

THE MORPHOSYNTAX OF GENDER AND WORD CLASS IN SPANISH:
EVIDENCE FROM *-(C)ITO/A* DIMINUTIVES

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By

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ABSTRACT

Since the inception of Distributed Morphology (Halle & Marantz, 1993), there have been two notable, but preliminary, analyses of Spanish gender and word class within this framework: Harris (1999) and Kramer (2015). This dissertation fills in the gaps left by these partial analyses for nominals in particular. It presents a novel word class inventory that captures a larger percentage of the data and posits that the postsyntactic of word class marker targets multiple projections, not just *nPs* (*pace*, Kramer, 2015). Specific evidence for the postsyntactic insertion of word class on multiple projections (namely *nPs* and evaluative projections) arises from the novel two-level analysis proposed for *-(c)ito/a* diminutives whereby the diminutive allomorph *-cito/a* realizes a diminutive node on a separate diminutivizing projection (DimP), while the allomorph *-ito/a* realizes an adjunction to the nominalizing projection *nP*. This two-level analysis accounts for the heretofore morphosyntactically unmotivated patterns of word class markers with respect to each diminutive suffix (i.e., *-ito/a* vs. *-cito/a*). A brief investigation into other evaluative morphology demonstrates that the analysis presented here allows for a unified explanation for the conditioning and subsequent realization of word class markers for simple nominals, evaluative nominals, and perhaps even purely derivational nominals.

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CHAPTER 1

1.1. Introduction

Spanish gender and word class and their impact on nominal morphology have been studied under various frameworks and perspectives (Roca, 1989; Corbett, 1991; Harris, 1991a, 1991b; Lloret & Viaplana, 1997; Bermúdez-Otero, 2013; Kramer, 2015; among many others). The distinguishing feature of this dissertation is that it addresses these topics from a syntactico-centric approach to word formation (namely Distributed Morphology) in which roots are devoid of category-specific information (i.e., features) and that it unifies an analysis for simple nominals, evaluative nominals, and (to a lesser extent) derived nominals. The majority of prior analyses of Spanish nominal morphology (specifically gender and word class) have assumed an isolated word-formation component, or a lexicon. Although there have been some recent preliminary analyses (Harris, 1999; Alcântara, 2010; Kramer, 2015) of gender and word class from a Minimalist and DM perspective, each has its own shortcoming. Harris (1999) gestured towards an analysis for Spanish word class markers in DM, which was furthered by Alcântara's (2010) work on Portuguese. However, both of these relied on the storage of category-specific information on roots, contrary to most recent developments in the DM literature (cf. Harley, 2014a, b). Kramer (2015) upheld the assumption that roots do not contain category-specific information, but its analysis for Spanish was part of a larger work on gender and did not investigate the intricacies of the interaction between gender, word class, and other types of nominal morphology (e.g., evaluative morphology). These are the gaps that I fill in this dissertation.

As such, the questions that I aim to address are the following:

1.1.1. Question 1: What is the relationship between gender and word class in Spanish (if there is one)?

The fact that many nominals ending in /o/ are masculine while many ending in /a/ are feminine prompted Falk (1978) to state that it is probable, that there is a masculine (/o/) and a feminine (/a/)

morpheme. However, more recent work has moved away from this position to assume that there is a distinction between gender and word-final segments (i.e., word-class markers — cf. Harris, 1985, 1991a, 1991b). Klein (1989) assumed that there was a rule that would assign /o/ to the final position of masculine nouns and adjectives on the one hand and /a/ to the final position of feminine nouns and adjectives on the other. Harris (1991a) similarly assumes that there is a redundancy rule that will supply [+FEM] nouns with word-final /a/, while word-final /o/ is supplied for masculine nouns by default (since masculine is the default gender and /o/ is the default word class marker). There is clearly a relationship between the two, but what exactly is it? Furthermore, how can this relationship be accounted for in a framework that assumes Late Insertion and does away with the traditional lexicon (i.e., Distributed Morphology)? I address the former in Chapter 2, where I demonstrate that gender and word class are two distinct properties. The latter is the topic of Chapter 3 and leads to a discussion of the location of gender and word class in the grammar (i.e., Question 2).

1.1.2. Question 2: Where are gender and word class encoded in the grammar?

As mentioned above, it is no longer possible to posit that gender and word class are a part of a presyntactic generative lexicon if one assumes that morphological structure is syntactic structure and that there is no such presyntactic generative lexicon. The question that remains is thus where both are located. If they are related (and I demonstrated above that they most likely are), where can they be positioned in the grammar to allow this relationship to hold? I will address this question in Chapter 3 and then demonstrate the predictions that are borne out by several different types of nominals in Chapters 4 and 5.

1.1.3. Question 3: How are gender and word class accounted for in diminutive contexts?

Diminutivized nominals pose a particular challenge for an analysis concerning the location of gender and word class. This is because they appear to always retain their gender but change word class in

very specific situations. An analysis of gender and word class and the relationship between the two must be able to account for these patterns while upholding the generalizations that hold for simple (non-diminutivized) forms. I address this specific challenge to an account for the relationship between gender and word class and the position of both within the grammar in Chapter 4 with regard to the most productive diminutive suffix in modern Spanish *-(c)ito/a* (Lang, 1990). I propose an analysis that allows gender and word class to be related in both simple nominals and diminutivized contexts. In Chapter 5 I demonstrate how patterns for additional diminutive nominals and augmentative nominals are predicted and accounted for based on the account given for diminutives in Chapter 4.

1.1.4. Additional contributions of this analysis

In responding to the questions above, I make a number of additional contributions to the field of nominal morphology. First, I propose a novel word class inventory that incorporates the seminal works on word class in Spanish (Harris, 1985, 1991a, 1991b) but also some of its criticism (Lloret & Viaplana, 1997; Bonet, 2007; Bermúdez-Otero, 2013; Vadella, 2015). This word class inventory is used to investigate the relationship between gender and word class in diminutive contexts, incorporating the work of Wiltschko and Steriopolo (2007) and Steriopolo (2008). The result is a novel two-position analysis for diminutive formation in Spanish whereby diminutives are formed either by adjunction of a diminutivizing morpheme to *nP* or by the merger of a separate *DimP*. Within this analysis is the original proposition that Spanish word class is not restricted to the nominal projection (*nP*) (*pace* Kramer, 2015); rather, it can be present on other functional projections within the nominal spine. A further consequence of this two-position analysis is that it sheds light on the word class and gender patterns of diminutives and their allomorphy that have puzzled linguists for decades (Jaeggli, 1989; Crowhurst, 1992; Colina, 2003; Smith, 2011; Vadella, 2015; among many others).

1.1.5. Organization of the remainder of this chapter

The remainder of this chapter is organized as follows. In section 1.2, I explain the frameworks that I assume throughout the dissertation: Minimalism and Distributed Morphology. I explain the basic tenets of each in sections 1.2.1 and 1.2.2. I then provide a brief introduction to Spanish and the data incorporated throughout this dissertation in section 1.2.3. Section 1.3 addresses some of the limitations of this dissertation, and section 1.4 provides an outline of the remaining chapters.

1.2. Frameworks: Minimalism and Distributed Morphology

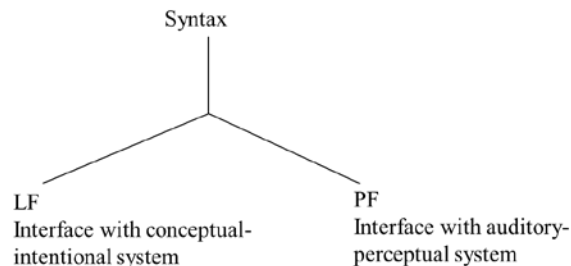
The analysis proposed in this dissertation assumes a Minimalist framework (Chomsky, 2000, 2001). Such a framework incorporates a Y-model of the grammar in which syntax operates independently of phonology (PF) and semantics (LF). This analysis is also developed within a Distributed Morphology (DM) framework. This framework — initially proposed by Halle and Marantz (1993) and further elaborated by others, including Halle (1997); Embick (1998, 2010); Embick and Noyer (2001, 2007); Harley (2014); among others — assumes that word formation takes place in the syntax. There is no isolated word-formation component, such as the traditional lexicon. I explain each one in turn.

1.2.1. Minimalism

The Minimalist framework proposed by Chomsky (2000, 2001) — and elaborated upon in the work of countless others since — assumes that the grammar is comprised of three modules: the syntax, the semantics (LF; or the interface with the conceptual-intentional system), and the phonology (PF; or the interface with the auditory-perceptual system). The syntactic component is the locus of phrase formation and is hierarchical in nature. The semantic component is the locus of interpretation and meaning, while the phonological component is the locus of phonological form (i.e., sounds of language).

These components are relatively isolated. Once phrases are formed in the syntax, the derivation is sent to the interfaces (i.e., LF and PF). This is perhaps easily explained using a Y-shaped model whereby the syntax (the stem) feeds into the semantics and phonology (the branches), as depicted in (1).

(1) Y-model of the grammar



The point at which the syntactic derivation is sent from the syntactic component to the interfaces is referred to as a phase (Chomsky, 2000). The phase marks the point at which one part of the derivation is no longer accessible to manipulation or alteration by the syntactic component. In other words, once a part of the derivation is sent to the interfaces, it is no longer accessible by the syntactic component.

There are several assumptions about what constitutes a phase head (i.e., a head whose merger into the derivation would cause a part of the derivation to be “SpelledOut,” or sent to the interfaces. It was first assumed that only CP and transitive vP could be phases (Chomsky, 2000). More recent work has investigated extending the phase inventory to include DP as well (e.g., Svenonius, 2004) and all vPs (Legate, 2003).¹

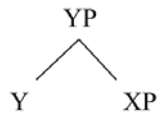
The operations that take place in the syntax before a phase head is reached are: Merge, Agree, and Move. It is this limited inventory of syntactic operations that differentiates Minimalism from other

¹ The phase head inventory is expanded even further in DM. Many DM works, including this one, assume that categorizing heads are also phase heads, as posited by Marantz (2001, 2007).

frameworks and contributes to its name. Distributed Morphology assumes this same set of operations within the syntactic component. I explain each one briefly here.

Merge is the process by which material enters the derivation. A projection is merged to another structure, producing a derivation that is hierarchical. I demonstrate this process in (2), in which YP is merged into the derivation above XP. The resulting structure takes the label from the newly merged element, as we see here.

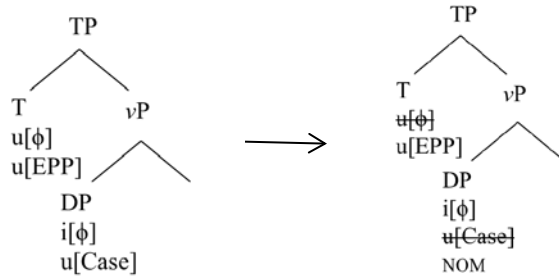
(2) Merge



Agree refers to the process by which two syntactic elements receive valuation of their unvalued features. This operation occurs between a probe, the element with (a) feature(s) in need of valuation, and a goal, an element with a value for at least one of these features. The goal must be in the c-command domain of the probe and contain an uninterpretable feature, making it syntactically active, and there cannot be a closer (higher) goal in the c-command domain.

As Chomsky (2000) explains, agreement occurs when the probe and goal match in a feature, but not in the value for that feature. For example, the head of a TP and the head of a DP that is the subject of the sentence might both have a person feature. However, while the person feature on the DP is valued (with the value that corresponds to the subject, such as first, second, or third person), the person feature on the TP is not. The result is that the goal (DP) will value and delete the uninterpretable feature on the probe (TP). This process is demonstrated below in (3).

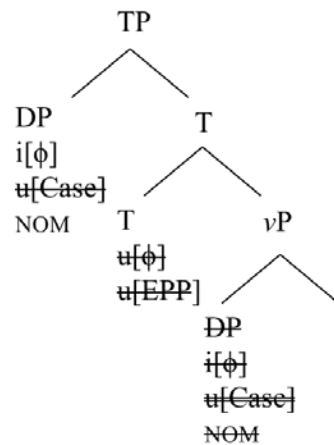
(3) Agree



In this example, the uninterpretable phi-features on T make it syntactically active and cause it to search its c-command domain for a goal with matching features that are interpretable. The highest possible goal is the subject DP in the specifier of vP. This goal has interpretable phi-features that are able to value the phi-features on Tense. As a result, the uninterpretable Case feature on the DP is valued with Nominative Case. This type of feature valuation is slightly different because the probe itself does not have a value for this feature; the value that the goal receives is determined by the identity of the probe — Nominative for T; Accusative or Ergative-Absolutive for ν (Chomsky, 2001, p. 6). Both the phi-features on T and the Case feature on the DP are deleted as the result of their valuation.

Lastly, Move is the combined application of this process of Agree and Merge. Chomsky (2001) provides the movement of the subject to the specifier of T as the canonical example of movement. The uninterpretable phi features on T are valued by the interpretable phi features on the subject. As a result, the subject's uninterpretable Case feature is valued with Nominative Case. Then, the subject Merges in the specifier of T, which results in the valuation of the uninterpretable EPP feature on T.

(4) Move



The three operations described above (i.e., Merge, Agree, and Move) account for syntactic structure building in the Minimalist framework. Distributed Morphology adopts these processes and assumes that word formation is also subject to them. That is, words are created using the same operations: Merge, Agree, and Move, in addition to several other operations that occur outside of the syntactic component. I explain this system in detail in the following section.

1.2.2. Distributed Morphology

The basic assumption of Distributed Morphology is that the tasks of the morphology (i.e., word formation) are “distributed” throughout the components of the grammar (i.e., the syntax, phonology, and semantics). There is no isolated word formation component or lexicon; instead, word formation is governed by several morphological operations and the contribution of three different lists (List 1, List 2, and List 3). These processes and these Lists replace the traditional lexicon. The rejection of the traditional lexicon puts DM at odds with Lexicalism,² a framework that assumes word formation takes place in an

² Chomsky’s (1970) *Remarks on nominalization* is frequently referred to as the beginning of Lexicalism, as it argued that at least some word formation was pre-syntactic. Lexicalist accounts combine this argument with Lapointe’s

isolated lexical component, or lexicon. At the same time, however, it unifies the phrase formation and lexical formation processes by assuming that they share at least some common operations and elements (i.e., Merge, Move, and Agree). What follows is an explanation of the DM framework, including a description of its basic assumptions and processes.

1.2.2.1. Syntactic structure all the way down and List 1

The first of these assumptions was alluded to above. Because word formation mirrors phrase formation, DM assumes that much³ of word formation takes place within the syntactic component. As Harley and Noyer (1999) explain, there is syntactic hierarchical structure “all the way down.” Words are built via the same processes as phrases (i.e., Merge, Move, and Agree). Much like phrases, words consist of hierarchically organized syntactic projections. These projections are headed by morphemes. Morphemes are thus syntactic nodes or more specifically, bundles of morphosyntactic features. In this aspect, DM departs from the traditional definition of morpheme as “a distinctive collocation of phonemes...having no smaller meaningful parts” (Morpheme, 2017). A DM morpheme does not contain phonological material per se, but rather phonological material is inserted in the postsyntactic component PF.

The morphosyntactic features that compose a morpheme are found in List 1, the set of morphosyntactic features that appear on syntactic elements. Some of these features include the feature [PL], which differentiates a singular entity from a plural one, and the feature [PAST], which distinguishes a past tense verb from a non-past tense verb. Within this list are morphosyntactic feature bundles (i.e., morphemes) that can be merged into the syntactic structure. This list is, therefore, the element in DM that is most comparable to the traditional lexicon in a Lexicalist framework — two differences being,

(1980) Lexical Integrity Hypothesis, which claims that words are built by mechanisms that are specific to word formation. Generally, these mechanisms are seen as isolated from the other modules of the grammar. Examples of such approaches include Lieber (1992) and Aronoff (1994), among many others.

³ Some aspects of word formation take place at PF, as I will explain in the remainder of this chapter.

however, that there are no operations within this list such as those that exist in a traditional lexicon and that these feature bundles do not consist of phonological material.

The bundles of morphosyntactic features are merged into the syntactic component, creating a hierarchical structure. The derivation can then be sent to the interfaces, just as I explained above. It is at the interfaces that the other two Lists become involved in the process of word formation. One governs the insertion of phonological material, while the other regulates semantic interpretation. I will explain the role of each in turn.

1.2.2.2. Late Insertion and List 2

Distributed Morphology operates under the assumption of Late Insertion. This term refers to the point at which phonological material enters the derivation. Here the modifier “Late” specifies that this phonological material enters the derivation outside of the syntactic component (i.e., after the completion of syntactic processes at PF). A Late Insertion approach follows Beard’s Separation Theory in which semantic and syntactic features are separated from their phonological realization. Phonological material is therefore not relevant for and cannot impact syntactic operations.

Within DM, Late Insertion manifests itself in the competition between phonological forms for insertion at particular syntactic nodes. In this way, the model is a realizational one in which phonological material realizes particular morphosyntactic features. The List that governs the insertion of this phonological material is referred to as List 2 or the Vocabulary. It contains the contexts in which specific phonological material is inserted based on the features at a specific node, or morpheme. I demonstrate this competition for the various allomorphs of the past tense in English.

The past tense in English is realized in many instances by suffixation of /d/ to a verbal form (e.g., *smoked*, *coughed*). In other circumstances, however, the past tense requires no morphological change (e.g., *put*, *cut*) or the addition of only /t/ (e.g., *dreamt*, *dealt*). This variation is captured in the Vocabulary

by pairing specific realizations of the [PAST] feature to certain contexts. Halle and Marantz (1993) provide the following simplified Vocabulary Items for the English [PAST] feature.

(5) (Simplified) Vocabulary Items for English [PAST]

[PAST]	↔	∅ / ___	√PUT, CUT, etc.
[PAST]	↔	/t/ / ___	√DEAL, LEAP, etc.
[PAST]	↔	/d/	

The contexts for insertion are ordered based on the Paninian principle in which the most specific context takes precedence over the least specific context. The insertion of a null morpheme applies in the most specific of instances, while the insertion of /d/ applies in the least specific context. The least specific context in Distributed Morphology is typically known as the “elsewhere case.” It is not necessary to list the contexts of insertion for the least specific allomorph; it will be inserted when none of the other rules can apply.

Furthermore, the Vocabulary is governed by the principle of underspecification. Halle (1997) codified this property in his Subset Principle. The Subset Principle states that a Vocabulary Item must match all or a subset of the features on the terminal morpheme. If the Vocabulary Item has more features than the morpheme, Insertion of that item will not occur. When there is more than one item that meets the condition(s) for insertion, the item that matches the morpheme in the greatest number of features will be inserted. I illustrate this process for the English verb *be* in (6), adapted from Halle (1997).

(6) Vocabulary Items for *be*

(i)	$am \leftrightarrow __ + [+Auth, -Pl, +Pres, +Finite]$	1Sg. Pres
(ii)	$i-\langle z \rangle \leftrightarrow __ + [-Pl, +Pres, +Finite]$	3Sg. Pres
(iii)	$was \leftrightarrow __ + [-Pl, +Finite]$	1/3Sg. Past
(iv)	$are \leftrightarrow __ + [+Pres, +Finite]$	Pres. elsewhere
(v)	$were \leftrightarrow __ + [+Finite]$	Past elsewhere
	$be \leftrightarrow __ \langle elsewhere \rangle$	

As in (5), the Vocabulary Items are listed in order of decreasing specificity. The phonological string *am* is inserted in the most specified context. The least specified present form is *are*, which occurs with second person (both singular and plural) and third person plural. Instead of specifying that this form occurs in the second person and third person plural (by listing each of these contexts), the Vocabulary Item contains an underspecification of the features in these contexts and includes only those necessary to distinguish these conditions from a less-specified form (such as *were* or *be*). In other words, not all of the features present on these morphemes are included in the specified context, but Vocabulary Insertion can still take place since no feature on the morpheme contradicts those in the Vocabulary Item (i.e., -Pres or -Finite). This underspecification minimizes the listing of specific contexts for Vocabulary Insertion, paring down the amount of information that must be stored and capturing generalizations for similarities of forms that have several features in common.

Note also that simultaneous to Vocabulary Insertion is the process of Linearization (Embick & Noyer, 2001). Linearization is the conversion of hierarchical structures into linear strings of phonological material. Embick and Noyer (2007) argue that Linearization is the result of the need for hierarchical structures to be presented in real-time. In other words, hierarchical structure cannot be uttered or interpreted in real-time; a morphological operation, namely Linearization, must act to produce a structure satisfying this restriction (i.e., a linear one).

1.2.2.3. An aside on root suppletion and readjustment rules

In reference to the Vocabulary, there is not agreement among DM scholars as to the treatment of nonfunctional material. Earlier work in DM (Halle, 1992) assumed that some morphemes had fixed phonological material while others had variable phonological material whose expression occurred postsyntactically. Later versions of DM (e.g., Harley & Noyer, 1998, 1999) assumed that all phonological material was expressed postsyntactically but that competition among phonological forms only occurred for functional morphemes (f-morphemes). Lexical morphemes (l-morphemes), in contrast, were not subject to competition.

The issue still remains unresolved. Borer (2009) (among others) assumes that the phonological material for roots is present in the syntax. Siddiqi (2006) and Harley (2014), on the other hand, have argued that the phonological material for roots competes for postsyntactic insertion in the same way as that for functional morphemes. In order to distinguish one root from another, Harley (2014) follows Pfau (2000, 2009) and Acquaviva (2008) in assuming that roots are individuated in the syntax via indices and not via phonological material or semantic material.

(7) Roots differentiated by indices

$\sqrt{322}$, $\sqrt{54}$, $\sqrt{181}$, etc.

Roots will then appear as those in (7). There are no phonological or semantic criteria to distinguish one root from other; the only means of differentiation is via an index. It is not the case that one bundle of features is *assigned* a particular index, but rather that an index signifies a particular root, which is then realized with particular phonological material and interpreted in a specific way following instructions given at PF and LF, respectively.

Two advantages emerge as a result of this approach. First, we are able to maintain a sharp division between the syntax and the interfaces, as desired following the Y-model presented in (1). Only syntactically relevant material is present in the syntax, and no phonological material is present before the derivation is sent to the interface. This enables us to avoid a violation of the Legibility Condition (cf. Chomsky, 2000; 2001), which stipulates that morphosyntactic features in a component (of the grammar) must be interpretable in that component. For instance, syntactically uninterpretable features, such as phonological features, should not be present in the syntax.

Second, we are able to account for the complementary distribution of multiple phonological realizations of the same root. For instance, the English verb *go* is associated with at least two distinct phonological sequences: /gow/ (as in *go*, *going*, *gone*, *goes*) and /went/ (as in *went*). Assuming that roots are not individuated phonologically allows us to claim that these sequences realize the same root, just in different environments. Without such an assumption, we have no way to explain why phonological strings /gow/ (as in *go*, *going*, *gone*, *goes*) and /went/ are in complementary distribution (i.e., the gaps in each verbal paradigm do not overlap) (Harley, 2014, pp. 237-238).

One caveat that I provide is that this assumption necessitates overgeneration. Any root is in theory permitted under any categorizing head. This framework relies on crashed derivations to filter out the possible and impossible combinations of roots and categorizing heads. I discuss this topic more in detail in Chapter 3 as it pertains to gender in particular.

I also point out that there is another way to account for roots realized by different phonological strings: postsyntactic readjustment rules. Such phonological readjustment rules apply after Vocabulary Insertion and transform only a specific set of phonological strings into different phonological forms (taking *sing*, for instance, and converting it into *sang* in a particular context). These rules take place before regular phonological processes (those based on the phonotactic properties of the language, such as epenthesis or deletion).

Of course, it is difficult for a readjustment rule to account for the difference between *goes* and *went*, for instance, but it seems less farfetched to assume a slight phonological alternation creates *kep* (as in *kept*) from the root KEEP (as in *keeping*). For this reason, many (Noyer, 1992; Halle & Marantz, 1993, 1994; Embick & Halle, 2005; Harris & Halle, 2005; Bobaljik, 2011; Marantz, 2013; Harley & Tubino Blanco, 2013; among others) have assumed the possibility of both root suppletion and phonological readjustment. One advantage to a DM framework involving readjustment rules and suppletion, state Embick and Halle (2005), is that it permits the distinction between instances of “true suppletion” (phonologically unrelated forms) and instances of partial suppletion (phonologically related forms). A DM framework with both options, however, will be forced to address the question of where readjustment rules end and where suppletion begins. How similar must two forms be to be “phonologically related”? How dissimilar must two forms be in order to be considered unrelated? This is a difficult distinction to draw and a slippery slope.

For the purposes of this dissertation, I will assume that there are no readjustment rules. Root suppletion is the result of allomorphy and the insertion of different phonological sequences for the same root in a particular context. I, therefore, will also assume that roots are devoid of phonological material and can only be individuated by means of indexation, following Pfau (2000, 2009), Acquaviva (2009), and Harley (2014).

1.2.2.4. Semantic interpretation and List 3

Returning to the outline of Distributed Morphology, I explain the role of List 3. This list, known as the Encyclopedia, contains information on semantic interpretation. Much like the Vocabulary Entry, the Encyclopedia specifies the interpretation assigned to a given collection of features in a specific context. This is necessary when the meanings of items are noncompositional, i.e., when the meaning of a word or phrase cannot be predicted by the meaning of its parts. A well-cited example of such a phrase is

the expression *kick the bucket*, which can have both a compositional meaning (i.e., ‘to kick a literal bucket’) and a noncompositional meaning (i.e., ‘to die’). The interpretation DIE could not be determined by its morphosyntactic structure.

The Encyclopedia also contains information on the interpretation of lexical items or roots (l-morphemes in Harley & Noyer, 1998a). The interpretation of the root for *cat* might be something like ‘fuzzy animal’ (Harley & Noyer, 1999, p. 4) or the root for *house* ‘place people live.’ Following the assumption that roots are individuated in the syntax only by means of indexation, (cf. Pfau, 2000, 2009; Acquaviva, 2008; Harley, 2014), semantic interpretation cannot take place until an indexed root has been matched to a meaning in the Encyclopedia.⁴ This allows us to maintain a sharp division between the syntactic component and the semantic component in the same way that we did for the syntactic component and the phonological component.

1.2.2.5. An aside on properties of roots

Another point of disagreement within proponents of DM concerns whether or not roots are devoid of semantic content (see in particular the commentary for Harley (2014)). For the sake of consistency, I follow Harley (2014) in assuming that roots are devoid of both phonological material and semantic interpretation. This allows for a sharp division between the syntactic, semantic, and phonological components, as mentioned above. It also, however, requires one further stipulation about roots and the material they contain.

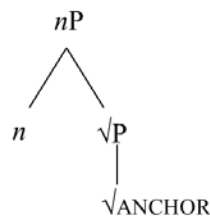
If roots are differentiated only by indices, then they will also not contain category-specific information. In other words, roots will not be listed as nominal, verbal, adjectival, adverbial, etc.

⁴ There is no need to suppose an additional mechanism to ensure that, for example, the phonological material /'kæt/ is matched to the meaning CAT. There are specific instructions for the realization and interpretation of the morpheme used to create the word *cat*. Though the two processes are independent, they act on the same set of features, so there is no need to assume an additional mapping mechanism or list.

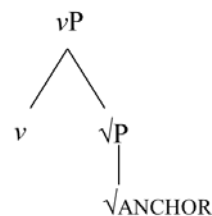
Following Marantz (2001) and Arad (2003), I assume that roots are therefore uncategorized until they are merged as the complement of a categorizing head (e.g., *n*, *a*, *v*).

The argumentation for the existence of a single root that can be either a verb or a noun comes from several sources. The first is Kiparsky's (1982) distinction between root-derived verbs and noun-derived verbs. A verb is considered root-derived when it does not entail the presence of a noun with a shared semantic interpretation. In contrast, a verb is considered noun-derived when it does entail the presence of a noun with a shared semantic interpretation. The verb *to anchor* exemplifies the first type, while *to tape* exemplifies the second. One can anchor a boat with a rock or other heavy item, while one cannot tape without tape. This causes Kiparsky to assume that the pair *anchor/to anchor* consists of a root-derived noun and verb, while the pair *tape/to tape* consists of a root-derived noun and a verb built on the resulting noun.⁵ The two structures are given below.

(8)



(9)



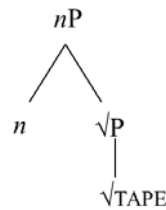
The root ANCHOR⁶ can be either a noun or a verb depending on whether it is merged as the complement of *n* or *v*. When it is merged as the complement of *n*, the result is a noun. The merging of this root as the complement of *v* results in the verb *to anchor*. In contrast, the root TAPE can only become a

⁵ I will elaborate on derivational processes in DM in Chapter 4 in which I address gender and word class in derivational contexts.

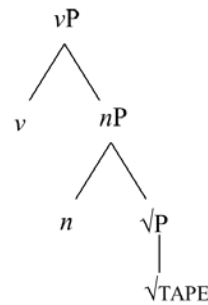
⁶ Note that the root would only contain an index. I have included the phonological/semantic material here for the sake of clarity and will continue to do so for other roots for ease of exposition.

root-derived noun and not a root-derived verb. To arrive at the verb *to tape*, a second categorizing head must be merged above the first, nominalizing head.

(10a) Root-derived noun



(10b) Noun-derived verb



Further argumentation for this lexical decomposition approach comes in the form of levels of semantic interpretation and compositionality (see Marantz, 2001; Arad, 2003). Although the specifics of these arguments have been cast into doubt (cf. Harley, 2014), most DM scholars continue to assume that roots are categorized via their position as a complement to a categorizing head. I will, therefore, follow this assumption.

Since roots do not pertain to a specific syntactic category until they are merged as the complement to a categorizing head, it would logically follow that they do not possess any category-specific information.⁷ They will also not be able to host any material that is specific to any one or even a subset of elements pertaining to these categories. Especially important for the purposes of this dissertation is the subsequent conclusion that roots in Spanish cannot have gender or word class, as there are some

⁷ One question that might arise in this approach is how lexical aspect could be accounted for, particularly in how it interacts with syntactic frames or structures. For example, one might wonder where it is encoded that some verbs in English (e.g., *give*, *bring*, etc.) can undergo dative shift while others cannot (e.g., *wash*, *acquire*, etc.). Preliminarily, I see two options. The first is to posit that what we might describe as lexical aspect is encoded as a syntactico-semantic feature that is included in the morpheme itself. In other words, the feature that allows dative shift is included in the set of features that would be realized as, for example, *give*, and not in the set of features realized as *wash*, for example. The other is to assume that there is an Aspect projection with this feature that selects for particular verbs (see Embick & Halle, 2005 for a structure that assumes an AspP).

elements in these categories that do not have either (e.g., adverbs lack gender) or both (e.g., verbs lack both gender and word class, having theme vowels instead — cf. Oltra-Massuet, 1999; although this work describes Catalan, a similar set of theme vowels surface in Spanish as well). I will adhere to this restriction in the analysis that I propose for gender and word class in Spanish.

1.2.2.6. Additional morphological operations

I stated above in section 1.2.2.1 that DM assumes that most of word formation takes place in the syntax. But, there are several additional operations that are part of the DM framework that do not take place in the syntax. These operations are morphological and operate after the derivation has been sent to PF. Such operations are used to account for instances in which the syntactic structure does not mirror the structure at PF. They consist of Morphological Merger, including Lowering and Local Dislocation (Marantz, 1984); Fusion; Fission (Noyer, 1992); Impoverishment (Bonet, 1991); and insertion of dissociated nodes (Embick, 1997, 1998). Due to space constraints, I do not delve into the specifics of each of these operations here with the exception of the operation that inserts dissociated nodes at PF. This process will be particularly relevant for this dissertation, as I assume that it is the means by which word class enters the derivation. I address others briefly at relevant points throughout the dissertation.

1.2.2.7. Insertion of dissociated nodes

The insertion of dissociated nodes is a language-specific operation available to the morphological component, as described by Embick (1997, 1998). This process consists of the postsyntactic insertion of nodes at PF that can then be realized phonologically. It is argued that this material is inserted postsyntactically because it does not contribute meaning, is not syntactically active, and is only necessary to create a morphologically well-formed word. If this material were included in the syntax, it would violate the Legibility Condition because it would not be interpretable in the syntactic component. This

marks the contrast between these features and syntactically interpretable features (e.g., tense, gender, and person). Examples of such material include theme, case, and agreement (Halle & Marantz, 1993).

Oltra-Massuet (1999) provides one example of an analysis that incorporates dissociated nodes to account for morphological well-formedness requirements (i.e., requirements with no syntactic or semantic basis). She argues that a theme node (hosting a theme vowel) must be inserted in Catalan for verbs in order to satisfy a Catalan-specific morphological well-formedness requirement on verbs. This explains why verbs almost always appear with a certain vowel in front of the tense and agreement morphology.⁸ For example, the theme vowel /a/ appears in the imperfect future indicative forms of *cantar* ('to sing'), while the theme vowel /e/ surfaces in many instances of the present indicative.

(11) Theme Vowels in Catalan

(a) Future Indicative

cantaré	'I will sing'
cantaràs	'you (sg.inf.) will sing'
cantarà	'he/she/you (sg.for.) will sing'
cantarem	'we will sing'
cantareu	'you (pl.inf.) will sing'
cantaran	'they/you (pl.for.) will sing'

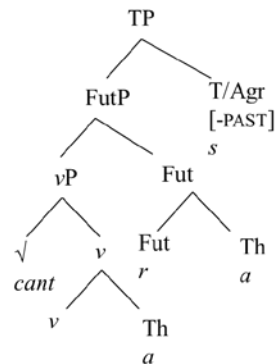
(b) Present Indicative

canto	'I sing'
cantes	'you (sg.inf.) sing'
canta	'he/she/you (sg.for.) sing'
cantem	'we sing'
canteu	'you (pl.inf.) sing'
canten	'they/you (pl.for.) sing'

Oltra-Massuet and Arregi (2005) argue that there are also dissociated theme nodes for Spanish verbs. The insertion of such nodes occurs on both *v* and the Future node for the future verb forms. This is the result of their assumption that theme nodes are inserted for each functional projection, a theory that is further supported but also contradicted by the analysis that I propose in this dissertation. The derivation for the Spanish verb *cantarás* ('you will sing') is included below to illustrate this insertion process.

⁸ Note that Oltra-Massuet (1999) assumes that there is a theme vowel between the tense and agreement morphology in addition to there being a theme vowel right after the verbal root for some tense-aspect-mood combinations, such as the future. Due to space constraints, I do not detail all of the specifics here.

(12) Derivation with theme nodes inserted



The reason that nodes such as Theme must be inserted into the morphological structure before Vocabulary Insertion is that their realization is determined contextually. The realization of theme, case, and agreement, for example, can depend upon the features of the surrounding material. Oltra-Massuet (1999) provides the following example for the Vocabulary Items for the theme vowels in Catalan, where we clearly see that the theme vowels are contextually determined by specific verbal features. These verbal features (i.e., features that are included in the feature bundle for specific verbs) are designated by Greek letters, as demonstrated in this set of Vocabulary Items.

(13) Vocabulary Items for theme vowels in Catalan⁹

- (a) /u/ ↔ [+β]/__[+Participle, Past]
 /Ø/ ↔ [+β]/__[+Future]
 /e/ ↔ [+β]/ <elsewhere>
- (b) /ɛf/ ↔ [-γ]/__[-Past]
 /i/ ↔ [+α]/ <elsewhere>
- (c) /ɛ/ ↔ [-α]/__[+Part, +Plural]
 /a/ ↔ [+α]/__ <elsewhere>

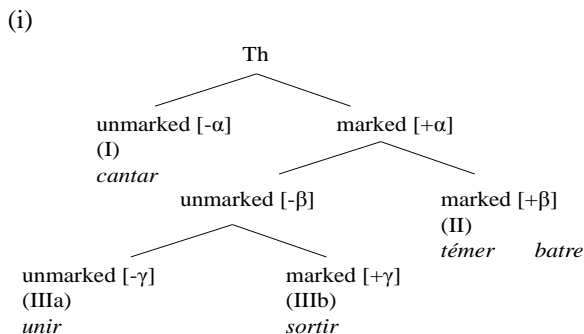
The dissociated nodes are subject to Vocabulary Insertion in the same way that syntactically-active, functional morphemes are. Vocabulary Insertion is regulated by the ordering of Vocabulary Items within the Vocabulary Entry for a particular dissociated node, just as for functional morphemes.

Dissociated nodes, therefore, are subject to the same contextual allomorphy as functional morphemes.

The two types of nodes (i.e., morphemes) are simply incorporated into the derivation in different components of the grammar.

An example of postsyntactic case insertion comes from Marantz (1992). Marantz (1992) argues that there is a specific CASE affix included at what he refers to as Morphological Structure (i.e., PF) when

⁹ The features that the theme vowels realize are primitive features, somewhat like stand-ins for features whose exact identity and nature are as yet undiscovered (Oltra-Massuet, 1999 leaves this topic for future research). They are used merely to construct the markedness hierarchy given in (i). The features therein are subject to feature-filling rules and Impoverishment rules. I do not elaborate on these here, as they are beyond the scope of this dissertation. I refer the reader to Oltra-Massuet (1999) for more details.



a language requires it in order to satisfy a condition on morphological well-formedness. There is then a hierarchy to determine how the case feature is included on the CASE affix. The hierarchy is given here:

(14) case realization disjunctive hierarchy:

- lexically governed case
- “dependent” case (accusative and ergative)
- unmarked case (environment-sensitive)
- default case

Marantz (1992) explains that “as soon as a CASE affix finds some case feature that it is eligible for, it takes that CASE” (p. 24). Because this dissertation will not focus on case (and because the process is quite-detailed), I do not discuss details further here, but refer the reader to Marantz (1992) for more specifics.

In addition to preventing us from violating the Legibility Condition, the postsyntactic insertion of nodes for elements like theme vowel and case enables us to account for the expression of overt morphemes that do not correspond with a terminal node in the syntax. For example, we are able to explain the presence of the theme vowel as an entity distinct from tense and agreement that correlates with certain features for a given verb. I will demonstrate how the same assumptions facilitate the derivation of nouns with word class markers in Spanish in the remaining chapters of the dissertation.

1.2.3. Introduction to Spanish and the data used in this dissertation

Spanish is a modern Romance language that is spoken across several countries and continents. In 2015, the Instituto Cervantes estimated that there are 470 million native speakers. It should come as no surprise, then, that there is much variation across its many dialects. In order to minimize noise in the data that I use throughout the dissertation, I have decided to focus on only one specific dialect: Peninsular Spanish (though itself contains multiple dialects). The informants that I use are native speakers of Peninsular Spanish, and unless otherwise indicated, the data in this dissertation has been gathered from

my own fieldwork. I will make reference to other dialects where relevant (particularly for the different diminutive suffixes examined in Chapter 5). However, the vast majority of the data will focus on Peninsular Spanish.¹⁰

1.3. Limitations

The primary aim of this dissertation is to investigate the processes involved in the derivation of nominals, particularly with regard to gender and word class. As a result, I have not engaged in a discussion of how gender agreement takes place. What I do include, however, is the idea that a noun's gender is discerned by the agreeing elements in an utterance (as I explain in Chapter 2). Gender agreement is relevant but only in so far as it allows us to see the gender of a given noun, which I (among others, including Hockett, 1958; Corbett, 1991; etc.) argue is a property inherent to that noun.

A further limitation of this goal is that I do not address gender or word class as they pertain to other categories. I set aside the pronominal system in its entirety and also do not investigate the location of gender and word class for other categories (i.e., gender for determiners, adjectives, and past participles and word class for adjectives, adverbs, verbs, and past participles). The rationale for the creation of this demarcation point is two-fold: (1) nominals are the only ones with gender as an inherent property, so it follows that an investigation into the relationship between the two should begin there; (2) limitations of time and space, as the project at hand is already quite vast.

While investigating the position of gender and word class in the context of evaluative nominals and derived nominals, I abstract away from much of the semantic interpretation of these items. There is

¹⁰ I do note that there is still a great amount of variation among native speakers of Peninsular Spanish. In these cases, I have used data that is acceptable for the majority of those surveyed (who come from different regions). It is still possible, however, that some of the data might seem ungrammatical or infelicitous to specific native speakers. In fact, I have found that there is a great amount of interspeaker and even intraspeaker variation particularly where diminutive formation is concerned. It therefore seems near impossible to compile a data set that is representative of a region as a whole let a whole a continent, but I have made an effort to point out variation where it exists and to propose possible ways of accounting for it in the analysis at hand.

still much work to be done on the specifics of the Encyclopedia and semantic interpretation from the DM perspective (though see Harley & Noyer, 2000; Marantz, 2013; and Harley, 2014a, 2014b for some preliminary work). I do not, therefore, describe in detail how each morpheme receives its specific interpretation, focusing mostly on syntactic structure of words and their phonological realization.

This dissertation is not intended to pose a cross-linguistic explanation for the interactions between gender and word class. It is instead a detailed study of Spanish that allows for a greater understanding of the morphology within this particular language. I provide novel solutions to several dilemmas addressed in previous literature (e.g., a novel word class inventory, a split location for diminutivization and augmentation, and a split location for word class). I note some cases in which other Romance languages (namely Portuguese and Italian) can further elucidate the proposals I make, but do not investigate these languages in great detail, reserving them as a topic for future research.

Lastly, this dissertation approaches the topics of gender, word class, and nominal morphology from a theoretical perspective. I investigate the structures, processes, and operations responsible for gender and word class assignment and morphological realization and interpretation (though to a lesser extent). As such, I have not incorporated a sociolinguistic or psycholinguistic approach to gender or word class.

1.4. Dissertation outline

The dissertation consists of six chapters: four chapters of analysis with an introductory and concluding chapter. In the first portion of the dissertation, I define terms before progressing into the empirical data for Spanish that will simultaneously drive and promote the analysis presented in Chapters 3 and 4. The chapters are organized as follows.

Chapter 2 defines the terms that will be used throughout the dissertation. I define gender, incorporating the work of Corbett (1991) and Kramer (2015) specifically. I also define word class, based

on the definition proposed by Harris (1985, 1991a, 1991b, among others). These definitions are then used to investigate the gender and word class systems of Spanish. I demonstrate that the Spanish gender system for nominals is binary, consisting of masculine and feminine gender, which is reflected in agreeing elements (e.g., determiners, adjectives, past participles, etc.). There is little controversy among previous analyses with regard to the number of genders in the Spanish nominal system. The exploration of the types of gender in Spanish (semantically-determined, formally-determined (i.e., default), and arbitrarily-determined) leads up to the proposal of an analysis for gender in Chapter 3 that can account for these different types. The word class system of Spanish has been the subject of much disagreement over the last several decades. I conclude Chapter 2 by proposing a novel word class inventory.

In Chapter 3, I investigate previous analyses for the location of gender and word class. I explain that the most viable option from a Distributed Morphology perspective is one in which gender is on *n* in the syntactic component (following Kramer, 2015). Similarly, I argue that word class markers can also be located on *n*, but outside of the syntactic component, as I assume that they are inserted postsyntactically (i.e., at PF).

Chapter 4 refines the analysis proposed in Chapter 3 by investigating the properties of diminutives in Spanish. I posit that diminutives are formed in two possible manners: via adjunction to a nominalizing projection or via a separate diminutivizing projection (DimP). The latter motivates an analysis whereby word class can be inserted on a projection in the derivation that is above *n*. This prompts me to amend the analysis proposed in Chapter 3 to extend the possibility that word class is inserted postsyntactically on projections in the nominal spine that are above the categorizing *n* head. In the process, I am able to account for some complicated diminutive allomorphy (*-cito/a* vs. *-ito/a*) that has been the subject of much debate.

Chapter 5 tests the analysis for diminutives posed in Chapter 4 on other diminutive suffixes in Spanish (namely *-(c)illo/a*, *-(c)ín/ina*, and *-(c)ico/a*). I propose that multiple diminutivizing suffixes can

be accounted for by assuming the presence of specific semantic features that distinguish specific terminal nodes and cause their dissimilar realization. The latter portion of the chapter then investigates the properties of augmentatives. I argue that certain augmentatives, different from diminutives, are formed via the merger of categorizing projections with an augmentative feature. The patterns that these augmentatives display fall out from the assumption that gender and word class are located on *n*.

The dissertation concludes in Chapter 6, which addresses directions for further research. I pinpoint some unanswered questions and directions for future investigations, particularly within some of the languages mentioned throughout the dissertation (e.g., Portuguese, Italian, etc.). Lastly, I show that the predictions that this analysis makes for derived nominals are also upheld. Assuming that gender and word class are on *n* facilitates an account whereby gender and word class change with the addition of derivational morphology.

CHAPTER 2

2.1. Introduction

The purpose of this chapter is to define the terms *gender* and *word class* as they will be used over the course of the dissertation and then to investigate each in turn with regard to Spanish. I begin with a thorough investigation of previous definitions of gender and types of gender in section 2.2. I use this review of the literature to develop a novel definition of gender. In section 2.3 I look specifically at gender in Spanish. I outline the gender system of Spanish, using the definition developed in section 2.2 and demonstrate the types of gender found in the language. The purpose of this thorough investigation of gender in Spanish is to determine what types of gender must be accounted for in the gender system that I present in Chapter 3. Particularly noteworthy are the distinctions between uninterpretable and interpretable gender and predictable versus default gender. After a brief summary on gender, I transition into a discussion of word class. I propose a definition based on previous work, namely Harris (1985, 1991a, 1991b, 1996, 1999), in section 2.4. I then examine the word class inventory of Spanish in section 2.5 and conclude with a novel inventory that takes into account some of the criticisms leveled against Harris' work. I conclude the chapter with a summary of gender and word class in section 2.6.

2.2. Defining gender

The term *gender* can create significant confusion due to its various uses in the English language. The two usages that are most relevant for this dissertation are the following: (1) in reference to biological sex (male or female) and (2) in reference to grammatical gender. The focus of this dissertation is the latter, which can be related to the former, but need not be. I elaborate on this below. In this section, I discuss previous definitions of grammatical gender and describe the term's usage before proposing the definition that I will use for the remainder of the dissertation.

In his seminal work on gender, Corbett (1991) cites Hockett (1958, p. 231), who defines grammatical gender as “classes of nouns reflected in the behavior of associated words.”¹ These associated words are often² the other elements of the DP (e.g., adjectives, determiners, quantifiers, etc.), and the “behavior” is morphological agreement. Thus, grammatical gender is used to denote the property of a noun that is relevant for morphological agree relations (or concord).³ The result of defining grammatical gender in this fashion is that the inventory of nouns in a language is sorted into groups based on shared patterns of agreement/concord on agreeing elements. I provide examples of agreement between a noun and other elements in the DP in (1) and (2).

(1) Agreement with adjective⁴

(a)	nov-yj	žurnal	(b)	nov-aja	kniga	(c)	nov-oe	pis'mo
	new-sg.m.	magazine-sg.m.		new-sg.f.	book-sg.f.		new-sg.n.	letter-sg.n.

(1) shows morphological agreement for gender on adjectives in Russian. The adjective for ‘new’ receives a suffix that varies depending on the noun it modifies. When modifying ‘magazine,’ the adjective takes a different suffix from the one that appears in front of ‘book.’ That suffix is different still from the one that appears with ‘letter.’ This behavior of the adjective is the criterion used to sort nouns into groups. Those that cause the pattern in (a) form one group, those like (b) another, and those like (c) a third. These groups

¹ Hockett’s usage of the word “class” here is confusing due to the existence of word classes, which are a separate phenomenon. I will elaborate on these in section 2.4. I prefer to use the word “groups” in my definition of gender in order to avoid this confusion.

² Some languages, such as Spanish, also show agreement in participles (Spanish shows agreement on passive past participles). Very few languages show gender agreement on complementizers. Some of these include Najdi Arabic, Modern Standard Arabic, and West Germanic dialects (Lewis, 2013). Others also have gender agreement on non-participial verbs, such as many Semitic languages and Russian (Kramer, personal communication). For the purpose of this dissertation, I will focus on DP-internal agreement.

³ My usage of agreement here does not refer to Chomsky’s syntactic Agree operation. It merely acknowledges that there is morphological material that appears on another element in the same utterance, which itself reflects the group/gender to which the noun belongs.

⁴ This data was taken from Corbett (1991, p. 106).

are classified as masculine, feminine, and neuter, respectively.⁵ The French data in (2) demonstrates similar gender agreement on determiners.

(2) Agreement with determiner

- | | | | | | |
|-----|-----------|-----------|-----|-----------|-------------|
| (a) | le | jour | (b) | la | nuit |
| | the-sg.m. | day-sg.m. | | the-sg.f. | night-sg.f. |
| (c) | un | jour | (d) | une | nuit |
| | a-sg.m. | day-sg.m. | | a-sg.f. | night-sg.f. |

Depending on the gender of the noun, the determiner will take one of four forms: *le* or *la* for definite nouns and *un* or *une* for indefinite nouns.⁶ Just as in the Russian data above, the agreement pattern sorts the nouns into groups: one whose nouns take *le* and *un* and one whose nouns take *la* and *une*. These two different genders (or groups) in French have been classified as masculine and feminine, respectively.

As demonstrated by the data for Russian and French, languages differ in the inventory of genders that they possess. Russian sorts nouns into three gender groups, while French sorts them into only two.⁷ Languages also differ with regard to the particular elements that exhibit variable behavior based on the gender of the noun (what I have termed “agreeing elements”). Many languages from various language families display gender agreement for adjectives, including Russian and French. There is much variation in the inventory of “agreeing elements” a language possesses, as explained above.

⁵ In these examples, and throughout the dissertation, I have glossed the agreeing elements (determiners, adjectives, quantifiers, etc.) with a particular gender. As explained in the definition above, gender is a property of nouns that is reflected in the behavior of other elements. By glossing the agreeing elements as masculine, feminine, or neuter, I am not claiming that these elements have these genders. I am merely underscoring that these are the variants of the agreeing elements that are used with masculine, feminine, or neuter nouns.

⁶ I note here that vowel-initial nouns in French cause the article to undergo elision, in which the final vowel of the article is lost. This occurs for both the masculine and feminine definite article, such as in *l'arbre* (‘the tree’) and *l'église* (‘the church’), which are masculine and feminine, respectively.

⁷ French does also have a neuter, but it is limited to the pronominal system. The reader is referred to Lang and Perez (2004) for further information.

Regardless of the number of genders and the inventory of elements that demonstrate variable behavior in a language, the classification of a noun into the wrong gender results in an ungrammatical sentence. This process is demonstrated for Russian and French in (3) and (4) below.⁸

(3) Failed agreement in Russian

- | | | | |
|---------------------------|--------------------------|--------------------------|---------------------|
| (a) *nov-aja
new-sg.f. | žurnal
magazine-sg.m. | (b) *nov-oe
new-sg.n. | kniga
book-sg.f. |
| (c) *nov-yj
new-sg.m. | pis'mo
letter-sg.n. | | |

(4) Failed agreement in French

- | | | | |
|----------------------|-------------------|----------------------|---------------------|
| (a) *la
the-sg.f. | jour
day-sg.m. | (b) *le
the-sg.m. | nuit
night-sg.f. |
| (c) *une
a-sg.f. | jour
day-sg.m. | (d) *un
a-sg.m. | nuit
night-sg.f. |

In these examples, the classification of the noun into the opposite gender group — as reflected in the usage of the adjectival suffix or determiner associated with that group — is ungrammatical. We see here that gender assignment is not just a matter of speaker preference; it is one with repercussions for grammaticality. The phrases above are ungrammatical, not just infelicitous.

There can be some exceptions to this rule, however. The incorrect gender might be used for rhetorical purposes, such as in a pejorative capacity or for word-play. For example, it is common in English to refer to certain inanimate objects as being gendered (though gender in English is only reflected in the pronominal system), such as a ship or country (typically female). The same process can be used in languages that demonstrate gender outside the pronominal system. Another possible exception (i.e., a case

⁸ Where not otherwise indicated, data throughout the dissertation was collected as part of my own fieldwork.

in which the incorrect agreeing element does not result in an ungrammatical utterance) occurs due to phonological factors. I will address one particular phonological exception for Spanish in section 2.3.1. However, in the vast majority of cases, it is ungrammatical for a noun to be classified into the wrong gender. This begs the question of how gender assignment is discerned.

*2.2.1. Traits responsible for gender assignment*⁹

In his seminal work on gender, Corbett (1991) breaks gender assignment down into three particular types: semantically-determined, formally-determined via phonological rule, and formally-determined via morphological rule. I will discuss each in turn.

2.2.1.1. Semantically-determined gender

Corbett (1991) explains that all languages have at least some gender assignment based on a semantic trait (p. 8). This means that at least some of the nouns in every language are sorted into genders (or groups) based on a semantic distinction. The most frequent semantic distinctions referenced by gender systems are male vs. female;¹⁰ animate vs. inanimate; and human vs. nonhuman.

So frequent are gender systems based on these traits (i.e., biological sex, animacy, and human-ness), Kramer (2015) argues, that at least one of these semantic distinctions is present in a gendered language.¹¹ As such, Kramer (2015) adds to Hockett's (1958) definition for grammatical gender

⁹ By the phrase "gender assignment," I refer to the way in which particular nouns come to acquire a specific gender. In this chapter, I merely demonstrate the types of gender that there are and will address specifically how they are "assigned," or matched to particular nouns in Chapter 3. Ultimately, I follow Kramer (2015) in assuming that gender assignment is the result of the pairing of specific types of *n*'s (i.e., *n*'s with specific gender features) with roots, creating nouns with particular genders. I explain this in detail in Chapter 3.

¹⁰ The fact that some gender systems divide nouns into groups based on sex explains why grammatical gender is often confused with or assumed to involve only biological sex. As this paragraph explains, there are other semantic distinctions that drive gender division in many languages. We should not, therefore, conflate gender and biological sex or assume that grammatical gender affects only systems that distinguish nouns based on biological sex.

¹¹ Kramer does mention that this might be too strict of a distinction, but no language has yet been discovered that contradicts this point.

by including these criteria, stating that for at least some animate nouns in a gendered system, grammatical gender is assigned based on biological sex, animacy, and/or human-ness.¹² This type of gender is what Kramer terms “natural gender” (i.e., gender assigned based on a semantic trait). Natural gender contrasts with arbitrary gender, the latter being gender that is assigned without semantic basis.

The distinction Kramer (2015) draws between natural and arbitrary gender corresponds with Corbett’s (1991) distinction between semantically-determined and formally-determined gender, respectively. However, Corbett (1991) argues that formally-determined gender is not necessarily “arbitrary,” as we will see in the following two sections. If we were to use Kramer’s terminology, then gender that is assigned based on phonological or morphological traits would be considered arbitrary. In one sense, it is, since it does not reference a semantic trait that corresponds to the gender category (e.g., feminine, masculine, animate, inanimate, etc.). However, it is not arbitrary in the sense that it can be predictable from other characteristics of the noun. For maximal clarity, I will use the terms semantically-determined and formally-determined instead of natural and arbitrary.

2.2.1.2. Formally-determined gender that relies on a phonological rule

Gender that is assigned depending on particular phonological characteristics of the noun in question is formally-determined gender that relies on a phonological rule. This type of formal assignment targets only those nouns whose gender is not semantically-determined. One example of such a system is that of Qafar. Corbett (1991) argues that for nouns without semantically-determined gender, the following rules apply: (1) “nouns whose citation form ends in an accented vowel are feminine” (e.g., *catò* ‘help,’ *karma* ‘autumn’) and (2) all others are masculine (p. 51). I will investigate whether or not this type of gender assignment applies to Spanish in section 2.3.2.2.

¹² For the purposes of this dissertation, I will not take a stance as to whether specific semantic criteria must be included in a definition of gender. Although this is an observable pattern, it has not been confirmed, as Kramer (2015) mentions. Moreover, assuming that this is a universal pattern is not crucial for the analysis for gender and word class that I propose.

2.2.1.3. Formally-determined gender that relies on a morphological rule

The second type of formally-determined gender that Corbett references is that which makes use of a morphological rule. For example, a noun might be assigned to a particular gender based on its declension class. Corbett (1991) argues that Russian provides an example of this type of system, but only for declinable nouns whose gender is not semantically-determined. Nouns of declensional type I are masculine, nouns of declensional types II and III are feminine, and all others are neuter. I will investigate whether or not Spanish has this type of gender assignment in section 2.3.2.2.

2.2.2. An elaboration on Corbett's (1991) gender type distinctions

Before proposing a definition of gender, I will make a few additional comments on the gender type distinctions that I will use throughout this dissertation. I will begin with a comment on mixed gender systems and then proceed to answer a few questions that might emerge as a result of the discussion of gender up to this point.

2.2.2.1. Gender systems with semantically-determined and formally-determined gender

It is worth mentioning briefly that in systems that have multiple types of gender assignment (such as Russian and Qafar), semantically-based gender assignment takes precedence. For example, the word for 'father' (*abbà*) in Qafar ends in an accented vowel and should be feminine, following the rule presented above in section 2.2.1.2. But, because it has a male referent, it is masculine (Corbett, 1991, p. 52).¹³ There is a clear crosslinguistic preference for semantically-determined gender over formally-determined gender. Spanish, we will see, is no exception.

¹³ This is similar to the case for the word for 'father' in Albanian. In Albanian, nouns that are consonant-final are often masculine, while those that are vowel-final are typically feminine (Mëniku & Campos, 2011). Although the word for 'father,' *babá*, ends in a vowel, the referent it denotes is male and the agreement it triggers on an adjective is masculine and not feminine. We see this in the distinction between *babái im* ('my father') and *mëna ime* ('my mother'). The two possessives differ in their morphology: *im* for masculine nouns and *ime* for feminine ones. This

2.2.2.2. Is there such a thing as “arbitrary” gender?

Kramer’s (2015) usage of the term arbitrary (as mentioned above) begs the question as to whether there is some gender assignment that is truly arbitrary. In other words, are there some nouns whose gender cannot be determined by semantics, phonology, or morphology? It seems as though the answer is “yes.” Corbett (1991) explains that some nouns are assigned gender that does not rely on information that is needed in the lexicon for other purposes (i.e., other than semantic, morphological, and phonological information). He argues that these make up 15% of the words in the languages that he surveyed in depth (p. 68).

There are also some nouns for which gender assignment contradicts the semantic and formal patterns described above. These exceptions and other nouns whose gender is unpredictable must have some other method of gender assignment, which appears to be completely arbitrary. It looks, therefore, as if there is a three-way distinction in gender assignment: semantically-determined gender, formally-determined gender, and arbitrarily-determined¹⁴ gender. This is the distinction that I will utilize in this dissertation.

2.2.2.3. Do loanwords have their own method of gender assignment?

One group of nouns that we have not yet considered consists of loanwords (i.e., borrowings, xenonyms). We might wonder whether or not these words, which come from other (possibly gendered) languages, might have their own system of gender assignment. Corbett (1991) argues that the same processes of gender assignment that apply to native nouns will apply to borrowings. Semantic traits take precedence (e.g., a language with a sex-based gender system will assign male-denoting nouns to the

seems to be another instance in which gender and word-final segment often pattern together but are sometimes quite distinct. At least some of the gender in Albanian must then be based on semantic features and not phonology. This is predicted, as semantically-determined gender takes precedence, which Corbett (1991) explained (see as noted section 2.2.2.1).

¹⁴ This arbitrarily-determined gender is different from the arbitrary gender in Kramer’s (2015) two-way dichotomy because it is necessarily neither semantically- nor formally-determined.

masculine gender and female-denoting nouns to the feminine gender). When semantic traits cannot determine the gender of the noun (i.e., the noun does not fall into one of the semantic categories on which semantically-determined gender is based), morphology or phonology will. Languages such as French and Qafar assign loanwords to a given gender based on their phonological features (Corbett, 1991, p. 74). Russian, on the other hand, assigns loanwords to a gender based on their declensional types when these nouns fit into the declensional system (Corbett, 1991, p. 72). It seems as though Corbett is correct in assuming that there is no difference for loanwords than for native words.

There is, however, at least one difference between loanwords and native words in terms of gender assignment. Several languages exhibit a pattern by which loanwords take on a particular gender by what Corbett terms “concept association” or “semantic analogy” (p. 16, 75). In these instances, a loanword is assigned gender based on the gender of an analogous word in the language. Corbett (1991) cites evidence of this process in Russian, French, Hausa, Polish, and Spanish, suggesting that it is quite widespread. Thornton (2001) gives evidence of it in Italian for the nouns *panda* (panda-sg.m.) and *koala* (koala-sg.m.), which in Italian are masculine because the word for ‘bear’ in Italian (*orso*) is also masculine (p. 483).

A similar process affects hyponyms. There are many cases in which a loanword is assigned a particular gender due to the gender of a hyperonym in the language. For example, Thornton (2001) explains that all city names in Italian are assigned to the feminine gender because the word for ‘city’ (*città*) is itself feminine. Further, the feminine *macchina* (‘car’) causes all car names to be feminine as well. This is particularly evident with the contrast between the masculine *panda* (‘panda’) and the feminine *Panda* (‘Fiat Panda’) (p. 484). Thornton’s (2009) later work evidences this process for Hausa and German as well.

The “concept association” and related hyperonym gender distinctions seem to be another type of semantically-determined gender. It is quite different from the semantically-determined gender discussed

in section 2.2.1.1. Because its scope seems to be more limited and is quite exceptional, I will not devote too much attention to it when proposing a system of gender assignment for Spanish in Chapter 3. I mention it for the sake of completeness.

Returning to the case of Russian loanwords, Corbett (1991) explains that when loanwords do not comply with the declensional system of Russian, they are assigned to a particular gender by default. Nouns are assigned to the masculine gender if they are (non-human) animates and the neuter gender if they are inanimate (p. 72). This process suggests that there is perhaps another way in which loanwords are different from native words in terms of gender assignment.

Default gender assignment for loanwords does not seem to fit neatly into one of the categories presented by Corbett (1991). It is not semantically-determined and does not seem to be formally-determined either. However, Corbett (1991) argues that a word is only given loan status once it is determined that its morphological and/or phonological properties are non-native. In other words, a noun has to be considered not to adhere to the morphological and phonological systems of the language in order for its gender to be assigned. I argue, then, that default gender assignment for loanwords is a type of formally-determined gender assignment. As a result, there is no need to establish a separate type of gender assignment for loanwords. They follow the patterns exhibited for native nouns: semantic distinctions take precedence followed by formal distinctions, which can include one that references the noun's status as a loanword but not obligatorily (i.e., if it can fit into a phonological or morphological category for which gender is assigned to other nouns in the language).

2.2.2.4. Default gender assignment

I argue that default gender assignment is not limited to loanwords. In fact, many languages have been suggested to have a default gender throughout the gender assignment system. Some languages, such as Spanish, Portuguese, and Italian have a masculine default. Others, such as Zayse and Zargulla, have a

feminine default (Kramer, 2015), and some have a neuter default, such as Wari' (Birchall, 2008). This default gender typically applies to nouns whose gender is unknown (including loanwords), groups of nouns with mixed gender, and ungendered parts of speech used as nouns (e.g., prepositions, conjunctions, etc.). As mentioned above, I assert that default gender assignment is a type of formally-determined gender. In other words, it is a formal characteristic for a noun to not fall into any previously-referenced phonological or morphological category able to have its gender impacted by these traits. This formal distinction results in the assignment of a default gender, thereby demonstrating that default gender assignment is formally-determined.

2.2.3. Summary and novel definition of gender

First, gender refers to the classification of nouns into groups based on the behavior of agreeing elements. This behavior takes the form of morphological agreement patterns. The elements in the utterance that demonstrate variability based on the gender of a noun vary from language to language, but many are DP-internal. At least some of the nouns in each gender grouping will share a semantic criterion that can be used to determine their gender. In many cases, this is the distinction between biological sexes male and female. The rest of the nouns in the language will have their gender determined by other means (i.e., either formally or arbitrarily). Gender that is determined formally can reference a phonological rule, morphological rule, or the lack of applicability of either type of rule due to the noun's status as a loanword or some other case in which a default gender might apply (i.e., ungendered parts of speech). All other nouns have their gender determined arbitrarily (i.e., without reference to any type of formal rule). These include many exceptions to the rules guiding both semantically-determined gender and formally-determined gender (including default gender assignment).

The definition of gender proposed here (and used for the remainder of the dissertation) summarizes section 2.2.

(5) Gender is:

- the classification of nouns into groups based on the morphological agreement/concord patterns demonstrated by other elements in the utterance
- based on a semantic criterion for at least some nouns in every gendered language
- determined formally or arbitrarily in other instances

2.3. The gender system of Spanish

In this section, I first describe the gender groupings for nouns in Spanish. I then explain the different types of gender that Spanish possesses (semantically-determined, formally-determined, and arbitrarily-determined). This discussion all leads up to the analysis presented in Chapter 3, as it establishes how gender can be discerned for Spanish nouns and which types of gender Spanish nouns possess. These two topics are paramount for a cogent analysis of gender and word class in Spanish nouns.

2.3.1. Gender as reflected in agreement/concord

As defined above, a noun's gender is discerned by the behavior of other elements in the sentence. In Spanish, agreeing elements include adjectives, determiners, quantifiers, and passive past participles. Morphological variation is expressed in the identity of the vowel immediately left of the number marker (/s/ for plural nouns and /Ø/ for singular nouns)¹⁵ in most cases. These vowels are typically /o/ and /a/, which group nouns into the masculine and feminine gender, respectively. The pattern is demonstrated in (6) and (7) below.

¹⁵ In Spanish, nouns, adjectives, determiners, and quantifiers agree in number in addition to agreeing in gender. This is reflected in the word-final /s/ on plural nouns. Native nouns that end in a consonant will have an epenthetic /e/ before the plural marker, such as *flor* (flower-sg.)~*flores* (flower-pl.). However, some nouns that end in /s/ are undifferentiated in the plural, such as *lunes* (Monday-sg.)~*lunes* (Monday-pl.).

(6a) Agreement reflected by determiner identity (singular nouns)

- | | | | | | |
|-------|-----------|-------------|------|-----------|-----------------|
| (i) | la | fruta | (ii) | el | helado |
| | the-sg.f. | fruit-sg.f. | | the-sg.m. | ice cream-sg.m. |
| (iii) | la | cerveza | (iv) | el | vino |
| | the-sg.f. | beer-sg.f. | | the-sg.m. | wine-sg.m. |

(6b) Agreement reflected by adjective identity (singular nouns)

- | | | | | | |
|-------|-------------|----------------------|------|-----------------|----------------|
| (i) | fruta | bonita/*bonito | (ii) | helado | *barata/barato |
| | fruit-sg.f. | pretty-sg.f./m. | | ice cream-sg.m. | cheap-sg.f./m. |
| (iii) | cerveza | deliciosa/*delicioso | (iv) | vino | *blanca/blanco |
| | beer-sg.f. | delicious-sg.f./m. | | wine-sg.m. | white-sg.f./m. |

(6c) Agreement reflected by quantifier identity (singular nouns)

- | | | | | | |
|-------|---------------|-------------|------|---------------|-----------------|
| (i) | mucha/*mucho | fruta | (ii) | *mucha/mucho | helado |
| | much-sg.f./m. | fruit-sg.f. | | much-sg.f./m. | ice cream-sg.m. |
| (iii) | mucha/*mucho | cerveza | (iv) | *mucha/mucho | vino |
| | much-sg.f./m. | beer-sg.f. | | much-sg.f./m. | wine-sg.m. |

(7a) Agreement reflected by determiner identity (plural nouns)

- | | | | | | |
|-------|--------------|-------------|------|--------------|------------|
| (i) | las/*los | casas | (ii) | *las/los | libros |
| | the-pl.f./m. | house-pl.f. | | the-pl.f./m. | book-pl.m. |
| (iii) | las/*los | mesas | (iv) | *las/los | zapatos |
| | the-pl.f./m. | table-pl.f. | | the-pl.f./m. | shoe-pl.m. |

(7b) Agreement reflected by adjective selection (plural nouns)

- | | | | | | |
|-------|-------------|------------------|------|------------|----------------------|
| (i) | casas | bonitas/*bonitos | (ii) | libros | *caras/caros |
| | house-pl.f. | pretty-pl.f./m. | | book-pl.m. | expensive-pl.f./m. |
| (iii) | mesas | feas/*feos | (iv) | zapatos | *comodas/comodos |
| | table-pl.f. | ugly-pl.f./m. | | shoe-pl.m. | comfortable-pl.f./m. |

(7c) Agreement reflected by quantifier selection (plural nouns)

(i)	<i>muchas</i> / <i>*muchos</i> many-pl.f./m.	<i>casas</i> house-pl.f.	(ii)	<i>*muchas</i> / <i>muchos</i> many-pl.f./m.	<i>libros</i> book-pl.m.
(iii)	<i>muchas</i> / <i>*muchos</i> many-pl.f./m.	<i>mesas</i> table-pl.f.	(iv)	<i>*muchas</i> / <i>muchos</i> many-pl.f./m.	<i>zapatos</i> shoe-pl.m.

The data in (6) shows agreement patterns for singular nouns, while the data in (7) shows agreement patterns for plural nouns.¹⁶ As exemplified in the data above, Spanish has a two-way gender distinction in the nominal system.¹⁷ The morphological agreement demonstrating this gender distinction is reflected in the identity of the vowel just left of the number marker on the agreeing elements (e.g., *las*/*los*, *mucha*/*mucho*, etc.).

Some adjectives, determiners, and quantifiers do not have a vowel in word-final position. But, some can and do still vary in form with gender.¹⁸ The most common instance of this is the singular, definite article *el*. Others include adjectives ending in the suffix *-dor* (e.g., *encantador*, meaning ‘enchanting’). These elements appear with masculine nouns. The equivalents that pattern with feminine nouns, on the other hand, will end in /a/ (e.g., *la* and *encantadora*). The data in (8) illustrates these claims.

¹⁶ Although Spanish shows agreement for participles as well, I do not include them here, as determiners and adjectives are more than sufficient evidence for the gender of a given nominal.

¹⁷ The neuter still persists in the pronominal system. Examples include the neuter direct object clitic and definite article *lo*, the neuter demonstrative pronouns *esto*, *eso*, *aquello*, and the nominative pronoun *ello*.

¹⁸ I will demonstrate below that others cannot vary in form with gender. In these cases, we cannot look at adjectival agreement to discern the gender of a noun.

(8) Agreement reflected by the contrast in lack of word-final vowel vs. word-final /a/

(i)	la/*el the- sg.f./m.	fruta fruit-sg.f.	(ii)	*la/el the- sg.f./m.	helado ice cream-sg.m.
(iii)	chica girl-sg.f.	encantadora/*encantador enchancing-sg.f./m.	(iv)	chico boy-sg.m.	*encantadora/encantador enchancing-sg.f./m.

Despite the lack of a word-final vowel in one form (i.e., that associated with the masculine gender), these elements are able to show variation due to gender. Some other elements are unchanging, appearing in the same form when paired with masculine and feminine nouns. The adjectives in (9) below are examples of this phenomenon.

(9) Adjectives that do not vary with nominal gender

(i)	casa house-sg.f.	grande big-sg.?	(ii)	libro book-sg.m.	grande big-sg.?
(iii)	cerveza beer-sg.f.	excelente excellent-sg.?	(iv)	vino wine-sg.m.	excelente excellent-sg.?

We have seen above in (6-7) that the nouns in (9) can cause gender agreement to appear on adjectives (namely, where the adjectives can vary in form with gender) in other instances. Therefore, it is not that these nouns do not have gender, but rather that the adjectives in (9) do not vary with gender. The data in (9) does not contradict the definition of gender proposed above, but it does demonstrate that not all elements — not even those within the same grammatical category as others that show agreement — are capable of varying with gender. These particular elements simply cannot be used to discern the gender of the noun they modify. As a result, sometimes more than one agreeing element is necessary to discern a noun's gender.

Another complication in discerning a noun's gender can be created by phonological constraints. Several nouns in Spanish have conflicting agreement patterns due to a phonological rule that might be difficult to perceive at first glance. The nouns in (10) are some of those affected by this process, which results in conflicting agreement patterns that suggest that the nouns are masculine in some instances and feminine in others.

(10a) Singular definite determiner agreement

- | | | | | | |
|-------|--------------|---------------|------|--------------|---------------|
| (i) | el/*la | alma | (ii) | el/*la | arma |
| | the-sg.m./f. | soul-sg.m.? | | the-sg.m./f. | weapon-sg.m.? |
| (iii) | el/*la | habla | (iv) | el/*la | hacha |
| | the-sg.m./f. | speech-sg.m.? | | the-sg.m./f. | ax-sg.m.? |

(10b) Plural definite determiner agreement

- | | | | | | |
|-----|--------------|-------------|------|--------------|---------------|
| (i) | las/*los | almas | (ii) | las/*los | armas |
| | the-pl.f./m. | soul-pl.f.? | | the-pl.f./m. | weapon-pl.f.? |

(10c) Plural quantifier agreement

- | | | | | | |
|-----|----------------|-------------|------|----------------|---------------|
| (i) | muchas/*muchos | almas | (ii) | muchas/*muchos | armas |
| | many-pl.f./m. | soul-pl.f.? | | many-pl.f./m. | weapon-pl.f.? |

(10d) Adjectival agreement

- | | | | | | |
|-----|-------------|--------------------|------|---------------|--------------------|
| (i) | alma | contenta/*contento | (ii) | arma | cara/*caro |
| | soul-sg.f.? | happy-sg.f./m. | | weapon-sg.f.? | expensive-sg.f./m. |

(10e) Adjectival agreement with determiner

- | | | | | | | | |
|-----|-------|--------|----------|------|-------|---------|------------|
| (i) | el | alma | contenta | (ii) | el | arma | cara |
| | the- | soul- | happy- | | the- | weapon- | expensive- |
| | sg.m. | sg.f.? | sg.f. | | sg.m. | sg.f.? | sg.f. |

The data in (10a) suggests that the nouns in question are masculine due to the selection of the determiner *el*. As explained above, *el* typically appears with masculine nouns, contrasting *la* (the determiner used with feminine nouns). However, the data in (10b-d) suggests that the nouns are feminine, since the agreeing elements appear in the forms associated with feminine nouns (i.e., namely, the segment immediately left of the number marker is /a/). The data in (10e) is completely contradictory; the determiner associated with masculine nouns appears alongside the adjectival form associated with feminine nouns. How is this possible?

Looking carefully at these nouns, we see that they all begin with a stressed /a/ (orthographic *h* in Spanish is not pronounced). The article selection appears to be determined by a phonological rule and not the gender of the noun. The juxtaposition of the /a/ from the feminine article *la* and the stressed /a/ at the beginning of the noun appears to be prohibited, at least in some instances (See Harris, 1987a; Wolf, 2008).¹⁹

This process is also carried over to /a/-final indefinite determiners and quantifiers, as shown below.

(11) Similar patterns for indefinite determiners and quantifiers

(a)	un/?una the-sg.m./f.	arma ²⁰ weapon-sg.f.	(b)	unas/*unos the-pl.f./m.	armas weapon-pl.f.
(c)	algún/*alguna some-sg.m./f.	arma weapon-sg.f.	(d)	algunas/*algunos some-pl.f./m.	armas weapon-pl.f.

If the sequence of stressed /a/'s, however, is broken up, then the determiner associated with feminine nouns surfaces. This is demonstrated in (12).

¹⁹ For an alternative approach, see Varis (2010).

²⁰ It is also possible to use the feminine indefinite article (*una arma*). But, the masculine article is preferred.

(12) Change in determiner identity with addition of prenominal adjective

- | | | | | | | | |
|-----|--------------|-----------|------------|-----|--------------|-----------|--------------|
| (a) | la/*el | nueva | alma | (b) | la/*el | nueva | arma |
| | the-sg.f./m. | new-sg.f. | soul-sg.f. | | the-sg.f./m. | new-sg.f. | weapon-sg.f. |

In (12) an adjective appears between the definite determiner and the noun, and the feminine form of the determiner is obligatory. It is, therefore, not the case that these nouns have idiosyncratic determiner selection that does not follow the gender patterning described above. Rather, these nouns are feminine, but take the masculine article in order to prevent an unfavorable phonological juxtaposition (Harris, 1987a; Wolf, 2008).²¹ The feminine article is not permitted due to phonological constraints, and the only other option is the masculine article. Again we see that more than one associated element is sometimes needed for unequivocal gender determination.

To summarize, the data in this section demonstrates that Spanish is a gendered language, according to the definition of gender presented in (5). It has two genders in the nominal system: masculine and feminine. These genders are reflected in (among other DP-external elements) the behavior (i.e., variability of the vowel directly inside the number marker) of determiners, adjectives, and quantifiers. There are some determiners, adjectives, and quantifiers that remain unchanged regardless of the gender of the noun they modify. Finally, some elements will demonstrate conflicting gender assignment due to disfavored phonological sequences. It is therefore sometimes necessary to observe the behavior of multiple agreeing elements to discern a noun's gender.

It has been demonstrated that Spanish upholds the first part of the definition of gender given in (5) (i.e., that nouns are classified into groups based on the morphological agreement patterns of other elements). The last piece of the definition of gender — whether or not gender assignment in this language

²¹ Karlos Arregi (personal communication) has pointed out that this rule only applies in the case of nouns. It is perfectly grammatical to have a sequence like *la alta* (the-sg.f. tall-sg.f.), which translates to 'the tall one.' This is peculiar considering the adjective *alta* begins with a stressed /a/, much like the nouns discussed above. I do not address this here, as this dissertation focuses on nominal gender and word class. I leave it for future research.

is based (at least in part) on semantic traits — remains to be explored. We will see in the next section that the only productive type of semantically-determined gender in Spanish is that which is based on biological sex.

2.3.2. *Types of gender in Spanish*

The gender system of Spanish displays semantically-determined, formally-determined, and arbitrarily-determined gender.

2.3.2.1. Semantically-determined gender in Spanish

At least some sexed nouns are assigned gender based on the biological sex of the referent.²² The process occurs as follows: male-denoting nouns are masculine, while female-denoting nouns are feminine. Some examples are provided below in (13).

(13) Gender determined by biological sex of referent

(a)	la/*el	mujer	(b)	el/*la	hombre
	the-sg.f./m.	woman-sg.f.		the-sg.m./f.	man-sg.m.
(c)	la/*el	prima	(d)	el/*la	primo
	the-sg.f./m.	female cousin-sg.f.		the-sg.m./f.	male cousin-sg.m.
(e)	la/*el	médica ²³	(f)	el/*la	médico
	the-sg.f./m.	female doctor-sg.f.		the-sg.m./f.	male doctor-sg.m.

These patterns are observed for both same-root nominals (pairs of nouns that share the same root but differ with respect to gender, such as those in (b) and (c))²⁴ and different-root nominals (pairs of nouns

²² I discuss those that do not have gender assignment correspond with the biological sex of the referent (i.e., fixed gender nominals denoting animate beings) below.

²³ Note that feminine forms of many professions (mainly those that pertain to historically male-only or male-dominated fields) such as this (i.e., *médica*) are relatively new.

that share the same meaning but have different roots, such as those in (a)). We see that nouns with female referents appear with feminine determiners, and nouns with male referents appear with masculine determiners. Mismatches in the gender of the noun and the gender of the determiner are ungrammatical,²⁵ with some exceptions.

The first exception is that not all sexed entities have the same type of gender (i.e., semantically-determined gender). The majority of the nouns whose gender is determined by biological sex are human-denoting, such as those in (13).²⁶ Although they too have biological sex, most animal-denoting nouns will not have a gender distinction based on biological sex. This process is demonstrated in (14), in which the nouns denoting animals are either always feminine (in the case of ‘giraffe’) or always masculine (in the case of ‘gorilla’), regardless of the biological sex of the referent itself.

(14) Animals with fixed gender

(a)	la/*el	jirafa	(b)	el/*la	gorila
	the-sg.f./m.	giraffe-sg.f.		the-sg.m./f.	gorilla-sg.m.

In order to mark the difference between female and male animals, Spanish uses the addition of the equivalents of ‘female’ and ‘male,’²⁷ as exemplified in (15).

²⁴ It is clear that they share the same phonological sequence and meaning, with the slight discrepancy of word-final vowel and biological sex. I take this as evidence that they share the same root. The word-final vowel is assumed to be a marker of word class and not itself a part of the root, as I will explain below.

²⁵ Here again, I am not arguing that the determiner itself has gender in the way that a noun does. I am merely referring to “feminine” determiners as the form of a determiner appearing with feminine nouns and likewise for “masculine” determiners.

²⁶ There are exceptions to this rule as well. There are some human-denoting nouns with fixed gender. These are called epicenes and will be discussed below.

²⁷ We can see that ‘male’ and ‘female’ (*macho* and *hembra*, respectively) do not vary in form based on the gender of the noun that they modify. As such, I do not mark them with either a masculine (m.) or feminine (f.) symbol. But, it is clear that *macho* can only be used for male-denoting entities and *hembra* for female-denoting entities.

(15) Further evidence for fixed gender of some animals

(a)	la the-sg.f. 'the (beautiful) male giraffe'	jirafa giraffe-sg.f.	macho male-sg.	(bonita) beautiful-sg.f.
(b)	el the-sg.m. 'the (beautiful) female gorilla'	gorila gorilla-sg.m.	hembra female-sg.	(bonito) lazy-sg.m.
(c)	muchas many-pl.f. 'many (beautiful) male giraffes'	jirafas giraffe-pl.f.	machos male-pl.	(bonitas) beautiful-pl.f.
(d)	perezosos lazy-pl.m. 'lazy female gorilla'	gorilas gorilla-pl.m.	hembras female-pl.	

As we can see, the selection of determiner, adjective, and quantifier is not affected by biological sex or the addition of the term 'female' or 'male.' Rather, it follows the gender of the noun itself. This is clear evidence that the gender of these nouns does not relate to biological sex.

However, there are some exceptions. Some animals do show semantically-determined gender that is based on the biological sex of the referent. Many of these are domesticated animals, such as cats and dogs.

(16) Animals with gender that varies with biological sex

(a)	(i)	el the-sg.m.	gato cat-sg.m.	(ii)	la the-sg.f.	gata cat-sg.f.
(b)	(i)	el the-sg.m.	perro dog-sg.m.	(ii)	la the-sg.f.	perra dog-sg.f.

Ralli (2002) has argued that in Greek familiarity plays a role in determining which animate nouns will have gender assigned based on biological sex. The "closer" the referent is felt to be to the speaker, it

asserts, the more necessary it is to make a pair of nouns that differ in sex without the usage of additional lexical material (i.e., different roots), a pattern first noted by the Roman grammarian Varro (p. 527). Examples of this process in Greek include “the most familiar domestic animals” and familial roles (p. 528).

The same appears to hold for nouns in Spanish as well. The terms for domesticated animals, such as cats and dogs, often show differentiation for biological sex, while those for other animals (e.g., giraffes and gorillas) do not. Furthermore, many familial roles form same-root pairs. There are, however, some familial nouns that violate this pattern (including *madre* (‘mother’), *padre* (‘father’), *yerno* (‘son-in-law’), *nuera* (‘daughter-in-law’). But, for the most part, the generalization seems to hold and suggests that same-root pairs can be created for animals felt to be “closer,” such as pets.

I address now one other exception to the pattern of sex-determined gender for human-denoting nouns. There are several human-denoting nouns in Spanish that have fixed gender regardless of the biological sex of the referent, much like the animals in (14-15) above. These are referred to as epicenes. Some of these have feminine gender, such as those in (17a). Others have masculine gender (see (17b)). These genders will not change regardless of the biological sex of the referent.²⁸

(17a) Feminine epicenes

- (i) la persona
the-sg.f. person-sg.f.
- (ii) la crianza
the-sg.f. infant-sg.f.
- (iii) la víctima
the-sg.f. victim-sg.f.

²⁸ These are just a few examples. I do not claim that this is an exhaustive list.

(17b) Masculine epicenes

- (i) el sujeto
the-sg.m. subject-sg.m.
- (ii) el personaje
the-sg.m. character-sg.m. (of a story)
- (iii) el individuo
the-sg.m. individual-sg.m.

The epicenes in (17a) and the non-domesticated animals in (14-15), along with many others like them, do not have semantically-determined gender. This suggests that some nouns with biological sex have a different type of gender (i.e., formally-determined or arbitrarily-determined). Before I address other types of gender, however, I attend to some cases of seemingly semantically-determined gender that is not based on biological sex. These cases come in the form of same-root pairs whose different genders correspond to a specific distinction in meaning other than biological sex.

2.3.2.1.1. Other semantic distinctions that correlate with gender

One semantic distinction that correlates with gender (aside from biological sex) is one of fruit vs. the tree that bears it. Often fruits in Spanish are feminine, while the trees that produce them are masculine.

(18)²⁹ Fruit tree vs. fruit (correlated with gender)

(a)	(i)	el	cerezo	(ii)	la	cereza
		the-sg.m.	cherry tree-sg.m.		the-sg.f.	cherry-sg.f.
(b)	(i)	el	naranjo	(ii)	la	naranja
		the-sg.m.	orange tree-sg.m.		the-sg.f.	orange-sg.f.
(c)	(i)	el	manzano	(ii)	la	manzana
		the-sg.m.	apple tree-sg.m.		the-sg.f.	apple-sg.f.

However, this pattern does not hold for all of the fruits and fruit trees, as evidenced by the data in (19).

(19) Fruit tree vs. fruit (not correlated with gender)

(a)	(i)	el	limonero	(ii)	el	limón
		the-sg.m.	lemon tree-sg.m.		the-sg.m.	lemon-sg.m.
(b)	(i)	el	platanero	(ii)	el	plátano
		the-sg.m.	banana tree-sg.m.		the-sg.m.	banana-sg.m.

Both the fruits and the fruit trees in these examples in (19) are masculine. In place of the word-final /o/ for the trees, we find the suffix *-ero*. I will elaborate on derivational morphology later in Chapter 5 and merely mention that the fruit/fruit tree distinction does not hold for all fruit-bearing trees.³⁰

Although the pattern of masculine tree and feminine fruit does not hold for all fruit-fruit tree pairs, it still represents an instance in which a semantic trait corresponds with a particular gender. But, this pattern is different from that of gender based on biological sex because it is much more limited in its scope. In fact, it might not even be productive. In order to investigate its productivity, I rely on the productivity model developed by Charles Yang (2015).

²⁹ I reiterate that the word-final vowels in these nouns are word class markers and not gender markers. They are interrelated with gender, but are not gender markers per se, as I will explain.

³⁰ I mention here that this pattern seems to be limited only to trees and does not apply to other fruit-bearing entities (e.g., bushes or vines). One exception is the fruit-bush pair *frambuesa* (raspberry-sg.f.)~*frambueso* (raspberry-sg.m.).

Yang (2015) explains that in order for one to learn a productive rule, the number of exceptions must be fewer than the value of the number of items divided by the natural log of the number of items. The equation he provides is given below in (20).

$$(20) e < N / \ln N$$

The question is what type of item we should be counting in order to test whether or not the fruit-fruit tree gender correspondence pattern is productive. We could count all plants in the language (i.e., vines, shrubs, bushes, trees, etc.). We could limit ourselves just to trees or just to trees that bear fruit. I have chosen the latter in order to demonstrate most clearly whether or not there are too many exceptions for this rule to be learned. There are fewer fruit-bearing trees than plants. Therefore, if the pattern does not hold for this small section of the plants in Spanish, then it will not hold for the superset of all plants either.

An Internet search for fruit-bearing trees produced the following list. The trees are listed with the fruit that they bear when possible.³¹

³¹ There were some instances in which I could not determine the name for either the fruit or the tree.

(21) Fruit-bearing trees

(a)

(i)	'cherry'	la cereza	el cerezo
(ii)	'plum'	la ciruela	el ciruelo
(iii)	'orange'	la naranja	el naranjo
(iv)	'pomegranate'	la granada	el granado
(v)	'apple'	la manzana	el manzano
(vi)	'papaya'	la papaya	el papayo
(vii)	'grapefruit'	la toronja	el toronjo
(viii)	'banana'	la banana	el banano
(ix)	'guava'	la guayaba	el guayabo
(x)	'olive'	la aceituna	el aceituno ³²
(xi)	'almond'	la almendra	el almendro
(xii)	'hazelnut'	la avellana	el avellano
(xiii)	'chestnut'	la castaña	el castaño
(xiv)	'citron'	la cidra	el cidro
(xv)	'cider apple'	la chirimoya	el chirimoyo
(xvi)	'bergamot'	la bergamota	el bergamoto
(xvii)	'sloe'	la endrina	el endrino
(xviii)	'soursop'	la guanábana	el guánabano
(xix)	'jujube'	la azofaifa	el azofaifo
(xx)	'starfruit'	la carambola ³³	el carambolo

³² An alternate form of this is *olivo*.

³³ The name *carambola* applies to more fruits of the family of the starfruit. The term starfruit (for which 'fruta estrella' is a literal translation) refers to just the fruit that takes the shape of star. I have included this fruit-fruit tree pair to give the strictest test of the productivity as possible, since this is also the common name for the fruit.

(b)			
	(i)	‘peach’	el melocotón el melocotonero
	(ii)	‘pear’	la pera el peral
	(iii)	‘avocado’	el aguacate el aguacate
	(iv)	‘apricot’	el albaricoque el albaricoquero
	(v)	‘coconut’	el coco el cocotero
	(vi)	‘fig’	el higo la higuera
	(vii)	‘lime’	la lima el limero
	(viii)	‘lemon’	el limón el limonero
	(ix)	‘mango’	el mango el mango
	(x)	‘quince’	el membrillo el membrillero
	(xi)	‘nectarine’	la nectarina la nectarina
	(xii)	‘banana’	el plátano el platanero
	(xiii)	‘date’	el dátil la palmera datilera
	(xiv)	‘tamarind’	? el tamarindo
	(xv)	‘persimmon’	el caqui el caqui
	(xvi)	‘mandarin orange’	la mandarina el mandarnero
	(xvii)	‘grapefruit’	el pomelo el pomelo
	(xviii)	‘pistachio’	el pistacho el pistachero
	(xix)	‘cashew’	el anacardo el anacardo
	(xx)	‘pecan’	la pacana la pacana
	(xxi)	‘pine nut’	el piñón el pino
	(xxii)	‘walnut’	la nuez el nogal
	(xxiii)	‘tamarillo’	el tomate de árbol ?
	(xxiv)	‘sapodilla’	el chicle el sapota zapotilla
	(xxv)	‘rambután’	el rambután el rambután
	(xxvi)	‘medlar’	el níspero el níspero
	(xxvii)	‘lychee’	? el litchi
	(xxviii)	‘loquat’	el níspero el níspero
	(xxix)	‘jackfruit’	la jaca el árbol de jaca
	(xxx)	‘durian’	el durián el duriano

This list of fruit-fruit tree pairs contains 50 items. Of the 50 items, 20 demonstrate the pattern of masculine fruit tree and feminine fruit that share the same root. The remaining 30 do not display this pattern. According to Yang’s (2015) model, there should be no more than $N/\ln N$ exceptions. N , in this case, is 50. The calculations are provided below in (22).

(22) Yang's (2015) productivity model applied to fruit trees in Spanish

$$N/\ln N = 50/\ln(50) \approx 12.8$$

The calculation in (22) demonstrates that the rule of same-root masculine fruit tree and feminine fruit cannot be productive in Spanish. There are far more than 13 exceptions to the rule (30, in fact). Therefore, I assume that this pattern is not productive and does not need to be accounted for in the same way that the correlation between biological sex and gender does.

Another pattern in which a gender difference corresponds to a semantic trait distinction other than biological sex concerns size. Endruschat (2015) has argued that the feminine gender in Portuguese corresponds to largeness in some instances. The same pattern appears to hold in Spanish as well.

The Spanish data in (23) shows that in noun pairs based on the same root, the masculine noun denotes an item that is smaller than the feminine noun ('handbag' vs. 'sack,' 'puddle' vs. 'pond,' etc.). We can tell that these items have the same root due to their identical phonological form and shared meaning.

(23) Small vs. big (correlated with gender)³⁴

(a)	(i)	el	bolso	(ii)	la	bolsa
		the-sg.m.	handbag-sg.m.		the-sg.f.	bag, sack-sg.f.
(b)	(i)	el	charco	(ii)	la	charca
		the-sg.m.	puddle-sg.m.		the-sg.f.	pond, pool-sg.f.
(c)	(i)	el	saco	(ii)	la	saca
		the-sg.m.	sack, bag-sg.m.		the-sg.f.	large sack-sg.f.

³⁴ Data from fieldwork.

Endruschat (2015) argues that this pattern might be due to the evolution of Portuguese from Latin.³⁵ In Latin, the plural for certain nominative and accusative neuter nouns possessed word-final /a/ (e.g., BRACCHIA — ‘arms’ and FOLIA — ‘leaves’). Portuguese (and Spanish) does not have a neuter gender (with the exception of the pronominal system). As a result, the neuter nouns from Latin were absorbed into the masculine and feminine genders. The same process took place in other Romance languages, including Italian (Maiden, 1997). The plural form was then regularized to /s/ for Portuguese and Spanish.

The neuter plurals for cultivated fruits were reanalyzed as feminine singular nouns. Some of these, says Maiden (1997), retain their collective sense. Collectives were used to “denote entities larger than their single members” (p. 72). Thus, the use of feminine nouns for collectives might have led to the use of feminine nouns in /a/ for referents that are larger than their masculine counterparts (p. 72). Endruschat (2015) and Maiden (1997) both argue that the transfer of Latin neuter nouns to the feminine gender in Romance explains why plurality, collectivity, and largeness — traits that pertained to the Latin neuter — are often associated with the feminine gender.³⁶

Although this pattern holds for several noun pairs, much like the fruit vs. fruit tree distinction above, the question is whether or not this pattern is productive in Spanish. Given the limited size of the group of nouns affected in comparison to the vast majority of noun that are not, I will assume that it is not. This follows from Yang’s (2015) productivity rule given above.³⁷ I argue, therefore, that this is not an instance of semantically-determined gender. The only productive type of semantically-determined gender

³⁵ The same process could also be said to apply to Spanish, given their shared evolutionary history.

³⁶ For instances of varieties of Romance in which the distinction is productive, the reader is referred to Maiden (1997) and the sources cited therein.

³⁷ It would be near impossible to compose a list of all Spanish nouns in order to run this calculation. I will, therefore, not attempt to do so.

in Spanish is that based on biological sex.³⁸ As we have seen, this type of gender applies to most (but not all) human-denoting nouns and some (but not most) animal-denoting nouns.

2.3.2.1.2. Semantic analogy/concept association in Spanish

I mentioned in section 2.2.2.3 that there is a type of semantically-determined gender that applies to loanwords as a result of semantic analogy or concept association. The question is whether or not this type of gender exists in Spanish. Morin (2006) asserts that “synonymic gender”³⁹ or semantic analogy accounts for the majority of inanimate technology- and internet-related loanwords (Anglicisms) in Spanish (p. 337). We are able to observe this pattern since many of these terms have Spanish-language synonyms that are either native words or translations of loanwords. Some of her data is presented below in (24).

(24) Synonymic gender

	Anglicism		Synonym(s)			
(a)	el	spam	el	correo basura	los	mensajes no solicitados
	the-sg.m.	spam-sg.m.	the-sg.m.	mail-sg.m. trash-sg.f.	the-pl.m.	message-pl.m. unsolicited-pl.m.
(b)	la	toolbar	la	barra de herramientas		
	the-sg.f.	toolbar-sg.f.	the-sg.f.	bar-sg.f. of tool-pl.f.		
(c)	el	link	el	enlace		
	the-sg.m.	link-sg.m.	the-sg.m.	link-sg.m.		

³⁸ I note here that it is possible that this change in word-final vowel and gender that correlates with a difference in size might be an instance of diminutivization. Kramer (2015) argues for a similar process for Amharic nouns, which always trigger feminine agreement. She argues that this is the result of the merging of a diminutivizing *n* with an uninterpretable feminine feature above the *n* that nominalizes the diminutivized noun. I demonstrate in Chapter 4 that diminutivizing heads in Spanish are not categorizing, which rules out the same possibility for Spanish. The relevant point for the present discussion is that the limited correlation of gender and size does not necessitate that we assume a process by which a semantic trait other than biological sex leads to a particular gender assignment.

³⁹ This term was introduced by Smead (2000).

We see that the gender of the Anglicism, or loanword, mirrors that of the synonyms. We have, then, some evidence that gender for Spanish loanwords seems to reflect semantic analogy. Many, however, are assigned the default masculine gender, as I explain in section 2.3.2.4.

Additional evidence for loanword assignment based on semantic features other than biological sex comes from Smead's (2000) research on English-origin loanwords in Chicano Spanish.⁴⁰ Many of these are assigned feminine gender due to the feminine gender of an analogous word in Spanish. Some of the data he presents is given below in (25) (p. 293).

(25) Hyperonymic gender

Hyperonym

- | | | |
|-----|--------------------------------|-----------------------------------|
| (a) | galleta (cracker/cookie-sg.f.) | craques (soda cracker-pl.f.) |
| (b) | galleta (cracker/cookie-sg.f.) | cuques (cookie-pl.f.) |
| (c) | polvo (powder-sg.m.) | bequenpaura (baking powder-sg.m.) |
| (d) | pelota (ball-sg.f.) | sóftbol (softball-sg.f.) |
| (e) | camión (truck-sg.m.) | treila (semi(trailer)-sg.m.) |

We see that there is a consistent pattern for the loanword to take the gender of the hyperonym. I do point out, though, that this data is from Chicano Spanish and is not evidence for this type of gender assignment in Castilian Spanish, the focus of this dissertation.

Morin (2006) also addressed the process of loanword gender assignment based on the gender of a hyperonym. She demonstrated that the gender of the term for 'computer' (which varies even within the same dialect) in a given news article will determine the gender assigned for terms like *Notebook*, *Tablet*, and *Desktop*. This shows quite clearly that the gender of the more specific terms is determined by the gender of the hyperonym *computador* (computer-sg.m.) or *computadora* (computer-sg.f.). Unfortunately, once again this data does not come from Castilian Spanish. But, it provides some evidence to suggest that

⁴⁰ Chicano Spanish is the term used to describe a variety of Spanish spoken by Mexican-Americans in the United States.

the same could be possible in Castilian Spanish (i.e., that Castilian Spanish could have loanwords whose gender seems to be based on semantic analogy involving hyperonyms).

2.3.2.1.3. Interim summary

We have seen that gender in Spanish upholds the second point of the definition of gender in (5). At least some nouns (many human-denoting nouns and some nouns denoting domesticated animals) have gender that is determined by biological sex. Some unsexed nouns seem to have gender based on specific semantic traits, namely fruit/fruit tree and size. I have argued that these are likely not productive patterns and should therefore receive a different treatment as that given to nouns whose gender is based on biological sex. There is data for Castilian Spanish suggesting that loanwords can be assigned gender based on semantic analogy. In determining how exactly gender assignment takes place (namely how semantic traits cause nouns to have a particular gender), I must account for these special cases, epicenes, and nouns whose gender is based on biological sex. This will be the subject of Chapter 3. I now investigate the existence of formally-determined gender in Spanish.

2.3.2.2. Formally-determined gender in Spanish

Corbett (1991) argued that a language that does not have completely semantically-based gender will have some nouns whose gender is formally-determined. This gender can be determined by a morphological rule or a phonological rule. Because I have not yet explained the word class (or declension class) systems in Spanish, I will have to reserve an investigation of a morphological rule that determines formal gender for later on in this chapter (cf. this section; section 2.5.6). But, I will state preliminarily that it is widely-accepted that gender and word class (or declension class) are separate phenomena in Spanish (see Harris, 1985, 1991a, 1991b; Kramer, 2015; among others).

There are, however, several authors who argue that there is formally-determined grammatical gender that is based on phonological rules for Spanish. Bull (1965) has argued that grammatical gender can be determined by matching certain terminal graphemes of nouns with terminal graphemes of adjectives and determiners. Nouns ending in *-a*, *-d*, *-ción/-sión*, *-sis*, and *-itis* were matched to an /a/-final form of an adjective or determiner in 98% of the cases. Additionally, 96% of the nouns ending in *-e*, *-l*, *-n*, *-i*, *-r*, or *-s* matched adjective and determiners ending in *-e*, *-l*, *-n*, *-o*, *-r*, and *-s*.⁴¹

Sadek et al. (1975) investigated these claims and found that Spanish-speaking, prekindergarten-aged children would match a nonsense noun to an adjective or determiner that followed the patterns explained above. Smead (2000) replicated Bull's (1965) study and found that "nearly all" the nouns ending in *-e*, *-l*, *-n*, *-o*, *-r*, and *-s* were assigned masculine gender, as Bull (1965) predicted (p. 288). However, there were not many nouns ending in the feminine suffixes studied by Bull (1965) in the corpus Smead used; only /a/-final nouns occurred with frequency, which were found to be feminine roughly 90% of the time (p. 289).

Poplack et al. (1982) looked at the assignment of English borrowed nouns in speakers of Puerto Rican Spanish. They determined that this assignment was at least in part based on phonological rules by which nouns ending in *-d*, *-z*, and *-a* are feminine, while the rest are masculine. In the corpus that they used, word-ending could be predicted based on these phonological patterns for borrowed words 70% of the time.

These studies suggest that phonological rules can play a role in the assignment of Spanish gender when it is not semantically-determined. The fact that native speakers agreed on gender assignment of

⁴¹ The former (/a/-final adjectives and determiners) are typically used for feminine nouns, with a few exceptions. The latter (adjectives and determiners in *-e*, *-l*, *-n*, *-o*, *-r*, and *-s*) are often masculine, but adjectives in *-e* and determiners in *-s* in particular are also often feminine.

nonsense words and loanwords with some consistency implies the existence of underlying phonological rules for formally-determined gender.⁴²

However, there are some points of caution that must be made. First, the studies cited above (with the exception of Bull, 1965) refer exclusively to loanwords. It is unclear whether the phonologically-based gender assignment processes referenced apply only to loanwords (i.e., as a separate type of loanword gender assignment system) or whether they are active for native words as well. Due to the relative paucity of loanwords in comparison to native words, we could assume that this process is based on phonological rules that apply to native words. But, it is also possible that loanwords are treated differently than native words in terms of gender assignment. We know that this is true at least in the case of default gender that is assigned once a noun has been given loanword status (see section 2.2.2.4). It appears as though the evidence is inconclusive on this point.

There are further reasons to question the validity of the phonologically-based gender assignment strategy suggested by Bull (1965). As Morin (2010) points out, Bull's (1965) study did not distinguish native Spanish words from loanwords (p. 144). In other words, Bull did not stipulate whether the nouns ending in certain graphemes were native or not when determining his gender correlations. This is important, though, as it could be mere coincidence that certain loanwords end in particular graphemes and have a particular gender. There might be another underlying reason for their gender assignment, such as semantic analogy, as demonstrated above.

⁴² Morin (2006) provides some evidence that gender can be determined by phonology for a select few loanwords. There are some loanwords that are masculine despite the existence of feminine synonyms (e.g., *phishing* (phishing-sg.m.) vs. *pesca* (fishing-sg.f.) and *modding* (modding-sg.m.) vs. *transformación estética* (asthetic transformation-sg.f.)). Morin argues that these nouns are masculine due to their phonology since semantic analogy does not appear to be a factor. It is not clear to me that these are not just instances of default gender assignment. The loanwords are assigned masculine gender, perhaps due to their phonological status as a loanword (i.e., violation of the phonotactics of Spanish). If we could demonstrate that loanwords with certain terminal phonemes were feminine despite the existence of semantically analogous masculine nouns, we would be able to conclude that phonology is the factor taking precedence. Unfortunately, I have not yet found any evidence of such pairs.

A further caution concerns derivational morphology. Many of the word-final segments or sequences of segments could be argued to be morphemic in nature (i.e., derivational or inflectional material, or even what I will call “word class markers”), not phonemic. In fact, in the corpus that Morin (2010) uses, of the nouns ending in /d/ that do not have the derivational suffix /tud/ or /dad/ (including /tad/), 21 are masculine and 13 are feminine (p. 157). This clearly contradicts Bull’s (1965) assumption that *d*-final nouns are predominantly feminine. Similar contradictory results were found for underived *z*-final nouns (p. 160).

Morin’s (2010) research and the points raised here do not directly contradict all of Bull’s (1965) claims, but they suggest that we should proceed with caution in assuming that phonology plays a role in formal gender assignment for native words in particular. As there is no conclusive evidence to support the existence of phonologically-determined gender for native words in Spanish, I follow other analyses (e.g., Harris, 1991a, 1991b, 1999; Lloret & Viaplana, 1997; Morin, 1999; and Kramer, 2015) and assume it does not exist.

It is possible that phonological rules could impact gender assignment for loanwords, as the studies referenced above suggest. I mention that these are rare in their application, if they exist at all. Smead (2000) and Morin (2006, 2010) have shown that semantic factors take precedence, both biological sex and semantic analogy. Therefore, I will not present a formal analysis for formally-determined gender that makes use of phonological rules for loanwords or for native words in this dissertation.

This brings me to the second type of formally-determined gender that Corbett (1991) references: one determined based on morphological distinctions, such as declension class. Spanish has eliminated almost all of the declension class distinctions that existed in Latin, as pertaining to case. The pronominal system differentiates nominative from accusative, but otherwise nouns in Spanish have one form that is the same regardless of its role in the sentence (e.g., subject, direct object, indirect object, etc.). It is difficult to state with certainty that Spanish still possesses declension class, since there are no longer

interactions with inflection, aside from number. It does not, therefore, follow to argue that gender in Spanish could be based on declension class.⁴³

It is, however, possible that formally-determined gender is based on word class, which some, including Kramer (2015), have referred to as declension class. In order to investigate the plausibility of this scenario, I must first define word class in Spanish and explore its correlation with gender. This will be the topic of the second half of this chapter. I will ultimately argue, as have others (including Harris 1991a) that word class does not determine gender. If there is a relationship between the two, the reverse is true (i.e., gender can determine word class).

One other morphological distinction that might be able to determine gender is derivational morphology. The authors cited in this section (i.e., Bull, 1965; Smead, 2000; Morin, 2006, 2010) have already demonstrated the propensity for nouns with certain derivational endings to have a particular gender. Some examples of these phenomena are provided below in (26) and (27).

⁴³ In fact, it will be demonstrated that not all nouns that pattern together with regard to inflection are assumed to fall into the same word class.

(26) Derivational suffixes that correlate with feminine gender⁴⁴

- (a) *-ción*
 - (i) natación swimming-sg.f.
 - (ii) celebración celebration-sg.f.
 - (iii) explotación exploitation-sg.f.

- (b) *-dez*
 - (i) estupidez stupidity-sg.f.
 - (ii) timidez shyness-sg.f.
 - (iii) fluidez fluidity-sg.f.

- (c) *-dad*
 - (i) ciudad city-sg.f.
 - (ii) celebridad celebrity-sg.f.
 - (iii) felicidad happiness-sg.f.

- (d) *-ería*
 - (i) librería bookstore-sg.f.
 - (ii) cafetería cafeteria-sg.f.
 - (iii) carnicería butcher shop-sg.f.

- (e) *-nza*
 - (i) confianza confidence-sg.f.
 - (ii) vergüenza embarrassment-sg.f.
 - (iii) toleranza tolerance-sg.f.

⁴⁴ These are merely some examples. I do not claim that this is an exhaustive list.

(27) Derivational suffixes that correlate with masculine gender

- | | | | |
|-----|--------------|-------------|-------------------|
| (a) | <i>-aje</i> | | |
| | (i) | coraje | courage-sg.m. |
| | (ii) | linaje | lineage-sg.m. |
| | (iii) | recilaje | recycling-sg.m. |
| (b) | <i>-ismo</i> | | |
| | (i) | budismo | Buddhism-sg.m. |
| | (ii) | comunismo | Communism-sg.m. |
| | (iii) | catolicismo | Catholicism-sg.m. |
| (c) | <i>-és</i> | | |
| | (i) | holandés | Dutch-sg.m. |
| | (ii) | japonés | Japanese-sg.m. |
| | (iii) | inglés | English-sg.m. |
| (d) | <i>-dor</i> | | |
| | (i) | contenedor | container-sg.m. |
| | (ii) | luchador | fighter-sg.m. |
| | (iii) | ganador | winner-sg.m. |

It appears as though Spanish does have formally-determined gender that makes use of morphological rules that target derivational morphology. I will investigate how this correlation between derivational morphology and gender might be explained by the operationalization of gender that I propose in Chapter 3 and look at the case of gender for derived nominals specifically in Chapter 6.

One point that Corbett (1991) made that remains to be investigated in Spanish, now that we have determined that Spanish has a gender system with multiple types of gender (i.e., semantically-determined and formally-determined), concerns instances of conflict between the two types. The data in Corbett's (1991) study suggests that semantic distinctions take precedence when following formal gender rules would provide a contradictory result. In order to investigate whether this holds for Spanish, we would need to investigate derivational suffixes that would provide a noun with the opposite gender as that expected based on biological sex. But, in many instances, the suffix on a derived nominal depends on the sex of the human referent (e.g., *-ero* for males, *-era* for females; *-dor* for males, *-dora* for females, etc.).

The only (perhaps) relevant case I have come across concerns the suffix *-ista*. This suffix remains unchanged even when the biological sex of the referent is altered, as demonstrated in (28).

(28) Gender determined by biological sex and not derivational suffix

- | | | | | | | |
|-----|-----|-----------|------------------|------|-----------|------------------|
| (a) | (i) | el | periodista | (ii) | la | periodista |
| | | the-sg.m. | journalist-sg.m. | | the-sg.f. | journalist-sg.f. |
| (b) | (i) | el | surfista | (ii) | la | surfista |
| | | the-sg.m. | surfer-sg.m. | | the-sg.f. | surfer-sg.f. |
| (c) | (i) | el | pianista | (ii) | la | pianista |
| | | the-sg.m. | pianist-sg.m. | | the-sg.f. | pianist-sg.f. |

This gives us some evidence that semantic distinctions (i.e., distinction for biological sex) will take precedence over formal ones (i.e., the correlation that feminine nouns tend to end in /a/). Spanish appears to be no exception to Corbett's (1991) generalization, although the data to demonstrate this is scarce.

2.3.2.3. Arbitrary gender in Spanish

I established above in section 2.2.2.2 that there is such a phenomenon as arbitrarily-determined gender. Nouns whose gender cannot be determined by semantics or a formal distinction (phonological or morphological) can have completely arbitrary gender determination. Perhaps the clearest case of such a group of nouns is provided above by the epicenes and non-domesticated animals given in (17) and (14-15), respectively. We have already seen that the gender of these nouns is not based on biological sex. It is also not based on a phonological rule. As I explained in section 2.3.2.2, we do not have significant evidence to assume that Spanish has formally-determined gender that makes use of a phonological rule. Assuming that in Spanish there is also not formally-determined gender that makes use of a morphological rule aside from one that targets derivational suffixes (see section 2.3.2.2), I argue that the only other

option is for these nouns to have arbitrarily-determined gender. There is no underlying feature that determines that ‘gorilla’ and ‘individual’ are masculine and ‘person’ and ‘giraffe’ are feminine. In fact, the word-final vowels seem to suggest that *gorila* (‘gorilla’), in particular, should actually be feminine (as word-final /a/ often corresponds with feminine). The only possibility that I see here is that these are instances of arbitrarily-determined gender.

Other instances of arbitrarily-determined gender include inanimates that are without biological sex. Because all nouns in Spanish must have gender, these nouns must have their gender determined by something. The only remaining option seems to be arbitrary assignment for underived nouns. Some examples are given below in (29).

(29) Inanimates with arbitrarily-determined gender

(a)	(i)	el	horno	(ii)	la	estufa
		the-sg.m.	oven-sg.m.		the-sg.f.	stove-sg.f.
(b)	(i)	el	árbol	(ii)	la	hierba
		the-sg.m.	tree-sg.m.		the-sg.f.	grass-sg.f.
(c)	(i)	el	pie	(ii)	la	frente
		the-sg.m.	foot-sg.m.		the-sg.f.	forehead-sg.f.
(d)	(i)	el	sol	(ii)	la	lluvia
		the-sg.m.	sun-sg.m.		the-sg.f.	rain-sg.f.

This data demonstrates that even nouns that describe semantically-related entities (cooking surfaces, plants, etc.) can have different genders. There is no semantic, phonological, or morphological criterion to motivate the grouping together of the nouns on the left or the nouns on the right.⁴⁵ As a result, the gender assignment must be arbitrary.

⁴⁵ As mentioned previously, some might argue that the word-final /a/ is reason enough to group *hierba* and *estufa* together. But, as explained above, this does not hold for all /a/-final nouns. I, therefore, do not assume that gender assignment for these nouns is based on a phonological rule.

2.3.2.4. Default gender in Spanish

There is wide acceptance that masculine is the default gender for Spanish. I do not provide extensive argumentation for this here, but merely provide a few examples. First, in Spanish, the gender used for groups of nouns of both masculine and feminine gender is masculine. Feminine gender is only used when all members of the group are feminine.

(30) Mixed gender nouns receive masculine agreement

- (a) El chico y la chica son simpáticos/*simpáticas.
the-sg.m. boy-sg.m. and the-sg.f. girl-sg.f. be-3.pl.pres. nice-pl.m.
'The boy and the girl are nice.'
- (b) Las casas y el jardín son bonitos/*bonitas.
the-pl.f. house-pl.f. and the-sg.m. garden-sg.m. be-3.pl.pres. pretty-pl.m.
'The houses and the garden are pretty.'
- (c) Las chicas/casas son bonitas.
the-pl.f. girl-pl.f./house-pl.f. be-3.pl.pres. pretty-pl.f.

We see that this holds even when there are more feminine nouns in the group than masculine ones, as in example (30b). As long as there is at least one masculine noun incorporated into the group, the agreement will be masculine.⁴⁶ This suggests that masculine gender is the default gender in Spanish.

Another piece of evidence comes from ungendered parts of speech, which demonstrate masculine agreement. These include the following examples:

⁴⁶ There have, however, been some movements to change this practice. Possible alternatives include writing both possible word-final vowels, such as the @ for /o/ and /a/ in Spanish (e.g., *chic@s*-‘boys and girls’), or using an *x* instead (e.g., *chicx*-‘boys and girls’).

(31) Ungendered parts of speech with masculine agreement

- (a) Tienes demasiados “paras” en ese párrafo
have-2.sg.pres. too many-pl.m. “for’s” in that-sg.m. paragraph-sg.m.
‘You have too many “for’s” in that paragraph.’
Harris (1991a, p. 43)
- (b) los por qué’s
the-pl.m. why-pl.m.
‘the whys’
- (c) un oráculo del sí o no
a-sg.m. oracle of the-sg.m. yes-sg. or no-sg.
‘A yes-or-no oracle.’

Example (31a) demonstrates that the preposition *para* ‘for’ is assigned masculine gender in Spanish.

Question words, such as ‘why,’ are masculine as well (cf. (31b)). The conjunctions ‘yes’ and ‘no’ are also assigned to the masculine gender, as in (31c). Since these words are not typically used as nouns, they do not have gender in the way that canonical nouns do. But, when these elements are used as nouns, they pattern with masculine nouns (as demonstrated by the agreeing elements), suggesting again that masculine is the default gender in Spanish.

Further, Clegg (2010) found that nonsense loanwords (i.e., invented words that did not follow the phonotactics of Spanish due to their ending in “non-typical” word-final coda, such as *nosbert* and *snarb*) were assigned to the masculine gender in 90% of the cases in his study.⁴⁷ This provides further evidence that the default gender in Spanish is masculine and that this gender is used when semantic, phonological, and morphological rules for native nouns cannot apply.⁴⁸

⁴⁷ I provide one note of caution on this study. Clegg (2010) does not explain the communities of origin of his native speakers. He mentions that they were from different regions, but he does not explicitly address whether or not the region affected the results. We do not know, then, that this process will apply necessarily to all speakers of Spanish, particularly those who speak Castilian Spanish (the dialect of focus in this dissertation).

⁴⁸ Clegg (2010) also included distractors that ended in /o/ and /a/. About 90% of the time those in /o/ were assigned masculine gender, while those in /a/ were assigned feminine gender. This is despite the fact that the researchers tried to give the terms in /o/ definitions “associated with females” (e.g., an article of female clothing, a kitchen appliance) and those in /a/ definitions “associated with males” (e.g., a gun, a tool used in household construction)(p. 14).

2.3.2.5. Summary of gender types in Spanish

Section 2.3 has demonstrated that Spanish follows the definition for gender presented in section 2.2. Associated elements in an utterance will vary (when able) based on the gender of the noun that they modify (or are associated with). Many of these are DP-internal (e.g., adjectives, determiners, quantifiers), but others need not be (e.g., participles). This variation affects word-final segments, with /o/ frequently appearing on elements modifying masculine nouns and /a/ typically appearing on those modifying feminine nouns. But, this pattern is not universal; there are some agreeing elements that end in other segments (e.g., the definite determiner *el*) and others still that will not show variation at all (e.g., /e/-final adjectives). Nonetheless, a noun's gender can be identified based on the behavior of associated elements — sometimes one is enough, while in other instances multiple are needed.

The chart below summarizes the gender-type inventory of Spanish.

(32) Gender-type inventory of Spanish

	Loanwords (nouns)	Native nouns
Semantically-determined	-Biological sex -Semantic analogy (synonymic gender, hyperonymic gender)	-Biological sex (humans and some animals)
Formally-determined	-Default gender due to formal distinction (loanword status)	-Morphological (determined by derivational suffix) -Default for ungendered parts of speech
Arbitrarily-determined	N/A	-Epicenes -Underived nouns for nonhumans

Having concluded my investigation into gender in Spanish, I turn my attention to word class.

2.4. Defining word class

There have been multiple definitions of word class used throughout the literature on theoretical linguistics. The most widely-cited for Spanish comes from Harris (1983, 1985, 1991a, 1991b, 1996, 1999), frequently referenced as the authority on Spanish word class. Harris (1985) describes “word markers”⁴⁹ as “simply small pieces of phonological material that must be at the right place at the right time” (p. 35). The right place is word-peripheral position, followed by at most the plural /s/, and the right time is the point at which a word becomes complete, both derivationally and inflectionally (1991a, p. 30). Belonging to the same class correlates with ending in the same word-final segment or lack thereof, as demonstrated in (33), the inventory of Harris’ (1991b) Form Classes.

(33) Harris’ (1991b) Form Classes for Spanish

Class	Distinguishing feature	Examples
Class I	substantives ending in <i>o</i>	paso (step-sg.m.), mano (hand-sg.f.), reo (culprit-sg.m.,f.)
Class II	substantives ending in <i>a</i>	pasa (raisin-sg.f.), mapa (map-sg.m.), maya (Mayan-sg.m.,f.)
Class IIIA	substantives ending in epenthetic <i>e</i>	jefe (chief-sg.m.), nube (cloud-sg.f.), verde (green-sg.m.,f.)
Class IIIB	substantives ending in \emptyset	as (ace-sg.m.), col (cabbage-sg.f.), común (common-sg.m.,f.)
Class IIIA’	substantives ending in non-epenthetic <i>e</i>	pase (pass-sg.m.), prole (progeny-sg.f.), inmune (immune-sg.m.,f.)
Class IV	substantives ending in /Vs/ (/s/ in rare cases)	tóraks (thorax-sg.m.), dosis (dose-sg.f.), mochales (batty-sg.m.,f.)
Class V	all others	taxi (taxi-sg.m.), tribu (tribe-sg.f.), chef (chef-sg.m.,f.), esnob (snob-sg.m.,f.)

⁴⁹ There are various terms used to describe these word-final segments, including “word markers,” “class markers,” and “word class markers.” For optimal clarity, I opt for “word class markers” and will use this throughout the dissertation.

We see in this classification that substantives⁵⁰ ending in /o/ fall into Class I, while those ending in /a/ fall into Class II. Epenthetic /e/ is assumed to surface when a substantive would otherwise end in an illicit consonant coda. Illicit consonant codas in Spanish include /f/, /b/, /g/, /x/, /ɲ/, /ʎ/, /tʃ/, /k/, /m/, /p/, and /t/ (Lloret & Mascaró, 2007, p. 80). Substantives displaying this epenthesis make up Class IIIA. This /e/ is different from the non-epenthetic /e/ that we see on the end of substantives ending in licit consonant codas (i.e., /s/, /l/, /r/, /d/, /θ/, /n/). Substantives following this pattern fall into Class IIIA'. Substantives that have neither type of word-final /e/ or any distinguishable word class marker but do end in a licit consonant coda comprise Class IIIB. These are assumed to have a null word class marker. Class IV contains substantives ending in /Vs/ and occasionally /s/.⁵¹ Class V contains all other nouns, including a sizeable portion of xenonyms that do not fall into Class III.

Harris' (1991b) classification has informed the work of several others (e.g., Alcântara (2010) for Portuguese and Kramer (2015) also for Spanish, among others). On the other hand, Aronoff's (1994) definition of word class has also been used widely with regards to Italian (cf. D'Achille & Thornton, 2001; Acquaviva, 2009). He states that an inflectional class (or word class) is "a set of lexemes whose members each select the same set of inflectional realizations" (p. 64). In other words, word class is determined by its interaction with inflection. Words that inflect alike (e.g., for number) belong to the same word class.

This definition and approach to word class has been used specifically for Italian, perhaps due to the fact that inflection for number does not appear as a separate morpheme in Italian the way that it does in Spanish (i.e., /s/). It is not clear how exactly Aronoff's definition would apply to Spanish, as most

⁵⁰ I mention that Harris' (1991b) form class system provides word class information for all substantives (i.e., adjectives, nouns, adverbs). This dissertation only addresses nominal word class. I leave the other "substantive" categories for future research.

⁵¹ Differentiating between Class III nouns ending in /s/ and Class IV nouns ending in /s/ involves observing the behavior of the word-final segments with the addition of derivational or inflectional morphology. If the /s/ (and possibly the /V/ that precedes it) is lost in the derivational context, then the noun is assumed to belong to Class IV. When the /s/ (and possibly /V/) is not lost, Harris assumes the noun belongs to Class III.

nouns that are not consonant-final interact with number inflection in the same way (i.e., add /s/ after the word-final vowel). This would mean that all nouns ending in any vowel would belong to the same word class, which directly contradicts Harris' definition of word class. We could, however, argue that the "inflectional realizations" involved do not incorporate the plural but rather a different inflectional element.⁵² But, it is not clear what this might be.

As a result, it appears as though Harris' definition applies more precisely to Spanish. I will, however, tweak this definition slightly with the hopes of extending it to other languages, such as Italian (mentioned in Chapter 6). The definition I suggest is provided in (34).⁵³

(34) Nominal word class is:

- a property of nominals determined by the identity of root-specific pieces of phonology
- necessary for a morphologically well-formed noun

I explain each of these points in turn and then revisit the word class system of Spanish specifically. First, I explain what is meant by the assumption that the pieces of phonology are root-specific. I then demonstrate why they are necessary for a morphologically well-formed noun, with evidence coming primarily from same-root nominals. And finally, I demonstrate how word class is determined by word-final pieces of phonology in Spanish specifically. Once I provide this expansion upon my definition of word class, I highlight the ways in which word class is different from gender and argue that word-final vowels cannot be gender vowels. This line of inquiry will set the stage for the analysis of gender and word class that I will present in Chapter 3.

⁵² It could also be argued that the word-final segments are markers of the singular. In this case, there would be several realizations for the singular depending on the class of the noun (e.g., /a/, /o/, /e/, etc.). However, this does not make much sense. It would require us to argue that the singular and plural in Spanish share the same elements (i.e., the same vowels) and differ only in the presence or absence of /s/. It is much more parsimonious to assume that the /s/ alone is a marker for the plural and that there is no marking for the singular.

⁵³ I note that this definition applies only to nominal word class. As previously mentioned, it is beyond the scope of this dissertation to investigate word class in other grammatical categories. I leave it for future research.

2.4.1. Pieces of phonology determining word class are root-specific

The identity of a word class marker is specific to the root. Homophonous roots with different semantic interpretation provide evidence for this phenomenon. I provide some examples below in (35).

(35) Homophonous roots with diverse semantic interpretations⁵⁴

- | | | | | | |
|-----|-----|----------------------------|-----|------|-------------------------------|
| (a) | (i) | la col ('the cabbage') | vs. | (ii) | la col-a ('the line') |
| (b) | (i) | el bot-e ('the boat') | vs. | (ii) | la bot-a ('the boot') |
| (c) | (i) | la bat-a ('the housecoat') | vs. | (ii) | el bat-e ('the baseball bat') |

None of the pairs above share a similar semantic interpretation (i.e., 'cabbage' is not related semantically to 'line,' nor 'boat' to 'boot,' and so on). Therefore, these pairs do not share a common root, despite their shared phonology.⁵⁵ They also fall into different word classes, as demonstrated by the discrepancy in their word-final segments. The word-final segments are thus specific to the root and not to the sequence of segments preceding it. For instance, $\sqrt{626}$ and $\sqrt{789}$ might be realized phonologically as *col*. While $\sqrt{626}$ appears without a word class marker when it is nominalized, $\sqrt{789}$ appears with /a/. Since the two phonological strings are identical and the only item that differs is the identity of the root (which we know differs due to the diverse interpretations given), we see that word class varies with the root and not with the phonological string. It just so happens that the two roots are homophonous.

The data in (36) provides further evidence that word-final segments are specific to particular roots. In these cases, a difference in word-final segment results in a meaningless sequence of segments. It is not just that the word has changed its meaning but that this sequence of segments does not have any meaning whatsoever.

⁵⁴ I separate the phonological strings representing the roots from the word class markers with a hyphen (-) in this example and throughout this section.

⁵⁵ Recall that in Distributed Morphology, roots are devoid of phonological realization in the syntactic derivation. The items in each row share the same phonological realization but are not the same root (i.e., are not represented by the same indices, following Pfau, 2000, 2009; Acquaviva, 2008).

(36) Changing the word-final segment results in a meaningless sequence of segments⁵⁶

- | | | | | | | |
|-----|-----|-------|-------------|------|-------|-------------|
| (a) | (i) | el/la | col-i (??) | (ii) | el/la | col-u (??) |
| (b) | (i) | el/la | bot-o (??) | (ii) | el/la | bot-i (??) |
| (c) | (i) | el/la | bat-u (??) | (ii) | el/la | bat-i (??) |
| (d) | (i) | el/la | mach-e (??) | (ii) | el/la | mach-u (??) |

This data also helps to illustrate the second point of the definition provided above (i.e., that word class markers are necessary to form a morphologically complete word).

2.4.2. *Word class markings are necessary for formation of a (derivationally and inflectionally) complete word*

Without the proper word class marker, these roots do not form a word when nominalized. (Note that the nominalizing head *n* is typically null for simple nominals in Spanish). In fact, without any word class marker, most⁵⁷ roots will not form a word, though they can still have meaning. Examples are provided below in (37).

(37) Roots without word class markers do not form words

- | | | | | | | | |
|-----|-----|-----------|----------|-----|------|------------|------------------|
| (a) | (i) | el *chic | (‘the?’) | vs. | (ii) | el chic-o | (‘the boy’) |
| (b) | (i) | la *fuent | (‘the?’) | vs. | (ii) | la fuent-e | (‘the fountain’) |
| (c) | (i) | el *pas | (‘the?’) | vs. | (ii) | el pas-e | (‘the pass’) |
| (d) | (i) | la *prol | (‘the?’) | vs. | (ii) | la prol-e | (‘the progeny’) |
| (e) | (i) | el *cuent | (‘the?’) | vs. | (ii) | el cuent-o | (‘the story’) |
| (f) | (i) | la *pag | (‘the?’) | vs. | (ii) | la pag-a | (‘the payment’) |

As we see here, roots without word class markers do not form words. The examples in (c-d) demonstrate that this is the case even when these roots could, phonologically-speaking, form words

⁵⁶ The data in (36) often includes less common word-final vowels due to the fact that many of the more common word-final vowels will form words with completely distinct meanings from those in (35).

⁵⁷ There are some roots whose word class marker is null. Harris (1991b) includes these in his Class IIIB.

without the addition of a word class marker (i.e., they end in licit consonant coda). But, it is not clear that the meaning of the root is completely inaccessible in some instances when the word class marker is lacking. I look at the example of the root *pag* below to further illustrate this point.

(38) Case study: *pag*⁵⁸

**pag* (?) → *el pago* ('the installment'); *la paga* ('the payment'); *pagar* ('to pay')

In this case, the root for the words has a similar meaning, roughly 'pay.' Without the presence of the word-final vowel (or verbal morphology), however, we are unable to form a particular word with this root. But, it seems as though the meaning of the root is still somewhat accessible; the meaning will just not be nearly as specific as when a word class marker is added.

This point is demonstrated further with same-root nominal pairs, such as those that show alternation in their word-final vowel based on the semantic traits discussed above (i.e., biological sex; fruit and fruit tree; size). These nouns share a similar, but not completely equal, meaning but have different word-final vowels. This patterning suggests that word-final vowels do not contribute to the shared meaning. I provide some examples in (39).

(39) Same-root pairs

- | | | | | |
|-----|-----|--------------------------------------|------|------------------------------------|
| (a) | (i) | <i>muchach-o</i>
'boy' | (ii) | <i>muchach-a</i>
'girl' |
| (b) | (i) | <i>cerez-o</i>
<i>cherry tree</i> | (ii) | <i>cerez-a</i>
<i>cherry</i> |
| (c) | (i) | <i>bols-o</i>
<i>bag</i> | (ii) | <i>bols-a</i>
<i>large sack</i> |

⁵⁸ Note that in this case, the root could not form a word on its own without violating the phonotactics of the language. The example still demonstrates that the specific meaning is inaccessible without a word class marker.

The examples in (39) suggest that word-final vowels contribute some meaning, distinguishing nouns with slightly different semantic interpretation. The fact that the word-final vowels do not contribute to the shared meaning suggests that they are not a part of the root. Further, the obligatory presence of these word-final segments suggests that they have something to do with the nominalization process in general — that is that they are involved in categorizing a root into a noun. The case study of the root *pag* above in (38) provides evidence for this hypothesis. We see that specific interpretations of the root are only available once the word class marker or verbal morphology has been added.

In fact, some authors (Ferrari, 2005; Lowenstamm, 2008; and Ferrari-Bridgers,⁵⁹ 2007, 2008) argue that word-final segments in Italian are actually derivational morphology. The word-final /a/ in particular is the exponence of a feminine nominalizing head. It is not clear to me that this analysis could be extended to all word classes.⁶⁰ But, the intuition that word-final segments are involved in categorization appears to be on the right track. I will address this point further in Chapter 3 in which I propose an account for both gender and word class in Spanish.

The data above in (35-39) can be summarized to support the following points: (1) word class markers are specific to roots and not phonological sequences; (2) roots without word class markers can have meaning but will not form words — assuming that there are null word class markers; (3) a root is not categorized (i.e., does not become a word) until it has a word class marker or another type of morphology (e.g., verbal morphology). As mentioned, I will investigate this final point and the implication it has for the characterization of word class markers further in Chapter 3. For now, I turn to an elaboration on the word class system of Spanish specifically.

⁵⁹ Note that Ferrari and Ferrari-Bridgers refers to the same individual.

⁶⁰ I return to the specifics of these accounts and present other analyses in Chapter 3.

2.4.3. How do we know what constitutes a word class marker?

Before I can address specifically just how many word classes there are in Spanish, I must investigate the key features that help determine what a word class marker is. Word class markers are present in nominals, as demonstrated above.⁶¹ One of the ways of determining what constitutes a word class marker is to observe the behavior of word-final segments when additional morphology is added (i.e., derivational or evaluative morphology). Word class markers of underived nominals are lost when these nominals undergo derivational and evaluative processes. A new word class marker will appear at the new edge of the word. An illustration of this process is given below in (40).

(40) Loss of word class marker before derivational morphology

- | | | | |
|-----|-------------|---|----------------------|
| (a) | libr-o | → | librería, *libroería |
| | book-sg.m. | | bookshop-sg.f. |
| (b) | frut-a | → | frutera, *frutaera |
| | fruit-sg.f. | | fruit bowl-sg.f. |
| (c) | lech-e | → | lechoso, *lecheoso |
| | milk-sg.f. | | milky-sg.f. |

In each instance, the word-final vowel on the left is assumed to be the word class marker because it is lost in front of the derivational morphology in the derived nominals on the right. We see that this process does not target a specific word-final segment over another; it applies equally to word-final /o/, /a/, and /e/. These are assumed to be the word class markers in these cases. (See section 2.5.3. for information on words that end in other vowels or have a null noun class marker).

⁶¹ Harris (1991) also assumes that they are present for adjectives and adverbs, though these are both beyond the scope of the current work.

2.5. Word class in Spanish⁶²

The section above provided a brief introduction to word class markers in Spanish. As does Harris (1991b), I have assumed that word class markers do not appear in front of derivational morphology; they are only found at the right periphery of a word. This is demonstrated in the data Harris (1991b) provides in (41). I have added to the data the conclusion that Harris draws based on the behavior of the word-final segments in the underived substantives.

(41) Loss of word class markers before derivational morphology

- | | | | |
|-----|---|---|-----------------------------------|
| (a) | medio ('middle') | → | mediano ('medium') |
| | conclude /o/ is word class marker (Class I) | | |
| (b) | lejos ('far') | → | lejano ('distant') |
| | conclude /os/ is word class marker (Class IV) | | |
| (c) | arroz ('rice') | → | arrocero ('rice grower') |
| | conclude a null word class marker (Class IIIB) | | |
| (d) | Aristóteles ('Aristotle') | → | aristotélico
('Aristotelian') |
| | conclude /es/ behaves as word class marker (Class IV) | | |
| (e) | virus ('virus') | → | viral ('viral') |
| | conclude /us/ is word class marker (Class IV) | | |
| (f) | espíritu ('spirit') | → | espiritoso ('spiritual') |
| | conclude /u/ behaves as word class marker (Class V) | | |
| (g) | tribu ('tribe') | → | tribal ('tribal') |
| | conclude /u/ behaves as word class marker (Class V) | | |

⁶² For reasons of space and limited scope, I am only investigating word class in Spanish in this dissertation. Some particularly interesting topics for future research would be an extension of this analysis to a language like Italian in which word class and number seem to be represented in the same segment (cf. Thornton, 2001; Acquaviva, 2009). Italian (and also Romanian) would be of particular interest, as it is a language in which nominals and adjectives can be broken up into groups based on the number of inflectional endings that each has for particular gender and number combinations (cf. Giurgea, 2013 for information on Romanian). Perhaps an investigation into these languages would prompt a redefinition of word class, or perhaps there are other processes at work that are not immediately apparent. I mention these languages in the conclusion along with other directions for future research.

This data served as the basis for Harris' division of nominals into five classes. These five classes were demonstrated in table (33), repeated here as (42).

(42) Harris' (1991b) Form Classes for Spanish

Class	Distinguishing feature	Examples
Class I	substantives ending in <i>o</i>	paso (step-sg.m.), mano (hand-sg.f.), reo (culprit-sg.m.,f.)
Class II	substantives ending in <i>a</i>	pasa (raisin-sg.f.), mapa (map-sg.m.), maya (Mayan-sg.m.,f.)
Class IIIA	substantives ending in epenthetic <i>e</i>	jefe (chief-sg.m.), nube (cloud-sg.f.), verde (green-sg.m.,f.)
Class IIIB	substantives ending in \emptyset	as (ace-sg.m.), col (cabbage-sg.f.), común (common-sg.m.,f.)
Class IIIA'	substantives ending in non-epenthetic <i>e</i>	pase (pass-sg.m.), prole (progeny-sg.f.), inmune (immune-sg.m.,f.)
Class IV	substantives ending in /Vs/ (/s/ in rare cases)	tóraks (thorax-sg.m.), dosis (dose-sg.f.), mochales (batty-sg.m.,f.)
Class V	all others	taxi (taxi-sg.m.), tribu (tribe-sg.f.), chef (chef-sg.m.,f.), esnob (snob-sg.m.,f.)

Many have probed further into Harris' (1991b) word classes, including Harris (1999) himself. Two points in this analysis in particular have been cast into doubt: (1) word-final epenthesis and (2) the necessity of his Class IV. I address each one in turn and raise some additional concerns about Harris' (1991) Class V before proposing the system of word class that I will assume for Spanish over the course of this dissertation.

2.5.1. *Word-final epenthesis*

Morin (1999) and Bonet (2007) pose a challenge to Harris' (1991b) assumption that Spanish /e/-final nouns have undergone epenthesis (utilized in Klein (1989) and Harris (1991a) as well). Morin's (1999) criticism focuses on two points: (1) epenthesis patterns in borrowed words and (2) a questioning of the "exceptionality" of a lack of epenthesis. She explains that there are many borrowed words that do not

have epenthesis, such as *record* ('record,' pronounced /rékor/), *York* (as in *New York*, pronounced /yor/).⁶³ Because these borrowed words are not undergoing epenthesis, it looks like epenthesis is not productive. Morin (1999) also explains that there is a word-final /e/ for those exceptional items (i.e., words that end in licit consonant codas but still have word-final /e/, or Harris' (1991b) Class IIIA') almost just as often as there is a word-final /e/ for nonexceptional items (i.e., words that would end in an illicit consonant coda without word-final /e/, or Harris' Class IIIA). This leads Morin (1999) to state that it does not make sense to refer to the /e/ as a word class marker in one case and as epenthesis in the other, as neither one is more exceptional than the other. In fact, Morin argues that word-final /e/ is no more predictable than word-final /o/ in the feminine *mano* (hand-sg.f.), assuming that the /o/ is unexpected due to the feminine gender of the noun. It concludes that no distinction should be made for types of word-final /e/.

Bonet (2007) agrees and argues that word-final epenthesis in Spanish is no longer productive. If it were, then we would expect *Al Sadr* (pronounced /al.sa.der/) to be comparable to *padre* ('father,' pronounced /pa.dre/) if what is at issue is the illicit consonant cluster with rising sonority (/dr/). But, the epenthesis is word-medial for the former and word-final for the latter. Bonet argues that two different processes were at work depending on the era in which each noun emerged (in its current form) as part of the Spanish lexicon. *Al Sadr* has entered the lexicon much more recently than *padre*, prompting Bonet to assert that word-medial epenthesis is productive, while word-final epenthesis is not. Bonet assumes, then, that what was once a productive strategy of word formation (word-final epenthesis), no longer exists. Instead, word-final /e/ is now just a word class marker. Therefore, there is no difference in word-final /e/'s. They are all word class markers.

Harris (1999) revises his (1991b) previous inventory and proposes a Class IV consisting of those substantives that unexpectedly take word-final /e/ even though it is not necessary for syllabification (i.e., substantives that would end in a licit consonant coda, such as *oboe* ('oboe')). As a result, Harris (1999)

⁶³ We see here that speakers tend to simplify the consonant cluster rather than add an epenthetic /e/.

argues that the difference must not be phonological but rather morphological, prompting the creation of a morphological class for substantives with unexpected word-final /e/.

I argue, based on the argumentation above, that the grouping together of all /e/-final noun follows intuitively. A speaker will not know which nouns entered into the language when word-final epenthesis was productive or even have evidence that it was once productive. There would have to be another method in which the grammar could account for words that once underwent this process. As such, my analysis will assume that word-final /e/ is a word class marker. This means that all nouns with word-final /e/ are part of Class III, regardless of whether or not they would end in a licit consonant coda without word-final /e/. Harris' (1991b) Class III should then be broken up into two different classes: those ending in /e/ and those ending in a consonant. Bermúdez-Otero (2013) has done this to a certain extent. It also argues for a single group for all /e/-final nouns. This group, however, is further broken down into two groups: (1) those nouns that end in /e/ in the singular despite the fact that /Ø/ would be licit following the phonotactics (*e*-only stems) and (2) those nouns that must end in /e/ in the singular due to a phonotactic restriction on the remaining consonant being word-final and those that end in /Ø/ (ordinary *e*-stems). I carry this insight into the word class inventory that I propose in section 2.5.4, but I take it a step further in assuming that there are two distinct word classes for these nouns.

2.5.2. *Is Class IV necessary?*

The second question raised addresses the necessity of Harris' (1991b) Class IV. Lloret and Viaplana (1997) cast doubt on Harris' Class IV using diminutives. They argue that /Vs/ nouns should be analyzed as consisting of a gender marker and a plural marker, due to the diminutive forms that they take.

(43) /s/-final diminutives casting doubt on Class IV

- (a) Carlos *Charles-m.* Carl-it-os *Charles -dim.m.*
(b) Brusel-as *Brussels-f.* Brusel-it-as *Bussels- dim.f.*

The nouns in (43) appear to have what they refer to as a gender marker⁶⁴ and a plural marker because the diminutive suffix (/it/) appears before both the /V/ and the /s/ and not after them. This marks a point of contrast between these /Vs/-final nouns on the one hand and other (non-/s/-final) consonant-final nouns on the other (e.g., *pan~pancito* (bread-m.~bread-m.dim.)).⁶⁵

This same treatment of Harris' Class IV nouns has been alluded to in Bermúdez-Otero (2013) and Vadella (2015). However, as Vadella (2015) points out, the pattern only holds for diminutives that end in /as/ and /os/. Others appear to pattern more closely to Harris' Class III, such as *lunes* (Monday-sg.m.)→ *lunecito*, not **lunecitos*. These nouns (i.e., /s/-final nouns that are not /os/- or /as/-final) follow the same pattern as other consonant-final nouns. We see, then, that not all words in Class IV pattern together, which suggests that Harris' (1991b) Class IV should be revised.

Data that complicates this even further includes nouns like *virus*, *Sócrates*, *Aristóteles*, *análisis*, *neurosis*, etc. These nominals come from Greek and all lose their /s/ in front of derivational morphology.

(44) Greek-origin nouns have eccentric behavior in derivational contexts

- (a) virus ('virus') → viral ('viral')
(b) Sócrates ('Socrates') → socrático ('Socratic')
(c) Aristóteles ('Aristotle') → aristotélico ('Aristotelian')
(d) análisis ('analysis') → analítico ('analytic')
(e) neurosis ('neurosis') → neurótico ('neurotic')

⁶⁴ Lloret and Viaplana (1997) differ from Harris (1991b) in assuming that word-final /o/ and /a/ are gender markers, not word class markers.

⁶⁵ There are several accounts that seek to explain why the diminutive takes an orthographic *c* (/s/ in most dialects, /θ/ in most regions of Spain) in this case and several others, but not in all. I refer the reader to Jaeggli (1980), Crowhurst (1992), Smith (2011), and Vadella (2015, January) for more detailed discussion (though this is not an exhaustive list of approaches to Spanish diminutive formation). I also investigate this further in Chapter 4.

Because these nouns pattern differently than all of the others, it seems to make sense that they constitute their own class.

I argue, then, that Class IV should be broken apart into nouns that pattern like Classes I and II (such as *Carlos* and *Bruselas*)⁶⁶; those that pattern like Class III (such as *lunes*); and exceptional Greek-derived nouns, including those given in (44). Those in the first group are actually special cases of Classes I and II in which word-final /s/ behaves similarly to a plural marker. Nouns in the second are simply just a part of Class III; no additional stipulation is necessary. The third group (i.e., Greek-derived nominals) constitutes its own class due to their eccentric behavior in derivational contexts.

2.5.3. Harris' (1991b) Class V

Harris (1991b) proposed a “catch-all bin” for xenonyms and nominals ending in vowels other than /a/, /o/, and /e/ (p. 69). Later work, Harris (1999), revises this claim and argues that there is a separate class for xenonyms.⁶⁷ But, this is not necessary. Xenonyms pattern the same way as consonant-final nominals. No segments are lost before the addition of derivational morphology or evaluative morphology. The data in (45-46) below supports these claims.

⁶⁶ Harris (1991b) alludes to this distinction, but instead of arguing that these /Vs/ nouns are a part of Classes I and II, it states that they receive the word class marker /o/ and /a/ by means of the default mechanism and Class II diacritic, respectively. Both /os/- and /as/-final nouns have the Class IV diacritic in this system.

⁶⁷ In Harris (1999), it is unclear how many classes Harris believes exist. We know that there are at least four (see discussion above) plus a separate class for xenonyms. Footnote 8 mentions the existence of substantives ending in /Vs/ but states that they are not included in the analysis because “they are not relevant to our main concerns” and refers the reader to his previous work (1991a, 1991b). It is not clear whether or not Harris (1999) still assumes that these constitute a separate class.

(45) Nominals that do not end in /o/, /a/, /e/ pattern identically in *-(c)it-* diminutive (i.e., they retain their word-final segment)

(a)	(i)	café ('coffee')	→	cafecito (dim.)	Class V
	(ii)	menú ('menu')	→	menucito (dim.)	Class V
	(iii)	bar ('bar')	→	barecito/barcito (dim.)	Class V
	(iv)	chef ('chef')	→	chefecito/chefcito (dim.)	Class V
(b)	(i)	flor ('flower')	→	florecita (dim.)	Class III
	(ii)	cruz ('cross')	→	crucecita (dim.)	Class III
(c)	(i)	casa ('house')	→	casita (dim.)	Class II
	(ii)	perro ('dog')	→	perrito (dim.)	Class I
	(iii)	madre ('mother')	→	madrecita (dim.) ⁶⁸	Class III

(46) Nominals that do not end in /o/, /a/, /e/ pattern identically in derivational contexts (i.e., they retain their word-final segment)

(a)	(i)	café ('coffee')	→	cafetera ('coffee maker')	Class V
	(ii)	fútbol ('soccer')	→	futbolero ('soccer fan')	Class III
	(iii)	papel ('paper')	→	papelero ('waste basket')	Class III
(b)	(i)	zapato ('shoe')	→	zapatero ('cobbler')	Class I
	(ii)	mesa ('table')	→	mesero ('waiter')	Class II
	(iii)	llave ('key')	→	llavero ('key ring')	Class III
(c)	(i)	esnob ('snob')	→	esnobismo ('snobbery')	Class V
	(ii)	fútbol ('soccer')	→	futbolista ('soccer player')	Class III
	(iii)	flor ('flower')	→	florista ('florist')	Class III
(d)	(i)	bajo ('bass')	→	bajista ('base player')	Class I
	(ii)	batería ('drums')	→	baterista ('drummer')	Class II
	(iii)	clase ('class')	→	clasista ('snob, class-conscious individual')	Class III

The data in (45) shows the behavior of word-final segments in *-(c)it-* diminutives. It shows that nominals that end in stressed vowels or consonants pattern differently than nouns ending in /o/ or /a/.⁶⁹ However,

⁶⁸ Some nouns that end in /e/ will pattern like the Class I and Class II nouns *casa* and *perro*, but others will follow the pattern exhibited by *madre*. I reserve a discussion of the intricacies of diminutive morphology for Chapter 4. Here, I merely point out that word-final segments are not lost in the transition from a plain nominal to a diminutivized nominal for more than just the nouns in Harris' (1991b) Class V. Nouns not ending in /o/, /a/, and /e/ will retain their word-final segment. In Chapter 4, I will investigate whether the /e/ in *madrecita* is the word-final segment from *madre* or not.

all consonant-final nouns pattern the same way, regardless of whether they are loanwords (e.g., *bar* or *chef*) or native words (e.g., *flor* or *cruz*).

(46) presents data displaying the behavior of word-final segments in two different derivational contexts (with the suffix *-(t)er-* and the suffix *-ista*). The data in (46) shows similar behavior for nouns ending in stressed vowels and nouns ending in consonants, again regardless of whether the latter is native or nonnative. The only nouns that behave differently are those that end in /o/, /a/, or /e/, such as *zapato*, *batería*, and *clase*. In these cases, as with the diminutives in (45), the word-final vowel is lost when the derivational suffix is added.⁷⁰

The data given in (45-46) suggests that xenonyms pattern the same way as consonant-final native words. It therefore seems logical to include them all within one class. This class would not have an overt word-final segment, as no segment is lost with the addition of derivational or diminutive morphology.

Up to this point, we have only looked at derivational morphology to determine what constitutes a word class marker. However, we should also consider interactions with inflectional morphology for the sake of completion. Harris (1991b) distinguishes consonant-final Class III nouns from consonant-final Class V nouns due to their interaction with plural inflection. He argues that Class III nouns will have an epenthetic /e/ appear between the word-final segment of the singular and the plural marker /s/. Class V nouns, on the other hand, are able to add /s/ to the end of singular form without the addition of this /e/. (47) includes some of the examples he provides.

⁶⁹ I do not include in my discussion here the complicated data for nominals ending in /e/. This involves the allomorphy of diminutive morphology (*-ito* vs. *-cito*). I will return to this point and provide more detail in Chapter 4.

⁷⁰ I will discuss this in greater detail in Chapter 4.

(47) Different behavior for consonant-final singulars when pluralized

(a)	(i)	líder ('leader')	→	líderes ('leaders')	"Domestic Substantive"
	(ii)	lócker ('locker')	→	lóckers ('lockers')	Xenonym
(b)	(i)	tisú ('tissue')	→	tisúes ('tissues') ⁷¹	"Domestic Substantive"
	(ii)	menú ('menu')	→	menús ('menus')	Xenonym
(c)	(i)	gene ('gene')	→	genes ('genes')	"Domestic Substantive"
	(ii)	yen ('yen')	→	yens ('yen [plural]')	Xenonym
(d)	(i)	ley ('law')	→	leyes ('laws')	"Domestic Substantive"
	(ii)	esprey ('spray')	→	espreys ('sprays')	Xenonym

The data in (47) is divided into pairs based on the word-final consonant that appears. These pairs demonstrate that what Harris (1991b) terms "domestic substantives" pluralize differently than xenonyms (p. 70). This causes him to assume that xenonyms constitute their own class.

We have, therefore, contradictory findings about whether Class V should constitute its own word class or be subsumed as a part of Class III. Instead of assuming that the plural data suggests that Harris' Classes III and V should be two different classes, I argue that this is another instance of a now-defunct phonotactic rescue operation. In other words, there was epenthesis between the plural marker /s/ and the nominal base in Spanish, but this process no longer applies to neologisms. This leads me to assume that Harris' Class IIIB is not its own word class, but rather a set of nouns that take a different allomorph in the plural (/es/).⁷² I will demonstrate how this fits in with the rest of my analysis in the remaining chapters of the dissertation.

⁷¹ I note that Collins Dictionary cites *tisús* as the plural of *tisú*.

⁷² A similar proposal was put forward by Saporta (1965). However, it argued that the plural in /es/ was the elsewhere case – it was the plural marking whenever the noun did not end in an unstressed vowel or /e/ (their plural marking was /s/) or when the noun did not end in an unstressed vowel followed by /s/ (their plural marking was null). This does not, of course, provide the correct plural form for a noun that ends in a stressed vowel, such as *mamá*, whose plural form is *mamás*, not *mamáes* (Saltarelli, 1970). To my knowledge, more recent work has assumed that /e/ is epenthetic (cf. Saltarelli, 1970; Contreras, 1977; and Harris, 1991b; 1999). See Foley (1967), Harris (1970), and Roca (1996), however, for alternative analyses.

I summarize the findings of the last few sections in the proceeding section, providing the word class inventory for Spanish that I will use for the remainder of the dissertation.

2.5.4. *A novel word class inventory of Spanish*

Incorporating the observations presented in the previous sections, I propose the following class system for Spanish:

(48) Novel word class inventory for Spanish

- Class I: nominals ending in /o/
- Class II: nominals ending in /a/
- Class III: nominals ending in /e/ (no distinction for roots ending in consonants that cannot be word-final per the rules of phonotactics)
- Class IV: nominals ending in any segment other than /o/, /a/, or /e/
*exception for nominals ending in /os/ and /as/ (which are subsumed under Classes I and II, respectively), but including /ó/, /á/, and /é/
- Class V: Greek-derived nominals ending in /s/, such as *virus*, *Sócrates*, *análisis*, etc.

This is the class system that I will use for this dissertation. I will now turn to an exploration of the ways in which gender and word class differ before discussing the clear relationship between the two. These sections will lay the foundation for the third chapter in which I present a system that operationalizes gender and word class and captures key generalizations about their interrelatedness.

2.5.5. *Gender and word class are different, yet related*

Now that we have a working definition of word class, I point out a few observations about the difference but also the relationship between gender and word class. Unlike gender, word class can be apparent even when a noun exists in isolation; it does not rely on agreement with other elements in an utterance. Word class, in fact, is completely independent of other elements in an utterance. The adjective-

noun pairs in (49) demonstrate that adjectives do not alter in form when the noun they modify has a different word class.

(49) Adjectives remain unchanged when paired with nouns in different word classes⁷³

(a)	(i)	la	chica	inteligente	(ii)	el	chico	inteligente
		the-	girl-	intelligent-		the-	boy-sg.m.	intelligent-
		sg.f.	sg.f.	sg.f.		sg.m.		sg.m.
(b)	(i)	una	tarea	difícil	(ii)	un	curso	difícil
		a-sg.f.	task-	difficult-sg.f.		a-sg.m.	course-	difficult-sg.m.
			sg.f.				sg.m.	

In (49a), we see that a change in the word-final vowel on the noun *chico/chica* does not alter the word-final vowel of the modifying adjective (*inteligente*); it is /e/ regardless. Example (49b) demonstrates that some adjectives that lack a word-final vowel will continue to do so no matter the word class or gender of the noun they modify. Adjectives will, however, appear with different word-final segments (in many instances) when paired with nouns of different genders.

(50) Adjectival word-final segments vary with nominal gender, not word class

(a)	(i)	la	cliente	molesta	(ii)	el	cliente	molesto
		the-	client-sg.f.	annoying-sg.f.		the-	client-sg.m.	annoying-
		sg.f.				sg.m.		sg.m.
(b)	(i)	la	estudiante	española	(ii)	el	estudiante	español
		the-	student-	Spanish-sg.f.		the-	student-	Spanish-
		sg.f.	sg.f.			sg.m.	sg.m.	sg.m.

⁷³ Note that I include the determiners in these examples to demonstrate the gender of the noun. This makes it easier to see that the word-final vowel of the adjective patterns with the gender of the noun and not the word-final vowel of the noun itself. I continue to include determiners throughout the remainder of this section for this reason.

The data in (50a) demonstrates the pattern opposite that of (49a). The noun is always /e/-final, but there is a change in the identity of the word-final vowel of the modifying adjective. This word-final vowel depends on the gender of the noun (/a/ for a feminine nouns and /o/ for a masculine noun).

Further evidence that word class is not relevant for agreement comes from (50b). This data shows that there are some adjectives (such as *español*) that have a word-final vowel when paired with feminine nouns but not when paired with masculine nouns. Although the word-final vowel on the noun remains consistent (/e/ for both male and female students), the adjective's word-final vowel varies depending on the noun's gender (as reflected in determiner selection).

The data in (51) supports this claim even further. As shown above, the adjective-final vowels /o/ and /a/ are typically associated with the masculine and feminine genders, respectively. In (51), nouns ending in /o/ are feminine and those ending in /a/ are masculine. The word-final vowels on the modifying adjectives, however, follow the expected pattern, with word-final /o/ for the masculine form and word-final /a/ for the feminine form, regardless of the fact that the noun has the opposite word-final vowel.

(51) Further evidence against agreement for word class

- | | | | | | | | |
|-----|-----------|-------------|--------------|-----|-----------|------------|-----------|
| (a) | la | mano | izquierda | (b) | el | mapa | antiguo |
| | the-sg.f. | hand-sg.f. | left-sg.f. | | the-sg.m. | map-sg.m. | old-sg.m. |
| (c) | la | foto | bonita | (d) | el | poeta | viejo |
| | the-sg.f. | photo-sg.f. | pretty-sg.f. | | the-sg.m. | poet-sg.m. | old-sg.m. |

In all of the cases in (51), the word final vowels of the adjective and the noun do not align. Even when the adjective is able to end in the same vowel as the noun (i.e., it is not consistently /e/-final or /Ø/-final), it will not do so. The word-final vowel on the adjective is determined by the gender of the noun, not the noun's word class. Therefore, word class is not relevant for agreement, and word class can be determined

for a given noun in isolation (i.e., when no other elements are present).⁷⁴ This makes it quite different from gender.

The discussion above does suggest, though, that there is a correlation between gender and word class. The same-root data and (49a) in the previous section also seemed to imply that word-final vowels might actually be gender vowels.⁷⁵ We saw that when two nouns have the same root, it is quite common for the masculine form to end in /o/, while the feminine form ends in /a/. I repeat some of the data from (13) here in (52) for convenience.

(52) Same-root pairs

- | | | | | | | |
|-----|-----|-----------|-------------------|------|-----------|---------------------|
| (a) | (i) | el | primo | (ii) | la | prima |
| | | the-sg.m. | male cousin-sg.m. | | the-sg.f. | female cousin-sg.f. |
| | | | | | | |
| | (i) | el | médico | (ii) | la | médica |
| | | the-sg.m. | male doctor-sg.m. | | the-sg.f. | female doctor-sg.f. |

It looks like we could argue that word-final /o/ marks the masculine and word-final /a/ the feminine. However, the examples in (51) above cast doubt on this claim. The nouns *mano* and *foto* are feminine, but they end in /o/; the nouns *mapa* and *poeta* are masculine, although they end in /a/.⁷⁶ We see quite clearly, therefore, that conceiving of word-final vowels as gender vowels creates some complication. It would ultimately have to be argued that both /a/ and /o/ can represent both the masculine and feminine genders. This is not ideal. But, that is not to say that there is no correlation between gender and word class or that such a correlation is mere coincidence. Chapter 3 will focus on the ways in which

⁷⁴ I say here that it “can be,” but it will not necessarily be, particularly if the word-final vowel interacts unexpectedly with derivational morphology. We would not know that this is the case without observing the nominal in a derived context. We have already seen some of the more complex cases that fall into this group.

⁷⁵ This is exactly what some authors, including Klein (1989), Lloret & Viaplana (1997), and Bonet (2007), have argued.

⁷⁶ There are many more /a/-final, masculine nouns. There are only a few additional /o/-final feminine nouns (i.e., *libido* (‘libido’), *moto* (abbreviation for ‘motorcycle’), *radio* (‘radio’), *soprano* (‘woman who sings in the soprano range’)). However, there is not universal agreement on whether *radio* is masculine or feminine.

generalizations about the correlation between gender and word class can be captured by a DM-based model of gender and word class in Spanish. Before turning to this topic, I close the loop on formally-determined gender and summarize what has been presented in this chapter.

2.5.6. *Closing the loop on formally-determined gender that relies on word class*

It was discussed above in section 2.3.2.2 that it might be possible that Spanish has formally-determined gender that makes use of a morphological rule. As word class is a morphological trait, the question is whether a noun's word class can determine its gender. Now that we have defined word class and looked at the word class inventory in Spanish, we are ready to investigate this possibility.

A preliminary observation of the data presented above suggests that there is a correlation between Class I and masculine gender on the one hand and Class II and feminine gender on the other. However, as I presented in (50), not all /o/-final nouns are masculine, just as not all /a/-final nouns are feminine. Nonetheless, Harris (1999) argues that this is no coincidence and that feminine gender in particular is related to word class via a redundancy rule. His rule, given in (53) states that feminine nouns are assigned to Class II. As we have seen, Class II consists of all /a/-final nouns. This explains the correlation between feminine gender and word-final /a/.

(53) fem→II

Class II is the default for feminine nouns that are otherwise without class membership specifications. Class I is not the target of a similar gender→word class rule. It is the “ultimate elsewhere case” (p. 58). It is the word class that is assigned to everything that is not designated as belonging to any other class.⁷⁷

⁷⁷ I will elaborate more on the specifics of how these stipulations lead to the realization of the word-final segments in Chapter 3.

Harris' redundancy rule captures the generalization between feminine gender and word-final /a/ (or Class II). But, this generalization relies on the idea that gender determines word class, and not vice versa.⁷⁸ We could assume that the same rule operates in reverse. This presupposes, however, that word class material is capable of existing in the derivation prior to gender. Harris (1999) operated on the assumption that this was not the case. I will do the same, as I will explain in Chapter 3, in which I investigate previous approaches to gender and word class. I will conclude, as did Harris (1999), that gender is syntactic and word class is morphological, meaning that word class cannot determine gender because it is not yet present in the derivation (assuming morphological information is added post-syntactically, as DM does). I will assume, therefore, that in Spanish there is no formally-determined gender that relies on morphological class.

2.6. Summary

I began the chapter with an investigation into the definition of grammatical gender. I proposed the following definition: (5) Gender is the classification of nouns into groups based on the morphological agreement/concord patterns demonstrated by other elements in the utterance; based on a semantic criterion for at least some nouns in every gendered language; and determined formally or arbitrarily in other instances (i.e., when not based on a semantic criterion).

After defining gender, I presented the gender system of Spanish. Spanish has a two-way gender distinction for nominals (three-way for pronominals); nouns are categorized as masculine or feminine depending on the behavior of other elements in an utterance. For the purpose of this dissertation, I focus on DP-internal agreeing elements (i.e., determiners, quantifiers, and adjectives). I demonstrated that gender in Spanish is determined partly by biological sex for many nouns that denote humans and

⁷⁸ This directionality for the relationship between the two was suggested by Thornton (2001) for Italian as well (pp. 481-482). However, her argumentation relied on a different definition of word class than that proposed by Harris (1985, 1991b, etc.).

domesticated animals. I argued that the remaining nouns are assigned gender formally (i.e., default for certain loanwords) or arbitrarily. The only formal types of gender assignment in Spanish target derived native nouns, nonnative nouns without semantically-determined gender, and native ungendered parts of speech. The analysis for gender in Spanish that I present in Chapter 3 will take all of these distinctions into account, demonstrating how the approach put forward by Kramer (2015) can account for the observed data. Specifically, this approach can demonstrate the distinction between semantically-determined gender (Kramer's interpretable gender) and gender that is not semantically-determined (represented by uninterpretable features) as well as the masculine default (represented by a lack of gender features).

After presenting some previous approaches to the operationalization of gender, I turned to a discussion of word class. I defined nominal word class to be a trait of nominals determined by the identity of root-specific pieces of phonology that are necessary for a morphologically well-formed noun. I provided evidence to support each of these claims and suggested that word class might be related to the categorizing process (i.e., the process by which a root becomes a word of a particular syntactic category). Upon reviewing past approaches to Spanish word class, I proposed the word class inventory that I will use for this dissertation.

The next section addressed the way in which word class differs from gender, namely that, unlike gender, word class is not relevant for agreement and can be identified even when a noun appears in isolation. I pointed out generalizations between gender and word class in Spanish (namely, /o/-final nouns are often masculine, while /a/-final nouns are often feminine). But, I also argued that word-final vowels cannot be gender markers because this would require the same word-final vowel to expone opposite genders for certain sets of nouns (e.g., feminine *mano* ('hand') vs. masculine *chico* ('boy')). In the next chapter I account for these generalizations and operationalize the relationship between gender and word

class. The subsequent chapters will provide support for the model I propose by looking at gender and word class patterns in diminutive, augmentative, and derivational contexts.

CHAPTER 3

3.1. Introduction

In the preceding chapter, we saw that Spanish possesses both gender and word class. The only productive correlations between gender and other traits are: (1) the association of specific (mostly human-denoting) sexed entities with masculine or feminine gender based on sex (2) the association of unsexed nouns with either the masculine or feminine gender arbitrarily and (3) the association of all atypical nouns (e.g., loanwords, nominalizations of items of other parts of speech,¹ etc.) with masculine gender. We saw that word class is sometimes related to gender in that word-final /o/ often patterns with the masculine gender and word-final /a/ often patterns with the feminine gender. However, this correlation does not always hold. The questions that this chapter addresses are (1) how this pattern can be accounted for when it does hold and further (2) how and why such a relationship might not hold in other cases. In order to do so, I investigate the location of both gender and word class in the grammar.

This chapter is constructed as follows. The first several sections address gender, while the latter investigate word class. Because I have assumed that the two are distinct, I describe them each separately before bringing them both together and explaining how they can be interrelated.² I begin with an investigation of the location of gender. I argue that assuming that gender is present in the syntactic component, where it is paired with roots, allows for the greatest theory-internal consistency and best accounts for the observed data. Specifically, I follow Kramer (2015), which asserts that gender appears as a feature on the nominalizing head (*n*) and that this feature varies in interpretability (i.e., ability to be interpreted at LF). This allows for an explanation of the difference between semantically-based gender and arbitrary and default genders, all of which are present in Spanish (as described in Chapter 2). The

¹ Recall that nominalized prepositions (e.g., *para*, meaning ‘for’), for example, were shown to appear with masculine agreement.

² Additionally, because the two are distinct, not all of the previous literature with regard to gender is also relevant for word class. Discussing them both together would complicate the review of the previous literature. This separate treatment of each was therefore selected with ease of exposition in mind as well.

ability to differentiate between semantically-based gender and other genders distinguishes Kramer (2015) from previous analyses (e.g., Harris, 1991a), which could not explain the difference between masculine gender for sexed entities and default masculine gender in particular. I demonstrate the benefits of this possibility and explain other ways in which Kramer (2015) is superior to previous, lexicon-based analyses for Spanish gender. These benefits are two-fold: (1) it upholds the basic tenets of Minimalism and Distributed Morphology, and (2) it better accounts for the data (in particular feminine nouns with fixed gender and the distinction between semantically-determined gender and other genders).

Committed to the assumption that gender is on *n*, I then investigate the ways in which we can account for the relationship between gender and word class. This concerns the frequent correspondence between word-final /o/ and masculine gender on the one hand and word-final /a/ and feminine gender on the other. I argue that word class, like gender, is on *n*. However, unlike gender, word class is not present in the syntax, but rather is the result of a postsyntactic morphological operation that inserts a dissociated node into the derivation to satisfy a morphological well-formedness condition (cf. Embick, 1997). Such an approach can account for the relationship between gender and word class but can also accommodate the instances in which the two do not correspond (i.e., any case in which the masculine gender does not correspond with /o/ and the feminine gender does not correspond with /a/). In the next chapter, I demonstrate that this analysis, coupled with the novel word class inventory presented in Chapter 2, allows for an account of Spanish diminutive allomorphy, itself a subject of much attention in the past several decades (cf. Jaeggli, 1980; Colina, 2003; Smith, 2014; among many others). It also explains the patterns of word class marker realization for diminutives, a subject (to my knowledge) that has been heretofore unexplored.

3.2. Where is gender?

The first question we must ask in investigating the relationship between gender and word class is where each is located. I begin with gender. There is wide support for the claim that gender is a feature in various approaches and frameworks (cf. Roca, 1989; Harris, 1991; Eguren, 2001; Alexiadou & Müller, 2008; Kramer, 2015; among others). What is less clear is the location of gender assignment or encoding (i.e., at what point in the derivation is the gender feature assigned or incorporated?). There appears to be general consensus among the authors listed above (and others) that gender must be present in the syntactic component. This is due to the fact that gender is necessary for agreement. This particular agreement results in concord on adjectives, determiners, and other parts of speech, as described in Chapter 2. In order for gender to be present in the syntax, it must be introduced to the derivation either presyntactically or in the syntactic component itself. I explore each option in turn.

3.2.1. When is gender introduced into the derivation?

One possible response to the question of when gender is introduced into the derivation is to assume that gender is inserted in the syntactic component on a preexisting projection. In other words, gender features would be inserted into the syntactic component independent of a projection. As I am unaware of a process by which features are inserted syntactically, I rule this out as a plausible scenario.

Another approach to ensuring that gender is introduced presyntactically is to assume that gender is *assigned* in a presyntactic lexical component (e.g., Roca, 1989; Harris, 1991; Eguren, 2001; Alexiadou & Müller, 2008).³ This is not an option if we assume a Distributed Morphology framework, as there is no generative, presyntactic component in DM.

DM assumes a presyntactic list of feature bundles, and some of the features included could be gender features. However, in this framework, gender features are not inherent to or assigned to particular

³ Alexiadou and Müller (2008) argue that gender is an inherent and non-predictable feature that is paired with a noun stem in the lexicon (p. 140).

noun stems the way that they are in a generative lexicon-based approach.⁴ In fact, noun stems are not present on this presyntactic list; they are built via a process of categorization of a root that takes place in the syntax (see Chapter 1). Furthermore, an association or assignment of gender to roots would introduce category-specific information before categorization has occurred, contradicting recent DM work, including Harley (2014a). As such, I assume that gender features must be present presyntactically (i.e., included in the presyntactic list of feature bundles) but not assigned presyntactically. Over the course of this chapter, it will be demonstrated why this position is preferable to that espoused by generative, lexicalist approaches (namely Harris, 1991a), both due to theory-driven and data-driven factors. But first, another question must be answered.

We have determined that gender should not be present on a root, but that it is a feature that is present in the syntax. The question, then, becomes whether gender heads its own projection or whether it is a feature on another projection. Previous work has argued for both positions. I summarize briefly some of these and motivate my assumption that gender is a feature that does not head its own projection. I ultimately follow Kramer (2015) in assuming that gender is found on *n*, the nominalizing head.

3.2.2. *Gender as an independent syntactic projection*

There are several works that assume that gender heads a separate projection. Picallo (2008) argues for a GenderP. Fábregas and Jiménez (2010), on the other hand, argue that gender is present in both a GenderP and a ClassP. Although their approaches vary in their specifics, both assume that gender can head its own projection. If we assume that gender can be uninterpretable (which I do, following Kramer, 2015, as I will explain below),⁵ then this poses a challenge. As we saw in Chapter 2, there are many instances in which gender has no semantic basis (and therefore should be semantically

⁴ I demonstrate in section 3.2.4 why this particular framework is preferred over one with a generative lexicon.

⁵ I note that Picallo (2008) assumes that gender for inanimate nouns is interpretable and would avoid this issue. But, it is not clear to me how gender for inanimate nouns could be interpretable.

uninterpretable). Any analysis that purports that there is a separate projection for gender relies on the assumption that there can be a projection that does not contain (semantically) interpretable features, as Kramer (2015) explains. The problem concerns gender that is not semantically-determined, which, for Spanish, means gender that is not based on biological sex. I illustrate this point using the inanimate feminine noun *puente* (bridge-m.).

This noun has arbitrary gender;⁶ its gender is not determined by semantics or by formal features. Because gender in this case contributes no semantic meaning, it should therefore be considered uninterpretable (i.e., illegible at LF). If we were to assume the existence of a GenderP, this projection would contain an uninterpretable gender feature. Chomsky (1995), however, argues that no projection should be comprised entirely of uninterpretable features.⁷ Such projections would only be necessary for theory-internal reasons (p. 349), namely to provide a location for the checking (or valuation) of features. They are thus unnecessary and should be avoided.

We know that there are many instances throughout various languages of the world in which at least some gender is not semantically interpretable (as described in Chapter 2). In these languages, including Spanish, gender cannot head its own projection.⁸

3.2.3. *Gender as a feature on another projection*

Several authors have adopted the assumption that gender is a feature on a projection other than a GenderP, including Ritter (1993), Ferrari (2005), Lowenstamm (2008), Ferrari-Bridgers (2007, 2008), Kramer (2015), among others. The subsequent question that we must ask concerns the identity of such a

⁶ Further support for the fact that the gender of this noun is arbitrary is provided by other Romance languages that have this same noun. In Portuguese, the term for ‘bridge’ (*ponte*-sg.f.) is feminine.

⁷ The prime example of such a projection are Agr nodes.

⁸ I suppose it is also possible that there is a GenderP that can house uninterpretable gender due to the presence of a separate feature that is interpretable at least in the instances in which the gender feature is not. At this point, I cannot think of a plausible identity for such a feature or why it would obligatorily be introduced into the derivation with gender even when gender is uninterpretable. It seems like a highly unlikely scenario, but I mention it for the sake of completeness.

projection. Ritter (1993) argues that the location of the gender feature is parameterized. For example, the gender feature appears on Num in Romance, but on N in Hebrew. Ferrari (2005), Lowenstamm (2008), Ferrari-Bridgers (2007, 2008), and Kramer (2015), however, have argued that gender is always on *n* in the syntax. In other words, gender appears on the nominalizing head in a framework (such as DM) in which word formation occurs in the syntax. I explain this assumption here in detail and explain why it is preferred to the analysis put forward by Ritter (1993), as well as the idea that gender heads its own projection.

(1) Categorization (nominalization) process



The process of categorization (nominalization) of a root is presented in (1). We see that the root $\sqrt{\text{CAT}}^9$ becomes the noun ‘cat’ once it has been merged with an *nP*. It is on this categorizing *n* that gender is located, according to Ferrari (2005), Lowenstamm (2008), Ferrari-Bridgers (2007, 2008), and Kramer (2015). I point out the differences across these different approaches and explain why Kramer (2015) best accounts for gender in Spanish.

⁹ I follow Harley (2014a), among others, in assuming that roots are devoid of phonological material until the derivation has reached PF. As such, the root would, at this point, be differentiated from other roots only via an index (cf. Pfau, 2000, 2009; Acquaviva, 2008). I include the orthographic form here for the sake of ease of explanation.

3.2.3.1. Ferrari (2005), Ferrari-Bridgers (2007, 2008)

In an analysis of Italian, Ferrari (2005) and Ferrari-Bridgers (2007, 2008)¹⁰ argue that the gender marker is derivational in nature but that it also has inflectional functions. Ferrari (2005) assumes that there are no word class markers; word-final /a/ is the morphological realization of the feminine gender feature [f].¹¹ Masculine, word-final /o/ is postlexically epenthetic, while word-final /e/ is lexically epenthetic (and involves the lowering of /i/ to /e/ postlexically). Both are “possible expressions of unmarkedness” for noun stems that do not have the feature [f] (p. 122). Ferrari (2005) also assumes that /o/ results from morphological epenthesis since it can be re-analyzed as a masculine marker, while the phonologically epenthetic /e/ cannot (i.e., it has “no evident morphological value”; p. 130).

It is interesting to note Ferrari’s (2005) idea that at least some word-final vowels (namely /a/) are derivational and not inflectional. It does not seem farfetched to assume that /a/ could be derivational if we look at feminine nominals that seem to be built on masculine nominals in Spanish pairs such as *ganador~ganadora* (worker-m.~f.).¹² With these nominals, the only difference between the masculine form and the feminine form is the addition of word-final /a/. However, I argue that the /a/ that surfaces here and on other feminine nominals is the result of a close relationship between gender and word class that allows gender to impact word class (i.e., it is not due to the fact that *n* expones gender itself). It is preferable to assume that /a/ is not a derivational marker in Spanish, in which we find a sizeable amount of masculine nouns that end in /a/ and feminine nouns that end in /e/ (and also a few feminine nouns that end in /o/). If we were to assume that the word-final /a/ realized the feminine gender, it would be much

¹⁰ Note that Ferrari and Ferrari-Bridgers refer to the same individual.

¹¹ In order to account for the fact that /a/-final, feminine nouns in Italian pluralize with word-final /e/ (e.g., *casa* (house-sg.f.) → *case* (house-pl.f.)), Ferrari (2005) argues that the /a/ realizing [f] and the /i/ realizing the plural are fused at PF, resulting in /e/. As for the masculine plural, Ferrari (2005) assumes that no such process occurs since they surface with the plural morpheme /i/ (e.g., *libro* (book-sg.m.) → *libri* (book-pl.m.)); no additional stipulation is necessary.

¹² There are fewer Italian pairs like this, as Italian has suffixes such as *-trice* and *-essa* to demonstrate female counterparts to male agents and practitioners of certain professions.

more difficult to explain how either masculine, /a/-final nouns or feminine nouns ending in /e/ acquire their word-final segment.

Following this assumption (i.e., that word-final /a/ realizes the feminine gender) would require us to stipulate that the word-final /e/ is epenthetic or that the same feature ([f]) has two different phonological realizations (one being /a/ and the other being /e/). We have already seen that word-final epenthesis is no longer productive in Spanish (section 2.5.1), meaning that word-final /e/ has achieved word class marker status. The notion that word-final /e/ is epenthetic, therefore, can be ruled out. The second option (i.e., that the same feature is realized with two different phonological strings) would also pose a challenge. The possible Vocabulary Items in such a scenario are given below in (2).

(2) Possible Vocabulary Items for [+FEM]

- [+FEM] ↔ /a/
- [+FEM] ↔ /e/

As is, this predicts that the two realizations of the feature would be in free variation. This is certainly not the case as word-final /a/ and /e/ are obligatorily paired with certain nouns. Sometimes a change from /e/ to /a/ can even result in a difference in meaning, as seen in (3).

(3) /a/ and /e/ are paired with specific nouns

/a/-final feminine form	Gloss	/e/-final feminine form	Gloss
casa	house-sg.f.	case	???
clasa	???	clase	class-sg.f.
bata	housecoat-sg.f.	bate ¹³	???
muerta	dead female-sg.f.	muerte	death-sg.f.
basa	pedestal-sg.f.	base	basis-sg.f.
seda	silk-sg.f.	sede	seat-sg.f.

¹³ Note that *bate* does have meaning as a masculine noun, in which case it denotes ‘baseball bat.’

However, the data above demonstrates that the two realizations of [+FEM] cannot be in free variation.

One way to avoid this issue is to argue that there is a more specific context in which one of the two appears. In other words, there would be a feature that would distinguish /a/-final feminine nouns from /e/-final feminine nouns, making one of the two types of nouns more specific and subject to Vocabulary Insertion before the other. I am not aware of any possible specification to this effect. To my knowledge, there is no discernible phonological, semantic, or morphological criterion to differentiate the two types of feminine nouns. Thus, I reject the option that both word-final /e/ and word-final /a/ can realize the [+FEM] feature and argue that neither is a gender marker (*pace* Ferrari, 2005; Ferrari-Bridgers, 2007, 2008). This argument is further strengthened by the fact that there are also masculine nouns that end in /e/ and /a/, such as *punte* (bridge-sg.m.) and *problema* (problem-sg.m.).

3.2.3.2. Lowenstamm (2008)

Lowenstamm (2008) has a slightly different approach than Ferrari-Bridgers. It argues that *n* is expounded as gender. In this analysis, *n* comes in several versions, and the number of types of *n* is determined by a specific language itself. The type of *n* that is merged to a root determines the realization of the word-final segments in that language. The merging of a root with a particular *n* is just “a convention enforced by society,” so a root merging with any *n* is, in theory, possible (p. 22).

This analysis, in a way, encapsulates both the idea that gender is on *n* and the idea that class information must somehow be related to this *n*. However, the notion that merging of a root with a particular *n* is just due to “convention” is unattractive. The assignment of a nominal to the incorrect gender results in ungrammatical phrases, not just ones that are pragmatically odd, as we saw above in section 2.2. It is syntactic, not pragmatic.

Lowenstamm (2008) also operates from a Government Phonology perspective, permitting the assumption that there are CV templates present in the syntax. Such an approach contradicts the DM tenet

that no phonological material is present in the syntax. It appears we can reject this analysis for its inability to account adequately for ungrammatical gender agreement and its deviation from the frameworks incorporated here.

3.2.3.3. Kramer (2015)

Kramer (2015) differs from both authors in that it does not claim that gender information on *n* is necessarily spelled out at all. Rather, for Spanish in particular, Kramer argues for postsyntactic insertion of dissociated nodes that realize word class and not gender, following Embick (1998), Oltra-Massuet (1999), and Oltra-Massuet and Arregi (2005).¹⁴ Kramer (2015) accounts for the differences in gender types, namely the distinction between semantically-determined gender (or natural gender) and its “arbitrary gender,” which covers all gender assignment that is not determined by a natural trait (e.g., biological sex, animacy, etc.), using different types of features. The distinction boils down to the difference between interpretable gender features and uninterpretable gender features.

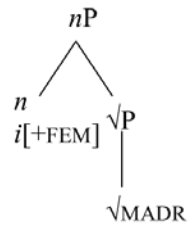
3.2.3.3.1. The analysis

Nouns with “natural gender” (gender determined by a semantic trait) have interpretable gender. This follows intuitively, since their gender corresponds with a semantic distinction (e.g., male vs. female). Nouns with natural gender are formed by the merging of an *n* with interpretable gender features with roots that are licensed under an *n* with that particular feature. For instance, the noun *madre*, meaning ‘mother,’ (root *madr*) is created by the merging of \sqrt{P} with an *n* that has the interpretable [+FEM] feature (*i*[+FEM]), considering it denotes a female.¹⁵

¹⁴ I elaborate on this point once I delve into the discussion of the relationship between gender and word class.

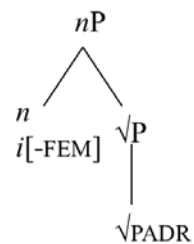
¹⁵ I describe the way in which Kramer (2015) blocks this root from combining with an *n* that has other features (*i*[-FEM], *u*[+FEM]) and plain *n* below (i.e., licensing conditions) after explaining each of the types of *n* in question and the benefit of this analysis with regard to same-root nominals and epicenes.

(4) Derivation of nouns with interpretable feminine gender



In contrast, the noun *padre*, meaning ‘father’ (root *padr*) is created via the merging of a \sqrt{P} with an n that has an interpretable $[-FEM]$ feature.¹⁶ This is demonstrated in (5).

(5) Derivation of nouns with interpretable masculine gender



As for nouns whose gender is not semantically-determined, they do not have interpretable features, as this gender contributes no semantic meaning to the derivation. Feminine nouns with arbitrary gender are formed by the merging of a root with an n that has the uninterpretable $[+FEM]$ feature ($u[+FEM]$). (6) illustrates this process for the feminine *casa* (house-sg.f.).

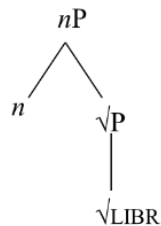
¹⁶ Kramer (2015) utilizes a binary $[\pm FEM]$ feature for gender. See Roca (1989) and Harris (1991a) for other gender feature systems.

(6) Derivation of nouns with uninterpretable feminine gender



Masculine nouns with arbitrary gender are formed by the merging of a root with a “plain” *n* (i.e., one without any gender feature). This is due to the fact that masculine gender can be assigned by default, making it unnecessary to have an uninterpretable masculine feature. An example is provided below in (7) for the masculine *libro* (‘book’). In this case, the root merges with a “plain” *n* and receives the uninterpretable masculine gender by default, since this is the default gender for Spanish.

(7) Derivation of nouns with uninterpretable masculine gender



Therefore, there is a distinction between the uninterpretable feminine feature and interpretable feminine feature: the former has no basis in biological sex, while the latter does. Both feminine features, however, have the same impact in terms of agreeing elements; both will prompt the same articles, determiners, etc. to surface. This is the commonality that they share. Masculine nouns with semantically-determined gender and masculine nouns without semantically-determined gender, on the other hand, do

not share a common feature. The former contain an interpretable [-FEM] feature, which results in the interpretation of a male entity; the latter, in contrast, does not contain a gender feature and will have masculine gender by default.¹⁷

3.2.3.3.2. Benefits over other analyses

There are several benefits to Kramer's (2015) gender system in contrast to that of Ferrari (2005), Ferrari-Bridgers (2007, 2008), and Lowenstamm (2008). First, Kramer (2015) explains the way in which gender relates to semantic traits in some instances but not in others. Interpretable gender has a semantic basis, while uninterpretable gender does not. In the case of Spanish, the distinction concerns biological sex, but this analysis could easily be extended to animacy-based gender systems (as in Kramer's Chapter 6, which extends the analysis to Algonquian languages) or those based on another semantic trait. Second, Kramer's analysis allows us to draw a distinction between word class markers and gender itself. By not assuming that the gender feature itself is spelled out in a particular way, we avoid running into difficulty when feminine nouns end in an unpredictable way (i.e., without word-final /a/, as described above).¹⁸ Furthermore, we do not have to rely on epenthesis to supply word-final /e/ or /o/ (as in Ferrari, 2005), which is particularly important for Spanish, in which word-final epenthesis is no longer active.

Kramer (2015) has a further advantage in that it easily accounts for same-root nominals. These are nominals that share the same root (i.e., have similar meaning and phonological form) but that have different gender. We saw in Chapter 2 that same-root nominals can be used to demonstrate several

¹⁷ One reviewer wondered whether a [-FEM] feature would be necessary at all. It seems to me that such a feature would be necessary in order to cause the interpretation that the entity denoted by the root+n is in fact male. I suppose that it would be possible for the male sex interpretation be granted to a nominal, animate root by default, but this seems as though it would pose complications when we consider masculine epicenes. These nouns would have masculine gender by default, since their gender is not based on biological sex. I am unsure as to how we would be able to distinguish these human entities from those that have male sex and are masculine. I choose to retain the i[-FEM] feature to create this distinction.

¹⁸ I will explain in detail where word class markers come into the derivation and how they are realized in the latter half of this chapter.

semantic distinctions (e.g., male vs. female; small vs. large; fruit vs. fruit tree). However, it was determined that only the male vs. female distinction is productive in Spanish. Some examples of human-denoting same-root nominal pairs are given below in (8).

(8) Same-root nominals¹⁹

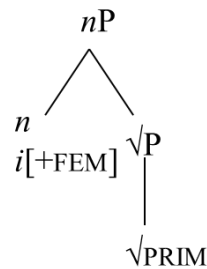
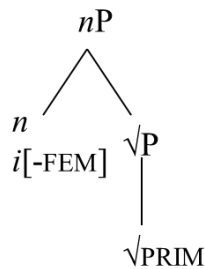
- | | | | | |
|-----|-----------|-------------------|-----------|---------------------|
| (a) | el | primo | la | prima |
| | the-sg.m. | male cousin-sg.m. | the-sg.f. | female cousin-sg.f. |
| (b) | el | médico | la | médica |
| | the-sg.m. | male doctor-sg.m. | the-sg.f. | female doctor-sg.f. |

These are easily accounted for in Kramer's (2015) analysis by the assumption that there are different types of *n* that can merge with each root. Roots that form same-root nominals are licensed under either type of interpretable *n*. Under an *i*[+FEM] *n*, they are feminine, and under an *i*[-FEM] *n*, they are masculine.

(9) Derivation of same-root nominal pair²⁰

(a) *el primo*

(b) *la prima*



¹⁹ There are some nominals that share the same root but do not pattern in this way (/o/ for masculine and /a/ for feminine). I will address these in the section 3.2.4.4 and discuss some same-base (but not same-root) nominals in Chapters 5 and 6. The latter are cases like the deverbal *instructor~instructora* (instructor-sg.m./f.) and *profesor~profesora* (professor-sg.m./f.)

²⁰ These derivations do not include the word-final vowels. I abstract away from this part of Kramer's analysis until I explain the interactions between gender and word class and how these are accounted for her in analysis.

We see that both nouns are formed in the same manner and only differ in the identity of the gender feature.

The same is true for same-root nominals whose gender does not incorporate a sex-based distinction, such as the fruit/fruit tree and small/large pairs introduced in section 2.3.2.1.1. These can be licensed under either $u[+FEM]$ or the “plain” n . I argue that it is the purview of List 3, or the Encyclopedia, to determine which meaning is assigned to each nominal in this case. There are instructions to interpret the root CEREZ, for example, in a particular way in the context of the $[+FEM]$ n (i.e., as the fruit born by the tree indicated by the root CEREZ). I provide an example below in (10).

(10) Possible Encyclopedia entry for fruit-fruit tree same-root nominals in Spanish²¹

Interpret \sqrt{CEREZ} as CHERRY / $_ n[+FEM]$
Interpret \sqrt{MANZAN} as APPLE / $_ n[+FEM]$

I elaborate further on these special instructions after a brief discussion of epicenes, which are also relevant to these special instructions.

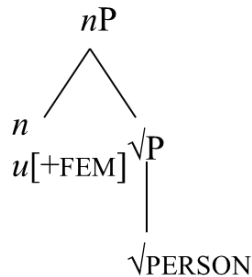
A further benefit of Kramer’s (2015) analysis is that it can fairly easily account for epicenes. These human-denoting nouns have fixed gender despite their ability to denote humans of either male or female biological sex. According to Kramer’s (2015) analysis, epicenes that are feminine are licensed under an n with an uninterpretable feminine feature since their feminine gender is not related to the sex of the referent (i.e., it is not interpretable). Epicenes that are masculine are licensed under the “plain” n . They too need not have a semantically interpretable gender feature since their gender is independent of

²¹ It is not clear whether the Encyclopedia entry would be given for the fruit or the tree. It is also unclear whether a separate entry would be necessary for the other interpretation (i.e., either the fruit or the fruit tree). However, I posit that an Encyclopedia entry would not be necessary for both, as I assume that one interpretation is the compositional or anticipated one that does not have a special interpretation. The Encyclopedia does not need to provide instructions for interpretation for elements whose meaning is compositional, which is why a special instruction would only be needed for either the fruit or the fruit tree.

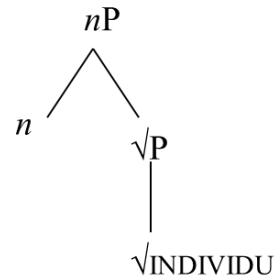
the sex of the referent. The derivations in (11) illustrate both processes; (11a) derives the feminine epicene *persona* (person-sg.f.), while (11b) derives the masculine epicene *individuo* (individual-sg.m.).

(11) Epicenes in Kramer' (2015) analysis

(a) *la persona*



(b) *el individuo*



As demonstrated in (11), Kramer (2015) is able to account for the fixed gender of epicenes despite the variable biological sex of their referents. This treatment of epicenes highlights the importance of differentiation between interpretable (“natural”) gender and uninterpretable (“arbitrary”) gender. Such a system works quite well for Spanish, a language with both natural and arbitrary gender (cf. Chapter 2), as demonstrated above.

Additionally, the presence of the underspecified plain *n* (i.e., the nominalizing projection without a gender feature) explains the process of default gender assignment. Whenever the gender is not specified due to a semantic feature or the presence of the uninterpretable [+FEM] feature, it is assigned by default. Furthermore, Kramer (2015) adheres to the principles of DM (i.e., not placing gender information on the root) and Minimalism (i.e., not relying on a projection that can house only uninterpretable features) and can account for the mismatches between gender and word class that I referenced above with regard to Ferrari (2005), Ferrari-Bridgers (2007, 2008), and Lowenstamm (2008).

However, one point that has not been fully clarified up to this point concerns how exactly roots are matched up with particular types of nominalizing heads (*n*'s). It was mentioned above that it is

unattractive to assume that speaker choice determines these pairings (*pace* Lowenstamm, 2008). But, I have also warned against the possibility of putting category-specific (such as type of *n* selection) information on the root in the presyntactic list of feature bundles. What are the other options?

3.2.3.3.3. Matching up *n*'s and roots: Licensing conditions

I mentioned one possibility briefly above with regard to certain root and *n* combinations for the fruit and fruit tree pairs. Specifically, the combination of a specific one of these roots and “plain” *n* was interpreted as a tree while the combination of the same root and the *n* with a $u[+FEM]$ feature was interpreted as a fruit. This is referred to as a licensing condition, a term used previously by Harley and Noyer (1998, 1999, 2000), Acquaviva (2008), Siddiqi (2009), and Kramer (2015) in reference to conditions on the pairing of particular roots with specific types of projections. This particular example is a semantic licensing condition (in contrast to what Kramer, 2015 refers to as “arbitrary licensing conditions”).

Semantic licensing conditions are those that affect semantic interpretation. With respect to Spanish gender, these licensing conditions refer to the pairing of roots with specific types of *n* (i.e., *n*'s with specific gender features). Same-root nominals are addressed in the manner described above with regard to fruit and fruit tree pairs. These roots can be interpreted by the Encyclopedia under multiple types of *n*. The fruit and fruit tree pairs can be interpreted when under the uninterpretable $n(u[+FEM])$ or the underspecified “plain” *n*. Sexed same-root nominals (such as *médico* and *médica* for ‘doctor’) are interpretable under either type of interpretable *n*. No semantic licensing conditions need to be stipulated. The only difference in these interpretations is the sex of the referent.

Different-root nominals (those pairs of nouns whose masculine and feminine forms do not share the same root, such as *nuera* (‘daughter-in-law’) and *yerno* (‘son-in-law’)) are much more limited. They are only interpretable in the Encyclopedia when paired with a particular type of nominalizing projection.

For instance, *nuera* is only interpretable when it appears under $n\ i[+FEM]$, while *yerno* is only interpretable when it appears under $n\ i[-FEM]$. The derivation will crash if such a root is paired with an incompatible type of n .²²

As for ensuring that interpretable n 's are only matched with roots that denote animate nouns, Kramer discusses two possible routes: (1) restrictions on feature (i.e., animacy and gender features) co-occurrence and (2) semantic licensing restrictions that ensure that roots that denote inanimate nouns can only be interpreted in the context of an n with an uninterpretable gender feature. She does not choose between the two, saving them for future investigation once more is known about the nature of the Encyclopedia.

The other type of licensing conditions is referred to by Kramer (2015) as arbitrary licensing conditions. These are idiosyncratic pairings between a root and a particular type of n that have no basis in semantics, phonology, morphosyntax (i.e., case), or otherwise. Kramer (2015) notes that most previous work has assumed that these licensing conditions are conditions on the Vocabulary Insertion of roots (e.g., Harley and Noyer, 1998, 1999, 2000; Siddiqi, 2009; *pace* Acquaviva, 2008). In other words, Vocabulary Insertion for roots will only take place (i.e., roots are only exponed) when they are paired with the correct type of n . The masculine *libro* ('book') is only exponed when paired with the plain n (n lacking a specific gender feature), while the feminine *clase* ('class') is only exponed when paired with the uninterpretable, feminine n ($n\ u[+FEM]$).

²² Some speakers may generate the ungrammatical form *nuero* for 'son-in-law.' Curiously, however, the form *yerna* for 'daughter-in-law' is not generated (Campos, personal communication). This raises two interesting questions: (1) how is *nuero* generated; and (2) why is *yerna* not generated? For the former, it is possible that the licensing conditions do not hold for this particular noun for these particular speakers. As for the latter, it seems reasonable to assume that licensing conditions could also be broken to allow the creation of *yerna*, but this form is not attested. One possible theory is that it is much more likely for a speaker to generate back a masculine, /o/-final form for a noun from a feminine, /a/-final noun than to generate a feminine, /a/-final noun from a masculine, /o/-final noun. I do not delve into the topic of variation from a DM perspective, but refer the reader to Parrott (2006; 2007) for some preliminary work on the topic.

(12) Vocabulary Insertion of root demonstrating arbitrary licensing conditions for inanimates

$$\begin{aligned}\sqrt{\text{LIBR}} &\leftrightarrow [\text{libr}] / n \\ \sqrt{\text{CLAS}} &\leftrightarrow [\text{klas}] / n u[+\text{FEM}]\end{aligned}$$

Due to the fact that Encyclopedic interpretation of different-root nominals is only possible with one type of *n*, no arbitrary licensing condition is necessary for these nominals. The derivation will crash at PF regardless of what occurs at LF. Same-root nominals also lack arbitrary licensing conditions. The difference between same-root nominals and different-root nominals is thus semantic licensing. Kramer proposes multiple possibilities for preventing *u[+FEM]* from combining with a same-root nominal. She opts not to choose between them and leaves them open for future research. I will not address these conditions further because an investigation into the specifics of the Encyclopedia and Vocabulary Insertion are beyond the scope of the present work.

More importantly, Kramer (2015) and the preceding section have demonstrated that it is possible to account for specific root and *n* combinations without storing such information in the presyntactic component or lexicon. The appeal to licensing conditions marks an improvement to the notion that the combinations are based on speaker choice (cf. Lowenstamm, 2008) in that it can account for why certain combinations are ungrammatical and not merely infelicitous. Moreover, it allows us to retain the assumptions presented in this section thus far (namely that gender is a feature on the nominalizing head) and all of the benefits associated therein. I provide a brief summary to these points here.

3.2.3.4. Summary of the advantages of Kramer (2015)

The current section has demonstrated both data-driven and theory-driven reasoning for adopting the gender system proposed by Kramer (2015). This system states that gender is present on *n*. The combination of interpretability and specific gender results in a four-way typology of *n* for Spanish, summarized in the table below.

(13) Four-way typology of *n* for Spanish²³

Feature inventory	Type of gender it accounts for	Roots licensed under this type of <i>n</i>	Gloss
<i>n</i> <i>i</i> [+FEM]	Sex-determined feminine gender	√CHIC, √HERMAN, √NUER, √MADR	‘girl,’ ‘sister,’ ‘daughter-in-law,’ ‘mother’
<i>n</i> <i>i</i> [-FEM]	Sex-determined masculine gender	√CHIC, √HERMAN, √YERN, √PADR	‘boy,’ ‘brother,’ ‘son-in-law,’ ‘father’
<i>n</i> <i>u</i> [+FEM]	Feminine gender for inanimate nouns; feminine epicenes; feminine default	√MES, √CLAS, √PERSON, √CRIATUR, √GALLIN, √OVEJ	‘table,’ ‘class,’ ‘person,’ ‘infant,’ ‘chicken,’ ‘sheep’
<i>n</i>	Masculine gender for inanimate nouns; masculine epicenes; masculine default	√CENTR, √LIBR, √INDIVIDU, √PERSONAJ, √PER, √BAR	‘center,’ ‘book,’ ‘individual,’ ‘character,’ ‘but,’ ‘bar’

Each type of *n* can combine with any root, in theory. Certain combinations, however, will cause the derivation to crash either at LF or PF due to restrictions on combinations, the result of licensing conditions.

The data-driven benefits of this analysis are first that Kramer (2015) can easily account for the correlation between semantic features (biological sex in the case of Spanish) and syntactic gender. This analysis also accounts for gender that lacks semantic basis and even gender that can violate semantic correlations (i.e., epicenes or fixed-gender nominals) and demonstrates how the two are distinct.

As for the theory-driven evidence for this analysis, the first is that gender is syntactically active (i.e., present in the syntax) and available for Agree relations, which are necessary for determiner realization, adjectival concord, etc. Second, gender does not head its own projection, thereby avoiding the creation of a projection that might possibly house only uninterpretable features. Third, we are able to

²³ One interesting case for this typology is the masculine *marimacho* (tomboy-sg.m.), which is used to describe female human entities. The question concerns how this might be permitted. If we were to assume that the nominalizing head paired with this root had an interpretable feminine feature, then we would expect the gender of the noun to be feminine. This is not the case, as the gender is always masculine while the sex of the referent is always female. I assume that this nominal has fixed masculine gender (i.e., is formed with a “plain” *n*). There could then be a condition in the Encyclopedia whereby this root (under a “plain” *n*) is only interpreted as describing a female. I note that it is not clear what exactly constitutes the root in this case, as *macho* itself is a word in Spanish. In any case, it would still be necessary for the highest *n* in the derivation (in the event that this is a derived nominal) to be a “plain” *n* in order to prompt fixed masculine gender.

maintain the DM framework in which word formation takes place over the course of the derivation (i.e., is distributed throughout) without relying on a presyntactic, generative lexical component. It also allows us to continue to assume that roots are devoid of category-specific information.

The latter is the key differentiating factor between Kramer (2015) and a lexicon-based approach, such as Harris (1991a). Such analyses rely on redundancy rules, lexical specification, and distinct rules to address the same points mentioned above, in particular the correlation between gender and biological sex and gender assignment for same-root nominals. In the section that follows, I explain each of these briefly for the sake of completeness and demonstrate how the analysis put forward in Kramer (2015) is better able to account for a larger portion of the observed Spanish data.

3.2.4. Lexicon-based analyses

The vast majority of the work on gender assignment has incorporated an isolated, generative lexicon into its framework. The assignment of gender takes place within the lexicon, typically via three different processes: redundancy rules for gender assignment, lexically-specified (e.g., listed or marked) gender assignment, and default gender assignment. I present each one in turn and then discuss why Kramer (2015) better addresses a larger portion of the Spanish data than do the lexicon-based analyses.

3.2.4.1. Redundancy rules

Redundancy rules capture the correlation between semantic traits and the gender of the nouns associated with them; in other words, they account for semantically-determined gender. The presence of a semantic feature triggers the application of a rule assigning a particular gender to the noun containing this feature. For instance, a rule could assign the feminine gender feature to a female-denoting noun in a language with a sex-based gender system, such as Spanish.

Harris (1991a) and Riente (2003) have proposed such a rule for Spanish and Italian, respectively. These redundancy rules assign female-denoting nouns to the feminine gender. I present Riente's (2003) redundancy rule (her (9)) below in (14).

$$(14) [\quad]_{\text{GEN}} \rightarrow f / \text{____}, \text{♀}^{24}$$

This rule easily accounts for the observed correlations between semantic traits and gender. Female-denoting nouns are typically feminine, and the redundancy rule explains why this is the case. We see in (15) some sample derivations for feminine Spanish nouns.

(15) Sample derivation for semantically-based feminine gender nouns in Spanish²⁵

(a)	(i)	médic	[] _{GEN}	→	médic [f]	'doctor'
	(ii)	amig	[] _{GEN}	→	amig [f]	'friend'
(b)	(i)	madr	[] _{GEN}	→	madr [f]	'mother'
	(ii)	nuer	[] _{GEN}	→	nuer [f]	'daughter-in-law'

It must be noted that all of the nouns in (15) are unspecified for gender in the lexical entry, following the system proposed by Riente (2003) and Harris (1991). Their grammatical gender is assigned via redundancy rule as a result of the biological sex of the referent. This is true for both same-root

²⁴ Harris (1991a) proposes the following similar rule: 'female' → f / [_____, 'human']. Note that Harris' (1991a) rule only applies to humans. Riente (2003), on the other hand, does not stipulate to which groups the comparable rule applies.

²⁵ Note that in this example and throughout the examples related to Harris' (1991a) analysis, there are no word markers in the lexical entry. This is because Harris assumes that these word markers are added as a result of the gender marking processes mentioned in this section (i.e., redundancy rule, lexical specification, default assignment) in combination with a system of diacritics. I do not explain this part of Harris' system in detail, as I have demonstrated already the importance of avoiding the placement of category-specific information (such as word class markers) on roots in the DM equivalent of the lexicon. I refer the reader to Harris (1991a, 1991b) and Lloret and Viaplana (1997) for more details on lexicon-based analyses of word class in Spanish.

nominals²⁶ and different-root nominals, as illustrated above in (a) and (b), respectively. However, redundancy rules are blocked when a noun's gender is lexically-specified. I will illustrate this point in section 3.2.4.4.

Lastly, I mention that a redundancy rule like that in (14) is not limited to sex-based gender systems. The same process can assign a noun to a specific gender based on any number of other semantic distinctions, such as animacy, human-ness, etc. — it merely depends on which distinctions are present in the language in question.²⁷

In sum, redundancy rules account for semantically-determined gender. They assign a gender to a noun in the lexicon based on the semantic features it possesses. This contrasts with Kramer (2015) in which semantically-determined gender is accounted for via the feature inventory and licensing conditions (see section 3.2.3.3). One benefit of Kramer's (2015) gender system over that proposed here is that it can account for the distinction between semantically-determined gender and formally-determined gender. In the section that follows, I demonstrate that the lexicon-based analyses discussed here do not draw such a distinction and explain why it is preferable to do so.

²⁶ However, for Harris (1991a), the case of same-root nominals is a little bit more complex. I will address this process in section 3.2.4.4.

²⁷ This means that it would be possible, in theory, for there to exist redundancy rules that relate the size and fruit/fruit tree distinctions that were investigated in section 2.3.2.1.1, such as those in (i).

(i) Redundancy rules for other semantic distinctions in Spanish

$$\begin{array}{l} [\quad]_{\text{GEN}} \rightarrow f / \text{____}, \text{LARGE} \\ [\quad]_{\text{GEN}} \rightarrow f / \text{____}, \text{FRUIT} \end{array}$$

To my knowledge, no such redundancy rules have been proposed. It does not seem difficult to imagine that such rules could exist and operate in a similar fashion to the rule in (14). However, the fruit feature in particular is very different from gender features in that it does not have implications for or effects on other parts of the grammar.²⁷

Furthermore, as I have mentioned in section 2.3.2.1.1, the correlations between gender and size on the one hand and gender and fruit/fruit tree on the other do not appear to be productive any longer. It is therefore more likely that same-root nominals that exhibit these patterns are assigned gender via some other process.

3.2.4.2. Lexical specification (lexical marking)

The second process of gender assignment in generative lexicon-based approaches involves either lexical marking or lexical listing.²⁸ Both options specify the gender of the noun in the lexicon from the beginning — i.e., without the use of a rule like that in (14). An example of lexical marking is Harris' (1991a) treatment of feminine nouns that are not human-denoting. These nouns do not undergo a redundancy rule, such as the one given above in (14) because they do not have the female semantic trait. Instead, their lexical entry already contains the lexical mark (f) that corresponds with the feminine feature. The result of this lexical mark is the assignment of the noun to the feminine gender. No noun is assigned to the feminine gender without such a mark. I include an example for some inanimate feminine nouns in (16).

(16) Lexical specification of feminine inanimates in Spanish

(a)	'pound'	(b)	'class'	(c)	'table'	(d)	'flower'
	libra		clase		mesa		flor
	/libr/		/klas/		/mes/		/flor/
	N		N		N		N
	f		f		f		f

These columns represent the lexical entries for four different inanimate feminine nouns. Each one contains the lexical marking f, specifying that the noun the entry describes is feminine. No rule is necessary to assign the feminine feature because the noun comes pre-specified for gender. This is beneficial since the redundancy rule in (14) only applies to female-denoting nouns (i.e., human nouns and a select few of other animate nouns, which Harris argues are “morphologically human *honoris causa*”;

²⁸ The two terms have been used to describe the process by which a noun is specified as having a specific trait, in this case gender, without an assignment rule. The trait is stipulated in the lexicon as part of the lexical entry for a given lexical item. To my knowledge, no individual has addressed the specific difference between the two. However, it seems that lexical marking takes lexical listing one step further by actually including a mark of the feature in the derivation, while lexical listing merely states that the lexical item must have a specific feature. The end result is the same; gender information is included in the lexical entry before any rules operate in the lexicon.

p. 53). There is no observable pattern in semantics, morphology, or phonology that can account for the correlation, so gender must be provided in some other way. Harris (1991a) argues that it is lexically marked.

Lexical specification of gender for specific nouns in Spanish is necessary in two additional contexts: (1) when the noun denotes a female but is masculine; (2) when the noun denotes a male but is feminine. An example of the first scenario would be the masculine epicenes that remain masculine even when they denote a female person (e.g., *individuo* (individual-sg.m.) or *personaje* (character-sg.m.)). The second is just the opposite, an epicene that is always feminine even when it denotes a male (e.g., *persona* (person-sg.f.) or *crianza* (infant-sg.f.)).

(17) Lexical specification of animate feminine nouns

'person'	'infant'
persona	crianza
/persona/	/krianθa/
N	N
f	f

In contrast to (16), the nouns in (17) refer to humans, but the sex of the entities that they denote is irrelevant for gender assignment; both *persona* and *crianza* are always grammatically feminine.

Application of the redundancy rule in (14) would only assign these nouns the correct gender when the referent is female. If the referent were male, the rule would not apply since the conditions for its application would not be met (i.e., / ____, ♀). The result is that the gender must be specified in the lexical entry, thereby preventing (14) from applying.

Harris (1991a) does not explain how masculine-only forms that denote both male and female referents (e.g., *individuo* ('individual'), *personaje* ('character'), etc.) are addressed in this system. In fact, it is not clear how they would be since this system assumes that the feminine feature is unary (i.e., there is

no feature for masculine nouns) and that masculine nouns are those that are just never assigned the feminine feature. Without lexically-specified masculine gender, Harris (1991a) has no way to block the application of the redundancy rule in (14) to female-denoting, masculine-only nouns. The result would be the over-application of the rule and the assignment of feminine gender to nouns that only permit the masculine gender. Riente (2003), however, does address these nouns, claiming that their gender must be lexically specified as masculine. This is a viable option in this particular analysis since the gender feature is binary, unlike in Harris (1991a).

Kramer (2015) avoids lexical specification (an impossibility in an analysis in which roots are devoid of category-specific information) by incorporating licensing conditions into her analysis. Certain roots are interpretable or exponable only with specific types of *n* (i.e., *n*'s with a specific feature inventory) (see section 3.2.3.3). The advantage of this analysis over Harris' (1991a) is that masculine-only epicenes can receive the masculine gender in the same way that feminine-only epicenes do (i.e., the result of licensing conditions). The benefit of Kramer (2015) over Riente (2003) is theory-internal. Kramer (2015) does not need to rely on lexical listing of category-specific information in the way that Riente (2003) does.

3.2.4.3. Default gender assignment

There is one more gender assignment process that occurs in lexicon-based analyses: default gender assignment. It was established in Chapter 2 that Spanish possesses a masculine default gender (i.e., masculine gender that is not determined semantically or formally). However, what I am referring to here is not the assignment of default gender, but rather the default process of gender assignment. Such a process can target both nouns whose gender correlates with semantic or formal distinctions and nouns whose gender does not correlate with such a property. Harris (1991a) provides an example of such a scenario.

In Harris' (1991a) system, gender that is not lexically-specified or assigned via redundancy rule is assigned by default. More specifically, any noun that is not marked as feminine (either by redundancy rule or lexical specification) is assigned to the default gender — in this case, the masculine gender. All nouns lacking a feminine gender marking, including male-denoting nouns, are assigned to the masculine gender by default.

This point marks a crucial distinction between Kramer (2015) and Harris (1991a). Because Harris (1991a) only has a redundancy rule for feminine gender and only has a unary feminine feature, all masculine nouns must be assigned to the masculine gender by default. The absence of an *f* marking (or feature) in Harris' approach results in automatic assignment of the noun to the masculine gender. A series of masculine nouns demonstrating this point is provided in (18).

(18) Masculine gender assignment by default

(a)	'book'	(b)	'husband'	(c)	'bull'	(d)	'garage'
	libro		marido		toro		garaje
	/libr/		/marid/		/tor/		/garaxe/
	N		N		N		N

None of these nouns, including the male-denoting *marido* in (b), have a gender specification. Therefore, all are assigned gender by default.

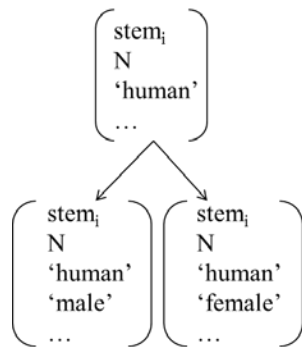
Kramer (2015), on the other hand, assumes that interpretable masculine nouns have a masculine feature ([-FEM]). It is only the inanimate nouns that are assigned masculine gender by default (i.e., by virtue of being paired with a plain *n*). This makes sense intuitively, as there is a distinction between nouns whose gender is based on a semantic distinction (i.e., biological sex) and those whose gender is, as Kramer says, "arbitrary." Though Harris (1991a) is able to account for default gender as described above, the assignment of masculine by default to sexed nouns fails to capture the distinction between semantically-based masculine gender and masculine gender that lacks semantic basis.

By differentiating between the two, Kramer (2015) avoids the issue with the masculine epicenes that was described above (i.e., overassignment of the feminine feature due to the inability to lexically mark masculine epicenes - itself caused by the lack of a masculine marking). Furthermore, the system it proposes also allows for a straightforward account of same-root nominals. They are created by the same merge operation as all other nouns. Harris (1991a), on the other hand, relies on additional machinery in the form of what he deems the Human Cloning process, the subject of the section that follows.

3.2.4.4. Exceptional cases: same-root gender pairs (including gentilic pairs)

Harris (1991a) accounts for same-root gender pairs by his Human Cloning process. In this process, a lexical entry that is semantically specified as human and does not have a specification for biological sex is replaced by a pair of lexical entries. These two new lexical entries are identical to the original one with the exception that one is marked male and the other female.

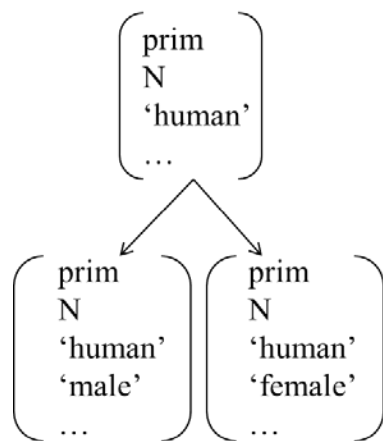
(19) Harris' (1991a) Human Cloning Rule



For instance, the lexical entry for *prim*-²⁹ ‘cousin’ is marked as human and lacks a specification for biological sex. The single lexical entry is replaced by two lexical entries: *prim*- (female) and *prim*- (male). Gender is then assigned by redundancy rule (for female-denoting nouns) or by default (for male-denoting nouns), as described above.

(20) An example of a derivation involving Human Cloning

(a) Human Cloning



(b) Gender assignment

prim ‘male’ → prim
 prim ‘female’ → prim f

Such a process (or one that has a similar effect) is necessary in a lexicon-based analysis. There must be some way to account for both the relatedness of the two nouns that share the same root and the fact that they have different genders. This necessitates the existence of two different stems that share the same root but have different gender features and meaning (where meaning refers to the sex distinction).

²⁹ Recall that word-final vowels in Harris’ (1991a) system are inserted after gender assignment occurs. The lexical entry would thus be devoid of the word-final /o/.

Human Cloning also occurs for what Harris (1991a) terms gentilic pairs. Gentilic pairs consist of nouns whose masculine form and feminine form share the same root but do not end in /o/ and /a/, respectively. Masculine forms typically end in a consonant or /e/, while feminine forms end in /a/. Examples include the following:

(21) Gentilic noun pairs³⁰

jefe ~ jefa	juez ~ jueza	señor~señora
chief-m.~f.	judge-m.~ f.	sir-sg.m.~ma'am-sg.f.

Harris (1991a) argues that these same-root gender pairs are marked in the lexicon with a diacritic (*g*), signaling that they undergo the Gentilic Rule. A sample lexical entry for *jefe/jefa* is provided below in (22) (from Harris' (35a)).

(22) Lexical entry with diacritic for undergoing Gentilic Rule

'human'
 jefe/-a
 /xef/
 'chief'
 g

The Gentilic Rule refers to the process by which word class markers are assigned to specific stems in the lexicon. It will assign /a/ to the feminine form and /Ø/ to the masculine form. The rule is provided below in (23).

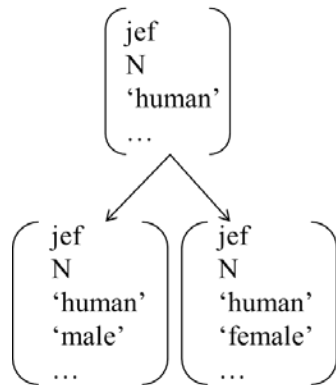
³⁰ There are many more gentilic noun pairs if we consider nouns with derivational suffixes as well (e.g., *profesor~profesora* — 'professor'; *director~directora* — 'director'; etc.). I will briefly address these derived nouns in Chapters 5 and 6.

(23) Gentilic Rule

$$g \rightarrow \left(\begin{array}{l}]a / [______ , f] \\]\emptyset \quad (\text{elsewhere}) \end{array} \right)$$

In order to arrive at a lexical entry with both forms, the stem must first undergo Human Cloning to produce two stems with the same meaning, each of which contains the gentilic marking.

(24) Human Cloning of gentilic noun



Kramer (2015), in contrast, does not need to stipulate that such a duplication process occurs. It can account for same-root gender pairs and gentilic pairs by permitting the merge of two types of *n* above roots, as explained above. It is not necessary to propose an additional mechanism that clones a root and permits this cloned root to take on a different gender. In this way, Kramer's (2015) system contains less machinery. It does not need to create multiple entries in the storage component of the grammar. It also does not need to provide additional stipulation for different-root pairs and same-root nominal pairs in the way that Harris (1991a) does, as I will now explain.

Harris' (1991a) Human Cloning must be blocked in instances in which pairs of nouns share a similar meaning but have different sex and different phonological form. Examples of such instances include the kinship terms provided in (25).

(25) Different-root gender pairs

(a)	madre	mother-sg.f. /*father-sg.m.	padre	father-sg.m. /*mother-sg.f.
(b)	nuera	daughter-in-law-sg.f. /*son-in-law-sg.m.	yerno	son-in-law-sg.m. /*daughter-in-law-sg.f.

If Human Cloning were not blocked, we would end up with two nouns of the same form that differed only for sex/gender for each of the nouns above (i.e., no difference in form - with the exception of word-final segment). As we see in (25), this is not the case. These nouns are different-root gender pairs and do not undergo Human Cloning. Harris (1991a) explains that the Human Cloning is blocked by the existence of a “corresponding lexical entry” (i.e., a lexical entry with the same meaning and set of features) (p. 51).

Kramer (2015) does not need to worry about such an instance because licensing conditions will prevent interpretation of the incorrect root and *n* combination. In other words, the Encyclopedia will sift through illicit root+*n* pairs, and Vocabulary Insertion will not take place if no Vocabulary Item contains a specific root+*n* pair. This will cause the derivation to crash, preventing the ungrammatical options for the terms in (25). In this way, the system of root and gender pairing is much more streamlined than in Harris' (1991a) lexicon-based analysis. There are not specific rules or terms of their application for some nouns and not others.

Furthermore, we have seen throughout that there are same-root nominal pairs that do not have human referents, such as *cerezo/a* ('cherry tree'/'cherry') and *bolso/a* ('bag'/'sack') (cf. section 2.3). Harris' Human Cloning rule should not apply in these cases. There is, then, no way to explain the shared

meaning and form between the masculine and feminine forms of these nouns. The system, however, could be modified slightly to allow certain lexical entries to be marked to undergo Human Cloning even without the “human” semantic distinction. It seems it might make more sense to then refer to this process as Stem Duplication or something along those lines. But, as I mentioned above, if we assume the analysis put forward by Kramer (2015), no such process is necessary. The same-root nominals are accounted for via the basic merge operation and licensing conditions on its application.

3.2.4.5. Additional advantages of Kramer (2015): The case of feminine default nouns

Thus far, this section has demonstrated the superiority of Kramer (2015) with respect to differentiating between masculine default gender and semantically-based masculine gender (a distinction not made in Harris 1991a). We have also seen how it accounts for epicenes, same-root nominals, and different root nominals via the same process (i.e., merge, which is subject to licensing conditions). Kramer (2015) maintains, however, another advantage over the system proposed by Harris (1991a) in that it is better equipped to deal with feminine default nouns.

Feminine default nouns in Spanish include those listed in (26).³¹ These nouns are considered to have a feminine default since the feminine is used when the gender of the specific entity they denote is unknown.

(26) Feminine default nouns in Spanish

(a)	<i>cabra</i>	she-goat-sg.f.	<i>cabra</i>	goat-sg.m./f.
(b)	<i>oveja</i>	ewe-sg.f.	<i>oveja</i>	sheep-sg.m./f.
(c)	<i>gallina</i>	hen-sg.f.	<i>gallina</i> ³²	chicken-sg.m./f.
(d)	<i>vaca</i>	cow-sg.f.	<i>vaca</i>	bovine-sg.m./f.

³¹ See Chapter 2 of Kramer (2015) for the application of the same system to feminine defaults in Amharic.

³² Further support that there is a feminine default for the nouns in (c-d) comes from the fact that the plural masculine forms for these nouns implies that there are only males (e.g., *toros* can only be bulls, not cows and *gallos* can only be roosters and not chickens).

The problem that these nouns pose for Harris (1991a), as Kramer (2015) points out, is that feminine gender is simultaneously specified (feminine when sex is unknown) and unspecified (determined by the sex of the referent). Same-root nominals are dealt with under Harris' (1991a) system by the Human Cloning Rule. If the sex is unknown, the noun has most likely not undergone Human Cloning (since there is no reason to have multiple stems) and will therefore not receive a value for grammatical gender. This should result in masculine morphology since there is no feminine [f] feature added via the redundancy rule mentioned above in (14). There is no way to arrive at the feminine default that is observed following Harris' (1991a) system as it stands. If the gender for these nouns were lexically-specified, similar to the nouns in (18), then there would be no way for these nouns to ever be masculine. Masculine gender will not be assigned by default since the noun has lexically-specified feminine gender.

Kramer (2015), however, points out a possible additional rule that might save Harris' (1991a) system. This rule would assign the [f] feature to specific words whose grammatical gender is unknown. But, such a rule would run into the same problem as the lexical specification option discussed in the preceding paragraph. It would be impossible to arrive at a masculine version of these nouns without violating the principles of the system Harris (1991a) established (i.e., masculine gender is assigned by default). Kramer (2015) is able to account for these nouns by assuming that there is an arbitrary licensing condition that prevents the realization of these particular Vocabulary Items when they are paired with plain *n*.

3.2.5. Interim summary

Section 3.2.4 has demonstrated the difficulties posed by assuming a lexicon-based analysis of gender. These are both data-driven and theory-driven. Kramer (2015) elegantly accounts for the correlation between biological sex and grammatical gender as well as the existence of both masculine default and feminine default. This is captured in the four-way gender distinction that is proposed for a

language that has two genders in its nominal system (like Spanish), one of which is based on a semantic feature. The four-way gender distinction is created by the existence of four types of nominalizing projections (i.e., nominalizing projections with four different feature values): n i [+FEM], n i [-FEM], n u [+FEM], n .

With regard to default gender assignment, Kramer (2015) correctly predicts the overwhelming preference for masculine default in Spanish through the underspecified “plain” n , but can also account for the handful of feminine default nouns in the inventory of Spanish nouns. This approach is able to account for the presence of same-root nominals and different-root nominals without proposing specific rules that apply only to these sets of nouns (e.g., Human Cloning). Furthermore, we saw in section 3.2.3 the benefits of Kramer (2015) for theory-internal reasons. Of particular relevance in comparing this system with that of Harris (1991a) is the fact that Kramer (2015) does not rely on a generative, presyntactic lexical storage component. This allows roots to be devoid of category-specific information, adhering to recent work on roots in DM (cf. Harley, 2014a, in particular).

Consequently, the approach to gender that I assume as I investigate its relationship with word class is that proposed by Kramer (2015). Further support for this decision comes as a result of its ability to account for the close relationship between gender and word class but also allow for instances in which the two are not correlated (i.e., when masculine and feminine gender do not correlate with a specific word class, respectively). I address this point in the section 3.3.

3.2.6. *On economy*

At this point, it seems prudent to address one possible criticism that might be levied against such a system as that proposed by Kramer (2015) and incorporated into the analysis here: economy. As mentioned above, the idea of arbitrary and semantic licensing conditions is that the generation of forms is possible just not their phonological realization or interpretation, respectively. The system overgenerates

and allows these conditions to filter out the possible constructions from those that are not possible (i.e., those for which there are no instructions for realization or interpretation). This is true. However, assuming that there are only four types of nominalizing morphemes, the system might only generate an additional three forms (i.e., one form for each of the three types of *n* that are not included in the final derivation).

The alternative is to assume that these conditions are listed somewhere. Following the DM framework, this is not a realistic possibility, as there is no presyntactic storage component that stores anything other than feature bundles (i.e., morphemes). Furthermore, listing such possible structures would avoid some of the key generalizations that are currently captured simply by the presence of specific semantic features in the syntactic formation of a nominal (i.e., animacy and interpretable features that prompt an interpretation of that nominal with gender determined by biological sex). These could be contained within a redundancy rule, such as those proposed by Harris (1991a) and Riente (2003). Such rules, however, add additional machinery to the derivation of these nouns. It seems as though there is necessarily a tradeoff between storage and overgeneralization. It is unclear which of these is less desirable.

3.3. Gender on *n* and the relationship between gender and word class

We have seen previously that there is a clear relationship between gender and word class. In many instances, the word-final segment /o/ corresponds with masculine gender, while the word-final segment /a/ corresponds with feminine gender. This is most apparent in the patterns displayed by same-root nominals. However, this pattern does not always hold, as demonstrated in Chapter 2. The question this raises is: how can we account for the seeming relationship between gender and word class when the correspondence between gender and word-final segment does not hold for all nouns? Of course, central to this question is yet another question: where is word class located? In order to investigate how word class and gender can be related in some instances, we must be able to pinpoint the location of word class in the

derivation. This is the first question that I seek to address in the remainder of this chapter. The position that I adopt (i.e., that word class information is inserted postsyntactically on multiple projections within the nominal spine) will be supported by the behavior of diminutives, as presented in Chapter 4. It is further supported by the evidence from augmentatives and derived nominals, which are discussed in Chapters 5 and 6.

3.4. Where is word class?

Approaches to the location of word class have been similar to those for gender. Some have argued that word class heads a projection (Bernstein, 1993; Haegeman, 1998; Picallo, 2006; Fábregas, 2013; among others), while others have assumed that word class is a feature present on another, independent projection (Alexiadou & Müller, 2008; Kramer, 2015; among others). Further still, there are lexical approaches to word class (Harris, 1991a, 1991b; Lloret & Viaplana, 1997). I briefly outline some of these analyses and argue that word class should not head its own projection and should not even be present in the syntax.

3.4.1. Word class as an independent projection

Bernstein (1993) argued for a Word Marker Phrase for Spanish due to the fact that adjectives in Spanish can be postnominal (and in fact usually are) and that indefinite NP ellipsis can occur, as shown in (27a, 28a) (English translations in (27b, 28b)). The same does not occur in English, where the adjective appears before the noun, as in (27b), and indefinite NP ellipsis is not possible (at least not without the addition of ‘one’), as in (28b).

(27) Postnominal adjectives in Spanish and English

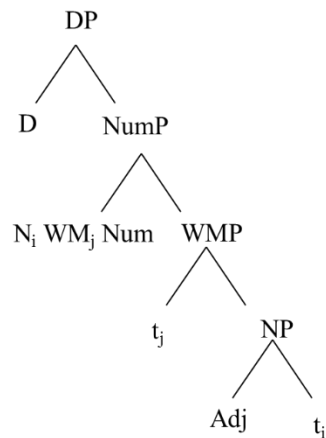
- (a) la chica americana
- (b) (i) the American girl
- (ii) *the girl American

(28) NP ellipsis in Spanish and English

- (a) una bonita
- (b) a pretty *(one)

Because it is assumed that adjectives are in the specifier of NP (following Cinque, 1993), in order to ensure that adjectives are postnominal, there must be head movement of the noun to a higher projection in the DP. Bernstein (1993) argues that this higher projection is the word marker phrase. The structure that then results is given below in (29).

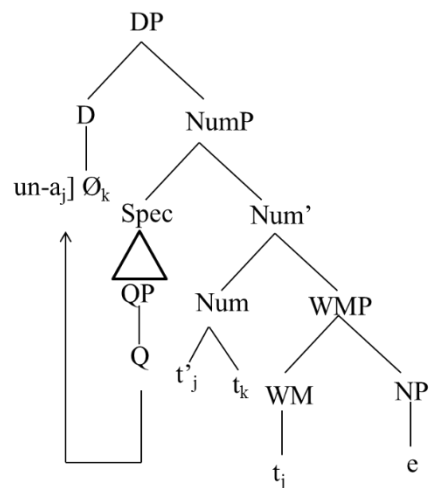
(29) A separate word marker projection ensures postnominal adjectives (Bernstein, 1993)



This is also, according to Bernstein (1993), what allows indefinite ellipsis. The word marker, having no noun to attach to, raises to Num and eventually to D, since number marking is also affixal and therefore N is not a “legitimate final landing site” for the word marker (p. 125). The idea is that this type

of movement would not occur in a language without word markers (and thus without a word marker phrase). This operates under the assumption that the article is, in this case, a pronominal determiner that is generated in Spec, NumP and that the word marker is independently generated (i.e., without the presence of an overt noun stem). The structure for this is provided below in (30), using the Spanish feminine indefinite article *una*.

(30)³³ A separate word marker projection allows indefinite NP ellipsis (Bernstein, 1993)



Haegeman (1998) has also argued for this type of word marker phrase but instead of limiting it to certain languages (e.g., Spanish but not English), this approach assumes it exists in all languages. But, Alexiadou (2004) provides counterevidence for the presence of a word marker (or class marker, in its terms) projection, arguing that class features are not syntactically active. The argument that they are not syntactically active centers on a disproof of the idea that indefinite ellipsis, noun-adjective order, and overt class markers always pattern together in a language (i.e., a language that has one will have them all).

³³ This structure is Bernstein's (1993) (57).

French is one language that has postnominal adjectives and indefinite NP ellipsis without having “obvious,” or distinguishable, class markers (Alexiadou & Müller, 2008, p. 134).

(31)³⁴ French allows postnominal adjectives and indefinite NP ellipsis without class markers

- (a) un cube rouge
 a-sg.m. cube-sg.m. red-sg.m.
- (b) Un bleu est sur le coin droit.
 A-sg.m. blue-sg.m. be-3.sg.pres. on the-sg.m. corner-sg.m. right-sg.m.
 ‘A blue one is on the right corner’

Greek and Hebrew provide further evidence that word class does not seem to be syntactically active.

Greek has indefinite ellipsis and obvious class markers but not noun-adjective order. Hebrew has both indefinite ellipsis and noun-adjective order but no class markers. Alexiadou’s (2004) Table 2, repeated here as (32), summarizes Alexiadou’s findings.

(32) Inventory of languages with and without properties Bernstein (1993) uses to argue for the syntactically active nature of word class

<i>Language</i>	<i>Indefinite Ellipsis</i>	<i>NA Order</i>	<i>Class Markers</i>
Spanish	+	+	+
Greek	+	-	+
Hebrew	+	+	-
French	+	+	-

As the table demonstrates, there is no direct correlation between either or both of these properties (indefinite ellipsis and postnominal adjectives) and the presence of word class markers. Thus, word class markers are not syntactically active.³⁵

³⁴ This is adapted from Alexiadou’s (2004) example (14).

3.4.2. *When is word class introduced into the derivation?*

Since word class markers are not syntactically active and contribute no meaning, there is no reason to assume that they are present in the syntax. It appears as though we can then go one of two ways. The first is to assume that class features are present in a lexical storage unit (e.g., a lexicon) that houses idiosyncratic information, such as word class features, for each lexical item. These features can either be inherent to the items in the lexicon (e.g., roots, nominal stems) or inserted via something like the redundancy rule proposed by Harris (1991a) for nominal gender. The second is to assume that word class markers are inserted into the derivation postsyntactically.³⁶

3.4.2.1. Word class as a presyntactic feature

If we were to assume that word class features were inherent to roots, we would violate the recent DM tenet that roots are devoid of category-specific material (cf. Harley, 2014a). This would occur because not all categories of words in Spanish have word class (Harris, 1991b assumes that only nouns, adjectives, and adverbs can have word class). Assuming that word class features were inherent to a root would require a stipulation as to the category of the root.

A possible step around this is to assume that there is a process in the lexicon by which a root could be assigned a class marker. This is unappealing for two reasons: (1) the DM equivalent of the lexicon is merely a list of feature bundles; it is not generative in nature and (2) it would again require that the category of the root be stipulated, which is assumed not to occur until a root has been merged with a categorizing head.

³⁵ I suppose it is possible that word class markers could still be syntactically active but correspond to another set of properties. To my knowledge, this has not been proposed.

³⁶ As mentioned in section 3.2, I am not familiar with any processes of syntactic insertion of features that are not parasitic to a syntactic projection. I rule this option out for theoretical reasons, but also point out that it is far from ideal since Class features are not syntactically active, as will be shown over the course of this section.

Both approaches — either inherent class features on a root or assignment of class features to a root via a generative, lexical process - run into the same dilemma: class features should not be present in the syntax because they are not relevant for syntactic operations (cf. Chomsky, 2000, 2001). If class features are present in a presyntactic lexical component in either case, they would need to be removed before the derivation proceeded to the syntax. This is a possibility, and it is pursued by Alexiadou and Müller (2008). But, as I will explain, it is not an ideal solution to this dilemma.

Alexiadou and Müller (2008) argue that class features are present in the presyntactic lexical component but are removed in the morphological component, which exists between the presyntactic lexical component and the syntactic component. It is assumed that class features on stems are probes that can be valued as the result of Agreement with inflection markers. The motivation for this assumption is that class features are not syntactically active (i.e., irrelevant for syntactic operations - in contrast to gender features). Therefore, in order to avoid violating the Legibility Condition, these features must be removed prior to the point at which the derivation proceeds to the syntactic component.

Alexiadou and Müller (2008) assume that class features are not inserted after the derivation exits the syntactic component (i.e., is sent to the interfaces) because this would violate the Inclusiveness Condition (Chomsky, 1995, 2000). This condition states that new elements cannot be added over the course of the derivation. However, Embick and Noyer (2007) explain that Chomsky (1995) assumes that the Inclusiveness Condition is false at PF since there is no way to avoid the introduction of phonological features, in particular. It is, therefore, possible that the condition does not hold more broadly at PF.

Alexiadou and Müller's (2008) analysis also completely violates the major tenets of DM by incorporating morphological material into the derivation before the syntax (DM assumes it is inserted after) and violating the assumptions of Late Insertion. Moreover, Alexiadou and Müller (2008) rely on theory-internal motivation (adherence to the Legibility and Inclusiveness Conditions) and do not explain

why their particular approach to Class features better accounts for the observed data. Without empirical motivation (of which there is none), I assume that this is not a viable option for word class in Spanish.

3.4.2.2. Word class as a postsyntactic feature

This brings us to the second possible solution: insertion of class feature information postsyntactically. This method of insertion of syntactically irrelevant material was first proposed by Embick (1997, 1998) and has been utilized by many others since. Oltra-Massuet (1999) argues for the postsyntactic insertion of theme vowels for verbs in Catalan, which Oltra-Massuet and Arregi (2005) extend to all functional heads (i.e., they argue that all functional heads have an inserted theme node). Kramer (2015) has expanded on these ideas and presented a brief sketch of an analysis for the insertion of word class (“declension class”) for Spanish.³⁷

The decision between Alexiadou and Müller’s (2008) approach and that proposed by Oltra-Massuet (1999), Oltra-Massuet and Arregi (2005), and Kramer (2015) comes down to the choice between incorporating a lexicon back into our framework or violating Inclusivity, respectively. To my knowledge, there is no firm solution to the problem of the violation of Inclusivity by the insertion of dissociated nodes in a DM framework. Embick and Noyer (2007) state that we must take caution particularly when introducing features at PF, and Embick’s (1997, 2000) previous work had hypothesized that perhaps only uninterpretable features can be added at PF. Inserting class features at PF does not violate this last assumption. Also, it does not violate the major tenets of DM by assuming that there is a lexicon containing nominal stems (or at least roots with category-specific information³⁸) in the way that following

³⁷ In order to maintain consistency with Oltra-Massuet and Arregi’s (2005) system in which theme nodes are inserted postsyntactically on each functional head, I retain the notation Th for these nodes in my derivations. However, I continue to refer to the word-final segments on nouns, adjectives, and adverbs as word class markers, as some of them are not vowels. I also differentiate verbs, which have thematic vowels, from elements of other categories (i.e., nouns, adjectives, and adverbs), which have word class markers.

³⁸ If we assume that there are not nominal stems in the presyntactic lexical component, then we would have to assume that the roots themselves would have the class features. This would mean that the roots would have

Alexiadou and Müller's (2008) presyntactic insertion analysis would. Therefore, I follow Kramer (2015) and assume that class features are inserted postsyntactically and are not inherent to roots or nominal stems in a presyntactic lexical component.

Before delving into a brief account of Kramer's (2015) approach, I explain some other recent analyses for word class. I demonstrate why these fall short and then discuss Kramer (2015), pointing out areas in which it needs to be altered following the word class inventory developed in section 2.5.4.

3.4.2.3. Other recent analyses of word class

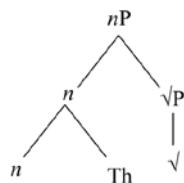
Other analyses for gender and word class have been proposed by Harris (1999) for Spanish, Alcântara (2010) for Portuguese, and Riente (2003) and Lampitelli (2008) for Italian, all of which purport to take place in the DM framework. But, these analyses are not consistent with the assumptions of the DM framework. Harris (1999) and Alcântara (2010) both assume the storage of stems with word class information. Riente (2003) assumes that gender is assigned in the lexicon, via redundancy rules or lexical specification, which presupposes the presence of a generative lexicon. Finally, Lampitelli (2008) argues for a $V_{fin}P$, which is the projection that houses word-final vowels and is in the specifier of the \sqrt{P} . As we have seen, this projection would be syntactically inactive and would not contain semantically interpretable features, which should be avoided (see section 3.4.2.1). Lampitelli also opts for the incorporation of CV structures into the syntactic component instead of morphemes. This places phonological material in the syntax, which violates DM's basic assumption that there is no phonology until the derivation is sent to PF.

category-specific information, since not all categories have word class (Harris, 1991a, 1991b assumes that only adjectives, adverbs, and nouns have word class).

3.4.2.4. Kramer's (2015) analysis of word class

Kramer (2015) argues that word class markers are a purely morphological phenomenon. She analyzes them as the realization of a Theme node that is inserted post-syntactically as a dissociated node (à la Embick, 1998). This dissociated node adjoins to *n*, following the analysis put forward by Oltra-Massuet (1999) for verbal theme vowels and Oltra-Massuet and Arregi (2005) for all categorizing heads. The structure Oltra-Massuet (1999) assumes — also incorporated into Oltra-Massuet and Arregi (2005) and Kramer (2015) — is provided in (33).³⁹

(33) Postsyntactic insertion of a Theme node on *n*



In Kramer's (2015) analysis, dissociated Theme nodes have class features (listed as [II/III/IV/etc.]) that determine the realization of word-final segments. This realization is governed by Vocabulary Items, as explained for DM morphemes in general in Chapter 1. Kramer's (2015) theme vowel inventory is based on the work by Bermúdez-Otero (2013). Following Bermúdez-Otero (2013), Kramer (2015) assumes that there are only three declension classes. Class I contains /o/-final nouns, Class II houses /a/-final nouns, and Class III consists of /e/-final and /∅/-final nouns.⁴⁰ She assumes that these word class

³⁹ Oltra-Massuet (1999) actually provides a tree in which the order of elements is reversed (i.e., the order in which they appear in the word itself: root + nominalizing morpheme + theme vowel). It states that it follows Baker's (1986) Mirror Principle and assumes that the more deeply embedded a morpheme is, the lower it is in the syntactic structure. But, Oltra-Massuet (1999) does not provide this structure in the diagrams that it provides. Perhaps this is for ease of interpretation of the individual parts that make up each word; this remains unexplained. In any event, the structure that I have included here is one prior to linearization of individual morphemes, the topic of section 3.4.3.1.

⁴⁰ As explained in Chapter 2, I argue that there are five word classes in Spanish and modify Kramer's (2015) system accordingly in section 3.4.2.5.

marker patterns are the result of the insertion of postsyntactic Theme nodes with specific features. The possible Vocabulary Items she gives are provided here in (34).

(34) Possible Vocabulary Items for Theme (Kramer, 2015)⁴¹

- (a) [THEME, III] ↔ -e/∅ / ____ Num
- (b) [THEME, II] ↔ -a / ____ Num
- (c) [THEME] ↔ -o / ____ Num
- (d) [THEME] ↔ ∅

This rule inventory effectively states that a Theme node with the [THEME, III] feature is realized as either /e/ or ∅ in the context of Num. A Theme node with the [THEME, II] feature is realized as /a/ in the context of Num.⁴² All other [THEME] nodes (i.e., the Theme node with the Class I feature [THEME, I] and the underspecified Theme node [THEME]) are realized as /o/ when in the context of Num. Finally, all Theme nodes, regardless of the features on them, have a null realization when in any other context.

Kramer (2015) explains that such class features are necessary in order to avoid the need to specify two disjunctive conditions for the realization of /o/. The argumentation is as follows. First, Class I (which corresponds to Harris' 1991b Class I - i.e., nouns, adjectives, and adverbs ending in /o/) is analyzed as the least marked class (as such, it is represented by the underspecified [THEME] feature). Because Class I is the least marked class, its realization should be governed by the elsewhere condition (i.e., insert /o/ elsewhere). There is an issue with this, however, because there are some nominals that take word-final /o/ despite having feminine gender, including *mano* ('hand') and *foto* ('photo'). This means that there would have to be two contexts for the insertion of -o: (1) lack of a specific condition on the insertion of /o/ (i.e., -o is assigned by an elsewhere condition) and (2) the specific condition for unpredictable word-final /o/ (e.g., the one applying to feminine nouns that have word-final -o). It is not ideal to have the same

⁴¹ The commas here indicate that what is inserted is both the Theme node and the Theme number feature itself.

⁴² I elaborate on why this specific condition is included in these Vocabulary Items below.

theme vowel realize two disjunctive conditions of Vocabulary Insertion. The solution is thus to incorporate a word class feature. (35) demonstrates the rules that Kramer (2015) assumes govern the insertion of Theme nodes with specific word class ([THEME]) features. What these rules state are conditions for the insertion of Theme nodes with specific features. Each of these word class features is then realized with a particular phonological segment based on the rules given in the Vocabulary.

(35) Insertion of Theme nodes (Kramer, 2015)

- (a) (i) Insert [THEME, III] in the context of $\sqrt{\text{MADR}}$, $\sqrt{\text{PADR}}$, $\sqrt{\text{LAPIZ}}$, $\sqrt{\text{LUZ}}$...
- (ii) Insert [THEME, II] in the context of $\sqrt{\text{DI}}$...
- (iii) Insert [THEME, I], in the context of $\sqrt{\text{MAN}}$...
- (b) Insert [THEME, II] in the context of $n[+\text{FEM}]$
- (c) Insert [THEME] elsewhere.

These rules stipulate that a nominalizing head in the context of the roots listed in (a)(i) should have an adjoined Theme node inserted postsyntactically along with the [III] feature. Similarly, the root $\sqrt{\text{DI}}$ will cause the postsyntactic insertion of a Theme node with the [II] feature, while the root $\sqrt{\text{MAN}}$ (and similar roots) will cause the postsyntactic insertion of a Theme node with the [I] feature. The condition in (b) states that a Theme node with the [II] feature should be inserted for all nominalizing heads that contain the feminine feature, but crucially only those that have not already undergone the insertion of a Theme node per the rules listed in (a). Lastly, in all other contexts, an underspecified Theme node will be inserted. These features are then exponed as explained in (34).

Kramer (2015) includes the Num context in order to explain the behavior of the word class marker (theme vowel) in nominalizations and diminutives. Spanish word class markers surface only outside of the rightmost suffix in nominalizations. We see in the following example, Kramer provides from Harris (1996), that the theme vowel cannot be realized between the suffix and the word fragment to

which it attaches in the Theme III nominalization *hermandad* ('brotherhood'-sg.f.) from Harris (1996), where TV stands for theme vowel.

(36) Theme vowels are realized only in the context of Number⁴³

- | | | |
|---|--|--|
| (a) herman-o
brother-TV
'brother' | (b) herman-dad-Ø
brother-hood-TV
'brotherhood' | (c) *herman-o-dad-Ø
brother-TV-hood |
|---|--|--|

Kramer (2015) invokes Oltra-Massuet and Arregi's (2005) analysis for theme vowels to explain this effect. As does Oltra-Massuet (1999), they assume that theme vowel nodes are inserted for each functional head. However, the Theme node receives overt realization only when it is left-adjacent to the number head Num. Consequently, when word class markers (i.e., theme vowels) are not next to Num, their realization is null. Kramer's (2015) approach therefore asserts that Theme nodes can be conditioned by the identity of the root and also by the nominalizing suffix to which it adjoins. But, she does not elaborate on this claim. One of the purposes of Chapters 4 and 5 is to investigate this relationship.

One departure Kramer (2015) makes from previous work (e.g., Oltra-Massuet, 1999; Embick & Halle, 2005), however, is that the word class (Theme) feature is not on the root. This allows her to avoid contradicting recent DM accounts, including Harley (2014a), in which category-specific information is not permitted on roots. It also prevents the inclusion of syntactically-irrelevant information in the syntax.

A further topic to address is the Spanish diminutive data that Kramer (2015) also did not incorporate into her DM approach towards gender and word class. As we have seen previously in section 2.5 and as is detailed further in the next chapter, the diminutive data is of utmost importance in determining an analysis of gender and word class that can account for Spanish. Before I address this data, however, I must tie up two additional loose ends. The first is to modify Kramer's (2015) Theme node

⁴³ Each of the nominals provided in (36) are singular and therefore have a null Number marking.

(and feature) insertion process and Theme node (and feature) realization process in order to account for the word class distinctions described in Chapter 2. I briefly put everything that we have seen thus far together before I address morpheme order and the special case of Class IV nouns. I address each of these in turn and then move on to demonstrate that word class is inserted on more projections than just *nP* in Chapter 4.

3.4.2.5. A new word class inventory for Spanish: Modifying Kramer (2015)

In section 2.5.4, I presented the following novel theme vowel inventory for Spanish substantives.

(37) Novel word class inventory for Spanish

Class I:	nominals ending in /o/
Class II:	nominals ending in /a/
Class III:	nominals ending in /e/ (no distinction for roots ending in illicit consonants)
Class IV:	nominals ending in any segment other than /o/, /a/, or /e/ *exception for nominals ending in /os/ and /as/ (which are subsumed under Classes I and II, respectively), but including /ó/, /á/, and /é/
Class V:	Greek-derived nominals ending in /s/, such as <i>virus</i> , <i>Sócrates</i> , <i>análisis</i> , etc. ⁴⁴

I argued that Harris' (1991b) Class III and Class IV should be revised in light of the data against word-final epenthesis and the assumption that word-final /s/ constitutes a word class marker (see sections 2.6.1 and 2.6.2, respectively). If I follow Kramer (2015) in assuming that word class is inserted postsyntactically, her class (Theme) inventory must be altered to reflect the inventory I present in (37). I repeat here in (38) Kramer's system of Theme node insertion and present my amended version in (39).

⁴⁴ I do not attempt to determine what specifically constitutes a word class marker for these nominals. Greek-derived words in Spanish pose a particular challenge due to the fact that it is often unclear which element is itself the root, as many words are formed from a compilation of affixes, just as in English. I reserve this topic for future research.

(38) Kramer's (2015) Theme node insertion operation

- (a) (i) Insert [THEME, III] in the context of $\sqrt{\text{MADR}}$, $\sqrt{\text{PADR}}$, $\sqrt{\text{LAPIZ}}$, $\sqrt{\text{LUZ}}$...
- (ii) Insert [THEME, II] in the context of $\sqrt{\text{DI}}$...
- (iii) Insert [THEME, I] in the context of $\sqrt{\text{MAN}}$...
- (b) Insert [THEME, II] in the context of $n[+\text{FEM}]$
- (c) Insert [THEME] elsewhere.

Kramer's (2015) Theme node insertion operation applies for all Theme nodes, but these Theme nodes are only realized when in the context of Num (I define "context of" as "adjacent to"). It seems, however, that it might be more parsimonious to propose a restriction on the insertion of Theme nodes themselves, rather than their realization (*pace* Oltra-Massuet & Arregi, 2005). As such, my conditions on Theme node insertion also take into account adjacency to the Num node; Theme nodes are only inserted when the functional head (in this case, n) to which they adjoin is adjacent to Num nodes.

(39) Novel Theme node insertion operation⁴⁵

- (a) (i) Insert {Th}[CLASS V] in the context of $\sqrt{\text{VIRU}}$, $\sqrt{\text{SÓCRATE}}$, $\sqrt{\text{ANÁLISI}}$...; Num
- (ii) Insert {Th}[CLASS IV] in the context of $\sqrt{\text{FLOR}}$, $\sqrt{\text{PAPEL}}$, $\sqrt{\text{CHEF}}$, $\sqrt{\text{CLUB}}$...; Num
- (iii) Insert {Th}[CLASS III] in the context of $\sqrt{\text{MADR}}$, $\sqrt{\text{PADR}}$, $\sqrt{\text{CLAS}}$, $\sqrt{\text{JEF}}$...; Num
- (iv) Insert {Th}[CLASS II] in the context of $\sqrt{\text{TEM}}$, $\sqrt{\text{DIAGRAM}}$, $\sqrt{\text{POET}}$...; Num
- (v) Insert {Th}[CLASS I] in the context of $\sqrt{\text{MAN}}$, $\sqrt{\text{LIBID}}$...; Num
- (b) Insert {Th}[CLASS II] in the context of $n[+\text{FEM}]$; Num
- (c) Insert {Th}[CLASS I] in the context of Num.

As in Kramer's (2015) inventory of Theme node insertion, the ordering of the rules in my system is of particular importance. The insertion of the [CLASS IV] feature for the root $\sqrt{\text{FLOR}}$, for instance, must occur before the [+FEM] feature prompts the insertion of the [CLASS II] feature. Similarly, the [CLASS I]

⁴⁵ Here and throughout, I include "Class" instead of Theme in the conditions that I give for feature insertion and word class marker realization in order to avoid confusing the different inventories (mine from that of Kramer, 2015). These Class features, however, are inserted in addition to a Theme node (represented by "{Th}").

feature must be inserted for the root $\sqrt{\text{MAN}}$ before the [+FEM] feature causes the insertion of the [CLASS II] feature. Otherwise, this would result in an incorrect realization of the word class marker (theme node).⁴⁶

There is, however, another key distinction between Kramer's (2015) Theme node insertion rules and those given here. In the rules I provide here, the elsewhere case results in the insertion of a Theme node with the [CLASS I] feature and not an underspecified Theme node. The reasoning behind this will become apparent in light of the Vocabulary Items, which I present next.

As we can see, there are not too many difficulties in incorporating the novel word class inventory into Kramer's (2015) analysis. It does, however, mean that we also need to adjust the conditions on the realization of Theme vowels or word class markers (i.e., the Vocabulary Items for Theme nodes/word class markers) accordingly. Again, I provide both Kramer's (2015) preliminary sketch of this process for Spanish (in (40)) and then update this analysis in light of the word class inventory presented above. These novel Vocabulary Items also take into consideration the fact that Theme nodes will now only be inserted when the functional head on which they appear is adjacent to Num.

(40) Kramer's (2015) Vocabulary Items for Theme

- (a) [THEME, III] \leftrightarrow -e/ \emptyset / ____ Num
- (b) [THEME, II] \leftrightarrow -a / ____ Num
- (c) [THEME] \leftrightarrow -o / ____ Num
- (d) [THEME] \leftrightarrow \emptyset

⁴⁶ I mentioned above that singular /s/-final nouns that do not belong to Class V should be treated as regular Class IV (if they end in /Vs/, where V is not /o/ or /a/) and special Class I and II nouns (if they end in /os/ or /as/, respectively). As the data concerning this treatment of these nouns concerns diminutive forms, as presented above, I will address how these are formed once I discuss in detail how diminutives are created. The discussion is presented in section 4.6.3.1.

(41) Novel Vocabulary Items for Theme in light of (39)

- (a) [CLASS V] ↔ -s
- (b) [CLASS IV] ↔ \emptyset
- (c) [CLASS III] ↔ -e
- (d) [CLASS II] ↔ -a
- (e) elsewhere ↔ -o

These instructions are fairly straightforward; in each case, there are specific instructions for the realization of the word class marker.⁴⁷ As mentioned above, a more specific Vocabulary Item was necessary for the insertion of /o/. The Vocabulary Items that Kramer (2015) provides do not adequately account for the observed data. If we were to assume that the condition in (40d) operated on a Theme node that was underspecified for a Class feature (as Kramer does), then we would insert /o/ for both Class IV nouns and Class I nouns (when they are adjacent to Num). This is not what the data bears out; recall that Class IV nouns have null word class markers. With the current assumption that Theme nodes are only inserted when the functional head on which they appear is adjacent to Num, there is no need to have two conditions affecting an underspecified Theme node. We can now merely assume that each class feature is realized with one phonological element (including \emptyset), as demonstrated in (41).⁴⁸ /o/, however, is inserted by default (i.e., as the elsewhere case), which will effectively only include the case of Theme nodes with the [CLASS I] feature.

It is not complicated to extend Kramer's (2015) approach to word class to the inventory proposed in Chapter 2 and repeated here in (38). Such an approach explains why word class and gender are frequently related. The general case is that nouns that are feminine (i.e., have the [+FEM] feature) are assigned to Class II. The masculine gender is the default gender, and Class I is the default word class.

⁴⁷ One might wonder, however, how the plural is realized for these nominals, particularly those belonging to Class IV. I will address this point in section 3.4.3.2.

⁴⁸ We could assume that the final Vocabulary Item realizes an underspecified class feature and not just [CLASS I]. However, ultimately, this will have the same end result, as only /o/-final nouns will be affected. I have left the Vocabulary Item as including [CLASS I] for expository purposes.

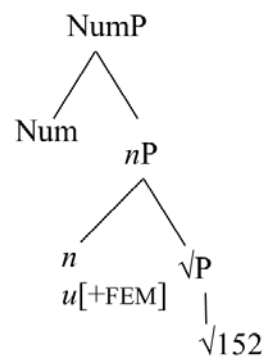
This explains why the masculine gender is typically associated with word-final /o/. This approach also easily accounts for cases in which these two word class markers do not correspond to the feminine and masculine gender as expected and for the appearance of other word class markers. However, as we see in the next chapters, it must be amended further once evaluative data has been taken into account.

3.4.2.6. Putting it all together

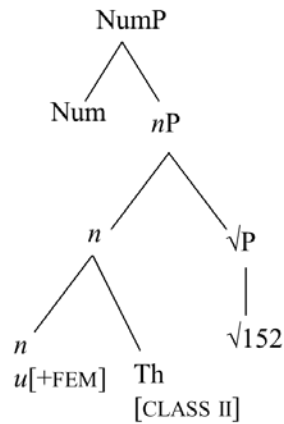
In this section, I demonstrate how the previous sections and Chapter 2 come together to account for the gender and word class patterns in nominals using sample derivations. The data in (42) gives a step-by-step account for the creation of simple nominals (i.e., non-derived nominals without evaluative morphology).

(42) Step-by-step derivation of simple nominals

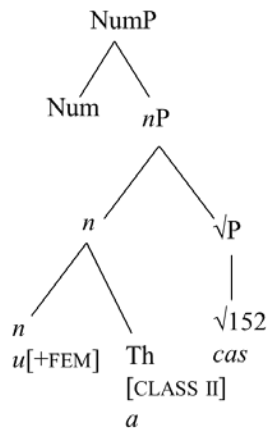
(a) Step 1: Merging of *nP* to root and merging of NumP above *nP*



(b) Step 2: Post-syntactic insertion of the Theme node and Class feature (Class II because of the +FEM feature on *n*)



(c) Step 3: Vocabulary insertion



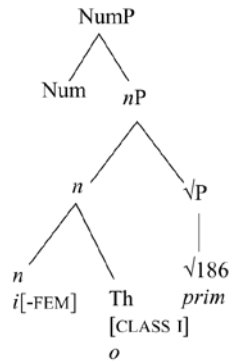
This first derivation gives the step-by-step process for the creation of the noun *casa* (house-sg.f.). The root is first categorized in Step 1. The remaining steps occur post-syntactically. First, the dissociated Theme node is inserted, along with a Class feature. In this case, the Class feature that is inserted is the [CLASS II] feature, which is the result of the [+FEM] feature on the nominalizing morpheme. Step 3 takes place after the insertion of this dissociated node. The root is spelled out as *cas*, and the Theme node is spelled out as *a*, due to the presence of the [CLASS II] feature. The nominalizing morpheme itself is null.

Due to the uninterpretable [+FEM] feature, this noun is interpreted as having gender that is not determined by biological sex (i.e., Kramer’s, 2015 arbitrary gender).⁴⁹

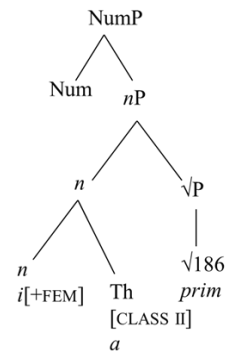
The process is perhaps most straightforward and transparent for feminine nouns. I include here some additional example derivations for some less straightforward cases to demonstrate clearly how this system can account for these as well.

(43) Additional derivations for nouns of differing types

(a) Sexed masculine noun
(has *i*[-FEM] feature)



(b) Sexed feminine noun
(has *i*[+FEM] feature)

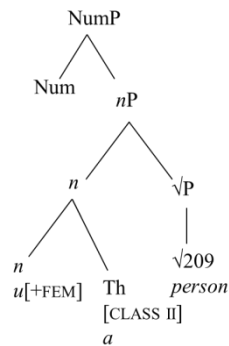


The first set of additional derivations contains the sexed nouns *primo* and *prima* (cousin-sg.m.,f.). The two are built from the same root, so we can clearly see how same-root, sexed nominals are derived in this case as well. The stages are the same. The roots are categorized by a nominalizing head with a specific gender feature. Then, the Theme node and Class feature are inserted once the derivation is sent to

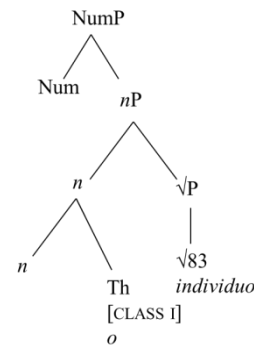
⁴⁹ One might raise the concern that this process involves looking ahead, or knowing which nominalizing head and which Theme node must be inserted beforehand. This concern is unfounded. There is no look ahead; rather, the derivation of each root with any of the four nominalizing heads (i.e., *i*[+FEM], *i*[-FEM], *u*[+FEM], and “plain” *n*) is possible. The derivation will merely crash if there is no condition for the insertion of phonological material for a particular root and nominalizing head combination. The derivations that I give here and throughout are those that would successfully be realized phonologically and interpreted semantically. As for the determination of the word class marker, this proceeds directly from either the identity of the root or the identity of the nominalizing head; looking ahead is also not necessary in this case.

SpellOut. For the masculine noun, the [CLASS I] feature is inserted, while the [CLASS II] feature is inserted for the feminine noun. Lastly, each morpheme is realized phonologically (or has a null realization, depending on the morpheme) as the result of Vocabulary Insertion. The Theme nodes are realized based on the instructions for the realization of Class features: [CLASS I] as /o/ and [CLASS II] as /a/ (when adjacent to Num).

(c) Feminine epicene
(same process for feminine inanimates - cf. *casa*)

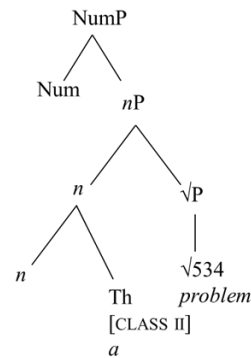
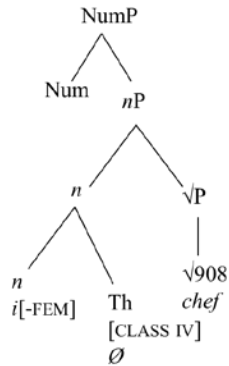


(d) Masculine epicene
(same as masculine inanimates)



This set of derivations demonstrates the process whereby epicenes are created. The first epicene is the feminine *persona* (person-sg.f.), and the second is the masculine *individuo* (individual-sg.m.). Feminine epicenes are created in exactly the same way as inanimates. The gender feature on *n* is uninterpretable and feminine. The feminine feature prompts the postsyntactic insertion of the [CLASS II] feature, which is then realized as /a/. Masculine epicenes, on the other hand, are created in the same way as masculine inanimates. The *n* used to create them is the plain *n*, which is without a gender feature. This prompts the insertion of the [CLASS I] feature, which is then realized as /o/. In both of these cases, the gender of the noun is not determined by the sex of the noun, so it is uninterpretable. This prevents the interpretation that the person is necessarily feminine and/or that the individual is necessarily masculine.

(e) Root-determined Class feature (Class IV) (f) Root-determined Class feature (Class II)



This last set of derivations is for nouns whose word class markers are determined by the identity of the root (as given in the conditions for the insertion of Class features). The first is the noun *chef* (chef-sg.m./f.), which remains unchanged in its form no matter the biological sex of the referent. I have included the masculine form here, but the derivation would proceed in the same fashion if it were feminine; the only difference is that the nominalizing head would have a different feature. The root is categorized with the nominalizing morpheme with the gender feature that correlates with the sex of the referent. The Theme node is inserted postsyntactically with the [CLASS IV] feature, since this root is listed in the conditions for the insertion of this [CLASS IV] feature. During Vocabulary Insertion, the Theme node is assigned null exponence.

The derivation for the masculine *problema* (problem-sg.m.) proceeds in a similar fashion. In this case, however, the nominalizing morpheme is plain *n* because the noun has masculine gender that is not determined by biological sex. Because this root (i.e., $\sqrt{\text{PROBLEM}}$) is listed as one that receives the [CLASS II] feature, this Theme node is assigned the [CLASS II] feature. It is then realized as /a/. Derivations for all nouns whose word class markers cannot be predicted from their genders will follow in the same fashion (i.e., all Class III and IV nouns as well as masculine, /a/-final nouns, and feminine /o/-final nouns).

3.4.3. Tying up loose ends: Morpheme order and Class IV plurals

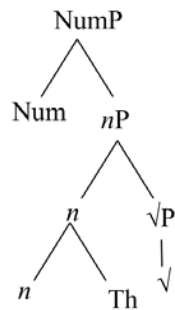
Before concluding the section on word class, I must address two related points of interest: (1) the process by which we arrive at the observed order of morphemes and (2) the case of plural Class IV nouns. These are the topic of the current section.

3.4.3.1. Morpheme order

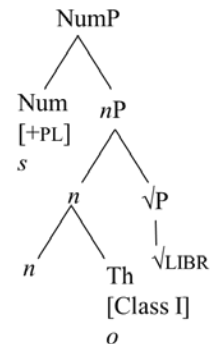
At this point, it becomes necessary to address the order of morphemes within nouns and how this order results from the syntactic structures we have seen thus far. I have established that gender is on the categorizing head *n*, which is merged into the structure with a root as its complement. I have also argued that word class can be inserted postsyntactically as an adjunction to this categorizing *n* (and on other projections in the nominal spine, as I put forward in Chapter 4). This results in the structure given below.

(44) Structure of nominals after word class insertion

(a)



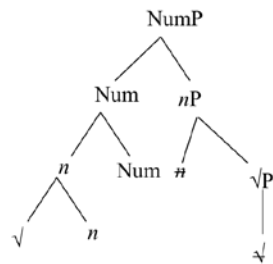
(b)



At this point, it must be explained how we arrive at the observed forms (e.g., *libros* and not *solibr* or some other ordering of the morphemes). This requires that we first determine how the morphemes come to be pronounced together phonologically. One possibility is head movement. In this process, two

terminal nodes are combined into one complex head. An example of this process for nouns is provided below in (45).

(45) Head movement in nominals in Spanish⁵⁰



This derivation assumes that $\sqrt{+n+Num}$ forms a complex head that can be pronounced as a single phonological entity.⁵¹ Another possibility is Lowering, as described by Embick and Noyer (2001). Lowering unites syntactic nodes that are realized together phonologically but are not joined together in the syntax (via Raising). A head X will lower to the head (Y) of its complement YP.

(46) Lowering of X^0 to Y^0

$$[XP X^0 \dots [YP \dots Y^0 \dots]] \rightarrow [XP \dots [YP \dots [Y^0 Y^0+X^0] \dots]]$$

In this case, Num could Lower to n and then this complex head could Lower again to the head of \sqrt{P} . At this point, it is not clear whether it is necessary to specify which of the two options applies in this case. I choose to assume that either option is viable.

⁵⁰ As this process is assumed to take place in the syntax, the Th node has not yet been inserted.

⁵¹ I refrain from using the term “word” due to the difficulties in defining such a term in a consistent manner. I refer the reader to Embick (2010) for a discussion of different types of words in a DM perspective (i.e., m-words and subwords).

Additional stipulation is necessary for both options, however. The heads have been combined into one complex entity, but we still do not know why we end up with the order that we see pronounced at PF (i.e., $\sqrt{+Th+Num}$). Embick and Noyer (2001) refer to this process as linearization, a property “imposed at PF in virtue of the requirement that speech be instantiated in time” (p. 562). According to them, linearization takes place during Vocabulary Insertion.

Embick and Noyer (2001) and Embick (2010) assume that there are requirements concerning which head must precede another at PF. They represent these requirements with the symbol $*$, demonstrating that $a*b$ means that a must linearly precede b at PF. Embick (2010) proposes the following order of operations at PF that result in linearized elements, which I have illustrated using the nodes under investigation here.

(47) The linearization process

- (a) Linear relations by $*$: $(\sqrt{*nP})(n*NumP)$
- (b) Linear relations by \frown : $(\sqrt{\frown Th})(Th \frown Num)$ ⁵²
- (c) Chained: $\sqrt{-n-Num}$

The first step stipulates the order of the morphemes. Next, the terminal nodes are concatenated with each other, denoted by the symbol \frown . This is particularly relevant since it pulls out the specific element within an XP that is adjacent to another terminal node in its complement. Lastly, the elements must be chained into an expression that the input/output system can recognize. The chains are represented with hyphens, as in (c). This process of linearization is what I assume throughout the remainder of the dissertation. I address one final loose end, Class IV plurals, before concluding this chapter.

⁵² At this point, the nominalizing heads are null, so the concatenation statements refer to the Th nodes.

3.4.3.2. Class IV plurals

By definition, Class IV nouns have a null word class marker. But, when they appear in the plural (i.e., with the plural marker /s/), some surface with an /e/ between the root noun and the plural marker.

This is not the case for all Class IV nouns, as we can see in the distinction between (a) and (b) in the examples of pluralized Class IV nouns provided below.

(48) Class IV plurals⁵³

(a)	(i)	flor	flower-sg.f.	flores	flower-pl.f.
	(ii)	sol	sun-sg.m.	soles	sun-pl.m.
	(iii)	crúz	cross-sg.f.	cruces ⁵⁴	cross-pl.f.
	(iv)	ser	being-sg.m.	seres	being-pl.m.
(b)	(i)	chef	chef-sg.m.	chefs	chef-pl.m.
	(ii)	esnób	snob-sg.m.	esnóbs	snob-pl.m.
	(iii)	menú	menu-sg.m.	menús	menu-pl.m.
(c)	(i)	bar	bar-sg.m.	bares	bar-pl.m.
	(ii)	club	club-sg.m.	clubes	club-pl.m.
	(iii)	líder	leader-sg.m.	líderes	leader-pl.m.

Curiously, as Harris (1991a) points out, there is a distinction between nouns that are “domestic” (a) and those that are “xenonyms” (b). The “domestic” nouns surface with an /e/ between the root and the pluralizing suffix /s/, while “xenonyms” do not. There are, however, some nouns that appear to be xenonyms but that also have an /e/ before the plural /s/. Examples of such nouns are provided in (c). How can we explain the lack of /e/ in the instances in (b) but not those in (c) or (a)?

⁵³ Some Class IV nouns have multiple acceptable plural forms (e.g., *bambú* for ‘bamboo’, which pluralizes as *bambúes* or *bambús*). It is possible that individual speakers utilize one plural morpheme for some nouns and another for others and even that some speakers have different means of creating the plurals of the same words than others. There is much work to be done on variation in the DM framework, and I leave this for future research.

⁵⁴ There is no difference in pronunciation in the consonantal segments here. The alternation from *z* in the singular to *c* in the plural is merely orthographic convention.

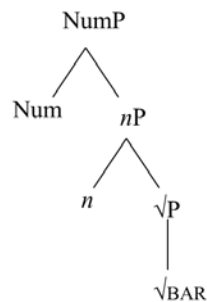
One possibility is to assume that the /e/ is part of an allomorph of the plural that adds both /e/ and /s/ instead of just /s/ for specific nouns. This could work fairly well with the Vocabulary Items for the plural given in (49).

(49) Vocabulary Items for plural in light of the patterns in (48)

[+PL] ↔ /es/ / ____ √CRUZ, √SOL, √BAR, √CLUB, etc.
 [+PL] ↔ /s/ elsewhere

However, it is not clear that the root is available to affect the contextual allomorphy of Num since there is a nominalizing head in between the two, as shown in the structure below in (50).

(50) Position of √ and Num in the derivation



It has been assumed that categorizing heads, including *n*, are phase heads. Therefore, the root is in a separate phase from Num and should not be able to impact the realization of Num. There is, however, one possible solution to this dilemma, which comes in the form of the pruning operation proposed by Embick (2010). This operation prunes (i.e., removes) phonologically null phase heads, allowing the identity of a root to affect the allomorphy of the non-cyclic head above this null phase head. This process is demonstrated in (51).

(51) Pruning of phonologically null *n*

$$\sqrt{\text{BAR}} \frown [n, -\emptyset], [n, -\emptyset] \frown [\text{Num}, -s] \rightarrow \sqrt{\text{BAR}} \frown [\text{Num}, -s]$$

It could be argued that the word class markers would prevent *n* from being pruned in such a structure. In this case, however, the word class marker is phonologically null because the nouns in question belong to Class IV. The steps in the derivation would proceed as follows:

(52) Pruning process for phonologically null *n* (based on Embick's (56))

- (a) Syntax: *n* and the Root are merged
 - (i) PF: Spell-Out of the phases in the domain of *n*
- (b) Syntax: Num head merged with *n*P
- (c) PF: Higher cyclic head (*x*)⁵⁵ triggers Spell-Out of *n*-headed phase
 - (i) Num lowers to create complex head of [[$\sqrt{\text{BAR}} n$]Num [+PL]]
 - (ii) Linearization $\sqrt{\text{BAR}} \frown n, n \frown \text{Num} [+PL]$
 - (iii) Vocabulary Insertion at *n*: $\sqrt{\text{BAR}} \frown [n, -\emptyset], [n, -\emptyset] \frown \text{Num} [+PL]$
 - (iv) Pruning: $\sqrt{\text{BAR}} \frown [n, -\emptyset], [n, -\emptyset] \frown \text{Num}, [+PL] \rightarrow \sqrt{\text{BAR}} \frown \text{Num}, [+PL]$
 - (v) Vocabulary Insertion at Num [+PL]

I see no issue with this particular method of accounting for the differences in pluralization observed in (48) aside from the complexity that it adds to the Vocabulary Items for the plural feature.

Another option is to assume that it is the Class morpheme itself that impacts the Vocabulary Insertion of the feature [+PL]. The Vocabulary Items for this possibility is provided below in (53).

(53) Vocabulary Items for plural with Class as context determining allomorphy

$$\begin{aligned} [+PL] &\leftrightarrow /es/ \quad / ____ [\text{CLASS IV}] \\ [+PL] &\leftrightarrow /s/ \quad \text{elsewhere} \end{aligned}$$

⁵⁵ SpellOut would be triggered by the merger of a different cyclic head above *n*. Num is not a cyclic head itself, so the derivation would not be sent to the interfaces until another cyclic head was merged. I have marked this cyclic head as *x* because its identity is not clear for this derivation in this isolated context. Perhaps it is a further *v*P or *n*P, depending on the specific context (i.e., phrase or sentence) in which we find this noun.

The issue with such a stipulation is that it does not capture all of the data in (48). Namely, those nouns that are Class IV but do not take /es/ would have to be listed separately. Because they take the plural /s/, the elsewhere allomorph, we would then have two conditions on Vocabulary Insertion that are realized by the same phonological segment. We saw above (in relation to theme vowel/word class marker realization) why this is not ideal.

(54) Revised (and disallowed) Vocabulary Items for plural with Class as determining factor for allomorphy

- [+PL] ↔ /s/ / ____ √CHEF, √ESNOB, √MENÚ, etc.
- [+PL] ↔ /es/ / ____ [CLASS IV]
- [+PL] ↔ /s/ elsewhere

An additional option is to assume that the Class IV word class marker will surface as an /e/ in the context of (i.e., adjacent to) a [+PL] Num. Possible Vocabulary Items for this word class marker realization is provided below in (55).

(55) Vocabulary Items for word class marker realization assuming two realizations for Class IV

- (a) [CLASS IV] ↔ -e / ____ [+PL]
- (b) [CLASS V] ↔ -s
- (c) [CLASS IV] ↔ Ø
- (d) [CLASS III] ↔ -e
- (e) [CLASS II] ↔ -a
- (f) elsewhere ↔ -o

Once again, this would result in disjoint conditions realizing the same phonological segment.

A final option is to assume that the /e/ is the result of some particular phonological specification. We could argue that the /e/ in (a) and (c) is the result of word-internal epenthesis. We saw in section 2.5.1 that word-internal epenthesis is still quite active. But, this would not explain why word-internal epenthesis

does not occur for all xenonyms (i.e., why the xenonyms in (b) do not undergo epenthesis). It could be that some nouns will undergo this process in order to adhere to the phonotactics of Spanish while others will not. Perhaps certain xenonyms (e.g., newer ones, ones that assimilate phonologically to a lesser degree, etc.) are able to escape unchanged. It is beyond the scope of this dissertation to delve this far into the rules governing phonological realization in Spanish depending on specific rules for assimilating certain xenonyms and not others. There are, then, two possible options: (1) pruning of the null *n* head and (2) varying phonological requirements. It is not necessary at this point to determine which is at play in this situation. I merely point out that there are multiple ways to address the presence of /e/ in the pluralized forms without assuming that it is itself a word class marker.

3.4.4. Interim summary

In section 3.4, I explored various possible locations for word class in the derivation. I first demonstrated that word class is not necessary for syntactic operations, which prompted me to assume that word class is not present in the syntactic component. I ruled out presyntactic insertion and elimination of word class features (cf. Alexiadou & Müller, 2008) due to the need for such features to impact phonological realization and the restriction on including category-specific information on roots. I then determined that word class information should be inserted postsyntactically on *n*, as suggested by Kramer (2015). This allows word class to be impacted by gender in the instances in which there is a correlation between the two but not in others, as gender is also present on *n*. I revised Kramer's (2015) analysis to include the novel word class inventory presented in Chapter 2. Lastly, I tied up some loose ends by addressing how the morphemes in each nominal are ordered to result in the pronounced forms and investigating possible explanations for the /e/ that surfaces with certain Class IV nouns. The next chapter will demonstrate further benefits of the postsyntactic analysis of word class in light of the complicated diminutive data that will be presented.

3.5. Conclusion

This chapter demonstrated the superiority of a syntactic analysis for gender whereby gender is present on the nominalizing projection in the syntactic component. This was proposed by Kramer (2015), the benefits of which (as compared to lexicalist approaches) were presented section 3.2. I provided both theory-internal and empirically-motivated support for this syntactic approach. I briefly explained the relationship between gender and word class in section 3.3, motivating the investigation as to the location of word class in section 3.4. In the latter, I addressed the benefits of a postsyntactic analysis of word class, as argued for by Oltra-Massuet (1999), Oltra-Massuet and Arregi (2005), and Kramer (2015).

As a result, this chapter has established that both gender and word class can be introduced into the derivation on *n*. The difference between the two is that gender is included in the presyntactic bundle of features that is introduced into the derivation via a syntactic merge operation; word class, on the other hand, is inserted postsyntactically as the result of a morphological well-formedness condition. The fact that both are on *n* (i.e., that both are local) allows one (namely gender) to impact the other. This was demonstrated in the conditions for [CLASS] feature insertion in section 3.4.2.5.

In the chapter that follows, I probe further into this postsyntactic analysis of word class. I argue that other projections besides *n* can serve as the location for the insertion of word class nodes. By allowing word class to also surface on the projection of the nominal spine before Number (especially when this is not *n*), I explain, we can account for some complex patterns of word class marker realization for evaluatives. A further benefit of this analysis is that it can account for the complicated diminutive allomorphy that has been the subject of much research in the last four decades.

CHAPTER 4

4.1. Introduction

The previous chapter advocated for an analysis in which gender is introduced on n and word class can be introduced on n . While gender is present in the syntactic component, word class is introduced postsyntactically. In this chapter, I demonstrate some of the other possibilities for insertion of word class — namely, that it is inserted on other projections in the nominal spine. This follows from an investigation into diminutive morphology that prompts me to posit that there are two different types of diminutives: what I term the adjoined diminutive and the diminutive formed from a separate projection (a DimP). It is the DimP diminutive that motivates a refined version of the assumption that word class is inserted on n . The iterative nature of evaluative projections in Spanish and evidence that they can be separate projections leads me to assume that word class is also inserted on other projections in the nominal spine, effectively whichever one is adjacent to Number. I counter the subsequent possible objection that word class is merely inserted on Number itself. To do so, I demonstrate why it is necessary for word class information to be present on n with regard to the adjoined diminutive in particular. Over the course of the chapter, I focus predominantly on nominal constructions, but I address an extension of the analysis described here to adjectives, adverbs, and verbs when applicable.

The chapter is organized as follows: first, I begin by providing some general background on diminutives and Spanish diminutives in particular in section 4.2. I then transition into a discussion of the syntactic nature of diminutives from a crosslinguistic perspective in section 4.3. In this section, I outline the diagnostics that have been proposed (cf. Steriopolo, 2008) to determine whether a diminutive is a categorizing head or an adjunction. The subsequent section, section 4.4, describes the behavior of Spanish diminutives with regard to these diagnostics. I present evidence for the existence of two different types of diminutives in Spanish based on the outcome of Steriopolo's (2008) diagnostics. I address previous syntactic analyses for the Spanish diminutive in section 4.5 before proposing my novel, two-position

analysis in sections 4.6 and 4.7. This analysis assumes that diminutives are merged in two different locations in the derivation: as adjunctions to *n* and as separate projections above *n*. The latter type prompts me to argue for multiple locations of insertion of word class (i.e., on *n* and on other projections in the nominal spine). In section 4.7, I address some of the predictions that this analysis makes with regard to properties of each type of diminutive (e.g., word class of the resulting diminutive, compositionality of meaning, iteration, etc.) and demonstrate how these are borne out. I then turn to a discussion of diminutives in Brazilian Portuguese in section 4.8 and demonstrate how they present further evidence for a two-position approach to diminutives. In section 4.9, I motivate the two-position analysis as a better means of handling the complex patterns of allomorphy displayed by the *-(c)ito/a* diminutive. Finally, before concluding, I investigate the durability of the analysis presented thus far to V+N compounds. The chapter concludes with a summary and a brief transition into Chapter 5, which will address how this analysis can be extended to other Spanish diminutive suffixes and augmentatives.

4.2. General background on Spanish diminutives

4.2.1. The semantic effect of diminutivization

Diminutives are typically subsumed under the category of evaluative morphology. This category consists of diminutives, pejoratives, augmentatives, and amelioratives. Grandi and Körtvélyessy (2015) describe evaluation as implying two different perspectives. The first is descriptive or quantitative — it is an evaluation according to an object’s “tangible, real characteristics,” such as size or shape (p. 10). The second is qualitative and concerns the speaker’s feelings towards the object in question (p. 10). Both are seen as a deviation from a culturally- or socially-established norm or default. Though they seem distinct, the two perspectives can overlap in the same construction, which is what we see in Spanish. Spanish diminutive morphology contributes to the elements that it modifies the concepts of familiarity, small size,

and disdain (Eddington, 2002).¹ The concern of this chapter, however, is not the semantic contribution of diminutive morphology, but rather the morphology itself.²

4.2.2. *The morphological process of diminutivization*

Crosslinguistically, there are many morphological processes that can produce evaluatives, including suffixation, prefixation, reduplication, compounding, and a few other processes (Körtvélyessy, 2015, p. 22). Spanish diminutives are formed via suffixation of overt morphology, as demonstrated below in (1).³

(1) Diminutivized nouns, adjectives, and adverbs

		Base form	Diminutivized form	Gloss
(a)	(i)	casa	casita	‘house’
	(ii)	libro	librito	‘book’
	(iii)	elefante	elefantito	‘elephant’
	(iv)	coche	cohecito	‘car’
	(v)	flor	florecita	‘flower’
(b)	(i)	chico	chiquito	‘small’
	(ii)	rápido	rapidito	‘fast’
	(iii)	bajo	bajito	‘short’
	(iv)	gordo	gordito	‘fat’
(c)	(i)	pronto	prontito	‘soon’
	(ii)	cerca	cerquita	‘close’

¹ For more on the semantics of Spanish diminutives, see Zuluaga (1993).

² The reader is referred to Jurafsky (1996) for further information on the semantics of diminutives crosslinguistically.

³ Jaeggli (1980) and Colina (2003) have argued that some diminutives, namely those ending in *-ito* and not *-cito*, are formed via infixation. I argue that a similar distinction must be made. However, I assume that it is not one of infixation versus suffixation, but rather one due to differences in position of the diminutive within the syntactic structure.

We see in (1) that *-(c)ito/a*⁴ is added to the base element (i.e., noun, adjective, or adverb) in order to create the diminutivized form.⁵ But, this is not the only suffix capable of diminutivization in Spanish. Historically, Spanish has utilized several diminutivizing suffixes, including *-illo/a*, *-uelo/a*, *-ejo/a*, *-ijo/a*, *-ete/o/a*, *-enzo/a*, *-ín/ina*, *-(c)ito/a*,⁶ *-ico/a*, and *-ón/ona* (González Ollé, 1962).⁷ Many of these suffixes are now rarely used, if at all. In fact, Náñez-Fernández (1973) reports that the only active (i.e., fully productive) diminutive suffix in Peninsular Spanish is the *-(c)ito/a* suffix (p. 385). As such, the bulk of my discussion on diminutives focuses on this particular suffix, itself the study of numerous previous works (e.g., Jaeggli, 1980; Crowhurst, 1985; Colina, 2003; Smith, 2011; among others) for reasons that will be elaborated in section 4.9. Once I propose my two-position analysis of Spanish diminutives in *-(c)ito/a* in this chapter, I investigate its applicability to other Spanish diminutives in Chapter 5.

Now that I have introduced the concept of diminutive morphology as a subset of evaluative morphology and presented a brief description of what diminutivized forms look like in Spanish, I turn to an investigation of how such forms are created. I first present a review of recent literature on diminutivization, highlighting specifically the influential work by Wiltschko and Steriopolo (2006, 2007) and Steriopolo (2008). I conclude the review of the literature with a description of the diagnostics for determining the location of diminutivizing morphemes in the derivation that were presented by Steriopolo (2008).

⁴ I have included the *-c-* in parentheses here since we see it surface in forms like (a)(iv) and (a)(v) but not in any of the other examples in (1). This orthographic *c* is realized as either /s/ or /θ/ in Spanish, depending on the dialect. In most regions of Spain, this orthographic *c* is pronounced as /θ/, while it is pronounced as /s/ in Central and South America. Over the course of the chapter, I argue that *-(c)ito/a* is not one suffix, but rather two.

⁵ The change from *-c-* to *-qu-* in (b)(i) and (c)(ii) is an orthographic convention. There is no phonological distinction between *-c-* and *-qu-* in these cases.

⁶ I choose to write this suffix as having an optional orthographic *c* due to the allomorphy it displays. In some instances, it has an orthographic *c*, while in others it does not. I explain later that I believe this allomorph corresponds to the distinction between two different locations for diminutive formation.

⁷ I write the suffixes with the different word class markers that they can take, separated by a forward slash. For instance, the suffix *-ill-* can have either an /o/ or an /a/ as the word class marker that follows it. Examples include *chiquillo* (boy-dim.sg.m.) and *chiquilla* (girl-dim.sg.f.). The word class markers are not to be assumed to be a part of the diminutive suffixes themselves, just as word class markers are not assumed to be a part of the root or nominalizing morphology in Chapter 2. I merely include them here for expository purposes.

4.3. The syntactic nature of diminutives

Because diminutives contribute meaning, as outlined above, they are assumed to be present in the syntactic structure. Following, Chomsky (2000, 2001), elements are interpretable at LF if they are legible, meaning they contribute to or alter the interpretation of a derivation. Diminutivization does alter the interpretation of a derivation, so we would therefore assume that the diminutive morpheme is present in the syntax.⁸

Once it is established that the diminutive morpheme appears in the syntax, there are several possibilities for its precise location. The most recent work on diminutives (Eguren, 2001; Wiltschko & Steriopolo, 2007; Steriopolo, 2008; Fábregas, 2010; De Belder, Faust, & Lampitelli, to appear; among others) has demonstrated language-specific variation for the location of diminutives. There appear to be three options: (1) the diminutive as a syntactic, categorizing head; (2) the diminutive as an adjunct; (3) the diminutive as a syntactic, non-categorizing head (e.g., the head of a DimP). What has not been suggested before (to my knowledge) is that multiple of these types of diminutives are possible within the same language.⁹ This is precisely what I argue for with regard to Spanish diminutives (and suggest for Brazilian Portuguese diminutives) throughout the chapter, building on previous diagnostics meant to differentiate between diminutives across multiple languages.

4.3.1. Cross-linguistic variation for location of diminutive in the syntax

Wiltschko & Steriopolo (2007), a seminal work on crosslinguistic variation for the location of diminutivization, compares German and Halkomelem. The authors use these two languages to distinguish between two different processes of diminutivization: (i) merging of a categorizing head with a diminutive

⁸ Note that this definition of interpretability was based on that provided by Kramer (2015).

⁹ DeBelder, Faust, and Lampitelli (to appear) do present a two-level analysis of diminutives. However, they assume that both are the heads of separate projections (Lex and Size). The analysis I present is (to my knowledge) the first to argue that diminutives can be both heads of separate projections and adjuncts to a categorizing projection within the same language.

feature (ii) adjoining a head with a diminutivizing feature to a categorizing projection. They argue that the properties of the diminutivized forms in a language are able to determine which process takes place in the language. According to Wiltschko & Steriopo (2007), German diminutives are formed by the first process, while Halkomelem diminutives are formed via the second. The respective structures are included below in (2).

- (2) (a) DIM as syntactic head (b) DIM as adjunction



The argumentation is as follows. Diminutives in German obligatorily have certain properties (i.e., they are count nouns with neuter gender) and therefore, the diminutivization process must be simultaneous to categorization. In contrast, in a language in which diminutivization does not correlate with certain properties for the diminutivized entity (such as Halkomelem), the diminutive is the result of an adjunction.

I compare the data for the two different languages in (3-6). We see that the German diminutives are obligatorily neuter regardless of the gender of the base noun.¹⁰

¹⁰ The data in (3a-b) is from Wiltschko and Steriopo (2007). The data in (3c) is from my own fieldwork.

(3) German diminutives are neuter

(a)	der det.m. 'tree'	Baum tree	das det.neut. '(cute) little tree'	Bäum-chen tree-dim.
(b)	die det.f. 'bottle'	Flasche bottle	das det.neut. '(cute) little bottle'	Fläsch-chen bottle-dim.
(c)	das det.neut. 'house'	Haus house	das det.neut. 'cottage'	Häus-chen house-dim.

Additionally, diminutivized forms in German behave like count nouns, regardless of the count/mass status of the base. This is exemplified in the change from the mass noun 'bread' to the count noun 'rolls' that co-occurs with the process of diminutivization below in (4) (data from Wiltschko & Steriopolo, 2007).

(4) German diminutives behave like count nouns

(a)	viel Q 'much bread'	Brot bread	(b)	viele Q.pl. 'many rolls'	Bröt-chen bread-dim.
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In contrast, diminutives in Halkomelem can be nouns, adjectives, and verbs, as demonstrated in (5). The category of the base element is retained over the course of the diminutivization process. Moreover, nouns that undergo diminutivization also retain their count/mass distinction (p. 3). These two properties are demonstrated in (5) and (6), respectively (data from Wiltschko & Steriopolo (2007)).

(5) Halkomelem diminutives are not always nouns

- (a) N→N
q'á:mi → q'á-q'emi
girl DIM-girl
'girl' 'small girl'
- (b) A→A
p'eq' → p'í-p;eq'
white DIM-white
'white' 'a little white, whitish'
- (c) V→V
lhí:m → lhi-lh:m
picking DIM-picking
'picking' 'picking a little bit'

(6) Halkomelem diminutives retain their count/mass distinction

- (a) count → count
s-páth → s-pi-páth
nom-bear nom-dim-bear
'bear' 'little bear'
- (b) mass → mass
s-peháls s-pi-peháls
nom-wind nom-dim-wind
'wind' 'a little bit of wind/breeze'¹¹

We see that the difference in the properties of the two types of diminutives is the direct result of their location within the syntax. A categorizing head is able to change the formal properties of the item that it diminutivizes (as in German), while an adjunction is not (as in Halkomelem). Therefore, when the diminutive appears on a categorizing head, the formal properties of the item that is diminutivizes can change, whereas they obligatorily must remain unchanged when the diminutive is an adjunction.

¹¹ This translation might seem somewhat misleading because it appears to have a count status (especially the added 'breeze'). Wiltschko and Steriopo (2007) argue, however, that this nominal has mass noun properties. Perhaps the translation is just somewhat imprecise.

4.3.2. Steriopolo's (2008) diagnostics for determining the head/adjunct status

In the previous section, we saw that there are several formal properties that can be altered on a categorized element via the merger of a subsequent categorizing head. Steriopolo (2008) has distilled the results of Wiltschko and Steriopolo (2007) (and further investigation presented therein) into a set of diagnostics to determine whether an expressive (evaluative suffix)¹² is a head or an adjunct. These are presented below in (7).

(7) Diagnostics for Head/Adjunct Status of Expressive Suffixes

Diagnostic I: Do expressive suffixes change syntactic category?

Diagnostic II: Do expressive suffixes change grammatical gender?

Diagnostic III: Do expressive suffixes change inflectional class?

If the answer to any of these diagnostics is “yes,” then, Steriopolo (2008) argues, we have evidence for the head status of that expressive suffix. The section that follows will demonstrate that there is no one-size-fits all set of responses for diminutives in Spanish. Rather, there is evidence for two different processes of diminutivization, particularly with regard to Diagnostic III.

4.4. The (mixed) results of Steriopolo's (2008) diagnostics for Spanish

This section addresses each one of Steriopolo's (2008) diagnostics in turn with respect to Spanish diminutives. It demonstrates that the answers to the first two questions are quite clearly “no,” while the response to the third question is much more complicated (i.e., “yes” in some instances but “no” in others). The variable behavior of diminutives with regard to their inflectional (or word) class leads me to argue for

¹² Steriopolo (2008) defines expressives as “linguistic objects that convey the attitude of the speaker toward the referent” (p. 1). Included among these are expressives for attitude and size. Diminutives can express both attitude and size, as mentioned in section 4.2.1.

the existence of two different types of diminutive in Spanish: one that is an adjunction to *n* and one that is a separate projection in the nominal spine that is merged above *n*.

4.4.1. Spanish diminutives do not change syntactic category

Steriopolo's (2008) first diagnostic investigates whether or not an expressive suffix causes a change in syntactic category from the base form to the expressive form. In this section, I demonstrate that Spanish *-(c)ito/a* diminutives do not cause a change in syntactic category of the form that they modify. We saw in (1), repeated here as (8), that a property of the Spanish diminutive *-(c)ito/a* is its ability to combine with bases of various syntactic types.

(8) Diminutivized nouns, adjectives, and adverbs¹³

		Base form	Diminutivized form	Gloss
(a) Nouns	(i)	<i>casa</i>	<i>casita</i>	'house'
	(ii)	<i>libro</i>	<i>librito</i>	'book'
	(iii)	<i>elefante</i>	<i>elefantito</i>	'elephant'
	(iv)	<i>coche</i>	<i>cohecito</i>	'car'
	(v)	<i>flor</i>	<i>florecita</i>	'flower'
(b) Adjectives	(i)	<i>chico</i>	<i>chiquito</i>	'small'
	(ii)	<i>rápido</i>	<i>rapidito</i>	'fast'
	(iii)	<i>bajo</i>	<i>bajito</i>	'short'
	(iv)	<i>gordo</i>	<i>gordito</i>	'fat'
(c) Adverbs	(i)	<i>pronto</i>	<i>prontito</i>	'soon'
	(ii)	<i>cerca</i>	<i>cerquita</i>	'close'

(8a) contains diminutivized nouns, while (8b) and (8c) consist of diminutivized adjectives and adverbs,¹⁴ respectively. I exclude verbal diminutives here as there is not definitive evidence that these are possible in Peninsular Spanish (cf. Rainer, 1995).¹⁵

¹³ It is also possible to diminutivize some interjections, such as *adiosito* ('goodbye').

The data in (8) demonstrates that in none of these instances is the syntactic category altered by the process of diminutivization. This marks a distinct contrast between Spanish and German, a language in which diminutivized forms must be nominal (as described above in section 4.3.1). The crucial point is that diminutives in Spanish will not always be nominals; but rather, they retain the syntactic category of the base form. The response to Diagnostic I, then, appears to be “no”; diminutivization does not alter the syntactic category of the form being diminutivized.

For the sake of completeness (though it is not one of Steriopolo’s, 2008 diagnostics), I also investigated the count/mass distinction of nominal Spanish diminutives. As we see below in (9a), the base mass nouns are still mass nouns when diminutivized. The count nouns given in (9b) also retain their count noun status in their diminutive form.¹⁶

¹⁴ It is not clear that all adverbs can be diminutivized in the same way. Eguren (2001) argues that only adverbs with nominal and/or adjectival properties can be diminutivized. Those that are manner, qualifying, focal, or degree adverbs (aside from *poco*, or ‘a bit’), he argues, cannot be diminutivized. However, Lang (1990) asserts that some manner adverbs can be diminutivized, including *regularcitamente* (regularly-dim.) and *lentitamente* (slowly-dim.), though this is rare. In any event, the syntactic category of diminutivized adverbial forms does not change as a result of the diminutivization process.

¹⁵ There is also some evidence to suggest that some verbal forms (namely gerunds) can be diminutivized in Latin American Spanish (Rainer, 1995). But, Rainer (1995) suggests that the gerunds that allow diminutivization in Peninsular Spanish might actually be “subsumed under the deadverbial formations” (p. 86).

¹⁶ It is possible to have a count version of both *agua* (‘water’) and *helado* (‘ice cream’) similar to the English forms for the same entities. A count version of *water* can be used to refer to multiple bottles of water, while the count version of *ice cream* might reference multiple ice cream cones or brands of ice cream, and the same for *agua* and *helado*, respectively.

(9) Spanish diminutives do not necessarily¹⁷ alter the count/mass distinction of base nouns

- | | | | |
|-----|-------------------|---|---|
| (a) | (i) ¹⁸ | Necesitas mucha agua.
You need a lot of water. | Necesitas mucha agüita.
You need a lot of water (dim). |
| | (ii) | Quiero tomar mucho helado.
I want to eat a lot of ice cream. | Quiero tomar mucho heladito.
I want to eat a lot of ice cream (dim). |
| (b) | (i) | Ella tiene dos ranas.
She has two frogs. | Ella tiene dos ranitas.
She has two frogs (dim). |
| | (ii) | El perro está en su rincón.
The dog is in the corner. | El perro está en su rinconcito.
The dog is in the corner (dim). |
| | (iii) | Mi madre quiere una casa nueva.
My mother wants a new house. | Mi madre quiere una casita nueva.
My mother wants a new house (dim). |

The behavior of the diminutives displayed in (9a) and (9b) demonstrates that Spanish diminutives retain their count/mass distinction when diminutivized. In sum, Spanish diminutivization alters neither the syntactic category of the base form nor the count/mass distinction of nominals. The response to Diagnostic I is “no,” providing evidence that Spanish diminutives should be adjuncts.

4.4.2. Spanish diminutives retain the gender of the noun they diminutivize

Diminutives in Latin, contrary to those in many other languages of Indo-European origin, retained the gender from the nouns which they diminutivized (González-Ollé, 1962, p.179).¹⁹ The data in

¹⁷ In its sections 9.6e-f, the RAE (2009) notes that count nouns much more readily diminutivize than mass nouns. In some instances, the form of a diminutive prompts the count reading as opposed to the mass reading, such as in *trabajito* (‘work’ or ‘task’) and *lucécita* (‘light’). However, this does not mean that it is the diminutive itself that transforms one reading into another the way that Wiltschko and Steriopo (2007) describe for diminutives in German. A mass reading is possible for many diminutive forms, so this is not counterevidence for the claims made above. Perhaps there is a feature co-occurrence restriction whereby abstract nouns cannot retain a mass reading when diminutivized. I do not investigate further, but note that this is one possibility to account for the dispreference for diminutivized mass nouns in some instances.

¹⁸ I have chosen to include the diminutivized meaning in parentheses in the English translations. In many instances, the diminutive does not contribute a size difference (e.g., *mucha agüita* → ‘*a lot of a little water’). The diminutive in many of these examples would be expressed using a sing-song tone in English, which is difficult to translate into written work.

(9) above and in (10) below show that the same pattern holds for diminutives in Spanish.²⁰ The uniformity of the identity of the determiner for the base noun and its diminutivized form shows that gender is retained. This occurs for even the non-Latinate diminutives of unknown origin, such as -*(c)ito/a*.²¹ A masculine base noun results in a masculine diminutive, just as a feminine base noun results in a feminine diminutive.

¹⁹ One exception, González Ollé (1962) notes was pointed out by Weinhold (1887, p. 188). Weinhold (1887) argues that nouns whose diminutive form separates itself semantically from the noun on which it is based can change gender from the base noun to the diminutivized form. Lang (1990) also notes some such diminutives. I address these in Chapter 5.

²⁰ I will describe the patterns for feminine Class I nouns and masculine Class II nouns below.

²¹ The origins of the -*(c)ito* diminutive have been the focus of many studies, which generally conclude that it did not emerge from Latin. There are many theories as to its origin, but no single theory is conclusive. For a summary of theories, see González Ollé (1962).

(10) Gender is retained when a noun is diminutivized²²

(a)	el the-sg.m.	libro book-sg.m.	→	el the-sg.m.	librito book-dim.sg.m.	Class I
(b)	la. the-sg.f.	casa house-sg.f.	→	la the-sg.f.	casita house-dim.sg.f	Class II
(c)	la the-sg.f.	clase class-sg.f.	→	la the-sg.f.	clasecita class-dim.sg.f.	Class III
(d)	el the-sg.m.	camión truck-sg.m.	→	el the-sg.m.	camioncito truck-dim.sg.m.	Class IV
(e)	el the-sg.m.	virus virus-sg.m.	→	el the-sg.m.	virusito virus-dim.sg.m.	Class V
(f)	el the-sg.m.	chico boy-sg.m.	→	el the-sg.m.	chiquito boy-dim.sg.m.	Class I
(g)	la the-sg.f.	esposa wife-sg.f.	→	la the-sg.f.	esposita wife-dim.sg.f.	Class II
(h)	la the-sg.f.	madre mother-sg.f.	→	la the-sg.f.	madrecita mother-dim.sg.f.	Class III
(i)	la the-sg.f.	mujer woman-sg.f.	→	la the-sg.f.	mujercita woman-dim.sg.f.	Class IV

I note two important points here. First, gender is maintained no matter the class of the base noun, as shown in (10). Second, gender is maintained for inanimate nouns (10a-e) and animate nouns alike (10f-i). We would assume that animate nouns would retain the gender of the base noun for semantic reasons (i.e., the entity described displays a particular biological sex that corresponds with a grammatical gender). The fact that inanimate diminutives also retain the gender of the base shows us that this is a requirement of the diminutivization process for Spanish in general. As a result, the response to Diagnostic 2 appears to be “no”; diminutivization does not affect the gender of the diminutivized form.

²² I have not included a Class V animate noun, as I am not aware of the existence of any.

4.4.3. Word class can be maintained

The answer to the final diagnostic is quite complex. In some instances, the answer is quite clearly “no,” while in others, the answer is quite clearly “yes.” The data in (11) demonstrates the process of diminutivization for nouns of all five of the classes proposed in section 2.5.4 for the *-(c)ito/a* diminutive suffix.

(11) Diminutivized nouns for each class

(a)	I	el	libro	book-sg.m.	→	el	librito	book-dim.sg.m.
(b)	II	la	casa	house-sg.f.	→	la	casita	house-dim.sg.f.
(c)	III	la	madre	mother-sg.f.	→	la	madrecita	mother-dim.sg.f.
(d)	IV	el	café	coffee-sg.m.	→	el	cafecito	coffee-dim.sg.m.
(e)	V	el	virus	virus-sg.m.	→	el	virusito	virus-dim.sg.m.

In (11a-b), we see that the word class of the base noun is maintained in the diminutivized form.

However, the data in (11c-e) show a change in word class from the base noun to the diminutivized form.

When nouns in the latter group are diminutivized, it appears as though the word class marker is determined by the gender of the base noun. Masculine nouns, such as *café*, will have a diminutivized form that ends in the canonical word class marker for masculine nouns (*/o/*). On the other hand, feminine nouns, such as *madre*, will have a diminutivized form that ends in the canonical word class marker for feminine nouns (*/a/*). This is not incredibly surprising considering diminutivized *-(c)ito/a* nouns end in either */o/* or */a/*, with very few exceptions, such as a few */r/*-final nouns.²³

Due to this property of diminutivized nouns, it would not be possible to retain the word class markers for classes other than III-V. Additional data provided demonstrates the inability for nouns from Classes III-V to end in vowels other than those canonically associated with the gender of the base noun.

²³ Some exceptions include *azuquítar* for *azúcar* (‘sugar’), *Hectítor* for *Héctor* (‘Hector’), among others. I will address the special Class I and Class II nouns that end in */s/*, such as *Carlitos* in section 4.6.3.1.

(12) Diminutives formed from nouns in Classes III-V: word class patterns with gender

(a)	III	madre	mother-sg.f.	→	madrecita, ²⁴ *madrite, *madrecite	mother-dim.sg.f.
(b)	III	jefe	boss-sg.m.	→	jefecito, *jefite, *jefecite	boss-dim.sg.m.
(c)	IV	café	coffee-sg.m.	→	cafecito, cafetito, *cafite, *cafecite	coffee-dim.sg.m.
(d)	IV	rincón	corner-sg.m.	→	rinconcito *rinconcit	corner-dim.sg.m.
(e)	IV	flor	flower-sg.f.	→	florecita, *florexit	flower-dim.sg.f.
(f)	V	dosis	dose-sg.f.	→	dosisita, ²⁵ *dosisitas, *dosisitis	dose-dim.sg.f.
(g)	V	virus	virus-sg.m.	→	virusito, *virusitos, ?viritus ²⁶	virus-dim.sg.m.

The data above confirms that word class markers on diminutivized forms for nouns from Classes III-V pattern with gender.

This could lead one to wonder whether the gender of diminutivized forms always determines word class markers. The Class I and II nouns given above fell into the masculine and feminine genders, respectively, suggesting that this might be the case. However, the data in (13) contradicts this claim. This data shows that word class for nouns in Classes I and II is retained in the diminutivized form even when the word class marker does not correspond with the one typically associated with the gender of the base noun.

²⁴ I assume that the /e/ that surfaces here is not a word class marker but rather word-medial epenthesis. I elaborate on this claim in more detail in section 4.7.3.1.

²⁵ Note that this is the form provided in Smith (2011). However, my field work suggests that *dosisitas* is also a possible form for some speakers. I will elaborate more on this point in section 4.6.3.2, where I address Class V diminutives in particular.

²⁶ Two speakers provided this as a possible form for the diminutive of *virus*. However, the vast majority disagreed.

(13) Word class is retained for nouns in Classes I and II despite the noun's gender

(a)	I	amigo	friend-sg.m.	→	amiguito, *amiguita ²⁷	friend-dim.sg.m.
(b)	II	mesa	table-sg.f.	→	mesita, *mesito	table-dim.sg.f.
(c)	I	mano	hand-sg.f.	→	manito, *manita ²⁸	hand-dim.sg.f.
(d)	II	poeta	poet-sg.m.	→	poetita, *poetito	poet-dim.sg.m.

We see that the feminine, /o/-final *mano* retains its word-final /o/ in the diminutive, and the masculine, /a/-final *poeta* retains its word-final /a/ in the diminutive. If the word class marker of a diminutive were always determined by the gender of the noun, then the diminutivized form for *mano* would end in /a/ due to its being feminine, while the diminutive for *poeta* would end in /o/ due to its being masculine. (13c-d) show that this is not the case; word class remains consistent from the base noun to the diminutivized noun for base nouns from Classes I and II.

The distinction, thus, appears to be that base nouns that end in either /o/ or /a/ (i.e., those in Classes I and II) are able to retain their word class marker once diminutivized, while base nouns that end in other segments (i.e., those in all other classes), will change word class when diminutivized.

But, the situation is even more complex than this. The data in (14) shows that word class does pattern with gender for Class I nouns when these are diminutivized with *-cito* instead of *-ito*.

²⁷ This form is grammatical when referring to a female, but not when referring to a male.

²⁸ Some speakers do accept this as a form for the diminutivized *mano*. However, these are the minority of those sampled.

(14) Word class is not maintained for Class I with *-cit* diminutive²⁹

- | | | | | | | |
|-----|------|-------------|---------|----------|-----------------|----------|
| (a) | mano | hand-sg.f. | Class I | manecita | hand-dim.sg.f. | Class II |
| (b) | foto | photo-sg.f. | Class I | fotecita | photo-dim.sg.f. | Class II |

Here we see instances of diminutivized Class I nouns that do not retain their word class marker when diminutivized. Both the feminine *mano* and the feminine *foto* fall into Class II when diminutivized, although their base nouns belong to Class I. The Class I diminutives that are formed with *-cito* follow the same pattern as nouns in Classes III-V that are diminutivized with *-cito/a*; word class assignment follows the canonical correlation with gender (i.e., nouns that are feminine fall into Class II).

This data suggests that Spanish diminutives in *-cito/a* and *-ito/a* pattern differently with respect to word class.³⁰ The *-ito/a* constructions display retention of the word class marker from the base noun in the diminutive form. The *-cito/a* types, on the other hand, contain word class markers that are different from those of the base noun. The results of Diagnostic III, then, are ‘yes’ in the case of *-ito/a* diminutives from Classes I and II and ‘no’ in the case of *-cito/a* diminutives unless this word class patterns with gender (i.e., /o/ for masculine nouns and /a/ for feminine nouns).

²⁹ Most of the instances of each of these two forms come from online blogs or social media sites. The one exception is a singular instance of *manecita* found in the book *Amor y pedagogía* by Miguel de Unamuno (p. 57). This form has also been attested in several literary works throughout the latter half of the previous millennium (see Nájuez-Fernández, 1973). Of the two masculine, /a/-final nouns that I found with the *-cit* diminutive suffix, one was on an English-language blog and should be discounted. The other was *plasmecita* for the masculine, /a/-final *plasma*. However, it was used metaphorically (*tu [sic] eres mi plasmecita* — or ‘you are my (little) plasma’), and it is unclear what the gender of the intended referent was and how this might have impacted gender assignment and subsequently the word-final vowel. I have excluded it from the data for this reason. There were no instances of a feminine, /o/-final noun that retained its word class marker into the diminutive formed by *-cit* (e.g., *manecito*, *fotecito*).

³⁰ Note that there is no difference in meaning between those that diminutivize with *-cito/a* and those that diminutivize with *-ito/a*. One speaker did note that there might be a slight difference in level of endearment with *-cito/a* versus *-ito/a*, but this was not confirmed by others. In the case of *mano* and *foto*, however, the diminutive formed by *-ito/a* is much more common than that in *-cito/a*.

4.4.4. Summary of conclusions drawn from Steriopolo's (2008) diagnostics

In testing Steiopolo's (2008) diagnostics, we have arrived at the following conclusions: (1) diminutives in Spanish retain the syntactic category of the base form; (2) gender is always maintained for nominals;³¹ (3) word class³² is maintained only for base nouns from Classes I and II with the exception of Class I and Class II nouns that are diminutivized with *-cito/a*; (4) in all other instances, word class is determined by the gender of the base noun (i.e., masculine nouns will end in /o/, feminine nouns will end in /a/). The latter two points have prompted me to argue that the differences in word class patterns are the result of two different locations of diminutivization: adjunction to a categorizing head (in this case, *n*) and the merging of a separate projection above the categorizing projection (in this case, *nP*).³³ Further motivation for this analysis comes from restrictions on locality. I argue that word class is able to be retained when the diminutive is merged lower in the derivation (i.e., closer to the nominalizing head where the word class/theme node is inserted at PF) but not when the diminutive is merged higher up in the structure (i.e., above *nP*). Before laying out the analysis, I briefly present some previous syntactic analyses of Spanish diminutives as adjuncts and highlight the areas in which they fall short in terms of accounting for the observed patterns, further motivating the analysis developed in sections 4.6 and 4.7.

³¹ I assume that adverbs do not have gender and that adjectival gender is the result of agreement and not an inherent property of the adjective itself.

³² Declension class (cf. Kramer, 2015) and word class (cf. Harris 1991a, 1991b) have both been used with regard to word-final segments for Spanish nouns. I prefer the term word class, as only the pronominal system in Spanish demonstrates variable nominal endings for nouns with different cases.

³³ DeBelder, Faust, and Lampitelli (to appear) do not use these diagnostics or similar ones but do spell out predictions based on their claims for the two different projections that house diminutive morphology (LexP and SizeP). It seems as though their predictions/diagnostics will not apply, as the dichotomy between derivational morpheme and inflectional morpheme for *-cito/a* and *-ito/a* cannot be drawn. Neither has all of the expected properties presented by DeBelder, Faust, and Lampitelli (to appear). (For example, the *-ito/a* allomorph is the one used with noncompositional meaning but can also appear outside of the *-cito/a* allomorph, which is unexpected if it is the derivational diminutive). I do not discuss this analysis further but mention it here for the sake of completeness.

4.5. Previous syntactic analyses of Spanish diminutives

In section 4.4, it was demonstrated that diminutivization in Spanish does not affect syntactic category or gender. These diagnostics alone would prompt us to assume, following Steriopolo's (2008) diagnostics, that diminutives in Spanish are adjuncts and not categorizing heads, in contrast to German diminutives (cf. section 4.3). The same analysis would be upheld if we considered only *-ito/a* diminutives, in which word class also remain unchanged. Previous analyses (Eguren, 2001; Fábregas, 2010) have also assumed that diminutives in Spanish are adjuncts. I briefly describe these here and explain how they contradict some of the points we have already discussed (namely the presence of word marker or class projections) before presenting my novel analysis in sections 4.6 and 4.7, which is also able to account for the variable behavior of the two diminutive suffixes (*-ito/a* and *-cito/a*) with regard to word class.

4.5.1. Eguren (2001)

The syntactic analysis of Spanish diminutives presented by Eguren (2001) assumes that diminutives in Spanish are base-generated to the left of the root in an adjunct position. The motivation for such an analysis is that diminutives can modify many different syntactic categories, lack their own word class marker (Eguren's "word marker"), and do not alter lexical features of the root (p. 72). We have seen that at least two of these properties are true. Spanish diminutives can modify elements of different syntactic categories and do not alter the gender or the mass/count distinction of the root. But, as we have seen, Spanish diminutives can have their own word class markers. In fact, they do so obligatorily when the base noun belongs to Classes III-V (as in (12)) and in Class I *-cita* diminutives (as in (14)).³⁴

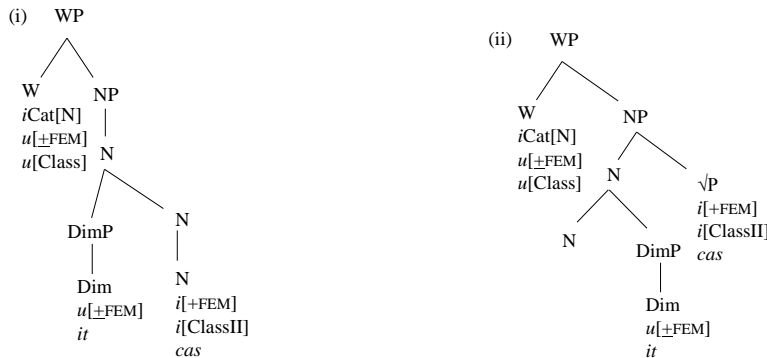
Eguren (2001) argues that a close relationship between gender and the evaluative suffix emerges as the result of the positioning of this suffix by the root. For Eguren, Spanish diminutives can modify

³⁴ Additionally, at least one diminutive suffix, *-ín/ina*, can have its own word class marker, as will be explained in Chapter 5. Some of the older diminutive suffixes that are not as commonly used today, such as *-ete* and *-ón*, appear to also have idiosyncratic word class markers.

elements of different syntactic categories because of the proximity of the suffix and the root. These roots have both gender and word class (as a matter of fact, derivations include the root labeled as NP). This analysis, therefore, contrasts with the assumptions put forward in some recent versions of DM that roots are devoid of both category and gender, with gender being a feature on the nominalizing head (*n*).

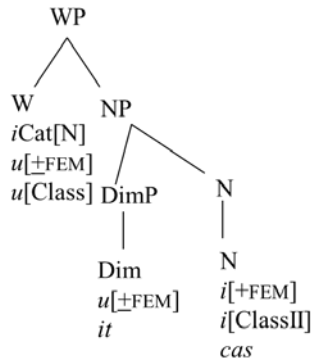
Eguren’s (2001) analysis also relies on the assumption that there is a word marker phrase in the derivation. This word marker phrase is presumed to have an interpretable categorial feature and uninterpretable word marker and gender features. The DimP adjoined to NP (Eguren’s \sqrt{P} — see above) has an underspecified gender feature and does not have a word marker feature. The combined structure for a diminutivized form is included below in (15).³⁵

³⁵ A few notes on this structure are in order. Eguren (2001) does not provide any examples of derivations with features included, so this structure is merely the one that I propose based on the explanation that he provides. In the structure, “Cat” stands for category, while “Class” represents the word marker feature. I have marked the gender and word marker/class features as interpretable on the N head, though Eguren (2001) does not mention explicitly that they are interpretable. Such an assumption falls out from his description of the feature elimination process that I will explain below (pp. 74-75). Additionally, Eguren (2001) argues that the diminutives are adjoined, while the structure he proposes displays them as specifiers to NP. I have retained his structure here for the sake of consistency, but mention that it should look more like that included here.



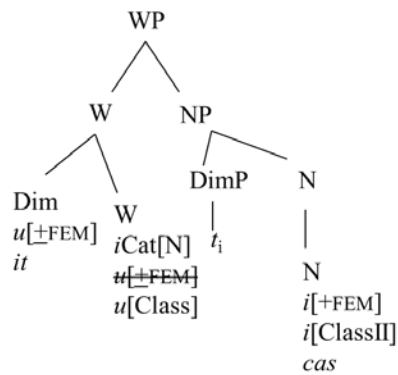
Note that the former assumes the same structure of NP, while the latter incorporates a \sqrt{P} .

(15) Pre-feature checking structure assumed by Eguren (2001)



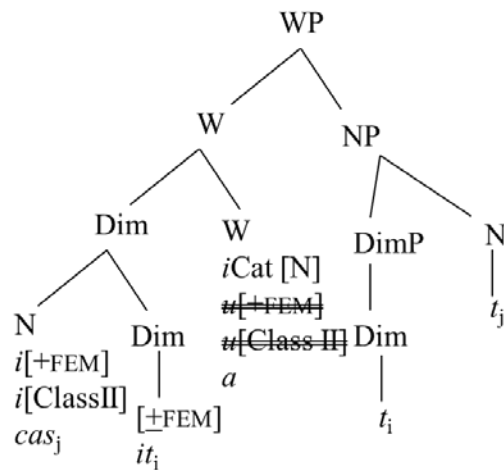
Under a feature checking system in Minimalism (Chomsky, 1995), the evaluative becomes a suffix due to the gender checking process in which the uninterpretable gender feature of the word marker attracts the evaluative adjunct. This process results in the deletion of the gender feature on the word marker but not its erasure, as demonstrated in (16).

(16) Deletion of gender feature on word marker



The word marker can thus also attract the root, which results in the erasure of the gender feature and the word marker feature on the word marker.

(17) Erasure of the gender and class/word marker features on W³⁶



This results in the linearization of the evaluative as a suffix after the root but before the word marker.

The correct order of morphemes is achieved. However, this analysis assumes that there is a separate projection for the word marker. It was explained in section 3.2.2 that projections that consist of only uninterpretable features (e.g., word marker phrases) should be avoided, as they would only be necessary for theory-internal reasons (cf. Chomsky, 1995).³⁷ The analysis I present will be able to arrive at the correct order of morphemes without relying on such a projection. It will also be able to account for the presence of word class markers that differ from those of the base noun (and in fact predict when this will occur). It does so while maintaining the assumption that roots are devoid of category-specific information and that there is no word marker projection in the syntactic structure.

³⁶ The strikethrough in these structures corresponds with erasure of features.

³⁷ Although Eguren (2001) assumes that the word marker phrase contains an interpretable categorial feature, this feature has no semantic interpretation and should therefore not be assumed to be interpretable (following the explanation given in 3.2.1).

4.5.2. *Fábregas (2010)*

A motivating factor for Fábregas' (2010) analysis is also morpheme order, specifically the fact that the diminutive in Spanish is a suffix rather than a prefix. Referencing Wiltschko and Steriopolo (2007), he draws the distinction between Spanish and German, demonstrating that Spanish patterns more closely with Halkomelem (as described by Wiltschko and Steriopolo, 2007) in that diminutives do not alter the syntactic (category) or semantic (count/mass) properties of the elements that they modify.

However, Fábregas (2010) comes to a different conclusion from Wiltschko and Steriopolo (2007). Instead of assuming that diminutives are either adjunctions to a categorizing head or the categorizing head itself, it argues that diminutives are either adjunctions to a ClassP or the heads of a ClassP. This ClassP is a classifier phrase that is the location of desinence in Spanish (see Picallo (2008) for other ClassP systems). The distinction between those languages in which the diminutives are heads of the ClassP and those in which they are adjunctions to the ClassP boils down to the ability of the base element and the diminutive to form a morphological word without phrasal movement. Spanish diminutives, Fábregas (2010) argues, are adjunctions to a ClassP and not the head of a ClassP due to their inability to form a morphological word without phrasal movement, in contrast to German diminutives, which are the head of a ClassP.³⁸

Once again, this analysis relies on a projection that has been demonstrated to be undesirable for theory-internal reasons and unmotivated empirically (cf. section 3.4.1). I will demonstrate in the proceeding section that such a projection is not necessary in order to account for the behavior of Spanish diminutives with regard to Steriopolo's (2008) diagnostics (which were the basis for the analyses provided by Eguren, 2001 and Fábregas, 2010, though not necessarily referenced outright as such). Furthermore, my analysis will be able to draw a distinction between the *-ito/a* diminutives that obligatorily maintain their word class and the *-cito/a* diminutives that obligatorily change their word

³⁸ I return to the phonological evidence that Fábregas (2010) presents in section 4.7.4.4.

class. An added benefit is its ability to explain complex patterns of allomorphy, which will be presented in section 4.9.

4.6. A novel, multiple-location analysis of Spanish diminutives

In section 4.4, we saw that Spanish diminutives appear to consistently pattern with adjoined diminutives, following Steriopolo's (2008) diagnostics I and II. But, the response for diagnostic III was less straightforward — so much so that I mentioned it provided evidence for intralanguage variation for diminutives in Spanish.

In this section, I present an analysis for diminutives in Spanish that assumes that diminutives head a separate projection (i.e., separate from *nP*; in this case *DimP*) in instances in which the word class is altered from the base noun to the diminutive (i.e., with the *-cito/a* diminutive). It also assumes, however, that when the word class does remain unchanged from the base noun to the diminutive, the diminutive is an adjunct on a nominalizing head (i.e., with the *-ito/a* diminutive). This analysis is motivated by and possible as a result of the assumption that word class is inserted postsyntactically on *n* but also on other projections within the nominal spine. The postsyntactic insertion of word class on *n* allows us to account for instances in which the diminutive form retains the word class marker from the base noun (which can be conditioned by the root, since it is within the same phase). Postsyntactic insertion of word class on *DimP* accounts for instances in which word class patterns with gender and cannot be conditioned by the root (particularly assuming that *DimP* is cyclic,³⁹ as we will see).

The crucial data to draw the distinction between diminutives formed via adjunction to *n* and those that are formed by merging a separate projection above *nP* is the data for feminine, Class I diminutives. I present the patterns again here in (18) for convenience.

³⁹ I use the terms “cyclic” and “phase head” interchangeably throughout. Both reference the head of a projection that introduces a new phase into the syntactic structure.

(18) Feminine Class I diminutivization patterns for *-cito* and *-ito*

(a)	(i)	mano	hand-sg.f.	Class I	manito	hand-dim.sg.f.	Class I
	(ii)	foto	photo-sg.f.	Class I	fotito	photo-dim.sg.f.	Class I
(b)	(i)	mano	hand-sg.f.	Class I	manecita	hand-dim.sg.f.	Class II
	(ii)	foto	photo-sg.f.	Class I	fotecita	photo-dim.sg.f.	Class II

We see in this data that the diminutive maintains the word class of the base noun when it is formed with *-ito/a* (18a), but not when it is formed with *-cito/a* (18b).⁴⁰ I argue that this pattern is the result of differences in structure between the two types of diminutives. The former is one in which the root is able to condition the realization of the word class marker (as demonstrated for undiminutivized nouns in section 3.4.2.5). The latter, on the other hand, is a structure in which the root cannot affect the realization of word class, causing the word class marker to be determined by gender and not the identity of the root. Recall the conditions for Class feature insertion provided in section 3.4.2.5 and repeated here in (19) for convenience.

(19) Theme node insertion process

- (a) (i) Insert {Th}[CLASS V] in the context of $\sqrt{\text{VIRU}}$, $\sqrt{\text{SÓCRATE}}$, $\sqrt{\text{ANÁLISI...}}$; Num
- (ii) Insert {Th}[CLASS IV] in the context of $\sqrt{\text{FLOR}}$, $\sqrt{\text{PAPEL}}$, $\sqrt{\text{CHEF}}$, $\sqrt{\text{CLUB...}}$; Num
- (iii) Insert {Th}[CLASS III] in the context of $\sqrt{\text{MADR}}$, $\sqrt{\text{PADR}}$, $\sqrt{\text{CLAS}}$, $\sqrt{\text{JEF...}}$; Num
- (iv) Insert {Th}[CLASS II] in the context of $\sqrt{\text{TEM}}$, $\sqrt{\text{DIAGRAM}}$, $\sqrt{\text{POET...}}$; Num
- (v) Insert {Th}[CLASS I] in the context of $\sqrt{\text{MAN}}$, $\sqrt{\text{LIBID...}}$; Num
- (b) Insert {Th}[CLASS II] in the context of $n[+\text{FEM}]$; Num
- (c) Insert {Th}[CLASS I] in the context of Num.

The two different conditions being described here are (a)(v) and (b). I assume that when *mano* and *foto* are diminutivized with the *-ito/a* morpheme, (a)(v) applies, but when they are diminutivized with

⁴⁰ Another example that demonstrates this pattern is the ambiguously gendered *radio* (radio-sg.m./f.). The base noun commonly appears with both masculine and feminine agreement. The diminutive forms are *radiecito* (m.) and *radiecita* (f.), which supports the assumption that word class marker patterns with gender in diminutives formed with *-cito/a*. Once again, I assume that the /e/ that surfaces here is epenthetic.

-cito/a, (b) applies. The question is why? Why is it that the root conditions the realization of the word class marker in *manito* and *foto* but not in *manecita* and *fotecita*?⁴¹

My response is that there is a difference in the structures responsible for these two different diminutive suffixes resulting in a scenario in which the root is able to condition Theme node insertion for *-ito/a* diminutives and not for *-cito/a* diminutives. I argue that this difference is caused by constraints on locality. In the case of *manito* and *foto*, the root and word class marker are close enough that the root can condition the realization of the word class marker. But, the root and word class marker are not local enough in *manecita* and *fotecita*, resulting in the fallback to condition (b), in which the word class marker is determined by the gender of the base noun. I demonstrate over the course of the chapter that these locality restrictions are the result of phase boundaries (i.e., that word class and the diminutive must be in the same phase for the *-ito/a* diminutives but in different phases for the *-cito/a* diminutives).⁴²

If we follow Oltra-Massuet and Arregi (2005), Kramer (2015), and the analysis presented in Chapter 3 in assuming that word class is inserted postsyntactically on *n*, then the *-ito/a* diminutive morpheme and its word class marker must be in the same phase as *n*. In contrast, the *-cito/a* diminutive morpheme and its word class marker would have to be in a higher phase than *n*. I assume that the *-ito/a* diminutives, in which word class is retained (even if it does not correspond with the canonical gender marking for nouns of that gender), is an instance of adjunction of the diminutive morpheme, following Steriopolo's (2008) diagnostics. The *-cito/a* diminutive, on the other hand, is an instance in which the diminutive is a syntactic head, again following Steriopolo (2008) and Wiltschko and Steriopolo (2007). However, some questions remain. (1) Where does the first type of diminutive adjoin? (2) Which specific

⁴¹ The root also conditions the realization of the word class marker in masculine Class II nouns, such as *problema* ('problem') and *tema* ('topic'). However, I did not find instances of diminutivized forms of these nouns with the *-cito/a* suffix.

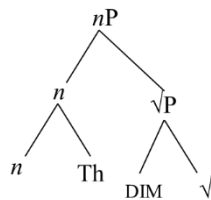
⁴² I also demonstrate that if we assume that gender is on *n*, the gender is still available to impact the gender of a diminutive formed above *nP*.

projection houses the second type of diminutive? I address each of these in turn in the sections that follow, in addition to elaborating further on each of the two diminutivizing structures.

4.6.1. Diminutives formed via adjunction to *n*

Wiltschko and Steriopo (2007) and Eguren (2001) argue that diminutives are root-adjoined when they do not change the properties of the element that they diminutivize.⁴³ The structure for Spanish diminutives that retain the word class from their base noun would then be that illustrated in (20).

(20) Root-adjoined diminutives



This structure, however, is not without its problems. Diminutives in Spanish are not freely created with all categories of words. They are far more limited in their co-occurrence with verbs (cf. section 4.4.1) and adverbs (cf. Lang, 1990; Eguren, 2000) than with adjectives and nouns. Since roots are assumed to lack category-specific information and category itself, in theory, any root should be able to be diminutivized if diminutives are adjuncts on roots. One clear method of testing this possibility is to look at the diminutive forms of a root that forms both a noun and a verb. I use the root $\sqrt{\text{ANCL}}$ to investigate.

This root forms both a noun, *ancla* ('anchor'), and a verb, *anclar* ('to anchor'). Much as in English, the verb does not entail the existence of the noun; one can anchor a boat with a rock or anchor a tent with some tent spikes, as in (21).

⁴³ One difference is that Wiltschko and Steriopo (2007) assume that the adjoined diminutive is a head, while Eguren (2001) assumes it is a full DimP projection.

(21) Both *ancla* and *anclar* are root-derived

- (a) *El capitán ancló el barco con una piedra grande.*
'The captain anchored the boat with a large stone.'
- (b) *Los acampantes anclaron la tienda antes de la tormenta.*
'The campers anchored the tent before the storm.'

As Kiparsky (1982) has pointed out, in instances such as these (i.e., ones in which the action of the verb does not entail the presence of the entity denoted by the noun), homophonous nouns and verbs are formed by the same root without an intermediate process of categorization. In other words, the verb *anclar* is root-derived, just as the noun *ancla* is. This pair contrasts with one like *tape* and *to tape* in which the action of taping can only be done with tape (i.e., not with some other adhesive material), thereby entailing the presence of tape for completion of the action denoted by the verb. In this case, the verb is not root-derived, but rather noun-derived.

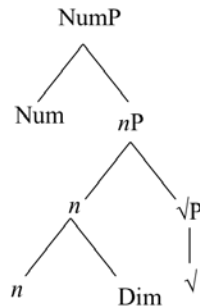
The possibility of diminutivizing *ancla* but not *anclar*, as demonstrated in (22), suggests that some category-specific information must be available at the point of the derivation in which diminutivization occurs.

(22) The same root cannot be diminutivized in all categories

- | | | | | |
|-----|---------------|------------------|---------------------|-------------------|
| (a) | <i>ancla</i> | anchor-dim.sg.f. | <i>anclita</i> | anchor-dim.sg.f. |
| (b) | <i>anclar</i> | to anchor-inf. | * <i>anclitar</i> , | anchor-dim.inf., |
| | | | * <i>anclitando</i> | anchor-dim.gerund |

I argue, therefore, that Spanish diminutives in *-ito/-a* are not root-adjoined, but rather are adjuncts on the first categorizing head, as depicted in (23). For the data under investigation in this chapter, that categorizing head is *n*.

(23) Diminutive formed via adjunction to *n* (presyntactic structure)



This structure, in which the diminutive morpheme is merged as an adjunct on *n*, is one in which the diminutive morpheme and *n* are in the same phase. The merging of the diminutive any higher than *n* would place it inside a different phase from the root, assuming that categorizing heads are phase heads (cf. Marantz, 2001, 2007). This is significant as it can impact the ability for a root to condition the allomorphy of the word class marker that appears on the diminutive, as demonstrated for nondiminutivized forms in ((39) in section 3.4.2.5, whose relevant parts are repeated here as (24)).

(24) Novel Theme node insertion operation

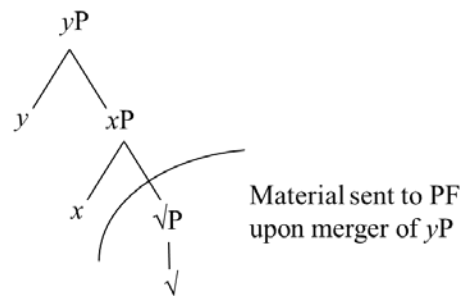
- (a) Insert {Th}[CLASS V] in the context of $\sqrt{\text{VIRU}}$, $\sqrt{\text{SÓCRATE}}$, $\sqrt{\text{ANÁLISI...}}$; Num
- (b) Insert {Th}[CLASS IV] in the context of $\sqrt{\text{FLOR}}$, $\sqrt{\text{PAPEL}}$, $\sqrt{\text{CHEF}}$, $\sqrt{\text{CLUB...}}$; Num
- (c) Insert {Th}[CLASS III] in the context of $\sqrt{\text{MADR}}$, $\sqrt{\text{PADR}}$, $\sqrt{\text{CLAS}}$, $\sqrt{\text{JEF...}}$; Num
- (d) Insert {Th}[CLASS II] in the context of $\sqrt{\text{TEM}}$, $\sqrt{\text{DIAGRAM}}$, $\sqrt{\text{POET...}}$; Num
- (e) Insert {Th}[CLASS I] in the context of $\sqrt{\text{MAN}}$, $\sqrt{\text{LIBID...}}$; Num

We need to make sure that the root can impact the realization of the word class marker because the word class marker on the *-ito/a* diminutive does not pattern with gender (except for in Class III and IV nouns, to be addressed momentarily). We observed this pattern for the feminine, /o/-final *manito* and *fofito*.

Embick (2010) describes the conditions for which roots can condition the allomorphy of morphemes higher up in the derivation. Embick explains that roots can condition allomorphy until they

have been sent to SpellOut and assumes that the section of the derivation in which the root appears is sent to SpellOut once a cyclic head is merged above the categorizing cyclic head. At this moment, the complement of the categorizing head is sent to SpellOut and is no longer available to influence the realization of any material above the cyclic head unless the cyclic head is null. This is demonstrated in (25), where x and y are cyclic heads.

(25) Process by which parts of the derivation are sent to Spell Out



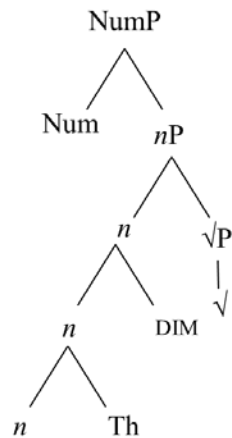
The result of this assumption is that the root should not be able to condition the allomorphy of any material above the cyclic head x once a further cyclic head is merged. The implication here is that no cyclic head can be merged between the diminutive morpheme and n ; otherwise, the root would not be able to condition the realization of the word class marker. As I have already demonstrated, it makes sense to assume that the diminutive here is an adjunct since it does not alter any of the properties of the noun described in Steriopo's (2008) diagnostics. A further benefit of this analysis is that the diminutive is within the same phase as the root and the word class marker, allowing the word class marker to be conditioned by the root.

This leaves us with at least two different possible structures for the location of diminutivization, as illustrated below in (26). One possibility is that the diminutive is the higher adjunct on n , while the

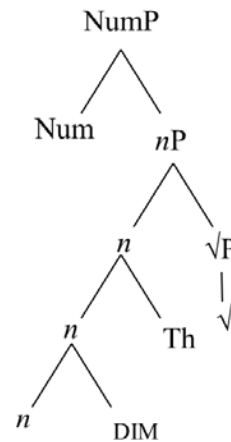
second is that the Theme node is the higher adjunct on *n*.⁴⁴ The question is: which of these two structures is most plausible?

(26) Two possible structures for the adjoined diminutive (post-syntactic structures)

(a)



(b)



The original inclination might be to accept the structure in (26a). It makes intuitive sense that the diminutive would adjoin in the syntax and then the word class marker would be inserted postsyntactically as the lowest adjunct on *n*. However, we do not have insight into the exact language-specific requirements/processes that take place at PF and no reason to rule out (26b) *prima facie*. At this point in time, there is no reason to prefer one over the other, as both are plausible under the current theory, and no empirical data rules out either option. I will assume the structure in (26a).

Now that I have determined the location of the adjunction of the diminutive and its position relative to the inserted Theme (word class marker) node, I illustrate my analysis with some sample Class I and Class II derivations. Data for these sample derivations is provided in (27). Recall that diminutives that

⁴⁴ Another possibility is that the diminutive heads its own projection and is not an adjunct at all. Such a projection would necessarily be noncyclic and would likely need to house its own word class marker in order for a word class marker to surface on the diminutivized form. This is possible, but does not seem as likely due to the fact that these *-ito/a* type diminutives can be iterated, as will be demonstrated below.

retain their word class marker when diminutivized with *-ito/a* are those that are formed from Class I and Class II base nouns.

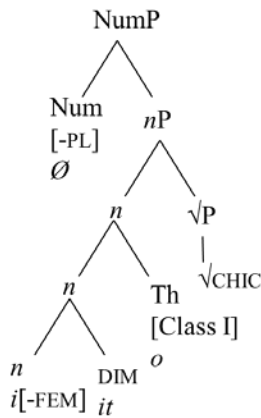
(27) Class I and Class II diminutives formed via adjunction retain word class from base noun

- | | | | | | | |
|-----|----|----------|---------------|----|------------|---------------|
| (a) | el | chico | boy-sg.m. | el | chiquito | boy-sg.m. |
| (b) | la | niña | girl-sg.f. | la | niñita | girl-sg.f. |
| (c) | la | mano | hand-sg.f. | la | manito | hand-sg.f. |
| (d) | el | problema | problem-sg.m. | el | problemita | problem-sg.m. |

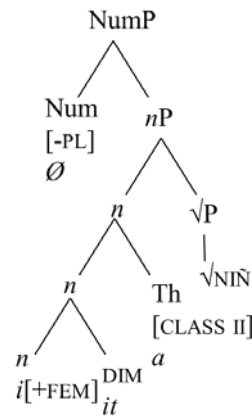
The structure for these nouns is given in (28a-d).

(28) Diminutivization of Class I and Class II nouns by adjunction⁴⁵

(a)

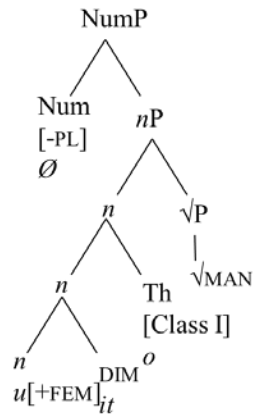


(b)

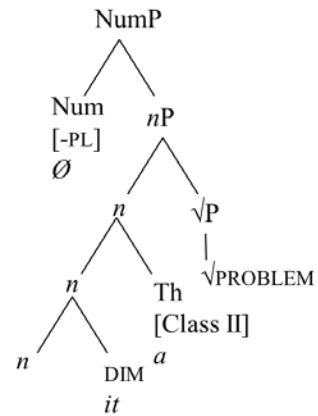


⁴⁵ I assume that nouns that belong to Classes I and II and end in a diphthong are treated in the same way (e.g., *armario* and *Rosario* for ‘wardrobe’ and ‘rosary,’ respectively). These nouns diminutivize as *armarito* and *rosarito* (Campos, personal communication). I assume that in this case, the /i/ from the diminutive suffix neutralizes the /j/ from the word-final diphthong in the base noun, resulting in the simplified *armarito* and *rosarito*, instead of *armariito* and *rosariito* (or even /armarjito/ and /rosarjito/). There are some forms, however, such as *radio* (radio-sg.m./f.; diminutivized as *radiecito* or *radiecita*) that seem to occur more frequently with the *-cito/a* diminutive. I address these in section 4.7.

(c)



(d)



First, the roots are merged into the derivation. They are then categorized by the nominalizing head that takes them as its complement. This nominalizing head has two adjuncts. The first adjunct is the diminutive, which is merged in the syntactic component. The second adjunct is the Theme node, which houses the Class feature, which is inserted and expounded postsyntactically.

As mentioned, the crucial data is that given in (27c-d) and (28c-d). These are nouns in which the word class marker of the base noun is retained in the diminutivized form even though it does not correspond with the word class marker that is typically associated with that noun's gender (i.e., /o/ for masculine and /a/ for feminine). This follows easily from the conditions for the insertion of Class features on a Theme node, which were presented in (39) in section 3.4.2.5 and are repeated here in (29).

(29) Conditions on realization of word class marker

- (a) (i) Insert {Th}[CLASS V] in the context of $\sqrt{\text{VIRU}}$, $\sqrt{\text{SÓCRATE}}$, $\sqrt{\text{ANÁLISI...}}$; Num
- (ii) Insert {Th}[CLASS IV] in the context of $\sqrt{\text{FLOR}}$, $\sqrt{\text{PAPEL}}$, $\sqrt{\text{CHEF}}$, $\sqrt{\text{CLUB...}}$; Num
- (iii) Insert {Th}[CLASS III] in the context of $\sqrt{\text{MADR}}$, $\sqrt{\text{PADR}}$, $\sqrt{\text{CLAS}}$, $\sqrt{\text{JEF...}}$; Num
- (iv) Insert {Th}[CLASS II] in the context of $\sqrt{\text{TEM}}$, $\sqrt{\text{DIAGRAM}}$, $\sqrt{\text{POET...}}$; Num
- (v) Insert {Th}[CLASS I] in the context of $\sqrt{\text{MAN}}$, $\sqrt{\text{LIBID...}}$; Num
- (b) Insert {Th}[CLASS II] in the context of $n[+\text{FEM}]$; Num
- (c) Insert {Th}[CLASS I] in the context of Num

The noun *chico* falls into Class I as the elsewhere case, resulting in the insertion of the [CLASS I] feature on the Theme node, which is realized at PF as /o/ (following the Vocabulary Entry given in section 3.4.2.5). The noun *niña* falls into Class II due to its having an interpretable feminine feature. This Theme node with the [CLASS II] feature is then realized as /a/.

The Theme node inserted for *mano* and *problema* also follows from the inventory provided in (29). Because the root is still within the same phase as the nominalizing head (and consequently, the Theme node), it is able to condition the insertion of the Theme node, its Class feature and the subsequent realization. Following condition (a)(v) and (a)(iv), Theme nodes with the [CLASS I] and [CLASS II] features are inserted for *problema* and *mano*, respectively. This results in the insertion of /o/ for *mano* and /a/ for *problema*.⁴⁶

As we can see, the insertion of Theme nodes and Class features and their subsequent realization follows just as described for undiminutivized nouns in Chapter 3. No additional machinery or stipulation is necessary. Word class is maintained from the base noun to the diminutivized form because there is only

⁴⁶ One might wonder how some speakers are able to produce the forms *manita* and *manitas* for hand-dim.sg.f. and hand-dim.pl.f., respectively. We could assume that for them, the rule to insert the [CLASS II] Theme node for feminine nouns is listed above the one that inserts the [CLASS I] Theme node for specific roots, including $\sqrt{\text{MAN}}$. This does not seem likely, however, considering that the [CLASS I] word class marker is inserted in the nondiminutivized context. This leads me to wonder whether the form *manita* is actually lexicalized for these speakers, meaning that they would have the root $\sqrt{\text{MANIT}}$ as well as the root $\sqrt{\text{MAN}}$; the former receiving the [CLASS II] word class marker and the latter the [CLASS I] one. Unfortunately, none of the speakers that I encountered in my research produced this form, so I was unable to try to test this question further. I state this here as a possibility.

one word class marker position, whose insertion and realization follows that of word class markers for undiminutivized nouns.

It has not yet been stipulated, however, what exactly the Vocabulary Items for these diminutives will look like or how the root morphophonologically combines with the elements in *n*. I will tie up these loose ends before providing an interim summary below.

4.6.1.1. Vocabulary Insertion for the *-ito/a* diminutive

In Chapter 2 we saw that nominals in Spanish that are root-derived typically do not have any morphology other than the root itself and a word class marker. For instance, the nouns *mano* and *problema* are formed from the roots $\sqrt{\text{MAN}}$ and $\sqrt{\text{PROBLEM}}$ (though the roots themselves would be differentiated in the syntax by indices and not phonological material, which is inserted postsyntactically). The only other overt morphology that is added to these nouns are their word class markers (i.e., /o/ and /a/, respectively), as the nominalizing head itself is typically null. We can then assume that the exponence of the diminutive that is formed via adjunction is /it/, with /o/ realizing the word marker.

The conditions for the insertion at this morpheme have yet to be determined. We know that this phonological sequence appears when the diminutive is an adjunct (in contrast with *-cito/a*). A possible Vocabulary Item might then be one in which the diminutive feature is spelled out as *-ito/a* when adjacent to *n*, such as that given in (30).

(30) Vocabulary Item for the *-ito/a* diminutive (to be revised)

[DIM] ↔ -it / __ *n*

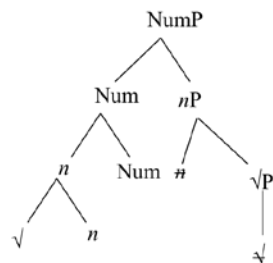
This Vocabulary Item, however, will need to be revised once we have investigated the conditions that differentiate the *-ito/a* allomorph from the *-cito/a* allomorph. We will also have to alter it in light of

the data demonstrating the iterative quality of this diminutive in section 4.7.4.3 and the presence of other similar diminutive allomorphs in Chapter 5. But, for now, this Vocabulary Item accounts for the properties of the adjoined diminutive demonstrated thus far (namely that it is adjoined to *n* and therefore in the same phase as the root).

4.6.1.2. Morphophonological combination of the root and the elements in *n*

After presenting the analysis for the postsyntactic insertion of word class markers on *n* in Chapter 3, I addressed how the root+word class marker combination was realized morphophonologically. I presented two options: head movement and Lowering (cf. Embick & Noyer, 2001), the figures for which are repeated here in (31).⁴⁷

(31) Head movement in nominals in Spanish⁴⁸



In (31) the head X will lower to the head (Y) of its complement YP, which in this case would mean that Num would Lower to *n* and then this complex head would Lower again to the head of \sqrt{P} .

⁴⁷ A question that one might raise is whether or not the locality restrictions that drive this analysis still hold within a complex head containing the root, *n*, and Num. Embick (2010) suggests that the answer to this question is “yes” (p. 18). Since *n* and Num are still within the same phase as the root, they can be subject to root-conditioned allomorphy.

⁴⁸ As this process is assumed to take place in the syntax, the Th node has not yet been inserted.

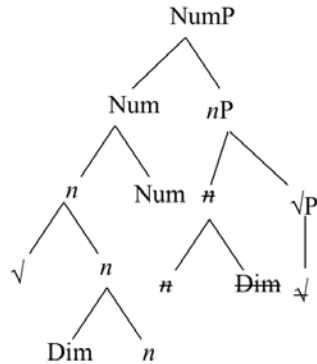
(32) Lowering of X^0 to Y^0

$$[_{XP} X^0 \dots [_{YP} \dots Y^0 \dots]] \rightarrow [_{XP} \dots [_{YP} \dots [_{Y^0} Y^0 + X^0] \dots]]$$

The complication that arises for Lowering with the diminutive is that the diminutive does not take nP as its complement; rather the diminutivizing head is an adjunct on nP . Lowering specifically involves the lowering of a head to its complement, so it seems as though this movement cannot be responsible for the morphophonological combination of the diminutive morpheme, root, and word class marker.

The structure that includes the diminutive morpheme is provided here in (33).

(33) Head movement with the diminutive



Head movement might, then, be our only option. Head movement was proposed by Chomsky (1986) as a core syntactic operation by which movement from X^0 to Y^0 is possible but movement from X^0 to YP is not. It is not ruled out *prima facie* that head movement could occur from an adjoined position to a head position. This is, therefore, one possibility. The other is to assume that head movement does not need to obey the syntactic constraints described above because it does not occur in the syntax.

The former possibility does not violate the major tenet of head movement, which is that movement must occur from a head to a head and not from a head to a phrase or from a phrase to a head. This might not be so farfetched considering the combined head created via head movement involves adjunction itself (cf. Roberts, 2001). It does not seem impossible to assume that head movement could combine this head formed via adjunction with an adjoined head further up in the structure.⁴⁹

Regarding the latter possibility, Chomsky (2001) presents several arguments, resulting in the conclusion that “a substantial core of head-raising processes, excluding incorporation in the sense of Baker (1988), may fall within the phonological component” (p. 37). It is possible, therefore, that the head movement described as taking place in the syntactic component actually takes place at PF. To my knowledge, there are no empirical motivations for excluding the movement from a head to an adjoining morpheme. In fact, I do not see another way in which a clearly adjoined piece of material, (i.e., any dissociated node that is adjoined at PF), would combine morphophonologically with the head to which it adjoins.

An investigation into the interaction of syntactic head movement and this possible PF head movement (or whether the former even exists — cf. Chomsky, 2001) is beyond the scope of this work. For the purposes of the discussion here, it seems that either solution proposed here is possible. At this point, it does not seem necessary to determine which of these two possibilities occurs for diminutive morphemes, so I will not argue for a particular solution. Regardless, linearization would then proceed as described in section 3.4.3.1.

⁴⁹ I would assume that there would be a locality restriction on this type of head movement if it were possible. I do not delve into this topic here and reserve it for future research. But, it seems plausible that the immediate adjacent adjoined node would not violate such a locality restriction.

4.6.2. *Interim summary*

Before moving on to some trickier data and also other data that will further support this analysis of *-ito/a* diminutives, I provide an interim summary. We saw that diminutives formed via *-ito/a* are those that will retain their word class marker when diminutivizing Class I and Class II nouns. This diminutive morpheme is merged as an adjunct on the nominalizing head and not the root. I argued against the latter due to the restrictions that appear on categorizing heads with which diminutives are able to combine (different from the analyses presented by Eguren, 2001 and Wiltschko & Steriopolo, 2007 in which diminutives are root-adjoined). The rest of the derivation proceeds as it does for undiminutivized nouns. The Theme node position is then inserted postsyntactically on *n*. The added complication here concerns the morphophonological combination of the root+*n* head and the diminutivizing morpheme. I argued that this likely occurs via head movement either in the syntax or at PF, as described above.

4.6.3. *Some seemingly complicated data: false plurals and Class III nouns with the adjoined diminutive*

At this point, there are two sets of data that require further explanation with regard to the adjoined diminutive. The first are “false plurals,” or nouns whose singular and plural forms are homophonous, and other nominals that appear to retain word-final consonants in the diminutive form; the second are Class III nouns that appear to be diminutivized with *-ito/a* and not *-cito/a*. Both seem to pose a challenge to the analysis of the adjoined diminutive that is posited here. The latter are particularly striking since they are unable to retain their word class into the diminutive form, as all *-(c)ito/a* diminutives end in either /o/ or /a/. I address each in turn and demonstrate how this analysis is able to account for them once some further clarification is made.

4.6.3.1. False plurals and similar consonant-final nouns

I mentioned in Chapter 2 that nouns ending in /os/ or /as/ in the singular (e.g., *Carlos* ('Carlos'), *atlas* ('atlas'), *Bruselas* ('Brussels')) should be treated as Class I and II nouns (respectively) that have a special Number marking that is an /s/ for both the singular and plural forms. As I pointed out, these are diminutivized with retention of the word final vowel and consonant (i.e., /s/) outside of the diminutive morpheme, as in (34).

(34) Special Class I and Class II diminutives

(a)	Carlos	Carlos-sg.m.	Carlitos	Carlos-dim.sg.m.
(b)	atlas	atlas-sg.m.	atlitas	atlas-dim.sg.m.
(c)	Bruselas	Brussels-sg.f.	Bruselitas	Brussels-dim.sg.f.

We see in (34b) in particular that the word class marker is retained inside the special Number marking even when it is opposite what is expected (i.e., /o/ for feminine nouns or /a/ for masculine nouns, such as *atlas*). The analysis presented above demonstrated that nouns without the special Number marking could easily be accounted for when their word class marker did not correspond with that associated with the gender of that noun.

But, this data raises some challenges regarding locality. Assuming that *n* is a phase head and that Number is not, the root should be able to condition the realization of the plural marking. This follows from Embick's (2010) approach to phases in which a categorized root will not be sent to Spell Out until an additional cyclic head is merged into the derivation. But, as alluded to briefly above, the adjoined diminutive can be iterated. Should there be multiple adjunctions, there comes to be more and more material between the root and Number.

A possible solution is to assume that the Number marking on these false plurals is the result of a morphological well-formedness condition and not the result of an interpretable plural feature. This seems plausible considering these nouns can have singular agreement, as demonstrated below in (35).

(35) Singular agreement of false plurals⁵⁰

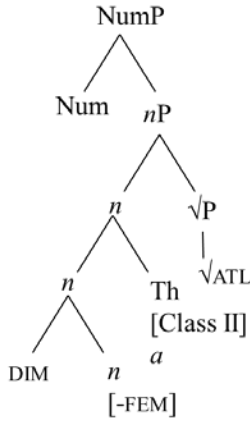
(a)	(i)	el	the-sg.m.	Carlos	Carlos-sg.m.
	(ii)	los	the-pl.m.	Carlos	Carlos-plm.
(b)	(i)	el	the-sg.m.	atlas	atlas-sg.m.
	(ii)	los	the-pl.m.	atlas	atlas-pl.m.
(c)	(i)	una	a-sg.f.	Bruselas	Brussels-sg.f.
	(ii)	dos	two	Bruselas	Brussels-sg.f.

This possibility is not without precedent. Harley (2014b) mentions it as a way of accounting for the complicated plural markings that surface on verbs in Hiaki. Harley's solution is to insert a dissociated node at PF that will provide plural marking for morphemes that are syntactically singular (p. 458). The same could occur in Spanish for these false plurals, as demonstrated below in (36).

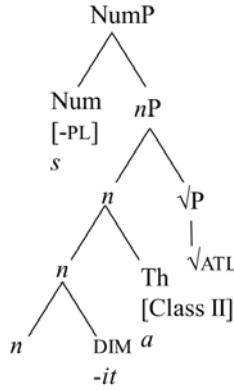
⁵⁰ I have included 'Brussels' here with a cardinal number, as this was the only scenario in which I could envision there being multiple 'Brussels.' We might find this in a sentence like *No necesitamos dos Bruselas en la UE* ('We don't need two Brussels in the EU'). I also note here that some speakers allow the form *atlases* for the plural of *atlas* (Campos, personal communication).

(36) Insertion of dissociated plural node for false plurals⁵¹

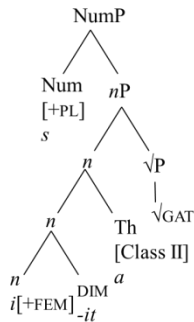
(a) Pre-insertion



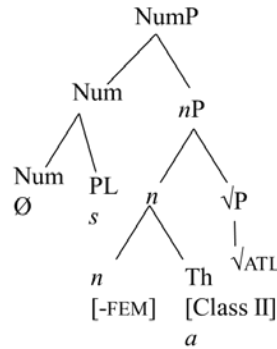
(b) Post-insertion



(c) Regular plural (for comparison)



(d) False plurals in simple nominals



We see in (36) that the nominal itself would not receive any plural marking due to its [-PL] feature. Once the PL node is inserted, however, this noun receives the /s/ that also marks regular plurals. Such a process

⁵¹ I have chosen to call this node PL (for plural) for the sake of clarity, but do not rule out the possibility that it is necessary in other, non-false plural instances. Also, note that these structures contain the full derivation (with the exception of linearization) for the sake of clarity. I do not make any claims here about the ordering of PF operations (e.g., insertion of dissociated material, Vocabulary Insertion, linearization, etc.).

of insertion of the PL node is only necessary for singular forms of these nouns. The plural forms will receive the /s/ on the Num head as usual.⁵²

The PL node is inserted in order to satisfy a morphological well-formedness condition, much like the Theme nodes.⁵³ The result is a syntactically singular noun that has plural markings without the complication of the root conditioning the exponence of the Number morpheme. This process accounts for the plural marking that we see but the singular agreement and avoids some complications that could arise due to the presence of multiple adjuncts between the root and Number. (36c) shows the contrast between a regular plural and one of these false plurals in that no Plural node must be inserted. Rather, the noun receives its plural marking due to the regular plural feature on Number. The same process will apply for simple (non-diminutivized) nominals of this type, as depicted in (36d).

There are some other diminutive forms that seem to retain a word-final consonant from the base noun into the diminutive form. Some examples include *Hectítor* and *azuquítar*, from *Héctor* (Hector-sg.m.) and *azúcar* (sugar-sg.m.), respectively. These nouns seem like the Class I and II false plurals above in that the word-final consonant appears at the end of the diminutive for base nouns ending in /oC/ and /aC/. If these were Class IV nouns (expected due to their ending in a consonant), we would predict that they would diminutivize as *Hectorcito* and *azucarcito*, respectively.

⁵² As I mentioned in Chapter 2, singular, /Vs/-final nouns whose penultimate segments are vowels other than /a/ and /o/ are assumed to be regular Class IV nouns. Thus, a noun like *lunes* (Monday-sg.m.) would be predicted to diminutivize in *lunecito* when singular and *lunecitos* when plural. This is what is attested. I assume that the /θ/ is deleted in this case, due to the fact that it is almost an identical segment to the /s/ (i.e., similar point of articulation, mode of articulation, and sonority). Data from the Peninsular dialect tells us that the /s/ from the base and not the /θ/ from the diminutive is realized, as the form is pronounced /lunesito/ and not /luneθito/, despite the misleading orthography (Hualde, 2013).

⁵³ One might argue that it still seems as though the root is conditioning the realization of Num or that this still represents an instance of root-conditioned allomorphy. The process is similar, but it is not the same. This is root-conditioned insertion of dissociated material. To my knowledge, no specific locality restrictions have been given for such a process as have been for root-conditioned realization of morphemes. As we will see, this marks a difference with the diminutives formed by a separate projection, which I argue is a phase head. In this case, Num would not be able to see the root, so we would predict that false plurals are not possible with the *-cito/a* diminutive. To my knowledge, false plurals do not diminutivize in *-cito/a*.

Perhaps the false plural feature mentioned above is not actually a plural and applies in other contexts as well, such as for these consonant-final nouns. Campos (personal communication) has mentioned that the retention of word-final consonants /l/, /r/, /n/, and /s/ in diminutives is particularly common for first and last names. As these are all licit consonant codas in Spanish, it seems as though there might be some understanding of the /oC/ and /aC/ combinations as word class markers. Or, perhaps there might be a similar process to that of the false plurals that these nouns undergo. However, I am not certain what the inserted node and feature might be. I leave this for future research, but mention these nominals here for completeness.

4.6.3.2. Class III nouns diminutivized with -ito/a

The second remaining set of data concerns Class III nouns that are diminutivized without the presence of the infix *-c-* (i.e., apparently with *-ito/a* and not *-cito/a*). This is unexpected considering these nouns are unable to retain their word class markers since diminutives formed with *-(c)ito/a* end in either /o/ or /a/, (with a few exceptions) and never /e/. A survey of Spanish literature from the 15th century to the 19th century resulted in the very short list of Class III nouns that were diminutivized with *-ito/a* instead of *-cito/a* (data from Nájuez-Fernández, 1973 and González Ollé, 1962).

(37) Class III nouns diminutivized with *-ito/a* diminutive⁵⁴

(a)	bigote	mustache-sg.m.	bigotito	mustache-dim.sg.m.	19 th c.
(b)	billete	ticket-sg.m.	billetito	ticket-dim.sg.m.	19 th c.
(c)	cheque	check-sg.m.	chequito	check-dim.sg.m.	16 th c.
(d)	delante	in front	delantito	in front-dim.	19 th c.
(e)	chocolate	chocolate-sg.m.	chocolatito	chocolate-dim.sg.m.	19 th c.

⁵⁴ It is perhaps worth noting that each of these forms, with the exception of *chequito*, came from a single text (*Fortunata y Jacinta* by Benito Pérez Galdós published in 1887). These forms all consist of a trisyllabic (or longer) base that ends in /t/.

All of the examples of this process in the literature were masculine. However, native speakers of Castilian Spanish deemed the following feminine forms to be acceptable, and some even preferred them to the forms with the *-cito/a* allomorph.

(38) Diminutivized, feminine Class III nouns formed by *-ito/a* diminutivization

(a)	clase	class-sg.f.	clasita	class-dim.sg.f.
(b)	leche	milk-sg.f.	lechita	milk-dim.sg.f.
(c)	costumbre	custom-sg.f.	costumbrita	custom-dim.sg.f.
(d)	comadre	midwife-sg.f.	comadrита	midwife-dim.sg.f.

In these instances and in those from the 15th-19th century literature, the word class marker is determined by gender. Feminine nouns take word-final /a/, while masculine nouns take word-final /o/. How can we account for these nouns while assuming the structure in (26b)? Gender appears to determine word class in all instances; word class is never retained from the base noun, as would be expected following the analysis proposed above.

I argue that these diminutivized nouns are the result of an Impoverishment process by which the Class III feature is deleted in the context of a diminutive. The Impoverishment (cf. Bonet, 1991 and Noyer, 1992) operation deletes a feature on a terminal node in a certain morphological environment. In this case, the Impoverishment occurs due to the presence of the diminutivizing node and is motivated by markedness, following Nevins (2011).

Nevins (2011) argues that morphological markedness can be the impetus for postsyntactic feature deletion (i.e., Impoverishment). He refers to this as “markedness-targeted [I]mpoverishment” (p. 417). The basic idea is that the Class III feature is too marked for the diminutive environment, causing it to be deleted. According to Jakobson’s (1941) definition of markedness, morphological material is marked when it is typologically rare, mastered later in the acquisition process, and more vulnerable to loss as a language changes over time.

Class III is certainly typologically rare. Class III nouns are so rare that Harris (1991a) assumes that nouns falling into this class are a part of the “outer core” of Spanish nouns in contrast to the “inner core,” which consists of /o/-final, masculine nouns and /a/-final, feminine nouns. The statistics uphold this distinction, as 32.69% of nouns end in /o/, and 29.2% end in /a/, while the remaining nouns are divided between those ending in /e/ and those ending in a consonant (Alfonso et al., 2013).

The other two criteria (i.e., difficulty of acquisition and vulnerability to loss) are more difficult to investigate without referring to the interaction between word class markers and gender. Montrul et al. (2012) have demonstrated that it is much more difficult for learners to master the gender assignment of Class III nouns than those in Classes I and II. There is also some evidence to suggest that Class III nouns are less desirable than Class II nouns when they denote females. The term *presidente* (‘president’), for instance, can be replaced with the Class II *presidenta* (‘president’) when it denotes a female and likewise for *jefe* (‘boss’) and *jefa* (‘boss’).⁵⁵ This shows that there has been some reduction of the inventory of feminine Class III nouns in favor of those that end in /a/. There is further evidence that word-final /e/ is more marked than the word class markers that correspond with particular genders. Fábregas (2010) explains that /e/-final nouns (and consonant-final nouns), such as *punte* (‘bridge’) have changed genders over time (in this case from feminine in pre-classic Spanish to masculine in Modern Spanish).

Assuming that Class III is more marked, Impoverishment of this Class III feature is not unexpected. It is perhaps even more expected when we consider that almost all diminutives formed with the diminutive morpheme /it/ belong to either Class I or Class II (exceptions being some /r/-final diminutives, as mentioned above). Classes I and II, on the other hand, are much less marked.⁵⁶ We do not expect for either the Class I or Class II feature to be Impoverished, and this is in fact what we observe.

⁵⁵ This process of hypercharacterization occurred in later Old Spanish as well, as Penny (2002) explains. It is also very common in Judeo-Spanish (Ladino), in which many adjectives in /e/ will take /a/ when they modify feminine nouns, such as *grande* (large-sg.m.)~*granda* (large-sg.f.) (Penny, 2000). This contrasts with the interchangeable /e/ in Modern Standard Spanish (i.e., *grande* for both masculine and feminine nouns).

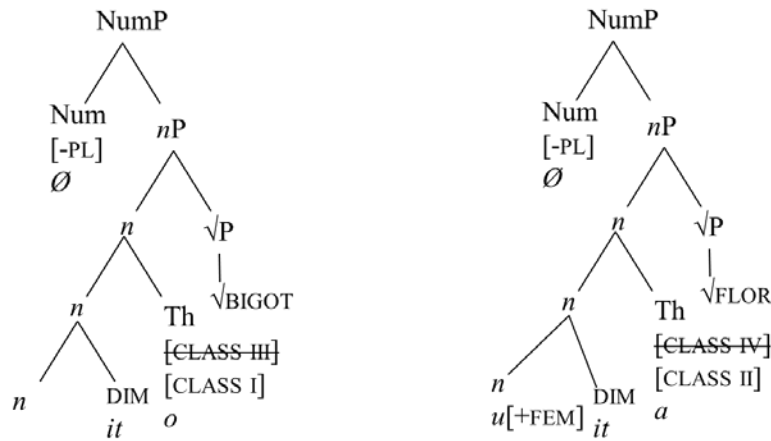
⁵⁶ This includes the special /s/-final Class I and Class II nouns, such as *Carlos* and *atlas*. These are not assumed to be marked, since they are a part of Classes I and II.

Class I and Class II nouns formed by the diminutive suffix /it/ retain their word class feature and its subsequent realization into the diminutive form.

The Impoverishment rule and the process are illustrated in (39).

(39) Impoverishment of non-Class I and II diminutives

[CLASS III], [CLASS IV] → ∅ / ___ DIM⁵⁷



Once the Class III feature is deleted, gender conditions the realization of the Theme node, which itself is not Impoverished. The result is that the next most specific condition will apply. For the feminine *clase* (class-sg.f.), the [+FEM] feature results in the insertion of [CLASS II] and subsequently /a/, while the elsewhere condition leads to the insertion of [CLASS I] and subsequently /o/ for the masculine *bigote* (moustache-sg.m.). (See the conditions for the insertion of [CLASS] features and their realization below in (40)).

⁵⁷ Note that this rule will only occur for the adjoined diminutive and not the diminutive formed with *-cito/a*. A way to distinguish the two might be to include a condition in the rule along the lines of / ___ DIM, *adv/n/adj*. This condition will not be met for diminutives formed in *-cito/a*, as these will be assumed to be formed with a DimP that has its own word class marker. As such, there will be no *n* head adjacent to the DIM head, as will be demonstrated in section 4.7.

(40) Theme node insertion and realization

(a) Insertion of class features

- (i) (1) Insert {Th}[CLASS V] in the context of $\sqrt{\text{VIRU}}$, $\sqrt{\text{SÓCRATE}}$, $\sqrt{\text{ANÁLISI...}}$;
Num
- (2) Insert {Th}[CLASS IV] in the context of $\sqrt{\text{FLOR}}$, $\sqrt{\text{PAPEL}}$, $\sqrt{\text{CHEF}}$,
 $\sqrt{\text{CLUB...}}$; Num
- (3) Insert {Th}[CLASS III] in the context of $\sqrt{\text{MADR}}$, $\sqrt{\text{PADR}}$, $\sqrt{\text{CLAS}}$, $\sqrt{\text{JEF...}}$;
Num
- (4) Insert {Th}[CLASS II] in the context of $\sqrt{\text{TEM}}$, $\sqrt{\text{DIAGRAM}}$, $\sqrt{\text{POET...}}$;
Num
- (5) Insert {Th}[CLASS I] in the context of $\sqrt{\text{MAN}}$, $\sqrt{\text{LIBID...}}$; Num
- (ii) Insert {Th}[CLASS II] in the context of $n[+\text{FEM}]$; Num
- (iii) Insert {Th}[CLASS I] in the context of Num.

(b) Class feature realization

- (i) [CLASS V] \leftrightarrow -s
- (ii) [CLASS IV] \leftrightarrow \emptyset
- (iii) [CLASS III] \leftrightarrow -e
- (iv) [CLASS II] \leftrightarrow -a
- (v) elsewhere \leftrightarrow -o

One issue with this analysis is that typically there is no restriction on the application of a more specific insertion process provided its conditions are met. For instance, we would not be able to prevent the re-insertion of the [CLASS III] feature.

A possible solution would be to assume that no class feature is needed when gender determines the word class marker. However, this would result in two conditions for the insertion of the segment /a/ in the Theme position. The first would be for nouns with the [CLASS II] feature and the second would be for nouns with the [+FEM] feature. At this point, then, it seems as though the best possibility is to assume that once the [CLASS III] feature is impoverished, it cannot be reinserted, resulting in the conditioning of the [CLASS II] feature by gender for feminine nouns and the elsewhere condition (resulting in the insertion of the [CLASS I] feature) for masculine nouns.

The result is that all Class III nouns that are diminutivized by the *-ito/a* diminutive have their word-final vowel determined by gender (/o/ for masculine nouns and /a/ for feminine nouns). We could

also assume that the same process occurs for Class IV nouns,⁵⁸ though *-ito/a* diminutives for these nouns are far less common (with the exception of /l/-final nouns). This would follow from the assumption that Class III is too marked to appear in a diminutive context, as Class IV is even more marked than Class III (e.g., there are much fewer of them, and many of them are xenonyms).⁵⁹ The impossibility of retaining the word class marker of the base noun for Classes III and IV is demonstrated in (41).

(41) Obligatory adjustment of word class marker from base for Classes III and IV

(a)	(i)	costumbre	custom-sg.f.	costumbrita	*costumbrite	custom-dim.sg.f.
	(ii)	clase	class-sg.f.	clasita	*clasite	house-dim.sg.f.
	(iii)	aguacate	avocado-sg.m.	aguacatito	*aguacatite	avocado-dim.sg.m.
(b) ⁶⁰	(i)	flor	flower-sg.f.	florita	*florit	flower-dim.sg.f.
	(ii)	papel	paper-sg.m.	papelito	*papelit	paper-dim.sg.m.
	(iii)	camión	truck-sg.m.	camionito	*camionit	truck-dim.sg.m.
(c)	(i)	café	coffee-sg.m.	cafeíto	*caféit	coffee-dim.sg.m.
	(ii)	papá	dad-sg.m.	papaíto	*papáit	dad-dim.sg.m.
	(iii)	mamá	mom-sg.f.	mamaíta	*mamáit	mom-dim.sg.f.

Motivation for the Impoverishment process described above comes from the historical evolution of the diminutives from Latin into Spanish. As mentioned previously, diminutives in Latin were limited to declensions I and II (whose forms ending in *-ĀS* and *-ŌS* in the accusative case,⁶¹ respectively). Therefore, the Impoverishment rule might have evolved from the need to transform a non-Class I or Class II noun into a Class I or Class II noun in order to diminutivize it. Historical data has shown that diminutives in -

⁵⁸ Recall that [CLASS IV] nouns are provided with a null word class marker due to the condition in (40)(b)(ii) above.

⁵⁹ Class IV nouns are also difficult to acquire with regard to their relationship with gender. Because this is the class to which many borrowed nouns are added, it is more difficult to demonstrate that Class IV is being depleted over time.

⁶⁰ With the exception of *papelito*, the nouns provided in (b) are not accepted by all speakers. Typically, consonant-final nouns are diminutivized with the diminutive that heads a separate projection (the *-cito/a* allomorph).

⁶¹ Note that many Romance scholars agree that the Spanish nominal system, which today demonstrates a distinction for case only for pronouns, evolved from the Latin accusative case. See for instance Menéndez Pidal (1962). But, for another perspective, see Penny (2002).

ito/a first affected nouns from Classes I and II, with *chiquito* (from *chico* - ‘small’) and *pequeñito* (from *pequeño* - ‘small’) being the most common forms in the 15th century (González Ollé, 1962, p. 303). It is noteworthy that there is only one example of a Class III diminutive without the *-cito/a* allomorph (*chequito*) before the 19th century. There was a clear preference for limiting diminutivization with the *-ito/a* diminutive to Classes I and II.⁶²

Even today, there is much interspeaker variation on the possibility of Class III forms with the *-ito/a* diminutive. Loanwords (i.e., those belonging to Class IV) seem to obligatorily be formed with the *-cito/a* diminutive. This makes sense intuitively, as there is no word-final segment (that is not a part of the root) that can be retained. This demonstrates that there is a preference for Class I and II diminutives to be formed with the *-ito/a* diminutive, perhaps due to the tendency to avoid an Impoverishment rule when possible. Without such an Impoverishment rule, speakers are limited to the *-cito/a* diminutive for Classes III-V.⁶³

With regard to Class V, it has not yet been demonstrated which diminutive structure is more common for these nouns. Class V is such a small and eccentric class that it is difficult to generalize. In fact, many native speakers are not even able to form diminutives from some Class V nouns when asked. Some possible forms are included below in (42).

⁶² One might wonder how a form like *Mercedes* (‘Mercedes’), which appears to belong to Class IV, is diminutivized as *Merceditas*. This seems to be an exception to the rule that /es/-final nouns belong to Class IV and have a null word class marker, which prompts them to diminutivize in *-cito/a*, without the /s/ at the end. The case of *Mercedes* could be an exception. It is possible that this is actually a Class III noun that happens to have a false plural /s/, such as those nouns addressed above. The Class III feature would be Impoverished with the adjoined diminutive, resulting in a word class marker that is determined by gender (i.e., /a/). The false plural marking would still be available in this case, if it is assumed to be influenced by the identity of the root, as the root would still be in the same phase. It is also possible that the diminutive of *Sócrates* (Socrates-sg.m.), which is *Socratitos*, could be addressed in the same way (though the word class marker would be /o/ in this case, as it is a masculine noun).

⁶³ Some exceptional diminutivized Class IV nouns are *Héctitor* and *azuquítar*, from *Héctor* (Hector-sg.m.) and *azúcar* (sugar-sg.m.), respectively, as discussed above.

(42) Class V diminutives

- (a) dosis dose-sg.f. → dosisita, dose-dim.sg.f.
dosisitas, *dosisitis, dositas
- (b) virus virus-sg.m. → virusito, virus-dim.sg.m.
*virusitos, ?viritus⁶⁴
- (c) tesis thesis-sg.f. → tesisita, tesitas, tesisitas thesis-dim.sg.f.

The underlined forms in (42) represent those for which there were some speakers who preferred that form over the others given. As we can see, the data is only (relatively) straightforward for *virus*; speakers typically preferred *virusito*. The data is much less conclusive for *dosis* and *tesis*. This leads me to believe that Class V is so marked that speakers are not sure how to diminutivize nouns from this class. For this reason, I will not address it in my analysis, as it is not clear which forms should serve as the basis for the analysis.

4.6.4. Further historical evidence that the root and the diminutive marker are in the same phase

Before I turn to a discussion of the other type of diminutive (i.e., that realized as *-cito/a*) and how its properties fall out from the two-position analysis I assume here, I present one further piece of evidence in support of an adjoined diminutive. Historical data suggests that the original *-ito/a* diminutive must have been low enough in the structure to have been affected by the identity of the root. González Ollé (1962) explains that originally not all diminutives were permitted with each root (or base noun). He states that nouns whose bases ended in /t/ were not permitted to diminutivize via *-ito/a*, taking *-ico/a* instead (p. 306). Likewise, those ending in /k/ would not have been permitted to diminutivize via *-ico/a* (another diminutive suffix) and would have taken *-ito/a* instead.

⁶⁴ Two speakers provided this as a possible form for the diminutive of *virus*. However, the vast majority did not believe that this form existed.

In order for the root to determine the realization of the diminutive suffix, the two must be in a local relationship (i.e., in the same phase). This is the case if we assume that the diminutive was formed via adjunction to the categorizing head. We have further support, therefore, for diminutivization via adjunction for the Spanish suffixes *-ito/a* and *-ico/a*. But, as I explain in the section that follows, we also have evidence for a diminutivization process that takes place higher in the derivation.

The data in (37) above demonstrates that the restriction preventing *-ito/a* from surfacing with /t/-final nouns no longer held in the 19th century (at least for the author cited here) and certainly does not hold any longer. With an extension in productivity of the suffix seems to have come more productivity in terms of the class of noun diminutivized as well. Recall that at this point in time, the word-final /e/ was likely not a word class marker, but rather the result of word-final epenthesis. Perhaps as the diminutive came to be more productive and as word-final /e/ came to be a word class marker, the need for an Impoverishment rule arose in order to supply a word-final vowel to diminutive morphemes. If diminutives are limited to Classes I and II, the only way to achieve this is to make sure that the base noun is also of Class I or II, as there is only one word class marker node inserted in *-ito/a* diminutive constructions.⁶⁵ We see that the same is not the case for the *-cito/a* diminutives.

4.7. Diminutive as a separate projection above *nP*

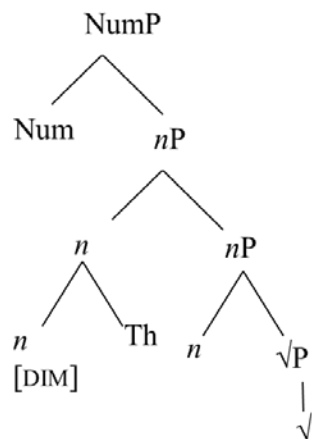
The second type of diminutive, I argue, consists of a separate projection above the categorizing head (*nP* in this case). Recall that this was motivated by the ability, or rather the obligation, for forms created with *-cito/a* to change their word class marker from the base to the diminutivized form. However, the identity of this projection has yet to be determined. The section that follows addresses the implications of two different possible structures.

⁶⁵ One might wonder how diminutives were formed prior to the transition of word-final /e/ from epenthetic segment to word class marker. It is beyond the scope of this dissertation to investigate the historical evolution from epenthetic segment to word class marker, which would be necessary to determine the structures of diminutives from a diachronic perspective.

4.7.1. Diminutive as non-categorizing projection or categorizing projection with diminutive feature

Following Wiltschko and Steriopo (2007), we would assume that the diminutives are a second *nP* above the one that initially categorized the root, as is described for German. This would explain the obligation for the presence of a word class marker outside of the diminutive suffix. The diminutive itself would be just a further nominal projection (*nP*) and could therefore host the insertion of a word class marker, as demonstrated in (43). Recall that the lower *nP* would not host the insertion of a word class marker since it would not be adjacent to Num.

(43) Diminutive as categorizing head (to be rejected)

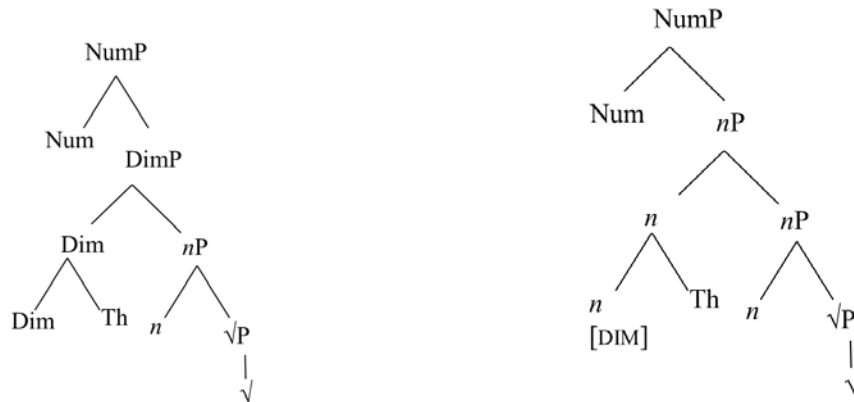


The problem with this assumption is that the diminutive in Spanish can affect nouns, adjectives, and adverbs. If we were to assume that the *-cito/a* diminutive were a second *nP*, we would have to argue that there are diminutive *nP*'s, *aP*'s, and *advP*'s. This marks a contrast between this type of diminutive and the German diminutives that motivated the *nP* diminutive analysis (cf. Wiltschko & Steriopo, 2007). There are thus two options at this point: (1) assume that diminutives are a separate, non-categorizing projection and (2) assume that the diminutive feature can appear on an additional

categorizing projection that is merged above the first categorizing head (in the case of single diminutivization⁶⁶). The two structures are provided below in (44).

(44) Two options for diminutives that are separate projections

(a) Diminutive as non-categorizing projection (b) Diminutive as categorizing projection with diminutive feature



Eguren (2001) opted for the first possibility in assuming that diminutivization is the result of a separate Diminutive Phrase, or DimP. In this analysis, the DimP projection is base-generated to the left of the root as an adjunct. This particular positioning of the diminutive projection was motivated by the order of morphemes within diminutivized forms and assumed the existence of a Word Marker Phrase (see section 3.4.1 for arguments against such a projection).⁶⁷ Of course, I do not follow this assumption, but see the merits of a separate diminutivizing phrase. This phrase is able to combine freely with any type of categorizing head, but with some exceptions, as described below (as opposed to a separate, categorizing diminutive projection).

⁶⁶ For information on stacked diminutives, see section 4.7.4.3.

⁶⁷ I should mention that Eguren (2001) does not incorporate a DM-based approach to word formation and therefore does not include a nominalizing projection above the root projection (notated as NP in his derivation).

It was noted previously that certain adverbs might more freely allow for diminutivization than others (cf. section 4.6.1); in particular, it is not clear that verbs will diminutivize at all. We would, therefore, need to ensure that diminutives are not formed from verbs and certain adverbs. If the diminutive were a separate DimP, we would need to place conditions on its pairing with elements of particular categories or with particular properties. These might take the form of selectional restrictions on DimP.⁶⁸ DimP would select only for categorizing heads with which it is permitted to merge (i.e., nominals, adjectives, some adverbs, and some verbal forms).

This might not seem ideal, but it is more parsimonious than the other option. If the diminutive were a categorizing projection that merged above another categorizing projection, we would need to make sure that there were syntactic selectional restrictions to ensure that diminutivizing adverbial projections would have only *advP* complements, diminutivizing nominal projections would have only *nP* complements, and so on. Nominal diminutivizing heads would also need to match their complements in gender. This latter option (i.e., that the diminutivizing projection is a separate categorizing projection that merges above another categorizing projection that matches it in type) seems less parsimonious than the former (i.e., that there is a diminutivizing projection that is not categorizing). Until empirical data forces a preference of the latter over the former, I will assume the former.

One further issue must be investigated with regard to the realization of the diminutive formed with an independent projection (a DimP). This concerns the difference between this morpheme and the one realized as *-ito/a*. The *-cito/a* allomorph corresponds with the DimP diminutive, while the *-ito/a* diminutive corresponds to the adjoined one, as outlined above. It could be, therefore, that the Vocabulary Items take these positions into account, as there is no difference in meaning or feature between the two. In

⁶⁸ Another possible solution would be licensing conditions, such as those discussed in section 3.2.3.3. These licensing conditions could be either semantic or arbitrary. Either realization or interpretation (respectively) of the diminutive feature would be prevented under certain conditions. I have chosen to assume that the restrictions are the result of syntactic selection and not licensing conditions, in part because it is not clear what a possible relevant syntactico-semantic feature would be in this case (particularly since Lang, 1990 and Eguren, 2001 disagree on the possibility of diminutivization of the same sets of adverbs). It is, however, another viable option.

fact, Arregi and Nevins (2012) argue for exactly that with regard to the realization of clitics in Basque. They state that it is possible for contextual restrictions to impact Vocabulary Insertion when multiple sets of features have different realizations. Assuming, then, that this process is valid, some possible Vocabulary Items for these diminutive suffixes are provided below in (45).

(45) Possible Vocabulary Items for diminutive suffixes

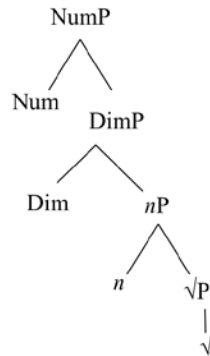
[DIM]	↔	θit	/	XP
[DIM]	↔	it		<i>elsewhere</i>

These Vocabulary Items suggest that the *-cito/a* allomorph is more limited than the *-ito/a* allomorph in terms of the position in which it can appear. This will become even clearer in light of the data that demonstrates the ability for iteration with the *-ito/a* diminutive but not with the *-cito/a* diminutive. As a result, the *-ito/a* allomorph will surface when the adjacent head is an *n*. In contrast, the *-cito/a* allomorph must always appear outside of *nP*. We will see in the next chapter that this Vocabulary Item will need to be adjusted slightly in order to account for stacked evaluatives.

4.7.2. *The location of the word class marker*

Assuming the structure in (44a) in which the diminutive heads a separate DimP requires one further step: we must account for how a word class marker is able to appear outside of a categorizing projection. Previously, it was assumed, following Oltra-Massuet and Arregi (2005) and Kramer (2015), that the word class marker node was inserted on functional and/or categorizing heads (e.g., Tense, *n*, etc.). For nominals, in particular, it was assumed that the word class marker (or Theme) node was inserted on the nominalizing head *n* when this head is adjacent to Num. If the diminutive heads a separate projection (as supported by the data for word class in diminutivized nouns), then *n* is no longer adjacent to Num, as demonstrated in (46).

(46) DimP intervenes between Th and Num



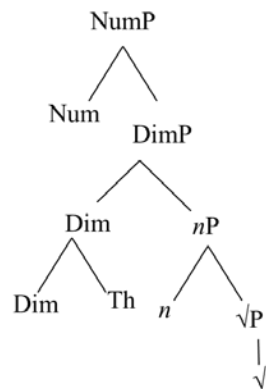
This suggests that there is another position for the insertion of the Theme node. I argue that this is especially important for deriving the observed patterns for feminine, Class I nouns.

The fact that the word class is never maintained when it is not the one that is associated with the gender of the noun suggests that the word class marker node is too far from the root to be conditioned by it. The likely implication is thus that the word class marker is in a different phase from the root. If we continued to assume that a Theme node could only be inserted as an adjunct on *n*, then we would have no reason to assume that the word class marker would not be conditioned by the root. In that case, the word class marker would need to be retained even when it is not the one typically associated with the gender of the noun in question (i.e., /o/ for masculine, /a/ for feminine). A further complication would be that we have been assuming thus far that Theme nodes are only inserted on nominalizing morphemes that are adjacent to Num.

It seems plausible to assume that the diminutivizing projection can house word class, as it is a functional morpheme. Because all diminutives (and augmentatives and other evaluatives) in Spanish obligatorily contain a word class marker, it is not difficult to assume that diminutive (evaluative) projections themselves are able to serve as the location for insertion of a word class node. In fact, Oltra-Massuet (1999) argues that there are multiple Theme nodes projected in verbal forms (one on the

verbalizing head, one on Tense, and one on Mood). The same could be true of nominal projections, whose outer boundary appears to be Number. The only difference is that nominals (typically) have only one word class marker, while verbal forms can have multiple theme vowels.⁶⁹ The figure in (47) illustrates this process whereby a Theme node is inserted for Dim head, and not the nominalizing head.

(47) Word class node inserted as adjunct on Dim and not on *n*



In the remainder of this section, I delve further into the implications of this analysis and how it is predicted by a conception of phases as described above in section 4.6.1. But first, I present an aside on the word-medial /e/ and argue for why this is not evidence of a word-medial word class marker that surfaces between the diminutive morpheme and the word class marker.

⁶⁹ One exception to this comes in the form of Brazilian Portuguese diminutives in *-zinho/a* and V+N compounds in Spanish, both of which will be described in subsequent sections of this chapter.

4.7.3. Aside on word-medial vowels

4.7.3.1. Word-medial /e/

One possible objection to the assumption that word class markers between the root and the diminutive are not exponed concerns word-medial /e/. I argued in section 2.5.1 that word-medial /e/ is still productive. It could be assumed, therefore, that the /e/ that surfaces between the root and the diminutive for many Class III diminutives (such as those in (48a)) is a word class marker.

(48) *-cito/a* diminutives with and without /e/ between the root and the diminutive

- | | | | | | |
|-----|-------|--------------|-----------|------------------|-----------|
| (a) | madre | mother-sg.f. | madrecita | mother-dim.sg.f. | Class III |
| (b) | padre | father-sg.m. | padrecito | father-dim.sg.m. | Class III |

For Class III nouns it could be argued that this is a word class marker that appears between the root and the diminutive suffix. One piece of evidence that suggests that this is not a word class marker is the fact that it can be present for nouns from Classes I, II, and IV (i.e., not just Class III), while those word class markers typically associated with these classes are not permitted, as shown in (49-50).

(49) Word-medial /e/ for diminutives in *-cito/a* formed from nouns from Classes I, II, and IV⁷⁰

- | | | | | | |
|-----|--------|--------------|----------|------------|------------------|
| (a) | mano | hand-sg.f. | Class I | manecita | hand-dim.sg.f. |
| (b) | foto | photo-sg.f. | Class I | fotecita | photo-dim.sg.f. |
| (c) | puerta | door-sg.f. | Class II | puertecita | door-dim.sg.f. |
| (d) | mesa | table-sg.f. | Class II | mesecita | table-dim.sg.f. |
| (e) | flor | flower-sg.f. | Class IV | florecita | flower-dim.sg.f. |
| (f) | papel | paper-sg.m. | Class IV | papelecito | paper-dim.sg.m. |

⁷⁰ Note that many of these forms are not preferred forms, but they are possible and accepted by at least some speakers.

(50) The vowel between the root and diminutive cannot correspond with the class of the base noun for Classes I and II

- | | | | | |
|-----|--------|-------------|-------------|-----------------|
| (a) | mano | hand-sg.f. | *manocita | hand-dim.sg.f. |
| (b) | puerta | door-sg.f. | *puertacita | door-dim.sg.f. |
| (c) | mesa | table-sg.f. | *mesacita | table-dim.sg.f. |
| (d) | radio | radio-sg.f. | *radiocito | radio-dim.sg.f. |

Furthermore, there is not always word-medial /e/ in diminutives of Class IV, as shown in (51).

(51) Word-medial /e/ is not necessary for all Class IV nouns

- | | | | | | |
|-----|---------|--------------|------------------------|------------------|----------|
| (a) | camión | truck-sg.m. | camioncito | truck-dim.sg.m. | Class IV |
| (b) | jugador | player-sg.m. | jugadorcito | player-dim.sg.m. | Class IV |
| (c) | corazón | heart-sg.m. | corazoncito | heart-dim.sg.m. | Class IV |
| (d) | flor | flower-sg.f. | florcita ⁷¹ | flower-dim.sg.f. | Class IV |
| (e) | resumen | résumé-sg.m. | resumencito | résumé-dim.sg.m. | Class IV |
| (f) | examen | test-sg.m. | examencito | test-dim.sg.m. | Class IV |
| (g) | cóndor | condor-sg.m. | condorcito | condor-dim.sg.m. | Class IV |

If we were to assume that the word-medial /e/ that we see in Class I, II, and III nouns and some Class IV nouns were a word class marker, then we would need to explain how and why Classes I, II, and IV come to have a word class marker realized as /e/. These nouns should not have a Class III Theme class node inserted postsyntactically, and should therefore not have their word class marker realized as /e/, assuming that there could be a Theme node inserted when the nominalizing head that hosts it is not adjacent to Num. I have been arguing, however, that Theme nodes are only inserted as an adjunction to the projection that is adjacent to Num.⁷² I argue for a less complicated approach with a basis outside of

⁷¹ Note that *flor* is included twice as some speakers allow both *florequita* and *florcita*, while others only allow *florequita*. I assume that the /e/ in *florequita* and similar diminutives is an epenthetic vowel, as I will explain below.

⁷² Of course, one could argue that there is a Number projection between the nominalizing head and the DimP. The problem with this assumption is that the word class markers for nouns in Classes I, II, and IV are not those that are expected. There is also nothing unique about this derivation (in comparison to a regular nominal derivation) at the point in which Number would be merged so as to be able to condition the realization of this lower word class marker. I will assume that there is no such Number projection between *n*P and DimP.

the diminutive data that allows me to retain the assumption presented thus far that Theme nodes are only adjoined to the projection adjacent to Num.

As has been mentioned previously, /e/ is the least marked (or default) vowel in Spanish (Harris, 1987b; Roca, 1989; Lipski, 2016; and references cited therein). I argue that the /e/ that appears between the root and the *-cito/a* diminutive morpheme is an epenthetic segment used to repair the illicit consonant cluster that forms when some nouns are diminutivized. This explains why it is invariably /e/ no matter the word class of the base noun. Such a segment is not necessary when the root ends in /n/ or /r/ (without a preceding consonant), as both are acceptable codas in Spanish.⁷³ As we have seen, however, there is some interspeaker variation for nouns like *florecita~florcita* (flower-dim.sg.f.) and *barecito~barcito* (bar-dim.sg.m.). I argue that some speakers will include an epenthetic vowel when /r/ is root-final while others do not, due to a difference in their individual grammars for when such a segment is licit according to the phonotactics of that idiolect.

Following this assumption (i.e., that the word-medial /e/ in the instances provided above is epenthetic) allows us to maintain the analysis that word class markers in Spanish nominals are only realized and only inserted on the projection adjacent to Num (similar to, but not exactly the same as in, Oltra-Massuet and Arregi, 2005⁷⁴). In diminutives formed via the merger of a DimP, I assume that this word class marker is an adjunct on the diminutive projection that merges above *nP*. Such an analysis makes a set of predictions about the realization of word class, which is elaborated on in the following sections.

⁷³ The behavior of *manecita*, in which an epenthetic segment is inserted, suggests that perhaps it is preferable for a segment from the root to maintain its status as onset or coda in the resulting diminutive. This seems to also be likely for nouns that end in diphthongs, such as *novio* ('boyfriend,' diminutivized as *noviecito*). The diphthong remains in the nucleus in the diminutivized form. A detailed study of the phonological repair strategies of Spanish necessary to fully understand this pattern, however, is beyond the scope of this dissertation.

⁷⁴ Note that Oltra-Massuet and Arregi (2005) use the phrase 'in the context of,' which I have defined here as a relationship of adjacency. They also assume that theme nodes can be inserted in other positions but that they are only realized "in the context" of Num.

4.7.3.2. Other word-medial vowels (roots that end in accented vowels)

Recall from Chapter 3 that nouns ending in stressed vowels were assumed to belong to Class IV. The stressed, word-final vowels in nouns such as those in (52) below were considered to be a part of the root and not word class markers themselves.

(52) Nouns ending in stressed vowels

sofá	sofa-sg.m.	sofacito	sofa-dim.sg.m.
papá	dad-sg.m.	papcito	dad-dim.sg.m.
ñandú	rhea-sg.m.	ñanducito	rhea-dim.sg.m.
café	coffee-sg.m.	cafecito	coffee-dim.sg.m.

The prediction that would be made is thus that the vowels that are word-final in these nouns will also appear in the diminutive forms directly before the diminutive suffix. This is in fact what we observe, as demonstrated in (52). Because these are not word class markers, we would not expect them to be deleted. This prediction is borne out.

4.7.4. Predictions for the -cito/a diminutive as a DimP merged above a categorizing projection

4.7.4.1. Prediction 1: Obligatory mismatch between word class marker on base noun and word class marker on diminutive

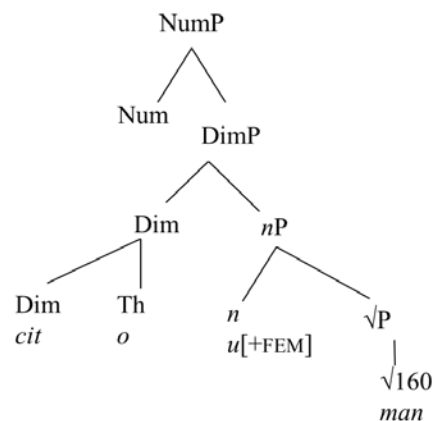
The first prediction of this analysis is the result of the obligatory mismatch between the word class marker of the base noun and that of the diminutivized form when the former does not pattern with gender. Diminutive masculine nouns with *-cito/a* have word-final /o/, and diminutive feminine nouns with *-cito/a* have word-final /a/. This is the case even when the base noun is feminine and belongs to Class I, such as *manecita* (based on *mano*, meaning ‘hand’). The prediction is thus that the word class marker on

DimP is too far from the root in order for the root to condition its realization. I argue that this means that the two must be in separate phases.

It was explained in section 4.6.1 that the root will be sent to SpellOut (and therefore unable to condition the realization of other morphemes in the derivation) once a second cyclic (i.e., phase) head is merged above the first categorizing head (cf. Embick, 2010). The resulting implication here is that DimP is a cyclic head; otherwise, the root should still be available to condition the realization of the word class marker. The two structures in question are provided in (53).

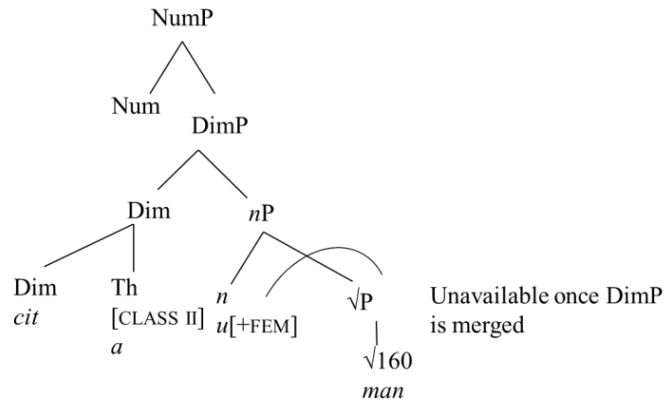
(53) Assuming DimP is cyclic ensures correct word class marker⁷⁵

(a) Word class marker realization if DimP is not a phase



⁷⁵ In both of these derivations, I have abstracted away from the insertion of Class features and simply inserted the exponence for the relevant word class markers for the sake of simplicity and clarity of explanation.

(b) Word class marker realization if DimP is a phase



If we assumed that **DimP** were not a phase, we would end up with a word-final /o/ for *mano*. The more specific condition on word class marker insertion that inserts Class I for select roots, including $\sqrt{\text{MAN}}$, would apply before the less-specific condition assigning the Class II feature to all [+FEM] nouns. This would result in **manecito* and not the attested *manecita*. Note also that in this structure, I follow Embick (2010) in assuming that *n* is pruned due to its being null (including the null word class marker).

Following Norris (2014), we can assume that the gender feature is still available to elements in the derivation above **nP** via percolation. Through percolation ϕ -features are “instantiated on projections along the way” to the top of DP (p. 143). In this case, the gender feature can percolate up the structure and impact the insertion of class features on the inserted word class node on **DimP**. Since the root is too far away from the upper word class node, the more specific condition that inserts a Class I feature for the feminine *mano*, for instance, does not apply. The result is that all feminine nouns with the *-cito/a* diminutive receive word-final /a/ due to their feminine gender feature. All of the masculine nouns with the *-cito/a* diminutive receive word-final /o/ due to the condition that assigns them word-final /o/ (as a result of insertion of the [CLASS I] feature).

4.7.4.2. Prediction 2: *-cito/a* diminutives are compositional

The assumption that the Vocabulary Item *-cit* realizes a cyclic head makes a further prediction with regard to the availability of noncompositional meanings. DeBelder, Faust, and Lampitelli (to appear) have demonstrated for Italian that there are two different positions for diminutivization. The higher diminutive, which is outside of the categorizing head, results in compositional diminutives (i.e., diminutives whose meanings are predictable from their structures). The adjoined diminutive, which is closer to the root, on the other hand, can have noncompositional meaning. Some of the data they provide is included in (54) below.

(54) Noncompositional vs. compositional diminutives in Italian (data from DeBelder, Faust, and Lampitelli)

(a)	(i)	pane	bread-sg.m.	panino	sandwich-sg.m.
	(ii)	casa ⁷⁶	house-sg.f.	casino	brothel-sg.m.
	(iii)	telefono	telephone-sg.m.	telefonino	cell phone-sg.m.
(b)	(i)	pane	bread-sg.m.	panino	bread-dim.sg.m.
	(ii)	naso	nose-sg.m.	nasino	nose-dim.sg.m.

These examples contrast with the compositional diminutives in (54b), whose meaning is predictable based on the sum of their parts. Similar examples are provided for Spanish in (55).

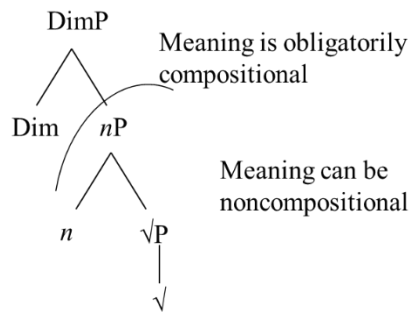
⁷⁶ This base noun-diminutive pair seems to contradict the others in that it is based on a noun of the opposite gender and word class marker. However, the authors cite Pianigiani's (1926) *Dizionario Etimologico*, which assumes that the feminine *casa* is the origin of the diminutive that has since come to mean 'brothel.'

(55) Noncompositional vs. compositional diminutives for Spanish

(a) ⁷⁷	(i)	ahora	now	ahorita	right now
	(ii)	goma	eraser/gum-sg.f.	gomita	fruit chew-sg.f.
	(iii)	coche	car-sg.m.	cohecito	stroller-sg.m.
	(iv)	central	central-sg.m./f.	centralita	switchboard-sg.f.
(b)	(i)	papel	paper-sg.m.	papelito	paper-dim.sg.m.
	(ii)	madre	mother-sg.f.	madrecita	mother-dim.sg.f.
	(iii)	plátano	banana-sg.m.	platanito	banana-dim.sg.m.
	(iv)	casa	house-sg.f.	casita	house-dim.sg.f./cottage-sg.f.
	(v)	rincón	corner-sg.m.	riconcito	corner-dim.sg.m.
	(vi)	avión	airplane-sg.m.	avioncito	airplane-dim.sg.m.

The argumentation that the adjoined diminutive can have noncompositional meaning while the DimP one must have compositional meaning stems from the work of Marantz (2001) and Arad (2003). Marantz (2001) and Arad (2003) argue that the categorizing head creates a boundary between obligatory compositional meaning and possible noncompositional meaning, as illustrated in (56) below.

(56) Demarcation between possible noncompositional meaning and obligatory compositional meaning



⁷⁷ The RAE (2009) gives one more noncompositional form in *-cito*, *frailecito*. This refers to a toy that children create by cutting a bean to make it look like the hair pattern of a monk (p. 636). I do not include this in the list of noncompositional forms, as the name of the toy is not entirely noncompositional from this point of view.

However, there is some disagreement on whether or not the categorizing head serves as the boundary between compositional meaning and noncompositional meaning. Marantz (1997) and Harley (2014a) argue that VoiceP serves as this demarcation point, while Panagiotidis (2014) argues for idiosyncratic meaning for constituents even larger than VoiceP.

The data from Spanish suggests, however, that the demarcation point between compositional and noncompositional meaning is in fact the phase head *nP*. There is, however, one form that is created with the *-cito/a* diminutive that seems noncompositional: *cochecito*. This noun can mean ‘stroller’ in addition to ‘little car’ or ‘little carriage.’ It could be argued that even the usage of *cochecito* to denote a stroller is compositional. A stroller is a smaller version of a carriage that is pushed by a person rather than pulled by a horse. Without further data, I therefore maintain that *-cito/a* diminutives cannot be noncompositional and as a result cannot be formed below *nP*.

4.7.4.3. Prediction 3: Iteration of the *-ito/a* diminutive is possible, but iteration of the *-cito/a* diminutive is not

A further expectation of this analysis is that we should be able to stack the *-ito/a* diminutives, since they are adjuncts. This follows from the basic assumption that there is no limit to the number of possible adjuncts (cf. Hornstein & Nunes, 2008). We find that this is in fact the case, as demonstrated in (57).

(57) Stacked diminutives

(a)	chico	small- sg.m.	chiquito	small- dim.sg.m.	chiquitito	small- dim.dim.sg.m.
(b)	casa	house- sg.f.	casita	house- dim.sg.f.	casitita	house- dim.dim.sg.f.
(c)	helado	ice cream- sg.m.	heladito	ice cream- dim.sg.m.	heladitito	ice cream- dim.dim.sg.m.
(d)	problema	problem- sg.m.	problemita	problem- dim.sg.m.	problemitita	problem- dim.dim.sg.m.
(e)	mano	hand- sg.f.	manito	hand- dim.sg.f.	manitito	hand- dim.dim.sg.f.

Further data to support this claim will be provided in Chapter 5 once I have introduced the remaining Spanish diminutive suffixes. At this point, though, we are able to see that the *-ito/a* diminutives can in fact be iterated.

For the most part, these double diminutives have compositional meaning. A form that has been diminutivized twice denotes an even smaller version of the diminutivized noun. Something that is *chiquitito*, in other words, is even smaller than something that is described as *chiquito*.⁷⁸ The possibility of stacking the diminutive provides further evidence for an analysis in which diminutives are adjuncts on categorized heads.

In contrast, it is not possible to iterate the *-cito/a* diminutives, as demonstrated below in (58).

(58) Ungrammaticality of iteration of *-cito/a* diminutives

(a)	café	coffee- sg.m.	cafecito	coffee- dim.sg.m.	*cafecitcito, cafecitito	coffee- dim.dim.sg.m.
(b)	rincón	corner- sg.m.	rinconcito	corner- dim.sg.m.	*rinconcitcito, rinconcitito	corner- dim.dim.sg.m.
(c)	munchkin	munchkin- sg.m.	munchkincito	munchkin- dim.sg.m.	*munchkincitcito, munchkincitito	munchkin- dim.dim.sg.m.

⁷⁸ Some exceptions will be provided in Chapter 5 with regard to diminutive forms created with other diminutivizing suffixes.

We see that iteration is ungrammatical if both of the diminutive suffixes are *-cito/a*. But, iteration is possible if the second suffix is *-ito/a*. This is exactly what is predicted if the *-cito/a* diminutive is assumed to be a separate projection and the *-ito/a* diminutive is an adjunct. The data in (57) suggest that the *-ito/a* diminutive can adjoin to other XP's in addition to *nP*'s, which is again what we predicted for *adjP* and *advP*. We see here that the set of XP's that can be diminutivized also extends to *DimP* and perhaps other evaluative projections (as will be investigated in Chapter 5).

Curiously, however, it seems that it is not possible for the adjoined diminutive to appear inside of the diminutive formed via *DimP* (e.g., **chiquitcito* as the doubly diminutivized *chico*, meaning 'boy'). It could be that this is due to the fact that the adjoined diminutive will always belong to either Class I or II, therefore making a diminutive formed with *-cito/a* less likely. We have seen previously that there is a preference for most speakers for adjoined diminutives with base elements of Classes I and II. Perhaps this is even encoded in the grammar as a selectional restriction whereby *DimP* will not select for a projection that already houses a diminutive feature. I assume that this is the case.⁷⁹

4.7.4.4. Prediction 4: Number markings for diminutives cannot be root-determined (i.e., all plurals must be regular)

The assumption that *DimP* is cyclic subsequently carries with it the prediction that there can be no root-specific number marking. The root is too far away (i.e., in another phase) for it to influence number marking on diminutives formed with *DimP*. The data bears out this prediction, as there are no irregular plural diminutives formed with *-cito/a*.⁸⁰ In contrast, there are several irregular plural forms for

⁷⁹ I do not provide extensive predictions for which diminutivization process occurs for each now, as this seems to be subject to much interspeaker variation. Where possible, I have and continue to point out some reasons for the variation. The focus of this chapter on diminutives, however, is to fill in the gap in the diminutive research by providing an account for the patterning of word-final segments in diminutives in both *-cito/a* and *-ito/a*.

⁸⁰ In fact, Kramer (2014) assumes that there are no irregular plurals in Spanish at all. It posits that there is a single plural morpheme /s/ and that the different alternates that we see (i.e., \emptyset , *-es*, *-s*) are the result of regular phonological processes.

nouns in a language like English, which may or may not be carried over into the diminutive forms (e.g., *goosy* → *geesy*; ?*geesies* or *footsy* → *feetsies*).

4.7.4.5. Summary of predictions and their results

This section has outlined several predictions for the behavior of the *-cito/a* diminutive in contrast to the *-ito/a* diminutive. First, the analysis predicts that the word class marker on the diminutive might be different from that of the base noun if we assume that DimP has its own Theme node. The data bears this out, as the word class marker for diminutives formed with this morpheme always patterns with gender (/o/ for masculine and /a/ for feminine) and not the word class of the base noun. This leads us to assume that the word class marker on these diminutives must be in a different phase from the root, motivating the argument that the DimP is itself a phase head.

Second, it was predicted that the meanings of the nouns formed with the *-cito/a* diminutive should be compositional because the DimP is outside of the categorizing head and the domain of special meaning (cf. Marantz, 2001; Arad, 2003). This prediction is also borne out by the data, which shows several instances of noncompositional meaning for diminutives formed with the adjoined diminutive but not with the one that heads a DimP. Evidence of a similar pattern of data was presented by DeBelder, Faust, and Lampitelli (to appear) for Italian.

We then predicted that the DimP diminutive would not be iterative while the adjoined diminutive could be. This marks a difference between maximal projections and adjuncts. Again, the data bears out this prediction, as the DimP diminutive cannot be iterated. The adjoined diminutive, however, can be iterated and can also modify a noun already diminutivized with the DimP diminutive. (See the revised Vocabulary Items given in section 4.7.1, which reflect this property.)⁸¹

⁸¹ A further prediction concerns a point raised by Fábregas (2010). He argues that diminutives in Spanish are part of a separate phase from the root because they do not incorporate phonologically with it. This, however, is only the case for those diminutives in *-cito/a* and not those in *-ito/a*, as we see below in (i-ii).

4.8. Further evidence from another Romance language: Diminutives in Brazilian Portuguese

We have seen before that a two-position analysis of diminutive formation with regard to Italian was presented by DeBelder, Faust, and Lampitelli (to appear). What is different about the Italian case from the Spanish case is that in Italian the two different diminutives are homophonous. The Spanish data, on the other hand, suggests that the diminutive morpheme varies along with the change in position. This prompts me to wonder whether there might be other instances of non-homophonous diminutives that appear to be formed in two different positions in the derivation. It turns out that there is. Data from Brazilian Portuguese shows even more definitively a phonological and even morphological distinction

(iii) Syllabification of root with diminutive morpheme for *-ito/a* diminutives

- (a) ca-sa house-sg.f. → ca-si-ta ~~cas-i-ta~~ house-dim.sg.f.
 (b) li-bro book-sg.m. → li-bri-to ~~lib-ri-to, libr-i-to~~ book-dim.sg.m.

(iv) Syllabification of diminutives with *-cito/a* morpheme

- (a) rin-cón corner-sg.m. → rin-con-ci-to ~~rin-cone-i-to~~ corner-dim.sg.m.
 (b) ca-fé coffee-sg.m. → ca-fe-ci-to ~~ea-fee-i-to~~ coffee-dim.sg.m.

We could follow Fábregas (2010) and assume that this provides further evidence that the *-cito/a* diminutive is in a separate phase from the root while the *-ito/a* diminutive is not. Superficially, this appears to follow. However, this assumption would create a complication for the analysis posed for augmentatives and derivational morphology in Chapters 5 and 6. Augmentatives, I will demonstrate, can head separate categorizing projections; derived nominals are formed by the merger of a categorizing head by definition. In neither instance is the root obligatorily prevented from incorporating phonologically with the Vocabulary Item realizing the nominalizing head (as demonstrated in (iii)).

(v) Phonological incorporation of the root in augmentatives and derived nominals

- (a) po-rra nightstick-sg.f. → po-rra-~~zo~~ ~~porra-zo~~, blow/whack
 (with a nightstick)-dim.sg.m.
 (b) te-la cloth-sg.f. → te-lón ~~tel-ón~~ curtain
 (in a theater)-sg.m.
 (c) pu-ro pure-sg.m. → pu-re-za ~~pure-za~~, purity-sg.f.
~~pur-e-za~~
 (d) li-bro book-sg.m. → li-bre-ría ~~libre-ría~~, bookstore-sg.f.
~~libr-e-ría~~

The data suggests that perhaps it is not a matter of phase boundary but rather the phonotactics of the language. In all of the cases provided here, with the exception of the *-cito/a* diminutives, the suffix begins with a vowel and not a consonant. This allows resyllabification with the root, as the roots are consonant-final (syllables in Spanish are typically CV). I do not, therefore, take the lack of phonological incorporation (i.e., syllabification of the base with the suffix) with *-cito/a* diminutives as a sign of a phase boundary between the two.

between the adjoined diminutive and the DimP diminutive, providing further evidence for the analysis of multiple positions of diminutivization in both Italian and Spanish. This will be the topic of section 4.8, which will provide further support for the two-position analysis presented in this chapter.

4.8.1. Introduction to Brazilian Portuguese word markers and gender

Word class and gender in Brazilian Portuguese are very similar to their counterparts in Spanish. In Brazilian Portuguese, as in Spanish, the word class marker /a/ is typically associated with the feminine gender, while the word class marker /o/ is typically associated with the masculine gender. However, similarly to the situation in Spanish, these word class markers do not always correspond with these genders (i.e., there are some masculine, /a/-final nouns and some feminine, /o/-final nouns). There are also many nouns that end in /e/ or a consonant.

For the purpose of the comparison of the diminutives in the two languages, I have assumed roughly the same word class inventory for Spanish as for Portuguese for at least Classes I-IV. Class I corresponds with /o/-final nouns; Class II with /a/-final nouns; Class III with /e/-final nouns; and Class IV with consonant-final nouns. I do not delve further into an analysis for Portuguese word class, but refer the interested reader to Alcântara (2010). What follows is an investigation of the Brazilian Portuguese diminutives in *-(z)inho/a* and the relationship between gender and word class when this (these) suffix(es) appear(s).

4.8.2. Introduction to Brazilian Portuguese diminutives in -(z)inho/a

Brazilian Portuguese diminutives formed with *-(z)inho/a* are similar to those in Spanish formed by *-(c)ito/a*. Much as in Spanish, these two forms are differentiated by one segment, in this case, the sonorous /z/ (orthographic *z*), as demonstrated in (59) below.

(59) Diminutivizing suffixes *-zinho/a* and *-inho/a* in Portuguese⁸²

(a) Diminutives in *-inho/a*

(i)	<i>casa</i>	house-sg.f.	<i>casinha</i>	house-dim.sg.f.	II→II
(ii)	<i>gato</i>	cat-sg.m.	<i>gatinho</i>	cat-dim.sg.m.	I→I
(iii)	<i>livro</i>	book-sg.m.	<i>livrinho</i>	book-dim.sg.m.	I→I
(iv)	<i>problema</i>	problem-sg.m.	<i>probleminha</i>	problem-dim.sg.m.	II→II

(b) Diminutives in *-zinho/a*

(i)	<i>maldade</i>	evil-sg.f.	<i>maldadezinha</i>	evil-dim.sg.f.	III→II
(ii)	<i>agene</i>	agent-sg.m.	<i>agentezinho</i>	agent-dim.sg.m.	III→I
(iii)	<i>papel</i>	paper-sg.m.	<i>papelzinho</i>	paper-dim.sg.m.	IV→I
(iv)	<i>café</i>	coffee-sg.m.	<i>cafezinho</i>	coffee-dim.sg.m.	IV→I
(v)	<i>mulher</i>	woman-sg.f.	<i>mulherzinha</i>	woman-dim.sg.f.	IV→I

As we can see, these two suffixes in Brazilian Portuguese pattern similarly to Spanish *-ito/a* and *-cito/a* with respect to word class. All forms (as far as I know) created with either suffix pertain to Class I or II (i.e., the diminutivized nouns end in /o/ or /a/).⁸³ One of the suffixes (*-inho/a*) allows retention of the word class marker — even for those nouns that end in the vowel opposite what is expected for nouns of that gender — outside of the diminutive suffix, while the other (*-zinho/a*) does not. This is most clearly seen in the case of (a) (iv) in which the masculine, but /a/-final *problema* is diminutivized as *probleminha* and not *probleminho*. Its word class marker corresponds with the class of the undiminutivized noun and not the gender of the noun.

We also see above in (59b) that all of the forms with the *-zinho/a* morpheme belong to a different word class from the nouns on which they are based. Similarly to Spanish, Class III and Class IV nouns must change their word class when diminutivized, as diminutives typically do not belong to word classes other than Classes I and II. These patterns are as we would expect if *-zinho/a* and *-inho/a* correspond to the *-cito/a* and *-ito/a* diminutives in Spanish, respectively, in terms of their location in the derivation.

⁸² See Guimarães and Mendes (2010) for some dialectal differences.

⁸³ I have not found any instances of Brazilian Portuguese diminutives that end in a segment other than /o/ or /a/. The Spanish /r/-final nouns, such as *Héctor* ('Hector') and *azúcar* ('sugar'), that have /r/-final diminutives in Spanish do not have /r/-final diminutives in Brazilian Portuguese (e.g., *Hectorzinho* and *açucarzinho*, respectively).

But, there is one key distinction between the Spanish suffixes and their counterparts in Brazilian Portuguese. The *-zinho/a* suffix, the diminutive suffix that does not allow retention of the word class marker outside of the diminutive suffix when it does not correspond with gender, also permits a word-medial word class marker and word-medial plural marking. This is illustrated for nouns of several classes in (60).

(60) Two different types of diminutives in Portuguese

(a)	problema	problem-sg.m.	Class II	probleminha, *probleminho,	problem-dim.sg.m.	Class II
(b)	problema	problem-sg.m.	Class II	problema ^a zinho, *problema ^a zinha	problem-dim.sg.m.	Class I
(c)	maldade	evil-sg.f.	Class III	maldadezinha	evil-dim.sg.f.	Class II
(d)	flor	flower-sg.f.	Class IV	florzinha	flower-dim.sg.f.	Class II

The case of *problema* in Portuguese is similar to that of *problema* in Spanish. The noun is masculine, but it belongs to Class II (i.e., it is /a/-final). We see that the diminutive formed here with *-inha* retains the word class marker from the base noun into the diminutive. The diminutive formed with *-zinho* also retains the word class marker from the base noun, but this word class marker appears between the nominalized root and the diminutive suffix. The word class marker after the diminutive suffix, on the other hand, corresponds with the noun's gender (/o/ for masculine).

Furthermore, we see that the word-medial /e/ is retained between the diminutive suffix *-zinha* for the Class III *maldadezinha*, as for the Class III *agentezinho* above in (59). We saw a similar word-medial /e/ in the Spanish diminutives that took the *-cito/a* suffix. However, this suffix was argued to be epenthetic in Spanish. The Brazilian Portuguese data from other word classes suggests that word class markers can appear between the base noun and the diminutivizing suffix. It could be that this word-

medial /e/ is in fact a word class marker and not an epenthetic vowel.⁸⁴ Until presented evidence to the contrary, I will assume that the /e/ that surfaces between the base noun and the diminutive suffix in the *-zinho/a* diminutives is a word class marker and not the result of epenthesis, in contrast to the cases discussed for Spanish.

Another difference between the Brazilian Portuguese diminutives in *-zinho/a* and the Spanish diminutives in *-cito/a* is their ability to house word-medial plural marking. Because plurals in Brazilian Portuguese for most nouns are formed via the addition of /s/, it is difficult to see plural marking between the nominalized root and the diminutive in the canonical case due to the shared point of articulation (/s/ vs. /z/). But, there are a few types of nouns that pluralize in such a way that enable us to see that there is in fact plural marking inside of the diminutive morpheme. The first are nouns that end in orthographic *l* (realized phonologically as a semivowel), such as *jornal* ('newspaper') /ʒornaw/. When pluralized, these forms end in orthographic *-is*, leading to the formation of a diphthong consisting of the vowel in the singular form and the high semivowel (e.g., *jornal* → *jornais*; /ʒornaw/ → /ʒornajs/). If the plural were formed with only word-final /s/, we would not be able to see the plural marking, just as in the regular plural forms. However, the change in height of the semivowel allows us to see whether or not there is number marking between the nominalized root and the diminutive suffix. The data in (61) shows us that there is in fact plural marking.

(61) Plural marking inside the *-zinho/a* diminutive suffix

- | | | |
|-----|---------------------|---------------------|
| (a) | <i>jornal</i> | newspaper-sg.m. |
| (b) | <i>jornais</i> | newspaper-pl.m. |
| (c) | <i>jornaizinhos</i> | newspaper-dim.pl.m. |

⁸⁴ It is beyond the scope of this dissertation to investigate whether this is a word class marker or epenthesis. Due to the behavior of other word class markers from Classes I and II, it seems logical to assume that it is a word class marker, but it is not possible to rule out the epenthesis argument without more investigation.

A further instance in which we can verify that there is plural marking inside of the diminutive suffix is the case of Class IV nouns that pluralize in /es/⁸⁵ instead of /s/. We see in (62) that /e/ is required when a consonant-final noun, such as *flor*, is pluralized. This /e/ is also required in the pluralized diminutive, but not in the singular diminutive.

(62) Further evidence of plural marking inside the *-zinho/a* diminutive suffix

(a)	flor	flower-sg.f.	florzinha	flower-dim.sg.f.
(b)	flores	flower-pl.f.	florezinhas	flower-dim.pl.f.

This provides further evidence that there is plural marking both inside and outside of the diminutive morpheme for diminutives created with *-zinho/a*.

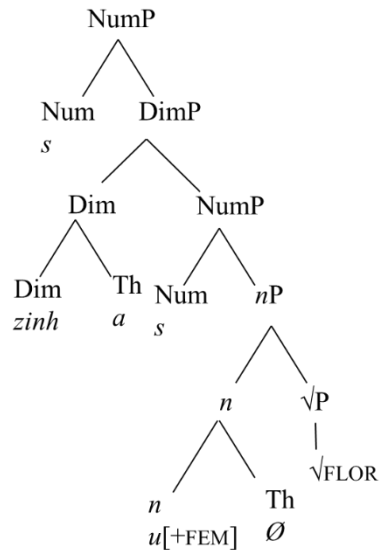
4.8.3. *Motivating a two-position analysis for Brazilian Portuguese diminutives*

Due to the patterning of the *-(z)inho/a* diminutives shown above, and the double Number and word class marking in particular, Bachrach and Wagner (2007) argue that the Portuguese diminutive can attach either above or below Number. They assume that it is an adjunct in both cases. I follow Bachrach and Wagner (2007) in assuming that Portuguese diminutives can attach above or below the first of two possible Number projections, with *-zinho/a* attaching above and *-inho/a* attaching below. However, I argue, following the analysis proposed for Spanish *-cito/a*, that *-zinho/a* diminutives head their own projection and are not adjuncts.

The structure for the *-zinho/a* type is thus that below in (63), while the structure for the *-inho/a* type is no different than that for *-ito/a*, which was given in (26).

⁸⁵ This is similar to the process for Class IV nouns in Spanish. I do not delve into the issue of whether this is epenthesis or a special type of word class marker, as argued by Harris (1991b) for Spanish and Alcântara (2010) for Portuguese. Either possibility has the same results in that they demonstrate the presence of plural marking between the nominalized root and the diminutive suffix.

(63) *-zinho/a* diminutives in Portuguese are merged above NumberP



As demonstrated in this figure, I assume that the word class markers in Brazilian Portuguese are the result of the insertion of a dissociated node at PF, just as in Spanish. I have abstracted away from the process of Theme feature and node insertion for the sake of clarity of presentation. The presence of two different Number markings is not perceptible in pronunciation due to the shared point of articulation between the plural marker /s/ and the first segment in the diminutive morpheme /z/. However, more must still be said about the additional NumberP. But, before I do so, I briefly investigate the same predictions made for Spanish in section 4.7.4 for Brazilian Portuguese.

4.8.4. Predictions for the behavior of the two different suffixes

The first prediction for Spanish was that the word class markers for diminutives formed with the *-zinho/a* diminutive should differ from those of the base noun when they do not correspond with gender. This is borne out by the data, as demonstrated above in (59-60).

Second, we would expect that the *-zinho/a* diminutive would have compositional meaning, while the *-inho/a* diminutive could have noncompositional meaning. Maurer (1969) explains that there are many instances of noncompositional *-inho/a* diminutives but not *-zinho/a* diminutives. I provide some of Maurer's data here in (64).

(64) Evidence for possible noncompositionality for diminutives in *-inho/a*

(a)	colar	necklace-sg.m.	colarinho	collar, neckband-sg.m.
(b)	amarela	yellow-sg.f.	amarelinha	hopscotch-sg.f.
(c)	vaca	cow-sg.f.	vaquinha	pool of money-sg.f.
(c)	salgado	salty-sg.m.	salgadinho	appetizer-sg.m.

We see that these are certainly instances of noncompositional meaning. In no case is the diminutivized form a smaller version of (or term of endearment for) the original noun or adjective. The *-inho/a* diminutive can have noncompositional meaning, which is what is expected if it is within the phase created by the categorizing head. In fact, the diminutive formed in *-zinho* for *colar* ('necklace') is perfectly compositional, in contrast to the form in *-inho* given above in (64a) (Ferreira, personal communication).

The third prediction concerns the possibility of iteration. Data for the possibility of iteration for both morphemes is provided here in (65).

(65) Iteration of *-inho/a* and *-zinho/a* in Brazilian Portuguese⁸⁶

(a)	problema	problem- sg.m.	probleminha	problem- dim.sg.m.	problemininha, probleminhazinho, *problemazinhainho	problem- dim.dim.sg.m.
(b)	livro	book- sg.m.	livrinho	book- dim.sg.m.	livrininho, livrinhozinho, *livrozinhoinho	book- dim.dim.sg.m.
(c)	gata	cat-sg.f.	gatinha	cat- dim.sg.f.	gatininha, *gatazinhazinha, gatinhazinha	cat- dim.dim.sg.f.
(d)	flor	flower- sg.f.	florzinha	flower- dim.sg.f.	*florzinhazinha, florzininha, *florzinzinha	flower- dim.dim.sg.f.
(e)	café	coffee- sg.m.	cafezinho	coffee- dim.sg.m.	cafezinhozinho, cafezininho, *cafezinzinho	coffee- dim.dim.sg.m.

This data is (mostly) as would be predicted based on the two-position analysis. In (a-c), we see that Class I and II nouns can have an iterated adjoined diminutive, just as the Spanish forms presented above. What is different about this data, in contrast to the Spanish data, is that the DimP diminutive can appear outside of the word class marker on the adjoined diminutive. But, this is an expected difference if the *-zinho/a* diminutive in Brazilian Portuguese is merged above NumP, whereas it is merged below NumP in Spanish. The selectional restriction that I assumed for Spanish DimP diminutives (i.e., that they will not take projections with [DIM] features as their complements) cannot hold in this case because the complement of DimP is NumP, not n [DIM].

It is also noteworthy that the adjoined diminutive is not possible outside of the DimP diminutive when there is a word class marker on the inner DimP diminutive. This is expected, since the adjoined diminutive is assumed to be an adjunct and not an independent projection.⁸⁷ It should not be able to appear outside of the word class marker, only inside of it.

The forms in (d) and (e) both adhere to and contradict predictions. First, it seems that the iterated *-zinho/a* morpheme is not acceptable in all cases but is possible for at least the double diminutive of *café*

⁸⁶ This data comes from a combination of fieldwork and Guimarães and Mendes (2010).

⁸⁷ I did not find data to suggest that the adjoined diminutive can appear inside of the word class marker of the DimP diminutive for either of the nouns in question here. However, we see that this is a possibility for (d) and (e), so I do not assume that it is an impossibility for these and similar nouns.

when there are three different word class markers (/e/, /o/, and /o/, respectively). This marks a contrast with the Spanish data because the DimP diminutive was not able to iterate. The difference could be due to the fact that the DimP diminutive in Brazilian Portuguese is merged outside of NumP. It could be that the DimP in Brazilian Portuguese is able to take a NumP as its complement, which allows for multiple DimP's as long as there are multiple NumP's.

Without the word-internal number marking, iteration of the DimP diminutive is not attested, which follows the Spanish *-cito/a* data. The ability of the adjoined diminutive suffix to surface outside of the DimP diminutive suffix demonstrates that this diminutive can adjoin to *n* but also to Dim, as explained above for Spanish. The fact that this is possible (though not attested for all forms) is what we would predict following a two-position analysis for diminutive morphemes.

As we can see, the Brazilian Portuguese data adheres to the predictions made for the comparable diminutives in Spanish (i.e., *-(c)ito/a* diminutives). I argue that this is further motivation for the two-position analysis presented above in this chapter. Before concluding this section, however, I have a few more comments with regard to the presence of two different Number Phrases in *-zinho/a* Brazilian Portuguese diminutives.

4.8.5. *More on the presence of two NumberP's*

The presence of the two NumberP's might lead us to wonder whether these diminutives receive a double plural interpretation. It does not appear as though this is the case, but Bachrach and Wagner (2007) explain that the plural diminutives in *-inho/a* are semantically different from those in *-zinho/a*. They explain that the *-zinho/a* plural diminutives will pick out a subset of the plurality of entities denoted by the base noun. The following example is provided to illustrate this point (p. 7).

(66) *-zinho/a* plural diminutives pick out a proper subset

Cristina and Flora are on a safari. In front of them are two big elephants, 3 smaller zebras and two bigger zebras.

- (a) *zebrinhas* ‘zebras that are small’
- (b) *zebrinhas* ‘small zebras’

If Cristina wants to point to all of the zebras, she must use (b); otherwise, Flora will look at only the subset of the three small zebras and not the other two zebras.

The result is not a double plural interpretation, but rather a diminutivization of a subset of entities. The plural diminutive in *-zinho/a*, therefore, does not modify all entities that are denoted by the noun in question but rather only a subset of those.

One way to explain this double plural marking without double plural interpretation is to assume that there are two different locations for Number marking: close to the root (i.e., on a particular flavor of nominalizing head) and on Number (cf. Lowenstamm, 2008). We could argue that the inner plural marking in *jornaizinhos*, for instance, is the result of a lower number marking that produces an intrinsically plural noun. This plural does not rely on the presence of a NumberP and therefore does not impact the syntax (i.e., agreement) or semantic interpretation of the resulting noun. In contrast, the plural marking outside of the diminutive suffix is an instance of pluralization due to the presence of Number. While this is a possibility, the fact that this pattern extends to all diminutives of the *-zinho/a* type and not just to a subset of them suggests that it is not ideal to assume these diminutives are formed from intrinsically pluralized nouns.

The presence of an additional Number head does not result in a double plural interpretation, but it certainly does impact the semantic interpretation of the resulting diminutive form. Perhaps Number in Brazilian Portuguese plays a role other than pluralizing nouns. Or, perhaps there is a different NumberP that can be merged inside of diminutive morphemes than can be merged outside of them. I leave this topic for future research and merely point out that the presence of number marking between the root and the

diminutive morpheme with the *-zinho/a* diminutives increases the plausibility of the two-position analysis of diminutives presented here.

4.8.6. Implications of the Brazilian Portuguese data for the analysis presented above for Spanish

Although the Spanish diminutive is more limited in its possible structures than the Brazilian Portuguese diminutive, the Brazilian Portuguese data demonstrates that it is not farfetched to assume that similar phonological forms realize distinct syntactic properties or that there are multiple positions for diminutivization. Brazilian Portuguese has a distinction between *-inho/a* diminutives and *-zinho/a* diminutives. The latter, due to the interaction with word class and the plural, must be outside of *nP* and optionally outside of *NumP* as well. The behavior of the Brazilian Portuguese diminutives underscores the properties that fall out from the analysis that word class is on *n*.

The presence of the possible additional Number Phrase for the Brazilian Portuguese diminutives accounts for why their word class markers are realized between the root and the diminutive suffix. In Spanish, where the diminutive appears below Number in all instances, this is not the case.⁸⁸ In fact, the Brazilian Portuguese data appears to confirm the assumption that there is a restriction that word class is only phonologically realized when it is adjacent to Number for certain languages (see Oltra-Massuet & Arregi, 2005; Kramer, 2015), an assumption that led me to assume that Theme nodes are only inserted on the functional head adjacent to *NumP*. The same restriction that holds for Spanish appears to hold for Brazilian Portuguese as well. The Brazilian Portuguese data seems to confirm this especially considering word class is realized when it is adjacent to Number even if this Number is word-internal, which is unexpected (nominals are typically assumed to contain only one number marking).

⁸⁸ It could be possible that Spanish also allows the *-cito/a* diminutive to appear either inside or outside of *Num*. But, because the Spanish plural marker is simply /s/, we cannot be so sure. It is likely that the plural /s/ and diminutive-initial /θ/ would be realized as a single segment considering the two are so similar phonetically. We also cannot rely on the epenthesis demonstrated by consonant-final, Class IV nouns when they are pluralized because the same epenthesis takes place between the root and the diminutive regardless (in many instances). Absent evidence to the contrary, I assume that there is only one position for the merging of *DimP* in Spanish, which is below *NumP*.

The data from Brazilian Portuguese also supports the idea that Number is the cutoff point in the nominal spine for word class markers. This provides further evidence for the assumption that word class markers are possible on elements within the nominal spine besides *n* (e.g., diminutive projections). This idea is further motivated in Brazilian Portuguese by the existence of multiple Numbers, resulting in multiple word class markers. In other words, we do not observe plural marking on the nominalized root inside of the diminutive without the presence of the word class marker as well. This pattern further evidences the claim that the cutoff for insertion of word class markers on projections within the nominal spine is Number. The Brazilian Portuguese data, therefore, provides further evidence for the two-position analysis of Spanish diminutives and also for the idea that the diminutive projection itself can host the insertion of a word class marker.

4.8.7. *Aside on the historical development of Brazilian Portuguese diminutives*

The historical development of the Brazilian Portuguese diminutives was similar to that for the Spanish diminutives, mentioned above in section 4.6.3.2. Rainer (1995) cites Skorge (1957) in arguing that the /z/-initial diminutive form was at first restricted to roots that ended in /r/ or a stressed vowel. Over time this diminutive form was extended to the other classes of words and even to those that ended in an unstressed vowel (e.g., *problema*, *livro*, etc.).

The same process occurred for Spanish as well, but in a more limited fashion. We have seen that *-cito/a* is compatible with some Class I and II nouns, but it is still not very common for most. The Brazilian Portuguese suffix, *-zinho/a*, on the other hand, is much more productive with Class I and II nouns. Regardless, there are still many similarities between the *-(c)ito/a* diminutives in Spanish and *-(z)inho/a* diminutives in Brazilian Portuguese.

4.8.8. Summary of Brazilian Portuguese diminutives and the evidence for a two-position analysis for diminutives

Section 4.8 has investigated diminutives in Brazilian Portuguese that pattern similarly to the *-(c)ito/a* diminutives in Spanish. The key difference that word class and number marking can appear within the *-zinho/a* diminutive provides further motivation for a two-position analysis for diminutives for Brazilian Portuguese. It shows that there can be at least two different locations for word class markers in a nominal (i.e., on *n* and on a separate projection that is not *n*). We have also seen that the double word class and number marking suggests that the DimP with the outer word class marker is in a separate phase from the root, just as was assumed for Spanish. Furthermore, I have demonstrated that Brazilian Portuguese *-(z)inho/a* diminutives have the same properties as Spanish *-(c)ito/a* diminutives with regard to the patterning of the outermost word class marker, compositionality of meaning, and ability to be iterated. All of this supports the analysis proposed in this chapter — namely that diminutives within Spanish are of two different types. In the section that follows, I address further implications for this two-position analysis regarding diminutive allomorphy, the predictions this analysis makes, and the way in which it can better account for seemingly idiosyncratic allomorph selection.

4.9. An added benefit: A better explanation for diminutive allomorphy

The *-(c)ito/a* diminutive has been the focus of study from various perspectives, including earlier iterations of generative phonology (Jaeggli, 1980; Carreira, 1984; Prieto, 1992; Crowhurst, 1992); Optimality Theory (Elordieta & Carreira, 1996; Miranda, 1999; Colina, 2003; Stephenson, 2004; Smith, 2011); exemplar theory (Eddington, 2002); generative syntax (Fábregas, 2010); and generative morphology (Ambadiang, 1996, 1997). There have also been a few accounts of diminutive allomorphy from a DM perspective, including Harris (1994) and Vadella (2015a, b). These *-(c)ito/a* diminutives have been the topic of much research due to their complex patterns of allomorphy. In this section, I argue that a

two-position analysis of the *-(c)ito/a* diminutives can account for these complex patterns of allomorphy. I begin with an introduction to the data before explaining some previous analyses and where they have fallen short. I conclude with a description of how my analysis can account for some cases left unexplained in prior analyses.

4.9.1. Introduction to the data

Smith (2011) has attempted to summarize the data from decades of research into some distinguishable patterns. The generalizations that I provide in (67) are those that are relevant for Castilian Spanish.

(67) Observable patterns for diminutive allomorphy

- (a) Class I and Class II nouns take *-it*
- | | | | | | | | |
|------|-------------|---|-----------------|-------|--------------|---|------------------|
| (i) | casa | → | casita | (iii) | libro | → | librito |
| | house-sg.f. | | house-dim.sg.f. | | book-sg.m. | | book-dim.sg.m. |
| (ii) | atlas | → | atlitás | (iv) | Carlos | → | Carlitos |
| | atlas-sg.m. | | atlas-dim.sg.m. | | Carlos-sg.m. | | Carlos-dim.sg.m. |
- (b) Disyllabic Class III nouns take *-cit*
- | | | | | | | | |
|-----|--------------|---|------------------|------|----------------|---|--------------------|
| (i) | madre | → | madrecita | (ii) | pobre | → | pobrecito |
| | mother-sg.f. | | mother-dim.sg.f. | | poor one-sg.m. | | poor one-dim.sg.m. |
- (c) Trisyllabic Class III nouns take *-it*
- | | | | | | | | |
|-----|-----------------|---|---------------------------|------|---------------|---|-------------------|
| (i) | chocolate | → | chocolatito ⁸⁹ | (ii) | comadre | → | comadrita |
| | chocolate-sg.m. | | chocolate-dim.sg.m. | | midwife-sg.f. | | midwife-dim.sg.f. |
- (d) Class IV nouns take *-cit*
- | | | | | | | | |
|-------|---------------|---|-------------------|------|---------------|---|-------------------|
| (i) | pintor | → | pintorcito | (iv) | corazón | → | corazoncito |
| | painter-sg.m. | | painter-dim.sg.m. | | heart-sg.m. | | heart-dim.sg.m. |
| (ii) | café | → | cafecito | | matinée | → | matinecito |
| | coffee-sg.m. | | coffee-dim.sg.m. | (v) | matinee-sg.f. | | matinee-dim.sg.f. |
| (iii) | lunes | → | lunecito | | | | |
| | Monday-sg.m. | | Monday-dim.sg.m. | | | | |
- (e) Class V nouns take *-it*
- | | | | | | | | |
|------|----------------|---|------------------------|-------|-------------|---|-----------------|
| (i) | dosis | → | dosisita ⁹⁰ | (iii) | virus | → | virusito |
| | dose-sg.f. | | dose-dim.sg.f. | | virus-sg.m. | | virus-dim.sg.m. |
| (ii) | Sócrates | → | Socratitos | | | | |
| | Socrates-sg.m. | | Socrates-dim.sg.m. | | | | |

⁸⁹ Prieto (1992) provides examples of *chocolatecito* instead of *chocolatito* for some, stating that the difference between these has to do with a minimal word constraint that holds for some speakers and not others.

⁹⁰ As mentioned above in section 4.4.3, there is not agreement by all speakers that this is the preferred diminutive form for *dosis*.

(68) Exceptions to (67)

- (a) Disyllabic words with an alternating diphthong⁹¹ take *-cit*
- | | | | | | | | |
|-----|---------------|---|-------------------|------|---------------|---|-------------------|
| (i) | <i>piedra</i> | → | <i>piedrecita</i> | (ii) | <i>puerta</i> | → | <i>puertecita</i> |
| | rock-sg.f. | | rock-dim.sg.f. | | door-sg.f. | | door-dim.sg.f. |
- (b) Disyllabic words ending in [jo] or [ja] take *-cit*
- | | | | | | | | |
|-----|-----------------|---|---------------------|------|--------------|---|------------------|
| (i) | <i>novio</i> | → | <i>noviecito</i> | (ii) | <i>radio</i> | → | <i>radiecito</i> |
| | boyfriend-sg.m. | | boyfriend-dim.sg.m. | | radio-sg.f. | | radio-dim.sg.f. |

These patterns of diminutive allomorphy suggest some correlation between diminutive morpheme realization and the word class of the base noun (i.e., the undiminutivized noun). Classes I and II pattern together in that they both appear with *-ito/a*, except in the exceptional case in which they contain a diphthong (as in (68)). Classes III and IV appear to pattern together in taking *-cito/a*, with the exception of the trisyllabic or longer nouns that appear with *-ito/a*. Class V nouns all take *-ito/a*.⁹²

However, as mentioned previously, a recent survey of speakers of Castilian Spanish that I conducted demonstrates that there is not agreement on preferred forms for Class III nouns of any particular length. Some speakers' preferences follow the patterns described above, but others diverge. Some had a preference for the forms with *-cito/a* even for trisyllabic or longer Class III nouns (e.g., *octubrecito* (October-dim.sg.m.), *comadrecita* (midwife-dim.sg.f.)). Furthermore, there was disagreement on the preferred form of the disyllabic, Class III *clase* (class-sg.f.); some preferred *clasecita*, while others preferred *clasita*.

⁹¹ By "alternating diphthong," Smith (2011) is referring to those nouns that seem to have a diphthong when other forms that are based on the same root do not (e.g., *portal* for 'vestibule' vs. *puerta* for 'door,' both seemingly based on the root √PORT).

⁹² Note that there are some nouns that seem to retain their root-final consonant even when it is identical to the suffix-initial consonant in the diminutive morpheme (i.e., /θ/). This contrasts with some of the other Class IV nouns that we saw above, including *lunes* ('Monday,' diminutivized in *lunecito*). I argue that there is not reduplication here, but rather the regular suffixation of the *-cit* diminutive and epenthesis instead of simplification of one of two identical segments (/θ/). The question concerns why these nouns undergo epenthesis instead of simplification of two identical segments. It could be due to the fact that these bases are monosyllabic. Perhaps all else being equal, epenthesis is preferred to deletion for monosyllabic roots, a point argued for by Vadella (2014).

The nouns that most commonly showed variation in preferences are those included below, in addition to the list of nouns for which there was no disagreement on preferred form.

(69) Investigating Class III nouns

(a) No clear preference

(i)	comadre	'midwife'	comadrecita	comadrita
(ii)	costumbre	'custom'	costumbrecita	costumbrita
(iii)	octubre	'October'	octubrecito	octubrito
(iv)	clase	'class'	clasecita	clasita

(b) Preference for *-cito/a*

(i)	madre	'mother'	madrecita	madrita
(ii)	leche	'milk'	lechecita	lechita
(iii)	coche	'car'	cohecito	cochito

(c) Preference for *-ito/a*

(i)	chocolate	'chocolate'	chocolatecito	chocolatito
(ii)	aguacate	'avocado'	aguacatecito	aguacatito
(iii)	presidente	'president'	presidentecito	presidentito
(iv)	elefante	'elephant'	elefantecito	elefantito
(v)	paquete	'packet'	paquetecito	paquetito

In all instances, the forms in both *-cito/a* and *-ito/a* were supplied as possible diminutivizations for multiple native speakers (but not necessarily all of them). However, there were clear preferences for the longer forms (i.e., those with *-cito/a*) for the nouns in (b) and clear preferences for the shorter forms (i.e., those with *-ito/a*) in (c). The nouns in (a) showed no clear preference for shorter or longer form; some speakers preferred the shorter form while others preferred the longer one.

4.9.2. Previous analyses

Several previous accounts have assumed that the reason for asymmetrical diminutive formation for Class III nouns was due to the difference in the number of syllables (e.g., Prieto, 1992; Fábregas, 2010; among others). Fábregas (2010), for example, argues that the difference between the contexts in

which the *-ito/a* allomorph surfaces and those in which the *-θito/a* allomorph surfaces has to do with language-specific phonological requirements (cf. pp. 15-17). Shorter nouns (monosyllabic or bisyllabic) need a vocalic segment (/e/) in order to form an independent (trochaic) foot, while longer nouns do not. The consonantal segment /θ/, Fábregas (2010) argues, is necessary for these shorter nouns in order to prevent the final segment of the base (e.g., /n/) from syllabifying with the diminutive morpheme. Various analyses (e.g., Prieto, 1992; Crowhurst, 1992; Miranda, 1999; among others) have made use of essentially the same argument regarding the necessity of forming a foot with the base alone using different frameworks and/or mechanisms (rules in generative approaches, constraints in OT ones, and homogeneous contexts for the exemplar-based account). I argue that these analyses fall short for several reasons.

4.9.2.1. An account for interspeaker and intraspeaker variation

First, we saw above that there are several instances in which longer bases appear without /θ/ (e.g., *chocolatito*, *comadrita*, etc.) and shorter bases appear with /θ/ (e.g., *mano*, *coche*, etc.). If the differentiating factor between the selection of *-ito/a* and *-cito/a* is word length (i.e., the ability for the root to form an independent, trochaic foot), then how do we account for the instances in which longer nouns are formed with *-ito/a* and bisyllabic nouns are formed with *-cito/a*? Prieto (1992) states that the variation between *chocolatecito* and *chocolatito* can be explained by the presence of this trochaic foot requirement for some individuals but not for others. But, even if this were so, we still have no way of explaining the intraspeaker variation that we observe for these nouns. This is where their analyses fall short and the one presented in this section can better account for the data.

The analysis presented in this chapter (i.e., one that assumes that both the DimP and adjoined diminutive are available to all nouns) can account for the observed variation. There is optionality and inconsistency in preference due to the existence of two possible processes of diminutivization. The forms

with *-cito/a* are DimP diminutives, many of which display word-internal epenthesis, while the forms without *-cito/a* are adjoined diminutives that have undergone Impoverishment to allow for the realization of the word-final /o/ or /a/. As we have seen, although one or the other seems to be preferred for nouns of a particular class, neither is exclusive to that class (or group of classes). The preference for a particular class or group of classes is motivated (at least in part) by markedness (as we saw in section 4.6.3.2). The adjoined diminutive is more marked for Classes III and IV, while the DimP diminutive is not.⁹³ This assumption has a basis in the historical evolution of the diminutive suffixes in question, as explained in section 4.6.3.2.

4.9.2.2. An account of variable word class marking on the diminutive

Another advantage to the current analysis is that it can easily explain the diminutive word class marker patterns, i.e., when word class markers in the diminutive match those of the base noun and when they do not. The analysis presented here can easily explain why diminutivized feminine nouns are typically /a/-final while masculine ones are /o/-final, but also account for the maintenance of Class I word class markers for the feminine *moto*, *foto*, etc. and Class II word class markers for the masculine *poema*, *tema*, etc. To my knowledge, no other analysis of Spanish diminutives has specifically addressed this aspect of diminutive formation.

Smith (2011) and the sources cited therein as well as the RAE (2010) have articulated many of the patterns for tendencies towards one suffix over the other (*-ito/a* and *-cito/a*⁹⁴). Where these analyses fall short is that they do not explain why gender and word class pattern in the way that they do. They merely give patterns for one when one route (i.e., adjunction or diminutivization with a DimP) seems to be preferred over the other. But, this itself is subject to much interspeaker variation. The benefit of the

⁹³ Note that Smith (2011) provides one account that does incorporate word class into an analysis of diminutive formation patterns. He argues that it is the class that determines the suffix more so than the phonology. The classes he presents, however, do not correspond with the word classes presented here.

⁹⁴ Note that the RAE (2010) also includes *-ecito/a* as a possible suffix.

analysis proposed in this chapter is that it can account for the gender and word class patterns that we see no matter which of these two routes is chosen. No previous analysis has been able to do so in a systematic fashion.

As stated above, the analysis presented in this chapter can account for word class markers with an appeal to phases and cyclicity. The word class patterns are as predicted if the adjoined diminutive and the root are in the same phase while the DimP diminutive and the root are in different phases. Additional predictions made based on this assumption were confirmed by the data, further motivating a two-position analysis. Because all previous morphosyntactic accounts of Spanish diminutives have assumed that diminutives are formed in the same way (albeit with different phonological restrictions in some cases), they are unable to account for why those in *-ito/a* pattern differently with respect to word class marker, compositionality of meaning, and ability to iterate.⁹⁵

4.9.3. Summary of the benefits of this analysis with respect to allomorphy

In sum, the account presented here is much more adept at explaining the different patterns of allomorphy that have been observed. It can account for why the word class marker changes obligatorily with the *-ito/a* allomorph and also why this allomorph is not restricted to specific contexts. The analysis proposed here can also explain why word-final vowels are maintained for Class I and II diminutives in *-ito/a* even when the Class does not correspond with the noun's gender, which seems to be the basis for the word class marker outside of the diminutive in all other instances. The two-position analysis can account for why there is inter- and intraspeaker variation for many Class III nouns and even some Class I nouns (i.e., *manecita*). Unlike other analyses, it does not rule out any particular diminutive formation with a specific root or nominal and therefore requires less lexical listing and/or rule storage.

⁹⁵ Many have, however, addressed the issue of phonological incorporation, as described in footnote 81.

4.9.4. Tying up one loose end (possible objection)

I present here one final possible objection to the theory in which one allomorph corresponds with each position. This line of argumentation could arise based on Bachrach and Wagner's (2007) treatment of the *-zinho/a* allomorph in Portuguese. They assume that the /z/ of the diminutive suffix is the result of a [z]-insertion process that occurs whenever suffixation results in hiatus. They cite the suffix *-al* as another instance in which this occurs, as in (70a) below.

(70) Other instances of [z]-insertion in Portuguese

- (a) *cafe* *coffee-sg.m.* *cafezal* *coffee grove-sg.m.*
- (b) *laranja* *orange-sg.f.* *laranjal* *orange grove-sg.m.*

The [z]-insertion is not necessary in (70b) due to the fact that the noun to which the derivational morphology is added ends in /a/. Bachrach and Wagner (2007) do not elaborate, but we might assume that the word-final /a/ from *laranja* is deleted when the /a/-initial suffix *-al* is added. Ignoring presently the question of whether the word-final /a/ from *laranja* is realized in a further derivational context, I investigate whether or not a similar process of insertion might be at work with the Spanish diminutives. I argue that there is no evidence for /θ/-insertion in Spanish in the diminutive context, which would parallel the [z]-insertion described above.

In similar contexts (i.e., derived nominals built on nominals ending in a stressed vowel) in Spanish, we see /t/-insertion. This occurs with the *-al* suffix as well as the *-ero/a* and *-eria* suffix, all of which create denominal nominals,⁹⁶ as demonstrated in (71).

⁹⁶ Note that *sofatero* can refer to one who is on the couch in either an adjectival or nominal sense. It is similar to the idea of a 'couch potato' in English, but it is also used as an adjective.

(71) [t]-insertion in Spanish

(i)	café	coffee-sg.m.	cafetal	coffee grove-sg.m.
(ii)	café	coffee-sg.m.	cafetera	coffee maker-sg.f.
(iii)	sofá	couch-sg.m.	sofateria	couch store-sg.f.
(iv)	sofá	couch-sg.m.	sofatero	on the couch-sg.m.
(v)	puré	purée-sg.m.	puretero	tool used to purée-sg.m.

There are not, to my knowledge, any instances of similar [θ]-insertion in Peninsular Spanish (though there are a few for certain dialects of Latin American Spanish⁹⁷) for base nouns ending in accented vowels. The only suffixes displaying a variation in the presence or absence of the [θ] segment are the diminutive suffixes presented above and some augmentatives.⁹⁸ It seems that the [θ] in front of a suffix is limited to evaluative environments, which could mean that it is the result of two different allomorphs and not an insertion process such as that argued for by Bachrach and Wagner (2007).

Moreover, the data that Bachrach and Wagner's (2007) use to argue that the Brazilian Portuguese diminutive [z] is the result of hiatus-avoidance does not seem to hold. There are some cases in which the [z] appears adjacent to a consonant (e.g., *florzinha*). It cannot be argued that the [z] in these cases is inserted in order to avoid hiatus.

Although there is data to support the notion that there is [z]-insertion for Brazilian Portuguese nouns in derivational contexts, there is not data to argue definitively that the same is true for diminutives. The [z]-initial suffix is not limited to cases in which there would otherwise be hiatus. It seems to me that there are two different suffixes involved in Brazilian Portuguese, as well as in Spanish. The two different suffixes in Brazilian Portuguese can appear as adjunct on *n*, just as in Spanish, while the DimP diminutive can appear either inside or outside of Num. Both of the positions of the higher diminutive result in the -

⁹⁷ Some forms are *manicero* (peanut seller-sg.m.) from *maní* (peanut-sg./pl.m.) and *ajicero* (pepper seller-sg.m.) from *ají* (pepper-sg.m.).

⁹⁸ Although one exception appears to be the /θ/ in the derived nominals *carnicería* (butcher shop-sg.f.) and *carnicero* (butcher-sg.m.). Because this seems to be the exception rather than the rule, I do not address it here. Note that other forms appear to follow this pattern (such as *tapicero* for 'upholsterer' and *lapicero* for 'pencil box'). However, the nouns on which these are based are /θ/-final, so it is difficult to determine the source of this /θ/.

zinho/a allomorph, while the adjoined diminutive is obligatorily *-inho/a*. It just happens that the suffix in Brazilian Portuguese begins with the same segment that is inserted in non-diminutivizing derivational contexts.

4.10. An aside on V+N nominal compounds

Before I conclude the chapter, I discuss the topic of V+N nominal compounds (i.e., noun compounds created from a verb and a noun). As will be demonstrated, these pose a particularly interesting challenge to the analysis presented thus far. However, taking into account previous observations and analyses for these compounds, I believe it is possible to retain the analysis presented thus far for diminutive nouns, word class markers, and gender. I provide one possible solution here.⁹⁹ I first present a brief section on the background of V+N compounds in Spanish. Then, I propose a structure for these compounds and finally attempt to account for the diminutive forms of these compounds in light of the analysis presented above for diminutives more broadly. I note that this is in no way intended to be a complete analysis for these V+N compounds (both diminutivized and undiminutivized), but rather a brief investigation of one possible approach that is consistent with the remainder of the dissertation, which itself merits further study in future work.

4.10.1. Introduction to V+N compounds in Spanish

V+N compounds in Spanish are quite productive. In the database compiled in Moyna (2011), V+N compounds make up about 27.9% of Spanish compounds in her data collected from the 1990s-2000s. These compounds are characterized by a verb form with its theme vowel followed by a nominal form. The resulting compound is itself a noun. Some examples are provided below in (72).

⁹⁹ The data in this section comes from a combination of fieldwork and the sources contained herein as well as Stump (2010).

(72) V+N compounds in Spanish

Compound			Verb		Noun	
(a)	parabrisas	windshield-sg.m.	parar	stop	brisas	breeze-pl.f.
(b)	quitasol	parasol-sg.m.	quitar	remove/take off	sol	sun-sg.m.
(c)	paraguas	umbrella-sg.m.	parar	stop	aguas	water-pl.f.
(d)	limpiabotas	shoeshiner-sg.m./f.	limpiar	clean	botas	boot-pl.f.
(e)	guardabosques	park ranger-sg.m./f.	guardar	keep/maintain	bosques	woods-pl.m.
(f)	abrelatas	canopener-sg.m.	abrir	open	latas	can-pl.f.
(g)	cortaúñas	nail clippers-sg.m.	cortar	cut	uñas	finger nail-pl.f.
(h)	lavaplatos	dishwasher-sg.m.	lavar	wash	platos	dish-pl.m.
(i)	saltamontes	grasshopper-sg.m.	saltar	jump	montes	hill-pl.m.
(j)	tocadiscos	record player-sg.m.	tocar	play	discos	disk-pl.m.
(k)	tragaluz	skylight-sg.m.	tragar	swallow	luz	light-sg.f.
(l)	pierdeplumas	pen-loser-sg.m./f.	perder	lose	plumas	pen-sg.f.
(m)	cuelgacapas	coat rack-sg.m.	colgar	hang	capas	cape-pl.f.

There are several curious points about these compounds. The first is that the number of the noun inside of the compound is rather predictable. Generally speaking, if the noun is a count noun, it will be plural (e.g., *botas* in *limpiabotas* or *discos* in *tocadiscos*); however, if it is a mass noun, then it will be singular (e.g., *luz* in *tragaluz* or *sol* in *quitasol*) (Scalise, Forza, and Fábregas, 2009). There are, of course, some exceptions (e.g., *agua* in *paraguas*). What is especially noteworthy is that the plural morphology is carried over into the compound but the plural semantics are not. As we can see above, compounds built from plural nouns retain the plural /s/ even when they are singular themselves. The plural forms of these nouns are listed below in (73). We see that those that end in /s/ in the singular form remain unchanged in the plural form, while those that did not end in /s/ in the singular form do end in /s/ in the plural form.

(73) Plural V+N compounds

	Singular form		Plural form	
(a)	parabrisas	windshield-sg.m.	parabrisas	windshield-pl.m.
(b)	quitasol	parasol-sg.m.	quitasoles	parasol-pl.m.
(c)	paraguas	umbrella-sg.m.	paraguas	umbrella-pl.m.
(d)	limpiabotas	shoeshiner-sg.m./f.	limpiabotas	shoeshiner-pl.m./f.
(e)	guardabosques	park ranger-sg.m./f.	guardabosques	park ranger-pl.m./f.
(f)	abrelatas	canopener-sg.m.	abrelatas	canopener-pl.m.
(g)	cortaúñas	nail clippers-sg.m.	cortaúñas	nail clippers-pl.m.
(h)	lavaplatos	dishwasher-sg.m.	lavaplatos	dishwasher-pl.m.
(i)	saltamontes	grasshopper-sg.m.	saltamontes	grasshopper-pl.m.
(j)	tocadiscos	record player-sg.m.	tocadiscos	record player-pl.m.
(k)	tragaluz	skylight-sg.m.	tragaluces	skylight-pl.m.
(l)	pierdeplumas	pen-loser-sg.m./f.	pierdeplumas	pen-losers-sg.m./f.

A second point of note is that the gender and number of the compound itself do not appear to be based on that of the noun that makes it up. We have several cases above of compounds consisting of a verb and a feminine noun that are themselves masculine. For example, the masculine noun *parabrisas* is formed from the feminine noun *brisas*, and the masculine noun *tragaluz* is formed from the feminine noun *luz*. There are also instances of a feminine noun being formed from a masculine noun, such as the noun *guardabosques* when it refers to a female park ranger. It appears as though the gender of the noun on which the compound is based does not matter in determining the gender of the compound itself.

Finally, I note that compounds, including verbs with alternating morphology (i.e., those that contain a diphthong in some conjugated forms but not in the infinitive), show diphthongs in the verbal portion of the compound. We see that the infinitival forms *perder* and *colgar* contain the vowels /e/ and /o/, while the verbal component of the compounds formed with these verbs contain the diphthongs /je/ and /we/. Because this dissertation focuses mainly on nouns, I will not go into the details of how these verbs are realized with different forms. I note, however, that under the assumption that roots are devoid of category-specific information and that there can be root suppletion, it seems as though the most consistent explanation for these verbs would be to posit that there are different root realizations depending on the

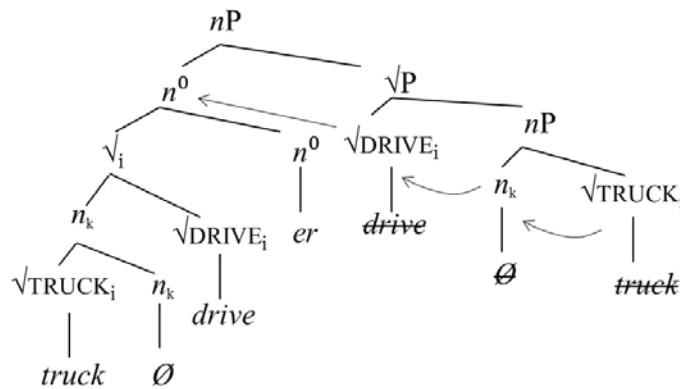
context in which said roots appear. I also do not go into specifics about the realization of theme vowels in these verbal forms. The reader is referred to Oltra-Massuet (1999) and Oltra-Massuet and Arregi (2005) for more specifics on verbal theme vowels in Catalan and Spanish, respectively.

4.10.2. *The structure of V+N compounds*

There have been several previous works on the structure of V+N compounds. I first discuss a previous approach to V+N compounds in the DM framework (Harley, 2008), pointing out why this particular analysis will not work for Spanish, and then look at some additional work on Spanish compound structure, including Shwayder (2015), Moyna (2011), and Scalise, Fábregas, and Forza (2009). I utilize aspects of each of these approaches in the analysis that I put forward in section 4.10.3, taking into account diminutive forms of these nouns, which were not considered in the previous approaches.

Harley (2008) argues that V+N compounds in English are formed from a verbalized root that takes a nominal complement (which itself has categorized another root). This nominal complement incorporates into the \sqrt{P} , following Baker's (1988) ideas on incorporation of nouns. The basic assumption is that syntactic head-to-head movement explains the X^0 status for the resulting syntactic head. The resulting complex head is then itself categorized by an nP and moves into the nominalizing head. The end result is a complex head containing $[[[[\sqrt{\quad}]_{\sqrt{P}} n]_{nP} \sqrt{\quad}]_{\sqrt{P}} n]_{nP}$. An example derivation for the compound *truck-driver* is given below.

(74) Harley's (2008) analysis for English V+N compounds



This analysis seems to work well for English V+N compounds, whose surface form is actually N-V. As we saw above, however, Spanish V+N compounds retain the V-N order as if they were a vP. Another difference is that the nouns in V+N compounds in English are bare nouns (i.e., they are singular and do not have determiners). Spanish nouns in V+N compounds, on the other hand, are typically plural if they are count nouns, as described above. This suggests that there should be a NumP somewhere in the compound to result in the plural noun form. Harley (2008) does not address this in particular but does investigate phrasal compounds in English, which seem to have some elements in common with V+N compounds in Spanish.

Phrasal compounds in English seem similar to V+N compounds in Spanish in that they retain their phrasal word order (i.e., SVO). Harley (2008) investigates some XP-n compounds, or compounds that have a nominal head that is modified by a phrase, such those in italics below.

(75) XP-n compounds from Harley (2008)

- (a) These aren't your standard *stuff-blowing-up effects*.
- (b) When he's not in that mode, though, he does an excellent job with the *bikini-girls-in-trouble genre*.
- (c) I've always found it odd that the people who complain most about realism are *comic-book and science-fiction fans*.

Harley (2008) assumes that these phrases have undergone zero-derivation to a nominal category.

Effectively, they behave similarly to roots that are categorized by a nominalizing head, as shown below.

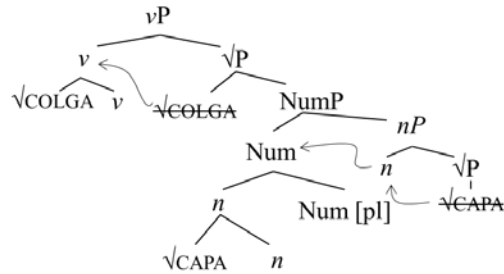
(76) Harley's (2008) demonstration of phrasal components undergoing zero-derivation

$[[XP n^0]_{nP}]$

The assumption that Harley (2008) makes is then that the noun created by this process should be able to undergo affixation just like any other noun. In English, this means that it could undergo affixation of an adjectival suffix, such as *-ish* or *-y* (e.g., *The look she gave was very devil-may-care-ish*).

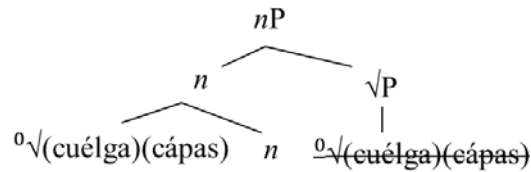
This analysis of phrasal compounds in English looks like it might be able to be extended to V+N compounds in Spanish, which are themselves phrasal in nature. Shwayder (2015) has argued just this. Shwayder (2015) asserts that both the verb and the noun in V+N compounds in Spanish are complete morphological words. These words are then together reinserted into the numeration as a phrase (i.e., undergo renumeration) and take on the characteristics of being a root once again. Shwayder (2015) accounts for the form *cuelgacapas* as shown below in (77).

(77) Shwayder's (2015) derivation of the phrase *cuelga capas*



Shwayder (2015) refers to this grouping of the V+N as a “pseudo-root,” as it undergoes renumeration. This “pseudo-root” is then used in another derivation to create a nominal compound, as shown below.

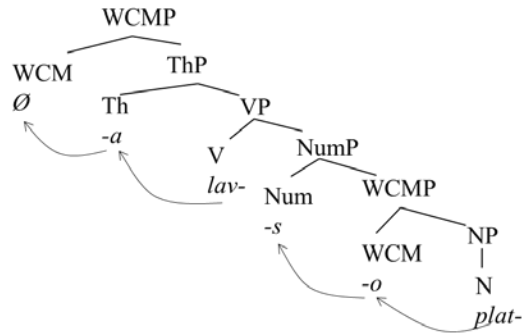
(78) Shwayder's (2015) derivation of the nominal compound *cuelgacapas*



This all seems to make sense and work well until we consider diminutive forms of these nominal compounds. It does not, though, tease apart word class markers or verbal theme vowels, the benefits of which have already been demonstrated above (and in Oltra-Massuet, 1999; Oltra-Massuet & Arregi, 2005; and Kramer, 2015).

Moyna (2011) posits a slightly different structure than Shwayder (2015), which is one that does take into account word class markers. However, Moyna (2011) assumes that word class markers head their own projections (as do verbal theme vowels). It demonstrates that a word class marker for the resulting compound is at least possible, but assumes that the word class marker on these nouns is null. The structure Moyna (2011) provides is given in (79).

(79) Moyna's (2011) structure for V+N compounds



A benefit of Moyna's (2011) structure is that it results in the correct order of morphemes. It also does incorporate word class markers and theme vowels, which Shwayder's (2015) structure does not address (in fact, it seems to suggest that these elements are a part of the roots themselves). However, Moyna's (2011) structure does not explain how the resulting compound behaves as a noun (i.e., takes a determiner and adjectives). This point is also problematic for diminutivizing the resulting compound.

Scalise, Fábregas, and Forza (2009) address this shortcoming from a Lexicalist perspective. It points out the pattern whereby nouns that are arguments in Spanish (Romance) require a determiner (p. 65). The nouns in these compounds do not have determiners, though determiners would be required in the phrase created inside the compound if this phrase appeared in isolation, as shown below.

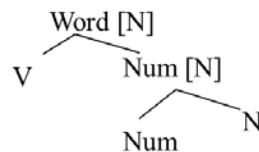
(80) Difference between the phrase and the compound built on it with respect to determiners

- (a) Lava *(los) platos.
(She/he/it) washes (the) dishes.
- (b) lava(*los)platos
dishwasher

Although no determiner is possible in these compounds, the N component is argumental (Scalise, Fábregas, and Forza, 2009). Scalise, Fábregas, and Forza (2009) argue that the way in which the noun in

the compound can have a determiner (and satisfy the requirement mentioned above) is for it to get its determiner elsewhere (i.e., from the determiner required for the full compound). It assumes that active features from the compound can percolate to the head of the word and be relevant for the syntax. In this case, active features are those that have not been formally licensed. The structure below is the one assumed by Scalise, Fábregas, and Forza (2009).

(81) Scalise, Fábregas, and Forza's (2009) V+N compound structure



The N's and V's represent categorial features. The feature V requires an internal argument, which is satisfied by the noun inside of the compound. The verbal feature is then inactive and not available for percolation up the structure. The N, on the other hand, requires a determiner because it is an argument. Because no determiner can be added within the compound itself, the N is not licensed and is therefore active for percolation. It percolates to the Number head and then to the highest node in the compound, which is represented here as Word. This Word node is labeled as an underspecified type of node since it will inherit the features that percolate up the structure and assign the category of the compound itself. In this case, this is the N feature, resulting in a nominal compound.

As for the gender and number features of the noun, Scalise, Fábregas, and Forza (2009) assume that these do not percolate. According to this proposal, gender is satisfied lexically, while number is satisfied by the Number projection that appears inside of the compound itself. This explains why the compound does not necessarily have the same gender or number as the noun that is contained within it.

Scalise, Fábregas, and Forza's (2009) analysis, of course, cannot be maintained in a DM framework. But, the idea of percolation of features is one that might help to explain what is at play in the V+N compounds in Spanish. I argue below that assuming percolation of features can explain why the word class marker can remain unchanged while the gender and number can change. I incorporate the patterns for diminutive morphology on these V+N compounds and demonstrate how we are able to uphold the analysis presented thus far.

4.10.3. *The challenge posed by diminutive V+N compounds and one possible solution*

Diminutive V+N compounds show two different patterns. Those that end in /os/ and /as/ seem to display the same pattern as simple nouns that end in /os/ and /as/. The diminutive morphology appears as /it/ and is realized between the remainder of the compound and /os/ or /as/. Diminutives made from compounds that end in /es/, on the other hand, have word-medial /e/ and end in /os/ when masculine. Diminutives that end in a null word class marker will end in /o/ if masculine. See the data below in (82).

(82) Diminutives of V+N compounds

(a)	abrelatas	canopener-sg.m.	abrelatitas
(b)	cortauñas	nail clippers-sg.m.	cortauñitas
(c)	lavaplatos	dishwasher-sg.m.	lavaplatitos
(d)	saltamontes	grasshopper-sg.m.	saltamontecitos
(e)	quitasol	parasol-sg.m.	quitasolcito, quitasolecito
(f)	tocadiscos	record player-sg.m.	tocadisquitos
(g)	guardabosques	park ranger-sg.m./f.	guardabosquecitos/guardabosquecitas
(h)	trotacalles	vagabond (bum)-sg.m.	trotacallecitos

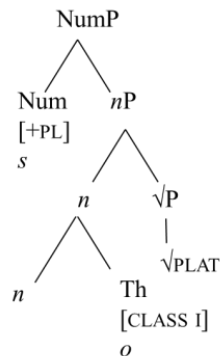
If we were to assume that the elements of the V+N compound are words whose form is unalterable once they become a pseudo-root, as Shwayder (2015) does, then we would have no way to account for the fact that the diminutive appears inside of the pseudo-root for compounds ending in /os/ and /as/. Of course, one easy solution would be to say that the diminutivizing morpheme appears on the

lower *n* (i.e., the one that creates the noun used inside of the compound and not the one that creates the compound itself). However, this should result in the interpretation that the noun in the V+N compound is itself diminutivized, not that the compound is. For example, *lavaplatitos* would mean a washer of little dishes and not a little dishwasher. This is not the interpretation that is assigned to these diminutive V+N compounds, so this does not seem like a viable solution.

At this point, I summarize what we know thus far and what needs to be incorporated into the analysis of these diminutive forms. Then, I draw on previous literature from other perspectives and utilize some of the insights and solutions contained therein to create a possible analysis of these items within the framework that has been presented in this dissertation thus far.

It is first important to note that based on the current framework, we would assume that there could be two different word class markers for these nouns. This is because there are two nominalizing heads, each of which should in theory be capable of appearing below a NumP. The *nP* contained within the compound itself seems to have a NumP, as the noun form can (and typically does when it is countable) appear in the plural form. Because there is a NumP here, we would assume that the Theme node and word class features for this noun would also be inserted. This point of the derivation is shown in (83) below.

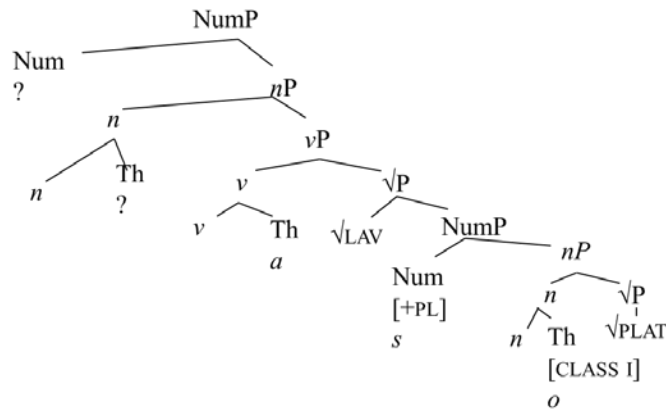
(83) Derivation of the noun in the V+N compound



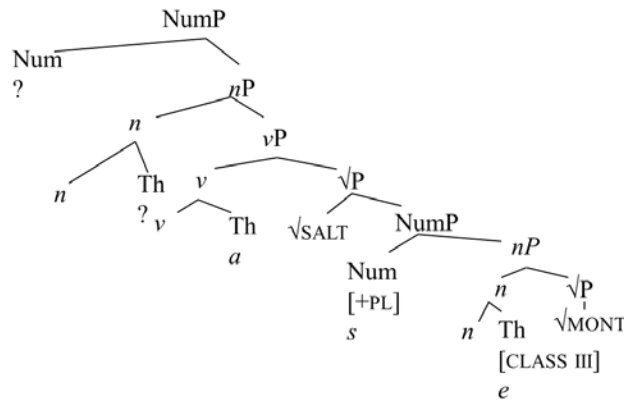
If this part of the derivation were isolated in the way that Shwayder (2015) describes, then we would not expect *lavaplatitos* to be the diminutivized form of this compound. This is because we would not expect the diminutive morpheme to be able to appear between the root of the noun in the V+N compound and the word class marker and the plural marker. A complete derivation of V+N compounds might then look like that proposed in (84).

(84) Derivation of V+N Compounds

(a) *lavaplatos* (dishwasher-sg.m.)

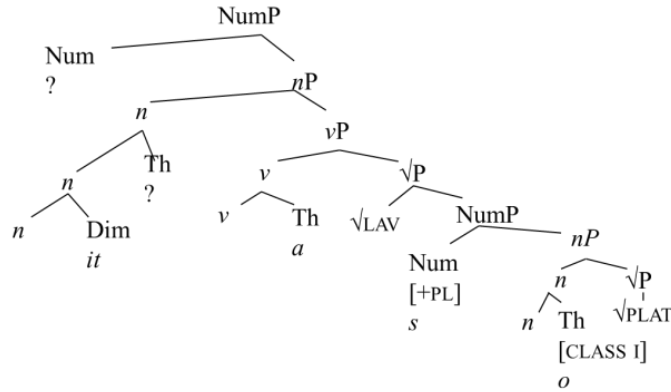


(b) *saltamontes* (grasshopper-sg.m.)

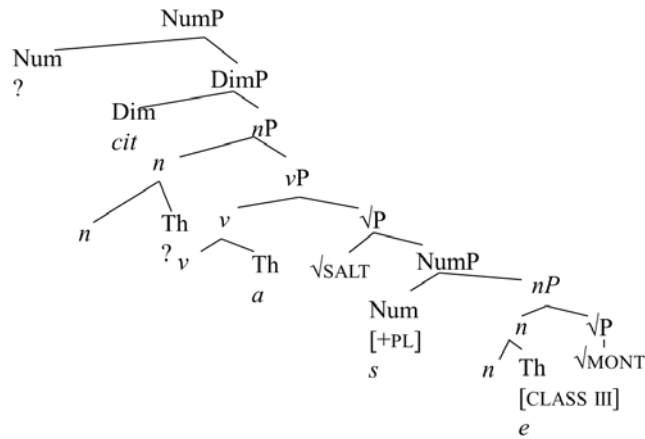


Based on the analysis presented for diminutives in *-ito/a* and *-cito/a*, we might assume structures like those presented in (85).¹⁰⁰

(85a) Possible structure for V+N compound diminutives in *-ito/a*



(85b) Possible structure for V+N compound diminutives in *-cito/a*



¹⁰⁰ In this structure and the ones that follow, I incorporate Harley's (2008) structure in which the root used to form a verb will itself take a complement. This is merely one possible solution, and I retain it here for the sake of simplicity and comparison with Harley's (2008) proposal for English. However, I do not make any claims here about whether roots take complements. For more discussion of this topic, see Harley (2014a, b) and the commentary contained therein.

The most pressing questions concern how the word class marker and the number marking of the resulting compound are realized, both in the bare noun form and in the diminutivized form. We have seen that the plural marking of the noun contained within the compound seems to be carried over to the compound itself even when the compound is not syntactically plural. The word class marker also appears to be carried over from the noun within the compound for the bare noun and also for diminutives when noun within the compound ends in /os/ or /as/. When the noun inside the compound ends in /es/, then the word class marker that appears outside the diminutivized form of the compound is that which matches the noun's gender. The plural marking, however, is still retained even when the compound itself is singular. Gender, on the other hand, is not carried over from this base noun. In fact, the gender of most of these V+N compounds is masculine gender that is not based on biological sex (i.e., the default gender). Compound nouns that denote individuals with biological sex have their gender determined by the sex of the referent.

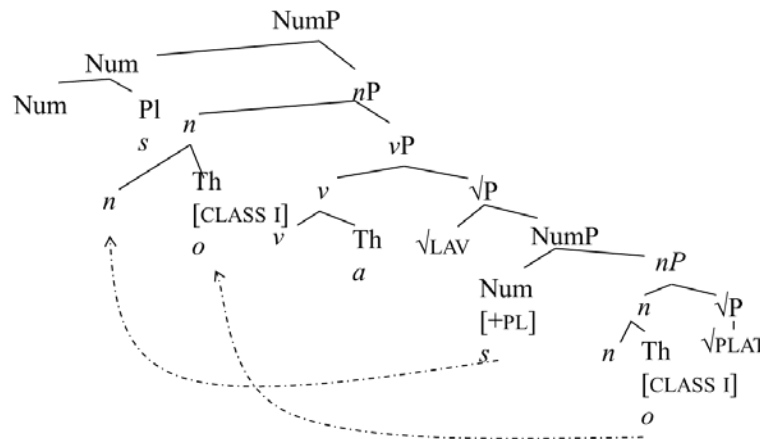
It seems that one piece of the puzzle can be filled in quite easily, then. The gender of the compound is determined by the gender of the upper nominalizing head. This seems to be a plain *n* in most cases unless the compound denotes an animate referent. When the compound denotes an animate referent, then the gender of the noun is determined by the biological sex of the referent, which is reflected in the type of *n* that merges with the compound as its complement (i.e., *i*[+FEM] or *i*[-FEM]).

I look next at word class markers and number markers. The word class markers from the noun inside of the compound appear to be retained for the whole compound. For example, the /o/ is retained for *lavaplatos* and the /e/ is retained for *saltamontes*, as shown above. The word class markers from the diminutives in /os/ and /as/ appear to very clearly be retained. We see the /os/ and /as/ surfacing at the end of the diminutive form, such as in *lavaplatitos* and *abrelatitas*. The plural marking appears to be retained in all instances, despite the lack of plural semantic interpretation for the resulting compound itself.

The question is first what allows the word class marker to be carried over from the base noun in all contexts except the diminutivized nouns built from nouns that do not belong to Classes I and II. Additionally, another question concerns the retention of the plural marking for all of the V+N compounds. I investigate the percolation mentioned above with regard to Scalise, Fábregas, and Forza (2009). It seems that we might be able to assume that the word class marker feature can percolate from the noun inside of the compound to the compound itself. This would allow the word class marker to be retained, as shown in (86).

(86) Derivation of undiminutivized V+N compounds¹⁰¹

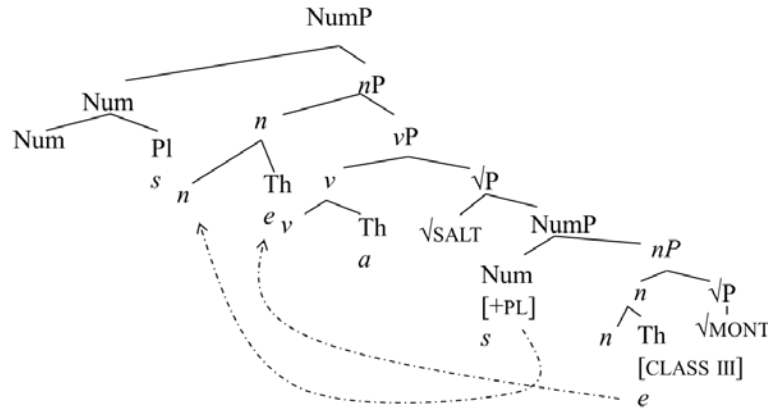
(a) *lavaplatos* ('dishwasher')¹⁰²



¹⁰¹ Note that the arrows illustrating percolation here are simply showing that this feature gets shared with other parts of the derivation. They do not indicate that the feature is displaced or that it is removed from one portion of the structure and added into another. They merely show that the feature that originates at the tail of the arrow is relevant for the position at its head.

¹⁰² This structure and situation looks very much like the canonical opportunity for an Agree relation. This is another possibility that I do not investigate here, as such an approach would be inconsistent with what we have seen thus far. There is also not evidence that we have seen up to this point that Agree takes place within a noun itself (just between a noun and agreeing elements). However, this is a great point for investigation, and I leave it for future research.

(b) *saltamontes* ('grasshopper')



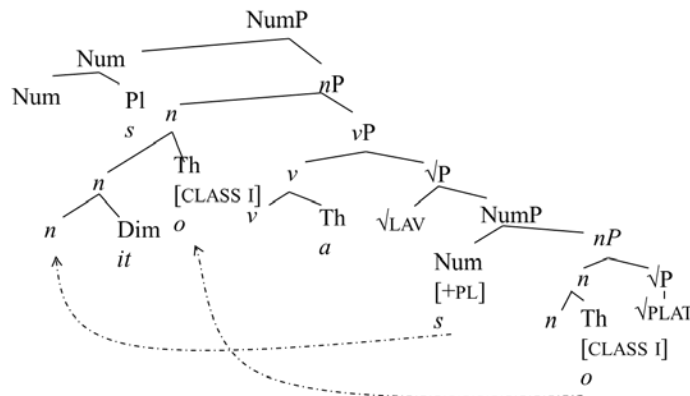
The idea here is that the percolation allows for the realization of the Theme node higher up in the structure than in the *nP* within the compound. With regard to Number, it has been assumed thus far that the number of a noun is determined by the feature on the NumberP itself. In the case of V+N compounds, a plural and a singular compound are realized in the same fashion. I assume that this is the result of the percolation of the plural feature from the noun contained within the compound to the head that nominalizes the compound itself. However, because this feature is on *n* itself and not Num, I assume that it is not relevant for syntactic operations, but that it can impact the morphological realization of Num. I posit that this [+PL] feature that percolates up the structure prompts the insertion of a morphological plural feature on the outer Num, just as was postulated for the false plurals described above. This allows for plural morphology without plural semantic or syntactic repercussions.

Of course, the logical question concerns what prevents the lower word class marker (i.e., the one on the *nP* inside of the compound) from being realized and likewise for the Number feature. I wonder if this is not also the result of some featural requirement that is not satisfied within the *vP*, which also prompts the percolation, borrowing this concept from Scalise, Fábregas, and Forza (2009). This might also be the explanation for the realization of the plural feature outside of the lower *nP* as well. It is well

beyond the scope of this dissertation to investigate these intricacies, as the goal of this section is merely to suggest some ways in which the current analysis might be able to account for V+N compounds and V+N diminutives.

As for the diminutive forms of these V+N compounds, the possible structures based on what we have seen in this section and throughout the dissertation thus far are those provided below.

(87) Derivation for diminutivized /os/- and /as/-final V+N compounds

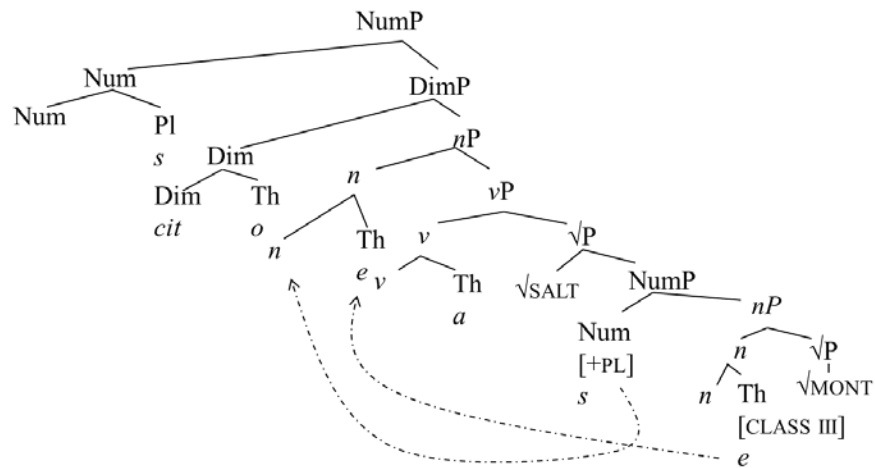


The next question concerns the diminutives built on compounds that end in /es/. These compounds seem to typically be formed by *-cito/a*, and do not retain their word class marker outside of the diminutive suffix. I argue that the word class marker feature still percolates in these nouns. The difference is that these nouns are formed with a DimP instead of an adjoined Dim node. This DimP can host its own word class marker, which is always determined by gender, as we saw earlier in the chapter. The *nP* that creates the compound cannot host a word class marker because it is not adjacent to Num. If the word class feature were contained on *n* after percolation, then it seems as though it should in theory be able to influence the realization of the theme node on the DimP.

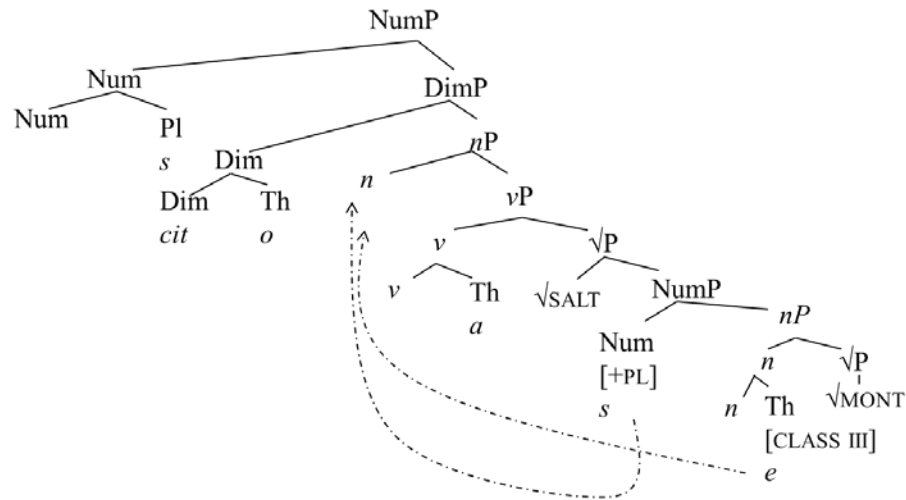
There are multiple possibilities. The first is to assume that the lower word class marker is in fact spelled out on the upper *nP*, which itself is not expected to host a Theme node because it is not adjacent to Num. The second is to assume that there is some restriction on the SpellOut of this theme vowel and that the feature percolates but is not overtly realized. Unfortunately, because this word class marker is the same as the epenthetic vowel, it is hard to say which of these options is most plausible. A third option still is that the word class marker /e/ is spelled out in the lower *nP* before this *nP* forms a compound itself. The fact that the number marking is carried up to the outer *nP* (as described above for diminutive compounds in /os/ and /as/) leads me to believe that the word class marker feature itself might also percolate up the structure. The structure below in (88a) assumes that the word class marker is percolated up and is realized, while that in (88b) assumes that the word class marker feature is percolated up but is not overtly realized. The result of (88b) is that the /e/ that we see word-medially must actually be epenthetic and not a word class marker.

(88) Diminutive V+N compounds built from a plural noun ending in /es/

(a)



(b)



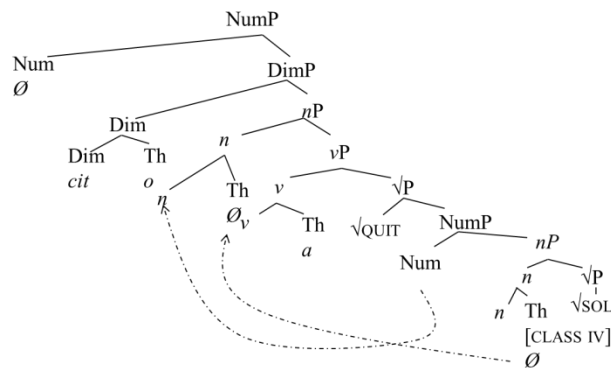
The structures presented above also follow from the definition of phases that we have assumed thus far. Under the definition of phases presented above, it seems as though we would expect that the complement of the lower *nP* would be sent to SpellOut at the point at which the upper *nP* is merged (assuming that \sqrt{P} is not itself a phase). This means that the edge of the phase (i.e., *n* and any specifiers in *nP*) should still be available to impact the other material in the structure. It is plausible then to assume that the word class marker and number information could percolate up the structure. However, as predicted, for the diminutives in *-cito/a*, the word class marker outside of the diminutive morphology is not predictable from that of the noun contained within the compound. This follows if we assume that the word class marker on the DimP cannot access the material that is present below the *vP* due to the DimP itself being cyclic.

The number features should still be available to impact the realization of the the upper Num in both structures if we assume that the feature percolates up to the upper *nP*. Even with the DimP intervening, this feature is still accessible to impact the insertion of a morphologically plural feature without a syntactically plural feature. This is one way in which we can account for the existence of plural

morphology despite the noun being syntactically and semantically singular. Again, it would still need to be determined what features or processes account for the failure of the word class marker and plural marker to be realized in the lower *nP*, which I reserve for future research.

Finally, the V+N compounds that have a null word class marker and are singular can be accounted for. These nouns likely undergo the same process as the nouns in /es/. However, it is hard to assess whether or not there are two word class markers in these nouns, as the lower word class marker (i.e., that determined by the noun contained within the compound) would be null. The outer word class marker would be determined by the gender of the compounding nominal head. The number feature likely percolates, but it is not overtly realized in this case because it is null (since these compounds are built from nouns in the singular form). The resulting structure is that given below in (89), assuming that the lower word class marker is realized (though see (88b) for an alternative structure).

(89) Diminutive V+N compounds that belong to Class IV



The analysis presented in this section is one possible explanation for these V+N compounds that will allow me to retain the analysis presented thus far for diminutives more broadly as well as word class markers and gender in Spanish. I have abstracted away from the verbal component of the V+N compound, aside from demonstrating clearly that it must be a verb and not just a root, due to the presence

of its theme vowel.¹⁰³ Investigating the specifics of verbal morphology is outside the scope of this dissertation, which itself focuses on nominals.¹⁰⁴ However, we can see in this section that it appears as though Scalise, Fábregas, and Forza (2009) were on the right track in that a zero-derivation of these V+N compounds does not seem to adequately explain the data. Moreover, such an account fails to capture the reason why determiners are not necessary in these compounds when they are in regular *v*Ps. Further investigation into the possibility of this particular type of percolation in a DM perspective of these nouns is necessary,¹⁰⁵ but I offer this potential solution as an alternative to the analyses presented thus far. It draws on the main idea from Harley (2008) and Shwayder (2015) that these compounds are built from a separate categorizing head. However, it improves these, and Shwayder (2015) in particular, in that it provides an account for the word class markers in /os/-final and /as/-final diminutive V+N compounds.¹⁰⁶ As mentioned above, there are still some points to clear up and address further, but it is at least a possible analysis to pursue that allows for consistency with the remainder of the dissertation up to this point.

¹⁰³ For more on theme vowels in verbs, the reader is referred to Oltra-Massuet (1999). Although this work is on Catalan, there are significant overlaps between Spanish and Catalan in this respect.

¹⁰⁴ One additional note that I make is that the verbal morphology in V+N compounds is recursive. Campos (personal communication) has noted that the addition of another verb in front of a V+N compound implies that the action of this additional verb (the first in the word) takes a V+N compound as its object. For example, a *lava-abrelatas* is an instrument that washes (*lava* from *lavar* for ‘to wash’) canopeners (*abrelatas* means ‘canopener’). Another example is *mata-saltamontes*, which is someone/something that kills (*mata* from *matar* for ‘to kill’) grasshoppers (*saltamontes* means grasshopper(s)). When these are diminutivized, the meaning is ambiguous. The diminutive form *lava-abrelatitas* can be an instrument that washes little canopeners or a little instrument that washes canopeners, while the diminutive form *mata-saltamontecitos* can be someone/something that kills little grasshoppers or a small person/thing that kills grasshoppers.

¹⁰⁵ See Norris (2014) for one type of percolation in the DM framework, which was also referenced above as it related to class features in regular (i.e., non-V+N compound) diminutives.

¹⁰⁶ One final question concerns whether or not a diminutive is possible within the compound itself (i.e., if *lavaplatitos* were to refer to a washer of little dishes instead of a little dishwasher). According to Varela (1986), this interpretation for these types of diminutivized V+N compounds is not possible. Perhaps the same feature or process responsible for the prevention of the realization of the lower *n*P prevents diminutivization of the noun within the verbal compound. With all of the evidence that has been presented thus far, it seems as though these *n*Ps within the compound are not typical *n*Ps. Further investigation (which is outside the scope of this dissertation) might shed some light on these phenomena mentioned thus far.

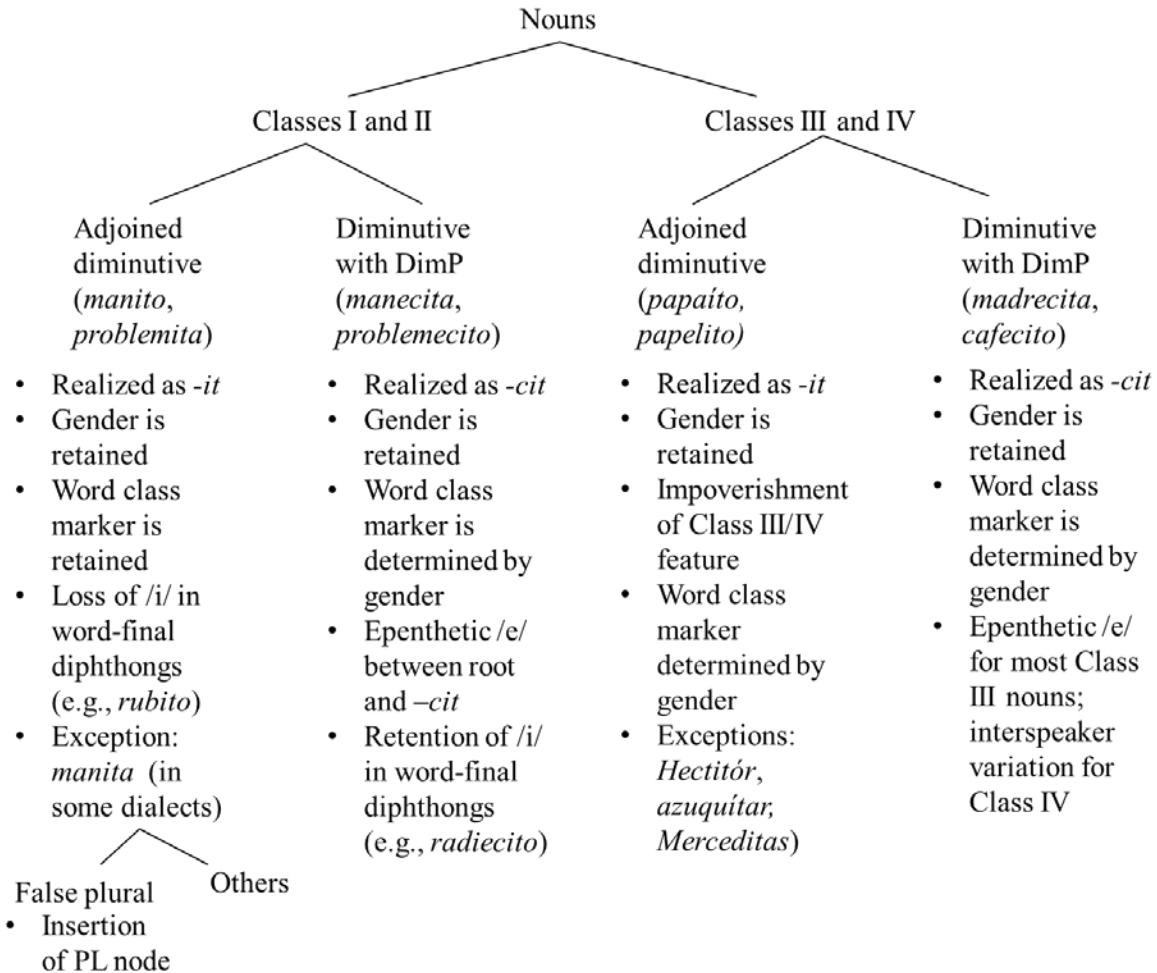
4.11. Concluding summary on diminutives and the location of word class

I began this chapter with a summary of the general properties of diminutives and explained that Spanish diminutives are formed via affixation. In section 4.3, I presented work on the syntactic structure of Spanish diminutives, highlighting the frequently-cited work by Wiltschko and Steriopolo (2007) and Steriopolo (2008), which argues for two different types of diminutivization differentiated by the properties of the resulting diminutive forms. Using Steriopolo's (2008) diagnostics, I demonstrated in section 4.4 that Spanish diminutivized nouns pattern differently with regard to word class when they are diminutivized in *-ito/a* than when they are diminutivized in *-cito/a* (with the exception of some Class III-IV *-ito/a* nouns). This prompted me to assume that the same language can have two different types of diminutives: those formed via adjunction to a categorizing head and those formed via a separate DimP, and that Spanish is one language in which both are possible.

Before delving into my two-position analysis of diminutives, I briefly summarized some previous syntactic analyses of diminutive formation in Spanish in section 4.5. I argued that these analyses fell short in that they did not account for the discrepancies in patterns of word class marking between the two different suffixes. I also explained how they relied on the existence of a word class projection, which I argued against in Chapter 3.

My novel analysis was presented in sections 4.6 and 4.7. The chart below in (90) summarizes the predictions that this analysis makes for nouns of Classes I-IV diminutivized with both possible diminutivization processes.

(90) Summary of the two-position analysis for diminutives



Section 4.6 motivated the assumption that *-ito/a* diminutives are formed via adjunction. In this same section, I provided a solution for the patterning of word class with gender for Class III and IV nouns that diminutivize in *-ito/a*, which was motivated by markedness. I also proposed an account for false plurals that retain the word-final /s/ in their diminutive form even when they are singular.

Section 4.7 provided evidence for the notion that *-cito/a* diminutives are formed by the merger of a separate projection headed by the diminutive morpheme (i.e., DimP). The obligatory patterning of word

class with gender in these nouns prompted me to assume that the word class marker for these nouns must be in a separate phase from the root. I therefore argued that projections other than *n* can house word class markers and that DimP itself was a phase head. Four predictions for the latter assumption were presented and confirmed, providing further support for the two-position analysis.

Added support came in the form of data for similar morphemes (*-inho/a* and *-zinho/a*) in Brazilian Portuguese, which must be present in two different levels of the derivation considering the additional word class and number marking found for one of them (*-zinho/a*). I demonstrated in section 4.9 that the analysis described above can account for complex patterns of allomorphy — and in particular some specific difficult cases — that have been the subject of numerous accounts for decades. The analysis presented here provides an advantage in that it allows for interspeaker and intraspeaker variation and can address the word class marker patterns that have not been explained previously. Lastly, I provided one possible solution to the challenge for the analysis presented in this chapter posed by V+N compound diminutives. The focus of the proceeding chapter will be to extend the analysis presented in this chapter to other diminutive suffixes as well as augmentative suffixes, some of which, I argue, are categorizing.

CHAPTER 5

5.1. Introduction

The previous chapter extended and revised the analysis put forward in Chapter 3 in which gender is on *n* in the syntax (following Kramer, 2015), while word class is inserted postsyntactically on *n*. The novel proposition was that word class could be inserted on other projections in the nominal spine (particularly, evaluative projections) as well. Evidence for this came from diminutives that headed their own projection. Because word class obligatorily reflected gender (/o/ for masculine nouns and /a/ for feminine nouns) and was never conditioned by the identity of the root, I assumed that the word class marker must have been in a separate phase from the root. This demonstrated the need for word class to be inserted further up the nominal spine. I argued that the word class marker (Theme) node could thus be inserted on evaluative projections within the nominal spine. In this chapter, I investigate the implications of this analysis for other diminutives and then briefly describe how it might be extended to account for other evaluative suffixes.¹ I demonstrate that assuming that gender and word class are on *n* allows for a unified explanation of the gender and word class patterns demonstrated by all types of nominals presented in this chapter and the preceding two (i.e., simple nominals, diminutivized nominals, and augmented nominals).

The chapter is structured as follows. First, in section 5.2, I investigate the gender and word class patterns for several diminutive suffixes that were not discussed in detail in the previous chapter. Specifically, I explain how my analysis accounts for the realization of word class for diminutives ending in segments other than /o/ and /a/. Section 5.3 describes the way in which a DM-based analysis can account for the presence of multiple suffixes (i.e., forms) that contribute the same meaning (i.e.,

¹ The latter portion of this chapter, which addresses gender and word class on augmentatives, is merely a preliminary first step in an investigation of these nominals and should not be assumed to be an exhaustive account. In fact, not all augmentatives are considered.

diminutivization). This analysis for diminutives is extended to augmentatives in section 5.4. The chapter concludes with a summary in section 5.5.

5.2. Extending the analysis in Chapter 4 to other diminutives

5.2.1. Background on other diminutivizing suffixes in Spanish

I mentioned in Chapter 4 that Spanish has utilized several diminutivizing suffixes, including *-illo/a*, *-uelo/a*, *-ejo/a*, *-ijo/a*, *-ete/o/a*, *-enzo/a*, *-ín/ina*, *-ito/a*, *-ico/a*, and *-ón/ona* (González Ollé, 1962). The previous chapter addressed the *-(c)ito/a* diminutive suffix, which is the only fully productive diminutive suffix² in modern Peninsular Spanish (Náñez-Fernández, 1973). Some of the remaining suffixes, however, are still very productive in certain dialects, while some are far less productive in all dialects. In this section, I focus on some of the most common ones in the former group: *-(c)illo/a*, *-(c)ín/ina*, and *-(c)ico/a*. To my knowledge, this is the first work that attempts to describe the morphosyntactic structure of these lesser used diminutives.³ The previous work that I have found has concerned itself with the more productive *-(c)ito/a* diminutives and merely mentioned the existence of several others. This marks another novelty of the analysis presented in this dissertation.

There are some generalizations about which suffixes are more common in particular dialects. The suffix *-(c)illo/a*, for instance, is commonly associated with Andalusia in particular (Lang, 1990). It is also noteworthy because it was the most productive suffix in Peninsular Spanish until *-(c)ito/a* became the

² A note on terminology: Throughout this chapter, the term “suffix” is used to refer to the phonological string (typically including the word class marker, when applicable) and not the feature bundle (i.e., morpheme/syntactic terminal node) itself. It is used to denote the orthographic material added to a root and not the morphophonological realization itself. In this way, it is differentiated from a Vocabulary Item (VI), which is itself a morphophonological element.

³ I have also found very little work on the selection between the form with *-c-* and that without for these variants. Lang (1990) notes that there are forms for these diminutives with *-c-* and provides some examples of these, but does not study in-depth the patterns of the associated gender and word class marker. The RAE (2010) describes several patterns for the inclusion of the *-c-* with the suffix *-(c)ito/a*, but does not investigate these patterns for the other diminutive suffixes listed above.

predominant diminutive suffix (Lang, 1990, pp.102-103). As we will see, it has a much greater tendency toward lexicalization in Modern Peninsular Spanish. The suffix *-ico/a* is used in Costa Rica to such an extent that popular accounts argue it is the source of their nickname *ticos*. The Asturian dialect, in contrast, is noted for its usage of the *-(c)ín/ina* suffix pair.

I do note, though, that in none of these regions do we see the presence of just one diminutive suffix. One might wonder why (or how) there are multiple suffixes used to diminutivize the same elements. It seems as though one dialect might select one and discard the others, particularly since they contribute the same meaning. But, Lang (1990) explains that there are subtle differences in the shades of meaning for each of these suffixes and the gradation of pejorativity they connote (i.e., how heavy a pejorative undertone they might express) (p. 102). I provide a preliminary analysis that accounts for this distinction and explain how a DM-based analysis can account for the presence of these syntactic terminal nodes with similar, though not identical meaning. In short, it follows out easily from the process of competition for Vocabulary Insertion, which is governed by the Subset Principle.

The section that follows demonstrates the necessity for a means of differentiating the suffixes in question. Since all of the terminal nodes appear to be able to occur in the same position, at least in some instances, they cannot be distinguished by different positional conditions for their Insertion as was assumed for *-ito/a* and *-cito/a* diminutives in section 4.7.1. Two different solutions to this dilemma are provided in section 5.3: (1) diacritics and (2) a difference in semantic features. Ultimately, I assume the latter based on the fact that the difference between the morphemes (i.e., feature bundles) impacts semantic interpretation and is not arbitrary.

5.2.2. *The data*

As we saw in the previous chapter, Spanish *-(c)ito/a* diminutives motivate an analysis whereby word class is on *n* and other projections within the nominal spine, namely DimP — specifically

whichever projection is adjacent to NumP. It was argued that whenever the word class of the base noun is obligatorily maintained, the root, word class marker, and diminutivizing head must be within the same phase. This prompted me to assume that some diminutives could be formed via adjunction. The other diminutives (i.e., those that did not retain the word class marker from the noun on which they were based) were assumed to be formed by a diminutivizing projection (DimP). In the sections that follow, I demonstrate that there is significant evidence to suggest that the three diminutive suffixes under investigation here (Vocabulary Items) can realize terminal nodes in both positions (i.e., as adjuncts on an *nP* and as heads of DimP).

5.2.2.1. Word class and gender patterns

The data in (1) demonstrates the word class marker and gender patterns for *-(c)illo/a* diminutives with nouns from each of the five classes presented in Chapter 2.

(1) Diminutives in *-(c)illo/a*

(a)	I	el chico	boy-sg.m.	→	el chiquillo	boy-dim.sg.m.
(b)		el venado	stag-sg.m.	→	el venadillo	stag-dim.sg.m.
(c)	II	la rama	branch-sg.f.	→	la ramilla	branch-dim.sg.f.
(d)		la mesa	table-sg.f.	→	la mesilla	table-dim.sg.f.
(e)	III	el puente	bridge-sg.m.	→	el puentecillo	bridge-dim.sg.m.
		la tarde	afternoon-sg.f.	→	la tardecilla	afternoon-dim.sg.f.
(f)	IV	el whisky	whisky-sg.m.	→	el whiskicillo ⁴	whisky-dim.sg.m.
		la mujer	woman-sg.f.	→	la mujercilla	woman-dim.sg.f.
(g)	V	el atlas	atlas-sg.m.	→	?????	
		la tesis	thesis-sg.f.	→	?????	

This data suggests that the patterns for the *-(c)illo/a* diminutives are similar to those for the *-(c)ito/a* diminutives with regard to two points. Diminutivized nouns retain the gender of the noun on which they

⁴ The /i/ in the diminutive here is likely the word-final vowel that surfaces as orthographic *y* in the base nominal but *i* in the diminutive. There is no difference in pronunciation.

are based. Nouns from Classes I-IV seem to diminutivize fairly easily. I did not, however, find instances of Class V nouns that were diminutivized in either *-cillo/a* or *-illo/a*.⁵ This is perhaps not that surprising considering that data was inconclusive for Class V nouns diminutivized with the *-(c)ito/a* diminutive as well, as noted in Chapter 4.

The data in (1) also demonstrates that the *-(c)illo/a* diminutive patterns with the *-(c)ito/a* diminutive with respect to the realization of the word class marker that surfaces after the diminutivizing suffix. This word class marker is either /a/ or /o/. We see that for Classes III and IV, the realization of the word class marker seems to depend on the gender of the base noun; diminutivized masculine nouns end in /o/, while diminutivized feminine nouns end in /a/. Base nouns from Classes I and II, on the other hand, are a different case, just as they are for *-ito/a* forms. This is particularly evident in light of the data in (2), where the word class of the base noun does not pattern with gender.

(2) Diminutives in *-illo/a* when the word class of the base noun does not pattern with gender

(a)	mano	hand-sg.f.	manillo ⁶	hand-dim.sg.f.
(b)	foto	photo-sg.f.	fotillo	photo-dim.sg.f.
(c)	problema	problem-sg.m.	problemilla	problem-dim.sg.m.
(d)	poema	poem-sg.m.	poemilla	poem-dim.sg.m.

The feminine, /o/-final and masculine, /a/-final nouns retain their word class markers in the diminutivized form even though these word class markers do not pattern with gender. Recall that the same base nouns, however, did not retain their word class markers when diminutivized with *-cito/a* (in contrast to when they were diminutivized in *-ito/a*). The data in (3) investigates this point for the base nouns in (2) with the *-cillo/a* allomorph.

⁵ I did not find these in any of the sources on Spanish diminutives that I have consulted or a simple Google search.

⁶ Note that the form *manilla* refers to a ‘handle’ or a ‘hand on the clock,’ which could cause the compositional form to be /o/-final (Campos, personal communication). This form (manillo) was found on several websites using a Google search. The context demonstrates that it clearly refers to the diminutivized form of ‘hand.’

(3) Diminutives in *-cillo/a* for base nouns whose word class does not pattern with gender

(a)	mano	hand-sg.f.	manecilla, ⁷ manecillo	hand-dim.sg.f.
(b)	foto	photo-sg.f.	fotecillo, fotocilla	photo-dim.sg.f.
(c)	problema	problem-sg.m.	problemecillo, (?)problemecilla	problem-dim.sg.m.
(d)	poema	poem-sg.m.	(?)poemecillo, (?)poemecilla	poem-dim.sg.m.

The data for *-cillo/a* is less straightforward than that for *-cito/a*. It seems as though both word class markers (i.e., /o/ and /a/) are possible for the *-cillo/a* diminutive forms of *mano* and *foto*; although, there was a clear preference for *manecilla* over *manecillo* in the number of instances recorded in a simple Google search. There were only two cases of the diminutive of *foto* with *-cillo/a*, one with each word class marker. It seems as though *problemecillo* is the only attested form for *problema*, while there were no instances of either *poemecillo* or *poemecilla*. It is difficult, therefore, to create a hard-and-fast rule for the word class marker of diminutives in *-cillo/a* the way we could for those in *-cito/a*.

As we will see, the data for diminutives in *-(c)ín/ina* is also less predictable than that for *-(c)ito/a*. Diminutive forms for nominals from each Class are provided in (4). Once again, we see that Class V poses a challenge for understanding the complete picture of the diminutivization process in Spanish, as it seems to be far less productive. I note also that the *-c-* appears to surface most naturally for Classes III and IV, as we saw for both *-(c)ito/a* and *-(c)illo/a*⁸.

⁷ The RAE's *Diccionario de la lengua española* (online versión) only recognizes the /a/-final form.

⁸ Data is from a combination of field work and simple Google searches.

(4) Diminutives in *-(c)ín/ina*⁹

(a)	I	el	momento	moment- sg.m.	→	el	momentín	moment- dim.sg.m.
(b)	I		pequeño	small-sg.m.	→		pequeñín	small-sg.m.
(c)	II	la	casa	house-sg.f.	→	la	casina	house-dim.sg.f.
(d)	II	la	gota	drop-sg.f.	→	la	gotina	drop-dim.sg.f.
(e)	III		Jaime	Jaime-sg.m.	→		Jaimín	Jaime-dim.sg.m.
(f)	III	el	puente	bridge-sg.m.	→	el	puentín, puentecín	bridge-dim.sg.m.
(g)	IV	la	flor	flower-sg.f.	→	la	florechina, florcina	flower-dim.sg.f.
(h)	IV	el	bar	bar-sg.m.	→	el	barecín	bar-dim.sg.m.
(i)	V	la	tesis	thesis-sg.f.	→	la	tesina ¹⁰	thesis-dim.sg.f.

This suffix also patterns like the previous two (*-(c)ito/a* and *-(c)illo/a*) in that it appears as though only two word class markers are possible. What is different, however, is that these word class markers are /Ø/ and /a/ instead of /o/ and /a/. If these diminutives are formed in the same way as those in *-ito/a*, then we would expect the word class marker to be retained from the base noun for Classes I and II. The data in (4) contradict this claim, but the data in (5) complicate the picture further.

In (5) we see that the masculine *problema* remains in Class II (i.e., retains its word class marker) in the diminutivized form. Additionally, the feminine, Class I nouns *mano* and *foto* seem to be able to retain their word-final /o/, at least for some speakers. There were, in contrast, no instances of *-(c)ín* for these nouns in a simple Google search.

⁹ Lang (1990) notes that another possible allomorph for this suffix contains the palatal \tilde{n} (/ɲ/), such as in *cuerpo* ('body') → *corpíño* ('little body').

¹⁰ This diminutivized form of 'thesis' typically refers to a shorter thesis, while *tesis* frequently refers to what would be called a dissertation in American English.

(5) Word-final segment for suffix *-(c)ín/ina*

(a)	mano	hand-sg.f.	manino, ?manín, ?manina	hand-dim.sg.f.
(b)	mano	hand-sg.f.	?manecina, ?manecín	hand-dim.sg.f.
(c)	foto	photo-sg.f.	fotina, fotino, ?fotín	photo-dim.sg.f.
(d)	foto	photo-sg.f.	fotecina, ?fotecín	photo-dim.sg.f.
(e)	problema	problem-sg.m.	problemina, problemín	problem-dim.sg.m.
(f)	problema	problem-sg.m.	?problemecino, ?problemecín	problem-dim.sg.m.
(g)	poeta	poet-sg.m.	?poetín, ?poetina	poet-dim.sg.m.
(h)	poeta	poet-sg.m.	?poetecín, ?poetecín	poet-dim.sg.m.

The inconsistent data here shows that there is not much consensus on how these forms diminutivize with either *-ín/ina* or *-cín/cina*. But, it seems as though it might at least be possible to assume that *-ín/ina* diminutives are formed via adjunction, particularly due to the possibility for some speakers for the retention of the word-final /o/ for *mano* and *foto* and the word-final /a/ for *problema*.

Lastly, the data for *-(c)ico/a* is also conflicting with regard to the retention and/or loss of word class markers in the diminutivized form. Data for regular nominals in Classes I and II in which gender patterns with word class and those in Classes III-IV seems pretty straightforward. (It appears once again that data is inconsistent for Class V nouns, so I will again exclude them from my analysis). The *-(c)ico/a* suffix appears to follow the patterns for the same groups of nominals diminutivized in *-(c)ito/a*. This is demonstrated in (6).

(6) Diminutives in *-ico/a*

(a)	I	el momento	moment- sg.m.	→	el momentico	moment- dim.sg.m.
(b)	I	el chico	boy-sg.m.	→	el chiquico	boy-dim.sg.m.
(c)	II	la niña	girl-sg.f.	→	la niñica	girl-dim.sg.f.
(d)	II	la mesa	table-sg.f.	→	la mesica	table-dim.sg.f.
(e)	III	el duende	elf-sg.m.	→	el duendecico	elf-dim.sg.m.
(f)	III	verde	green-sg.f.	→	verdecica	green-dim.sg.f.
(g)	IV	la flor	flower-sg.f.	→	la florecica, florica	flower- dim.sg.f.
(h)	IV	el corazón	heart-sg.m.	→	el corazoncico, ?corazonico	heart-dim.sg.m.
(i)	V	el virus	virus-sg.m.	→	?????	

All of the forms given here end in either /o/ or /a/, just as most of the diminutives formed with *-(c)ito/a* do. Word class markers for nouns from Classes III and IV pattern with gender (/o/ for masculine, /a/ for feminine). The data in (7), however, shows that the results are far less conclusive for nominals in Classes I and II whose word class markers do not pattern with gender.

(7) Word-final segment for *-ico/a* suffix

(a)	mano	hand-sg.f.	manico, ?manica ¹¹	hand-dim.sg.f.
	mano	hand-sg.f.	mancica, ?manecico	hand-dim.sg.f.
(b)	foto	photo-sg.f.	fotico, ?fotica ¹²	photo-dim.sg.f.
	foto	photo-sg.f.	fotecica, ¹³ ?fotecico	photo-dim.sg.f.
(c)	moto	motorcycle- sg.f.	motico, motica	motorcycle- dim.sg.f.
	moto	motorcycle- sg.f.	?motecica, ?motecico	motorcycle- dim.sg.f.
(d)	problema	problem-sg.m.	problemica, ?problemico ¹⁴	problem-dim.sg.m.
	problema	problem-sg.fm.	?problemecico, ?problemecica	problem-dim.sg.m.
(e)	programa	program-sg.m.	programica, ?programico	program-dim.sg.m.
	programa	program-sg.m.	?programecico, ?programecica	program-dim.sg.m.

¹¹ It is difficult to determine whether this form is acceptable independently of the fact that the word exists in the name of a part of the anatomy of certain animals (such as horses) (i.e., *manica flexoria*).

¹² It is also difficult to determine whether this form has been influenced by the adjective *fótica*, meaning 'photic.'

¹³ Note that I only found one instance of this form when conducting a web search.

¹⁴ A web search revealed only one usage of this form.

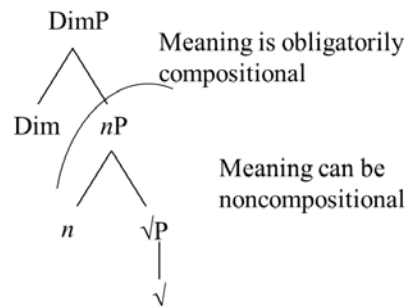
It appears as though feminine Class I nouns can change to Class II if their diminutive form contains the suffix that does not have an orthographic *c*, at least for some speakers. The data for masculine Class II base nouns is less conclusive. This makes it difficult to see whether or not *-ico/a* can expone an adjoined diminutivizing node or only one that heads a separate projection.

Overall, the data for word class marker retention (as evidence for the location of diminutivization) is somewhat inconclusive. But, the fact that at least some of the diminutive forms can retain their word class marker even when it does not pattern with gender suggests that these diminutives can be adjunctions in some cases. In the sections that follow, I present further support for this point and evidence that other diminutives are formed via separate diminutivizing projections.

5.2.2.2. Diminutives and (non)compositional meaning

I explained in Chapter 4 that I predicted that the adjoined *-ito/a* diminutive would be able to create diminutives with noncompositional meaning. This follows from the idea that the categorizing head *n* serves as the demarcation point between the sphere of possible noncompositional meaning and the one of obligatory compositional meaning (cf. Marantz, 2001; Arad, 2003). The figure is presented again here in (8) for clarity. This section examines the possibility for noncompositional meaning for diminutives formed with the three diminutive suffixes under investigation in this chapter: *-(c)illo/a*, *-(c)ín/ina*, and *-(c)ico/a*.

(8) Demarcation point between possible noncompositional meaning and obligatory compositional meaning



It has not escaped the notice of scholars that there are numerous instances of noncompositional diminutives formed with *-(c)illo/a* in particular (e.g., Lang, 1990). I include some of these in (9).¹⁵

(9) Noncompositional diminutives¹⁶ in *-(c)illo/a*

(a)	pera	pear-sg.f.	perilla	knob-sg.f.
(b)	bolso	bag-sg.m.	bolsillo	pocket-sg.m.
(c)	mano	hand-sg.f.	manecilla	clock hand-sg.f.
(d)	cama	bed-sg.f.	camilla	stretcher-sg.f.
(e)	papel	paper-sg.m.	papelillo	cigarette paper-sg.m.
(f)	bocado	bite-sg.m.	bocadillo	sandwich-sg.m.
(g)	zapato	shoe-sg.m.	zapatilla	slipper-sg.f.
(h)	bomba	bomb-sg.f.	bombilla	light bulb-sg.f.
(i)	mano	hand-sg.f.	manilla	handle-sg.f.
(j)	fiera	beast-sg.f.	fierecilla	shrew-sg.f.
(k)	cuaderno	notebook-sg.m.	cuadernillo	booklet-sg.m., liturgical calendar-sg.m.
(l)	estribo	stirrup-sg.m.	estribillo	chorus/refrain-sg.m.
(m)	fleco	fringe-sg.m.	flequillo	bangs-sg.m.
(n)	horca	pitchfork-sg.f.	horquilla	bobby pin-sg.f.
(o)	bastón	cane-sg.m.	bastoncillo	cotton swab-sg.m.
(p)	cola	tail-sg.f.	colilla	cigarette butt-sg.f.
(q)	fraile	monk-sg.m.	frailecillo	puffin-sg.m.

¹⁵ It is expected that there would be many lexicalized forms created with this suffix due to the fact that it is no longer as active as the others. As Nájiz-Fernández (1973) states, the more active a suffix is, the less likely it is that the suffix will have lexicalized forms (p. 378).

¹⁶ This data comes from fieldwork, Lang (1990), and RAE (2009) (p. 635-636).

With regard to the data for *-(c)illo/a*, I point out that I only came across three lexicalized forms in which the *-c-* appeared in the diminutive suffix and there was a noncompositional meaning: *manecilla*, *fierecilla*, *frailecillo*, and *bastoncillo*. Noncompositional forms in *-cillo/a* seem to be less common than those in *-illo/a*, but they do still seem to be a possibility. We could assume that this is evidence that *-cillo/a* diminutives are not formed in the same way as *-cito/a* diminutives (i.e., via a separate diminutivizing projection). However, it is worth noting the fact that this suffix pair is no longer as productive as it once was. Perhaps the process of diminutivization has changed for diminutives in *-(c)illo/a* over time. It could be that these particular forms (i.e., *manecilla*, *fierecilla*, *bastoncillo*, and *frailecillo*) are actually root-derived (due to lexicalization of these forms) and are not created in the same process as other *-cillo/a* diminutives. Further research into the history of this suffix and the usage of its two allomorphs in the past as compared with the future might possibly reveal this information. However, this is beyond the scope of this dissertation. For now, I assume that these few exceptions are not enough evidence to suggest that diminutives in *-cillo/a* can be noncompositional.

Many of the remaining noncompositional forms are likely not included in speakers' grammars as *n*+diminutive pairs. The cases of *manilla* and *zapatilla*, in which the word class of the diminutivized noun changes even though the base form belongs to Class I, are particularly compelling in this regard. For the second of these (i.e., *zapatilla*), there is also a change in gender from the base noun to the diminutivized form. Lang (1990) notes that this process of a shift in gender distinguishes a diminutivized noun from a more or less homonymic form (e.g., *zapatillo* from *zapatilla*) for this *-(c)illo/a* suffix in particular (p. 105). Perhaps these are analyzed as root + word class marker in these cases and not diminutivized forms of pre-existing nouns. I return to this data in section 5.4.3.6.3.

We see that there are also some lexicalized forms for the diminutives in *-ín/ina*, as shown in (10). I have not yet found any noncompositional forms of diminutives in *-cín/cina* nor any in *-cico/a*. The data for forms without this orthographic *-c-* are provided in (10) and (11), respectively.

(10) Noncompositional diminutives for *-(c)ín/ina*

(a)	madre	mother-sg.f.	madrina	godmother-sg.f.
(b)	padre	father-sg.m.	padrino	godfather-sg.m.
(c)	fútbol	soccer-sg.m.	futbolín	foosball-sg.m.
(d)	pata	paw-sg.m.	patín	roller skate-sg.m.
(e)	silla	chair-sg.f.	sillín	bicycle seat, saddle-sg.m.

(11) Noncompositional diminutives for *-(c)ico/a*¹⁷

(a)	abano	punkah (a large swinging fan in the ceiling)-sg.m.	abanico	handheld fan-sg.m.
(b)	Pero	Pedro-sg.m.	perico	parakeet-sg.m.
(c)	vaina	sheath-sg.f.	vainica	pin stitching-sg.f.

In sum, the possibility of noncompositional meaning for *-illo/a*, *-ín/ina*, and *-ico/a* provides further evidence that these diminutives can be formed via adjunction to a nominalizing projection. I show briefly in the next section that evidence from stacked diminutives further supports this assumption.

5.2.2.3. Stacked diminutives

In Chapter 4, I argued that the adjoined diminutive could iterate, while the DimP diminutive could not. This was due to the fact that the adjoined diminutive should be able to iterate without limitation (other than that imposed by external factors) since it is an adjunct. The diminutive that heads its own projection, on the other hand, should not be able to iterate, although it can host an adjoined diminutive itself. (Recall that I suggested that DimP might not be able to select for a categorizing head with a [DIM] feature).

When it comes to iteration of these three diminutive suffixes, we see that the *-(c)illo/a* suffix typically appears inside of other diminutivizing suffixes. This could be due to the fact that many of the

¹⁷ Data from RAE (2010).

-(c)illo/a forms predate those in *-ito/a* and are therefore more susceptible to being retained inside of an additional diminutive (i.e., as a lexicalized form). In contrast, *-ín/ina* typically appears outside of other diminutivizing suffixes (Lang, 1990). The suffix *-ico/a* seems to be able to appear in both positions. The data in (12) illustrate these patterns.

(12) Stacked diminutives¹⁸

(a)	(i)	torta	cake-sg.f.	tortilla	omelet /tortilla ¹⁹ - sg.f.	tortillita, *tortitilla	omelet/tortilla- dim.sg.f.
	(ii)	chico	boy-sg.m.	chiquillo	boy- dim.sg.m.	chiquitillo, ?chiquillito	boy- dim.dim.sg.m.
	(iii)	rama	branch- sg.f.	ramilla	branch- dim.sg.f.	ramillita, *ramitilla	branch- dim.dim.sg.f.
	(vi)	mesa	table-sg.f.	mesilla	table ²⁰ - dim.sg.f.	mesillita, ?mesitilla	table- dim.dim.sg.f.
	(vii)	flor	flower- sg.f.	florequilla	flower- dim.sg.f.	florequillita, *florequitilla	flower-dim.sg.f.
	(viii)	pan	bread- sg.m.	panecillo	roll-sg.m.	panecillito, *panecitillo	roll-dim.sg.m.
	(ix)	verde	green- sg.m./f.	verdecillo	green- dim.sg.m.	verdecillito, *verdecitillo	green- dim.dim.sg.m.
(b)	(i)	chico	small- sg.m.	chiquito	small- dim.sg.m.	chiquitín, *chiquinito	small- dim.dim.sg.m.
	(ii)	poco	a little- sg.m.	poquito	a little- dim.sg.m.	poquitín, *poquinito	a little- dim.dim.sg.m.
	(iii)	Jaime	Jaime- sg.m.	Jaimín	Jaime- dim.sg.m.	Jaimitín, ?Jaiminito	Jaime- dim.dim.sg.m.
(c)	(i)	momento	moment- sg.m.	momentito	moment- dim.sg.m.	momentiquito, ?momentitico,	moment- dim.dim.sg.m.
	(ii)	chico	boy-sg.m.	chiquico	boy- dim.sg.m.	?chiquiquito, chiquitico	boy- dim.dim.sg.m.
	(iii)	niña	girl-sg.f.	niñica	girl- dim.sg.f.	?niñiquita, ?niñitica	girl-dim.dim.sg.f.

¹⁸ Note that I have investigated the stacked diminutives with regard to the *-cito/a* and *-ito/a* diminutives for two reasons. The first is to limit the scope of the data solicited to avoid overwhelming the informants with data and compromising the judgments. The second is that the position of these diminutives has already been investigated thoroughly in Chapter 4. Lastly, it is to zero-in on the relationship between the different positions for the diminutives and avoid conflating factors determining the grammaticality or lack thereof. I assume that using the most productive suffix crossdialectally would avoid this problem as much as it could be avoided in this case.

Another note on this data is that it comes from a combination of soliciting judgments from informants and simple Google searches. The data is quite messy for these suffixes (i.e., there is a lot of variation). Those forms that were deemed acceptable by multiple speakers are unmarked. Those ruled out by all speakers and not found in Google searches are marked with an asterisk (*). Those ruled out by all speakers who were consulted but are found in Google searches are marked with a question mark (?), as are those that were only acceptable to one speaker consulted (this only applies to the form *niñitica*).

¹⁹ The term *tortilla* describes an omelet in Spain but a thin piece of dough in Latin America (translated in English to ‘tortilla’ as well).

²⁰ One alternative definition is ‘nightstand’ or ‘end table.’ This is, of course, typically a smaller table.

It seems that when the *-(c)illo/a* suffix appears as the outermost suffix, it is always *-illo/a* and not *-cillo/a*. The same appears to be true for *-ico/a*, as in (c)(i). This follows the assumption that only the adjoined diminutive can occur outside of either a previous adjoined diminutive or a separate diminutivizing projection. The data for *-ín/ina* is a bit more complicated due to the different word class marker patterns associated with this syntactic terminal node. However, the fact that the inner diminutive in these cases (i.e., *-ito/a*) is an adjunction suggests that the *-ín/ina* suffix is also capable of being an adjunct.²¹ We have even further evidence that a two-position analysis for these three diminutive suffixes is possible.

Although it appears as though a two-position analysis is possible, it does not seem as though it is quite as easy to draw the line between diminutives formed via adjunction and those formed via the merger of a separate projection (as it was for the *-(c)ito/a* diminutives). At the very least, however, we have seen significant evidence that these three Vocabulary Items (i.e., *-illo/a*, *-ín/ina*, and *-ico/a*) can appear in an adjoined position. The consequence of this fact is that we must now be able to account for a way in which the same position in the derivation with the same diminutive feature can be realized in multiple ways. Furthermore, we must be able to account for why their word class patterns differ (e.g., that for *-(c)ín/ina* vs. that for *-(c)illo/a*). This is the topic of the next section.

5.3. Multiple Vocabulary Items realizing (roughly) the same meaning

In the previous section, it was established that there are multiple diminutive Vocabulary Items that can realize the same (adjoined) diminutive position with the same diminutive feature. This raises the question as to how a particular realization would be chosen over the other (i.e., *-ín* vs. *-ito*). I explained the basic DM tenets in Chapter 1, emphasizing that morpheme (i.e., syntactic terminal node) realization

²¹ I return to some of the complications that this suffix creates for word class marker realization in section 5.3.4.

and interpretation²² occurs through competition. In this case, each Vocabulary Item seems equally likely to win the competition and be the realization of the terminal node. What follows is an explanation as to how we can account for the different realizations (and interpretations) of the same terminal node. I present two options (1) diacritics or (2) semantic features that differentiate one morpheme from another. I ultimately determine that the latter is the preferred choice.

5.3.1. Accounting for multiple diminutivizing suffixes

In Chapter 4, I explained that the Vocabulary Item for diminutives formed via adjunction (*-ito/a*) and that for those formed via separate diminutivizing projections (*-cito/a*) were differentiated in the Vocabulary by conditions on their insertion. The Vocabulary Item *-ito/a* realized the elsewhere condition, while the Vocabulary Item *-cito/a* could be inserted only when it realized a terminal node that had a maximal projection as its complement. A similar means of differentiating *-(c)ín/ina* from *-(c)illo/a* will not work, as both seem to be able to realize the same position in the same environment (e.g., an adjunction to *nP*). There are two other possibilities: (1) diacritics that distinguish one terminal node from another; (2) the presence of some semantic feature(s) that differentiates one terminal node from another. I explore each in turn.

A diacritic is a marker that differentiates one syntactic terminal node (i.e., feature bundle) from another. This marker is similar to the index that distinguishes one root from another in that it corresponds with a difference in phonological form and also in interpretation. However, while root 907, DOG, and root 908, TABLE,²³ (for example) might differ drastically in their interpretation, two diminutivizing nodes will only differ slightly.

²² As mentioned in section 5.2.1, diminutives formed with different suffixes vary slightly in their interpretation, particularly with regard to the level of pejorativity that is contributed to the base element.

²³ These root indices and their interpretations were selected at random. They do not reflect a stance on association of words within the storage component of the grammar.

In order to differentiate diacritics from root indices, I represent them with letters and not numbers. An inventory of the Vocabulary Items we have seen thus far (and consequently not an exhaustive list of all Spanish diminutives) is provided below in (13) with differentiation by diacritics.

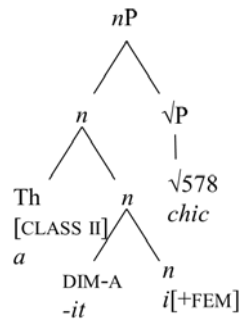
(13) Spanish diminutives differentiated by diacritics

DIM-A	-(c) <i>it</i>
DIM-B	-(c) <i>ill</i>
DIM-C	-(c) <i>ín</i>
DIM-D	-(c) <i>ic</i>

The idea is that each morpheme with a diacritic represents the same diminutivizing feature. What these diacritics differentiate are not the phonological sequences that realize a particular terminal node, but rather a series of terminal nodes themselves. The result is that each terminal node can be expounded with a different phonological string and also have a slight difference in interpretation. The former is encoded in the Vocabulary with instructions for the realization of one as different from the realization of another. The latter (interpretation) is encoded in the Encyclopedia. In this case, there are slightly different instructions for the interpretation of these different terminal nodes, which can vary in their pejorativity (as Lang, 1990 noted that diminutives formed with different suffixes are able to do).

The derivation below in (14) demonstrates the assumed structure for the *-ito/a* diminutive in light of the diacritics proposed above. This structure is no different than that presented for the same diminutive in Chapter 4 with one small exception: the terminal node is shown with a diacritic. This diacritic ensures that once the derivation is sent to SpellOut, this node is expounded with the sequence *-ito/a* and receives the interpretation given for *-ito/a* diminutives. Without this diacritic, any of the diminutive Vocabulary Items could be inserted here to expone this terminal node. Likewise, any particular interpretation given for any of the diminutives could be supplied by the Encyclopedia.

(14) Derivation for DIM-A syntactic terminal node (*chiquita* - girl.dim.sg.f.)



Once the diminutivizing terminal node with the A diacritic is merged, we have only one option as to its phonological realization: *-it*. Then, the Theme node realization process simply proceeds as was described in Chapter 4. The feminine nominalized root $\sqrt{\text{CHIC}}$ results in the insertion of a Theme node with a [CLASS II] feature. The result is that an /a/ is inserted to realize the [CLASS II] feature, as described in Chapter 3. The derivation of the same nominal with the other diminutivizing terminal nodes would proceed in the same fashion; the only difference would be the identity of the diacritic on the diminutivizing node. The diacritic would then prompt the insertion of a different Vocabulary Item (i.e., *-ic*, *-in*, or *-ill*).

This first option (i.e., differentiating diminutive terminal nodes with diacritics) seems pretty straightforward. However, the marking of the diacritic is completely arbitrary. These diacritics prompt a difference in phonological realization and interpretation but are not differentiated from one another in a meaningful way. It would be preferable to be able to account for these differences, particularly the differences in interpretation, in a more systematic way. I argue that the alternative (i.e., differentiating diminutives by semantic features) does just that and can also account for the slight differences in meaning across these suffixes, which were referenced above.

As mentioned previously, Lang (1990) has pointed out that the diminutives *-(c)ito/a*, *-(c)illo/a*,

-(c)ín/ina, and *-(c)ico/a* differ in their level of pejorativity. Santibáñez Sáenz (1999) notes that the suffix *-(c)illo/a*, in particular has more of a tendency towards pejorativity, while *-(c)ito/a* is typically “affectionate” (p. 175). The *-(c)ico/a* and *-(c)ín/ina* suffixes are also more affectionate than pejorative, Santibáñez Sáenz explains. Lang (1990) agrees, noting that *-(c)ito/a* is the “least inherently pejorative” (p. 103). He states that *-(c)ico/a* is similar to this suffix in that it is rarely pejorative and mildly affectionate, adhering more closely to “a strictly diminutive sense” (i.e., small size) (p. 108). The suffix *-(c)ín/ina*, on the other hand, has “light or friendly pejoration” (p. 107). It seems the ordering from least pejorative to most pejorative is thus the following:

(15) Pejorativity of diminutive suffixes²⁴

(Least pejorative) *-(c)ito/a* → *-(c)ico/a* → *-(c)ín/ina* → *-(c)illo/a* **(Most pejorative)**

If we were to assume that the suffixes in this diagram were differentiated by diacritics, we would have no way of capturing these generalizations. An alternative is to assume that there is a particular feature (or that there are particular features) that can distinguish one from the other and allow for the slight difference in meaning. I propose one possible (but rather simplified) set of feature bundles and their phonological realizations in (16) below.

²⁴ I note also, however, that Santibáñez Sáenz (1999) has explained that sometimes the generalizations given above can be reversed “in a seemingly arbitrary way.” For example, *Estoy harto de tus bromitas* can have the meaning ‘I’m fed up with your nasty little jokes,’ while *Eres un granujilla* can be translated as ‘You’re a nice little rogue’ (p. 175). We see here that *-(c)illo/a* is assigned a more positive and less pejorative connotation than *-(c)ito/a*. Santibáñez Sáenz notes that this reversal in connotation is associated with the interplay between the semantic material associated with the diminutive and mental spaces in one’s propositional knowledge of the world. The meaning typically associated with a suffix can be reversed when it clashes with the meaning associated with the statement as a whole. In the cases above, the negativity associated with the word ‘rogue’ overrides the pejorativity of the diminutive, prompting an affectional connotation. The opposite holds for the previous example. For more details on how exactly different mental spaces and the details of these propositions associated with the semantic features involved, see Santibáñez Sáenz (1999) and the references cited therein.

(16) Vocabulary Items for diminutives as differentiated by semantic features²⁵

[DIM] [+PEJ] [-AFF]	↔	(c)ill
[DIM] [+PEJ] [+AFF]	↔	(c)in
[DIM] [-PEJ] [+AFF]	↔	(c)ic
[DIM]	↔	(c)it

The proposed Vocabulary Items are intentionally oversimplified to merely demonstrate how such a process could work. Here, [PEJ] stands for ‘pejorativity,’ while [AFF] stands for ‘affection.’ The diminutive realized as *-(c)illo/a* has a pejorative and not an affectionate connotation, so it is listed as [+PEJ] [-AFF]. The diminutive in *-(c)ín/ina* is both pejorative and affectionate, while the diminutive in *-(c)ico/a* is only affectionate. I have listed the *-(c)ito/a* diminutive as an elsewhere case, as it seems to be the least marked and certainly the most productive. It also has the most “strictly diminutive sense,” as Lang (1990) notes.

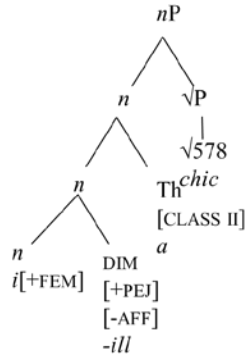
I mention briefly that there is little in this current set of Vocabulary Items to differentiate *-(c)ico/a* from *-(c)ito/a*. This is somewhat intentional, as the two seem to be more or less matched in the meanings that they denote. The difference between the two appears to be more a matter of regional/dialectal difference rather than a difference in semantic features. (Note that Lang, 1990 lists *-(c)ico/a* as the most regionally marked of the diminutive suffixes he describes). As such, distinguishing between the two seems to be a matter of interspeaker variation more so than differences in semantic features. I do not, therefore, attempt to tease them apart any further.

Some example derivations for all four of the terminal nodes described above, differentiated by semantic features, are provided below in (17).

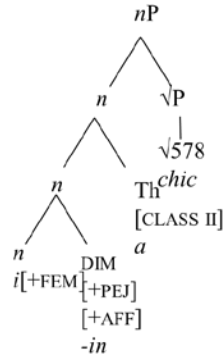
²⁵ These are features that are associated with these suffixes. However, note that there are certainly instances in which each diminutive can appear with a purely diminutive or affectionate reading. It is possible that such features combined with certain pragmatic features and discourse contexts might produce such a diminutive or affectionate reading. It is beyond the scope of this dissertation to investigate these properties. I merely note them here to demonstrate that the presence of these [+PEJ] and [+AFF] features need not necessarily force a pejorative or affectionate reading in all instances.

(17) Derivations for each type of diminutive

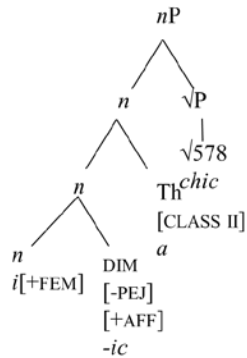
(a) Diminutives in *-illo/a*
chiquilla



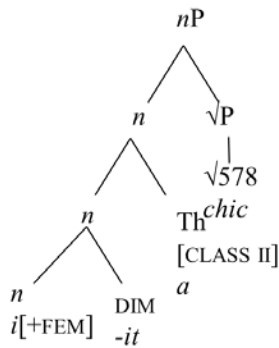
(b) Diminutives in *-ín/ina*
chiquina



(c) Diminutives in *-ico/a*
chiquica



(d) Diminutives in *-ito/a*
chiquita



Because there is a semantic distinction to be drawn across the different diminutive suffixes, I assume that differentiation due to semantic features is preferable to differentiation by diacritics. This is the analysis that I provide for these diminutives throughout the remainder of the dissertation. However, I note that there is more work to be done to determine the feature inventory of these diminutives in greater detail. This would involve motivating the features provided here in Spanish and perhaps in other languages, demonstrating that these features are relevant for other structures, not just diminutives (though

I suspect they are also necessary for other evaluative suffixes, which seem to also differ in the levels of pejorativity and affection that they connote — cf. Lang, 1990; RAE, 2010).

Even if we adopt the simplified Vocabulary Items above in (16), there are still several questions that remain to be addressed. The first concerns how different members of each suffix pair (i.e., *-cito/a* vs. *-ito/a*; *-cillo/a* vs. *-illo/a*; *-cín/ina* vs. *-ín/ina*; and *-cico/a* vs. *-ico/a*) are differentiated. I will address this in section 5.3.2. Second, I must discuss how we can account for the fact that particular diminutives are much more common with certain base elements (i.e., that *-(c)ico/a*, for instance, seems to be almost entirely limited to nominal bases, as Lang, 1990 explains). Finally, I must investigate the realization of the word class markers for the *-illo/a*, *-ín/ina*, and *-ico/a* diminutives. The derivations provided above in (17) for feminine, Class II nouns are very straightforward, as these nouns retain their Class II word class markers with all of the diminutive suffixes. It is, however, necessary to delve further into the specifics of the realization of word class for nominals whose word class does not pattern with gender in the expected way (i.e., those that are formed with *-ín/ina*, and as a result, have a null word class marker instead of /o/). I also address briefly how we might be able to account for adjoined diminutives whose word class markers pattern differently from those in nouns formed by *-ito/a*.

5.3.2. Differentiating members of the same suffix pair (e.g., *-cillo/a* from *-illo/a*)

This section addresses how we can differentiate two members of a suffix pair (e.g., *-cillo/a* and *-illo/a*). The semantic patterns described above hold for both members of the pair (i.e., *-cillo/a* has the same level of pejorativity and affection as *-illo/a*), so they cannot be distinguished by semantic features. There are two other approaches that both seem to have their merits and their drawbacks.

The first is to assume the existence of a diacritic for the member of each pair (e.g., *-illo/a* might realize {[DIM][+PEJ][-AFF]}-A, while *-cillo/a* might realize {[DIM][+PEJ][-AFF]}-B). Each member of the pair would have the same set of features and would only be distinguished from the other by means of an

index (represented above by a letter). The benefit of this is that it would allow greater flexibility for the appearance of each member of the pair if it does not correspond with a difference in position. It was explained in section 5.2.2.1 that the data on this point was not as conclusive as that for the *-cito/a*~*-ito/a* pair for the remaining diminutives. But, if there are positional restrictions on one of the forms or the other, we would not capture that relationship. In fact, we would not have a means of explaining the generalizations that we have seen with regard to compositionality and ability to iterate.

The second option is to assume that there is a positional restriction in the instructions for insertion of Vocabulary Items, just as we proposed for *-cito/a* and *-ito/a*. I repeat in (18) the Vocabulary Items that I provided for *-cito/a* and *-ito/a*.

(18) Possible Vocabulary Items for diminutives realized as *-ito/a* and *-cito/a*

[DIM]	↔	θit	/	xP
[DIM]	↔	it		<i>elsewhere</i>

At this point, we do not have enough conclusive data to determine whether or not the same positional restrictions would apply for the three remaining diminutive terminal nodes. However, if we did, we could conceivably use positional restrictions to account for when each type of diminutive is able to appear.

I do not choose between the two options at this point but note some of the benefits of both over the assumption that the two are in free variation or that the two are not realizations of the same sets of features in different positions. Both can account for the identical meaning assigned to each pair while differentiating one from the other in some way. Each would enable us to account for intraspeaker mutual exclusivity (i.e., that only one member of the pair can be used in a given position). One remaining question, however, is why certain diminutivizing terminal nodes (realized with specific Vocabulary Items) are not possible or are less likely with some categorizing heads and not others. In order to account

for these patterns, I utilize licensing conditions, such as those described in Chapter 3 (following Kramer (2015)). This is detailed in the section that follows.

5.3.3. *Licensing conditions impose restrictions on when a specific diminutive is permitted*

I mentioned in the previous chapter and above that certain diminutivizing suffixes are more productive than others. Some, like *-(c)ito/a*, are able to diminutivize bases from many categories, while others, such as *-ico/a*, are almost completely limited to nominal bases (Lang, 1990). I argue that these patterns can be accounted for using licensing conditions.²⁶

As we saw in Chapter 3, Kramer (2015) presents two different types of licensing conditions: semantic licensing conditions and arbitrary licensing conditions. The semantic licensing conditions are those that affect semantic interpretation, while arbitrary licensing conditions are assumed to be limitations on the exponence of specific morpheme (i.e., feature bundle) combinations. The case of diminutivizing node selection for specific categorized elements could be an instance of either. Since the semantics of diminutives appear to interact with pragmatics and discourse, it is difficult to say whether or not a certain interpretation might be blocked due to a lack of instructions for this combination of features in the Encyclopedia. This is one possibility. The other is that there are arbitrary licensing conditions. If we were to assume the arbitrary licensing conditions, we could combine them with the semantic feature distinctions presented above and account for the observed patterns. A possible inventory of licensing conditions with semantic features differentiating the different diminutivizing terminal nodes is provided in (19).

²⁶ Note that selectional restrictions cannot be used for the adjoined diminutive the way that they were used for the DimP diminutive in Chapter 4. This is due to the fact that the adjoined diminutives do not head a separate projection and thus do not select for specific complements, as they do not have complements.

(19) Possible arbitrary licensing conditions for diminutives based on semantic feature distinctions²⁷

- (a) [DIM] [-PEJ] [+AFF] ↔ *ic* / *n*
- (b) [DIM] [+PEJ] [+AFF] ↔ *ín* / *n, adj*²⁸
- (c) [DIM] [+PEJ] [-AFF] ↔ *ill*
- (d) [DIM] ↔ *it*

The first condition effectively limits the *-ico/a* allomorph to nominal contexts. The second (in (b)) restricts *-ín/ina* to nominal and adjectival contexts. The final two demonstrate that *-illo/a* and *-ito/a* are permitted with nouns, adjectives, adverbs, and verbs.²⁹

These licensing conditions ensure that a specific diminutive will be expounded when in a licit context (i.e., when it diminutivizes categorized elements with which it is compatible). In all other instances, the derivation will crash at PF since the diminutivizing morpheme will fail to receive phonological material to expone it. This combination of semantic features and licensing conditions effectively ensures that specific diminutives will appear in certain contexts and not in others. In fact, the Subset Principle will rule this out entirely.

As explained in Chapter 1, the Subset Principle stipulates that Vocabulary Items for a terminal node can contain a subset of the features possessed by that node but not a superset. In other words, phonological material can expone fewer features than a node contains but not more than these. If we assume that there are semantic features that differentiate one diminutive from another, then we are guaranteed that a particular diminutive will only be expounded by the phonological string that realizes the features it contains and not more than these. We saw above that this holds for the diminutives with particular feature combinations. When we add in the positional restrictions (similar to those referenced by

²⁷ Conditions on the bases with which these suffixes are possible come from the data provided by Lang (1990, pp.103-109).

²⁸ Lang (1990) also includes verbs in the list of categories that this terminal node can attach to. I argue in section 5.4.3 that deverbal nominals in *-ín/ina* are not actually diminutives.

²⁹ As Lang (1990) notes, however, *-illo/a* is more limited with certain adverbs than is *-ito/a*.

Arregi & Nevins, 2012), we are guaranteed that *in* will not realize a node that is not adjectival or nominal, even if it is [+PEJ][+AFF]. Instead, the elsewhere morpheme *it* will appear in these contexts, which will be permitted since there are not conflicting feature or positional restrictions listed in its conditions for insertion. What is blocked, however, is the realization of this same node as *ill*, due to the presence of the [+AFF] feature.

As Arregi and Nevins (2012) have pointed out, feature combination restrictions take precedence over positional restrictions. In other words, if two Vocabulary Items can appear in the same position, the one that expones the greatest Subset of the features listed in the conditions for insertion is inserted. For example, a morpheme that is adjacent to a nominalizing head can be realized with any of the Vocabulary Items given above. In this case, the one that matches the greatest number of features in the morpheme itself will be inserted.

On the other hand, when a morpheme has a set of features that can be realized by two different Vocabulary Items, then the one that matches the positional restriction will be inserted. This would apply to a morpheme that has the features [DIM] [-PEJ] [+AFF]. As I noted above, this feature bundle is realized as either *ic* or *it*. However, once adjacent to any categorizing head other than *n*, there is only one option: *it*.³⁰

The conditions on Vocabulary Insertion above are thus a good approximation of the process whereby multiple Vocabulary Items can realize a similar set of features in the same relative position (i.e., as an adjunction to a maximal projection). However, further research is needed to investigate the plausibility of these features and how pragmatics and discourse might impact the realization and interpretation of these features. I merely posit the analysis above as a possible means of accounting for the patterns that we observe whereby certain diminutive morphemes much more readily diminutivize some base elements than others. The last stage of the analysis is to explain how the word class markers on these

³⁰ I mentioned previously that the restrictions on the appearance of *-ico/a* and *-ito/a* appear to be regional/dialectal in nature. I do not address them here and leave them for future investigation.

diminutives are realized. In particular, I explain how we can account for the patterns observed in section 5.2.2.1 and how the analysis presented in Chapter 4 can explain the unexpected null word class marker that surfaces with the *-(c)ín/ina* diminutive.

5.3.4. *Word class marker realization*

We saw above that diminutives formed with *-(c)ín/a* obligatorily have a word class marker other than that of the base noun when the base noun belongs to a class other than Class II or Class IV (with a few exceptions and questionable cases, as shown above). Nouns from the remaining classes will have diminutivized forms in /Ø/ and /a/ when they are masculine and feminine, respectively. The word class marker for the diminutive form of feminine Class IV nouns will also be /a/. This marks a departure from all of the other diminutive suffixes considered thus far. For these suffixes, diminutive forms of masculine nouns had /o/ as their word class marker, while feminine nouns had /a/, unless the diminutive was formed via adjunction for nouns from Classes I and II. In this case, the word class marker was retained from the base noun. Because *-(c)illo/a* and *-(c)ico/a* pattern (more or less) in the same way as *-(c)ito/a*, we can assume that the word class marker realization process proceeds in the same manner as that described for *-(c)ito/a* (see Chapter 4). The *-(c)ín/ina* suffix, however, requires further explanation.

If some of the diminutives formed via *-(c)ín/ina* can be adjoined (cf. section 5.2.2), we need to ensure that the word class marker from nominals that do not end in /Ø/ need not be retained. (See the data from (4-5), repeated here as (20-21)). But, at the same time, we need to ensure that it can be retained for cases like those in (21).

(20) Word class patterns for diminutives in *-(c)ín/ina*

(a)	I	el	momento	moment-sg.m.	→	el	momentín	moment-dim.sg.m.
(b)	I		pequeño	small-sg.m.	→		pequeñín	small-sg.m.
(c)	II	la	casa	house-sg.f.	→	la	casina	house-dim.sg.f.
(d)	II	la	gota	drop-sg.f.	→	la	gotina	drop-dim.sg.f.
(e)	III		Jaime	Jaime-sg.m.	→		Jaimín	Jaime-dim.sg.m.
(f)	III	el	puente	bridge-sg.m.	→	el	puentín	bridge-dim.sg.m.
(g)	IV	la	flor	flower-sg.f.	→	la	florechina	flower-dim.sg.f.
(h)	IV	el	bar	bar-sg.m.	→	el	barecín	bar-dim.sg.m.
(i)	V	la	tesis	thesis-sg.f.	→	la	tesina	thesis-dim.sg.f.

(21) Word class patterns for *-(c)ín/ina* diminutives whose base nouns' word class markers do not pattern with gender

(a)	mano	hand-sg.f.	manino, ?manín, ?manina	hand-dim.sg.f.
(b)	mano	hand-sg.f.	?manecina, ?manecín	hand-dim.sg.f.
(c)	foto	photo-sg.f.	fotina, fotino, ?fotín	photo-dim.sg.f.
(d)	foto	photo-sg.f.	fotecina, ?fotecín	photo-dim.sg.f.
(e)	problema	problem-sg.m.	problemina, problemín	problem-dim.sg.m.
(f)	problema	problem-sg.m.	?problemecino, ?problemecín	problem-dim.sg.m.
(g)	poeta	poet-sg.m.	?poetín, ?poetina	poet-dim.sg.m.
(h)	poeta	poet-sg.m.	?poetecín, ?poetecín	poet-dim.sg.m.

In short, we need to account for the fact that the masculine, /o/-final *momento* and *pequeño* do not carry their word class marker over into the diminutive form. On the other hand, we must ensure that the word class marker for the feminine, /o/-final *mano* and *foto* can be carried over (though it apparently does not always need to be). We also need to be sure that Class II nominals will retain their word class no matter the gender of the base noun (though, again, this does not always seem to be so, as some speakers prefer *problemín* for the masculine, Class II *problema*).

I argue that the way to account for this is by the addition of a new condition on Class feature insertion and a particular ordering of the remaining conditions. This new condition stipulates that the Class IV feature should be inserted when the Theme node is adjacent to the diminutive that realizes the feature bundle [DIM][+PEJ][+AFF]. For ease of exposition, I have listed this as DIM-C, but note that this diacritic is merely a stand-in for a set of semantic features and not an arbitrary marker (such as those

described in section 5.3.1) itself. I have included the revised conditions on Theme node insertion here in (22).

(22) Amended Theme insertion rules

- (a) (i) Insert {Th}[CLASS,V] in the context of $\sqrt{\text{VIRU}}$, $\sqrt{\text{SÓCRATE}}$, $\sqrt{\text{ANÁLISI...}}$; Num
- (ii) Insert {Th}[CLASS IV] in the context of $\sqrt{\text{FLOR}}$, $\sqrt{\text{PAPEL}}$, $\sqrt{\text{CHEF}}$, $\sqrt{\text{CLUB...}}$; Num
- (iii) Insert {Th}[CLASS II] in the context of $\sqrt{\text{TEM}}$, $\sqrt{\text{DIAGRAM}}$, $\sqrt{\text{POET...}}$; Num
- (iv) Insert {Th}[CLASS III] in the context of $\sqrt{\text{MADR}}$, $\sqrt{\text{PADR}}$, $\sqrt{\text{CLAS}}$, $\sqrt{\text{JEF...}}$; Num
- (v) Insert {Th}[CLASS I] in the context of $\sqrt{\text{MAN}}$, $\sqrt{\text{LIBID...}}$; Num
- (b) (i) Insert {Th}[CLASS II] in the context of $n[+\text{FEM}]$; Num
- (ii) Insert {Th}[CLASS IV] in the context of DIM-C³¹; Num
- (c) Insert {Th}[CLASS I] in the context of Num

The ordering of the conditions in (a)(iv)-(vi) is crucial. The condition on insertion of Class II features for the idiosyncratic masculine, /a/-final nouns must apply before the condition on insertion of the Class IV feature for the *-ín/ina* (DIM-C) diminutive suffix. If it did not, then we would always have the form *problemín* and not *problemina*. The fact that both forms are attested suggests that perhaps some speakers have a different ordering for these two conditions for Theme node insertion. However, the conditions listed above will be able to account for the presence of /o/ for masculine Class II nouns and feminine Class I nouns that are diminutivized by *-ín/ina*. At the same time, it allows masculine nouns from any class other than Class II to have a null word class marker instead of /o/.

³¹ The reader might notice that I have added a condition on to (b) here and placed the instructions for some morpheme-determined Class features below the instructions for nouns of the feminine gender. This is due to the absence of a $u[-\text{FEM}]$ feature, which prevents the creation of a condition like *Insert {Th}[CLASS IV] in the context of [-FEM] DIM-IN* above (b)(i). We need to guarantee that masculine nominals diminutivized with *-ín* have a null word class marker. However, a condition like *Insert {Th}[CLASS IV] in the context of [-FEM] DIM-IN* would be necessary (as opposed to *Insert {Th}[CLASS IV] in the context of DIM-IN*) in order to ensure that feminine nouns formed with *-(c)ín/ina* have /a/ as their word class marker. The way the conditions stand in (22), the only diminutives in *-ín/ina* remaining to receive a word class marker after condition (b)(i) applies are the masculine ones; there is thus no need to include a gender feature in the condition in (22)(b)(ii). Because the conditions in (22) are conditions on the insertion of features and not the realization of feature bundles, there is no limit to how many conditions can exist or how many different, disjoint conditions there might be for the insertion of the same Class feature. For an alternative (a “not” operator, which could create a “not’[+FEM] condition that would capture the same set of nominals as [-FEM]), see Siddiqi (2009).

These conditions on word class marker insertion would also allow for the realization of the word class marker on the diminutivizing morpheme exponed as *-cín/in*, assuming that this Vocabulary Item realizes a diminutive that is a separate projection. A root would no longer be able to condition the realization of the word class marker, as it would be a different phase. The result is that the only applicable conditions would be those in (a)(vi) and (b). These two conditions combine to allow for the realization of the word class marker as /Ø/ for masculine nouns and /a/ for feminine ones, which is exactly what we have observed (see (20)). Although it can account well for the observed data, the additional condition on Class feature insertion presented in this section raises a question: which element conditions the insertion of the word class marker in a stacked diminutive? I address this in the next section.

5.3.5. Stacked diminutives and their word class markers

We saw above in section 5.2.2.3 that diminutives can be stacked when they are of differing types (i.e., have different diacritics). I repeat some of this data here in (23).

(23) Stacked diminutives containing diminutivizing nodes with different realizations

(a)	chico	small- sg.m.	chiquito	small- dim.sg.m.	chiquitín	small- dim.dim.sg.m.
(b)	poco	a little- sg.m.	poquito	a little- dim.sg.m.	poquitín	a little- dim.dim.sg.m.
(c)	Jaime	Jaime- sg.m.	Jaimín	Jaime- dim.sg.m.	?Jaiminito ³²	Jaime- dim.dim.sg.m.
(d)	problema	problem- sg.m.	problemina, problemín	problem- dim.sg.m.	probleminita	problem- dim.dim.sg.m.
(e)	pan	bread- sg.m.	panecillo	roll-sg.m.	panecillito	roll-dim.sg.m.

³² The native speakers of Peninsular Spanish that I surveyed did not accept this form. However, I did find it using a simple Google search and have therefore included it here, as it can play a role in determining the positioning of the Theme node in relation to the diminutivizing node, as I explain below. I assume that there must be some way of producing the form if it is acceptable by at least the speaker who used it and demonstrate an analysis for the relative position of the diminutive head and word class marker (Theme) node that can account for the observed word class marker pattern.

In Chapter 4, I explained that stacked diminutives are created when at least one of the diminutives is adjoined. This is due to the fact that there were no instances of *-cito/a* diminutives stacked on other *-cito/a* diminutives. Multiple adjunctions, however, are permitted and even observed, as are adjunctions to diminutivizing projections.

Those diminutives formed with multiple adjunctions should have the gender and word class marker of the base noun. This is because the root and both of the diminutivizing terminal nodes should be within the same phase. As a result, there is no reason to assume that the identity of the root cannot impact the realization of the word class marker.³³

5.3.6. *Interim summary*

In this section, I presented a novel analysis for diminutivizing suffixes that have received little attention in the morphosyntactic literature up to this point. Much of the work on these diminutivizing suffixes focuses on their differentiation from one another from a semantic, psycholinguistic, and historical perspective (e.g., González Ollé, 1962; Náñez-Fernández, 1973; Lang, 1990). I have not come across any morphosyntactic analyses for these lesser-used (dialect-dependent, of course) suffixes. The analysis presented here is thus noteworthy because it extends an analysis for the *-(c)ito/a* diminutives to one that also includes other diminutivizing terminal nodes and provides a preliminary step in addressing the way in which these similar terminal nodes are differentiated. In fact, the DM framework allows for a simple explanation. Each diminutivizing node is distinguished by features that then prompt different realizations of these nodes in the same morphosyntactic context.

This section on diminutives also demonstrates how expanding the conditions on word class marker insertion will produce the correct word class markers for the *-(c)ín/ina* diminutives in both single

³³ However, as in the case of *-(c)ín*-final diminutives, the diminutive is also clearly able to impact the realization of the word class marker. This is easy to account for, considering the rule for inserting a [CLASS IV] feature in the context of this diminutive is above that which inserts a [CLASS I] feature for masculine nouns.

and double diminutives. It appears as though the assumption that gender is on *n* and that word class is on *n* and other projections in the nominal spine also accounts well for these specific diminutive suffixes. The section that follows investigates whether the same is true for other evaluatives (namely augmentatives).

5.4. Other evaluative projections (i.e., augmentatives)

Over the course of this section, I explain how the augmentative suffixes investigated here³⁴ can be accounted for using the same system as that for diminutives. I first must determine what exactly constitutes an augmentative, as there is some disagreement. I specifically address the two different analyses provided by Lang (1990) and the Real Academia Española (RAE) (2009, 2010). After synthesizing the data from both of these analyses, I propose my own approach for nominals in *-ón/ona*, *-azo/a*, and *-ote/a* (a subset of the augmentatives in Spanish). We will see that following any of these analyses, necessitates an investigation into the properties of nominals formed with multiple categorizing heads. I demonstrate how the analysis proposed for gender and word class in Chapters 3 and 4 can account for multiple types of augmentatives and that the predictions it makes are in fact borne out. All of the discussion leads into an investigation of gender and word class in derived nominals, which I discuss briefly in the Chapter 6.

5.4.1. Brief background on Spanish augmentatives

Spanish possesses many different suffixes that are associated with augmentation, just as it possesses many suffixes associated with diminutivization. Some of these are included in (24).

³⁴ I do not claim that this is an exhaustive analysis for all augmentatives in Spanish.

(24) Spanish augmentative suffixes³⁵

(a) <i>-azo/a</i> ³⁶	(i)	bueno	good-sg.m.	buenazo	good-aug.sg.m.
	(ii)	perro	dog-sg.m.	perrazo	dog-aug.sg.m.
	(iii)	trompeta	trumpet-sg.f.	trompetazo	trumpet blast-sg.m.
	(iv)	porra	nightstick-sg.f.	porrazo	blow/whack-sg.m.
(b) <i>-ón/a</i>	(i)	llorar	to cry	llorón	crybaby-sg.m.
	(ii)	gruñir	to growl	gruñona	one who growls-aug.sg.f.
	(iii)	cuchara	spoon-sg.f.	cucharón	ladle-sg.m.
	(iv)	tela	cloth-sg.f.	telón	curtain (in a theater)-sg.m.
	(v)	patada	kick-sg.f.	patadón	big kick-sg.m.
	(vi)	simple	simple-sg.m./f.	simplón	simple/gullible person-sg.m.
	(vii)	empujar	to push	empujón	shove/push-sg.m.
	(viii)	estirar	to stretch	estirón	growth spurt-sg.m.
	(ix)	pechuga	chest-sg.f.	pechugón	blow to the chest-sg.m.
	(x)	manota	hand-aug.sg.f.	manotón	blow with the hand-sg.f.
(c) <i>-ote/a</i>	(i)	tiempo	time-sg.m.	tiempote	time-aug.sg.m.
	(ii)	gorda	fat-sg.f.	gordota	fat-aug.sg.f.
	(iii)	palabra	word-sg.f.	palabrota	curse/bad word-sg.f.
	(iv)	fulano	John Doe-sg.m.	fulanote	John Doe-aug.sg.m.

As we can see above, there are many instances in which the suffixes here, particularly *-azo/a* and *-ón/ona*, correspond with a change in gender from the base noun to the augmented form (see (b)(iii-iv)). There can also be a change in category, such as in (24)(b)(i-ii).³⁷ I noted a few diminutive forms above that

³⁵ Data from a combination of field work, Lang (1990), and the RAE (2010, p. 169-171).

³⁶ There are also some nominals that end in *-etazo*. These include *pistoleta* (blow from a pistol-sg.m. from the feminine *pistola* for ‘pistol’) and *lengüetazo* (a lick-sg.m. or a set of unintelligible words-sg.m., such as that produced by children, from the feminine *lengua* for ‘tongue’), among others. The RAE (2010) mentions that it is possible that these nouns involve the infix *-et-* or that the suffix itself is *-etazo*. As this portion of this chapter is merely a brief investigation into how the analysis presented thus far might be extended to augmentatives (and not a thorough analysis of all of the augmentative suffixes in the language), I do not investigate these nouns any further.

³⁷ Another suffix that some might assume is augmentative is *-udo/a*, as in the following forms:

(i) <i>-udo/a</i>	(i)	pantorrilla	calf-sg.f.	pantorrilludo	thick-calved-sg.m.
	(ii)	pierna	leg-sg.f.	piernudo	thick-legged-sg.m.
	(iii)	panza	belly-sg.f.	panzudo	big-bellied-sg.m.
	(iv)	conciencia	conscience-sg.f.	conscienzudo	conscientious-sg.m.

Lang (1990) notes that the decision to classify *-udo/a* as augmentative is “contentious,” and that it is different from the other suffixes here in that it is typically class-changing and can overlap with the denominal, adjectival suffix *-oso*, which is not emotive (p. 116). The RAE (2010) considers forms in *-udo/a* to be denominal adjectives formed with a quantificational suffix (p.139). In order to limit the scope of this section somewhat, I will not focus on this here, but note that it seems comparable to the augmentatives in *-ón/ona*, which I will discuss in detail.

demonstrated a change in gender, but explained that there has been no evidence to suggest that diminutives are category-changing. Recall, however, from Chapter 4 that Wiltschko and Steriopolo (2007) argued for evaluatives as categorizing heads for German diminutives, whose forms are always neuter and can be count nouns even if the base nominal on which they are built is a mass noun. It is not, therefore, farfetched to assume that an evaluative suffix could itself cause a change in category. It seems that we must first address whether or not these forms that change categories with the addition of *-ón/ona* are augmentatives or something else.

Lang (1990) includes these forms in his list of augmentative suffixes regardless of the category of the base on which the nominal (or homophonous adjectival) forms are created. The RAE (2010), on the other hand, differentiates between multiple usages of these suffixes, arguing that some are augmentatives while others are derived nouns, and still others are lexicalized forms. A chart displaying the RAE's (2010) typology is included below in (25).

(25) The RAE's (2010) typology of the suffixes in (24)³⁸

Suffix	Classification	Examples
(a) <i>-ón/ona</i>	(i) regular augmentatives (ii) personal nouns derived from verbs (iii) nouns derived from verbs that denote movement or collision (iv) lexicalized forms (v) denominal nominals denoting a blow	<i>patadón, simplón</i> <i>llorón, gruñona</i> <i>empujón, estirón</i> <i>telón, cucharón</i> <i>manotón,</i> <i>pechugón</i> ³⁹
(b) <i>-azo/a</i>	(i) regular augmentatives (ii) nouns expressing some type of blow	<i>buenazo, perrazo</i> <i>trompetazo,</i> <i>porrazo</i>
(c) <i>-ote/a</i>	regular augmentatives ⁴⁰	<i>all nouns with this suffix</i>

The question is whether or not we should treat all instances of these suffixes in the same way. Are they all considered to be augmentatives (i.e., contribute an augmentative meaning), or are some perhaps purely derivational suffixes (i.e., derivational suffixes that do not contribute augmentative meaning)?

The RAE (2010) defines evaluative suffixes as those that do not alter the category of the element on which they are based (p. 164). This difference in behavior with regard to changes in category is the only argumentation that the RAE (2010) provides for why there is a distinction made between the homophonous *-ón/ona* that appears in a deverbal context and a denominal context and that which is purely augmentative (i.e., does not involve a change in category). In fact, it is noted that the suffix -

³⁸ There are also some adjectival forms that are derived from nominals and end in *-ón*, such as *rabón* ('without a tail') and *pelón* ('without hair' or 'with lots of hair,' depending on the region). Because this paper focuses on nominal forms, I do not address these here, but note that the RAE excludes them from its discussion of augmentatives.

³⁹ The RAE (2009) does not explicitly state that these are not augmentative, but they are included in the derivational section, separate from the augmentatives in the evaluative morphology section. I, however, argue that these are augmentatives. They have a shared history with the augmentative suffix, both being derived from the same Latin suffix. I include these in the discussion of gender-changing augmentatives in *-azo* that also denote a blow of some kind.

⁴⁰ The RAE (2010) does describe some lexicalized forms that include this suffix, but it does not mention whether or not these are considered to still be augmentatives (p. 169). I have not included them here.

ón/ona that appears on nouns derived from verbs is not considered augmentative because of the change in category, despite the fact that it can correspond with the addition of expressive shades of meaning (p. 164). In contrast, Lang (1990) argues that these are all augmentatives and that some merely have a contusive usage. By “contusive usage,” he is referring to the process whereby “augmentation combines with reference to action” (p. 112). This contusive usage (and sometimes a similar acoustic usage, as in (24)(a)(iii) and (b)(ix-x)), in fact, often corresponds with a change in gender, its “standard morphological feature” (p. 112).

I follow Lang (1990) in assuming that the suffixes associated with a ‘blow’ (i.e., contusive or acoustic usage) are augmentatives. The ‘sharp’ or ‘sudden’ meaning associated with these suffixes suggests that there might be an augmentative feature involved. Furthermore, the fact that the forms are synonymous and share the same etymological history as the “regular” augmentatives in *-azo/a* and *-ón/ona* provides additional evidence that these might share an augmentative meaning.

It also seems intuitive to assume that the personal deverbal (and deadjectival) nouns in *-ón/ona* have an augmentative meaning to them. They denote individuals who perform the action of the verb frequently. These seem to have a clear excessive and somewhat pejorative connotation, as compared with other derivational nouns (e.g., those formed with *-dor/a*, which does not imply either of these meanings). In fact, the RAE (2009) notes that these always have a pejorative connotation (p. 396), which might be due to this excessive connotation. In contrast, the deverbal forms in (25)(a)(iii) do not have any connotation of excess or other features typically associated with augmentatives. I assume that these are regular nominalizations that happen to be homophonous with augmentatives (I address these and forms in *-ín/ina* in section 4.4.3.4.1).

As for the forms that the RAE deems to be lexicalized, I do not determine whether or not these are augmentatives or simply root-derived nominals.⁴¹ I do, however, address either possibility and demonstrate how it could be accounted for in the analysis presented thus far. The distinction that I assume for the suffixes listed above in (25) is thus that provided in (26).

⁴¹ Note that there are some lexicalized forms with the *-ón* suffix that appear to have a diminutive connotation rather than an augmentative one. Some include *ratón* ('mouse') vs. *rata* ('rat'); *tapón* ('small lid') vs. *tapa* ('cover'); *callejón* ('small alleyway') vs. *calleja* ('alleyway'). I do not have a specific solution for these nouns but note that there might have been a reversal in the meaning, as we saw above for the diminutives, which was simply lexicalized in this case. It might make sense to assume that these are root-derived nouns rather than augmentative forms themselves. I leave this for future research.

(26) Classification of *-ón/ona*, *-azo/a*, and *-ote/a* forms

Suffix	Classification	Examples
(a) <i>-ón/ona</i>	(i) augmentatives (gender change possible) (ii) augmentative personal nouns derived from verbs/adjectives (i.e., category-changing) ⁴² (iii) deverbial nominalizations without augmentation ⁴³ (iv) two options: root-derived nominals or augmentatives formed via categorization (v) denominal nominalizations that involve a blow (gender change possible)	<i>patadón, simplón</i> <i>llorón, gruñona</i> <i>empujón, estirón</i> <i>telón, cucharón</i> <i>manotón,</i> <i>pechugón</i> ⁴⁴
(b) <i>-azo/a</i>	(i) augmentatives (ii) nouns expressing some type of blow created by nominalization (gender change possible)	<i>buenazo, perrazo</i> <i>trompetazo,</i> <i>porrazo</i> ⁴⁵
(c) <i>-ote/a</i>	augmentatives	<i>all nouns with this suffix</i>

I address each type of suffix in turn, demonstrating the assumption that augmentatives in Spanish can be formed by categorizing heads, in contrast to diminutives (as discussed above). This is largely due to the prevalence of gender-changing augmentatives and the association of augmentative meaning (i.e., excess, large size, etc.) with a change in category. First, however, I discuss briefly some of the previous approaches to augmentatives in Spanish and demonstrate that there are many gaps to be filled in this literature, which I propose to do (albeit in a rather preliminary analysis) here.

⁴² Note that the RAE (2009) states that all of these types of nominals have pejorative connotation (p. 486).

⁴³ The RAE (2009) explains that the suffix *-ón* that creates nouns from verbs comes from the Latin *-io, -iōnis*, while the suffix *-ón/ona* that forms augmentatives comes from the Latin *-o, -ōnis* (p. 396). This provides further support that there might be two homophonous forms that realize two different morphemes.

⁴⁴ According to the RAE *Diccionario de la lengua española*, this form denotes a blow to the chest, as well as a person with a large chest or with large breasts (among other meanings).

⁴⁵ The RAE (2009) does not include these as possible augmentatives, asserting that they are merely denominal nominals (p. 398). I have included them in the list of augmentatives that I will address here due to two different factors: (1) the sudden or forceful meaning appears to have an augmentative connotation; (2) they are comparable to the denominal nominals in *-ón* that also denote a blow or sudden or impetuous action (RAE, 2009, p.396). I have included these nominals in *-ón* as part of the augmentatives due to their shared morphological history. However, whether or not these are considered to be augmentative or derived does not have much bearing on the analysis presented here, since both are assumed to be formed via a categorizing projection (at least when there can be a change in gender).

5.4.2. Brief background on previous approaches to Spanish augmentatives

The literature on the various augmentative suffixes in Spanish is much less developed than that on diminutives in *-(c)ito/a*. These suffixes are typically subsumed within larger works on several types of evaluative suffixes. Fewer analyses still address the morphophonological or morphosyntactic formation of augmentatives. I address briefly the ones that do in this section.

Crowhurst (1992) investigates the structure of *-ote/a* augmentatives in Mexican Spanish. She provides a generative phonological approach to these augmentatives (and likewise *-(c)ito/a* diminutives) whereby the forms of the suffix are determined by phonological rules that impact words within a generative lexicon. The disadvantages of such an approach from a theoretical and empirical standpoint were addressed in Chapter 3. Furthermore, Crowhurst (1992) does not delve into an investigation of other augmentative suffixes nor does it address specifically why word-final vowels pattern the way that they do. This is one of the benefits of the analysis that will be presented below.

Eguren (2001) includes augmentatives within his analysis for evaluatives, which was presented in Chapter 4. As we saw in Chapter 4, this analysis was dispreferred because of its reliance on the empirically and theoretically unmotivated Word Marker Phrase. Such a phrase would necessarily be devoid of interpretable features (as word class marker features have been proven to be irrelevant for syntax and semantics), which is undesirable, as described previously. The analysis was motivated only with regard to morpheme order. I described in Chapter 4 how the same morpheme order can be arrived at without assuming the existence of a Word Marker Phrase. This analysis should therefore not be pursued for augmentatives.

Bermúdez-Otero (2013) also references augmentatives in his Stratal Optimality Theory approach to Spanish nominal morphology. He takes a lexicon-based approach in which word class markers (theme vowels) are a part of the stems involved in augmentation. The bulk of his claims center on the idea that word-medial diphthongs (such as *cuento* in ‘story’ vs. the monophthong in the verb *contar* for ‘to tell’)

are not predicted if word class markers themselves are not a part of the derivation when stress is assigned. This is based on the idea that middle vowels in morphemes are converted to diphthongs when they are stressed (/o/ → /we/ and /e/ → /je/). Having already described the disadvantages of an approach that incorporates stems and also one that takes place within a generative lexicon, I do not pursue this line of reasoning either.⁴⁶

In all other instances, we might presuppose that scholars who have worked on diminutives would assume that other evaluatives would be formed in the same fashion. The benefits of the analysis presented in Chapter 4 over these have already been enumerated and discussed in detail. A further advantage would then be the ability to address augmentative formation in the same manner as diminutive formation when the two types of evaluatives pattern the same way with regard to gender and word class. I demonstrate below that this is in fact possible. Observed patterns for the interactions between gender and word class in augmentatives are predicted based on the analysis presented in Chapter 4, providing further evidence for this approach to Spanish word formation.

5.4.3. Where are augmentatives formed?

I presented above the chart that I repeat here in (27) with regard to the different types of augmentatives (and forms created with homophonous suffixes that are not augmentatives) I will investigate. In this section, I address the ways in which each of these constructions can be accounted for using the analysis presented thus far.

⁴⁶ Following DM, we could account for the different realizations of the root (i.e., monophthongs and diphthongs) by conditions on root suppletion listed in the Vocabulary. It is beyond the scope of the present work to delve into this topic further, but I note it as a possible solution to the issue raised by Bermúdez-Otero (2013).

(27) Classification of *-ón/ona*, *-azo/a*, and *-ote/a* forms

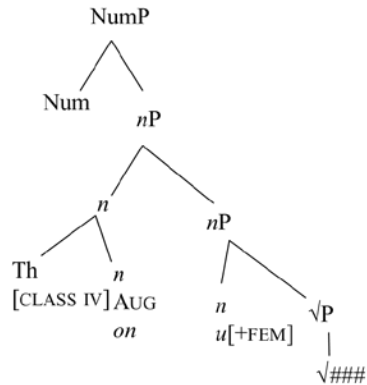
Suffix	Classification	Examples
(a) <i>-ón/ona</i>	(i) augmentatives (gender change possible) (ii) augmentative personal nouns derived from verbs/adjectives (i.e., category-changing) (iii) deverbial nominalizations without augmentation (iv) two options: root-derived nominals or augmentatives formed via categorization (v) denominal nominalizations that involve a blow (gender change possible)	<i>patadón, simplón</i> <i>llorón, gruñona</i> <i>empujón, estirón</i> <i>telón, cucharón</i> <i>manotón, pechugón</i>
(b) <i>-azo/a</i>	(i) augmentatives (ii) nouns expressing some type of blow created by nominalization (gender change possible)	<i>buenazo, perrazo</i> <i>trompetazo,</i> <i>porrazo</i>
(c) <i>-ote/a</i>	augmentatives	<i>all nouns with this suffix</i>

5.4.3.1. Augmentatives that change in gender, including those that denote a blow (i.e., (27)(a)(v), (b)(ii))

First, I address augmentatives formed in *-ón/ona* and *-azo/a* that change in gender, including those that denote a strike or blow by a particular object. Following the diagnoses put forward by Steriopolo (2008), we would assume that these would be formed via a categorizing head because of their change in gender. These suffixes then contrast with the diminutive suffixes we saw above that did not involve a change in gender (with very rare exceptions).

I follow the assumption that these nouns are formed with a categorizing (nominal) head and assume that this categorizing projection would house an augmentative feature ([AUG]). A plausible structure for these nouns is given here in (28), where the augmentative feature appears on a categorizing projection and not an augmentative projection (i.e., an AugP). This is the structure that we would assume for nouns that change gender but do not denote a blow.

(28) Derivation of nouns in *-ón/ona* that show a change in gender without denoting a blow



I include in this structure an unidentified root that is the complement of an *nP* with an uninterpretable feminine feature. First, I include a placeholder root because I have not come across simple nouns in Peninsular Spanish that change gender with the suffix *-ón/ona* without a change in meaning⁴⁷ beyond augmentation.⁴⁸ There is the feminine *patada* (a kick-sg.f.), which is a noun that derives from another noun *pata* (a foot (usually of an animal)-sg.f.). Abstracting away from the internal structure of *patada* itself, we could assume that it would be made into an augmentative following the same process shown in (28) (i.e., by the merger of an *nP* with an augmentative feature and lacking in a gender feature, resulting in masculine gender agreement).

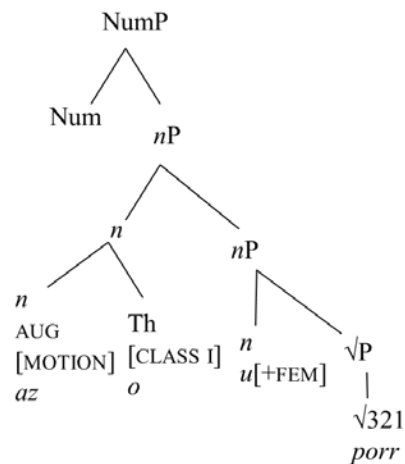
However, some of these nouns are not merely augmentative; they also involve the meaning ‘blow from X,’ where X represents the nominal on which they are based. It seems as though this should be represented by a feature that is contributed by the augmentative nominalizing head. It is beyond the scope

⁴⁷ One possible example on the surface is the masculine *botellón* from the feminine *botella* (bottle-sg.f.). However, in Peninsular Spanish, *botellón* has acquired the meaning of a group of young people drinking and carousing in the street.

⁴⁸ There are some nouns in certain dialects of Latin America Spanish that show a change in gender when augmented with *-ón/ona*. These include *botellón* (large bottle-sg.m.) from *botella* (bottle-sg.f.) and *mujerón* (large woman-sg.m.) from *mujer* (woman-sg.f.). I assume that these nouns would be formed as shown in figure (28), with the root first being nominalized by an *nP* with a feminine feature (uninterpretable in the former case and interpretable in the latter). Then, the second *nP* merged above the first would have an augmentative feature and without a gender feature, which results in default masculine gender agreement.

of this current work to address what exactly the identity of this feature might be. Lang (1990) assumes the feature in question is a [MOTION] feature that contributes what he calls a “contusive” meaning. I will use Lang’s (1990) [MOTION] feature to illustrate what the derivation of these nouns might look like, but do not assert that the feature that contributes this meaning is necessarily the [MOTION] feature he describes.

(29) Derivation of *porrazo* (and similar nouns in *-azo*)

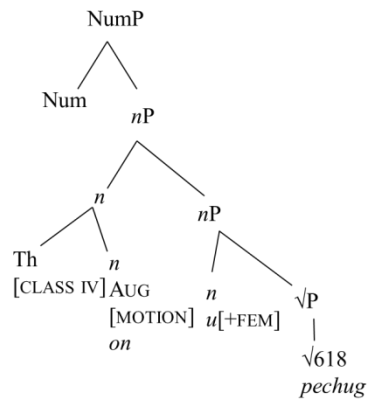


In this derivation, the root is first categorized by the $u[+FEM]$ nominalizing projection that creates *porr(a)*. The word class marker, however, is not realized and no Theme node is inserted because this n is not adjacent to Num. The second nominalizing projection is underspecified for gender (i.e., it is a plain n) and has an augmentative feature. We know this because the gender of the resulting nominal is masculine and is not based on biological sex. The augmentative projection is expounded as *-az*. Finally, the Theme node is realized as /o/, due to the default assignment of the [CLASS I] feature in the case of this noun formed with a plain n whose root is not visible to the exterior categorizing node.

We can see clearly how a change in gender and word class can be explained assuming the merger of a second nP . The same analysis can be extended to nouns like *pechugón* (blow to the chest-sg.m. from

pechuga: breast-sg.f.; cf. *pecho*: chest-sg.m.), which denote a blow and show a change in gender from the noun on which they are based.

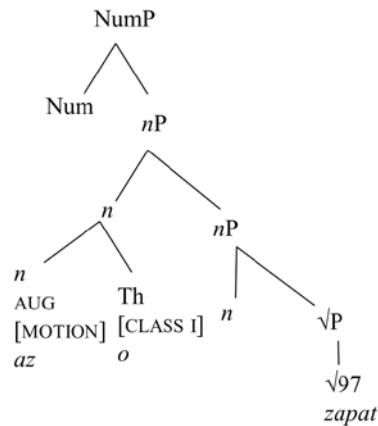
(30) Derivation of *pechugón* (and similar nouns in *-ón*)⁴⁹



There are, however, also some nouns in *-azo* in particular that denote a blow from a masculine object. These include nouns like *zapatazo* (blow from a shoe-sg.m. from the masculine *zapato*, meaning ‘shoe’) and *cañonazo* (blow from a cannon-sg.m. from the masculine *cañón*, meaning ‘cannon’). I assume that these nouns are formed in the same fashion as those derived above (i.e., with a separate nominalizing, augmentative head that contains the semantic feature responsible for the ‘blow’ meaning). An example structure is included here for *zapatazo*.

⁴⁹ I explain below why the [CLASS IV] feature is inserted with the Theme node for this particular noun.

(31) Derivation for *-azo* nouns denoting blows that are derived from masculine nouns

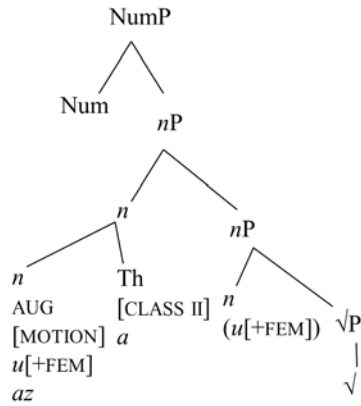


As we see, the derivation proceeds in exactly the same fashion, with the exception that the base noun is formed with a plain *n* instead of an *n* with the *u*[+FEM] feature. Although the gender and word class of the noun do not change, I argue that a second nominalizing head is necessary to account for the change in meaning (i.e., blow by a particular object), in addition to maintaining consistency with the structures given above in (29) and (30).

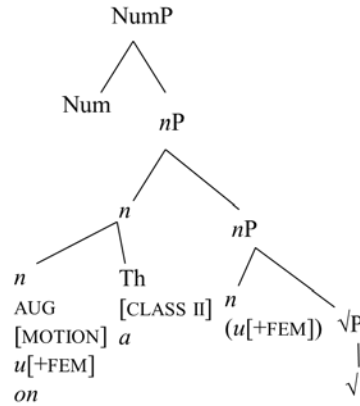
In principle, this process could also account for nouns that have a contusive meaning but are feminine, regardless of the gender of the noun on which they are based. In this case, we would need to have an augmentative nominalizing head that has a *u*[+FEM] feature, which would result in a word class marker of /a/ for the derived nominal. Unfortunately, I have not come across any data for augmentatives that have a contusive meaning but are feminine (or any augmentatives that have feminine gender while their base noun has masculine gender), so I cannot confirm that the data bears this out. It could be that there is a feature co-occurrence restriction that prevents the semantic feature responsible for the contusive meaning from appearing with an uninterpretable feminine feature. In any event, I provide some example derivations for hypothetical feminine nouns in *-aza* and *-ona* with a contusive meaning for expository purposes.

(32) Derivations for hypothetical feminine forms created by the categorizing augmentative suffixes *-aza* and *-ona*

(a) Feminine forms in *-aza*



(b) Feminine forms in *-ona*

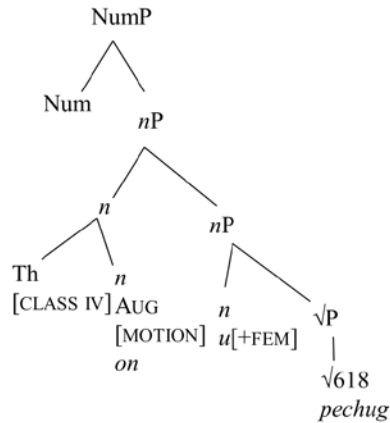


As referenced, above, the masculine nouns in *-ón* require additional stipulation. As demonstrated in (30), I assume that the [CLASS IV] feature is inserted for these nouns, in order for there to be a null word class marker, which is what we observe for masculine nouns in *-ón*. This is similar to the case of diminutives in *-ín*. Just as for the diminutivizing suffix that is realized as *-ín*, I assume that there is a condition on the insertion of the [CLASS IV] feature for the augmentative suffix that is realized as *-ón*. Provided this is listed above the conditions for the insertion of the [CLASS I] feature, these nominals should not be able to have /o/ as their word class marker. The revised word class inventory and a sample derivation are included below in (33) and (34), respectively.

(33) Amended Theme insertion rules

- (a) (i) Insert {Th}[CLASS,V] in the context of $\sqrt{\text{VIRU}}$, $\sqrt{\text{SÓCRATE}}$, $\sqrt{\text{ANÁLISI...}}$; Num
- (ii) Insert {Th}[CLASS IV] in the context of $\sqrt{\text{FLOR}}$, $\sqrt{\text{PAPEL}}$, $\sqrt{\text{CHEF}}$, $\sqrt{\text{CLUB...}}$; Num
- (iii) Insert {Th}[CLASS II] in the context of $\sqrt{\text{TEM}}$, $\sqrt{\text{DIAGRAM}}$, $\sqrt{\text{POET...}}$; Num
- (iv) Insert {Th}[CLASS III] in the context of $\sqrt{\text{MADR}}$, $\sqrt{\text{PADR}}$, $\sqrt{\text{CLAS}}$, $\sqrt{\text{JEF...}}$; Num
- (v) Insert {Th}[CLASS I] in the context of $\sqrt{\text{MAN}}$, $\sqrt{\text{LIBID...}}$; Num
- (b) (i) Insert {Th}[CLASS II] in the context of $n[+\text{FEM}]$; Num
- (ii) Insert {Th}[CLASS IV] in the context of DIM-C, AUG-ON; Num
- (c) Insert {Th}[CLASS I] in the context of Num.

(34) Derivation of masculine forms with nominalizing *-ón*



I have repeated here the derivation of the masculine *pechugón* ('blow to the chest') from the feminine *pechuga* ('breast'), which derives from *pecho* ('chest'). We see that the merger of a second categorizing head allows for the change in gender from the feminine form to the masculine form. The resulting nominal belongs to Class IV, which is accounted for by the modified condition on word class marker insertion that is included in (33)(b)(ii). This condition prompts the insertion of the Class IV feature, which then has null realization, as explained in Chapter 3.

5.4.3.2. Personal deverbal augmentatives in *-ón/ona* (i.e., (27)(a)(ii))

I turn now to a discussion of the personal deverbal augmentatives created with the suffix *-ón/ona*. Because these nominalized forms also have the connotation of large quantity (i.e., ones who perform the action of the verb frequently or to excess), I assume that they are augmentative (as described above). These augmentatives are category-changing, as they are derived from verbs — changed first from verbs to adjectives and then from adjectives to nouns. Because these deadjectival nouns are built from adjectives that are themselves deverbal, there obligatorily must be a change in gender and word class, as verbs have neither gender nor word class in Spanish. As I do not delve into the structure of adjectives in this dissertation (particularly how gender assignment proceeds and then impacts word class marker realization), I conclude this discussion here. However, I mention that it is entirely plausible to assume that the adjectivalizing head that creates an adjective from the verb contains an augmentative feature, resulting in an adjective whose word class is different from that of the verb on which it is built (as verbs do not have word class).

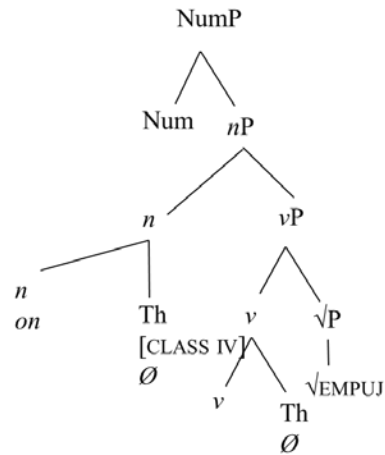
5.4.3.3. Deverbal nouns in *-ón* without augmentative meaning (i.e., (27)(a)(iii))

I mentioned above, however, that there was one other type of nominal formed with *-ón* that did not appear to be an augmentative.⁵⁰ The nouns that fall into this type are forms that do not have an augmentative meaning associated with them, such as *empujón* (just a ‘push,’ not a ‘big push’) and *estirón* (a ‘stretch’ and not a ‘big stretch’). I assume that these are deverbal nominals that are formed much as those above; the only difference is that their nominalizing morpheme does not contain an augmentative feature.⁵¹ Possible derivations for these nominals are included below in (35).

⁵⁰ The RAE (2009) does not mention any of these with possible forms in *-ona*.

⁵¹ One might wonder whether or not we should assume that these nouns also have a feature responsible for the ‘motion’ meaning. I assume that this meaning is the result of the verbal morpheme below the nominal and not a part of the nominalizing process itself.

(35) Non-augmentative deverbal nominals in *-ón*



In this case, the resulting nominal does not have an interpretable gender feature. Because the resulting nominal is masculine, I assume that it is formed via a plain *n*. As was the case for the other masculine nominals in *-ón*, these would fall into Class IV as the result of an additional condition on Class feature insertion that would assign the [CLASS IV] feature to nominals with this suffix. The revised inventory is provided below in (36).⁵²

⁵² For more on derived nominals, see Chapter 6.

(36) Revised Class feature insertion rules

- (a) (i) Insert {Th}[CLASS,V] in the context of $\sqrt{\text{VIRU}}$, $\sqrt{\text{SÓCRATE}}$, $\sqrt{\text{ANÁLISI...}}$; Num
- (ii) Insert {Th}[CLASS IV] in the context of $\sqrt{\text{FLOR}}$, $\sqrt{\text{PAPEL}}$, $\sqrt{\text{CHEF}}$, $\sqrt{\text{CLUB...}}$; Num
- (iii) Insert {Th}[CLASS II] in the context of $\sqrt{\text{TEM}}$, $\sqrt{\text{DIAGRAM}}$, $\sqrt{\text{POET...}}$; Num
- (iv) Insert {Th}[CLASS III] in the context of $\sqrt{\text{MADR}}$, $\sqrt{\text{PADR}}$, $\sqrt{\text{CLAS}}$, $\sqrt{\text{JEF...}}$; Num
- (v) Insert {Th}[CLASS I] in the context of $\sqrt{\text{MAN}}$, $\sqrt{\text{LIBID...}}$; Num
- (b) (i) Insert {Th}[CLASS II] in the context of $n[+\text{FEM}]$; Num
- (ii) Insert {Th}[CLASS IV] in the context of DIM-C, AUG-ON, $n\text{-ON}^{53}$; Num
- (c) Insert {Th}[CLASS I] in the context of Num

5.4.3.4. Augmentative forms that do not show a change in gender or category (i.e., (27)(a)(i), (b)(i), (c))

The third type of nominals in *-ón/ona* and *-azo/a* that we must address are those that seem to be regular augmentatives (i.e., those that only add an augmentative meaning to the derivation and do not cause a change in gender or category). I discuss the augmentatives in *-ote/a* in this section as well. In order to determine what the structure of augmentatives formed with these suffixes might be, we must look at the patterns for the remaining diagnostic proposed by Steriopolo (2008): word class.

As we saw above, there are instances in which an augmentative suffix does not correspond with a change in category, gender, or word class. The augmentatives created with the suffixes *-azo/a* and *-ote/a*⁵⁴, in particular, are also able to maintain the category, gender, and word class of the nominals that they modify (though there are also nominals in *-azo/a* that do not; see above). Some of these examples are repeated here in (37), with a few additional examples.

⁵³ As above, I include the realization of this morpheme here merely as a means of easily demonstrating which morpheme it is. However, there would be no phonological material present in these feature insertion rules, as the insertion of dissociated nodes should precede Vocabulary Insertion.

⁵⁴ There is, however, one noun in *-ote* that I have come across that seems to demonstrate a change in gender and number from the noun on which it is based. This is the masculine, /e/-final *islote* (islet-sg.m.) from the feminine *isla* (island-sg.f.). This noun seems to be different from other nouns in *-ote* because it denotes a noun smaller than that denoted by the base nominal. I will not address this exception any further, as it appears to have different morphology from the remaining *-ote* examples given above. I mention it, however, for the sake of completeness.

(37) Nominal augmentatives retaining category and gender (and sometimes word class)⁵⁵

(a)	(i)	bueno	good-sg.m.	buenazo	good-aug.sg.m.
	(ii)	perro	dog-sg.m.	perrazo	dog-aug.sg.m.
	(iii)	gata	cat-sg.f.	gataza	cat-aug.sg.f.
	(iv)	problema	problem-sg.m.	problemaza, <u>problemazo</u>	problem-aug.sg.m.
	(v)	drama	drama-sg.m.	<u>dramazo</u> , dramaza	drama-aug.sg.m.
	(vi)	niña	girl-sg.f.	niñaza	girl-aug.sg.f., good-looking girl artist-sg.m.
	(vii)	artista	artist-sg.m.	artistazo ⁵⁶	artist-sg.m.
(b)	(i)	tiempo	time-sg.m.	tiempote	time-aug.sg.m.
	(ii)	gorda	fat-sg.f.	gordota	fat-aug.sg.f.
	(iii)	palabra	word-sg.f.	palabrota	curse/bad word-sg.f.
	(iv)	fulano	John Doe-sg.m.	fulanote	John Doe-aug.sg.m.
	(v)	drama	drama-sg.m.	<u>dramote</u> , dramota	drama-aug.sg.m.
	(vi)	mano	hand-sg.f.	<u>manota</u> , manoto	hand-aug.sg.m.

In (37), we see that nominals can be augmented by these suffixes without a corresponding change in category or added meaning (other than augmentation). There is also retention of the gender of the base noun in all of these augmentative forms. We see that word class can be maintained for all of the *-azo/a* nouns. There is, however, conflicting data for the /a/-final masculine nouns. Some speakers use forms that retain the word class marker, while others use forms in which the word class marker patterns with the gender of the nominal. The same pattern holds for *-ote/a*. The difference with the augmentatives formed with this suffix is that the masculine forms will end in /e/ instead of /o/ - with the exception of *manoto*, one of the forms provided for the feminine, Class I *mano*.

Just as for the diminutives in section 5.2, it is difficult to tell whether the augmentatives in (37) must necessarily be formed via adjunction or whether they can head a separate projection. If they do head a separate projection, must the separate projection be a categorizing projection? The data for other

⁵⁵ Data is from fieldwork and simple Google searches. The Google searches were used to investigate the possibility of more marginal forms. Where two options are possible, underlining is used to distinguish the most commonly occurring form. The remaining form in the pair was found in a Google search, but much more infrequently.

⁵⁶ This form was provided by the RAE (2009, p. 658). Note that it is possible to get the form *artistaza*, if the referent is female.

augmentatives, such as *-ón/ona*, shows that augmentatives can head separate, categorizing projections. But, this does not mean that it is necessarily the case that they will whenever the word class marker is not retained from the base noun. Because these suffixes are so numerous and so varied in their usage and properties, I will not address them all here. What I will do, however, is explain how any of these possible structures can be accounted for and explained in the analysis presented above. I note that a separate AugP is therefore a possibility, as is an adjoined augmentative.

The word class marker realization process for most augmentatives should follow exactly that of the diminutives, which was presented in section 5.3. For adjoined augmentatives, word class is determined by the identity of the root (in cases in which it does not pattern with gender) or the gender of the base. Augmentatives formed by separate, categorizing projections have their gender determined by the gender of that nominalizing projection, as described above. The word class for these will then always pattern with gender and likewise for augmentatives formed via separate projections — with two exceptions.

We saw above that two of the augmentative suffixes do not follow the typical pattern for evaluatives, by which forms end in either /o/ or /a/. Both *-ón/a* and *-ote/a* break this pattern, typically ending in /∅/ and /e/, respectively, when masculine. I assume that these cases are similar to the *-ín/ina* diminutive suffix presented above in section 5.3.4. In order to account for this particular word class marker pattern, I suggest that there is a condition on the insertion of the Class features when Theme is adjacent to these augmentatives that results in the correct word class marker. These (one for each suffix) are added to the conditions on Theme node insertion provided above. I include this revised set of Class features in (38).

(38) Amended Theme node insertion process⁵⁷

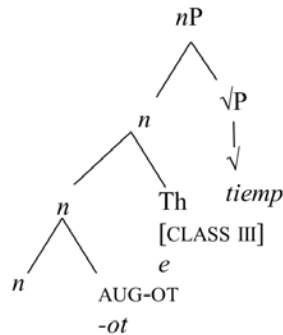
- (a) (i) Insert {Th}[CLASS,V] in the context of $\sqrt{\text{VIRU}}$, $\sqrt{\text{SÓCRATE}}$, $\sqrt{\text{ANÁLISI...}}$; Num
- (ii) Insert {Th}[CLASS IV] in the context of $\sqrt{\text{FLOR}}$, $\sqrt{\text{PAPEL}}$, $\sqrt{\text{CHEF}}$, $\sqrt{\text{CLUB...}}$; Num
- (iii) Insert {Th}[CLASS II] in the context of $\sqrt{\text{TEM}}$, $\sqrt{\text{DIAGRAM}}$, $\sqrt{\text{POET...}}$; Num
- (iv) Insert {Th}[CLASS III] in the context of $\sqrt{\text{MADR}}$, $\sqrt{\text{PADR}}$, $\sqrt{\text{CLAS}}$, $\sqrt{\text{JEF...}}$; Num
- (v) Insert {Th}[CLASS I] in the context of $\sqrt{\text{MAN}}$, $\sqrt{\text{LIBID...}}$; Num
- (b) (i) Insert {Th}[CLASS II] in the context of $n[+\text{FEM}]$; Num
- (ii) Insert {Th}[CLASS IV] in the context of DIM-IN, AUG-ON, n -ON, n -IN; Num
- (iii) Insert {Th}[CLASS III] in the context of AUG-OT; NUM
- (c) Insert {Th}[CLASS I] in the context of Num

Note that in this case, I have not included the nominalizing heads from the contexts for insertion (with the exception of condition (b)). This is due to the fact that the augmentatives described above can appear in adjectival contexts as well. Therefore, it is just the gender feature that is conditioning the word class marker realization and not the nominalizing head of a particular gender. As was the case for the diminutivizing suffixes, the ordering of these conditions is important because the terminal nodes must receive the correct word class markers before gender can condition the insertion of /a/ (for feminine nominals that end in /o/ but can retain their word class markers, such as *manoto* for *mano*). The ordering above will result in the correct word class marker assignment.

The derivation in (39) below demonstrates how the Class III word marker /e/ appears on an augmentative realized with the Vocabulary Item *-ote/a*. The semantic features that differentiate this augmentative from the others cause the triggering of the condition in (38)(b)(iii). The result is the insertion of the [CLASS III] feature on the Theme node, which is then realized as /e/.

⁵⁷ The reader is referred to Arregi and Nevins (2012) for another case of a very detailed ordered list (actually, several) that impacts insertion at PF. One difference is that their list refers to insertion of Vocabulary Items, while the list given here concerns insertion of morphological features (which are later realized by Vocabulary Items).

(39) Derivation for masculine augmentatives in *-ote*

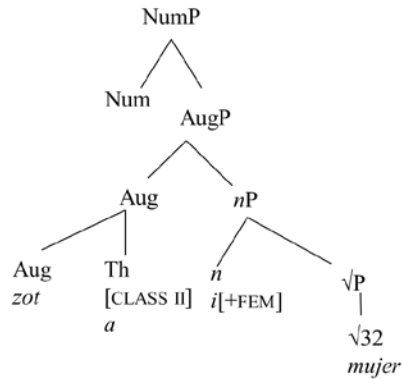


Derivations for masculine augmentatives in *-ón* would follow those presented in the preceding sections. There is no need to alter the word class feature rule inventory further as it already accounts for the Class IV word class markers for augmentatives in *-ón*.

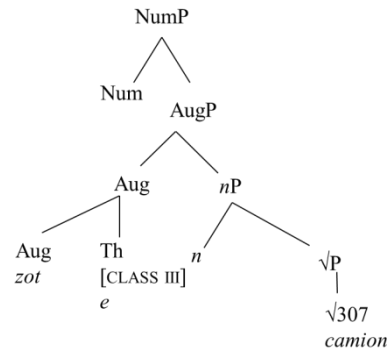
There is one more point that bears mentioning with regard to the augmentatives in *-ote/a*. The RAE (2010) mentions that there is an allomorph *-zote/a*, which surfaces in the same contexts as the suffix *-cito/a* (p. 171). We saw above in Chapter 4, however, that the two suffixes *-ito/a* and *-cito/a* were not mutually exclusive. Speakers could have either for most nominals. The word class patterns differentiated one from the other, suggesting that the two were formed in different positions (a hypothesis further supported by the addition of evidence discussed in Chapter 4). Should the word class patterns for *-zote/a* resemble those for *-cito/a*, then I would assume that there could also be an augmentative projection that realizes these in addition to an adjoined augmentative that can account for the cases in which the word class remains unaltered (aside from the conversion of all masculine nominals to Class III). It is beyond the scope of this dissertation to address these points, but I demonstrate how the derivations would proceed for forms created by an augmentative projection in (40) for the sake of completeness.

(40) Augmentatives formed via AugP

(a) Feminine form



(b) Masculine form



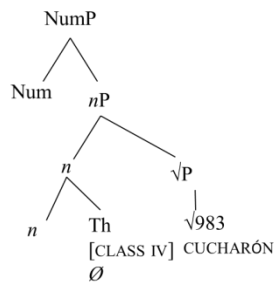
In both cases, the word class marker of the nominal on which the form is based is not realized overtly (though it would be null in either case, since these are Class IV nouns). The word class marker for the augmentative is determined by gender for the feminine noun but by the special condition that inserts the [CLASS III] feature for masculine forms in *-ote* for the masculine noun. The result is the realization of the word class marker /a/ for the feminine noun and the word class marker /e/ for the masculine one.

5.4.3.5. Lexicalized forms (i.e., (27)(a)(iv))

I mentioned above in my classification in (27) that there are lexicalized forms that the RAE (2009, 2010) considers to have an opaque meaning (i.e., a noncompositional meaning). There are two possible options for the derivation of these nouns. The first is that they could be formed via a nominalizing augmentative projection. This would necessarily be nominalizing as there is a change in gender associated with these nominals (e.g., *telón*: curtain-sg.m. from *tela*: cloth-sg.f. or *cucharón*: ladle-sg.m. from *cuchara*: spoon-sg.f.). The derivations for these would then follow those forms given in section 5.4.3.1.

It might, however, be possible that some of these lexicalized augmentatives are actually root-derived, in which case, the phonological string resembling the diminutive suffix is actually now a part of the root. This is entirely possible. The structure in this case would resemble that in (41).

(41) Possible structure for lexicalized forms if *-on* is considered to be a part of the root



We see here that the noun would be created with a plain *n*, since its gender is uninterpretable (i.e., is not based on biological sex) and masculine. In order to arrive at the insertion of the Class IV feature (necessary since this noun has a null word class marker), we would need to alter the conditions for the insertion of the [CLASS IV] feature to include this particular root. The process would follow just as it does for other Class IV non-derived, non-evaluative nominals (cf. Chapter 3).

I do not determine whether or not these are root-derived nouns or gender-changing augmentatives formed by a categorizing head. In either case, the analysis presented here is able to account for the patterns of gender and word class that are present in the data.

5.4.3.6. Tying up loose ends

5.4.3.6.1. Why some augmentatives are associated with a change in gender but others are not

There is one more question that we might have concerning the different augmentative forms addressed here. It is not clear why some augmentatives have a change in gender while others do not. Take for instance the case of *casa* (house-sg.f.), which has a form in *casona* (mansion-sg.f.). On the other hand, the form *espada* (sword-sg.f.) derives the nominal *espadón* (broadsword-sg.m.). It is unclear why the change in form is associated with a change in gender in the one case and not in the other. Perhaps the forms with a change in gender are more closely associated with a change in meaning (Lang, 1990 noted this for diminutives as well). This would make sense if we assume that there is a second nominalizing projection in these constructions but not in those in which there is not a change in gender.

At this point, however, we have no means of understanding just what licenses each type of augmentative with each nominal base. There are two different options for how exactly one is chosen over the other. The first is to assume that there are selectional restrictions that prevent the categorizing diminutive with *casa*, for example, but not for *espada*. Another option is to assume that there are arbitrary licensing conditions that will prevent the realization of an augmenting morpheme in either of these positions. I do not address these in more detail here, but rather turn to a discussion of how multiple morphemes might come to be realized in the same manner, the topic of the next section.

5.4.3.6.2. Diminutives in -ín/ina

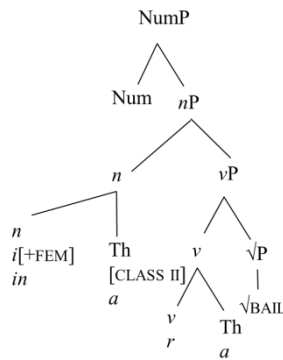
At this point, it is prudent to revisit the case of deverbal nominals in *-ín/ina*. The string *-ín/ina*, the same string used to realize the diminutivizing morphemes described in section 5.2, can appear on deverbal nominals. For example, a *bailarín* is one who dances ('dancer'), based on the verb *bailar* ('to dance'), and a *saltarín* is one who jumps ('jumper'), based on the verb *saltar* ('to jump'). Of course, we

saw in the first half of this chapter how this Vocabulary Item appears on diminutivize nominals that do not show a change in the category, gender, or word class from the nominal on which they are based in many instances (recall that word class changes for those masculine nouns that do not belong to Classes II or IV, for example). I assume, then, that these deverbal nominals are comparable to the nonaugmentative, deverbal nominals in *-ón* described above.

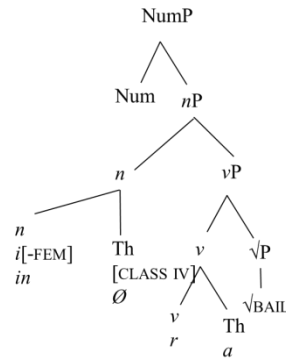
One distinction, however, is that the deverbal nominals in *-ín/ina* are animate, while those in *-ón* are inanimate. The derivations would therefore differ slightly in that the nominalizing projection that is realized as *-in* would have an interpretable gender feature (either *i*[+FEM] or *i*[-FEM]). A few of these are demonstrated below in (42).

(42) Possible derivations for deverbal nominals in *-ín/ina*

(a) Feminine forms



(b) Masculine forms



I assume again that the Class IV masculine noun would be created by the insertion of a [CLASS IV] feature due to a condition that this nominalizing morpheme should trigger the insertion of [CLASS IV] (much as that for diminutives in *-ín*).

There is one other difference between these nominalizations in *-ín/ina* and those in *-ón*. The verbal morphology appears to be present in the case of deverbal nominals in *-ín/ina*, while it is not in the

case of the deverbal nominals in *-ón*. I have included the theme vowel (see Oltra-Massuet, 1999; Oltra-Massuet & Arregi, 2005) and the infinitival marker *r* in the derivation above. Perhaps the overt realization of these morphemes is due to the difference between the animacy of the forms in *-ín/ina* and those in *-ón*. Or, it could be that the nominals in *-ón* are actually root-derived (though this does not seem too likely considering the action of the verb is implied in the noun). It is difficult to say without a more detailed investigation into both of these structures. At this point, however, it seems clear that the analysis presented thus far is able to account for the addition of gender associated with this nominalization and also the addition of word class that appears to pattern with gender for the feminine nouns. The masculine nouns, on the other hand, are accounted for in the same way as the other masculine Class IV nouns with feminine variants that belong to Class II: with an additional rule for Class feature insertion.

5.4.3.6.3. Gender-changing diminutives with specialized meanings

The data presented for the augmentatives in this section raises a question with regard to the gender-changing diminutives that we saw in section 5.2.2.2. There was one lexicalized noun in *-illo/a* in particular that had a different gender from the noun on which it appeared to be based. The data for this noun, *zapatilla*, is repeated here in (43) along with a few other examples.⁵⁸

(43) Gender-changing diminutives in *-illo/a*

(a)	zapato	shoe-sg.m.	zapatilla	slipper-sg.f.
(b)	ventana	window-sg.f.	ventanillo ⁵⁹	peephole-sg.m.
(c)	hormiga	ant-sg.f.	hormiguillo	tingling-sg.m.

In each case, a change in gender also corresponds with a change in meaning.

⁵⁸ Data from Lang (1990).

⁵⁹ The form *ventanilla* also exists, and it denotes a ticket window (e.g., in a movie theatre) or a window in an envelope.

We could assume that these are root-derived or derived from a categorizing diminutive projection. In light of the augmentative data described above, both options seem plausible. However, the latter (i.e., that a diminutive could be formed by a categorizing projection) does not seem to have independent motivation elsewhere. These seem to be a very small set of exceptional forms in comparison to the numerous gender-changing augmentative described above, some of which contribute a standardized meaning aside from augmentation (e.g., a blow or sudden event). I posit then that these are likely root-derived (i.e., that *-illo/a* can realize a nominalizing terminal node in specific instances) and the derivation of them would proceed as that described for the possible lexicalized augmentatives in section 5.4.3.5.

5.4.4. Multiple augmentative Vocabulary Items

The possibility for many Vocabulary Items to realize the same augmentative structure necessitates an explanation for how this can be accounted for under the current system. We have seen above that in many instances, augmentatives seem to contribute a different meaning than just augmentation. The suffixes *-azo/a* and *-ón/ona* can be associated with a blow issued by a particular object (e.g., *puntazo*: stab-sg.m. from *punta*: tip-sg.f.) or to a particular part of the body (e.g., *pechugón*: blow to the chest-sg.m. from *pechuga*: breast-sg.f.; cf. *pecho*: chest-sg.m.), and *-ón/ona* can be used for verbal forms to create a nominal describing the person who does that action to a great extent, such as (*llorón*: crybaby-sg.m. from *llorar*: cry-inf.) (RAE, 2009, 2010). Unlike in the case of the lexicalized forms of the diminutives that we saw earlier in this chapter, the same meaning is contributed to multiple forms. I assumed that these were nominalizing augmentatives.

How is it that these nominals that contribute meaning other than just augmentation are realized by the same Vocabulary Item as those that do not? One solution to this dilemma follows straight from one of the core assumptions of DM — namely that Vocabulary Items can (and often do) realize only a subset of the features on a particular morpheme. In other words, the [MOTION] feature would not be included in the

conditions for Vocabulary Insertion for the Vocabulary Item *-az*. This way, all of the augmentatives in *-az* could be realized with the same Vocabulary Item without the presence of multiple conditions for its insertion.

The question then is how we can distinguish this morpheme (i.e., that realized as *-az*) from the others (e.g., those realized as *-on* and *-ot*). Just as for the diminutives mentioned above, there are two options. There could be a semantic feature that distinguishes augmentatives in *-az* from those in *-on* and *-ot*, which can condition the insertion of one Vocabulary Item in one instance and another in the other. Some possible Vocabulary Items for these morphemes are included here in (44), where there are dummy semantic features that differentiate one from the other.

(44) Vocabulary Items for augmentatives

az ↔ [AUG] [FEATURE 1]
on ↔ [AUG] [FEATURE 2]
ot ↔ [AUG] [FEATURE 3]

Lang (1990) gives some insight into some shades of meaning that distinguish one type of augmentative from another, noting that there are similar differences in the connotations of the augmentative suffixes listed above. He states that *-ote/a* is pejorative and jocular and is rarely used with a meliorative connotation (p. 115). The connotation of *-azo/a* and *-ón/ona*, on the other hand, depends on the base to which they attach, but with perhaps more ambiguity for the suffix *-azo/a* than for *-ón/ona*. This suffix seems to generate both more positive and more pejorative forms (e.g., *besazo* ('big kiss') from the positive *beso*, meaning 'kiss,' but also *cabronazo* ('bastard') from the already pejorative *cabrón* ('asshole')) (Lang, 1990).

I do not attempt to determine the exact identity of the semantic features that differentiates these, but note that one such feature might be pejorativity (independently motivated for diminutives, as we saw

in section 5.3.1). The crucial point is that we are able to differentiate the augmentative terminal nodes semantically and do not have to make use of an arbitrary index, such as that presented as a less preferable possibility in section 5.3.1.

Regardless, it is not clear that these features are associated equally with augmentatives formed via a categorizing head and those formed by means of adjunction or an AugP. We might, then, need to have separate Vocabulary Items for the nominalizing augmentatives than those for the non-nominalizing augmentatives that just happen to be homophonous. We have already seen that this is the case for those deverbal nominals that end in *-ón* and do not have an augmentative connotation. Until more research is done into the identity of the semantic features that might differentiate one type of augmentative from the other and the exact position of the non-categorizing augmentatives in the grammar, it seems imprudent to choose one of these possibilities over the other.

An additional option is that there are diacritics that distinguish one morpheme from the other. These diacritics would not have any semantic distinction and would be similar to the indices used to differentiate one root from another. Without further investigations into the semantic qualities of these augmentatives (a topic outside the purview of this dissertation), it is impossible to choose the most likely scenario at this point.

Assuming that there is some means of differentiating these augmentatives semantically, the insertion of these different Vocabulary Items would follow just as it did for the diminutive Vocabulary Items described in section 5.3. Each terminal node is differentiated by some specific semantic feature combination, and there are Vocabulary Items that realize each one. Just as there are for diminutivizing nodes, there would be licensing conditions for the realization of these terminal nodes based on the identity of the projections to which they adjoin. There would also need to be licensing conditions for the augmentativizing nodes that can change the category of the elements that they augment. For instance, there would be instructions in the Vocabulary for realizing the nominalizing [AUG]-B (*-ón/ona*) head with

a verbal complement but not for one realizing the same nominalizing [AUG]-B⁶⁰ head with an adverbial complement, as there are no deadverbial augmentatives in *-ón/ona*.

5.4.5. Summary on augmentatives

This section on augmentatives has demonstrated that augmentatives might possibly come in three different forms: (1) adjunctions to a categorizing projection (nominal for our purposes); (2) categorizing projections with an augmentative feature; (3) a separate, non-categorizing augmentative projection. This section has shown that augmentatives can be accounted for in a similar fashion to diminutives.

Assuming that gender and word class are on *n* allows us to account for the different patterns for both. When an augmentative is adjoined to a nominal (or adjectival) head, it retains the gender of the element on which it is based, due to the fact that there is no new nominalizing projection to cause a change in gender. In this case, the word class of the base noun can also be retained, provided that the augmenting node is not one that is included in the specific conditions for word class feature insertion. On the other hand, when an augmentative heads a separate nominalizing projection (e.g., when there is a change in category associated with an augmentative), then the gender and word class can change. Furthermore, in these latter instances, word class is determined either by the identity of the node itself or by the gender of the nominalized form, as we saw for *-ón* and *-azo*, respectively. The root, on the other hand, should not be able to condition the realization of the word class marker due to the fact that it is in a separate phase. The data bears this out as well.

Just as for different diminutive terminal nodes, different augmentative nodes were differentiated by a combination of semantic features. These semantic features and licensing conditions can account for the ability for some augmentatives to appear in certain contexts when others cannot. One difference,

⁶⁰ Here, as above, these diacritics stand in for a set of undetermined semantic features that differentiate a particular augmenting terminal node from others. In this case, however, I have provided diacritics that match the phonological segments in the suffix for ease of exposition.

though, is that many of these separate projections headed by augmentatives are categorizing, while those for diminutives were not. Further, at least for the suffix *-(c)ito/a*, the difference in structure corresponded with a difference in form. This is not so for the augmentatives that we have seen in this section.⁶¹

5.5. Summary and conclusion

This chapter has demonstrated that the analysis presented in Chapters 3 and 4 can be extended to account for additional diminutive suffixes and augmentatives. The assumption that gender and word class can both appear on *n* allows for a uniform analysis for simple nominals and evaluative (diminutive and augmentative) nominals. The data bears out the expected patterns for gender and the realization of word class markers for each of these types of nominals, assuming the definition of phases provided in Embick (2010). In the section that follows, I provide a conclusion summarizing the analysis thus far and the points for future research.

⁶¹ The RAE (2010), however, does note that the augmentatives formed with *-zote/a* will occur with the bases that are diminutivized in *-cito/a* (p. 171). But, I do mention that we saw in Chapter 4 that many native speakers accept *-cito/a* in contexts that violate the patterns pointed out by previous account, including Smith (2011), which sums up the previous literature and distills it in to the series of rules that I presented. It could be that the suffix *-zote/a*, like *-cito/a*, corresponds which a different structure. What I merely point out here is that a change in position for augmentatives does not always correspond with a change in phonological form, as demonstrated for *-ón/ona* and *-azo/a*, in particular.

CHAPTER 6

6.1. Introduction

This concluding chapter is structured as follows. First, I provide a summary of the responses to the questions that I posed in Chapter 1. I explain the way in which the analysis proposed here accounts for the relationship between gender and word class in Spanish and how diminutive contexts shed light on this analysis. In section 6.3 I provide some directions and areas for future research that arose over the course of the dissertation. Lastly, in section 6.4, I summarize the contributions that this dissertation makes to the current literature on Distributed Morphology, specifically as it relates to nominal morphology and Spanish morphology in particular.

6.2. Addressing the questions posed in Chapter 1

Chapter 1 posed a series of questions regarding gender and word class in Spanish. Over the course of this dissertation, I addressed each one and elaborated on them in turn. In this section, I summarize the responses, highlighting the novel aspects of this dissertation with regard to these responses. First, I recap the definitions of gender and word class that I proposed in Chapter 2.

I defined gender as the classification of nouns into groups based on the morphological agreement/concord patterns demonstrated by other elements in the utterance that is based on a semantic criterion for at least some nouns in every gendered language and determined formally or arbitrarily in other instances. Nominal word class, on the other hand, was defined for Spanish as a property of nominals determined by the identity of root-specific pieces of phonology necessary for a morphologically well-formed noun. Although word class is not limited to nouns in Spanish, I only addressed nominals in this dissertation, reserving other categories for future research (see section 6.3).

An investigation into word class in Spanish led me to propose the novel word class inventory provided here in (1).

(1) Novel word class inventory for Spanish

- Class I: nominals ending in /o/
- Class II: nominals ending in /a/
- Class III: nominals ending in /e/ (no distinction for roots ending in consonants that cannot be word-final per the rules of phonotactics)
- Class IV: nominals ending in any segment other than /o/, /a/, or /e/
*exception for nominals ending in /os/ and /as/ (which are subsumed under Classes I and II, respectively), but including /ó/, /á/, and /é/
- Class V: Greek-derived nominals ending in /s/, such as *virus*, *Sócrates*, *análisis*, etc.

This inventory builds on the one proposed by Harris (1991b) but takes into account criticism that has been leveled against it, particularly with regard to word-final /e/ and Harris' Classes IV and V. I argue that word-final /e/ is always a word class marker. I contradict Harris (1991b) in assuming that /s/-final nouns are their own class and argue instead that /os/- and /as/-final nouns are a special case of Classes I and II, respectively. Other /s/-final nouns behave as other consonant-final nouns and are assumed to be a part of the class with a null word class marker (i.e., Class IV), which also includes xenonyms. Class V is reserved for special nouns of Greek origin that also end in /s/. Having reviewed the definitions of gender and word class and the novel word class inventory proposed in Chapter 2, we are now ready to revisit the questions raised in Chapter 1.

6.2.1. *Question 1: What is the relationship between gender and word class in Spanish (if there is one)?*

Chapter 2 demonstrated that gender and word class appear to be interrelated. There is a strong correlation between word-final /o/ and the masculine gender and word-final /a/ and the feminine gender. This is particularly evident for the same-root nominals that I present here in (2).

(2) Same-root nominals that suggest a correlation between word-final vowel and gender

- | | | | | | | |
|-----|-----|-----------|-------------------|------|-----------|---------------------|
| (a) | (i) | el | primo | (ii) | la | prima |
| | | the-sg.m. | male cousin-sg.m. | | the-sg.f. | female cousin-sg.f. |
| (b) | (i) | el | médico | (ii) | la | médica |
| | | the-sg.m. | male doctor-sg.m. | | the-sg.f. | female doctor-sg.f. |

However, I pointed out several issues with assuming that word class markers were gender markers. There are several masculine nouns that end in /a/ and a handful of feminine nouns that end in /o/. If word class markers realize gender, then it would be difficult to explain these situations. In Chapter 3, I sought out to propose an analysis for gender and word class that allowed for these generalizations between word-final segments and gender while retaining flexibility to account for cases in which they do not hold. Ultimately, this led to a discussion of the location of gender and word class in the grammar.

6.2.2. *Question 2: Where are gender and word class encoded in the grammar?*

After a review of the previous literature of both lexicon- and DM-based analyses, I argue that Kramer (2015) best accounts for gender. This approach assumes that gender is included in the feature bundles in List 1 that are merged into the derivation in the syntactic component. More specifically, gender features are present on the head that nominalizes roots (*n*). This assumption allows us to assume that roots are devoid of category-specific information until they are categorized in the syntactic component (via the merger of a categorizing projection, such as *vP*, *nP*, *advP*, etc.). It also enables gender to be syntactically active, which is particularly necessary for Agree relationships, which result in concord between agreeing elements (e.g., adjectives and determiners).

A further benefit of Kramer's (2015) analysis is that it captures the difference between gender that has a semantic basis (for Spanish, gender based on biological sex) and gender that does not (all other gender in Spanish). It does so by means of a four-way feature distinction repeated here in (3).

(3) Four-way typology of *n* in Spanish

Feature inventory	Type of gender it accounts for	Roots licensed under this type of <i>n</i>	Gloss
<i>n</i> <i>i</i> [+FEM]	Sex-determined feminine gender	√CHIC, √HERMAN, √NUER, √MADR	‘girl,’ ‘sister,’ ‘daughter-in-law,’ ‘mother’
<i>n</i> <i>i</i> [-FEM]	Sex-determined masculine gender	√CHIC, √HERMAN, √YERN, √PADR	‘boy,’ ‘brother,’ ‘son-in-law,’ ‘father’
<i>n</i> <i>u</i> [+FEM]	Feminine gender for inanimate nouns; feminine epicenes; feminine default	√MES, √CLAS, √PERSON, √CRIATUR, √GALLIN, √OVEJ	‘table,’ ‘class,’ ‘person,’ ‘infant,’ ‘chicken,’ ‘sheep’
<i>n</i>	Masculine gender for inanimate nouns; masculine epicenes; masculine default	√CENTR, √LIBR, √INDIVIDU, √PERSONAJ ¹ , √PER, √BAR	‘center,’ ‘book,’ ‘individual,’ ‘character,’ ‘but,’ ‘bar’

Nouns whose gender is determined by biological sex have interpretable gender features (*i*[+FEM] or *i*[-FEM]), while nouns whose gender is not determined by biological sex have an uninterpretable gender feature if feminine (*u*[+FEM]). All other nouns have a nominalizing head that is underspecified for gender, the so-called “plain” *n*. This “plain” *n* accounts for instances in which gender is assigned by default.

Specific root and *n* combinations are allowed or prevented by licensing conditions, as presented in section 3.2.3.3.3. These licensing conditions take the form of instructions for interpretation in the Encyclopedia and instructions for phonological realization in the Vocabulary, or rather the lack thereof. That is the derivation crashes when there are no instructions for interpretation in the Encyclopedia and also (and independently) when there are no instructions for the phonological realization of morphemes. These are the plausible explanation for the blocking of certain gender and root combinations, as presented in Chapter 2.

In contrast to gender, word class has no relevance for syntactic operations. It is not relevant for Agree and does not ever contribute semantic meaning to the nominal on which it is found. As a result, I

¹ I address word-final *-aje* later on in this chapter, as it seems to me to possibly be a derivational suffix, at least in some instances.

have assumed that it is the result of the postsyntactic insertion of a dissociated node, which is necessary for the satisfaction of a morphological well-formedness condition (cf. Embick, 1998).

Because word class seems to be a part of the categorization process, I have assumed that the word class marker node (Theme node) is inserted on the categorizing head *n* (though I explained in Chapter 4 that it can also be inserted on other projections). One consequence of this assumption is that gender is local (as the gender feature also appears on *n*). It is therefore simple to demonstrate how gender can impact word class marker realization. This was explained by the conditions on the insertion of the [CLASS] features on the Theme nodes, as given below in (4). Instructions for phonological realization of these features are then provided in (5). Crucially, there is only one word class marker per noun, as determined by the restriction that Theme nodes are only adjoined to the projection adjacent to Num (in contrast to Oltra-Massuet & Arregi, 2005 and Kramer, 2015, in which a Theme node is inserted for each nominalizing projection).

(4) Conditions for [CLASS] feature insertion

- (a) (i) Insert {Th}[CLASS V] in the context of $\sqrt{\text{VIRU}}$, $\sqrt{\text{SÓCRATE}}$, $\sqrt{\text{ANÁLISI...}}$; Num
- (ii) Insert {Th}[CLASS IV] in the context of $\sqrt{\text{FLOR}}$, $\sqrt{\text{PAPEL}}$, $\sqrt{\text{CHEF}}$, $\sqrt{\text{CLUB...}}$; Num
- (iii) Insert {Th}[CLASS III] in the context of $\sqrt{\text{MADR}}$, $\sqrt{\text{PADR}}$, $\sqrt{\text{CLAS}}$, $\sqrt{\text{JEF...}}$; Num
- (iv) Insert {Th}[CLASS II] in the context of $\sqrt{\text{TEM}}$, $\sqrt{\text{DIAGRAM}}$, $\sqrt{\text{POET...}}$; Num
- (v) Insert {Th}[CLASS I] in the context of $\sqrt{\text{MAN}}$, $\sqrt{\text{LIBID...}}$; Num
- (b) Insert {Th}[CLASS II] in the context of *n*[+FEM]; Num
- (c) Insert {Th}[CLASS I] in the context of Num.

(5) Vocabulary Items for [CLASS]

- (a) [CLASS V] ↔ -s
- (b) [CLASS IV] ↔ Ø
- (c) [CLASS III] ↔ -e
- (d) [CLASS II] ↔ -a
- (e) elsewhere ↔ -o

These instructions for the insertion of [CLASS] features and for the phonological realization of these [CLASS] features differ from those proposed by Kramer (2015). They incorporate the novel word class inventory that I detailed above in (3) and as a result account for a larger portion of the Spanish nominal system. We see in this process how gender and word class can be related and in fact how gender can determine word class in some instances. However, as we see in the ordering of the conditions on the insertion of [CLASS] features, the identity of the root can supersede these generalizations between gender and word class, allowing word-final /o/ for feminine nouns and word-final /a/ for masculine nouns. Chapters 4 and 5 demonstrate how these rule inventories must be further elaborated to account for evaluative and derivational morphology.

6.2.3. *Question 3: How are gender and word class accounted for in diminutive contexts?*

Chapters 4 and 5 took the analysis presented for gender and word class in Chapter 3 and investigated its plausibility in light of data from evaluative nominals. This process began for diminutive nominals in *-(c)ito/a* in Chapter 4.

Using Steriopolo's (2008) diagnostics for whether or not an evaluative morpheme is adjoined or the head of a separate projection, I determined that the Spanish *-(c)ito/a* diminutive realizes two different types of diminutives. The first is the adjoined diminutive *-ito/a*, while the second is the *-cito/a* diminutive, which heads its own projection. However, I argue that this diminutive that is not formed via adjunction is also not a categorizing head, adding an additional option for evaluatives to those presented by Steriopolo (2008) (and Wiltschko and Steriopolo, 2007).

The reasoning behind this differentiation concerned patterns for gender and word class. I demonstrated that word class is retained for Class I and Class II nominals that are diminutivized in *-ito/a* but not for those diminutivized in *-cito/a*. In the latter case, the word class markers pattern with gender (/o/ for masculine nouns and /a/ for feminine nouns). I took this as evidence that the *-ito/a* diminutives

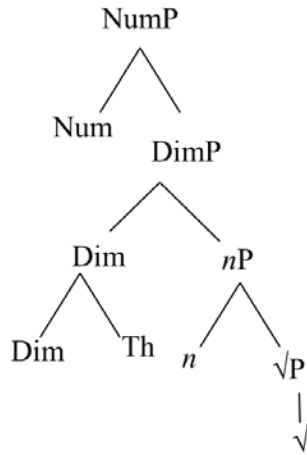
were adjunctions while the *-cito/a* diminutives headed a separate DimP. Further evidence came from compositional and noncompositional diminutives (section 4.7.4.2), the possibility of iteration (section 4.7.4.3), and comparable structures in Brazilian Portuguese (section 4.8)

The two-position analysis for diminutives provides further support for the analysis of gender and word class that was put forward in Chapter 3. Crucially, word class must be local enough to the root (i.e., in the same phase) for the root to affect its realization for the *-ito/a* diminutives. On the other hand, the word class marker must be too far away from the root (i.e., in a separate phase) in the *-cito/a* diminutives, which prevents the root from preempting the assignment of word class marker due to specific gender features (see (4) above). Assuming that word class is inserted on *n* postsyntactically allows for this to occur.

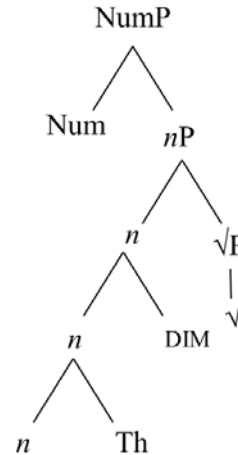
It is necessary, however, to add an additional possible location for the insertion of the word class marker (Theme node). In order for diminutives formed via the merger of a separate projection (above the nominalizing projection) to have a word class marker, there must be an additional location for the word class marker node to be inserted. Additionally, I have argued that Theme nodes are only inserted on the projection that is adjacent to Num. Therefore, I argue that functional heads within the nominal spine and below Num can house a word class marker node. The structures that I assumed for the two different *(c)ito/a* diminutives are thus the following:

(6) Structures for two different types of diminutives

(a) Adjoined diminutive



(b) Diminutive heading its own projection



In Chapter 5, I expanded this analysis to include other diminutive suffixes, augmentative suffixes, and derivational suffixes as well. Once again, I found further support for an analysis whereby gender and word class are both present on *n*, with the option of the existence of word class on functional projections higher up in the nominal spine. The augmentative suffixes and the derivational data support the analysis presented in the previous chapters in several ways.

First, gender and word class seem to be determined by the nominalizing suffix and not the previously categorized element on which it is based (or the root). This supports the notion that gender and word class are a part of the nominalization process. Secondly, the identity of the nominalizing suffix itself seems to determine the gender and the word class of the resulting nominal. Similarly, the identity of the diminutive and/or augmentative suffix also seemed to be able to determine the word class of the resulting nominal. This led me to assume that there were conditions on the insertion of word class markers based on the identity of the diminutive, augmentative, or nominalizing suffix, as demonstrated in the revised word class feature insertion instructions provided here in (7).

(7) Revised word class feature insertion instructions

- (a) (i) Insert {Th}[CLASS V] in the context of $\sqrt{\text{VIRU}}$, $\sqrt{\text{SÓCRATE}}$, $\sqrt{\text{ANÁLISI...}}$; Num
- (ii) Insert {Th}[CLASS IV] in the context of $\sqrt{\text{FLOR}}$, $\sqrt{\text{PAPEL}}$, $\sqrt{\text{CHEF}}$, $\sqrt{\text{CLUB...}}$; Num
- (iii) Insert {Th}[CLASS II] in the context of $\sqrt{\text{TEM}}$, $\sqrt{\text{DIAGRAM}}$, $\sqrt{\text{POET...}}$; Num
- (iv) Insert {Th}[CLASS III] in the context of $\sqrt{\text{MADR}}$, $\sqrt{\text{PADR}}$, $\sqrt{\text{CLAS}}$, $\sqrt{\text{JEF...}}$; Num
- (v) Insert {Th}[CLASS I] in the context of $\sqrt{\text{MAN}}$, $\sqrt{\text{LIBID...}}$; Num
- (b) (i) Insert {Th}[CLASS II] in the context of $n[+\text{FEM}]$; Num
- (ii) Insert {Th}[CLASS IV] in the context of DIM-IN, AUG-ON; Num
- (iii) Insert {Th}[CLASS III] in the context of AUG-OT; Num
- (c) Insert {Th}[CLASS I] in the context of Num..

In short, the diminutive and augmentative data supports the notion that gender and word class are both found on n but that word class can also be inserted on other functional projections in the nominal spine.

6.3. Areas for future research

Several additional questions arose throughout the investigation of the topics at hand.

Unfortunately, due to the limited scope and length of the present work, I was unable to address all of them. I include below some such topics that would be great directions for future research.

6.3.1 Derived nominals

Some of the evidence that prompted Kramer (2015) to argue that word class was only realized on the n closest to NumP came from derived nominals. Kramer explains that the word class marker of a noun like *hermano* ('brother') is suppressed when it is used to create a denominal nominal, such as *hermandad* ('brotherhood'). Harris (1991b) also argues that one way to determine what constitutes a word class marker is to observe its behavior in derivational contexts. He states that word class markers are lost in derivational contexts, such as those demonstrated in (8). It stands to reason, then, that we should discuss derivational morphology and how the analysis presented thus far can account for derived nominals.

(8) Loss of word class markers before derivational morphology

(a)	medi-o	'middle'	→	mediano	'medium'
(b)	lej-os	'far'	→	lejano	'far'
(c)	arroz-Ø	'rice'	→	arrocero	'rice grower'
(d)	Aristótel-es	'Aristotle'	→	aristotélico	'Aristotelian'
(e)	vir-us	'virus'	→	viral	'viral'
(f)	espírit-u	'spirit'	→	espiritoso	'spiritual'
(g)	trib-u	'tribe'	→	tribal	'tribal'
(h)	carn-e	'meat'	→	carnicero	'butcher shop'
(i)	libr-o	'book'	→	librería	'bookstore'
(j)	frut-a	'fruit'	→	frutera	'fruit bowl'

We have already seen in the previous chapter instances of augmentatives that head nominalizing projections. I assume that derived nominals will be similar to these, with the exception that there is no augmenting feature or interpretation associated with the process. As in the category-changing augmentatives (and contrary to the case of simple nominals), the root in derived nominals should not be able to condition the word class marker due to its presence in another phase. In my preliminary investigation, the data bears this out, providing further evidence for the analysis proposed up to this point. However, as this is only a preliminary investigation, there are still many areas that this theory can be tested, but more information about specific derived nominals is necessary for such an analysis, which is outside of the scope of this dissertation. I describe these below in section 6.3.1.3.

In this section, I propose a preliminary means by which the analysis proposed thus far could account for derived nominals. Specifically, I focus on the nominalizing suffixes *-ero/a*; *-dad*; and *-eza*. The first is a nominalizing suffix that seems to attach to nominal forms, creating denominal nominals. The remaining suffixes, on the other hand, derive nominals from adjectives. This process is demonstrated below in (9).

(9) Derived nominals

(a) **Denominal nominals**

(i)	-ero/a	fruta	fruit-sg.f.	frutero/a ²	fruit seller-sg.m./f.
		zapato	shoe-sg.m.	zapatero	cobbler-sg.m.

(b) **Deadjectival nominals**

(i)	-(i)dad ³	feliz	happy-sg.m./f	felicidad	happiness-sg.f.
		negativo	negative-sg.m.	negatividad	negativity-sg.f.
(ii)	-ez/a	puro	pure-sg.m.	pureza	purity-sg.f.
		rígido	rigid-sg.m.	rigidez	rigidity-sg.f.

I briefly address the determination that these are in fact derived nominals before proceeding to a discussion of their gender and word class. A fruit seller is one who sells fruit, while a cobbler is one who works with shoes. We could not cancel the implicature of either of these by stating that a the fruit seller does not sell fruit, only cheese (though he/she could sell cheese in addition to fruit) or that the cobbler does not make or fix shoes, only dresses.

(10) Implicatures demonstrating implied nominal base for denominal nominals in (9a)

- (a) #La frutera solo vende queso.
The fruit seller only sells cheese.
- (b) #El zapatero no sabe hacer ni arreglar zapatos.
The cobbler doesn't know how to make or repair shoes.

The deadjectival nominals are perhaps even more transparent. The nominalizing suffix in this case correlates with a change in meaning along the lines of “the quality of being X,” where X represents

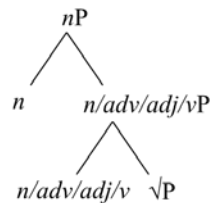
² Note that *frutero* can also mean a dish on which fruit is served (i.e., a fruit bowl). I return to the fact that this suffix can contribute multiple possible meanings later on in this section.

³ The identity of the vowel segment *i* in these nominals is unclear. It is necessary in some instances, but does not surface in others (e.g., *bondad*-‘goodness’; *maldad*-‘evil’; *humedad*-‘humidity’). It could be that this segment is a part of the nominalizing morpheme or that it is a phonological repair strategy (though we have seen before that the strategy in Spanish tends to be insertion of /e/). I do not investigate this here, as the focus of this section is on the gender and word class of derived nominals, but I mention that it is certainly a topic that must be taken into account in developing a full analysis for derived nominals in Spanish.

the adjective on which the nominal is based. Happiness, for instance, is the quality of being happy; while negativity is the quality of being negative. I, therefore, argue that these nominals are in fact derived nominals.

With regard to the gender and word class of these nominals, we can see in the data above in (9) that both gender and word class can change. If we assume that gender and word class can be found on *n*, then this is not surprising at all. This follows straightforwardly from the DM assumption that derived nominals are created by the merger of a nominalizing projection with a separate categorizing projection as its complement (demonstrated in (11)).

(11) Lower categorizing heads are accessible to the nominalizing head



Following Kramer (2015) and the statements put forward in Chapter 3, we would assume that such an *n* can host a gender feature. This gender feature is then able to condition the realization of word class just as explained for simple nominals in Chapter 3 and evaluative nominals in Chapters 4 and 5.

The question that arises is: what determines the gender that the derived nominal takes? In the examples of the denominal nominals, gender seems to be based on biological sex. The gender for deadjectival nouns in *-dad* and *-eza*, however, seems to be feminine. Similar patterns in Portuguese have led Rocha do Nascimento (2003) to argue that suffixes (i.e., pieces of morphophonological material) have intrinsic gender. This is one possible option, but it is a theoretically peculiar suggestion considering nominalizing suffixes are not themselves nominals, and gender is a property typically reserved for

nominals. I assume, rather, that derived nominals' genders condition the realization of the nominalizing nodes, not the reverse. Then, much as the diminutive and augmentative nodes were able to condition the realization of word class markers in sections 5.3.4 and 5.4.4, derivational terminal nodes can condition the realization of word class markers where it is not conditioned by gender. I outline each in turn.

6.3.1.1. Gender in derived nominals

The nominalizing suffixes in the section above were demonstrated to pattern in one of two ways: either biological sex seemed to determine the gender of the resulting nominal, or the identity of the suffix itself did. If we follow the analysis proposed for simple nominals and merely extend it to these nominalizing suffixes, this can easily be explained as the difference between gender with a semantic basis and one without (Kramer's, 2015 semantic gender versus arbitrary gender). The implication is thus that the gender feature on the nominalizing head (and other semantic features) determines the realization of the nominalizing suffix and not the other way around. I explain this process briefly first for interpretable gender (i.e., that which correlates with biological sex) and then for uninterpretable gender.

We saw above (in (9)) that the feminine noun *fruta* ('fruit') is the nominal on which the masculine and feminine *frutero* ('fruit seller') and *frutera* ('fruit seller'), respectively are formed.⁴ I argue that these are comparable to the same-root nominals that were discussed in Chapter 3 in that the same suffix realizes both a masculine nominalizing *n* and a feminine nominalizing *n*. The difference here is that the nominalizing head itself does not have a null realization; rather, it is realized as *-er*.⁵ Then, just as for same root nominals, there are two different types of *n* that can create a noun from this base: *n* i[+FEM] and an *n* i[-FEM]. Derivations are provided in (12).

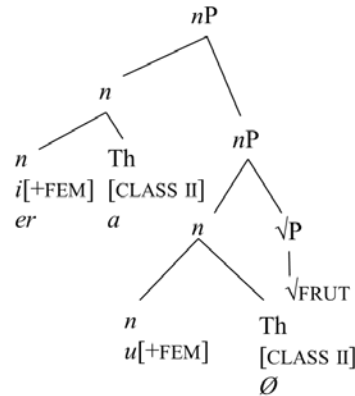
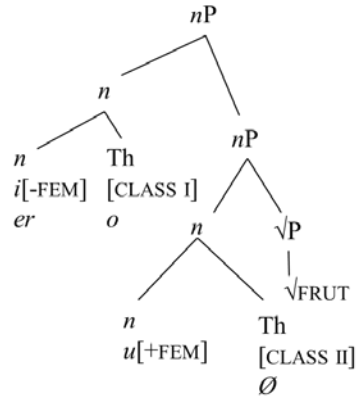
⁴ Note that the form *frutera* can also be used to describe a fruit bowl or a place to put fruit. I assume that this noun is derived in the same way as that in (12b) with the exception that the second nominalizing head will have an uninterpretable [+FEM] feature instead of an interpretable one.

⁵ I address the particular semantic contribution of this morpheme later on in this section.

(12) Human-denoting nominalizations with either gender

(a) frutero (fruit seller-sg.m.)

(b) frutera (fruit seller-sg.f.)



The question that this structure raises is: what is the effect of having multiple genders in the same nominal? Which is relevant for Agree and which determines the realization of the word-final word class marker (assuming there is also a null internal word class marker)? In other words, which gender wins?

Kramer (2015) has argued that the highest gender wins, which appears to be borne out by this Spanish data. The gender of the noun from which these animate nominals are derived is not relevant for agreement, as we see above in (12). Furthermore, the word class markers are correlated with the gender of the derived nominal (/o/ for the masculine form and /a/ for the feminine one). It appears as though the highest gender does in fact win. Kramer (2015) notes that this makes sense, as this would be the gender that would be most available for Agree. The lower gender could conceivably be sent to SpellOut before Agree could take place, depending on the remaining structure of the *nP*. (In fact, this would be the case if we were to diminutivize this noun with a DimP diminutive, following the assumption that DimP is cyclic.) As for their gender, my assumption is that the gender of these same-base derived nominals is determined by the second categorizing projection.

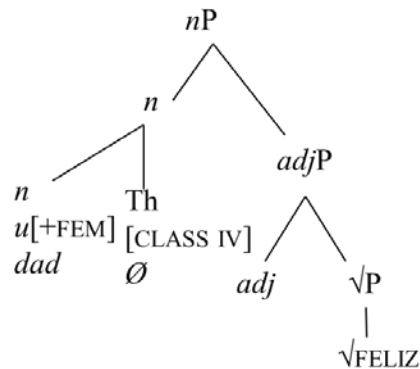
As for derived nominals whose gender is not interpretable (i.e., does not correlate with biological sex), the process must be somewhat different. Returning to the deadjectival nominals *felicidad* and *pureza*, it was explained above that both of these were feminine. In fact, all derived nominals that end in the suffix *-dad* and *-eza* are feminine (to my knowledge). Following the system discussed in Chapter 3 (i.e., based on Kramer, 2015), we would assume that each of these nominals is created by a $u[+FEM]$ nominalizing morpheme. I demonstrate this below in (13).⁶

This seems to work quite nicely. However, the question remains as to how two n 's that each take an adjective as their complement and are $u[+FEM]$ could be realized differently. The meaning that they contribute seems to be more or less the same, so it does not seem likely that they are each realized with a different nominalizing morpheme, as described for diminutives and augmentatives in Chapter 5.

One might propose that it is the root that conditions the realization of a nominalizing terminal node. However, one problem with this assumption is that once a second categorizing projection has been merged, the root should be sent to SpellOut (following Embick, 2010). The root should therefore not be able to impact the realization of the nominalizing terminal node above the first categorizing node, as demonstrated in the derivation in (13).

⁶ One note of caution that I have to make is that this structure does not address how gender is assigned to adjectives. It seems safe to assume that an adjective that is not used to modify a noun, but rather as the basis for one, as in this example, might be underspecified for gender. I leave the adjectival head without gender specification here and leave the topic of adjectival gender in the DM-based system advocated for in this dissertation for future research.

(13) Derivation of *felicidad* (caveat that the location and determination of gender on adjectives has not yet been determined)



In this case, the root *feliz* cannot influence the selection of the allomorph for the higher *n*. However, the presence of the lower *n* and the uninterpretable feminine feature on the higher *n* condition the allomorphy of the nominalizing terminal node, as explained above.

I argue that the solution is the second option for diminutives that we rejected above (see section 5.3): diacritics. I assume that in cases in which there is no distinguishable difference in meaning across multiple nominalizing suffixes (that take elements of the same category as their base), different Vocabulary Items realize different nodes that are distinguished from one another by elements that are like the indices that distinguish one root from another. A possible set of Vocabulary Items for the deverbal, feminine, nominalizing terminal nodes that are differentiated by diacritics is included in (14). In these Vocabulary Items, the diacritics are represented by letters, whose assignment (by me) is completely arbitrary (just as assignment of root indices was above).

(14) Possible Vocabulary Items for deadjectival, feminine, nominalizing terminal nodes

- (a) $n u[+FEM]-A \leftrightarrow \text{dad} / __ \text{adj}$
- (b) $n u[+FEM]-B \leftrightarrow \text{eza} / __ \text{adj}$

The conditions on insertion are identical. The diacritics ensure that each node will be realized differently. As above, this raises the question as to how certain nominalizing projections are possible and prohibited with certain verbs, for instance. How do we know whether the adjective is nominalized with *-dad* or *-eza* for example? I assume that this is done by syntactic selection. In other words, a given nominalizing head selects for a specific adjectival morpheme.

This syntactic selection will ensure that each terminal node is only paired with certain bases. For instance, *-dad* is paired with *feliz* (happy-sg.m./f.) to create *felicidad* (happiness-sg.f.) but is not paired with *rígido* (rigid-sg.m.), preventing the formation of the ungrammatical **rigidad* (rigidity-sg.f.). I will not investigate further as to which bases are permitted with each nominalizing node, but leave it for future research.

However, such syntactic selection would not be necessary for nominalizing suffixes that contribute specific meaning to a derivation that is not shared by other nominalizing suffixes. For instance, the suffix *-ero/a* above might contribute a meaning along the lines of “one who works with or sells X.” Whatever semantic feature might contribute such a meaning could simply be listed in the Vocabulary as a condition for the insertion of the Vocabulary Item *-er*. In this way, the suffix realized as *-er* could be differentiated from other feminine nominalizing suffixes that take *nPs* as their complements (i.e., morphemes that are not distinguishable by any other means). This would be similar to the way in which different diminutivizing and augmenting suffixes were distinguished in the analysis in Chapter 5.

There is one further point that bears mentioning with regard to the suffix *-ero/a* in particular. This suffix does not just contribute the meaning of “one who works with or sells X.” Rather, it can also be used to describe a receptacle for the noun on which it is based, such as a fruit bowl (*frutero*) or a shoe rack (*zapatara*). This raises several questions. First, how is it that the same form has a similar, but different meaning? Secondly, why is it that the receptacle noun is masculine in one instance and feminine

in the other? And furthermore, how can we account for these variations in interpretation in the proposed analysis?

The answers to these questions are beyond the scope of this current dissertation. However, I suggest that it must first be assumed that these inanimate nominals are created the merger of a different type of *n* from those that denote humans: either a plain *n* (for masculine nouns like *frutero*) or an *n* with an uninterpretable feminine feature (for feminine nouns like *zapatera*). It is not clear why the non-human noun form is masculine for one and feminine for the other. In studying many of these types of nominals, the response to this question might be determined. However, this is outside of the realm of this dissertation.

As for the difference in interpretation, it could be that there is a less fine-grained semantic contribution of the nominalizing morpheme that is realized as *-er* than that proposed above. Another possibility is simply that the Encyclopedia sorts out this interpretation issue, assigning a 'receptacle' interpretation to these nominals when with either a plain *n* or a *u*[+FEM] *n*. This seems somewhat less parsimonious, as the same 'receptacle' meaning is contributed to many nouns. A further possibility could be to assume that there are two different nominalizing morphemes that happen to be realized with the same piece of phonology (i.e., *-er*). One morpheme would contain a "one who makes or works with" feature while the other would contain a "receptacle" feature. This seems to not be ideal since there would be multiple realizations in the Vocabulary for the same type of morpheme (see Chapter 3 for an explanation of the pitfalls of such an assumption). But, perhaps these morphemes are dissimilar enough that this does not pose a challenge (similar to the diminutives in *-ín/ina* and the deverbal nominals in *-ín/ina* that were described in Chapter 5). There are several possible options, each with some advantages and drawbacks. It is beyond the purview of this dissertation to determine what exactly the solution to this dilemma might be, but I mention them here as topics for future research and note that the analysis

proposed here can account for the fact that gender and word class can change in these nominals and explain why. What remains to be filled in is merely the semantic portion of the analysis.

6.3.1.2. Realization of word class markers in derived nominals

Now that I have addressed gender and how it can condition the realization of nominalizing morphemes in derived nominals, I turn to a discussion of the realization of word class markers. The prediction would be that the highest gender is the one that determines the realization of the word class marker. As I mentioned above, it appears as though the highest gender (i.e., the gender on the outermost nominalizing suffix) is the one that is relevant for word class marker realization. The feminine derived nominal *frutera* receives the [CLASS II] feature, resulting in the exponence of /a/ for their word class marker, regardless of the gender of the base on which it is built. The masculine *frutero*, on the other hand, receives the [CLASS I] feature, resulting in an exponence of /o/ for its word class marker.

Again, as predicted by Oltra-Massuet and Arregi (2005) and Kramer (2015), the word-medial word class marker is not realized. They argue that this is because it is not adjacent to NumP due to the presence of the higher categorizing projection that hosts its own word class marker (i.e., *nP*). (I, however, have argued that Theme nodes are only inserted for nouns on the projection that is adjacent to NumP). We see that the forms are *frutera* and *frutero*, not *frutaera* and *frutaero*, respectively. One might argue that this could merely be the result of a phonological constraint on adjacent vowels creating a hiatus. However, as we saw with the diminutive data in Chapter 4, nouns without overt word class markers that end in a stressed vowel or a vowel other than /o/ or /a/ will retain this vowel. The repair strategy is not vowel deletion, but rather the insertion of a stop (/t/). This is demonstrated below in (15) with the data from Chapter 4.

(15) [t]-insertion in Spanish

(i)	café	coffee-sg.m.	cafetal	coffee grove-sg.m.
(ii)	café	coffee-sg.m.	cafetera	coffee maker-sg.f.
(iii)	sofá	couch-sg.m.	sofateria	couch store-sg.f.
(iv)	sofá	couch-sg.m.	sofatero	on the couch-sg.m.
(v)	puré	purée-sg.m.	puretero	tool used to purée-sg.m.

It appears, then, that the lack of word-medial word class markers is not due to a phonological repair strategy, but rather to a condition on the insertion of the word class marker. Recall that the word-final vowels in the cases in (15) are not assumed to be word class markers; instead, they are part of the root. The word class markers in these cases are null. We see then that the highest gender does in fact also determine the word class marker for derived nominals.

The process described above (i.e., one in which the gender of the nominalizing suffix conditions the word class marker realization) will only work for particular nominalizing suffixes. Just as not all simple nominals could be accounted for in this way, not all derived nominals can be either. There must be a way for the nominalizing terminal nodes to condition the realization of word class marker when the word class marker is not predictable from the noun's gender.

There seems to be a fairly simple solution. All we would need to do is to expand the conditions on Class feature insertion to include terminal nodes whose word class marker is not determined by gender, just as we did for the diminutives, augmentatives, and roots above. For example, we would need to include the terminal node realized as *-dad* (perhaps *n-J*) in the conditions for the insertion of [CLASS IV]. I add this to the previous inventory of word class feature insertion conditions here in (16).⁷

⁷ In this case, I have included the suffix in the position where the diacritic should appear just for the sake of clarity of exposition. The exponence of the terminal nodes is not actually included in these conditions or as a part of the terminal node or diacritic itself.

(16) Revised word class feature insertion process

- (a) (i) Insert {Th}[CLASS V] in the context of $\sqrt{\text{VIRU}}$, $\sqrt{\text{SÓCRATE}}$, $\sqrt{\text{ANÁLISI...}}$; Num
- (ii) Insert {Th}[CLASS IV] in the context of $\sqrt{\text{FLOR}}$, $\sqrt{\text{PAPEL}}$, $\sqrt{\text{CHEF}}$, $\sqrt{\text{CLUB...}}$; Num
- (iii) Insert {Th}[CLASS II] in the context of $\sqrt{\text{TEM}}$, $\sqrt{\text{DIAGRAM}}$, $\sqrt{\text{POET...}}$; Num
- (iv) Insert {Th}[CLASS III] in the context of $\sqrt{\text{MADR}}$, $\sqrt{\text{PADR}}$, $\sqrt{\text{CLAS}}$, $\sqrt{\text{JEF...}}$; Num
- (v) Insert {Th}[CLASS I] in the context of $\sqrt{\text{MAN}}$, $\sqrt{\text{LIBID...}}$; Num
- (b) (i) Insert {Th}[CLASS II] in the context of $n[+\text{FEM}]$; Num
- (ii) Insert {Th}[CLASS IV] in the context of DIM-IN, AUG-ON, $n u[+\text{FEM}]\text{-DAD}$; Num
- (iii) Insert {Th}[CLASS III] in the context of AUG-OT; Num
- (c) Insert {Th}[CLASS I] in the context of Num.

Just to clarify, /a/-final suffixes, such as *-eza*, would not need to be listed. These Vocabulary Items realize nominalizing nodes that are $u[+\text{FEM}]$. As such, they receive the [CLASS II] feature under the insertion rules that exist already. No additional rule/condition is required.

In short, we can account for derived nominals in the same way that we can account for root-derived nominals and the evaluatives addressed in Chapter 5. Of course, there are many more nominalizing suffixes to address and many more points at which the analysis proposed briefly here would need to be expounded upon in order to account for all of the data. We would need to take into account, for instance those derived nouns that correspond with the nouns that Harris (1991a) describes as “gentilic.” Recall that Harris (1991a) used the term “gentilic” for nominals that end in /e/ when masculine and /a/ when feminine, as described in Chapter 3.

The masculine forms will have their word class marker (/e/) determined by the identity of the nominalizing terminal node and its gender feature ($i[-\text{FEM}]$). This would take the form of an additional condition on the insertion of the Class features that would assign the $n i[-\text{FEM}]\text{-M}$ ⁸ terminal node the [CLASS III] feature. A second condition for the insertion of the [CLASS IV] feature could target the

⁸ The M here is a diacritic used to distinguish a particular nominalizing terminal node, such as one realized in *-nte* (from *presidente*, derived from the verb *presidir*), from other nominalizing terminal nodes.

n i[-FEM]-N terminal node (perhaps *-dor*). The feminine forms in both cases, on the other hand, will have their word class markers determined by gender. The result is that gender can determine the word class marker when the nouns are feminine and not when they are masculine. If we assume that there is a condition on the realization of word class markers that takes gender into account, then this is rather straightforward. These nominals can be accounted for in precisely the same way as nonderived nominals, evaluatives, and other same-base derived nominals.

6.3.1.3. Future directions for derived nominals

There are still many remaining questions concerning derived nominals that are beyond the scope of the current work, but which I mention here as directions for future research. As mentioned above, much work needs to be done to determine what exactly the features of the nominalizing morphemes would be in order for one to be differentiated from the other (i.e., for two feminine deverbal nominalizing suffixes to be differentiated from one another).

There are also some specific challenges associated with individual forms, such as male/female pairs that do not differ only in word final vowel. I have included some such nominalizations below.

(17) Same root nominals with dissimilar VI's for the nominalizing terminal node

- | | | | | | | | | | |
|-----|-------|----|---------|-----------|-----|-------|----|-----------|------------|
| (a) | (i) | el | alcalde | 'mayor' | (b) | (i) | la | alcaldesa | 'mayor' |
| | (ii) | el | duque | 'duke' | | (ii) | la | duquesa | 'dutchess' |
| | (iii) | el | vampiro | 'vampire' | | (iii) | la | vampiresa | 'vampire' |
| | (iv) | el | conde | 'count' | | (iv) | la | condesa | 'countess' |

The masculine forms that denote males are given in (a), while the feminine forms that denote females are given in (b). An extension of the analysis presented here would need to be able to explain these nouns and

the existence of what seems to be additional morphology in the feminine form than in the masculine form.⁹

Other nominalizing suffixes pose a challenge because it is not always clear whether they are nominalizing a previously-categorized element or a root. Some individual suffixes demonstrating this dilemma are included in (18).

⁹ One possible explanation for these is to assume that the feminine forms are an additional nominalization of the masculine forms. In short, the masculine form would be created via the merger of an *n* *i*[-FEM], and the feminine form would be created via the merge of an *n* *i*[+FEM] with this *n* *i*[-FEM] as its complement. Data from Brazilian Portuguese and Italian could lend further support to this treatment of the *alcalde/alcaldesa*-type nouns. The suffixes in question are the Portuguese *-al*^o and Italian *-essa* in (ia) and (ib), respectively.

(i) Evidence for treatment of *-esa* as a realization of *n*

(a)	laranja	orange-sg.f.	→	laranjal	orange tree-sg.m.
	banana	banana-sg.f.	→	bananal	banana tree-sg.m.
	areia	sand-sg.f.	→	areal	sandpit-sg.m.
	pomba	dove-sg.f.	→	pombal	dovecote-sg.m.
(b)	studente	student-sg.m.	→	studentessa	student-sg.f.
	professore	professor-sg.m.	→	professoressa	professor-sg.f.
	dottore	doctor-sg.m.	→	dottoressa	doctor-sg.f.
	principe	prince-sg.m.	→	principessa	princess-sg.f.

Nominals formed with these suffixes seem to provide further support for an analysis that builds a form of one gender on top of (or from) a form of another gender via an additional nominalization. In each case, additional morphology appears, which we could assume is the realization of a nominalizing head that takes a nominalizing head of the opposite gender as its complement. Perhaps this solution might make sense for the nouns presented above. But, it is merely one possible solution out of many and should not be assumed to be the best option without a deeper investigation of the data. One particular caveat to this analysis for human-denoting nouns would be that there would be two interpretable gender features on the nouns in question, which would create a semantic composition problem. It is not clear how the two interpretable gender features would be resolved. Perhaps there is another feature at play here, or perhaps the feminine form is realized with some of the same segments as the masculine forms. Further investigation is definitely necessary before drawing any conclusions.

(18) Nominals that might be root-derived or noun-derived

(a)	<i>-crata</i>				
(i)	demócrata	democrat-sg.m./f.	demos?		
(ii)	autócrata	autocrat-sg.m./f.	?		
(iii)	tecnócrata	technocrat-sg.m./f.	?		
(b)	<i>-fobia</i>				
(i)	xenofobia	xenophobia-sg.f.	√XEN?		
(ii)	arácnido	aracnophobia-sg.f.	√ARÁCN?		
(c)	<i>-aje</i>				
(i)	kilometraje	mileage-sg.m.	kilómetro	kilometer-sg.m.	
(ii)	coraje	courage-sg.m.	cor	heart-sg.m.(in disuse)	

For example, the suffix *-crata* seems to contribute the meaning of ‘rule of X,’ where X precedes *-crata* within the word. However, these pieces of morphology are not themselves clearly nominals in Spanish, just as in English. There is the Greek *demos*, which is borrowed into English, but which is not recognized by the Real Academia Española as a word in Spanish. But, there is no *auto* or *techno*, aside from the modern usages of the terms (i.e., an abbreviation of automobile and a form of music, respectively). The same is true for Spanish (i.e., there is no clear nominal entity). The roots are not the same type of roots used to create simple nominals that we saw in Chapter 3, since they cannot combine with a null nominalizing morpheme. Moreover, the morpheme *auto* can also be used as a modifying prefix, such as in *automóvil* (‘automobile’) or *autobiográfico* (‘autobiographical’).

A similar question arises for the suffixes *-fobia* and *-aje*. It is not clear that they are derived from a nominal in all cases or a root in some and a nominal in others (see *-aje* in particular). It could be that they are instances in which the simple nominal (i.e., one with just one nominalizing head that takes a root as its complement) has overt realization. But, as I mentioned, it is not clear that they are roots in the conventional sense. This raises a further question of whether prefixes can be roots and also whether a non-functional word can be created without a root. All of these questions are beyond the scope of this work. Once they could be solved, however, an investigation into whether the analysis proposed here for

other nominals might be able to account for these types of nominals as well. These nouns are all a part of the larger question of how to address words of Greek origin, which I will discuss in further detail below.

Another topic for future research concerns masculine-feminine pairs that seem to have the same root (or base element), but with dissimilar nominalizing terminal nodes. In these cases, the forms do not share material outside of the base element/root that could be considered to be the nominalizing terminal node, unlike the shared *-er* in the *frutero* and *frutera* example described above. The masculine and feminine forms appear to have completely different VI's. The data in (19) exemplifies this pattern.

(19) Same root nominals with dissimilar exponence of nominalizing terminal nodes

(a)	(i)	el	actor	'actor'	(b)	(i)	la	actriz	'actress'
	(ii)	el	emperador	'emperor'		(ii)	la	emperatriz	'empress'
	(iv)	el	príncipe	'prince'		(iv)	la	princesa	'princess'
	(v)	el	rey	'king'		(v)	la	reina	'queen'
	(vi)	el	don	'Mr.'		(vi)	la	doña	'Mrs., lady'

A first estimation as to how we might account for these could be to assume that the identity of the verb being nominalized might somehow condition the nominalizing terminal node (via syntactic selection). One issue with this analysis, however, is that the nominalizing head should not have access to the root. Specifically, the merger of *nP* should send all the complements of the categorizing *vP* to SpellOut, which includes the root. This leads me to wonder if these nominalizations are deverbal or root-derived. The fact that there is no verbal form for the root that forms *emperador* and *emperatriz* suggests that these might be root-derived nominals. I suggest, therefore, that these nominals might be accounted for by assuming that they are root-derived and not built on preexisting verbal derivations. But, even so, the remaining forms (i.e., *príncipe* 'prince' / *princesa* 'princess' and *don* 'Mr.' / *doña* 'Mrs.')

are unaccounted for. One possible solution is that these involve instances of contextual allomorphy of the root and are therefore not relevant for our discussion of derivational contexts and word class markers.

However, a more detailed investigation into the properties of these and other similar nouns might reveal a better, more-nuanced approach.

6.3.2. Gender and word class for other categories

The first of these is an investigation into gender for adjectives and word class for adjectives and adverbs. I noted above that gender for adjectives is distinct from that for nominals, as gender on adjectives is the result of agreement or concord. Gender on nominals, on the other hand, is inherent to that nominal. It would be interesting to investigate how this concord process works and also how it impacts word class.

We saw in Chapter 2 that gender is reflected in adjectival agreement. In many cases, word class markers on adjectives pattern with gender (/o/ for masculine adjectives and /a/ for feminine adjectives). However, I also noted some exceptions, including gentilic adjectives (i.e., those that take /a/ in the feminine form but either a null word class marker or /e/ in the masculine form). There are also adjectives that have an /e/ word class marker when used with nouns of both genders (e.g., *inteligente* for ‘intelligent’ and *interesante* for ‘interesting’) and some that have /a/ when used with nouns of both genders (e.g., *comunista* for ‘Communist’ or *demócrata* for ‘democratic’).

It seems as though the conditions on the insertion of [CLASS] features (given above in (7)) could also apply to adjectives. Specific adjectives would be listed for the insertion of specific [CLASS] features when these do not correspond with gender (i.e., [CLASS I] for masculine nouns and [CLASS II] for feminine nouns). As with the nominals described in Chapters 3-5, the node with the gender features and the root must be local enough to impact the realization of the word class marker for non-derived adjectives. The most parsimonious option would be to place the gender and word class information on the adjectivalizing head. However, further investigation is required to determine whether or not the Agree relation would be able to hold if this were the case.

As for adverbs, it remains to be seen what determines the word class markers. There is no gender correlation that needs to be captured. Perhaps there are other patterns, or perhaps each adverbial root and/or adverbial suffix would need to be listed in the word class feature insertion rule inventory. A first intuition suggests that this latter option might be the case, but an in-depth investigation might reveal otherwise.

Additionally, an investigation into gender and word class for the pronominal system is also necessary. This would be a particularly interesting extension of the analysis presented here because it would necessarily involve an investigation into case.

6.3.3. Languages in which gender, number, and word class appear intertwined

I mentioned in Chapter 2 that it would be particularly interesting to investigate gender and word class patterns for a language like Italian in which gender, number, and word class are all intertwined. I explained in Chapter 3 (with reference to the work of Ferrari, 2005 and Ferrari-Bridgers, 2007) that plural marking in Italian is not realized as a separate morpheme (in contrast to the plural /s/ in Spanish, with its rare null allomorph). Rather, the plural appears to result in the change from /o/ to /i/, /a/ to /e/, and /e/ to /i/ in the most common cases. The question is whether we can extend the analysis presented here with regard to gender and word class to this language where the plural and word class marker are both marked on the word-final segment.

As mentioned above, Ferrari (2005) noted that the plural created in the transition from /a/ in the singular to /e/ in the plural could be the result of a raising of /a/ to /e/ due to the plural morpheme /i/. The idea is that the plural and the word class marker (though for Ferrari it is a morpheme that has gender and is the result of the nominalizing operation) are realized simultaneously (i.e., are fused). Nouns that go from /o/ to /i/ or from /e/ to /i/ from the singular to the plural do not undergo this fusion. Perhaps in this

case, the Theme node might be blocked from insertion. It is certainly an extension of the analysis presented here worthy of investigation.

A second language that would be fascinating to study in light of the analysis presented here is Romanian. Romanian has nouns with neuter gender. These nouns are remarkable in that they appear with the same forms of agreeing elements as masculine nouns when singular but feminine nouns when plural. Kramer (2015) argues that these neuter nouns are underspecified for gender and receive the default gender. Kramer assumes that masculine is the default gender for singular nouns while feminine is the default gender for plural nouns. The defaults are created in each case by assuming that they have the least specified Vocabulary Item, as shown below in (20) (p. 149).¹⁰

(20) Vocabulary Items for Romanian vocalic endings

[C],[+FEM]	↔	ă
[C]	↔	∅
[C],[-FEM], [+PL]	↔	-e
[C],[+PL]	↔	-i

In spelling out this analysis, however, Kramer (2015) assumes that word-final segments in Romanian realize particular sets of features. This could be, but it could also be that Romanian has word class. If this were the case, then we would need to provide conditions on [CLASS] feature insertion as the result of the gender inventory. It seems as though this could work, but it remains to be seen if it would work as easily as the [CLASS] feature insertion given for Spanish.

¹⁰ [C] stands for “category,” as Kramer (2015) “intend[s] to be extremely neutral about what category that agreement is on” (p. 149).

6.3.4. An investigation of how word class interacts with the type of diminutive selected

I mentioned in Chapter 4 that it appears as though the adjoined diminutive is much more common for base nouns of Classes I and II. In fact, I argued that there was even a restriction on the adjoined diminutive formed by other classes to the point that Impoverishment is necessary in these cases, at least for the *-ito/a* diminutive.

The data that we observed for the other diminutivizing suffixes was somewhat less clear. A more in-depth study of these suffixes and the likelihood of each one diminutivizing nouns of a given class is warranted. Likewise, an in-depth study of the case of augmentatives is also warranted. Are there restrictions on which type of augmentative (i.e., one formed via adjunction, AugP, or *n* [+AUG]) will be formed with particular bases? Does the class of these bases play a role? This latter question would be particularly interesting for deverbal augmentatives, such as *llorón* ('crybaby'). These would all be fascinating topics for future research.

6.3.5. Words of Greek origin

We saw at numerous points that words of Greek origin posed challenges to the analyses presented in this dissertation. The first of this concerns Class V nouns, which I assumed were Greek nouns that ended in /s/, such as *tesis* ('thesis'), *dosis* ('dose'), and *virus* ('virus'). They do not seem to pattern like other nominals with regard to the behavior of the word class marker. In fact, it is difficult to determine what exactly the word class marker is.

It was also explained in Chapters 4 and 5 that these nominals are complicated when it comes to diminutive formation in particular. The speakers I surveyed had very conflicting intuitions about what to do with these nouns (e.g., *dosisita*, *dosisitas*; *virusito*, *viritus*). In many instances, in simple Google searches, there were no recorded forms of these nominals when diminutivized with the other three suffixes discussed in Chapter 5 (*-(c)illo/a*, *-(c)ín/ina*, *-(c)ico/a*). Further investigations into these nominals

might reveal distinguishable patterns that could be used to determine what exactly constitutes the word class marker in these cases.

Another difficulty caused by words of Greek origin was presented in Chapter 5 with regard to derived nominals. There were some suffixes that seemed able to nominalize both pre-existing words and word fragments. For example, *-aje* is a suffix that can appear in a word like *kilometraje* (roughly ‘mileage,’ though it refers to kilometers and not miles) but also in one like *coraje* (‘courage’) or *garaje* (‘garage’). While *kilómetro* (‘kilometer’) seems to be the clear base of *kilometraje* and is itself a word, no such base appears to exist for *coraje* or *garaje*. Not one of the possible word class markers can form a related noun or adjective from *cor* (i.e., **coro*, **core*, **cora*, **cor*) or *gar* (i.e., **garo*, **gare*, **gara*, **gar*). Could we consider these to be derivational suffixes, or not? Perhaps they are simple nominalizing suffixes that take roots as their complement. In this case, *kilometraje* would be root-derived. This does not seem ideal, as the existence of ‘kilometers’ is implied in the word ‘mileage’ (i.e., ‘kilometrage’).

The question becomes more complicated, however, when we look at words like *democracia* (‘democracy’) or *xenofobia* (‘xenophobia’). These are based on elements that have clear meaning (similar to ‘demos’ and ‘xeno’ in English), but that are not nominals and perhaps not even roots in this language. Further investigations into these items would shed light on the identity of these suffixes and possibly help explain which elements can be modified by these types of suffixes.

6.4. Contributions of this work

In addition to responding to the question raised in Chapter 1, this dissertation has pushed the field further with regard to nominal structures in Distributed Morphology and Spanish morphology in general. Chapters 2 presented an in-depth study of the types of gender Spanish possesses. In Chapter 3, it was demonstrated that Kramer’s (2015) analysis for gender assignment can account for each type of gender that Spanish displays (i.e., semantically-determined, arbitrarily-determined, and default). The word class

marker inventory captures a larger portion of the data and its idiosyncratic patterns than previous analyses (e.g., Harris, 1991b; 1999; Bermúdez-Otero, 2013). Furthermore, the assumption that the word class marker is inserted on *n* explains the patterns that are visible with regard to root-conditioned word class marker realization. This root-conditioned word class marker realization is then lost when the root appears in another phase, as predicted following Embick (1998). Assuming that a word class marker can be inserted on other projections in the nominal spine (i.e., evaluative projections), allows for an explanation as to why word class markers for the same root can vary depending on the construction it is found in (i.e., simple nominal or evaluative nominal) — and also depending on the identity of the evaluative morpheme itself.

The investigations into diminutive and augmentative morphology led to the development of a novel analysis whereby diminutives and augmentatives can come in multiple types in the same language. Wiltschko and Steriopolo (2007) and Steriopolo (2008) proposed multiple structures crosslinguistically (e.g., German vs. Halkomelem) but did not explain the possibility that both could exist within the same language. De Belder, Faust, and Lampitelli (to appear) argued for multiple positions for diminutivization in Italian, but did not necessarily assume that they were two different types of morphemes (i.e., an adjoined morpheme vs. a morpheme that heads its own projection). The two-way distinction for diminutives and the three-way distinction for augmentatives within the same language is thus a novel analysis for evaluative morphology.

The noteworthy aspect of the analysis presented here is that the predictions it makes for the gender of evaluative and derived nominals are borne out by the data, and likewise for word class markers. In the process, I developed an explanation for the complex patterns of diminutive allomorphy that are displayed by the *-(c)ito/a* diminutive. Furthermore, I provided the first explanation for the patterning of word class markers in both types of diminutives — a topic that received scant attention in the previous

literature. To my knowledge, this is the first analysis that can explain in a systematic fashion why word class markers on diminutives and augmentatives pattern with gender in some instances and not in others.

Lastly, this dissertation contributes to the line of research on derivational morphology. It plants the seeds for future work investigating the identity of word class markers in derived contexts. There has not previously been an attempt to explain the word class marker patterns that arise with derived nominals in which word class is not predicted by the gender of the derived nominal; these were simply lumped in with simple nominals. By this I am referring to an explanation for why the derived nominal appears to have its word class determined by the gender of the derived nominal regardless of the identity of the root. In previous analyses, this could not be explained with reference to a particular theoretical principle such as the phase-based analysis presented herein. Following this approach, word class marker patterns that are observed in derived nominals are predicted based on the analysis contained within Chapters 3 and 4.

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