiento _____.
   a. en el bolsillo
   b. en el fuego
   c. lleno de alboroto
   d. Dios sabe dónde

24. En vez de dirigir el tráfico estabas charlando, así que tú mismo _____ del choque.
   a. sabes la gravedad
   b. eres testigo
   c. tuviste la culpa
   d. conociste a las víctimas
25. Posee esta tierra un clima tan propio para la agricultura como para _____.
   a. la construcción de trampas
   b. el fomento de motines
   c. el costo de vida
   d. la cría de reses

26. Aficionado leal de obras teatrales, Juan se entristeció al saber _____ del gran actor.
   a. del fallecimiento
   b. del éxito
   c. de la buena suerte
   d. de la alabanza

27. Se reunieron a menudo para efectuar un tratado pero no pudieron _____.
   a. desavenirse
   b. echarlo a un lado
   c. rechazarlo
   d. llevarlo a cabo.

28. Se negaron a embarcarse porque tenían miedo de_____.
   a. los peces
   b. los naufragios
   c. los faros
   d. las playas

29. La mujer no aprobó el cambio de domicilio pues no le gustaba _____.
   a. el callejero
   b. el puente
   c. esa estación
   d. aquel barrio

30. Era el único que tenía algo que comer pero se negó a _____.
   a. hojearlo
   b. ponérselo
   c. conservarlo
   d. repartirlo

CLOZE TEST

Instructions: In the following text, some of the words have been replaced by spaces which are numbered from 1 to 20. First, read the complete text in order to understand it. Then reread it and choose, from the list of words on the answer sheet, the correct word for each space. Mark your answers by circling your choice on the answer sheet, not on the text.

El sueño de Juan Miró

Hoy se inaugura en Palma de Mallorca la Fundación Pilar y Joan Miró, en el mismo lugar en donde el artista vivió sus últimos treinta y cinco años. El sueño de Joan Miró se ha ______ (1). Los fondos donados a la ciudad por el pintor y su esposa en 1981 permitieron que el sueño se ______ (2); más tarde, en 1986, el Ayuntamiento de Palma de Mallorca decidió ______ (3) al arquitecto Rafael Moneo un edificio que ______ (4) a la vez como sede de la entidad y como museo moderno. El proyecto ha tenido que ______ (5) múltiples obstáculos de carácter administrativo. Miró, coincidiendo ______ (6) los deseos de toda su familia, quiso que su obra no quedara expuesta en ampulosos panteones de arte o en ______ (7) de coleccionistas acaudalados; por ello, en 1981, creó la fundación mallorquina. Y cuando estaba ______ (8) punto de morir, donó terrenos y edificios, así como las obras de arte que en ellos ______ (9).

El edificio que ha construido Rafael Moneo se enmarca en ______ (10) se denomina “Territorio Miró”, espacio en el que se han ______ (11) de situar los distintos edificios que constituyen la herencia del pintor.
El acceso a los mismos quedará ______ (12) para evitar el deterioro de las obras. Por otra parte, se _____ (13), en los talleres de grabado y litografía, cursos _____ (14) las distintas técnicas de estampación. Estos talleres también se cederán periódicamente a distintos artistas contemporáneos, _______ (15) se busca que el "Territorio Miró" ______ (16) un centro vivo de creación y difusión del arte a todos los ______ (17).

La entrada costará 500 pesetas y las previsiones dadas a conocer ayer aspiran ________ (18) que el centro acoja a unos 150.000 visitantes al año. Los responsables esperan que la institución funcione a _______ (19) rendimiento a principios de la _______ (20) semana, si bien el catálogo completo de las obras de la Fundación Pilar y Joan Miró no estará listo hasta dentro de dos años.
APPENDIX B
SOCIOLINGUISTIC BACKGROUND QUESTIONNAIRE

BACKGROUND QUESTIONNAIRE

Participant #: _______________

1) Gender: M F

2) Age:

3) Languages that you speak:

4) Place of birth:

5) Father’s place of birth: Mother’s place of birth:

6) Places where you have lived for 6 months or longer:

7) Age when you arrived in the US:

8) Education level (pick one)

   Elementary High School College Graduate School

9) What is your dominant language? ____________________________

10) Do you speak any other languages besides English and Spanish?

11) Have you (explicitly) studied Spanish grammar at school/university? If so, at what age did you start? ________________

12) (approximately) How many years have you studied Spanish? ________________

13) What exposure to Spanish, other than school, do you have? How many hours a week? With what regularity?

   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________

14) What language do you use to communicate with the following people:

   Father: Mother: Brother(s):

   Sister(s): Son/Daughter: Friend(s):

   Partner: Co-worker(s): Relatives:

15) What language do you primarily use to communicate in the following places/activities:

   Home: School: Work:

   Religious services: Free time activities: Hospital:

16) Have you ever spent more than one month in a Spanish speaking country? Explain:

   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________

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17) On a scale of 1-10, ten being the highest (native speaker level), what do you believe your level of Spanish is now? 
____________ Based on what factors are you calculating this number?
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

18) On a scale of 1-10, ten being the highest (native speaker level), what do you believe your level of English is now? 
____________ Based on what factors are you calculating this number?
____________________________________________________________________
____________________________________________________________________

19) What are your motivations for learning Spanish? (Leave blank if it does not apply)
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

20) What are your motivations for learning English? (Leave blank if it does not apply)
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
Informed Consent

Protocol Title: Spanish-English heritage speaker bilingualism

Please read this consent document carefully.

1. Purpose of the research study:
The purpose of this study is to examine the speech of Spanish-English bilingual speakers.

2. What you will be asked to do in the study:
You will be asked to give information about your language history, to fill out a Spanish questionnaire and do an oral production task.

3. Time required:
Approximately 1 hour and 30 minutes

4. Risks and Benefits:
There are no risks associated with this research project.

5. Confidentiality:
Your identity will be kept confidential to the extent provided by law. Your information will be assigned a code number. The list connecting your name to this number will be kept in a locked file in the Principal Investigator's office. When the study is completed and the data have been analyzed, the list will be destroyed. Your name will not be used in any report.

6. Voluntary participation:
Your participation in this study is completely voluntary. There is no penalty for not participating.

7. Right to withdraw from the study:
You have the right to withdraw from the study at any time without consequence.

8. Whom to contact if you have questions about the study:
Diego Pascual y Cabo, Graduate Student, Department of Spanish and Portuguese Studies, 170 Dauer Hall, P.O. Box 117405, Gainesville, FL 32611-7405, phone 815-915-5371

Jason Rothman, Assistant Professor, Department of Spanish and Portuguese Studies, 170 Dauer Hall, P.O. Box 117405, Gainesville, FL 32611-7405, phone 352-392-2016

9. Whom to contact about your rights as a research participant in the study:
IRB02 Office, Box 112250, University of Florida, Gainesville, FL 32611-2250; phone 392-0433.

10. Agreement:
I have read the procedure described above. I voluntarily give my consent to participate in the Linguistics Research in bilingualism. I have received a copy of this description.

Participant: ___________________________ Date: ______________
Principal Investigator: ______________________ Date: ______________

I have read the procedure described above. I voluntarily give my consent for my child, __________________________, to participate in this research. I have received a copy of this description.

Parent/Guardian __________________________ Date: ______________
2nd Parent/Witness __________________________ Date: ______________
APPENDIX D
GRAMMATICALITY JUDGMENT TASK 1

1) TRANSITIVE PASSIVES
   La casa fue diseñada por los arquitectos
   El libro fue escrito por unos escritores
   El libro fue leído por los estudiantes
   La tarea fue completada por los alumnos
   El paquete fue enviado por mis amigas

2) UNACCUSATIVE PASSIVES
   La mesa fue llegada por los estudiantes
   El teléfono fue entrado por las chicas
   El chico fue aparecido por mis primos
   El vestido fue desaparecido por las chicas
   El paquete fue salido por los estudiantes

3) RPPS PASSIVES (CLASS III)
   La pizza fue gustada por mis amigos
   El pastel fue gustado por los niños
   La película fue gustada por mis amigos
   El chocolate fue gustado por mis amigos
   El helado fue gustado por los niños

4) PP PASSIVES (CLASS II)
   La niña fue asustada por los perros
   El profesor fue asustado por los estudiantes
   El chico fue asustado por sus amigos
   Mis padres fueron asustados por los ladrones
   Mi hermano fue asustado por los profesores

5) DISTRACTERs

   UNGRAMMATICAL (adjective agreement)
   La casa blanco es muy grande
   El carro blanca fue caro
   El café americana estuvo caliente
   Las niñas altos eran de Costa Rica
   Los niños guapas vivían en Colombia

   GRAMMATICAL
   Nosotros vivimos en un apartamento
   Mis amigos son altos
   La comida está caliente
   Los libros de aventuras son interesantes
Las películas muy largas son aburridas
Por las mañanas siempre bebo un café con leche
Ellos tienen mucho dinero
El perro bonito es pequeño
Las películas cómicas son divertidas
El libro rojo es aburrido

UNGRAMMATICAL (verb agreement)
Nosotros voy al centro comercial los fines de semana
Ellas tengo dos hermanos muy altos
Ella hago la tarea todos los días
Nosotros hago la comida algunos días
Yo compramos la comida en el supermercado
1) **Prescriptive use of RPPs.**

**SG <theme>**
- A la chica le gusta el perro
- A la estudiante le gusta el libro
- A la niña le gusta la pizza

- A los chicos les gusta la película
- A los estudiantes les gusta el pastel
- A los niños les gusta el gato

**PL <theme>**
- A la niña le gustan los carros
- A mi amigo les gustan las matemáticas
- A el niño le gustan las ciudades

- A las niñas les gustan los restaurantes
- A los niños les gustan los juguetes
- A mis amigos les gustan las bicicletas

2) **Omission of dative marker a**

**SG <theme>**
- mí me gusta la pasta
- mí me gusta la pizza
- mí me gusta el carro

- tí te gusta la leche
- tí te gusta la leche
- tí te gusta el café

**PL <theme>**
- mí me gustan los libros
- mí me gustan las películas
- mí me gustan los perros

- tí te encantan los zapatos
- tí te gustan los dibujos
- tí te gustan las gatas
3) Clitic Omission

SG <theme>
A la niña gusta la playa
A la chica gusta el arroz
A la estudiante gusta el pollo

A las estudiantes gusta la física
A los estudiantes gusta tu vestido
A los niños gusta el helado

PL <theme>
A la niña gustan los carros
A la estudiante gustan los libros
A la mujer gustan los zapatos

A los niños gustan los peces
A las niñas gustan las películas
A los hombres gustan los deportivos

4) Case agreement innovation

SG <theme>
Yo gusto tu vestido
Tú gustas el arroz
La niña gusta la playa
Usted gusta el pastel
Nosotros gustamos el pollo
Mis amigos gustan la película

PL <theme>
Yo gusto tus zapatos
Tú gustas las empanadas
La niña gusta los aros
Usted gusta los libros
Nosotros gustamos los pasteles
Mis amigos gustan las películas

5) The new grammatical construction

SG <theme>
Yo me gusta la pizza
Tú te gusta la película
ella le gusta el libro
usted le gusta la historia
Nosotros nos gusta la fiesta
Yo me gusta la fiesta

PL <theme>
Yo me gusta las empanadas
Tú te gusta las películas
Ella le gusta los libros
Usted le gusta los habanos
Nosotros nos gusta las fiestas
Yo me gusta las fiestas

6) Distracters

- Transitive
Yo compra el periódico en la tienda
Yo vende fruta en el mercado
Tú compra el pan todos la panadería
Tú vende carne en el supermercado
Ella compra el periódico en la librería
Ella vende pescado en el mercado
Usted escucha música en la discoteca
Usted compra comida en el supermercado
Nosotros compra la comida en el supermercado
Nosotros vende ropa en el centro comercial
Ellos compra el periódico en el parque
Ellos vende fruta en el mercado

- Unaccusatives
A la casa llega yo
Del trabajo sale yo
En mi casa entra tu
En el parque aparece tu
En mi casa aparece usted
Por el trabajo llega usted
Por el bar aparece el
En el trabajo desaparece el
De la clase sale nosotros
En los museos entra nosotros
Al trabajo llega ellos
De la clase sale ellos

- Unergatives
Yo sonríe en mi casa
Yo canta en las fiestas
Tú canta en el bar
Tú corre en el parque
Usted llora en su casa
Usted corre en el parque
Él trabaja en la oficina
Él llora en la casa
Nosotros canta en la fiesta
Nosotros corre en la playa
Ellos corre en el gimnasio
Ellos trabaja en el bar

- **Adjectival agreement**
Los chicos guapa no vienen a la fiesta
Las mujeres alto no viven aquí
El niño pequeña duerme tranquilamente
El magnífico profesora hablará de su experiencia
Las estudiantes tranquilo no están en clase hoy
La niña guapo no me habla
La mujer casado tiene 2 hijas
El restaurante cara está lejos
La mesa rojo está rota
La silla amarillo está en tu habitación

- **Grammatically correct**
Yo limpio mi cocina por la mañana
Yo viajo con mis amigos durante las vacaciones
Yo voy al gimnasio por la tarde
Yo quiero comprar una computadora nueva
Yo bailo salsa con mis amigos
Yo vivo en una casa bonita

Tú llegas al trabajo 5 minutos tarde
Tú cocinas muy bien
Tú vienes de vacaciones conmigo
Tú compras tu ropa en el centro comercial
Tú tienes una hermana muy guapa
Tú no necesitas una computadora nueva

Ella lee revistas en su tiempo libre
Ella hace deporte todos los días
Él escribe poemas de amor
Él tiene 3 computadoras
Ella trabaja por las tardes
Ella quiere comprarse unos zapatos nuevos
Nosotros nos levantamos temprano todos los días
Nosotros comemos pasta casi todos los días
Nosotros vemos la televisión toda las noches
Nosotros vamos de fiesta con nuestros amigos
Nosotros trabajamos en un supermercado
Nosotros no queremos ir a la tienda

Ellos son estudiantes universitarios
Ellos van a Florida todos los años
Ellas no quieren venir con nosotros
Ellos tienen peces en su casa
Ellos viajan a Europa todos los años
Ellos comen pasta todos los días
<table>
<thead>
<tr>
<th>INFORMANT</th>
<th>TRANSCRIPTION</th>
</tr>
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<tbody>
<tr>
<td>HA1</td>
<td>Carmen y Esteban encantas las zanahorias</td>
</tr>
<tr>
<td>HA1</td>
<td>Dilan gusta ir en aviones</td>
</tr>
<tr>
<td>HA27</td>
<td>Eduardo no gusta viajar</td>
</tr>
<tr>
<td>HA27</td>
<td>Dilan si gusta viajar</td>
</tr>
<tr>
<td>HA34</td>
<td>Dilan y Lilian gustan superman</td>
</tr>
<tr>
<td>HA34</td>
<td>…pero Carmen y Eduardo solo gustan spiderman</td>
</tr>
<tr>
<td>HA46</td>
<td>…él gusta viajar</td>
</tr>
</tbody>
</table>
**APPENDIX G**

**OMISSION OF DATIVE CLITIC (HS-INT)**

<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>HA3</td>
<td>Carmen y Esteban encantas las zanahorias</td>
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<td>Dilan gusta ir en aviones</td>
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<td>HA4</td>
<td>Eduardo no gusta viajar</td>
</tr>
<tr>
<td>HA4</td>
<td>Dilan si gusta viajar</td>
</tr>
<tr>
<td>HA7</td>
<td>Dilan y Lilian gustan superman</td>
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<td>HA7</td>
<td>...pero Carmen y Eduardo solo gustan spiderman</td>
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<tr>
<td>HA11</td>
<td>Eduardo encanta helado</td>
</tr>
<tr>
<td>HA11</td>
<td>Carmen y Eduardo encantan verduras</td>
</tr>
<tr>
<td>HA11</td>
<td>...pero dilan y lilian no gustan verduras</td>
</tr>
<tr>
<td>HA18</td>
<td>Carmen y Eduardo gustan los deportes</td>
</tr>
<tr>
<td>HA18</td>
<td>...pero Dilan y Lilian no gustan los deportes</td>
</tr>
<tr>
<td>HA21</td>
<td>Carmen y Eduardo gustan el Caribe</td>
</tr>
<tr>
<td>HA21</td>
<td>...pero Dilan y Lilian no gustan el Caribe</td>
</tr>
<tr>
<td>HA22</td>
<td>Lilian gusta a... a comprar cosas</td>
</tr>
<tr>
<td>HA22</td>
<td>...y Carmen gusta comprar comida</td>
</tr>
<tr>
<td>HA22</td>
<td>Carmeny .. y Eduardo gustan las hamburguesas</td>
</tr>
<tr>
<td>HA22</td>
<td>...y Dilan y Lilian no gustan las hamburguesas</td>
</tr>
<tr>
<td>HA22</td>
<td>...pero Carmen no gusta las pizzas</td>
</tr>
<tr>
<td>HA41</td>
<td>Carmen no gusta pasta</td>
</tr>
<tr>
<td>HA41</td>
<td>...pero Lilian sí gusta pasta</td>
</tr>
<tr>
<td>HA41</td>
<td>Dilan y Lilian gustan sushi</td>
</tr>
<tr>
<td>HA41</td>
<td>...pero Carmen y Eduardo no gustan sushi</td>
</tr>
<tr>
<td>HA41</td>
<td>Carmen y Eduardo no gustan café</td>
</tr>
<tr>
<td>HA41</td>
<td>...pero Dilan y Liliansi gustan café</td>
</tr>
<tr>
<td>HA41</td>
<td>Carmen gusta los insectos</td>
</tr>
<tr>
<td>HA20</td>
<td>...pero Eduardo no gusta los insectos</td>
</tr>
<tr>
<td>HA20</td>
<td>Dilan y Lilian gusta sushi</td>
</tr>
<tr>
<td>HA20</td>
<td>...pero Esteban gusta a spiderman</td>
</tr>
</tbody>
</table>
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Villa-García, J. 2010. To Agree or Not to Agree: Beyond Quintessentially Syntactic Agreement in Spanish. In Colina, S., A. Olarrea, & A. M. Carvalho (eds.), Selected papers from the 39th Linguistic Symposium on Romance Languages (LSRL). Amsterdam/Philadelphia: John Benjamins, 249–266.


BIOGRAPHICAL SKETCH

A native of Madrid (Spain), Diego Pascual’s primary research interests lie in the areas of heritage speaker bilingualism and second language acquisition. Diego’s work, which is approached from a generative point of view, has appeared in several scholarly journals, (inter)national proceedings, and edited volumes.

After receiving a Bachelor of Arts in English philology from the University of Granada in Spain and a Master of Arts in Spanish from Northern Illinois University, Diego completed his Ph.D. from the University of Florida in the Spring of 2013. Diego is currently an Assistant Professor at Texas Tech University.