The Morphosemantics of Spanish Gender: Evidence from Small Nominals

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By

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THE MORPHOSEMANTICS OF SPANISH GENDER:
EVIDENCE FROM SMALL NOMINALS

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ABSTRACT

The feature of ‘gender’ has been a popular topic in recent years due to a general interest in phi-features, agreement and concord, and noun categorization (Mathieu et al., 2018). Nevertheless, how interpretable gender is assigned to a noun, and the more general relationship between gender-associated morphology and the semantic interpretation of gender, are open questions.

I provide an account of gender in Spanish that specifies where it is located on the nominal spine, when it is interpretable, and how such interpretation occurs. The empirical focus of this dissertation is interpretable gender in Spanish small nominals (BNs), or nouns that lack an overt determiner (Pereltsvaig, 2006). The main challenge presented by this group of nominals is to account for the surfacing of interpretable gender on the noun without the presence of a full DP structure (cf. Sauerland, 2008). In accounting for this possibility, I investigate three primary data points: (i) BNs in pseudo-incorporation structures; (ii) BNs in ellipsis structures; and (iii) BNs in coordinate structures.

Working within the Minimalist and Distributed Morphology Frameworks, I show that interpretable gender in Spanish comes in different semantic strengths as a result of its location on the nominal spine and the morphosyntax of the noun in question. I show that interpretable gender may originate on one of two locations on the nominal
spine: D or n (see e.g. Kramer, 2015 for gender on n; Kučerová, 2018 for gender on D; Alexiadou, 2017 for gender on both). This location is dependent on two factors: (i) whether the noun possesses full DP syntax; and (ii) the noun’s class, as evidenced by morphosyntactic and semantic features that impact the acceptability of ellipsis constructions. Depending on the noun’s class and type of gender (feminine or absence thereof), gender may either be interpretable in BN form or require full DP structure to be valued from context. Evidence from coordinate structures further shows that nouns possess two sets of gender features that coexist: syntactic (uninterpretable) and semantic (interpretable) features (Wechsler and Zlatić, 2003).

The analysis presented in this dissertation updates previous analyses that posit gender phi-features to be of uniform presuppositional or assertional type (Sudo & Spathas, 2016). The correlation of morphological form and semantic interpretation of gender in Spanish additionally differs from languages like Greek and Italian (Bobaljik & Zocca, 2011; Merchant, 2014), suggesting that the morphosemantics of gender is language specific. Finally, inter-speaker variation evidences a changing gender system in Spanish in which usage impacts underlying form.

**INDEX WORDS:** Gender, Spanish, small nominals, phi-features, interpretability
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1.1 **Central Themes and Questions**

This dissertation focuses on two central themes and their interaction: (i) interpretable gender; and (ii) the syntax and semantics of Spanish small nominals. While both themes are worthy of dedicated theses on their own (and will be formally presented later in this introduction), their interaction pinpoints properties of each that impact how they are understood as independent linguistic phenomena. Specifically, by looking at gender in small nominals, this thesis asks the questions of how interpretable gender is valued and interpreted in a minimal syntactic structure. Answers to these questions have implications for larger phenomena such as noun incorporation, nominal ellipsis, nominal agreement, and the understanding of featural makeup as it relates to nominal syntax and semantics.

These questions also relate to the paradox that the morphological expression of interpretable gender is seemingly both *context-free*, as it can be interpreted without reference to a specific individual; and *context-sensitive*, as it is often linked to a specific individual in the discourse. In other words, while in some cases interpretable gender appears to be inherent to a noun\(^1\), in others its expression is dependent on the context. While (1) is a generic statement about female soccer players, (2) refers to a specific soccer player:

\(^1\)The idea of gender being “inherent” will be further discussed in chapter two.
(1) Las jugadoras de fútbol tienen que entrenar mucho. 'Female soccer players must train a lot.'

(2) Abby Wambach, la jugadora de fútbol estadounidense, metió cien goles en nueve años. 'Abby Wambach, the U.S. soccer player, scored 100 goals in nine years.'

There are competing analyses for how gender is assigned and expressed on the nouns and their corresponding determiners in the sentences above. In (1), the noun las jugadoras ‘the players.F.PL’ is ambiguous between a generic and a kind reading, and many analyses posit that gender originates on the noun (or some component of the minimal noun phrase) itself. In (2), the expression of feminine gender on la jugadora ‘the soccer player’ is linked to the prior referent in the sentence. For a construction like (2), gender is often assumed to be “valued from context” (e.g. Alexiadou, 2017). Though the exact mechanism by which such valuation occurs is hard to pin down, several analyses posit a functional projection above or high in DP that is responsible for communicating with the context and valuing interpretable gender features in DP (Sauerland, 2008; Kučerová, 2018). This kind of context-oriented valuation of interpretable gender features will be discussed in detail in chapter 2.

A further example of how nominal structure and interpretable gender are closely intertwined is seen in (3). While in (3a) the marking of the small nominal perro ‘dog’ with a masculine or default gender is acceptable for almost all speakers, the marking of perra ‘female dog’ as female in (3b) results in unacceptability:

(3) a. Elena tiene perro. 'Elena has a dog.'
b. ¿Elena tiene perra.
    Elena has dog.F.SG
    ‘Elena has a female dog.’

The sentence in (3a) carries the interpretation that Elena is a dog owner, regardless of any further information about the dog (its gender included). In other words, possessing a dog is understood as one of Elena’s characteristics. In (3b), the addition of interpretable gender makes the identical sentence infelicitous. This infelicity is seemingly the result of the fact that having a female dog is not as common as simply having a dog. The specificity of the female gender appears to give rise to this infelicitous reading and suggests that it is the addition of interpretable gender to the small nominal that is the culprit.

Examples (1-3) offer a preview to the observation central to this thesis that the syntax of a nominal expression and the context within which it is situated impact the possible morphology and semantic interpretation of that expression. What does a syntactic architecture that allows feminine gender in (1) to originate on the noun while in (2) it is the result of being coindexed with a female referent look like, if these are indeed the processes? What is it about the interpretable feminine feature in (3b) that causes infelicity?

I seek to answer these questions with empirical data on natural gender in Spanish small nominals. I understand Spanish small nominals most basically to be nominal expressions that lack an overt determiner (or bare nouns, BNs). The main challenge presented by this group of nominals is to account for the surfacing of interpretable gender on the noun without the presence of a full DP structure. In accounting for this possibility, I investigate three primary data points: (i) BNs in pseudo-incorporation structures (chapter 3); (ii) BNs in ellipsis structures (chapter 4); and (iii) BNs in
coordinate structures (chapter 5). While each of these chapters and the data they lay out present their own empirical and theoretical curiosities, I am interested in how they all contribute to a more complete understanding of the morphosemantics of Spanish interpretable gender across nominal expressions.

With this in mind, there are three central questions that this dissertation consistently returns to:

i Where is gender located in the nominal spine?

ii When is gender interpretable?

iii How is gender interpreted?

These questions are necessarily interconnected, as the location of gender in the Spanish nominal spine will necessarily determine when it is interpretable—especially in the context of small nominals, for which not all nominal structure is present. Additionally, the locus of gender and its ability to be interpreted will impact how gender is interpreted, as it may interact with other functional elements and projections in the nominal structure.

In the remainder of the Overview, I provide a descriptive account of gender and nominal expressions in Spanish (1.2). I then outline the basic assumptions of and motivations for using the theoretical frameworks adopted for the analysis (1.3). I then discuss the data sources used as basis for the analysis. I conclude by presenting a chapter by chapter organization of its contents (1.4).

1.2 Grammatical Sketch of Spanish Nominal Expressions

The Real Academia Española (RAE) (2010) defines nouns and their surrounding nominal expressions as those which “morphologically admit gender and number
markings, and which participate in various derivational and compositional processes.” Nominal elements denote “entities, material or immaterial, of all nature and condition: persons, animals, real or imaginary things, groups, materials, actions, qualities, events” (209).2

The nominal domain (like the clausal domain) sits at the intersection of various linguistic processes. Syntactically, there are restrictions on the order of its elements (as seen above). Morphologically, in addition to syntactic well-formedness, there is overt agreement for gender and number phi-(φ) features between D and N, as (9-11) demonstrate. This agreement is reflected phonologically in how the elements are pronounced. Semantically, nominal expressions may be of many kinds: I discuss this extensively in chapter 2. Pragmatically, a DP has the ability to link an entity to a known referent in the world, thereby establishing a link between the entity and the discourse.3

1.2.1 Spanish Small Nominals

The empirical focus of this dissertation is Spanish small nominals, which I most basically understand to be nominals that lack determiners. Small nominals are highly restricted in Spanish, both in their syntax and semantics. Narrowing the data pool in this manner allows me to pinpoint several phenomena addressed above: First, how does natural gender behave in the absence of a fully elaborated functional nominal syntax? In particular, how does it behave without reference, and even perhaps without number marking (NumP)? This vantage point may additionally help elucidate what purpose the absent structure serves as well.

2The original definition is written in Spanish. The translation is my own.
3In this manner, the left periphery of the CP, often cited as the area for linking sentence-level phenomena to discourse, can be understood as implying a "left periphery" of the DP. Giusti (2015) explores this possibility. See section 3.3.2 for further discussion.
Small nominals don various labels across the literature: they may be called ‘bare’ nominals or noun phrases, reflecting the absence of a determiner. In Spanish they are commonly referred to as *sustantivos escuetos* ‘simple nouns’ or *los sintagmas nominals sin determinantes (SNSDs)* ‘nominal phrases without determiner’, to avoid misnemer in case syntactic structure beyond the noun is present (Bosque, 1996).

I adopt the label ‘small nominal’ following Pereltsvaig (2006), who defines small nominals as nominals that are not projected fully as DPs, but rather lack some or all functional projections. Pereltstvaig compares small nominals in languages without overt articles (e.g., Russian) and those with overt articles (e.g., Norwegian) and argues that both types of languages possess both DPs and small nominals. For Spanish, often analyzed to always possess a full DP structure (e.g. Chierchia, 1998), this dissertation thus offers a potential initial empirical contribution by demonstrating that small nominals exist in the language. Though my initial hypothesis is that there are small nominals that lack full DP structure in Spanish, for now I leave open the question of whether all nouns that appear without a determiner are true small nominals, as well as what possible intermediary stages may exist between small nominals and fully elaborated DPs in Spanish. I address this question in chapters 2 and 3 of the dissertation.

1.2.2 Spanish Nominal Structure: First Pass

There is consensus in linguistic research that natural classes of morphological features exist. This is reflected most basically in the universal classificatory use of the terms

\footnote{Pereltsvaig also argues that thematic relations underpinning argumenthood, on one hand, and referentiality, on the other, do not rely on the same mechanism of referential indices. Rather, she makes use of phi-features instead of referential indices, arguing that referentiality is encoded by means of phi-feature values, which are unavailable until D⁰ is merged. Though I do not specifically address this point, the data and analyses presented in this dissertation contribute to such discussion.}
person, number, and gender (phi-features, as cited in discussion of Minimalism in section 1.3). Nevertheless, though further organization of and relationships among these classes of features have often been noted, there is no clear theoretical consensus as to the exact nature of their organization and inter-relatedness.

As stated in work by Harley & Ritter (1998, 2002), any organization of a (universal) DP-internal geometry ought to be constrained and motivated by conceptual considerations, such that “cross-linguistic variation and paradigm-internal gaps and syncretisms are constrained by the hierarchical organization of features” (1998:3). Nevertheless, as the authors note, the interpretation of subtrees of the geometry may be relativized in tightly constrained ways so that language-specific interpretation of a given feature will depend in part upon the contrasts available within that language. Thus, though an accepted initial syntactic structure may be accepted as a valid one, this structure is further subject to the feature bundles that are permitted for each node by language (in line with DM), as well as how these features interact with each other syntactically, either in universally-constrained or language-specific manners.

Following the emergence of the DP Hypothesis in the mid-1980s, the traditional Noun Phrase (NP) came to be understood as an extended projection in which various functional heads project a complex structure above the lexical NP level (cf. Abney, 1987; Bernstein, 2008; among others). While this basic tenet is accepted in most work in Minimalism and DM, many proposals for additional functional projections have been made. For example, NumP (discussed below) has been proposed as the locus of grammatical number (Ritter, 1993); GenP for grammatical and biological gender (Picallo, 2008) (see chapter 2); as well as multiple agreement projections for the positioning of nominal modifiers (Cinque, 2010) (see chapter 5).

With this in mind, I propose the baseline structure in (4) for the Spanish DP:
Starting at the bottom, following approaches in DM (e.g. Kramer, 2015), the lexical element takes the form of a root $\sqrt{P}$. This category-neutral root combines with the category-determining head $n$, thereby adopting the properties of a nominal or noun. D and Num are both functional categories, and as such they do not require roots nor categorizing heads. However, when adjectives are added to the structure, they do require a parallel structure to $nP$ in the form of $aP$ (see chapters 3 and 5 for further discussion on adjectival modification of Spanish small nominals).

Moving up the tree, I adopt Ritter’s (1993) proposal that there is a distinct Number Phrase (NumP) separate from the noun and the projection of D. The head of NumP is the locus of number specification in the form of singular or plural. The respective positions of Number Phrase (NumP) and the [PERSON] feature located on D comes from work on the interaction between [PERSON] and [NUMBER] features in work by (among others) Harley and Ritter (1998, 2002). Additional support for the

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5 And, presumably, dual, though this possibility does not specifically pertain to Spanish. Ritter provides cross-linguistic evidence for this functional projection with pronominal noun phrases, which are distinguished from full noun phrases by their lack of lexical NP. Evidence for the existence of two distinct functional categories comes from evidence of two classes of pronouns in both Haitian and Modern Hebrew: those of the category D, and those of the category Num.

6 Specifically, the authors posit the existence of a separate NumP in work demonstrating that a refined geometric analysis of the nominal domain helps better understand child acquisition of pronouns. The authors cite data from 110 languages to support their claims.
separation of number from the lexical noun itself comes from work by Bernstein (2001). Support for the positioning of [PERSON] on D comes from the observation that person agreement is not found on elements below D; nevertheless, there are elements that select for D that show person agreement (see Baker (2008) for a full explanation).

Notably absent from the structure in (4) is the phi-feature [GENDER]. The location of the gender feature has been the subject of much debate in work on DPs for languages that overtly distinguish gender and is the subject of inquiry in this dissertation. Ritter’s work on NumP includes a proposal on the separation of gender and number projections based on the interaction between the two features: gender, she proposes, is located either on Num or on N, and this varies parametrically by language. As proposals discussed throughout this dissertation demonstrate, this question is one of the important motivators behind identifying an adequate DP structure across languages that mark gender in nominal expressions, and for Spanish more specifically. The location of features will subsequently play a role in their agreement processes. If the parallelism between DP and CP is complete, these locations will determine whether Agree works properly as a mechanism for agreement, or if additional and/or alternative explanations ought to be sought.

With this discussion in mind, a superficial structure for Spanish small nominals can be seen in (5):

\[
(5) \quad \begin{array}{c}
nP \\
\wedge \\
_\text{n} \sqrt{P}
\end{array}
\]
The structure in (5) lacks both NumP and DP. This absence of structure, as will be explored, will have impacts on the possible location of [GENDER] as well as its interaction with the overall interpretation of the nominal expression.

1.2.3 Gender in Spanish

In a subset of languages of the world (Spanish included), nouns come with gender specification. I define gender broadly in terms of agreement (see Corbett (2006) and Kramer (2015) for extensive discussion on this point). Gender is distinct from noun (declension) classes, though there is undoubtedly some relationship between the two (see Harris, 1991; Kramer, 2015; Vadella, 2017). Additionally, the morphological properties of a gendered noun in Spanish are not consistently a decisive factor for how gender is interpreted, as will be discussed throughout this dissertation and particularly in chapter 4.

In Spanish, all nouns trigger agreement with modifying elements such as determiners and adjectives. Two types of gender are typically recognized in the language: namely, grammatical gender and natural gender. Roughly understood, a grammatical gender is a gender without semantically interpreted gender inferences, while natural gender possesses semantically interpreted gender inferences. For instance, mesa ‘table.F.SG’ is a feminine noun in the sense that it triggers feminine agreement with determiners and adjectives; this gender does not seem to have a semantic correlate.

For nouns denoting humans (and, frequently, animals), the overwhelming tendency is that the gender specification of the noun itself correlates with the gender of the human

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7 Though natural gender is the terminology I use interchangeably with interpretable gender throughout this dissertation, it is perhaps an unfortunate term. Natural gender is necessarily a social construct. I use the terminology here in order to distinguish it from grammatical gender to be consistent with other literature on the topic.
in the non-grammatical sense. For example, the masculine noun hermano ‘brother’ and the feminine noun hermana ‘sister’, in addition to sharing the morphological root herman-, share a semantic core in that both describe siblings. The sole interpretive difference is the gender specification: hermano means ‘male sibling’ and hermana means ‘female sibling’. Thus, these nouns are analyzed to possess natural genders. They also trigger obligatory gender agreement/nominal concord with determiners and adjectives. Further examples of grammatical versus natural gender are seen in (6) and (7):

(6) Grammatical gender

a. El libro
   the.M.SG book.M.SG
   ‘the book’

b. La mesa
   the.F.SG table.F.SG
   ‘the table’

(7) Natural gender

a. El muchacho
   the.M.SG boy.M.SG
   ‘the boy’

b. La muchacha
   the.F.SG girl.F.SG
   ‘the girl’

Often, the grammatical gender or natural gender is not evident from the phonological form of the noun. In such cases, the gender appears on the determiner:

(8) Grammatical gender, indeterminate

a. La pared
   the.F.SG wall.F.SG
   ‘the wall’
(9) **Natural gender, indeterminate**

a. El estudiante  
   the.M.SG student.M.SG  
   ‘the (male) student’

b. La estudiante  
   the.F.SG student.F.SG  
   ‘the (female) student’

Spanish is thus observed to exhibit a property of most languages that possess gender distinctions: animate nouns (examples (7) and (9)) exhibit both grammatical gender and natural gender.\(^8\) In line with other Romance languages, Spanish contains a class of nouns known as epicene nouns that refer to animates yet do not morphologically represent natural gender. As seen in example (10a-b), such nouns may refer to animates of both male or female natural gender; examples 10c-d) show the inability of determiner that does not match the grammatical gender of the noun to surface.

(10) **Epicene nouns**

a. La víctima  
   the.F.SG victim.F.SG  
   ‘the (male or female) victim’

b. El testigo  
   the.M.SG witness.M.SG  
   ‘the (male or female) witness’

c. *El víctima  
   the.M.SG victim.F.SG  
   ‘the (male) victim’

\(^8\)See Atkinson (2015) for parallel examples in French.
Given this evidence, initial questions emerge regarding the role of gender in the syntax: is gender always syntactically meaningful? If so, how do we distinguish the behavior of grammatical gender and natural gender, if at all? Where is the feature located? If it is not syntactically meaningful, what accounts for its relationship to morphology and effect on semantic interpretation? Finally, how do the answers to these questions differ between full DP nominal expressions and small nominals? Next, I present the theoretical frameworks I adopt in this dissertation to help answer these questions.

1.3 Theoretical Background

This dissertation follows the frameworks of the Minimalist Program and Distributed Morphology (DM). Both Minimalism and DM explicitly seek to clarify and elaborate the relationship between the lexicon and the syntax. This is a key question for specifying the nature of word formation and underlying syntactic structure, which itself has implications for how linguistic domains interact with each other at their interfaces. In this sense, the two frameworks do not posit conflicting assumptions, but rather feed off one another in ways productive to investigating Spanish small nominals and the role of gender within.

1.3.1 The Minimalist Program

Syntax is central to the Minimalist Program, and understanding the syntactic structure of the DP allows for understanding how it manifests semantically and
phonologically. Fundamentally, within Minimalism, the syntax assumes the unique role of communicating the contents of the innate human language faculty (or faculty of language, FL) with the cognitive performance systems that humans are also innately equipped with: the sensorimotor system (for pronunciation) (also termed Articulatory-Perceptual (A-P)) and the system of thought (for comprehending meaning) (or Conceptual-Intentional (C-I)). Such interaction occurs through interface levels, as it is assumed that the performance systems are not specific to FL. For the sensorimotor system, the interface in question is the Phonological Form (PF); for the system of thought, the interface is Logical Form (LF) (Hornstein et al., 2005).

Given that the performance systems are not unique to FL, questions arise as to how well-designed FL is to interact with them, and what such design looks like. In other words, how does FL create objects that are legible at PF and LF? And what form does such legibility take? The Minimalist Program takes an initial position with the Strong Minimalist Thesis (SMT), which contends that “language is an optimal solution to legibility conditions” (Chomsky, 2000:96). Following, it is the syntax that is responsible for creating the objects sent to the interfaces in such a way that they are interpretable and satisfy (perhaps even facilitate) conditions on other

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9 The questions of this dissertation are more related to the syntax/semantics interface, but a complete understanding of the morphosemantics of Spanish gender necessarily involves looking at gender’s phonological expression. This latter interface is discussed with regards to word class in Spanish (e.g. Harris, 1991), but also plays a role in the analysis of Closest Conjunct Agreement (CCA), presented in chapter 5.

10 The existence of innate capacities involved in human language use is one of many assumptions that lays the groundwork for the Minimalist Program. Here, I will touch on what I believe are the most relevant ones for understanding nominal syntactic structure. The reader is directed to the original work for elaboration on the assumptions not mentioned (e.g. Chomsky, 2000).

11 A-P is understood as independent of the modality of the output of the system, to account for both spoken and sign languages (Chomsky, 1995).
language-related processes, such as acquisition, processing, and language change.\textsuperscript{12} The syntax accomplishes this in as economical a way as possible, both derivationally and representationally, hence the label “minimal” (Chomsky, 2000).

A key component of creating legibility is the use of a derivational approach to the grammar, such that fundamental properties holding between syntactic constituents\textsuperscript{13} are determined in the course of the derivation and not, for example, prior to entering the derivation (Hornstein et al., 2005). Universal Grammar (UG), the initial state of FL, makes available a set $F$ of features for lexical items and a set of computational operations ($C_{HL}$) that guide the derivation in language-specific ways. Lexical Items (LIs) are created via the assembly of individual bundles of features, which together determine the idiosyncratic properties of an LI; a lexical array of the specific LIs needed for a derivation is chosen at the beginning of the derivation for economy purposes. The computational system (the rules guiding the syntax) arranges these items in a way to form a pair $(\pi, \lambda)$, where $\pi$ is a PF object and $\lambda$ an LF object. The pair $(\pi, \lambda)$ is subject to Full Interpretation, a principle of representational economy, that requires that all features of the pair be legible at the relevant interfaces. The syntactic derivation is understood to converge if and only if it converges at both LF and PF; if not, it is said to crash at the relevant interface (Adger and Svenonius, 2011).

Relevant to the structure of nominal expressions as discussed in this dissertation, of interest are the available features and computational mechanisms that relate such features to each other during syntactic derivation (Harbour et al., 2008). While $([-\text{INTERPRETABLE}])$ are unreadable at LF, $([+\text{INTERPRETABLE}])$ features are. Both

\textsuperscript{12}Chomsky (2000) also mentions “neurology” as a language-related process, though it is unclear in which sense he understands it.

\textsuperscript{13}For example, theta-structure and agreement relations.
sets of features may be legible at PF: for example, definiteness features can be both interpretable at LF and relevant for PF. In a convergent derivation, then, the collection of features must be teased apart before sending the appropriate syntactic objects to the relevant interfaces. Fortunately, the Minimalist model is architecturally set up in such a way to foster this: Spell-Out occurs post-derivation, sending the relevant syntactic objects to LF and PF after derivation (Chomsky, 2000). Spell-Out itself is thus a good candidate for the LF/PF separation of features, “vetting” the syntactic objects and ensuring that a crash does not occur.

On top of features, the three operations that Minimalism makes use of are as follows. Importantly, these operations function under the basic assumption that the syntax is optimally designed and economical in the resources it makes use of:

1. **Merge**: The fundamental structure-building operation of the derivation, whereby two syntactic objects combine to form a new syntactic constituent.
   
   \[(\alpha, \beta) \rightarrow K(\alpha, \beta)\]

2. **Agree**: The relation that gives rise to surface agreement patterns and Case assignment between an LI \(\alpha\) and a feature F in its c-command domain.

3. **Move**: Agree + Merge (often considered a last resort as it is the most costly operation).

Agree in particular is relevant to understanding the inner workings of the DP, given the fact that morphological agreement often appears on multiple elements of the nominal domain. It is further specified in (14) (Chomsky 2000; here, adapted from Kramer, 2015):

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14 Derivation by Phase (Chomsky, 2001, 2008) updates Minimalism in proposing that syntactic derivation and Spell-Out occurs in small, cyclic chunks known as Phases. This is discussed in continuation and returned to in Chapter 6, as it is relevant to DP syntax and interpretation.
(14) Agree

a. Agree holds between a Probe that has uninterpretable features and a Goal that can value the uninterpretable features.

b. The Goal must be in the c-command domain of the Probe.

c. There is no closer Goal in the domain (even if the Goal is inactive).

d. Probe and Goal must be in the same spell-out domain/phase.

e. Both Probe and Goal must be “active,” i.e., have uninterpretable features.

Case-checking and specification may be understood as the reflex of the agreement relation involving the [+INTERPRETABLE] phi-features of the nominal expression (Goal) and the [-INTERPRETABLE] phi-features of the relevant Case checker (Probe). Since Case is only morphologically realized on the Goal, it is further assumed that nominal expressions have Case features, but Case-assigners do not.\textsuperscript{15}

Early Minimalism focused in large part on what were termed “core” functional categories (CFCs)\textsuperscript{16}, which were shown to drive much of clausal syntax, and thus Agree constituted a fundamental relation in the clausal syntax. A major question in turning to the structure of the DP is thus: does Agree operate between elements of the nominal domain in the same way that it does in the clausal domain? In the clausal domain, Agree serves a dual purpose of assigning values to unvalued features for morphological reasons, while at the same time deleting such [-INTERPRETABLE] features.

\textsuperscript{15}Case is the motivation behind much work on DP structure and agreement in the nominal domain. Since it does not seem to play a large role in the Spanish structural paradigm, it will not be discussed extensively in this dissertation. See chapter 5 for a brief discussion of its role in agreement.

\textsuperscript{16}These categories consist of C, T, and transitive v, and they are distinguished by possessing phi-features. In early work, phi-features were considered uninterpretable and normally consisted of person and number.
features for purposes of LF. Nevertheless, these principles do not always seem to be obeyed within nominal expressions. This can be seen in the paradigm of Spanish agreement in (15-17) (adapted from Portuguese (Hornstein et al., 2010)):

(15) Las alumnas parecen haber sido contratadas.
    the.FPL student.FPL seem.3PL have been hired.FPL
    ‘The (female) students seem to have been hired.’

(16) a. el gato bonito
    the.M.SG cat.M.SG beautiful.M.SG
    ‘the beautiful cat’

    b. la gata bonita
    the.F.SG cat.F.SG beautiful.F.SG
    ‘the beautiful cat’

    c. los gatos bonitos
    ‘the beautiful tomcats’

    d. las gatas bonitas
    the.F.PL cat.F.PL beautiful.F.PL
    ‘The beautiful cats’

(17) Los gatos son bonitos y la gata
    también.
    also
    ‘The (male) cats are beautiful and so is the (female) cat.’

17And following Full Interpretation as stated above, whereby no expressions occur idly in the grammar.
Example (15) illustrates how the phi-features\(^{18}\) on arguments are ultimately [+INTERPRETABLE] and comply with the Agree paradigm: *las alumnas* ‘the (female) students’ is generated as the internal argument (in the form of DP) of the passive verb *han sido contratadas* ‘have been contracted’; it then moves successive-cyclically to the specifier of the participial phrase (PartP) (generating the agreement-showing *contratadas* form and satisfying the EPP feature on participial TP); to the specifier of the infinitival TP (*tener* ‘have’); and lands finally in the specifier of the matrix TP (generating inflected *parecen* and satisfying matrix TP’s EPP). As such, the phi-features of the DP *las alumnas* enter into a checking relation with the phi-features of both the PartP and the matrix TP, allowing for the valuation of both of their uninterpretable phi-features. The DP argument thus functions as the Goal, while PartP and matrix TP are the Probes.

Example (16) raises the question of why seemingly identical pieces of information in the form of gender and number features are stated multiple times within the DP. It does not seem to be the case that all expressions of agreement are interpretable ones: (16b) does not mean that the cat is three-times female, nor does (16c) imply three pluralities of the cat. Example (17) confirms this intuition that such agreement information is disregarded at LF: the masculine plural adjective *bonitos* ‘beautiful’ licenses the ellipsis of the feminine singular one *bonita* ‘beautiful’; the interpretable features of number and gender are irrelevant to reconstructing the elided adjective.

It thus seems that while some pieces of nominal agreement are interpreted at LF, \(^{18}\)Minimalist Inquiries (Chomsky, 2000) identifies phi-features as the features of gender, number, and person, those involved in predicate-argument agreement. This identification has expanded to include such features as those involved in honorification and definiteness, as well as perhaps sub-features of each feature itself. Nevertheless, as Adger & Harbour (2008) wisely note, phi-theory is an emerging one. As such, “the limits of the empirical domain are not given a priori, and we expect the precise definition of φ features to emerge only after much more work” (2).
others are not. These questions—of where the locus of interpretability is and how agreement in the nominal domain compares to that in the clausal domain—are returned to throughout this dissertation.

A final note regarding the application of Minimalism to nominal expressions concerns the status of Phases. The Phase, understood as a unit of cyclic transfer during overall syntactic derivation, optimizes the efficiency of the mapping between syntax and the external performance systems in two ways:

1. It reduces computational burden (or cognitive load) in that once the derivation of a Phase is completed and sent to Spell-Out, the Spell-Out domain of the Phase is impenetrable\textsuperscript{20}, leaving only the head of the phrase and any specifiers (also known as the Phase Edge) accessible to any further derivational processes; and

2. It eliminates redundant internal levels and compositional cycles in favor of single-cycle generation with periodic transfer to the interfaces (yielding strong cyclicity).

Phases are understood as propositional and convergent objects legible at the interfaces; they are furthermore thought to be headed by a locus of uninterpretable features (Chomsky, 2001). Syntactically, Phases consist of lexical subarrays, or subsets of the initial lexical array chosen pre-derivation, along with corresponding functional categories.

\textsuperscript{19}Though, see chapter 4.2.2 for an alternative explanation of why such ellipsis with mismatched gender is possible.

\textsuperscript{20}Following the Phase Impenetrability Condition (Chomsky, 2000:108).
In the original proposal, designated Phases were CP, IP, and vP.\textsuperscript{21} Currently, there is debate over whether or not DP—or even elements smaller than DP (e.g. Bošković, 2013)—qualifies as a Phase. Following the definition of a Phase, as well as the potential parallelism to CP, the potential of DP (or some smaller unit) to be a Phase will affect how it interacts with other syntactic domains during syntactic derivation. It will also have implications for how agreement processes ought to be resolved before such interaction. I return to this idea, and to the possibility that phrases smaller than DP may constitute Phases, in chapters 2 and 6.

To summarize, Minimalism assumes an optimal, non-redundant system subject to economy restrictions such that particular linguistic phenomena are not overdetermined by principles inherent to the grammar. Such a system has been extensively tested for linguistic phenomena at the clausal level. The nominal domain poses a potential challenge the framework’s fundamental assumptions, posing the questions of why there may be redundancy in the (optimal) grammar, and how it is able to surface.

1.3.2 Distributed Morphology (DM)

The analysis of this dissertation is formalized within a Minimalist approach to syntax (Chomsky, 2000, et seq.) combined with the proposals of Distributed Morphology (Halle and Marantz, 1993; Halle and Marantz, 1994). In this framework, the syntax manipulates sets of abstract morphological features with no phonological content. Morphological forms are supplied after syntactic operations at a step known as Vocabulary Insertion, which is taken to occur as part of the interface responsible for phonetic and phonological form (PF). In parallel, the abstract morphological features are sent to LF and paired with information from the Encyclopedia for meaning.

\footnote{\textsuperscript{21}See Rizzi (1997) on how the nature of Phases may differ cross-linguistically, specifically between English and Italian.}
Importantly, within the DM approach, there are postsyntactic morphological operations that can alter the morphosyntactic representation before Vocabulary Insertion takes place (see, e.g., Arregi and Nevins, 2012; Embick, 2010; Harley and Noyer, 1999). This system is schematized as in Figure 1.1.

In a similar vein as Minimalism, DM represents a set of hypotheses about the relations and interactions between components of the grammar. Most specifically, the framework maintains that there is no centralized lexicon. Rather, word-formation occurs either in the syntax via head movement or at PF via morphology-specific operations.\textsuperscript{22} This is summarized in two key principles of the framework’s architecture (Halle and Marantz, 1994):

- \textbf{“Syntax-all-the-way-down”}: The syntax is the primary mode of meaningful composition in the grammar, both above and below the word-level. The syntax operates on sub-word units, and thus (some) word-formation is syntactic.

\textsuperscript{22}For example, Morphological Merger (Marantz, 1988; Bobaljik, 1995); Impoverishment (Bonet, 1991; Halle & Marantz, 1993); Fusion (Halle & Marantz, 1993); Fission (Noyer, 1997; Halle, 1997).

Figure 1.1: Basic Architecture of Distributed Morphology (DM).
Late Insertion / Realization: The pieces manipulated by the syntax (also termed functional morphemes) are abstract and lack phonological content. The pairing of phonological features with the terminals of the syntax (termed Vocabulary Insertion or exponence) happens post-syntactically, in the mapping from syntax to PF.

In accord with these principles (and seen in Figure 1.1), the lexicon is understood as a set of three lists:

1. The Numeration, or the syntactic terminal nodes (morphemes) equivalent to the atoms accessed and manipulated by the syntax during derivation to form complex terminal nodes (Harley, 2014).23;

2. Vocabulary Items (VIs), or the minimal pairings of form (sound) and function (meaning), accessed post-derivation in Morphology;

3. The Encyclopedia, understood as the minimal meaningful units of grammar that serve as the building blocks for words.

Similar to Minimalism, DM prioritizes the syntax for word formation. Yet, Minimalism may be seen as more lexicalist than DM, in that it does not make recourse to morphological operations beyond the syntax. In other words, the “distributed” aspect of DM refers to the distribution of lexical components throughout the grammar’s architecture. Nevertheless, the syntax is the engine behind word formation and sentence structure in both frameworks, and the syntax in DM may involve the same operations as those posited by Minimalism (Merge, Agree, Move).

23Following Bobaljik (2015), these will include features that project to unique syntactic nodes, such as [PLURAL]. They may also include language-specific bundles of features that constitute a single syntactic node, such as the INFL node for tense and agreement (person and number) in English.
In this way, DM is a natural extension of Minimalism. DM additionally relies on the assumption that, within the syntax, each morpheme is a bundle of features. Morphemes come in two types: “functional/abstract morphemes” and “roots.” Functional morphemes are the functional categories, composed exclusively of morphosyntactic features. By contrast, roots make up the open-class or *lexical vocabulary*, and they must always be categorized by virtue of being in a local relationship with one of the category-defining functional head (Bobaljik, 2015). Roots themselves are assumed to be category-neutral features, lacking morphosyntactic features. Nevertheless, the question of what a root possesses, and how it combines with categorizing heads (such as *n* for noun phrases) is an issue of current investigation and one I return to throughout this dissertation, specifically in chapter 3.

With regards to nominal expressions, DM enhances the Minimalist framework to help interpret many issues noted for nominal syntax, one in particular being the question sparked by examples (9-11) regarding the nature of multiple exponence of phi-features within the nominal domain. An analysis of DP that integrates the two theoretical frameworks of Minimalism and DM offers to capture the origin of phi-features important both to the interpretation and morphological expression of nominal expressions, as well as their interaction with each other pre-, during, and post syntactic derivation.

24 For example, the features that make up the determiner node D.
25 The idea that lexical categories are composed of a category-neutral root and a category-determining head is known as lexical decomposition (Halle & Marantz, 1993; Embick, 2008).
26 Some have proposed that roots may carry certain morphosyntactic features, but that these features are most likely limited to one or two. For example, Kramer (2009) proposes a gender feature on roots; and some work has proposed a declension class and/or deponence feature on roots (e.g. Embick, 2000).
1.4 Data Sources and Inter-speaker Variation

The data presented in this dissertation is, if characterized by one property, characterized by variation. Spanish being the second most spoken language in the world, variation between speakers, communities, regions, and countries is the focus of an extensive body of sociolinguistic research (e.g. Penny, 2004; Lipski, 2011; Toribio, 2000). Though the analyses I present rest on the assumption that a speaker’s grammar is systematic and relatively stable, I make note of constructions throughout the dissertation constructions that are more or less subject to variation.

For example, chapter 3 integrates data on preposition incorporation from a dialect of Río de la Plata Spanish that speakers of other dialects find almost unequivocally unacceptable. Furthermore, in a survey of ten native speakers of Rioplatense Spanish, the speakers themselves show variation in whether or not they accept the constructions in question. Chapter 4 on ellipsis constructions also makes note of inter-speaker variation between noun classes. Finally, chapter 5 investigates constructions that are productive in speech that speakers nevertheless may find odd.

How does a dissertation whose focus is a generative analysis of the syntax and semantics of Spanish small nominals properly address such variation? For the most part, the variation in question in this dissertation is syntactic: speakers vary on whether or not they permit certain syntactic constructions and whether or not the presence of interpretable gender causes conflict for a given reading. As Green (2007) notes, there have been at least three types of approaches to syntactic variation. The variable rule approach accounts for variability by allowing variable rules to apply in different contexts at different probability levels. Another approach has been to determine the parameters that account for differences among languages and dialects of a single language (Henry, 2008; Kayne and Looseleaf, 2000). In the
multiple grammars/competing grammars approach, variability is due to the selection of different grammars (Adger and Smith, 2005; Amaral and Roeper, 2014).

Though it is not my aim to develop a theory of syntactic variation and integrate such a theory into sociolinguistic research, this dissertation offers a theoretical account of Spanish gender’s syntax and semantics that could be applied in such a manner at a future date. Gender as a feature in particular is at the cusp of language change. The Spanish language is currently experiencing changes in its gender system, spawned largely by social factors. These changes include the emergence of potential neuter forms (e.g. *latinx, latin@, elle*, discussed further in chapter 6).

This said, I have made sure to confirm all data presented in this dissertation with native speakers to ensure that it is attested in some dialect or another. The informants for this dissertation span generations, gender, socioeconomic class, and region. My primary informants speak Chilean and Peninsular Spanish, but I have informally elicited constructions and acceptability judgments from native speakers from Colombia, Argentina, Mexico, and Uruguay, as well. All speakers acting as informants (except those polled from Argentina in chapter 3) are bilingual, and several are trilingual.

1.5 Organization of the Dissertation

This dissertation consists of six chapters: three chapters of analysis with introductory and concluding chapters. The current chapter has outlined my basic assumptions regarding Spanish nominal expressions and introduced the theoretical frameworks of Minimalism and Distributed Morphology (DM), within which I present my analyses.

Chapter two, *The Puzzle: Gender in Spanish (Small) Nominals*, defines key terms that will be used throughout the dissertation. I present a basic semantic typology
of nominal expressions that sets the stage for a semantic analysis of Spanish small nominals. I review previous proposals for how gender is assigned and valued in Spanish by Picallo (1991, 2007, 2008), Alexiadou (2014, 2017), and Kramer (2015), and in Italian by Kučerová (2018). Concluding this chapter, I initially assume that Spanish gender is located on $n$ instead of in a separate functional projection or on the root; this follows the proposal by Kramer (2015). Nevertheless, I note that this analysis still does not explain how interpretable gender appears on some small nominals in Spanish but not others; Kučerová’s proposal better integrates an understanding of context into the valuation of gender, though her proposal necessitates further evidence.

Chapter three, *Starting from Bare: Syntax and Semantics of Spanish Small Nouns*, presents a comprehensive look at the syntactic and semantic behaviors of Spanish small nominals. After presenting the relevant data on Spanish BNs, I review previous proposals that analyze Spanish small nominals as pseudo-incorporated nouns (e.g. Dayal, 2011; Espinal & McNally, 2011), as they exhibit properties noted cross-linguistically for such nouns and form a close syntactic and semantic unit with their host verb. I adapt a pseudo-incorporation analysis of Spanish BNs from Dayal’s (2011) semantics for Hindi pseudo-incorporation. This analysis captures canonical properties of Spanish BNs (reduced discourse transparency, narrow scope, and number neutrality). I additionally present a syntactic decomposition approach to deriving pseudo-incorporating verbs that centers on a prepositional have element (Harley, 2004); this analysis is able to capture the observation that pseudo-incorporation structures involving Spanish BNs all share a have-like interpretive component. I extend this analysis and suggest that additional prepositional elements may pseudo-incorporate in Spanish, allowing a range of prepositional incorporation structures to exist with distinct interpretations.
Chapter four, *The Many Forms of Gender: Evidence from Nominal Ellipsis*, focuses on the behavior of gender in predicative nominal ellipsis constructions. After a brief overview of nominal ellipsis patterns in general and specific to Spanish, I review recent literature on gender mismatches cross-linguistically in ellipsis (e.g. Bobaljik and Zocca, 2001; Merchant, 2014; Sudo and Spathas, 2015). Following this review, I outline a slightly different set of noun classes in Spanish than seen in previous literature that accounts for morphosyntactic differences in the expression of gender. I present an analysis of nominal ellipsis in Spanish that centers on subset relations to license ellipsis and a contrast between presuppositional and assertional gender in Spanish that interacts with this licensing for the observed asymmetries (Murphy, 2016; Percus, 2011). The analysis I present argues for the existence of both roots and affixes that entail femaleness and, as a result, possess assertional gender. I further present an analysis of relational nouns that possess a unique morphosyntax that interacts with gender to give rise to idiosyncratic interpretations in ellipsis patterns.

Chapter five, *Gender and Concord: A Case Study of Closest Conjunct Agreement*, analyzes the behavior of gender in the context of coordinate structures that exhibit non-canonical gender agreement. Specifically, I look at structures of form [D N & N] and conduct a corpus search to outline acceptable agreement patterns. Corpus data suggests that CCA is a productive agreement strategy in these types of constructions in Spanish. I analyze these structures to possess a joint-split reading, whereby two otherwise distinct entities are interpreted as parts of a whole (Heycock and Zamparelli, 2005). CCA patterns are explained as the result of both syntactic and semantic features (Wechsler and Zlatić, 2003): while prenominal CCA is accounted for by Agree, postnominal CCA must be accounted for by a post-syntactic process of Valuation after the syntactic process of Match (e.g. Walkow, 2013).
Finally, *A Morphosemantics of Spanish Gender*, the final chapter and conclusion, returns to the central questions of the dissertation one by one. As to where gender is located in the nominal spine, I propose that it may be located on n or D. Its location is dependent on three factors: (i) the class the noun forms part of (chapter 4); (ii) the syntactic environment the noun occurs in; and (related to ii) (iii) whether the noun possesses a full DP syntax. As to when gender is interpreted, the answer to this question (similar to the first) also depends on the class the noun forms part of. Additionally, the interpretability of gender is dependent both on the “established” or stereotypical gendered form of the noun as well as the verb the small nominal is complement to. As to how gender is interpreted, for small nominals, feminine gender may be either presuppositional or assertional in nature, while masculine gender may only be presuppositional in nature. Gender presuppositions display variation in the strength of their interpretation, such that while some both presuppose and entail gender, others merely presuppose it. I conclude chapter 6 with a discussion of the changing gender system in Spanish and how it impacts any future theoretical analyses of said system.
CHAPTER 2

THE PUZZLE: GENDER IN SPANISH (SMALL) NOMINALS

2.1 INTRODUCTION

This chapter lays out previous proposals that are relevant for understanding the relationship between interpretable gender and nominal structure. As mentioned in the thesis’ overview, a challenge in accounting for interpretable gender is its dual nature as context free, whereby natural gender may be assigned without the existence of a specific referent, and as context sensitive, whereby its assignment hinges on the natural gender of the referent in question. To account for this dual nature, it is necessary to look closely at the structure of the nominal expression. Identifying where gender is located syntactically has implications for when and how gender is interpreted. Conversely, by observing how gender is interpreted within a certain structure and context offers information about where it is located syntactically.

For gender in Spanish, many existing theories link the assignment of gender for nouns that possess natural gender to the existence of a unique referent in the discourse (Kramer, 2015; Alexiadou, 2017; Bobaljik and Zocca, 2011).¹ Thus, if a noun with a

¹Strictly speaking, there is a difference between gender assignment and gender valuation. I assume that gender assignment occurs at the NP level and subsequently determines agreement patterns with modifying elements in the nominal expression. Gender assignment thus applies to both grammatical (uninterpretable) and semantic (interpretable) gender. Gender valuation is the process that occurs for a lexical element to be valued for a missing GENDER feature. For items in the nominal expression other than the noun, this will occur via Agree (see (4), 1). If the noun itself lacks a gender assignment, many existing theories state that this gender may be assigned (and, in tandem, valued) by co-indexation with a discourse
root like chic- ‘kid’ is determined to have a female referent in the world, the noun is valued for feminine gender and surfaces as chica ‘girl’; the noun will default to chico if no referent is found, or if a male referent is identified. As chapter 3 will discuss in detail, this method of gender assignment is problematic for cases where a referent does not exist: cases of small nominals (BNs) that lack an overt determiner and do not refer to unique entities in the discourse. Nevertheless, there are structures that resemble structures for (pseudo-)nominal incorporation that involve interpretable feminine gender, in which case the gender is clearly interpretable and seemingly not default:

(1) a. La Unidad de Cuidados Intensivos Pediátricos necesita doctora.
   the unit of care intensive pediatric needs doctor.F.SG
   ‘The Pediatric Acute Care Unit needs a (female) doctor.’

   b. Juan busca esposa.
   Juan looks-for spouse.F.SG
   ‘Juan is looking for a wife.’

The current chapter provides the basic overview for how formal semantic approaches to nominal expressions may be intertwined with morphosyntactic accounts of functional projections and features. I first present a basic outline of proposals concerning the semantics of interpretable gender; how gender is interpreted in Spanish (small) nominals is more extensively discussed in chapter four. I then review a collection of previous proposals that focus on the morphosyntax of gender in Spanish (Picallo, 2008; Alexiadou, 2017; Kramer, 2015) and Italian (Kučerová), which referent (Kučerová, 2018; Sauerland, 2008). As this and subsequent chapters discuss, this analysis is problematic for many reasons.

This is an oversimplification; see section 2.3.3 of this chapter and chapter 4 for a more in-depth explanation of how nominal roots interact with morphosyntactic gender features.

These cases have typically been analyzed as forming part of nominal incorporation constructions. See 3 for further discussion on this construction and the makeup of the nominal expression itself.
presents comparable data to Spanish. From this discussion emerges a consensus that context free interpretable gender originates on the noun; regarding context-sensitive gender, there is less consensus. As the question of where interpretable gender is located is central to this thesis and has implications both for when and how gender is interpreted, this chapter is designed to serve as background for the chapters and analyses to come.

2.2 A Basic Semantics for Gender in (Small) Spanish Nominals

As will be explained and motivated in chapter 3, I assume that Spanish BNs denote properties, or type <e,t>; such nouns are also referred to as predicative nouns (Partee, 1986). The bare nature of Spanish small nominals and their property denotation is supported by cross-linguistic evidence (e.g. Baker et al., 1988, 2005; Dayal, 2015; Van Geenhoven and McNally, 2005) and argued for in Spanish (e.g. Espinal and McNally, 2011). This denotation stands in contrast to referential expressions (type e) and quantificational expressions (type <<e,t>,t>). Though there is no rigid correlation between a nominal expression’s syntax and its semantic type, referential and quantificational expressions typically possess syntactic structure beyond the noun itself (e.g. Contreras, 1996). For a property-denoting bare noun, then, the question arises as to whether or not processes that are typically contingent on additional syntactic structure affect its behavior. Specifically, several previous proposals link both the ability to refer and the assignment and interpretation of gender to extended nominal structure.

A well-cited proposal for the interpretation of gender comes from Heim and Kratzer (1998), who argue that all phi-features are presuppositional and interpreted high in DP. This proposal builds off much work on the nature of the person phi-feature (e.g.
Russell, 1940, 2013; Cooper, 1983, 2013). The idea that the semantics of phi-features is presuppositional comes from the observation that, with referential expressions, they only create conditions on the felicity of their utterance; they do not impact the truth-conditions. In accord with Tarski’s (1944) intuition that reference arises via an assignment of values to variables, Heim and Kratzer propose that phi-features are syntactically adjoined to pronominals as in (2); the semantic contribution of the phi-features is a presupposition that restricts the range of the assignment of values to variables. The structure in (2) is for the pronoun “she”:

\[
(2) \quad \text{DP} \\
\quad \text{[third person]} \quad \text{DP} \\
\quad \text{[feminine]} \quad \text{DP} \\
\quad \text{[singular]} \quad \text{DP} \\
\quad \text{she}_1
\]

The features are partial identity functions. For example, [feminine] maps individuals to themselves (an identity function), subject to the condition that the individual is female; it is otherwise undefined. This may be represented as in (3):

\[
(3) \quad [\text{feminine}] = \lambda x[\text{female}(x)]
\]

For person, a meaning for the first person feature is only defined when the pronoun bearing the feature refers to a group which includes the speaker who utters the sentence in context; a similar meaning is understood for second person. Third person pronouns (and features) are essentially chosen as semantic defaults.
Sauerland (2008a) presents a similar structure for referentials, in which there is one \( \phi \)-P that sits atop DP and resolves all phi-features at once. Sauerland assumes that \( \phi \)-features, when they are interpreted, are always interpreted as a presupposition on the reference of an expression that denotes an individual. The structure may be seen in (4a) for the first-person pronoun \( I \) and in (4b) for \( Vera \):

(4) a. \[
\begin{array}{c}
\phi P \\
\phi \\
\overline{[1,\text{sing}]} \\
\overline{\text{pro}_8}
\end{array}
\]

b. \[
\begin{array}{c}
\phi P \\
\phi \\
\overline{[3,\text{sing,fem}]} \\
\overline{\text{Vera}}
\end{array}
\]

Following the structures in (4), indexicality and phi-features occupy separate heads. Nevertheless, the phi-features are presupposed based on the features of the referent, creating a dependency between the two. This assumption essentially extends the assumption made by Heim & Kratzer in (3) for pronouns to apply to all interpretable features when a nominal expression is referential.\(^4\)

These proposals share the observation that an extended nominal syntax is important to gender assignment. D specifically (or a head in some dependency relation with it) is the locus of person and, in accord, the link between the nominal expression and the discourse. Thus, any agreement between DP and its surrounding clause, as well as the

\(^4\)See Giusti (2015), as well, for an analysis of nominal syntax that further dissociates D from indexicality and proposes a DP left-periphery.
agreement and resolution of phi-features within the DP, will be evident in D. This may be understood syntactically: DP is a phase, and D, as a phase head, triggers the spell-out of the cyclic domains it c-commands. Following the Phase Impenetrability Condition Chomsky (2000), previously spelled-out material is not accessible to later syntactic operations. D is thus the locus for both for the spelling out of phi-features that characterize a nominal expression, and the site where these features are linked to a possible unique referent. Presumably, if there is no unique referent, there is no means by which to value unvalued features lower in the DP.

Nevertheless, these previous semantic proposals focus on pronominal expressions; there has been less focus on nominal expressions in the form of common nouns that may or may not have a specific referent. Does a presuppositional analysis of gender hold up for such expressions? I explore this question further in chapter 4. In the next section, I outline previous proposals regarding the location of interpretable gender in the syntax, as these directly interact with interpretable gender’s semantic interpretation.

2.3 THE MORPHOSYNTAX OF SPANISH GENDER: PREVIOUS PROPOSALS

I presented a first pass of the Spanish nominal expression (full and small) in chapter 1 that locates GENDER on n, which I repeat here for reference:

5See Bošković (2013) on how this may be different for DP and NP languages.
(5)西班牙DP

\[
\begin{array}{c}
\text{DP} \\
\text{D} & \text{NumP} \\
\text{[PERSON]} & \\
\text{Num} & \text{nP} \\
\text{[NUMBER]} & \\
\text{n} & \sqrt{P} \\
\text{[GENDER]} & \\
\end{array}
\]

(6)西班牙小名词（BN）

\[
\begin{array}{c}
nP \\
n & \sqrt{P} \\
\text{[GENDER]} & \\
\end{array}
\]

The structure in (6) is a superficial reflection of BNs’ surface form. Although it’s possible that BNs possess silent structure (cf. Contreras, 1996), evidence from subsequent chapters supports a minimal syntax as in (6) due to restrictions both on the presence and interpretation of gender features on \( n \). With the previous discussion and structures in (5-6) in mind, I walk through several proposals that present alternative analyses of the location of gender and its contribution to the interpretation of nominal expressions. This discussion illustrates how complex a phenomenon gender is and highlights the essential questions surrounding any investigation into its status.

2.3.1 A Gender Phrase (Picallo 1991, 2007, 2008)

In her work on grammatical gender and number in Spanish and Catalan, Picallo claims that both gender and number are exponents of interpretable features and,
correspondingly, comprise unique functional projections in the extended projection of all Romance nouns. Gender in particular is “the formal correlate of an interpretable feature that linguistically encodes categorization processes,” the overt manifestation of an agreement relation between an interpretable feature in its respective functional projection and its non-interpretable correlate in the lexical N category (Picallo, 2008:1). Picallo additionally assumes that number can only be expressed in categorized elements that have been assigned formal gender or class.\(^6\)

Picallo takes the order in which the number and gender suffixes surface morphologically as indication that the head N has moved successive-cyclically to the Numb\(^7\) head. In accord, N must acquire gender before landing in Numb. The structures in (7a-b) represent Picallo’s analysis of the Romance DP; they indicate the location of N before head raising to GenderP (1991) / ClassP (2008)\(^8\) and NumbP.

\[
\begin{align*}
(7) \quad \text{a. } & [\text{DP } \text{la } [\text{NumbP } -s [\text{GenderP/ClassP } -a [\text{NP muchach }]]]] \\
\text{b. } & [\text{DP } \text{el } [\text{NumbP } -s [\text{GenderP/ClassP } -o [\text{NP muchach }]]]]
\end{align*}
\]

Though (7) illustrates the DP structure with an animate noun possessing natural gender, Picallo assumes that all gender — grammatical gender and natural gender — is interpretable.\(^9\) She writes, “The conjecture that these cognitive processes may have

\(^{6}\)Presumably, Picallo understands gender and class as one and the same, in contrast to well established analyses before here (e.g. Harris, 1991). Reference to her work in subsequent analyses (i.e. Alexiadou, 2004) nevertheless make a distinction between the two.

\(^{7}\)NumbP is understood as equivalent to NumP seen in chapter 1. I maintain Picallo’s (and other’s) notation here for accurate representation of her work.

\(^{8}\)See footnote 11: Picallo conflates gender and class and updates her phrase terminology in accord.

\(^{9}\)Picallo does not believe in a neuter gender in Spanish (or Catalan). Rather, she notes that the term ‘neuter’ itself is erroneously borrowed from the truly three-gendered Latin system. In Spanish and Catalan, the term is employed when formal gender is absent. She claims that all nouns, irrespective of their denotation, are gendered. Picallo further assumes that GenderP/ClassP may only exist if a lexical noun is present. This presents problems for
grammatical expression has already been formulated by some scholars in different theoretical frameworks” (Picallo, 2008).

Though she does not make explicit what these cognitive processes are, the corresponding footnote in her text seems to confirm this by referencing several works within the cognitive linguistics tradition. She also notes that the fact that gender has been treated before as an uninterpretable feature with apparent lack of function during syntactic derivation is “puzzling” within a Minimalist framework; she cites principles of economy in the language design as prohibitive of this. She considers the proposal that gender inflection is a dissociated morpheme instead of a syntactic object, yet she notes that even grammatical gender has effects at the interpretive component and ultimately rejects this idea, opting to analyze gender as always syntactically robust. She cites the following example of a classical “donkey” sentence in Catalan as support:

(8) Quan un venedor té una cadira, la té / el *j* / ho *h* ven
when a seller has a chair.FSG it.FSG / it.MSG / it.NSG sells
‘When a seller has a chair, he sells it.’

In the sentence above, the clitic (or object pronoun) *la* ‘it’ must agree in gender with its antecedent in order to be bound by it. If agreement does not surface, the pronoun is understood as free. Picallo additionally notes that the expression of gender determines the possibility of number expression: genderless expressions in Romance (for example, *ello* ‘it’ and *lo* ‘it’) are also numberless. Picallo takes all of this as evidence that gender participates in processes related to LF, and that it is a condition on the expression of number.

how pronouns (and other non-lexical items, such as the clitic in (25)) host gender once in an agreement relationship.
Though Picallo’s assessment of the data is intriguing, the claim that all gender must be interpretable raises questions. First, example (8) and other examples of binding relationships as evidence for interpretability of gender are not fully convincing for establishing gender as universally interpretable.\(^{10}\) Second, interpretable features must possess semantic content that affects processes at all syntactic levels of LF. Though I am unfamiliar with the specific work that Picallo cites in cognitive linguistics,\(^{11}\) Picallo’s claim suggests that the grammatical gender affects the understanding of the gender (or a related category) of the referent. For example, el libro ‘the book’ will be understood as having “masculine” qualities; la mesa will be understood to have “feminine” ones. Perhaps the notions of “interpretable” and the labels of gender themselves need to be clarified by Picallo, but rudimentarily, this claim seems suspicious. It is true that some grammatical genders hold sway over their interpretation: la tierra ‘the earth’ is normally referred to as a feminine entity. This, however, seems to be a case where the entity assumes animate properties: the earth is not merely feminine, but female. Cases like el libro and la mesa do not possess such clear denotations.

Critique apart, Picallo’s work sits within a framework that assumes that nominal constructions should both conform to a universal hierarchical structure and that the locus where grammatical features are interpreted should be invariant. In this sense, her proposal is notable working within the Minimalist framework, as well as for the explanations it offers of Spanish and Romance data. Additionally, the idea that all

\(^{10}\)See Kratzer (2009) and Heim (2008) for work on Fake Indexicals.

\(^{11}\)Specifically, Picallo cites Allan (1980), Craig (1986), Corbett (1991) and Croft (1994), among others. In a brief review, Croft (1994) distinguishes different types of classification systems according to their grammatical and (ultimately) semantic-pragmatic function and argues that subtle but regular cross-linguistic generalizations can be made. He proposes unique hierarchies of semantic distinctions associated with each type of classifier that are dependent upon the construction in which they are found.
gender is interpretable has resurfaced in Hammerly (2017). Following this proposal, though all gender is interpretable, only gender that is associated with an animate referent is compositional at LF. I will briefly return to this idea at the end of this chapter.

2.3.2 Gender on Root or via Reference (Alexiadou 2004, 2017)

Building off work by Picallo (1991) and others (e.g. Harris, 1991; Aronoff, 1994; Bernstein, 1994; Müller, 2004), Alexiadou chooses an approach to gender that contrasts with Picallo’s: she proposes that gender does not occupy an independent, functional projection. Number, however, does. Alexiadou cites evidence from class markers and semantic interpretation (independently) as justification for her proposal. In particular, she argues that the morphological realization of a given feature is not necessarily a diagnostic for its syntactic or interpretive function.\(^\text{12}\)

Alexiadiou cites work by Harris (1991), who analyzed the vowels that are often understood as gender markers in Spanish as word or inflectional class markers instead. Such markers are distinct from grammatical gender and do not play a role in agreement processes and are better understood as a diacritic on the root of a given word. Alexiadou cites Harris’ proposal of the five inflection classes that exist in Spanish as in Table 2.1.

While inflection class is never relevant to agreement processes\(^\text{13}\), gender (both grammatical and biological) is. Gender is thus a much better candidate for bearing a syntactic role and perhaps assuming functional structure. This latter point, however,\(^\text{12}\) and vice versa. The absence of morphological realization does not imply lack of syntactic or interpretive function.

\(^\text{13}\)Though see Bernstein (1994) and Haegeman (1998) for arguments that class marking bears a syntactic role and thus heads a functional projection.
Table 2.1: Inflectional Class Markers in Spanish (Alexiadou, 2004).

<table>
<thead>
<tr>
<th>Marker</th>
<th>Class</th>
<th>Gender</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>-o</td>
<td>1</td>
<td>masculine</td>
<td>muchacho</td>
<td>'boy'</td>
</tr>
<tr>
<td>-o</td>
<td>1</td>
<td>feminine</td>
<td>mano</td>
<td>'hand'</td>
</tr>
<tr>
<td>-a</td>
<td>2</td>
<td>masculine</td>
<td>día</td>
<td>'day'</td>
</tr>
<tr>
<td>-a</td>
<td>2</td>
<td>feminine</td>
<td>muchacha</td>
<td>'girl'</td>
</tr>
<tr>
<td>∅</td>
<td>3</td>
<td>masculine</td>
<td>cid</td>
<td>'cid'</td>
</tr>
<tr>
<td>∅</td>
<td>3</td>
<td>feminine</td>
<td>sed</td>
<td>'thirst'</td>
</tr>
<tr>
<td>∅ (e inserted)</td>
<td>3</td>
<td>masculine</td>
<td>padre</td>
<td>'father'</td>
</tr>
<tr>
<td>∅ (e inserted)</td>
<td>3</td>
<td>feminine</td>
<td>madre</td>
<td>'mother'</td>
</tr>
</tbody>
</table>

is demonstrated by Alexiadou to be false on the basis of two criteria for why syntactic features may be active in the syntax:

1. The feature contains semantic content and is relevant for interpretation. If this is so, the feature may be represented as a terminal node in the syntax.

2. If the first criteria is not met, a feature may still be relevant syntactically if it triggers specific syntactic operations such as movement and/or Agree (importantly different from agreement) (e.g. Case).

On this basis, Alexiadou argues that number deserves an independent functional projection: it is a feature that has clear semantic effects; it is relevant for DP-internal displacement; and it has been argued to function as a case assigner or licensor. Class membership is an idiosyncratic property of lexical roots, and it is thus arbitrary, unpredictable, and undeserving of a special syntactic role. For gender, Alexiadou presumes it is irrelevant to semantic interpretation and to other syntactic operations. Nouns are presumed to either carry inherent gender specification, or they...
are assigned such a specification under identification with their referent. For Spanish, this categorization plays out with the following types:\(^{14,15}\):

- **Gender lexically specified on root:**
  1. Non-human and non-animate nouns
  2. Human nouns with suppletive forms (i.e. *hombre/mujer* ‘man/woman’)

- **Gender assigned under identification with referent:**
  1. Types that share a root, and differ only in their final vowel (i.e. *muchacho/-a* ‘boy/girl’)
  2. Epicenes, animate nouns that possess a fixed grammatical gender

After discussing evidence from Italian, Greek, and Hebrew, Alexiadou settles on the structure in (9) as a universal DP structure across languages:

\(^{14}\)It is unclear which type nouns like *estudiante* are classified as. Presumably, they are assigned via identification with a referent, since morphological agreement for gender surfaces on the determiner and there is no suppletion.

\(^{15}\)Nouns denoting animals are at the cross-roads of this categorization. Alexiadou follows Harris (1991) in observing that, for animals, three patterns are possible: (i) one form is used for both male and female in the unmarked case (e.g. *jirafa/*o ‘giraffe.F.SG/*M.SG’); (ii) there are suppletive forms (*toro/vaca* ‘bull/cow’); or (iii) common animals show a gender alternation similar to human nouns (*perro/perra* ‘dog.M.SG/F.SG’).
Alexiadou’s rationale for discarding class marking as syntactically significant is convincing. Additionally, the justification for a Number Phrase is in line with other well-accepted approaches to DP structure. However, it is less clear how the claims about gender hold together.

Following the explanation for gender assignment in human referents in particular, gender assignment follows identification of a referent. However—as this chapter reiterates—not all DPs refer, and it is possible for gender to surface on non-referring human entities. How gender is assigned to an animate entity that lacks inherent gender, and where this assignment takes place, are questions that remain to be answered. Though the structure of (9) appears to capture empirical data from Spanish and other languages, the specifics of its inner workings remain unclear.
2.3.3 Gender is on n (Kramer 2015)

To account for the surfacing of different gender markings, I follow Kramer (2015) in assuming that Spanish has four nominalizing heads (n) in accord with having both interpretable and uninterpretable gender features, as posited in Minimalism. Kramer’s work focuses specifically on the morphosyntax of gender, and she addresses three foundational questions in her investigation:

1. Where is gender located in the hierarchical structure?

2. What is the relationship between natural gender and arbitrary gender?

3. How is gender assignment accomplished morphosyntactically?

The motivation for choosing n as the locus of gender follows from the fact that n is interpretable as a nominal categorizer, and it serves a function (converting the conceptual material stored in the root index into a linguistic object) apart from introducing gender into the derivation. Thus, n is motivated syntactically even if gender is uninterpretable.

Kramer rejects locating a gender feature on roots themselves, noting that such location would give the category-neutral root a category-specific feature relevant to the syntax, which violates basic assumptions concerning the nature of roots in DM. Instead, the ns in (10) are proposed to create a three-way distinction of natural gender (male, female, plain). The n in (d) surfaces as a result of evidence of an uninterpretable feminine feature that may surface on inanimates (e.g. la pluma ‘the pen’). A noun like la persona ‘the person’, though animate, is invariant for natural gender and can only combine with u[+FEM].

16Exactly such a claim has been made for French in the work of Atkinson (2015), however, who proposes a gender feature on all French lexical roots in addition to on n. Kramer (2009) previously located gender on the root, as well. This idea will be returned to in chapter 4.
Kramer affirms the fact that Spanish has a default gender of masculine (Prado, 1982; Roca, 1989). Specifically, this default may be equated with “non-feminine” — an important observation which will have implications for analyzing bare forms. Such default status may be seen in the Vocabulary Items (VIs) inserted for D in Spanish, which follow the paradigm in (11) (extended to plural Ds in (12)):

(11) Spanish definite determiner VIs\(^{17}\)

a. \([D], [\text{DEF}], [\text{+FEM}] \leftrightarrow \text{la}\)

b. \([D], [\text{DEF}] \leftrightarrow \text{el}\)

(12) Spanish definite determiner VIs (plural)

a. \([D], [\text{DEF}], [\text{+FEM}], [\text{+PL}] \leftrightarrow \text{las}\)

b. \([D], [\text{DEF}], [\text{+PL}] \leftrightarrow \text{los}\)

Building on previous literature and noting the complex relationship between gender and (declension) class (Alexiadou, 2001; Harris, 1991), Kramer assumes that word-final vowels such as -o and -a are not morphological expressions of gender; rather they are theme vowels, also known as declension class markers. Extending the analysis of

\(^{17}\)There is a third definite determiner in Asturian Spanish. This determiner is neuter in gender, but it takes the form lo, contrary to the VI in (12b). Lo in Asturian Spanish has been analyzed to be el neutro de materia or ‘the material neuter’, denoting agreement with a mass noun (e.g. García, 2017).
Table 2.2: Spanish Declension Classes (Kramer, 2015).

<table>
<thead>
<tr>
<th>Declension class</th>
<th>Theme vowel</th>
<th>Noun</th>
<th>Gloss</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>-o</td>
<td>lí-o</td>
<td>‘muddle’</td>
<td>masculine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>man-o</td>
<td>‘hand’</td>
<td>feminine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dí-a</td>
<td>‘day’</td>
<td>masculine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pas-a</td>
<td>‘raisin’</td>
<td>feminine</td>
</tr>
<tr>
<td>II</td>
<td>-a</td>
<td>pas-a</td>
<td>‘raisin’</td>
<td>masculine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dí-a</td>
<td>‘day’</td>
<td>feminine</td>
</tr>
<tr>
<td>III</td>
<td>-e/∅</td>
<td>padr-e</td>
<td>‘father’</td>
<td>masculine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>madr-e</td>
<td>‘mother’</td>
<td>feminine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>lápiz-∅</td>
<td>‘pencil’</td>
<td>masculine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>luz-∅</td>
<td>‘light’</td>
<td>feminine</td>
</tr>
</tbody>
</table>

importantly, gender cross-cuts declension class, though generalizations can be made.\(^{18}\) Though gender and declension class are two separate and distinct phenomena, gender features on \(n\) are local enough that they have the ability to affect declension class, but they are not required to. This can be seen in the structure in (13) and insertion rules below:

\[(13) \text{ Structure at Syntax for a feminine noun:} \]

\[
nP
\]

\[
\begin{array}{ccc}
\_ & \_ & \_ \\
n[+FEM] & \sqrt{P} & \_ \\
\_ & \_ & \sqrt{\_} \\
\end{array}
\]

\(^{18}\)For example, Class I nouns are almost all masculine; Class II nouns almost all feminine; while Class III nouns are equally divided.
(14) At PF: Theme Node Insertion:

```
nP
  /\
nP \ nP
   /   /
Th \   /√
 n[+FEM]√
```

(15) Theme node insertion rules for Spanish

a. i. Insert [theme, iii] in the contexts of √MADR, √PADR, √LÁPIZ, √LUZ...

ii. Insert [theme, ii] in the context of √DÍ...

iii. Insert [theme, i] in the context of √MAN...

b. Insert [theme, ii] in the context of n[+FEM]

c. Insert [theme] elsewhere

(16) Vocabulary Insertion for Theme node in Spanish

a. for [theme, iii] ⇐⇒ -e/∅ / __ Num

b. for [theme, ii] ⇐⇒ -a / __ Num

c. for [theme] ⇐⇒ -o / __ Num

d. for [theme] ⇐⇒ ∅

Kramer follows Embick (2010) in arguing that the dissociated Theme node (not present during syntax) carries the declension class feature in Spanish. The class marking is thus a reflex at PF during Theme Node Insertion. The set of rules in (15) inserts Theme nodes with particular declension class features in the context of certain roots. This captures all of the “listed” information about which roots go with which declension class, following Table 2.4 and the assumptions about the grammar’s architecture in DM. The Vocabulary Insertion in (16) follows the observation that theme vowels precede number markings morphologically. Additionally, following work by Oltra-Massuet and Arregi (2005), Kramer assumes that theme vowel nodes are
inserted at each functional head (including categorizing heads); the theme vowel, however, is realized overtly only if it is left-adjacent to the number head Num.

2.3.4 Gender Valued From Context (Kučerová, 2018)

Kučerová begins her analysis of gender assignment and valuation in Italian nouns with the affirmation that gender and number features within a DP may be valued either from the syntactic structure (i.e. from the lexicon) or from the context (citing Corbett, 1991, Dahl, 2000, Sauerland, 2004, Wiltschko and Steriopol, 2007, Acquaviva 2008, Heim, 2008, Wiltschko, 2008, Matushansky, 2013, Merchant 2014, among others). Echoing themes of this dissertation, she nevertheless notes that little is known about how these two types of valuation are established, nor what structural properties underpin this distinction.

Central to Kučerová’s analysis is the claim that more than one structural element can be the source of a valued feature. Furthermore, it is typically the structurally higher element that is responsible for the semantically informed value of this feature (e.g. Pesetsky, 2013; Landau, 2016). Kučerová sets out to clarify how gender may be valued both from the lexicon and from the context; additionally, she provides explanation as to why the structural height of functional heads should make a difference with respect to whether or not a syntactic feature is semantically interpreted.

Gender valued from the lexicon proceeds as follows. Importantly, in referring to lexical gender, Kučerová refers to grammatical, uninterpretable gender; examples from Italian include *il libro* ‘the.M.SG book.M.SG’ and *la rose* ‘the.F.SG rose.F.SG’. Such valuation adheres to the principles of Agree, whereby a Probe values its gender features from a suitable goal. This is seen in (17):
(17) a. Matching of unvalued gender features:

\[
\begin{array}{c}
\text{DP} \\
\text{D} \quad \text{nP} \\
[\text{GEN: }] \\
\text{n} \quad \sqrt{\text{root}} \\
[\text{GEN:F}] \\
\end{array}
\]

b. Valuation of the gender feature on D by Agree with the valued gender feature on n.

\[
\begin{array}{c}
\text{DP} \\
\text{D} \quad \text{nP} \\
[\text{GEN:F}] \\
\text{n} \quad \sqrt{\text{root}} \\
[\text{GEN: }] \\
\end{array}
\]

For gender valued from context, Kučerová is concerned with interpretable gender; examples include *il bambino* ‘the.M.SG boy.M.SG’, *la bambina* ‘the.F.SG girl.F.SG’, and *il/la chirugo* ‘the.M.SG/F.SG surgeon’\(^{19}\). For this type of valuation, the process begins as in (17) with D probing its c-command domain for a suitable Goal. In these cases, however, Kučerová argues that D cannot value its feature, as these animate nouns are not valued for gender from the lexicon. The search for a suitable Goal fails, and D values its feature from the context. This is justified as D is a phase head (or labeling head in its extended lexical domain) and it is thus the only accessible functional head at LF at spell out. This process thus allows the morphology to access LF at a later point in the derivation than often assumed across the literature. The

\(^{19}\)See chapter 4 for further discussion of similar invariant nouns in Spanish.
The gender feature on n is automatically valued via the existing matching link with D.
The entire process is outlined in (18):

(18) a. Matching of unvalued gender features:

```
  DP
 /     \
D    nP
 |      |
[GEN: ] n   \sqrt{\text{root}}
 |      |
[GEN: ]
```

b. D cannot get valued by n because the gender feature on n is not valued
→ D valued from context. D is phase head (or labeling head in extended
lexical domain) and only accessible functional head at LF at point of spell
out.

```
  DP
 /     \
D    nP
 |      |
[GEN:F] n   \sqrt{\text{root}}
 |      |
[GEN: ]
```

c. The gender feature on n gets automatically valued via the existing
matching link with D:

```
  DP
 /     \
D    nP
 |      |
[GEN:F] n   \sqrt{\text{root}}
 |      |
[GEN:F]
```
The core assumption in Kučerová’s proposal is that a formal syntactic feature can be assigned a context sensitive value only at the syntax-semantics interface. More precisely, the only point during the syntactic derivation when a formal syntactic feature may be semantically valued is when the phase is sent to the syntax-semantics interface (what Kučerová calls Transfer). This valuation is modeled as minimal search in the sense of Chomsky (2008, 2013) and Narita (2011); Kučerová argues that contextual valuation takes place as part of labeling of the transferred phase.

An example helps illustrate this. *La donna* ‘the.f.sg woman.f.sg’ denotes a female referent, but it is not clear whether this denotation arises from the lexical semantics of the noun’s root, the feminine gender feature determined from the lexicon, or both. Kučerová takes a stronger position and argues that the gender feature valued from the lexicon is never semantically interpreted. If there is a natural gender meaning associated with a full DP, the semantic interpretation always comes from elsewhere. The gender feature on D may be determined either by Agree with a gender feature valued from the lexicon, or the value can be determined from the context. If the feature on D is valued from the context, it is always semantically interpreted because the value restricts the natural gender of the referent.

What about interpretable gender in small nominals? Kučerová note that, if the locus of the semantic feature valuation is a phase head, it may be possible for such a feature to be assigned to *n* head instead (assuming *nP* as a phase, e.g. Kramer 2009, 2015). Kučerová claims that this is not possible: only a complete DP can interact with natural gender because the assignment of natural gender is tied to establishing a referential address via the [*PERSON*] feature, necessarily located in D. In other words, only the semantic properties of a full DP provide a formal trigger for minimal search to semantically value gender phi-features. In contrast, *nP* does not have the right
semantic interpretation, and as a result, \( nP \) properties can only possess grammatical gender.

Kučerová’s proposal is intriguing for the clarity she provides in defining gender valuation “from context.” Nevertheless, this clarity comes at a theoretical cost, such that the basic architecture of the syntactic derivation is altered to allow additional communication between the morphology and the semantics. This aside, her proposal also does not consider the possibility that interpretable gender may ever be valued from the lexicon. This hypothesis makes a strong claim that, as data throughout this dissertation will show, does not seem to hold up. Nevertheless, Kučerová’s ideas that there are multiple structural locations for gender and that these locations work together in patterned ways to determine the interpretation of gender will be kept in mind as I present my own analysis.

2.3.5 Summary

Previous proposals run the gamut in their assessment of gender’s syntactic and semantic roles. Picallo, proposing that gender is always interpretable, locates gender on a separate functional projection that, in turn, conditions the expression of number. Alexiadou, assuming the opposite position, proposes that gender is irrelevant to semantic interpretation and other syntactic operations. Alexiadou instead locates gender either on the root, for non-animate nouns and human nouns with suppletive forms, or as a feature that is assigned under identification with a referent in the discourse. Kramer assumes an intermediate position, in which gender is located on categorizing \( n \) and is morphologically expressed as a result of the interaction of four distinct \( ns \) and Spanish declension class. Kramer’s proposal is able to capture gender’s close relationship with number expression, as well as distinguish between
“inherent” grammatical gender and contextually-dependent interpretable gender. Finally, Kučerová locates gender on both $n$ and D, but argues that it is only ever interpretable on D. Moving forward, I adopt the proposal that gender is located on $n$. Further chapters will explore when (if ever) this locus gives rise to interpretability, or whether a full nominal syntax is necessary for gender to be interpretable.

2.4 RETURNING TO THE CENTRAL QUESTIONS

2.4.1 WHERE IS GENDER LOCATED IN THE NOMINAL SPINE?

From previous proposals, four possibilities for the location of gender on the nominal spine have been put forth, as illustrated in (19):

(19)

Interpretable (natural) gender is noted with $i$, while uninterpretable (grammatical) gender is noted with $u$. For now, I will eliminate the possibility of GenP from my consideration as a locus of gender. I follow Ritter (1993), who argues based on data
from Hebrew and Romance that (in contrast to number) gender is a feature realized on one of the existing syntactic heads of the noun phrase, and that the choice of syntactic head for realization is subject to cross-linguistic variation. Kramer, in her analysis of gender, additionally argues against GenP on the basis that it lacks a consistent semantics and that the data it is invoked to explain may be explained with alternative strategies.

Thus, possible loci for gender in Spanish moving forward are as in (20):

\[
(20)
\begin{array}{c}
φP \\
φP\quad \phi \\
φP\quad \phi\quad DP \\
φP\quad \phi\quad DP\quad i[GENDER] \\
φP\quad \phi\quad DP\quad i[GENDER]\quad D \\
φP\quad \phi\quad DP\quad i[GENDER]\quad D\quad NumP \\
φP\quad \phi\quad DP\quad i[GENDER]\quad D\quad NumP\quad nP \\
φP\quad \phi\quad DP\quad i[GENDER]\quad D\quad NumP\quad nP\quad \sqrt{P} \\
φP\quad \phi\quad DP\quad i[GENDER]\quad D\quad NumP\quad nP\quad \sqrt{P}\quad i/u[GENDER] \quad i/u[GENDER]
\end{array}
\]

The question of whether or not these loci may all be interpretable, possess variation, or are all uninterpretable unless resumed by a feature high in DP, is what I focus on in my analysis of BNs in chapter 3. Although my ultimate analysis will posit that gender may only reside on \( n \) or D, I leave gender on the root in (20) as a result of data presented in chapter 4. Several accounts in addition to Alexiadou make a case for there existing a locus of gender on the roots of certain nouns. Additionally, data presented in chapter 3 suggests that information present in the root regarding the noun’s meaning may condition the expression of gender and/or possible constructions in which interpretable gender is felicitous for a given noun.
2.4.2 When is Gender Interpretable?

Proposals seen in this chapter vary in their analyses of when gender is interpretable. Gender may always be interpretable (e.g. Picallo); it may be interpretable depending on whether or not the denoted entity is animate (e.g. Kramer); or it may only be interpretable at a high-level within DP (e.g. Sauerland, Kučerová). For the latter two proposals, gender intuitively interacts with an animacy feature, what I will call \([\pm\text{animate}]\). As such, the loci and expression of gender may be conditioned on the following syntax:

\[
\begin{array}{c}
\phi P/DP \\
\phi/D \\
[+\text{animate}] \\
nP \\
n \sqrt{P} \\
\end{array}
\]

In (21), I have left off whether or not gender itself is interpretable. It may be that, in some instances, gender is uninterpretable itself, but in combination with an animate feature, receives some sort of interpretability. This could be as in (39), where a low uninterpretable gender feature receives interpretation once a high animate feature is present. BNs in chapter 3 will prove a rich testing ground for this analysis, as well as ellipsis data from chapter 4 where certain nominals are valued for agreement features from their subjects.

As an alternative approach, “interpretability” of gender could be understood differently. This is what Hammerly (2017), using French as a case study, proposes for gender
features across languages. Hammerly argues that all gender features (even those which have been previously analyzed as arbitrary or uninterpretable) are necessarily interpretable at the LF interface. Even if a feature does not contribute compositionally to the meaning of a structure, it must be visible to provide the context for interpretation. As an example of what Hammerly is alluding to in Spanish, common in Spanish are alternations in meaning that result from alternations in gender, specifically in the fruit and vegetable realm:

(22) a. *cerezo, cereza* ‘cherry tree, cherry’
   b. *palto, palta* ‘avocado tree, avocado’
   c. *naranjo, naranja* ‘orange tree, orange’
   d. *manzano, manzana* ‘apple tree, apple’

In the patterns in (22), grammatical feminine gender has the apparent effect of making the masculine noun more specific: the (feminine) fruit is a part of the (masculine) fruit tree. Presumably, these alternations are derived from the same root; following, the feminine form is consistently derived from the masculine, or default.

If such a pattern holds up, the question arises as to whether feminine forms are always derived from masculine forms, as well as if there are only two genders in Spanish. The two ideas go hand in hand: if [+FEM] is always derived from the absence of feminine (i[-FEM] or bare), then there may be an additional gender, [+MASC], that precludes a feminine form derived from it. Further evidence gives texture to this analysis: a tree/flower gender alternation is seen with *magnolio/magnolia*, ‘magnolia tree (M.SG) / magnolia flower (F.SG)’, in which the feminine gender again denotes a part of the object represented by the masculine gender. An additional example plays with size: "bolsa ‘bag.F.SG’ is a smaller bag than bolso ‘bag.M.SG’."
These examples demonstrate that even grammatical gender may have an interpretive effect on the resulting denotation.\(^{20}\) An alternative analysis could posit that all meanings expressed above are inherent to the noun’s root, and that each gender selects a specific component of this root to express. These questions of what information is contained in the root and how this information interacts with gender will feature throughout the dissertation.

### 2.4.3 How is Gender Interpreted?

The distinct behavior of bare plurals (BPs) and bare mass nouns (BM)s in contrast with bare singular nouns (BNs) (to be explored more in chapter 3) suggests the possibility that, similar to number, gender may act as a sort of categorizer that separates groups of entities into their component parts. Though this question has not been as thoroughly investigated in the literature, its basis is suggested by the assessment that gender may be divided into two categories in Spanish: [+FEM] and everything else. In other words, the [FEM] feature denotes a specific set of entities selected from the larger set of [-FEM] entities.

BNs of the examples above are distinct from bare mass nouns (BM)s, which are morphologically singular but have a different internal atomic structure (Chierchia, 2010). This is evident both in their syntactic restrictions, and also by the fact that BNs cannot be modified by a measure phrase. This is shown by the contrast in (23):

\[(23)\] a. La botella lleva dos litros de agua adentro.
   the.SG.F bottle.SG.F carry.SG.PRS two liter.PL of water.SG.F inside
   ‘The bottle has two liters of water inside.’

\(^{20}\)See Williams et al. (2019) for recent computational work that models semantic interpretation as a function of grammatical gender across various languages.
b. *El edificio tiene una tonelada de
tiempo de
ascensor.
elevator
‘The building has one ton of elevator.’

If this holds, gender may designate an identifiable subset. Whether or not this is equivalent to being a singulative, however, is unclear and will be addressed in the chapters to come.

2.5 Moving Forward

This chapter has provided an overview for how an initial semantic proposal concerning interpretable gender may be intertwined with morphosyntactic accounts of functional projections and features. As such, it has laid the groundwork for an investigation of the semantic properties of gender in Spanish small nominals, both in context free and context sensitive environments.

The chapters that follow build on the previous work outlined here. Empirical evidence from Spanish offers further insight into where gender is located and interpreted on the nominal spine, how the presence of interpretable gender restricts possible nominal interpretations, and how agreement patterns involving gender shine light on its underlying syntax and semantics.
3.1 Introduction

Bare singular count nouns (BNs) have a more limited syntactic distribution than any type of nominal expression in Spanish. They thus serve as an optimal starting point for an analysis of how meaning is created in parallel with morphosyntactic structure, and how gender is expressed as part of this meaning and structure. The focus of this chapter is to analyze how BNs are interpreted without explicit consideration of gender. The analysis in this chapter provides the syntactic and semantic background with which to then address the questions of where, when, and how gender is interpreted in Spanish BNs.

Spanish BNs have been analyzed to be licensed only in pseudo-incorporation structures (Espinal, 2010; Espinal and McNally, 2011), as they both syntactically stay close to their verbal host and semantically display four well-established properties of these structures (Dayal, 2015): (i) reduced discourse transparency and lack of support for anaphora; (ii) narrow scope; (iii) number neutrality; and (iv) “name-worthiness,” or some sort of well-established usage. Nevertheless, pseudo-incorporation structures share semantic properties with other phenomena, in particular, nominal expressions that display weak referentiality, or “weak definites” (Zwarts, 2014; Schwarz, 2014). Spanish BNs also occur in syntactic structures that are not immediately apparent as pseudo-incorporation structures, in which BNs are linked to a prepositional,
and not verbal, host. It is not clear whether one can draw a clear line between these phenomena, or whether there may be a continuum of properties that these phenomena share and that contribute to the unique syntactic and semantic behavior of Spanish BNs. A primary goal of this chapter is therefore to describe the range of behavior of Spanish BNs that need to be addressed in a complete analysis.

The chapter is structured as follows: After presenting the data for Spanish BNs in light of the properties of pseudo-incorporated nouns (3.2), I review four specific proposals that have the potential to explain the syntax and semantics of Spanish BNs: (i) Chung and Ladusaw’s (2003) analysis of incorporation in Chamorro and Maori and proposal for two new modes of saturation (3.3.1); (ii) Dayal’s (2003, 2011) analysis of pseudo-incorporation in Hindi (3.3.2); (iii) Espinal and McNally’s (2011) analysis of pseudo-incorporation in Spanish and Catalan that addresses language-specific restrictions (3.3.3); and (iv) a collection of analyses of weak definites across languages (3.3.4). This review makes clear that the concept of incorporation itself is elastic and language-specific, although careful navigation between morpho-syntactic identifiers of incorporation and subtle but robust semantic properties endow it with a clear grammatical status.

I present a pseudo-incorporation analysis of Spanish BNs that is inspired by Dayal’s (2011) semantics for Hindi pseudo-incorporation (section 3.4). This analysis captures properties (i)-(iii) listed above for pseudo-incorporated nominals (reduced discourse transparency, narrow scope, and number neutrality). As data in section 3.2 will show, further explanation is needed to explain the limited set of verbs in Spanish that allow pseudo-incorporation. For this, I adopt Harley’s (1997, 2002, 2004) proposal concerning prepositional have ($P_{\text{have}}$), a semantic primitive that forms part of verbs in Spanish that participate in pseudo-incorporation (section 3.4.2). I present a syntactic
decomposition approach to deriving pseudo-incorporating verbs. The syntactic and semantic analyses together are able to explain additional Spanish BN data of their use in predicative structures. Finally, I extend the analysis to capture a previously unanalyzed use of Spanish BNs in certain prepositional phrases that mirror patterns for weak definites noted in other languages. This analysis confirms the status of Spanish BNs as pseudo-incorporating elements, and it gives new evidence for the existence of two types of prepositional hases: a true \( P_{\text{HAVE}} \) and a prepositional locative \( (P_{\text{LOC}}) \) (Harley, 2004). I suggest, too, that additional prepositional elements may pseudo-incorporate in Spanish, allowing a range of prepositional incorporation structures to exist with distinct interpretations. I conclude by discussing how this analysis affects possible interpretations of gender in Spanish BNs.

3.2 Data: Spanish Small Nominals as Pseudo-incorporated

The syntactic and semantic behaviors exhibited by BNs in Spanish parallel behaviors noted across the literature for pseudo-incorporated nominals. BNs are the most syntactically restricted set of nominals in Spanish, appearing in some predicative structures and as the object of a limited number of verbs. In all cases, BNs must stay close to their verbal host and are quite restricted in how they can be modified. Semantically, Spanish BNs (i) have reduced discourse transparency and provide bad support for pronominal anaphora; (ii) exhibit number neutrality; (iii) have narrow scope; and (iv) occur in constructions that are institutionalized in some manner, often referred to as “name-worthiness” or the “establishedness effect” (Van Geenhoven, 1995; Dayal, 2011, 2015).

As a point of entry, I consider in this chapter BNs as bare count nouns, or nombres discontinuos (‘discontinuous nouns’) (Bosque, 1996). BNs are distinct from bare mass
(BM) \( \text{nombres continuos, de materia, o medibles} \) ‘continuous, measurable nouns or nouns of materia’) and bare plural (BP) nouns. BNs behave differently from BMs and BPs both syntactically and semantically. Examples in (1) demonstrate specifically that, while BMs and BPs are licensed as objects of certain verbs, BNs are not (Bosque, 1996)

\[\begin{align*}
1. \quad & \text{a. Bare mass nouns (BMs)} \\
& \text{Quiero leche / guardé pan / adquirió confianza /} \\
& \quad \text{I-want milk.F.SG / I-saved bread.M.SG / 3.acquired confidence.F.SG /} \\
& \quad \text{compraré gasolina.} \\
& \quad \text{I-will-buy gasoline.F.SG} \\
& \quad \text{‘I want milk / I saved bread / (S)he acquired confidence / I will buy gasoline.’}

& \text{b. Bare plural nouns (BP)} \\
& \text{Quiero libros / guardé lámparas / adquirió cuadros /} \\
& \quad \text{compraré juguetes.} \\
& \quad \text{I-will-buy toy.M.PL} \\
& \quad \text{‘I want books / I saved lamps / (S)he acquired paintings / I will buy toys.’}
\end{align*}\]

\[\begin{align*}
1^1 \text{Certain count noun behave both as continuous (mass) and discontinuous (count) nouns. Such ‘abstract’ nouns may be modified as if they were BMs (Bosque, 1996):}
\end{align*}\]

\[\begin{align*}
1. \quad & \text{(a) Comí manzana / Comí una manzana.} \\
& \text{I-ate apple.F.SG / I-ate a.F.SG apple} \\
& \text{‘I ate some apple.’ / ‘I ate an apple.’}

& \text{(b) Me dio pan / me dio un pan.} \\
& \text{me gave bread.M.SG / me gave a.M.SG bread.M.SG} \\
& \text{‘(S)he gave me bread.’ / ‘(S)he gave me a bread.’}
\end{align*}\]

I will set aside this data and assume that these nouns do, indeed, possess a double function and are not pure count nouns in the sense being analyzed in this chapter.
c. Bare count nouns (BNs)

*I Quiero libro / *guardé lámpara / *adquirió cuadro
/ *compraré juguete.
/ I-will-buy toy.M.SG
‘*I want book / *I saved lamp / *(S)he acquired painting / *I will buy toy.’

Though my analysis will not include a full treatment of examples such as (1a-b),
the minimal difference between such examples and those in (1c) presents an initial
data point that is of interest for this chapter: what allows BMs and BPs to occupy
syntactic positions that BNs are restricted from?² In 3.2.1 and 3.2.2, I outline BN
syntactic and semantic data, respectively, before moving on to address this question
through a review of previous analyses (3.3) and the analysis itself (3.4).

3.2.1 SYNTACTIC DISTRIBUTION OF SPANISH SMALL NOMINALS

BNs are frequently allowed in predicate positions (Swart et al., 2005; Dobrovie-Sorin et al.,
2006; Munn and Schmitt, 2005). These structures include post-copular predication
(2), reprise-commentaire structures (3), and part/whole constructions (4)³:

(2) Juan es [médico / abogado / profesor / enfermero / 
bombero].
firefighter.M.SG] 
‘John is (a) doctor / lawyer / professor / nurse / firefighter.’

²The reader is directed to work by McNally (2004) and Laca (2013) for discussion of BMs
and BPs.
³Note, however, that the BN in the part/whole construction in (4) is further licensed by
the preposition de ‘of.’ This is a typical pattern for BNs: la chica de/con falda roja ‘the girl
of/with red skirt.’
(3) Pedro trajo su mesa de camping, mesa que sirvió para el picnic.

‘Pedro brought his camping table, (a) camping table that served for the picnic.’

(4) He adoptado un perro de hocico chato.

‘I adopted a dog with (a) pug-nosed snout.’

For constructions such as (2), BNs agree in gender with the pre-verbal subject (5a); this holds for number, too, when the subject is plural (5b):

(5) a. Amalia es [médica / abogada / profesora / enfermera / bombera].

‘Amalia is (a) doctor / lawyer / professor / nurse / firefighter.’

b. Ellas son [médicas / abogadas / profesoras / enfermeras / bomberas].

‘They are doctors / lawyers / professors / nurses / firefighters.’

BNs cannot be used as preverbal subjects or subjects of passive or copula sentences. BNs cannot appear as postverbal subjects, either, although their BP counterparts can.

(6) a. *Merodeaba león / Mereodeaban leones en la selva.

‘*Lion/lions prowled in the jungle.’

b. *Corría niña / Corrán niñas en la playa.

‘*Girl/girls ran on the beach.’
Whereas existential BPs\(^4\) can appear freely in object position with most verbs, as in \textit{Juan vio películas} ‘Juan watched movies’, BNs are generally ruled out in the same contexts:

(7) a. Juan vio *película/ películas.
   Juan saw movie.F.SG/ F.PL
   ‘Juan saw *movie/ movies.’

   b. He dibujado *árbol/ árboles.
   (I)-have drawn tree.M.SG/ M.PL
   ‘I drew *tree/ trees.’

These examples become grammatical with the addition of a determiner (8) or under negation (9). Importantly, in (9), both constructions signal the non-existence of the object denoted by the BN and overall activity denoted by the V-N complex.

(8) a. Juan vio una/ alguna/ la película.
   Juan saw a.F.SG/ some.F.SG/ the.F.SG movie.F.SG
   ‘Juan saw a movie.’

   b. He dibujado un árbol.
   (I)-have drawn a.M.SG tree.M.SG
   ‘I drew a tree.’

(9) a. Juan no vio película.
   Juan not saw movie.F.SG
   ‘Juan didn’t see (a) movie.’\(^5\)

   b. Carla no conoce mujer que cante.
   Carla not know woman.F.SG that sing.SUBJ
   ‘Carla doesn’t know (a) woman who sings.’

\(^4\)Existential BPs pick out specific referents, and are normally contrasted with generic BPs (Carlson, 1977; Dobrovie-Sorin, 2009). This contrast does not seem to hold in Spanish and Romance. Data regarding existential BPs is still, however, valid for comparison purposes here.

\(^5\)Though (9a) is acceptable, \textit{Juan no leyó libro ?(alguno)} ‘Juan didn’t read book ?(any)’ displays an alternation, where the BN alone is less acceptable than when modified by ‘some.’
BNs can appear quite productively in object position of a limited number of verbs in Spanish, which are equivalent to the verbs that occur with BNs in Catalan, and Romanian: 

6 tener ‘to have’ and acquisition verbs; other verbs that may be analyzed to contain a have or possession-like subcomponent, such as llevar ‘to wear’ or usar ‘to use’; some intensional verbs such as buscar ‘to look for’ and encontrar ‘to find’; some light verbs; and also in some idiomatic expressions7. A seemingly motley list, the fact that the same restrictions hold in these three languages indicates that these various contexts may share some basic common property. Examples from Spanish follow:

(10) Tener ‘to have’

a. María tiene [coche/ casa en la playa/ tarjeta de crédito/ etc.].
   María has [car.M.SG/ house.F.SG at the beach/ card.F.SG of credit/ etc.].
   ‘María has (a) [car/ house at the beach/ card of credit/ etc.]’

b. Estos edificios generalmente tienen ascensor.
   these buildings usually have lift.M.SG
   ‘These buildings usually have (a) lift.’

(11) Other verbs with a possession subcomponent

a. Van a ponerle ascensor al edificio.
   3.PL-go to put.CL lift.M.SG to.the building
   ‘They are going to put in (an) elevator in the building.’

b. Juan ha comprado casa.
   Juan has bought house.F.SG
   ‘Juan bought (a) house.’

c. Inés ha encontrado apartamento en Chueca.
   Inés has found apartment.M.SG in Chueca
   ‘Inés found (an) apartment in Chueca.’

---

6 Italian and French pattern differently, seemingly due to the presence of the partitive in both languages. The reader is directed to Stark (2007) for further discussion.

7 I discuss the latter two constructions in 3.4.4.
d. La mujer llevaba traje oscuro.
   the woman wore suit.M.SG dark.M.SG
   ‘The woman wore (a) dark suit.’

e. Se ha puesto corbata para la ocasión.
   SE has put tie.F.SG for the occasion
   ‘(S)he put on (a) tie for the occasion.’

f. Usaba [sombrero / bastón / monóculo /
   uniforme / cartera].
   uniform.M.SG / wallet.F.SG]
   ‘(S)he was using (a) [hat / cane / monocle / uniform / wallet].

(12) Intensional verbs

a. Juan busca secretaria.
   Juan looks-for secretary.F.SG
   ‘Juan is looking for (a) secretary.’

b. Necesitan camarero.
   (they)-need waiter.M.SG
   ‘They need (a) waiter.’

Examples analogous to (10-12) are the most frequently cited as evidence for pseudo-incorporation of BNs in Spanish. In these examples, the BN’s function as a THEME argument is syntactically linked to the verb such that its own functional structure appears reduced and it cannot easily be modified (see section 3.4.4 for discussion of possible BN modification). The collection of verbs in the above examples additionally limits BN’s ability to pseudo-incorporate to verbs that have a possession subcomponent.

Data not previously analyzed in pseudo-incorporation accounts involves BNs that appear as complements of prepositions that are themselves complements of verbs.
Such BNs occur not as theme arguments but as other roles, such as instrument, goal, or manner. This can be seen in the following examples:

(13) a. Gabi va con bufanda.  
Gabi goes with scarf.F.SG  
‘Gabi is wearing (a) scarf.’

b. En Mindo, se come todo con cuchara.  
in Mindo SE eat everything with spoon.F.SG  
‘In Mindo, they eat everything with (a) spoon.’

c. Claudia va a casa/ misa.  
Claudia goes to house/ mass.  
‘Claudia is going home/ to church.’

A particular extension of this use has been noted in varieties of Río de la Plata Spanish (Kuguel and Oggiani, 2016), in which the preposition en ‘in’ combines with BNs in ungrammatical ways for other dialects. The authors note that the V-P-N complexes must be canonical activities and that the BNs exhibit the same semantic properties as pseudo-incorporated nouns. The authors present a lexicalist analysis to explain these interpretive properties following Pustejovsky (1991). I do not include this data as a central component of my analysis, as almost all native speakers strongly disliked it. Nevertheless, the analysis I present in 3.4 could accommodate this data. Examples from the original paper are as below:

1. (a) Los alumnos suelen estudiar en biblioteca.  
the.M.PL student.M.PL tend.3.PL.PRS study.INF in library.SG.G  
‘The students tend to study in (the) library.’

(b) La reunión de los claustros se hace a la  
the.F.SG meeting.F.SG of the.M.PL staff.M.PL SE PASS do.3.SG.PRS a las 17 horas en rectorado.  
the.F.PL 17 hour.F.PL in rector’s.office.M.SG  
‘The staff meeting will take place / occurs at 5 o’clock in (the) rector’s office.’

(c) En este momento, el doctor está en quirófano.  
this.M.SG moment.M.SG the.M.SG doctor.M.SG be.3.SG.PRS in operating.room.M.SG  
‘Right now, the doctor is in (the) operating room / in surgery.’
These constructions nevertheless appear to be limited to certain verbs, prepositions, and nouns:

(14) a. Gabi ?baila/ *canta/ *reza con bufanda.
    Gabi dances/ sings/ prays with scarf.F.SG

    b. Gabi va ?de bufanda.
    Gabi goes of scarf.F.SG

(15) a. En Mindo, se come todo ?mediante cuchara.
    in Mindo SE eat everything with spoon.F.SG

    b. En Mindo, se pega todo con cuchara.
    in Mindo SE hit everything with spoon.F.SG

    ‘In Mindo, they hit everything with (a) spoon.’

    Claudia goes inside-of house.F.SG/ mass.F.SG

    b. Claudia va a *feria/ *parque/ *cafeteria.
    Claudia goes to fair.F.SG/ park.M.SG/ cafeteria.F.SG

A pseudo-incorporation analysis based on verbs with a possession subcomponent would need to be elaborated to explain the constructions in (13), as well as why the V-P-N complexes are limited.

3.2.2 Reduced Discourse Transparency

Semantically, Spanish BNs display restricted interpretive properties. First, they display a lack of referentiality (Espinal, 2010):

(17) a. Hoy lleva falda. Se #la regalamos el año pasado.
    today wear skirt.F.SG. her it.F.SG gave the year last

    ‘Today she is wearing (a) skirt. We gave it to her last year.’

    b. Hoy lleva una falda. Se la regalamos el año pasado.
    today wear a.F.SG skirt.F.SG. her it.F.SG gave the year last

    ‘Today she is wearing a skirt. We gave it to her last year.’
c. Hoy lleva falda. Le regalamos una el año pasado.  
‘Today she is wearing (a) skirt. We gave her one last year.’

In (17a), the BN is infelicitous as an antecedent for the object pronoun la ‘it.’ When preceded by an article (17b), it may serve as an antecedent. In (17c), the BN is ambiguous between referring to the skirt that was gifted or some other skirt (most likely the latter); this is evident in the use of an indefinite pronoun una ‘one.’

Lack of referentiality is further demonstrated by the inability of BNs to license non-restrictive relative clauses that describe a token individual. This is seen in Spanish in (18) and the contrast between a BN object (18a), an indefinite DP object (18b), and a BP object (18c)\(^9\):

\[
\text{(18) a. *Por fin hemos encontrado piso, que comenzaremos a renovar muy pronto.}
\]
‘At last we have found (an) apartment, which we’ll begin to renovate very soon.’ \(^{10}\)

\[
\text{b. Por fin hemos encontrado un piso, que comenzaremos a renovar muy pronto.}
\]
‘At last we have found an apartment, which we’ll begin to renovate very soon.’

\(^9\)See Espinal and McNally (2011) for parallel Catalan data.

\(^{10}\)Example (18a) appears acceptable with the use of a relative pronoun other than que: el cual ‘the one which’ and el que ‘that which’ are both felicitous in (18a). Similar to (17), too, el piso ‘the.M.SG flat.M.SG’ can be referred back to with a masculine pronoun lo ‘it.M.SG’ in the following sentence, though this is more felicitous with (b) and (c) than with (a). This data suggests that a simple relative like que needs more structure in its antecedent, structure that a complex relative provides itself. Future work can investigate this further.
c. Por fin hemos encontrado pisos, que comenzaremos a renovar muy pronto.

‘At last we have found some apartments, which we’ll begin to renovate very soon.’

As Potts (2005) observes, non-restrictive relative clauses are only licensed if the full expression they modify denotes a unique entity of the sort that the relative clause can apply to. The data in (17-18) strongly indicate that BNs neither denote token individuals nor introduce discourse referents corresponding to such entities.

3.2.3 NUMBER NEUTRALITY

BNs display number neutrality, whereby they may be interpreted as either singular or plural. In (19), although there is no plural morphology on the BN *pis*ó ‘flat’, neither is there a singularity implicature (Dayal, 2011)\(^1\):

\[
\begin{align*}
(19) & \quad a. \text{Busco piso. [Uno en Barcelona./ Uno en Barcelona y uno en Girona.]} \\
& \quad \text{‘I’m looking for a flat. [One in Barcelona./One in Barcelona and one in Girona.]}
\end{align*}
\]
\[
\begin{align*}
& \quad b. \text{Busco un piso. [Uno en Barcelona./ Uno en Barcelona y uno en Girona.]} \\
& \quad \text{‘I’m looking for a flat. One in Barcelona.’}
\end{align*}
\]

\(^1\)The example in (19a) is grammatical in Catalan (Espinal and McNally, 2011) but questionable for some native speakers of Spanish. I do not discuss this cross-linguistic variation. Instead, what is important here is the difference in acceptability between (19a) with a BN and (19b) with a DP.
Additionally, number neutrality results in BN’s lack of telicity:

(20) a. Ha buscado piso en/ durante una semana.
    have.3.SG look-for.PRT flat.M.SG in/ during one week
    ‘(S)he looked for and found a flat in a week.’/(S)he has been looking for
    a flat for a week.’

    b. Ha encontrado (un) piso en una semana.
    have.3.SG find.1.SG DET.IN.M.SG flat.M.SG in one week
    ‘(S)he found (a) flat in a week.’

This semantic property of BNs translates into restrictions on modification via several
syntactic strategies. BNs cannot be modified by adjectives that are comparative (21a)
or denote degree (22a); these adjectives cannot precede the noun, either (23).

(21) a. *Busco piso diferente.
    look-for.1.SG.PRS flat.M.SG different.SG
    ‘I’m looking for a different flat.’

    b. Busco un piso diferente.
    look-for.1.SG.PRS DET.IND.M.SG flat.M.SG different.SG
    ‘I’m looking for a different flat.’

(22) a. *Tiene pareja alta.
    have.3.SG.PRS partner.F.SG tall.F.SG
    ‘She/he has a tall partner.’

    b. Tiene pareja estable.
    have.3.SG.PRS partner.F.SG stable.SG
    ‘She/he has a long-term partner.’

(23) a. *Necesita mejor casa.
    need.3.SG.PRS best.SG house.F.SG
    ‘She/he needs the best house.’

    b. *Necesita primer avión a Miami.
    need.3.SG.PRS first.SG flight.SG to Miami
    ‘She/he needs the first flight to Miami.’
These adjectives may be understood to be bounded or have an endpoint in some manner. Either the adjective represents a full scale of gradability, or may be bounded at one end but not the other (Kennedy and McNally, 2005). This property reflects BNs’ atelicity, as bounded adjectives are thought to represent a fundamental property of gradability and may only combine with gradable nominals (Paradis, 2001). Though discussion of adjectives in the context of BNs merits further discussion\textsuperscript{12}, the analysis I present in 3.2 following Dayal’s (2011) proposal for pseudo-inciporporation explains this restriction on a basic level.

### 3.2.4 Narrow Scope

Finally, BNs exhibit narrow scope. This is seen both by the fact that a sentence like (17a) cannot be used to refer to a previously mentioned skirt, or to a skirt that belongs to a previously mentioned set of skirts. When other operators are present in the sentence, the BN takes scope under that operator. This can be seen with negation (24) and with quantification (25):

\begin{enumerate}[(24)]  
  \item a. No busco piso.  
      \text{not look-for.1.SG flat.M.SG}  
      \text{‘I’m not looking for a flat.’}  
  
  \item b. No busco un piso.  
      \text{not look-for.1.SG DET.IN.M.SG flat.M.SG}  
      \text{‘I’m not looking for a flat./There is a flat I am not looking for.’}  
\end{enumerate}

\begin{enumerate}[(25)]  
  \item a. Cada niño tiene perro.  
      \text{each child.M.SG have.3.SG.PRS dog.M.SG}  
      \text{‘Each child has a dog.’}  
      \text{Although there are four children, there may be eight dogs.}  
\end{enumerate}

\textsuperscript{12}E.g. Morzycki (2013) presents a detailed analysis of gradable adjectives, considering factors such as whether or not adjectives are attributive or predicative, exhibit indirect or direct modification, intersective or subsective interpretations, and relational or classificatory.
b. Cada niño tiene un perro.
   Each child.M.SG have.3.SG.PRS a.M.SG dog.M.SG.
   ‘Each child has one dog.’ #Although there are four children, there may be
eight dogs.

BNs are also more available to modification in the presence of both negation and restrictive relative clauses than in other constructions (Bosque, 1996):

(26) No encuentro película que me guste.
     Not I-find film.F.SG that me please
     ‘I cannot find a film to my taste.’

(27) No he visto ciudad que tenga más líneas de metro.
     Not I-have seen city.F.SG that has more lines of metro
     ‘I have never seen a city with more metro lines.’

The combination of negation with the restrictive relative clause appears to counteract the identification of a unique token in the discourse, as the negation signals that such a token does not exist and cannot be referred to.

3.2.5 Establishedness Effect

Across the Romance languages, and as evidenced by (2) and (6) for Spanish, BNs are allowed in predicate position particularly when they denote professions, roles, and certain relations.\textsuperscript{13} Zamparelli (2008) gives a range of examples for Italian, translated here to Spanish\textsuperscript{14}:

\textsuperscript{13}Both Romance and Germanic languages allow such constructions to occur with descriptions of nationality: i.e. Paula es española ‘Paula is Spanish.’ Such predicates are typically analyzed as adjectives, as they can occur in constructions with non-human subjects and be coordinated with other attributive adjectives. This question is an open one that I return to in 3.4 and chapter 4.

\textsuperscript{14}Curiously, the original Italian examples are grammatical both with and without D present. In Spanish, the presence of D makes the sentence ungrammatical.
(28) a. Carlos es (*un) maestro.
    Carlos is a.M.SG teacher.M.SG
    ‘Carlos is a teacher.’

b. Marta es [(*una) pariente / prima de Marcos].
    Marta is [a.F.SG relative.SG / cousin.F.SG of Marcos]
    ‘Marta is a relative/cousin of Marcos.’

c. Pilar es [(una)] vecina de casa de Mateo].
    Pilar is [a.F.SG neighbor.F.SG of house of Mateo]
    ‘Pilar is a neighbor of Mateo.’

Similar to argumental BNs, these predicates typically cannot be modified by certain adjectives, PPs, or relative clauses:

(29) a. Diana es (?buena) médica *(que comprende a los pacientes).
    Diana is good.F.SG doctor.F.SG (who understands DOM the patients).
    ‘Diana is a good doctor who understands her patients.’

b. Carlos es *(un) profesor [argentino / experto / viejo].
    ‘Carlos is an Argentine / expert / old professor.’

The same “establishedness” effect is observed for BNs in argument position. Possession constructions are used mainly when reference is made to sets of events which are, as Dobrovie-Sorin and Beyssade (2012) term them, “culturally institutionalized or which are conceived as common activities.” This sentiment is echoed across this literature: by Mithun (1984) for incorporation structures that denote “a unitary concept... of an institutionalized activity or state”; by Krifka (2004) for “well-established kinds” that play a restrictive role in definite generics; and by Zhang (2018) in work on non-canonical objects in Chinese, where non-“institutionalized” objects cannot serve
as verbal modifiers\textsuperscript{15}. This intuition is borne out: in atypical contexts, typical incorporation constructions such as those in (30) become odd (31).\textsuperscript{16}

(30)  
\begin{itemize}
  \item a. María tiene perro.
      Maria has dog.M.SG
      ‘Maria has a dog / is a dog owner.’
  
  \item b. Juan compró casa.
      Juan bought house.F.SG
      ‘Juan bought a house.’
  
  \item c. Este edificio tiene vista al mar.
      this building has view.F.SG to-the.M.SG sea.M.SG
      ‘This building has a sea view.’
\end{itemize}

(31)  
\begin{itemize}
  \item a. ?María tiene pingüino.
      Maria has penguin.M.SG
  
  \item b. ?Juan compró castillo.
      Juan bought castle.M.SG
  
  \item c. ?Este edificio tiene tobogán
      this building has slide.M.SG
\end{itemize}

As seen earlier in (16a), BNs do not license non-restrictive relative clauses with free relative pronouns. BNs also do not license restrictive relative clauses (27). This is seen again below in (32a) for Spanish, which stands in contrast to (32b). While the former use of a relative clause describes a specific individual and is unacceptable, the latter is well-formed because it denotes an “understood kind” (Espinal and McNally, 2011).

\textsuperscript{15}Non-canonical objects in Mandarin Chinese denote instrument, time, manner, and other verbal modifiers, instead of theme. The semantic function of such objects parallels that of classificatory adjectives in the nominal domain, and that of pseudo-incorporated nominals in the verbal domain. Zhang (2018) proposes that such objects denote properties, and restrict, rather than saturate, predicates (Chung and Ladusaw, 2003). Non-canonical objects are thus identified as event kind-classifying elements.

\textsuperscript{16}(30c) is indeed felicitous for certain slides that are common in houses: for example, \textit{tobogán de agua} ‘water slide’ and \textit{tobogán de jardín} ‘play slide’. For examples like (31a), even semi-common pets, such as snakes, are infelicitous: *?María tiene serpiente.
Table 3.1: Syntactic and Semantic Properties of Spanish Small Nominals.

<table>
<thead>
<tr>
<th>SYNTACTIC PROPERTIES</th>
<th>SEMANTIC PROPERTIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>–BNs acceptable in:</td>
<td>–BNs exhibit:</td>
</tr>
<tr>
<td>(i) predicative structures</td>
<td>(i) reduced discourse transparency</td>
</tr>
<tr>
<td>(ii) objects of have/possession verbs</td>
<td>(ii) number neutrality</td>
</tr>
<tr>
<td>(iii) objects of intensional verbs</td>
<td>(iii) narrow scope</td>
</tr>
<tr>
<td>(iv) objects of certain prepositions</td>
<td>(iv) establishedness effect</td>
</tr>
<tr>
<td>–Unacceptable as subjects in all positions</td>
<td>–Restrictions on modification</td>
</tr>
</tbody>
</table>

(32) a. *El Señor Campos posee/ tiene dato que
    the.M.SG sir.M.SG Campos posess/ have.3.SG.PRS data.M.SG that
    necesito.
    need.1.SG.PRS
    ‘Señor Campos has a piece of data that I need.’

    b. Para este evento, se necesita llevar falda que
    for this.M.SG event.M.SG SE need.3.SG.PRS to-wear skirt.F.SG that
    sea larga/ escocesa/ a cuadros.
    is.SUBJ long.F.SG/ Scottish.F.SG/ of square.M.PL
    ‘For this event, it is necessary to wear a skirt that is long/a kilt/plaid.’

The question arises as to how such institutionalization informs grammaticality. Presumably, were it common to own penguins, buy castles, and have slides in buildings, the sentences in (31) would be acceptable. An analysis of Spanish BNs must thus explain the contextual requirements of these V-N constructions and how this context is present in or informs the grammar.

3.2.6 SUMMARY

A summary of Spanish BNs syntactic and semantic tendencies is in Table 3.1. Syntactically, BNs are found frequently as predicates in post-copular, reprise-
commentaire, and part/whole constructions. In these constructions, BNs appear to denote certain professions, roles, and relations. As predicates, BNs are difficult to modify but may be compound nouns or take complex complements. BNs are infrequent as arguments. They cannot be subjects in any position. BNs may be objects of a limited number of verbs, which all possess a have or possession-related subcomponent. In object position, the constructions that BNs form part of appear to be canonical or culturally institutionalized in some form.

Semantically, BNs exhibit properties canonical to pseudo-incorporated nouns: (i) reduced discourse transparency, (ii) number neutrality, (iii) narrow scope, and (iv) an establishedness effect. Additionally, in predicate position, BNs have a limited function: as descriptors of formal roles or professions of their subjects, with which they must agree. BNs seem unable to pick out unique tokens of any sort, as exhibited by their lack of referentiality and their restrictions on modification by certain adjectives, PPs, and relative clauses. Finally, their association with interpretations that are stereotypical or well-understood is necessary, but perhaps not sufficient, for explaining their behavior and merits further analysis.

3.3 Previous Accounts

*Noun incorporation (NI)* has played an important role in discussions about the relationship between morphology, syntax, and the lexicon for several decades (e.g. Baker, 1988). The phenomenon itself has provoked much debate in the literature, and questions surrounding the construction abound: Is NI syntactic? Is NI the product of the lexicon? What are NI’s semantic properties? Why does NI appear to be available in some languages but not in others?
The term *incorporation*, in its non-technical sense, is used to describe constructions in which a verb and one of its arguments form a particularly tight unit (Dobrovie-Sorin and Beyssade, 2012). More technically, *noun incorporation* is identifiable primarily on the basis of morphological and syntactic evidence about the shape and position of the nominal expression involved: the thematic object occurs inside the verbal complex, often affecting the verb’s transitivity (Dayal, 2015). Incorporation structures are understood to constitute a single morphological object. Whether or not this object originates in the lexicon, or is derived by some syntactic process, appears to vary across languages (Baker, 2008).

In canonical NI, the nominal has been analyzed as a bare stem (N⁰) that lacks a determiner, number marking, case (seen in languages that overtly mark it), and the ability to be modified (Van Craenenbroeck, 2014; Baker, 1988). *Pseudo-noun incorporation*, a less-restrictive form of NI, involves noun phrases (NPs) instead of nouns (N⁰s) (Dayal, 2011). Although these NPs still form some sort of unit with their verbal host, as incorporated nominal expressions they do not have to surface as morphological or syntactic units with their verb and are normally diagnosed with semantic properties that parallel those listed above for Spanish. Nevertheless, there is still a range of variation across languages in how they display properties of NI and pseudo-NI: some languages may allow object doubling in NI constructions (Chamorro, Chung and Ladusaw (2003)); some languages allow pseudo-incorporation with all verbs (Hindi, Dayal (2011)); and some allow number morphology to appear in pseudo-incorporation structures (Hungarian, Dobrovie-Sorin et al. (2006)).

My review of previous accounts proceeds as follows. First, I look at the proposal by Chung and Ladusaw (2003) for two new modes of semantic composition that help explain noun incorporation data from Chamorro and Maori (3.3.1). These languages
show noun incorporation of N⁰ and, in Chamorro, object doubling—patterns distinct from Spanish. The analysis is nevertheless helpful for understanding cross-linguistic semantic tendencies across incorporation structures. I then look at Dayal’s (2003, 2011) proposal for pseudo-incorporation in Hindi, dubbed *pseudo-* for the fact that Hindi allows incorporation of NPs (3.3.2). Though Hindi allows pseudo-incorporation with more verbs than Spanish, Dayal’s proposal is applicable cross-linguistically and is ultimately the analysis I adapt for Spanish. Espinal and McNally (2011) present an analysis specific to Spanish and Catalan that, though robust, does not capture data from predicate BNs or those that seem to incorporate to prepositions (3.3.3). Finally, I look at recent proposals on weak definites in English and Dutch (3.3.4). These analyses attempt to explain full DPs that behave as if they were incorporated due to similar semantic patterns and will be helpful in constructing a final analysis for Spanish that captures all of the data.

3.3.1 Chung & Ladusaw (2003): Noun Incorporation in Chamorro and Maori

Chung and Ladusaw (2003), working on data from two Austronesian languages (Maori and Chamorro), use a flexible type-theoretic framework to develop an analysis of incorporation. The authors focus on two important questions: (i) the difference between the combination of the verb with weak, property-denoting nominals on one hand, and (ii) with incorporated nominals on the other. They also consider the possibility of doubling the incorporated argument with a full DP in a regular argument position, as Chamorro allows this possibility. For Chung & Ladusaw, the essential difference between incorporated nominals and ordinary indefinites is the mode of composition with the predicate.
Both ordinary indefinites and incorporated nominals are considered to be property denoting. When each combines with a predicate, there is a type mismatch in that an \(<e,t>\) type nominal has to combine with a predicate that is looking for an argument of type \(e\). In the case of regular indefinites, the mismatch is resolved by a type-shifting mechanism called Specify, while in the case of incorporated nominals, the composition rule is Restrict. I discuss Specify first, defined with examples below:

(33) Specify

a. dog bark:
   \[
   \text{FA} \left( \lambda x \lambda e \ [\text{bark}'(x)(e)] \right), \ \text{CF} \left( [\text{dog'}(y)] \right) \\
   = \exists f \exists e \ [\text{bark}'(f(\text{dog}')(e))] \\
   \]

b. John fed dog:
   \[
   \text{EC} \left( \text{FA} \left( \lambda x \lambda y \lambda e \ [\text{feed}(y,x,e)] \right), \ \text{CF}(\text{dog}), \ j \right) \\
   = \text{EC} \left( \text{FA} \left( \lambda y \lambda e \ [\text{feed}(y, f(\text{dog}), e)] \right), \ j \right) \\
   = \exists f \ [\text{feed}(j, f(\text{dog}), e)] \\
   \]

Specify is a compound mode of composition that combines the application of a choice function (CF) and subsequent operation of function application (FA). Specify is assumed to saturate the predicate: after FA, the relevant lambda prefix is gone and the targeted argument of the predicate is not available for further composition. The final interpretation is arrived at after the event variable and the functional variable have been existentially closed (EC); EC may occur at any step, allowing for the various scope possibilities of indefinites. This combination, and CF in particular, allows for a “semantic incompleteness”\(^{17}\) that allows the sentences in (33) to entail that a particular dog barked but gives no information about which dog barked.

\(^{17}\)In using this expression, the authors refer to the fact that the incorporated object denotes a property rather than an individual or generalized quantifier (114).
Restrict, a binary operation that composes a predicate directly with a property, has two important functions: (i) it targets the argument in question and restricts its value without semantically discharging it; and (ii) it syntactically discharges this same argument. Assuming that the predicate is interpreted as a function \( f \), the result of restricting the predicate with property \( p \) is the original function with its domain restricted to the subdomain of elements that have the property \( p \). In other words, the property argument is interpreted as a restrictive modifier of the predicate. Additionally, the argument in question is available for further composition if necessary. This is seen in (34a), which allows the next argument to be targeted for composition without the saturation of the \( y \) argument (Chung and Ladusaw, 2003:6). This allows function application to saturate the \( x \) argument, ensuring that \( \text{John} \) is the feeder. The result of this composition is a predicate unsaturated in two places: the event argument and the restricted \( y \) argument.

(34) **Restrict**

a. *feed dog*

\[
\text{Restrict}(\lambda y \lambda x \lambda e \ [\text{feed'}(y)(x)(e)], \text{dog'}) = \lambda x \lambda y \lambda e \ [\text{feed'}(y)(x) \land \text{dog'}(y)]
\]

b. *John dog-fed.*

\[
\text{FA(Restrict}(\lambda x \lambda y \lambda e \ [\text{feed'}(y)(x)(e)], \text{dog'}) \ j) = \text{FA} (\lambda x \lambda y \lambda e \ [\text{feed'}(y)(x)(e) \land \text{dog'}(y)] \ j) = \lambda y \lambda e \ [\text{feed'}(y)(j)(e) \land \text{dog'}(y)]
\]

In the final line of (34b), the argument targeted by Restrict, \( y \), is still available for further composition. At this point, existential closure may apply iteratively to yield the appropriate proposition, saturating both the predicates on \( y \) as well as on \( e \). This is seen in (35):
The result of (35) is the proposition that John fed a dog, though no interpreted constituent corresponds to an existential quantifier over dogs. This is logically equivalent to that in (33b), though in (33b) a particular dog is specified (albeit with no conditions placed on which dog it is). ¹⁸

How might Restrict and Existential Closure work for Spanish? (36) shows the example of *llevar mochila* ‘carry backpack’ (Espinal and McNally, 2011:115):

(36) a. Restrict(λyλx [llevar(x,y)], mochila) = λyλx [llevar(x,y) & mochila(y)]

b. EC(λyλx [llevar(x,y) & mochila(y)]) = λx∃y[llevar(x,y) & mochila(y)]

There are a few issues that arise with this analysis for Spanish. (36) does not prevent the possibility of having BNs in subject position, which is prohibited in Spanish. Additionally, because the sequence of Restrict followed by FA is a possibility, this analysis does not exclude the possibility of doubling the incorporated nominal with an independent NP, as is found in Chamorro.

Whether or not the operation of Restrict combined with EC allows discourse anaphora for token individuals for BNs by existentially quantifying the internal argument is a further question for an analysis that explains the Spanish data. Farkas (1997), in work on indefinites that may be analyzed as predicate restriction similar to Chung and Ladusaw’s analysis, proposes that predicate modifiers of any sort do not introduce

¹⁸The notion that ordinary, potentially weak indefinites compose via Specify while incorporated nominals compose via Restrict is an irreducible difference that the authors propose may be encoded as a special restriction on determiners. In this view, determiners may select for a particular mode of composition for the resulting DP. In Maori, this is signaled by different determiner forms.
discourse referents and are therefore unable to support discourse anaphora. Chung and Ladusaw, on the other hand, do not assume that the property of introducing a discourse referent is systematically correlated with mode of composition; they instead provide examples of indefinite DPs that compose via Restrict in Maori and support discourse anaphora. In Spanish, while BN modifiers resist supporting anaphora, they may allow such support in strongly contextualized settings. Thus, further data is necessary on the ability of Spanish BNs to support anaphora; I return to this in section 3.4.3.

Theoretically, Restrict could be combined with EC in a single operation in Spanish to rule out the above possibilities, though I do not pursue this line of analysis in this chapter. The important intuition to take away from the authors’ proposal is that of predicate restriction, such that the domain of the original verb is restricted to the subdomain of that verb combined with elements that have the property denoted by BN.

3.3.2 Dayal (2003, 2011): Pseudo-Incorporation in Hindi

Dayal (2003) proposes a semantics of pseudo-incorporation specific to Hindi; her goal, however, is to construct an analysis that is viable cross-linguistically and that can explain variations encountered across incorporation structures. Dayal’s proposal responds directly to previous proposals (Van Geenhoven, 1995; Bittner, 1994) that incorrectly analyze incorporated nominals to possess existential force.

Dayal’s analysis suppresses the theme argument in the ‘deep’ lexical semantics of the verb and treats the direct object as forming a complex predicate with the verb. However, the technical means by which this is achieved does not involve reducing the superficial valency of the verb. Pseudo-incorporating verbs are lexical alternates to
their transitive counterparts, specified to select for two expressions: one that denotes a property (in the form of an object NP), and one that denotes an entity (the subject or agent of V). The P-V complex is then interpreted as a modification to the verb instead of as a THEME argument: an incorporated verb such as book-read is to read and the manner verb boil is to cook. In addition, these verbs introduce the condition that the event they describe is “appropriately classificatory,” which captures the intuition that incorporation operations typically occur with common V-N combinations or events. The lexical alternation and condition are defined as below (Dayal, 2003:16):

(37)  a. **Transitive verb meaning:**
\[\lambda x\lambda y\lambda e[V(e) & Ag(e) = y & Th(e) = x]\]

b. **Incorporating alternate:**
\[\lambda P_{<e,t>\lambda y\lambda e[P-V(e) & Ag(e) = y & APPROPRIATELY-CLASSIFICATIONARY(e)]}\]

c. An event denoted by a predicate \(\delta\) that incorporates a property \(\gamma\) is **APPROPRIATELY CLASSIFICATIONARY** iff:
\[\diamond_{\text{probable}}(\exists e[\delta(e) \& \exists y[Ag(e) = y] \& \exists x[\gamma(x) \& Th(e) = x]])\] (extensional verbs)
\[\diamond_{\text{probable}}(\exists e[\delta(e) \& \exists y[Ag(e) = y] \& Th(e) = \gamma])\] (intensional verbs)

The incorporating alternant shown in (37b) must satisfy a requirement that the resulting event be *appropriately classificatory*, a term that Dayal borrows from Dowty (1979). The requirement is intended to introduce an element of modality into the meaning with distinctions in existential commitments for extensional and intensional verbs.

---

19Dayal cites Zimmermann (1993) in support of her proposal that transitive verbs may take properties as their first argument: \(\lambda P\lambda x[\text{imagine'}(x,P)]\). While Zimmerman made his proposal for intensional verbs, such verbs are distinct from incorporating verbs as incorporating verbs may license existential entailments with perfective aspect while intensional verbs may not. This observation was also suggested in Porterfield and Srivastav (1988), such that the final truth conditions for a sentence involving an incorporated verb like book-read was an event of book-reading, where book was understood as singular.
verbs, as shown in (32c). A predicate–property combination is possible only if events in which that property is a theme of that predicate are relatively frequent and sufficiently distinct from other similar activities. The modality introduced via the requirement of appropriate classification is thus indirect and distinct from the modality of the more familiar intensional verbs, which exhibit differences in existential entailment. Additionally, the notion of appropriate classification is a generic concept that relies not on a particular instance of a verb and its complement but rather on the class of the verb and the class of its complement.

Dayal updates her analysis in Dayal (2011), which is the analysis I adapt to Spanish and explain in 3.4. For now, Dayal’s proposal of lexical alternation for transitive/incorporating verbs is enticing for restricting incorporating verbs to combination with property denoting nouns and adding an establishedness requirement. As Hindi is much more flexible in the verbs and nouns it allows to pseudo-incorporate, Dayal’s analysis needs to be restricted to capture the have characteristic of verbs in Spanish that allow BNs.

3.3.3 Espinal & McNally (2011): Pseudo-Incorporation in Spanish and Catalan

Espinal and McNally (2011) propose a pseudo-incorporation construction for Spanish and Catalan BNs in V-N position by means of a special lexical rule that both provides a syntactic complement to V and suppresses the internal semantic argument. The authors do this in order to maintain the notion that some nominals are modifiers of the verbs they occur with solely as a result of a compositional rule. This captures

---

20With perfective aspect yielding an episodic interpretation, an incorporated structure licenses existential entailments, unlike an intensional verb. This inference is lost with imperfective aspect, which allows for a non-episodic interpretation, and if the verb itself is intensional or occurs in a modal context. See Zimmermann (1993) for further discussion.
the observations that (i) incorporating verbs in Spanish are limited to having a possession subcomponent and (ii) the semantics of incorporation ought to be stable across languages while the (morpho)syntax determines its surface form.

As noted before, pseudo-incorporation processes apply to NPs, differentiated from incorporated nouns by their ability to be modified, syntactically separated from their host verb, and coordinated (Massam, 2001). Clear examples of why Spanish exhibits pseudo incorporation as opposed to noun incorporation are shown in (38): in (38a) an adverb separates the V-N complex, while in (38b) the incorporated noun is fronted:

\[
(38) \quad \begin{align*}
a. \text{Lleva} \quad & \text{siempre falda.} \\
& ([S]he)-wears \text{ always skirt.F.SG} \\
& \text{‘[S]he always wears (a) skirt.’} \\

b. \text{Perro} \quad & \text{tengo desde hace cinco meses.} \\
& \text{dog.M.SG I-have since it-makes five months} \\
& \text{‘I’ve had a dog for five months.’}
\end{align*}
\]

Espinal & McNally first develop a lexical rule modeled off Borthen’s (2003) work on Norwegian BNs, which proposes that BNs in Norwegian are licensed as the possessed argument of a predicate that introduces an asymmetrical \textit{have}-relation, either explicitly or implicitly. Given the close connection between \textit{have}-relations and the class of verbs in Spanish that permit BN complements (see (10-12), this seems logical. The authors adjust this rule in order to capture the intuition that the resulting VP must denote a characterizing property of an external argument, as seen in (39a); and to block BNs in Spanish from subject position of passivized \textit{have}-predicates or from subject position of secondary predicates (39b).\textsuperscript{21}

\textsuperscript{21}Example (39b) may be unacceptable due to the previously observed fact that BNs are disallowed in subject position, regardless of whether or not they are secondary predicates.
(39) a. Elena tiene perro.
Elena has dog.M.SG
‘Elena has (a) dog. / Elena is a dog-owner.’

b. *Perro fue buscado por Elena.
dog.M.SG was looked-for by Elena
‘(A) dog was sought by Elena.’

The lexical rule that Espinal & McNally propose applies to all verbs with a *have* subcomponent; it also suppresses the theme argument of the predicate and adds a condition on use to take into account its potentially characterizing or institutionalized nature. The authors define this rule in a generalized fashion as in (40). In later work, the authors call this rule the *Characterizing Property (CP) rule* (40):

(40) Input\textsuperscript{22}:
\[
\lambda y \lambda e [V(e) \land \theta(e) = y \land \exists w [C(w) \exists e' [depend(e,e',w) \land have(e') \land havee(e') = \theta(e)]]]
\]

Output:
\[
\lambda e[V(e) \land \exists w[C(w) \exists e' [depend(e,e',w) \land have(e') \land havee(e') = \theta(e)]]]
\]

**Condition on use of output**: The issue of whether the referent introduced by the external argument participates or does not participate in \(e\) must be crucial for characterizing that referent in some way that is immediately relevant in the context.

The input to this rule specifies that the situation denoted by the V-N combination must depend on the existence of a *have*-relation involving the eventual subject referent and some other individual in some (not necessarily actual) world \(w\). This existence and relationship is subject to contextual restrictions as represented by the variable \(C\), which may be understood similarly to the restriction proposed by

\textsuperscript{22}The version of this rule as written in the original paper appears to have an error, such that the scope of \(\exists w\) is only \(C(w)\); the \(w\) in \(depend(e,e',w)\) is not bound by it. I have made what I believe are appropriate corrections in (40).
Dayal on incorporating verbs in (37). The authors represent this condition with the predicate \( \text{depend}(e, e', w) \) and the accompanying requirement that the subjacent event \( e' \) be a \( \text{have} \)-relation (\( \text{have}(e') \)), with \( y \) (equivalent to the V-N combination) as the \( \text{haveee} \).\(^{23}\)

The output of (40) causes the object argument to disappear, which accounts for the lack of referentiality that BNs display. This, however, leaves the problem of how to combine the BN with the verb. The key to solving this problem, the authors argue, is the fact that they assume that the verb still entails a situation that involves two participants. The participant that corresponds to the suppressed internal argument \( (\theta(e)) \) is instead treated as part of the lexical semantics of the verb and is subject to description by a modifier (described below) rather than being associated with an interpretable variable that corresponds to a Theme argument.

Whether or not this implicit participant exists in the real world will depend on the lexical semantics of the particular verb involved: if the \( \text{have} \)-relation that the situation described by the resulting predicate depends on is one that must hold in the actual world, its satisfaction conditions will guarantee that the \( \text{havee} \) exists in the actual world; if not, it won’t. For example, for a sentence like \( \text{Elena tiene perro} \), there is likely a dog that exists in the actual world that Elena is the owner of. For a verb like \( \text{buscar} \) ‘to look for’, the implicit participant will not necessarily exist in the actual world. Thus, the perceived referential ability of such BNs is a pragmatic effect that arises because of the verb’s lexical semantics. The output of the lexical rule additionally

\(^{23}\)This representation follows Parsons (1990), as it treats the verb as a predicate of events and separates out reference to the verb’s participants. It also follows Kratzer (1996) in positing that the external argument is introduced via a functional projection. Finally, the authors incorporate Dobrovie-Sorin et al. (2006)’s treatment of thematic roles as functions from events to the individuals bearing those roles.
introduces a condition on the felicitous use of the V+N sequence in order to capture the requirement that the predicate be “potentially characterizing.”

The authors finally propose a rule for how to combine V and BN. They propose that such combination occurs not via function application, but rather via a new, intersective composition rule:

\[(41) \text{If } [[V]] = \lambda e[V(e)] \text{ and } \theta \text{ is an implicit role function defined for } V, \text{ and if } [[N]] = N, \text{ a property, then } [[\nu V N]] = \lambda e[V(e) \wedge N(\theta(e))].\]

The rule in (41) applies to verbs that are lacking only an external argument (setting aside the event argument) but for which a participant role beyond that ultimately contributed by the external argument is entailed as part of the lexical semantics of the verb. A nominal in the complement position of such a verb will, under this rule, act as a modifier, placing a restriction on the object that satisfies the unexpressed participant role of the event. The requirement of having a role function defined will correctly prevent the rule in (41) from applying to other [\nu V N] structures where it would not be desirable, such as in analytic verbal expressions (e.g. *do work*), because the verb *do* and other light verbs that appear in such expressions do not have such role functions defined for them.

Espinal and McNally only minimally define the **depend** relationship central to the lexical rule in (40). The rule itself can apply to (i) Spanish and Catalan *tener/tenir* ‘have’, which depends on what the authors call a “prototypical have-relation” that holds either in the same world of evaluation; or to (ii) *necesitar/necessitar* ‘need’, which requires the have-relation to hold only in those (not necessarily actual) worlds in which the subject’s needs are met; or (iii) to the other ‘have’-predicates, which the authors understand as those I presented earlier in 3.2.1. The lack of description for
this relationship is complicated by the fact that the authors do not explain certain elements of their semantics, such as how the havee is a quantifier over events, or how the semantics works if there are multiple agents. Further, although the authors assume that verbs in Spanish and Catalan that participate in pseudo-incorporation possess a have subcomponent, they do not specify how this syntactically or semantically composes to form the verbal complex. Thus, though the authors’ account of pseudo-incorporation in Spanish appears to account both for the limited set of verbs and interpretational properties associated with the construction, the specifics of it are unclear and need detailing.

3.3.4 Weak Definites in English, Dutch, and German

As an alternative to (pseudo)-incorporation accounts, certain bare nouns have been analyzed as weak definites (DPs) that lack articles (Aguilar-Guevara et al., 2014). Weak definites are defined by the following semantic properties, outlined originally in Carlson et al. (2006): (i) they lack a uniqueness requirement, such that they allow co-varying interpretations under quantification and do not impose strict identity under ellipsis; (ii) their interpretation requires some notion of enrichment, such that a statement such as he is in the hospital is associated with an understanding of being there for treatment; and (iii) they do not support anaphora. Distributionally, weak definite interpretations seem to (i) only be available for objects of certain verbs and/or prepositions; (ii) only arise with specific choices of nouns; and (iii) disappear when restrictive modification is present.

As Spanish BNs seem to fall clearly into the category of pseudo-incorporating nominals, discussion of weak definites is primarily of interest for further elaborating potential interpretive behaviors of BNs that a complete analysis needs to account
Several authors who have built further on Carlson’s discussion of English weak definites are worth mentioning: Bosch and Cieschinger (2010); Aguilar-Guevara and Zwarts (2010); and Schwarz (2014). One of the primary questions that these authors engage with is the property of “name-worthiness” or establishedness of the noun and V-N complex in question. As seen above, this is a property central to the characterization of incorporation and one that led Carlson to characterize English weak definites as pseudo-incorporating. In contrast, Bosch and Cieschinger (2010) argue for a pragmatic account of weak definites in English, as well as for contracted forms of prepositions and definite articles in German, which they show to have similar properties. Their claim is that the restrictions on N + V/P combination are not lexical, and even those that may at first appear unacceptable can be made acceptable. The apparent lexical restriction on weak definite readings is claimed to be a restriction on the ease with which the required concepts are available to the discourse participants.

Aguilar-Guevara and Zwarts (2010) provide an analysis that restricts weak definite (DP) incorporation with a lexical rule inspired by Espinal and McNally’s (2011) account of BNs in Spanish and Catalan. They take weak definites to be kind terms, and their lexical rule operates on verbs that makes reference to instantiations of the kind. This lexical rule (i) lifts object-level predicates to kind-level predicates; (ii) indicates that kinds the lifted predicates combine with are instantiated via the realization relation R; and (iii) incorporates the relation U into the denotation of the lifted predicates, which corresponds to stereotypical usages of kinds:

\[
\text{(42) a. Kind Lifting Rule: If } V \text{ is a transitive verb (or V-P combination) with interpretation } \lambda x \lambda e [V(e) \land \text{Th}(e) = x_k], \text{ then } V \text{ also has the meaning } \lambda x \lambda e [V(e) \land R(\text{Th}(e), x_k) \land U(e, x_k)].
\]
Aguilar-Guevara and Zwarts' crucial condition for restricting their incorporation is the Usage condition (U) related to the kind term. For example, when the verb *read* is lifted to take the kind term *the newspaper*, the combination meets the usage conditions associated with the latter. This does not happen when the kind term is *the calendar*, for which an acceptable usage (the authors claim) is instead *look-up*.

Zwarts (2014) takes this analysis farther and argues that weak definites are a subset of weak nominals more broadly. He argues that weak nominals that surface in PPs in particular should be analyzed against the background of functional frames, or representations of stereotypical use of certain common objects. Weak nominals lack unique referents, such as the definite object in *listen to the radio* or the bare nominal in *watch television*. In English, these nominals usually surface with a determiner, though a few examples of “institutionalized” PPs with BNs can be found (all of which carry so-called generic interpretations):

(43) a. go to/ in/ *at/ *on/ come from bed
   b. go to/ in/ *at/ *on/ come from prison
   c. go to/ in/ at/ *on/ come from church
   d. go to/ in/ at/ *on/ come from school
   e. go to/ in/ at/ *on/ come from *(the) hospital
   f. go to/ in/ at/ *on/ come from *(the) pub
   g. #go to/ in/ at/ *on/ come from *(the) hotel (*generically*)

Zwarts points out that acceptable BN constructions in English have corresponding weak definites in Dutch. He takes this complementary distribution to suggest that
BNs are actually weak definites, but with the definite article ommitted. He leaves unanswered the question of whether the article omission in some weak definites (*church*) but not others (*hospital*) is systematic or idiosyncratic; it is also unclear why a rather institutionalized location like *hotel* cannot be referred to generically.

In confronting the question of why weak definites are lexically restricted in their distribution, such that “established” or “institutionalized” weak nominals are acceptable, while others are not, Zwarts proposes that acceptable weak definites refer to roles in frames (Radden and Dirven, 2007; Irmer, 2009) or objects that occur regularly and frequently in particular places and times with constant properties. A frame is not one specific situation, but a “generic, partial, and stereotypical type of situation that abstracts away from particular people, places, and times” (274). This does not exclude the possibility that frames are specific for a particular culture, but within a culture, they are generic.

In order for this frame analysis to work, the nominal element involved must possess a functional element that defines the frames it may participate in. Zwarts invokes Pustejovsky’s (1991) telic component of the qualia structure for this.24 Zwarts proposes that a weak noun always has a telic role that defines a function with respect to one or two other entities. For example:

(44)  
  a. *radio*: radio(*x*), TELIC = **receive-broadcast-from**(e,y,x)  
  b. *prison*: prison(*x*), TELIC = **be-detained-in**(e,y,x)  
  c. *bus*: bus(*x*), TELIC = **be-transported-by**(e,y,x)

24See footnote 8 of this chapter for an additional, related citation of qualia structure.
Frames need to be linked to these weak nominals to restrict their possible set, as not all nouns allow such weak use (e.g. hotel). Frames typically have a finite set of roles, such as the following:

(45)  
\[
\begin{align*}
\text{TOWN} & = \text{HOSPITAL, CHURCH, PARK, ...} \\
\text{HOME} & = \text{TELEPHONE, TELEVISION, RADIO, MIRROR, ...} \\
\text{PUBLIC TRANSPORT} & = \text{TRAIN, BUS, PLANE, ...}
\end{align*}
\]

Every role is then associated to a function based on a telic role, which is represented as a two-place relation between a ‘user’ and a ‘usage’ event:

(46)  
\[
\begin{align*}
\text{FUNCTION(HOSPITAL)} & = \lambda y.\lambda e.\text{GET-TREATMENT-FROM}(e,y,\text{HOSPITAL}) \\
\text{FUNCTION(RADIO)} & = \lambda y.\lambda e.\text{RECEIVE-BROADCAST-FROM}(e,y,\text{RADIO}) \\
\text{FUNCTION(TRAIN)} & = \lambda y.\lambda e.\text{BE-TRANSPORTED-BY}(e,y,\text{TRAIN})
\end{align*}
\]

Humans typically appear as secondary roles, thought there are primary roles such as DOCTOR, LAWYER, PROFESSOR.

A relationship conveyed in a VP such as listen to the radio thus overlaps with the frame information encoded in radio. This can be formulated as a typical regularity:

(47)  
\[
\begin{align*}
\text{Typically, for a person } p \text{ and an event } e, \\
a. \text{ if } \exists x \left[ \text{radio}(x) \land \text{listen-to}(e,p,x) \right], \text{ then RECEIVE-BROADCAST-FROM}(e,p,\text{RADIO})
\end{align*}
\]

Zwarts proposes that these regularities are so strong, that a speaker can simply use at VP such as listen to the radio to convey the functional frame meaning of listen to the radio in order to hear the broadcast. Importantly, for strong definites, this implicature is defeasible (Horn, 1984; Levinson, 2000). For weak definites (and BNs), however, the
enrichment of the nominal with the functional frame is obligatory and non-defeasible (Aguilar-Guevara et al., 2014). This requires a direct and semantic connection with the information in the frame, instead of an indirect and pragmatic connection. Zwarts thus defines an operation on predicates, \textsc{frame}, that takes a transitive verb or V-P combination \( P \) and maps it to a frame-based interpretation:

\[(48) \text { For every transitive predicate } P, \textsc{frame}(P) = \lambda r.\lambda y.\lambda e.\exists x \left[ R(x,r) \land P(e,y,x) \land \text{function}(r)(y)(e) \right] \]

This operation applies optionally, similar to a type-shift function; its application is obligatory, however, if one wants to combine a verb or preposition with a weak nominal. Nevertheless, the result is only grammatical if the noun’s frame provides a telic function that matches the verb or preposition. Though Zwarts does not formalize this restriction, it is an implicit property of \textsc{frame}, as evidenced by the oddness of something like Bob watched the radio\textsuperscript{25}. This infelicity results because there are no events that satisfy both the condition of (i) watching the radio and (ii) receiving its broadcast; these need to be two separate events, as listen and watch are two restrictive verbs in this sense.

Finally, Schwarz (2014) provides an analysis of weak definites that also instantiates requirements involved in making a noun or V-N/P-N complex “name-worthy” or established. He draws on the rule of pseudo-incorporation in Dayal (2011) but makes some significant changes, integrating the neo-Carlsonian approach to events instead. Schwarz adopts Dayal’s analysis that incorporating verbs are lexical alternates of their transitive counterparts. When such a verb combines with a definite, the property interpretation of the DP is derived through an application of a type-shift. This results

\textsuperscript{25}This construction is not odd with the strong definite reading available.
in a kind term that is also a plural entity, which means that the uniqueness entailed by
the definite is buried inside the sub-events that make up the plurality. The result is an
event e that is part of a plural event e’ that itself is part of the kind of event described
by the incorporating verb and the weak definite. Restrictions on kind reference are
invoked to explain the distribution of weak definites.

There are three primary take-aways from the discussion of weak definites: (i) they
display interpretive and distributional properties similar to pseudo-incorporated
nouns; (ii) they often occur with prepositions (like Spanish); (iii) there is debate
over whether their established or stereotypical usage is pragmatic or encoded in
the semantics. Zwarts’ analysis of the supreme importance of the noun additionally
connects to pseudo-incorporation proposals that analyze the noun as a property.

SUMMARY

The leading proposals for (pseudo-)incorporation place restrictions on the syntax
and semantics of the incorporated nominal. An incorporating verb looks for a
property denoting nominal which is typically something smaller than a DP, although
some proposals for weak definites argue that DP-incorporation is possible. Previous
proposals demonstrate how incorporation phenomena may vary across languages,
but there are clear morpho-syntactic identifiers and subtle but robust semantic
properties that establish it as a unique grammatical phenomena. Nevertheless, the
tension between structural and semantic identifiers is language-specific and requires
pinpointed analysis.

For Spanish, it is clear that some have or possession subcomponent in the V-N syntax
plays a role on the felicity of V-BN combinations. Thus, in addition to a restriction
on the incorporated nominal, there are restrictions on the verb. Spanish exhibits
pseudo-incorporation, in which a BN may take the form of NP rather than N⁰. Across proposals, and for Spanish as well, the need for a special lexical or compositional rule that both allows the V-BN complex to compose semantically and that incurs a restrictive interpretation on the predicate by the BN seems clear. Nevertheless, the restriction to pseudo-incorporation to verbs with a have subcomponent needs tweaking, as Spanish BNs can also combine with prepositions. For this, data from weak definites provide a possible explanation in giving more importance to the noun in selecting which construction it may form part of and how that construction is interpreted.

3.4 Analysis

I approach the analysis as follows. First, I discuss an alternative analysis in which BNs in Spanish possess full nominal structure, as if they were weak definites in the sense of Zwarts (2014) (3.4.1). I show that this account cannot explain the range of data presented above, and I instead analyze Spanish BNs as nPs and property-denoting, in line with previous accounts of (pseudo-)incorporation. In 3.4.2, I present a syntactic account of the V-N structures that BNs are found in. This account proposes a decompositional syntax following Harley (2004), in which a semantic primitive in the form of a preposition accounts for the have restriction on Spanish incorporating verbs. I explore how this syntax has the potential to unify V-N and V-P-N constructions in which BNs appear, and I conclude that, although similar in surface form, the prepositional element involved in these structures is semantically different. After presenting the syntax, I adapt Dayal’s (2011) semantics for pseudo-incorporation. I discuss how this semantics explains the behavior of Spanish BNs with specific regard to telicity and number neutrality, properties that are slightly different between
Spanish and Hindi incorporated nouns. In 3.4.4, I demonstrate how my analysis can explain additional phenomena noted for Spanish BNs, including how they may be syntactically modified and how to explain other constructions they appear in such as N-N compounds, light verb expressions, and idioms. I then conclude the chapter.

3.4.1 Considering the Alternative

A seemingly simple solution to explain the data above would be to posit full DP structures for all Spanish nominal expressions, and then to posit null or silent elements in the various functional projections. As such, Spanish nominal expressions could be unified syntactically if not semantically. Chierchia (1998) suggests a related analysis and proposes that true BNs are never found in argument position in Romance languages; they must always possess full DP structure. Following his Nominal Mapping Parameter, determinerless nominals in Spanish and Catalan, as in other Romance languages, are assigned the features [-argument, +predicate], whereby they are forbidden in argument position but allowed in predicate positions. Extending this analysis, BNs should behave only as predicates and not appear in argument position unless a null D is projected along with them, under the hypothesis that either a null or overt D is required to give the bare noun the correct semantics to appear in an argument position (e.g. Longobardi, 2005; Longobardi, 2008).

Zwarts’ analysis of weak nominals also suggests that there is optionality between the presence and absence of D for weak nominals, which Spanish BNs could be if they possessed a full DP structure (and, presumably, some null element in D). Implicit in his argument is the assumption that weak nominals with articles and BNs share

\[26\text{See Bosque (1996) and Camacho (2003) for proposals along these lines; also discussion of Contreras (1996) in chapter 2.}\]
an underlying syntax. Yet, if true, there should be little difference in the utterances below:

(49) a. Ernesto es piloto.

   b. ?*Ernesto es un piloto.

(49b) is strongly disfavored by speakers. Semantically, too, the interpretations for (49a) and (49b) are slightly different (with strong coercion of 49b). This can be seen with an additional, more felicitous pair of examples:

(50) a. Alexandria Ocasio-Cortez tiene prohibido trabajar porque es miembro del Congreso y no empezará a cobrar hasta enero.

       ‘Alexandria Ocasio-Cortez is prohibited from working because she is a member of Congress and she does not begin to earn a salary until January.’

   b. Jones es un miembro del Congreso con antecedentes militares.

       ‘Jones is a member of Congress with military background.’

While (50a) denotes the profession of Ocasio-Cortez, (50b) possesses the reading as one of a set of Congress members (specifically, those with military background). (50b) additionally does not display the same restrictions on modification as noted above for BNs; as an indefinite, it can be modified as a full DP. One explanation for such a difference is that the absence of overt material in functional projections affects the semantics of these nominal expressions. However, even if this were true, then the
options in (a) and (b) ought to still appear in the same syntactic environments. This does not occur.

If a null D were what licenses object bare nouns, one would expect them to appear freely as verbal complements. This does not occur, as the examples below illustrate:

(51) a. *Cierro puerta.
    close.1.SG.PRS door.F.SG
    ‘I’ll close (a/the) door.’

    b. Cierro la puerta.
    close.1.SG.PRS DET.DEF.F.SG door.F.SG
    ‘I’ll close the door.’

This fact raises the following basic alternative: either Chierchia’s parameterization of Romance bare nouns is incorrect, and argument BNs indeed exist in Spanish or Romance; or BNs such as those in the data above are not arguments in the relevant sense. I present an analysis that assumes the former position.

3.4.2 The Syntax of Spanish Small Nominals

The syntax I adopt for Spanish BNs is shown in (52):

(52) BN syntactic structure

\[
\begin{array}{c}
  nP \\
  \sqrt{P} \\
  n \\
  \text{[GENDER]}
\end{array}
\]

This structure most basically captures two key facts of BN behavior: (i) their semantic nature as properties (<e,t>); and (ii) their status as nPs/NPs for pseudo-incorporation processes.
I adopt a syntactic approach to argument structure that correlates lexical syntax and sentential syntax (Hale and Keyser, 1993; Hale and Keyser, 2002). Of the different structures posited from the previous literature and adhering to the assumptions of the frameworks assumed here, I begin with a structure such as (53):

(53) \[ V \]
    \[ \hat{V} \]
    \[ V \quad N \]

The structure in (53) is a minimal syntactic configuration in which the verb only takes the BN complement; it is directly analogous to the syntactic argument structure proposed by Hale (1993) for two different classes of verbal expressions. The first class corresponds to the class of denominal verbs such as English laugh, cough, and cry, which are assigned a structure that contains an abstract light verb and a nominal complement homophonous with the verb itself. The authors assume that this nominal complement is subsequently conflated with the verb. The second class is comprised of light verb expressions such as do work and make trouble. For both classes of verbs, the object nominals are arguments but do not contribute a participant to the situation the verb describes.

Thus, this structure captures the intuition that the V+BN sequence in Spanish is a complex predicate that characterizes the VP-external subject—a characterization evident in constructions such as Elena tiene perro, which may be understood as ‘Elena is a dog owner’ in addition to carrying a strong implication that there exists a dog of whom Elena is the owner.

For the analysis here, I extend (53) to the structure in (54) to capture the range of data presented in this chapter, as well as to formalize the idea that the incorporation structures that BNs appear in possess silent structure that ultimately contributes
to their interpretation and licensing. (54) possesses an additional PP that is the complement of V, which I will propose is present in all structures to license the BN. This is visualized below:

(54) \[
\begin{array}{c}
\text{V} \\
\text{V PP} \\
\text{P \ N}
\end{array}
\]

The structure in (54) allows for further decomposition of V into component parts. This reflects the intuition that many of the verbs that allow BN complements can be decomposed into a main verb and a HAVE component, as will be seen below. This will become clear as I walk through the analysis itself and corresponding data.

Harley (1997, 2002), working on possessives and the double object construction, proposes that there exists an abstract preposition (P_{HAVE}) that is stative in nature and combines in the syntax with certain verbs to render a reading of a have or possession subcomponent. As these are the verbs that pseudo-incorporate in Spanish, I adopt her proposal for my analysis. The notion of a prepositional element in the syntax also corresponds to the structure in (54).

The syntax of P_{HAVE} is seen below for the verb get in the sentence Mary got a letter. Harley argues that get results from the combination of P_{HAVE} and the abstract BECOME; this is shown with the box in (55). (55) shows the underlying syntax before Mary raises to subject position to get Case and satisfy the EPP.
As noted before, $P_{\text{HAVE}}$ was originally proposed to derive Possessor/Possessee relationships. Harley argues that $P_{\text{HAVE}}$ thus establishes the order of Possessor $>$ Possessee syntactically, paralleling the order of arguments on the sentential level.

Harley builds her understanding of $P_{\text{HAVE}}$ on the proposal shared by many researchers that, in languages like English, a preposition combines with be to produce the verb have (e.g. Benveniste, 1966; Freeze, 1992; Kayne 1993; Geéron, 1995). Extending this understanding to Spanish, I propose that the syntax for tener ‘have’ constructions in Spanish is as follows:
(56) *María tiene perro.* 'María has a dog.'

The structure in (56) recreates (55) and captures the intuition that *have* introduces a possession relationship, where *María* is the possessor of the dog. As with *get* in (55), $P_{have}$ raises and adjoins to the abstract verb $be$. Yet, as Spanish BNs pseudo-incorporate, in addition to *María* raising to subject position, $nP$ needs to raise to incorporate into the verb. This happens as in (57), resulting in a V-P-N complex that both contains a possession subcomponent and restrictively modifies the verbal meaning\(^{27}\):

\(^{27}\)In (57), the $nP$ is a minimal projection lacking specifier and complement; see (56). Later examples integrate $nP$ complements into the structure, suggesting it is indeed a phrase. This follows Dayal’s (2011) proposal of *pseudo*-incorporation of $nP$s in contrast to incorporation of bare nouns.
(57)  *María tiene perro.* ‘María has a dog.’

Turning to other verbs that possess a *have* subcomponent, the syntax becomes slightly different. I follow Harley’s (2002) proposal for verbs like *want*, which are composed of $P_{\text{HAVE}}$ and are understood to convey something like *want to have*. More formally, this can be conveyed as follows:

(58)  \[
\begin{align*}
\text{[VP want X$_{DP}$]} & \leftrightarrow [y: \text{wants} \ y \ P_{\text{HAVE}} \ F(x)]
\end{align*}
\]

Syntactically, this needs to be represented with a PRO element in place of $y$. This is seen as in (59):

(59)

For Spanish, I analyze all pseudo-incorporating verbs that exhibit a possession subcomponent (i.e. verbs with $P_{\text{HAVE}}$ that are not the verb *HAVE* itself, as *HAVE*
possesses a BE subcomponent) as adhering to the structure in (59). The derivation for *buscar* ‘look for’, for example, is presented below for the sentence *María busca perro*. (60) shows the VP structure, and I assume that *María* as the agent is introduced higher in vP (Kratzer, 1996):

(60) *María busca perro.* ‘María is looking for a dog.’

Two other constructions were presented in the data for Spanish BNs: (i) BNs as complements of prepositions in constructions with readings other than *theme*

---

28I note **BUSCAR** in the tree as a placeholder for a more precise semantic primitive that combines with $P_{\text{have}}$ to form *buscar*. This primitive may be something like *want*, as noted in the text.
(i.e. GOAL, INSTRUMENT, MANNER); and (ii) predicative/copula constructions for roles and professions. A common example of (i) is the sentence *María va a casa* ‘María is going home.’ Replicating the syntax for *have/tener* in Spanish, an initial representation of this could be as follows:

(61) *María va a casa.* ‘María is going home.’ (first pass)

```
vP
  v
  PP
  v
  P_a
  DP
  P'
  IR
  v
  María
  t_1
  nP
casa
```

The interpretation that follows from (61), assuming P_{have} raises and adjoins to *ir/go,* does not compute in the way we would like. If (61) were correct, we would expect this construction to be productive with a host of BNs. Instead, what seems to incorporate is the nP to the prepositional head; this P-NP complex then modifies the verb. This alternate process for Spanish pseudo-incorporation with prepositions is illustrated below:

---

29 Again, note that nP *casa* is a minimal projection.
As seen in (62), the order of operations for incorporation is distinct when the prepositional element is overt: first the noun incorporates to the prepositional element, and then this P-N complex incorporates to the verb.\(^\text{30}\) This also results in a distinct interpretation, whereby the P-N complex acts a verbal modifier instead of a direct object.

\(^{30}\)Further explanation is needed for a phrase like *Va María a casa*, where the word order is different. Either this structure would need to result from topicalization of the verb, or the PP is not incorporated in the same way as in (62b).
of just the noun. The question then arises: is the prepositional element in (62) the same $P_{\text{have}}$ as earlier for tener/have and buscar/look for? I argue that when overt prepositions occur in Spanish in incorporation structures, $P_{\text{have}}$ does not head the PP complement to V. Rather, an abstract preposition of a different form does. In (62), I follow Harley and understand this preposition as a locative preposition, $P_{\text{loc}}$. However, I suggest that other abstract prepositions exist in Spanish that denote various modification relations also exist: $P_{\text{ins}}$ for INSTRUMENT, $P_{\text{man}}$ for MANNER, and possibly so on and so forth. For example, $P_{\text{ins}}$ for INSTRUMENT can be used for comer con cuchara as seen in (14). This is visualized syntactically in the same sense as (63)$^{31}$:

\begin{equation}
(63) \quad \text{María come con cuchara. ‘María eats with a spoon.’}
\end{equation}

\begin{itemize}
\item [(63)] a. \begin{tikzpicture}[scale=0.8, grow=up, sloped]
\node (vP) {vP}
child {node (v) {v}}
child {node {PP}
child {node {COMER}}
child {node {DP}}
child {node {P'}}
child {node {María}}
child {node {P}}
child {node {nP}}
child {node {con}}
child {node {cuchara}}
child {node [契合] {t₁}}
}
\end{tikzpicture}
\end{itemize}

$^{31}$This analysis can also explain the data presented in Kuguel and Oggiani (2016) such as María estudia en biblioteca/‘María library-studies’, albeit questionably grammatical; see footnote 6. The structure in (63) is agnostic about the internal structure of the verb comer ‘to eat’, which cannot be decomposed in the same way as have or look for.
These prepositions are necessarily abstract and reduced, as the same incorporation behavior is not observed with robust prepositions such as *dentro de* ‘inside of’ or *hacia* ‘towards.’

Such a proposal of preposition incorporation like that shown in (62-63) has been sought for English for sentences similar to those presented in (43) in the discussion on weak definites (i.e. *go to/ at/ in school*) that show GOAL incorporation to PPs by Myler (2013); as well as for instrument incorporation in Niuean in Massam (2001) (though not fully elaborated). Myler’s analysis for English builds on the observation that GOAL arguments such as those in *come the pub*, found in varieties of British but not American English, exhibit behaviors that are a mix between direct object properties and PP object properties. To explain this, Myler proposes that such arguments are introduced by a silent P (in *come the pub*, the preposition TO); they then move to Spec vP, the final position of direct objects, where they receive accusative case.

Preposition incorporation may in theory be extended to explain predicative appearances of Spanish BNs, as well, such as constructions like *María es doctora* ‘María is a doctor’.
P, rather than introducing an explicit HAVE relation, could be a variant of P_{loc}. This analysis follows Landau’s (2009) analysis of EXPERIENCERS, extending proposals by Hermon (1985) and Belletti and Rizzi (1988).\textsuperscript{32} A syntax is proposed as follows:

\begin{equation}
\text{(64) } [\text{TP THEME } \ldots [\text{VP [PP P_{loc EXPERIENCER} V THEME]]}]
\end{equation}

In (64), the EXPERIENCER begins as a specifier to V, which takes a DP theme. Typically, the DP THEME raises to the subject position (Landau, 2009). Interestingly, the syntax in (64) looks equivalent to that in the (b) examples of (62) and (63), after nP has incorporated to the preposition and before the subject DP has raised (albeit with EXPERIENCER and THEME roles reversed). I follow this line of thinking and proposa a syntax for María es doctora below:

\begin{equation}
\text{(65) } \text{María es doctora. ‘María is a doctor.’}
\end{equation}

\begin{itemize}
  \item a. vP
    \begin{itemize}
      \item v
        \begin{itemize}
          \item PP
            \begin{itemize}
              \item BE
                \begin{itemize}
                  \item DP
                    \begin{itemize}
                      \item P'
                        \begin{itemize}
                          \item María
                            \begin{itemize}
                              \item P
                                \begin{itemize}
                                  \item P\textsuperscript{0}
                                    \begin{itemize}
                                      \item nP
                                        \begin{itemize}
                                          \item t\textsubscript{1}
                                            \begin{itemize}
                                              \item doctors
                                            \end{itemize}
                                        \end{itemize}
                                    \end{itemize}
                                \end{itemize}
                            \end{itemize}
                        \end{itemize}
                    \end{itemize}
                \end{itemize}
            \end{itemize}
        \end{itemize}
    \end{itemize}
\end{itemize}
\end{itemize}

\textsuperscript{32}Thank you to Mark Norris for pointing out this parallel.
Possible evidence for the structure in (65) and the overt realization of $P_0$ comes from constructions such as *María está de médica* ‘María is of doctor’, meaning similarly that María is a doctor. $P_0$ is overtly realized as the preposition *de* ‘of’. The structure in (65) additionally is able to explain agreement marking on $nP$, in which its features are valued by the DP *María*. Though these structures are a bit speculative, they offer promising ground for future research. A complete analysis will need to assess the empirical predictions made by each structure and assess whether or not these hold in Spanish. For now, I highlight the similarities exhibited across Spanish BN constructions that suggest the potential to unify pseudo-incorporation structures with a decompositional syntax such as that described above.

### 3.4.3 The Semantics of Spanish Small Nominals: Adapting Dayal (2011)

As noted earlier, Dayal updates her (2003) analysis in (2011). Dayal (2003) already accounted for the lack of discourse anaphora by suppressing the Theme argument of the verb and creating a complex predicate. This was achieved with a lexical

---

33 As stated in footnote 26, the order of words seems flexible for an example like (65): *Doctora es María?* I again note that this structure may involve topicalization, the mechanisms of which I leave to future work.

113
alternation rule for transitive/incorporating verbs, seen in (37). Dayal (2011) adjusts her Appropriately-Classificatory restriction on incorporating verbs, and she instead analyzes the appropriateness necessary in incorporation constructions via a presupposition about genericity. An incorporating verb is defined iff the property and the verb relate to a generic proposition as in (66), where the bold portions represent presuppositional content:

\[(66)\]

a. \(\lambda V \lambda P: P-V \text{ is a type of } V-ing. \lambda x \exists e [P-V(e) & Ag(e) = x]\)

b. \(\lambda V \lambda P: P's \text{ are } V-ed. \lambda x \exists e [P-V(e) & Ag(e) = x]\)

Treating the generic meaning that arises from incorporation structures leaves the truth conditions untouched. Although the lexical variant of a transitive verb is restricted by certain necessary conditions attached to it, these restrictions are flexible. For any given incorporating verb, then, only a subset of those that could satisfy the transitive verb’s normal selectional restrictions will be able to satisfy the associated presupposition; this results in restricted productivity. Though Dayal notes that her analysis is a bit speculative, it offers one way in which the often observed connection between incorporation and genericity can be captured without conflating the two.

A presuppositional analysis is apt to explain certain data for Spanish. First, incorporation constructions are notorious for possessing different acceptability ratings across Spanish dialects\(^{34}\), suggesting that certain presuppositions are more readily available that others. Additionally, a presuppositional account can explain certain data relating to discourse anaphora for Spanish. Spanish BNs’ lack of referentiality is challenged in certain examples where BNs are referred back to pronominally in a

\(^{34}\)In informal surveys conducted for this thesis among ten speakers of distinct dialects, no clear pattern emerged for acceptability.
subsequent sentence. In the following example, a BN licenses discourse anaphora to
the third person accusative pronouns la (a) and lo (b):

(67)  

a. Se puso falda para la fiesta.
  REF put.3.SG.PST for the.S.F.DEF party.S.F. it.F.SG
  ‘She put on a skirt for the party. She had bought it the day before.’

b. Ya tengo piso. Lo alquilé
  already have.1.SG.PRS flat.M.SG. it.M.SG rent.1.SG.PST
  make.3.SG.PRS a month
  ‘I already have an apartment. I rented it a month ago.’

In such examples, speakers judge the pronoun in question to not be directly
anaphoric to the BN; rather, it appears to have a less concrete antecedent that
is accommodated by the hearer into the common ground (e.g. Von Fintel, 2008).
Why some accommodation is permitted while for other instances it is not is a bit of
an open question, but it can be partially explained by the presuppositions in (66)
that entail the existence of an event (66a) and a property that denotes an object that
is part of that event (66b). Espinal and McNally suggest that such accommodation
is permitted when the overt lexical material surrounding the BN makes it easier
to interpret the discourse topic as something other than “an individual putatively
corresponding to the BN.” In (67a), this information is the event of a party, and the
recency of the purchasing of the skirt; in (67b) this information is the ya ‘already’
(Mittwoch, 1993) and the uniqueness of the apartment and the apartment renting
event—both of which map on to (66a) and (66b), respectively.\footnote{See Schwarz (2014) for an alternative analysis that existentially quantifies over the
incorporated noun deep in the semantic representation, thus not supporting discourse
anaphora unless is pragmatically coerced.}
Dayal (2011) additionally focuses her analysis on the role that aspectual information plays in deriving the semantic properties observed across incorporation structures. This is to primarily account for the number neutral interpretation of the noun in question, but it is also useful for explaining the Spanish data. As seen in (20) 3.2, repeated below, Spanish BNs exhibit atelic properties across constructions:

(68) a. Ha buscado piso #en/ durante una semana.
    have.3.SG look-for.PRT flat.M.SG in/ during one week
    ‘(S)he looked for and found a flat in a week.’/(S)he has been looking for
    a flat for a week.’

b. Ha buscado un piso en/ durante una semana.
    not look-for.1.SG DET.IN.M.SG flat.M.SG
    ‘(S)he looked for and found a flat in a week.’/(S)he has been looking for
    a flat for a week.’

Dayal’s basic idea is that there is a pluractional operator very low on the verbal complex whose semantic effect is to create a set of non-overlapping sub-events of the type denoted by the verb. The pluractional operator for incorporating verbs takes a predicate of events and returns a predicate of plural events (E), each of whose sub-events satisfies the conditions of the original verb. These sub-events are temporally discrete in that their run times do not overlap and between any two sub-events there is a hiatus. This is seen below, adapting Lasersohn’s (1995) notion of a pluractional operator that takes scope immediately above the verb. Essentially, the result is a plural event, each of whose sub-events is a V-N event; in (39), a mouse-catching event.

---

36 Examples in (68) are notable better with the verb encontrar ‘to find’, a result of its telic properties that can coerce a telic reading with a bare noun.

37 The reader is directed to the original paper for the full derivation.
(69) anu puure din cuuhaa pakaRtii rahii
    Anu whole day mouse catch-IM PPROG
    ‘Anu kept catching mice (different ones) the whole day.’

(70) a. $[\text{VP} \text{ anu } [\text{V'} \text{ mouse } [\text{VP OPPLURAL ACTIONALITY } [\text{caught}]]]]$

b. $\exists E [\text{Card}(E) \geq 2 \land \forall e \in E [\text{mouse-catch}(e) \land \text{Ag}(e) = \text{anu}]]$

Importantly, Dayal locates this operator in singular NumP, such that a single V-N event can be interpreted iteratively. Atomicity implicatures are lost, however, once the NumP meaning is lowered into the predicate denotation, resulting in the interpretation that there exists an event E with sub-events of V-N (e.g. mouse-catching), each of which has the same agent (Anu). Dayal’s semantics of incorporation only requires that there be one instance of the atomic entity per sub-event, leaving it entirely open whether there are one or more entities across the different sub-events.

This, she claims, explains the number neutral reading of incorporated bare nouns: they do not denote pluralities but rather form part of an iteration. This is possible because the pseudo-incorporation structure does not have an explicit theme argument in its representation.

For Spanish, Dayal’s analysis needs to be adjusted in a few ways. First, the analysis needs to be restricted to capture the have characteristic of verbs in Spanish that allow BNs. Following the syntax I presented in 3.4.2, this necessitates incorporating $P_{\text{have}}$ (or alternative prepositional elements) into the semantics. Second, a key difference with have verbs is that they often describe states than do not lend themselves to being iterated: for example, states such as Elena tiene perro ‘Elena has a dog’ or María es profesora ‘María is a professor.’ The pluractional operator that takes a predicate of events would need to be extended to cover states (s), as well. Finally, Dayal’s
assumption that pseudo-incorporation acts on NumP is at odds with my proposal for Spanish BNs that they are bare nPs.

Fortunately, these aspects can be accounted for. First, (66) works as long as we assume that V already possesses a element (P_{have}). This is accomplished in the syntax, as explained in 3.4.2., and looks as in (71) (where Pr stands for the prepositional element, updated to reduce confusion with property P):

\[
(71) \begin{align*}
\text{a. } & \lambda V \lambda P: \text{P-(V-Pr}_{have}) \text{ is a type of V-ing. } \lambda x \exists e \left[ P-V(e) \land Ag(e) = x \right] \\
\text{b. } & \lambda V \lambda P: \text{P's are (V-Pr}_{have})-ed. \lambda x \exists e \left[ P-V(e) \land Ag(e) = x \right]
\end{align*}
\]

For prepositional incorporation, (71) can be updated to incorporate prepositional elements as in (72):

\[
(72) \begin{align*}
\text{a. } & \lambda V \lambda P: \text{(Pr-P)-V is a type of V-ing. } \lambda x \exists e \left[ (V(e) \land Ag(e) \land Pr(e) = x) \right] \\
\text{b. } & \lambda V \lambda P: \text{(Pr-P)'s are V-ed. } \lambda x \exists e \left[ P-V(e) \land Ag(e) \land Pr(e) = x \right]
\end{align*}
\]

The update in (71) reflects the alternative order of incorporation seen in 3.4.2.

The second and third points of Dayal’s analysis that need to be addressed can be done so together. P_{have} necessarily introduces a stative component to the meaning of those verbs that pseudo-incorporate in Spanish. Though Dayal does not address stative predicates per se, she does address atelic forms of perfective verbs. For these verbs, Dayal’s claim is that number neutrality is the result of an iterative interpretation of the verb. However, she assumes that this occurs with singular NumP as the substrate. Additionally, she notes that while in Hindi atelic verbal forms are always number neutral, telic verbal forms can entail strict atomic readings. This does not appear to be possible in Spanish and is strongly disfavored, as seen in (20/28) and well
documented in Contreras (1996). Thus, the explanation for Spanish BNs is either (i) that they lack NumP, such that no atomic reading of any sort is possible (i.e. the subevents that the pluractional operator takes cannot be temporally individuated themselves); or (ii) that they are incompatible with telic verbal forms in any sense. A further example sheds some light:

(73)  

a. Busqué casa.  
look-for-1.SG.PST.PRF house.F.SG  
‘I looked for a house.’

b. Encontré casa.  
find-1.SG.PST.PRF house.F.SG  
‘I found a house.’

(73b) possesses a singular entailment that (73a) lacks, in part because of (73a)’s intensional status. It thus seems difficult to fully assess whether (i) or (ii) above is the adequate solution for Spanish BN behavior. Though future work should investigate this further, for now I will adopt (i), that BNs lack NumP, citing the limited distribution of BNs when compared to bare plurals (BPs), which possess NumP, as evidence.

3.4.4 Further Remarks

The analysis above explains the syntactic distribution and semantic composition of Spanish BNs. Here I explain (i) how modification that sometimes appears in Spanish pseudo-incorporation occurs syntactically; and (ii) how the analysis can be extended to account for BNs in light verb and idiomatic constructions. I briefly discuss the role of gender in Spanish BNs, which sets the stage for the next chapters.
Data from Spanish BNs suggest that certain nominal expressions possess subtle internal architecture comparable to argument structure. This is evident with the use of role/profession nouns (74); relational nouns (75), and bare compound nouns (76):

(74) a. Carla es cirujana de trauma y emergencias.
   Carla is surgeon.F.SG of trauma and emergencies
   ‘Carla is a trauma and emergency surgeon.’

   b. Juan es profesor de filosofía.
   Juan is professor.M.SG of philosophy
   ‘Juan is (a) professor of philosophy.’

(75) a. Marta es [(una) pariente / prima de Marcos].
   Marta is [(a.SG.F) relative.SG / cousin.SG.F of Marcos]
   ‘Marta is a relative/cousin of Marcos.’

   b. Carlos es [(un) vecino de casa de Mateo].
   Carlos is [(a.M.SG) neighbor.M.SG of house of Matteo]
   ‘Carlos is a neighbor of Mateo’s.’

(76) a. Diana es bocachancla.
   Diana is mouth-sandal.
   ‘Diana is a a blabbermouth.’

   b. Eva es capitán de barco.
   Eva is captain of ship
   ‘Eva is a ship captain.’

Though these predicates are normally predicated of [+HUMAN] subjects, they can be found with non-human subjects (Zamparelli, 2008):

(77) a. La noticia fue [motivo / causa / fuente] de gran preocupación.
   The news was [reason.M.SG / cause.F.SG / source.F.SG] of great worry
   ‘The news was reason/cause/source of great worry.’

'The palace was a replica/copy of other royal palaces of the same era.'

Examples (74-77) demonstrate that, while BNs cannot be easily modified, they can take complex complements in certain contexts. It is possible to explain this modification with an approach in which the root directly adjoins to $n$. This allows $n$ to control all argument structure.\(^{38}\) For now, I assume all adjectives that modify BNs are indirect modifiers and low in the extended projection of $nP$ (Cinque, 2010) (see chapter 5 for further discussion and analysis). A structure for BNs modified by both a PP and AP is shown in (78)\(^{39}\):\(^{38}\)

\[ (78) \]

a. *(Emilio es) profesor de química dominicano.*

'Emilio is a Dominican chemistry professor.'

b. 

![Diagram of a structure for BNs modified by both a PP and AP]

\(^{38}\) Thank you to Lindley Winchester for discussion on this matter.

\(^{39}\) Additional explanation is needed in regards to adjectives for why, for example, examples (21-22) are unacceptable but seem okay with prenominal adjectives: e.g. *Busco mejor piso* 'I’m looking for a better flat.'
An alternative approach could posit that the root possesses its own phrase and, potentially, argument structure. The same sentence would then look as the following:

(79) a. *(Emilio es) profesor de química dominicano.* (lexicalist approach)

ˈEmilio is a Dominican chemistry professor.ˈ

b.

The reader is directed to current discussions regarding argument structure in nPs and roots (e.g. Harley, 2014), as it is an active area of inquiry. I suggest that (78), more syntactically grounded, has the potential to explain more modification data. Future work can investigate this further.

Another apparent exception to BN’s being limited to pseudo-incorporation are light verb (80) and idiomatic constructions (81):

(80) a. hacer frente
to.make front.F.SG
ˈto confrontˈ

b. dar lugar
to.give place.M.SG
ˈto give rise toˈ
c. tomar nota/ parte
to.take note.F.SG/ part.F.SG
‘to take note of, part in’

(81) a. sentar cabeza
to.sit head.F.SG
‘to grow up’

b. pasar lista
to.pass list.F.SG
‘to call roll’

c. echar mano
to.throw hand.F.SG
‘to lend a hand’

It is likely that all of these verbs possess P\textsubscript{HAVE} in some form: either just P\textsubscript{HAVE} and its complement, or they P\textsubscript{HAVE} and the light verb(s) that it combines with. For a full explanation of these phenomena, the reader is directed to Marantz (1997) and Marantz (1995). Briefly, Marantz argues that, in such constructions, the Phase boundary is extended such that the B-N complex as a whole constitutes a verbal entity. BNs carry the semantic weight and the verb merely contributes its argument structure and verbalizing head \textit{v}. The construction still emulates an incorporation structure, which has been analyzed to take place by default with BNs if the predicate tolerates such operation (Leonetti, 2013).\textsuperscript{40} Harley (2002) also provides an analysis of idioms as incorporation complexes.

3.4.5 Summary

My analysis has explained the syntactic and semantic properties of Spanish BNs and the structures they can occur in. I presented a pseudo-incorporation analysis that assumes that Spanish BNs are bare \textit{n}Ps, and I showed how these are able

\textsuperscript{40}Work on light verbs and idioms from a DM perspective is sparse but potentially fruitful for future research.
to syntactically incorporate to verbs with a possession subcomponent. I adopted Harley’s (2002, 2004) analysis of $P_{\text{HAYE}}$, an abstract prepositional element that also functions as a semantic primitive, to explain this incorporation with a decompositional syntax. I additionally showed that the syntax of verbal incorporation can be extended to explain prepositional incorporation in Spanish, albeit with semantically different prepositional elements. I furthermore adapted Dayal’s (2011) analysis for Hindi pseudo-incorporation, updating it to account for the possessive nature of incorporating verbs in Spanish as well as the existence of prepositional incorporation. This analysis is able to explain the most notable semantic tendencies of Spanish BNs and tentatively confirms their status as nPs. Finally, this analysis can be extended to explain additional BN phenomena such as modification and constructions with light verbs and idioms.

3.5 Conclusion

The primary goal of this chapter was to provide an analysis of bare count nouns (BNs) in Spanish in order to better understand gender’s semantic contribution to Spanish nominal expressions. I showed that BNs may be analyzed as nPs and only appear in pseudo-incorporation structures. Such a limited syntax and distribution accounts for the semantic properties of BNs, which are typical of (pseudo-)incorporation structures across languages.

I additionally provided a novel account of how Spanish pseudo-incorporation structures are derived, building off previous proposals in the Spanish and incorporation literature. This account captures the observation that THEME-oriented incorporation structures in Spanish involve an abstract $\text{HAVE}$ component. This proposal has the added benefit of explaining why BN THEME arguments allow full prepositional
incorporation while BN oblique arguments like GOAL and INSTRUMENT must surface with an overt preposition.

Moving forward, the question arises: where does gender fit in? The notion of “name-worthiness” is worth returning to for this question, as the establishedness of certain incorporation constructions appears to vary depending on the gender and morphological form of the BN:

\[(82)\]

a. Elena tiene perro.
   Elena has dog.M.SG
   ‘Elena has a dog.’

b. ?Elena tiene perra.
   Elena has dog.F.SG
   ‘Elena has a female dog.’

c. ?Elena tiene perrito.
   Elena has dog.DIM.M.SG
   ‘Elena has a little dog.’

The sentence in (83a) is widely accepted by speakers with the interpretation that Elena is a dog owner (irrespective of the dog’s gender); in other words, having a dog may be understood as one of her characteristics. In (82b), the sentence is infelicitous seemingly because having a female dog is not as common as simply having a dog. The specificity of the female gender appears to give rise to this reading. Similarly, in (82c), possessing a little dog is also understood as infelicitous compared to (32a), seemingly for the same reasons as (82b). The specificity of the diminutive is odd if the speaker is trying to convey that Elena is a dog owner. Sentences (82b) and (82c) are much more felicitous with the addition of a determiner before the noun.
Are (82b) and (82c) simply results of presupposition failure, if we assume Dayal’s semantics? Or is there something syntactic that makes these sentences less acceptable? I address these questions in the next chapter.
4.1 Introduction

This chapter addresses a specific puzzle involving gender: the asymmetric behavior of nouns with respect to their gender features in nominal ellipsis constructions. Most basically, this pattern can be observed in the following pairs of sentences:

(1) a. Pablo es médico y Marta también.  
Pablo is doctor.M.SG and Marta also  
‘Pablo is a doctor, and Marta is too.’

b. (?)Marta es médica y Pablo también.  
Marta is doctor.F.SG and Marta also  
‘Marta is a doctor, and Pablo is too.’

(2) a. Pablo es actor y Marta también.  
Pablo is actor.M.SG and Marta also  
‘Pablo is an actor, and Marta is too.’

b. *Marta es actriz y Pablo también.  
Marta is actress.F.SG and Pablo also  
‘Marta is an actress, and Pablo is too.’

While all sentences in (1) and (2) display a mismatch between the gender of the antecedent and the elided noun, ungrammaticality only results in (2b), where a noun with feminine gender expressed in a morphologically complex manner precedes what should be its elided masculine gendered counterpart.\(^1\) This asymmetry, both across

\(^1\)(1b) is acceptable for the majority of speakers, though some slightly disprefer it to (1a). The variable acceptability of (1b) tends to be in stark contrast to the unacceptability of
noun types (1 vs. 2) and between masculine and feminine genders (2), is the focus of this chapter. Specifically, this chapter seeks to account for the interpretive restrictions that gender features impose on Spanish BNs across noun classes using data from ellipsis as empirical evidence.

The formal representation of gender can be broken down into two components: gender’s morphosyntactic location and its semantic interpretation. As presented in chapter 2, three possible morphosyntactic locations for gender in Spanish are commonly cited (3): (i) the nominal root (e.g. Alexiadou, 2004, 2017); (ii) the nominal categorizing head $n$ (e.g. Kramer, 2015); and (iii) $D$ or a higher functional projection (e.g. Kučerová, 2018; Sauerland, 2008). The idea that $\text{GENDE}R$ may have multiple locations has been previously proposed for Spanish and other languages, as well.\(^2\)

(3)

\[
\begin{array}{c}
\text{DP} / \phi P \\
\text{(iii) [GENDER?]} \\
\text{NumP} \\
\text{Num} \\
\text{[NUMBER]} \\
n \\\n\text{nP} \\
\sqrt{P} \\
\text{(ii) [GENDER?]} \\
\text{(i) [GENDER?]}
\end{array}
\]

\(^2\)See Kramer (2016) for an in-depth review of previous proposals regarding the syntactic location of $\text{GENDE}R$.\(^{128}\)
Semantically, gender is commonly understood as presuppositional; this follows analyses of gender inferences on pronouns (Cooper, 1993, 2013; Percus, 2011). For example, the meaning of ella ‘she’ can be understood as follows, where the gender presupposition is a definedness condition on \([ \llbracket \rrbracket \) (Heim and Kratzer, 1998):

(4) For any assignment function \(g\) and for any index \(i\):

a. \(\text{ella}_i \in \text{dom} (\llbracket \rrbracket^g) \text{ iff } g(i) \text{ is female (Presupposition)}\)

b. Whenever defined, \(\llbracket \text{ella}_i \rrbracket^g = g(i) \text{ (Assertion)}\)

The presuppositional nature of gender features guarantees that the pronouns they form part of denote maleness or femaleness.\(^3\) The semantic status of these features can be probed with a variety of tests such as presupposition failure and semantic binding (see Sudo 2012, 2013) for an in-depth review of these with pronominal gender features).

The question of how gender is interpreted on nouns as opposed to pronouns is worth exploring given that nouns don’t always possess an index and fixed reference. Evidence from Spanish nominal ellipsis supports an analysis of gender that is less clean-cut than previous analyses that claim there is one location and/or one interpretation for gender. Instead, Spanish data supports an analysis in which gender may be interpreted in different sites on the nominal spine depending on the morphosemantics of the noun.

This analysis concurs with several proposals that distinguish D-gender and \(n\)-gender and separate the locus of interpretability from the agreement evident on both sites.

\(^3\)While it is largely uncontroversial that female gender inferences are lexically encoded in feminine pronouns (at least in English and Spanish), masculine pronouns have been observed behave differently. This asymmetry has led some authors to argue the gender inferences of masculine pronouns are not part of their conventional meanings and only pragmatically inferred (e.g. Percus, 2006; Heim, 2008; Sauerland, 2008). Others treat male gender inferences on masculine pronouns as equivalent (Sudo, 2012). This asymmetry forms a central part of the discussion in this chapter and analysis in 4.4.
Spanish data also suggest that the interpretation of gender in Spanish is not uniform and varies in tandem with morphosyntactic structure.

This chapter is organized as follows: After a brief overview of nominal ellipsis patterns in general and specific to Spanish (4.2), I review recent literature on gender mismatches cross-linguistically in ellipsis such as those observed in (1-2) (4.3). These recent proposals share the observation that there exist three stable noun classes that exhibit unique patterns in ellipsis constructions. Following this review, I present my analysis of how data from Spanish nominal ellipsis classes helps account for the restrictions on gender interpretation in BNs (4.4). I first outline a slightly different set of noun classes in Spanish that accounts for morphosyntactic differences in the expression of gender (4.4.1). I then present an analysis of nominal ellipsis in Spanish that centers on subset relations to license ellipsis and a contrast between presuppositional and assertional gender in Spanish that interacts with this licensing for the observed asymmetries. Specifically, I adapt and analysis of ellipsis that locates it in the postysyntactic component in accord with an operation proposed by Murphy (2016), *Total Impoverishment* (4.4.3). This operation deletes entire feature sets of the elided noun if they constitute a subset of the antecedent. Ellipsis is then not due to deletion per se, but rather insertion of null Elsewhere markers into syntactic terminals in accord with a late insertion model of DM. The licensing conditions for this operation are argued to be a proper subset relation, where the features of the ellipsis site must be a proper subset of the features of the antecedent.

To explain the interpretive differences observed between Spanish noun classes, I adapt the semantics of nominal gender features proposed by Percus (2011) for Italian (4.4.2). Percus analyzes gender features as primarily presuppositional in nature, guaranteeing
that the noun they attach to entails natural gender of the corresponding type; he also introduces a silent affix specific to feminine gender that acts as a last-resort covert operator at LF and further guarantees femaleness.\textsuperscript{4} The semantics of gender proposed by Percus account for the subset relations and subsequent licensing conditions for Spanish ellipsis in a straightforward way. Nevertheless, Percus’ analysis for Italian focuses on nouns that share the same root. In Spanish, the noun classes in question are morphologically more complex and span the continuum from sharing the same root (Class I nouns, 4.4.4), to possessing different roots (Class II nouns, 4.4.5), to displaying gender-specific affixation (Class III nouns, 4.4.6). The analysis I present argues for the existence of both roots and affixes that entail femaleness and, as a result, possess assertional gender. I further present an analysis of relational nouns that possess a unique morphosyntax that interacts with gender to give rise to idiosyncratic interpretations in ellipsis patterns (Class III nouns, 4.4.6).

This chapter presents a novel analysis of gender in Spanish nouns that allows the locus of its interpretation to vary in accord with morphosyntactic structure. I conclude by revisiting proposals for the syntax and semantics of gender in Spanish (4.4.7) and connecting the data from this chapter to the question of nominal concord, which is the topic of chapter 5.

4.2 Nominal Ellipsis

4.2.1 General Background

Three basic possibilities have been pursued in the literature to develop formal accounts of nominal ellipsis:

\textsuperscript{4}See also Kučerová (2018) for an analysis that makes reference to a covert feminizing operator in Italian, as mentioned in chapter 2.
1. **“True” ellipsis or PF deletion:** Nominal ellipsis is “true ellipsis,” in which part or all of the noun phrase has been elided. Such ellipsis has been proposed by some for Spanish (4.2.2), and occurs when material that is identical to the antecedent is deleted from the ellipsis site at PF. Crucially, this approach assumes an initial syntactic structure that feeds LF for interpretation. This is often referred to as *PF-deletion*, as the material is deleted at Spell-Out (Merchant, 2008).

2. **LF-fill in:** A covert pronoun is present, and ellipsis in the traditional sense is not involved. In this approach (described in 4.3.1 as an option for ellipsis in Greek), the ellipsis site is a phonologically null *pro* from the beginning, which copies the relevant information at LF from the antecedent to get the correct interpretation. This *pro* has no internal syntactic structure and behaves simply as an anaphor.

3. **No ellipsis:** An overt pronoun is present: the word that appears to introduce the ellipsis functions like a pronoun, and there is no syntactic material that is actually elided although the construction appears elliptical. This approach is exemplified by *one*-replacement in English. This chapter will not consider such cases, though they will be relevant for comparison with data from Spanish.⁵

*Identity* in ellipsis concerns the extent to which the elided material needs to be identical to its antecedent in the preceding discourse—a condition that is not always a priori clear how to define. If identity is syntactic, antecedent and elided material should be found in the same kind of syntactic contexts and show the same syntactic composition. If identity is defined with respect to meaning, the syntactic contexts

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⁵Sag and Hankamer’s (1976) much cited proposal for *surface vs. deep* anaphora basically aligns with possibilities 1 and 2. The reader is directed to the original paper for more explanation and to Johnson (2008) and LaCara (2010) for further reading on ellipsis and one-anaphora.
and/or syntactic composition could be different, as long as the formal differences do not translate into a semantic one that makes the meanings non-identical.

The hypothesis that ellipsis is “true” ellipsis and involves underlying syntactic representation can be implemented in two ways: (i) deletion of syntactic material from the representation that is the input to the phonological component or (ii) recovery of syntactic structure at some level of logical representation. The crucial assumption that both implementations share is that elided material has syntactic structure at some level of representation, and that this representation needs to be parallel in antecedent and elided sites. A central result of such approaches, therefore, is that they can account for syntactic effects observed within the ellipsis site. For example, Binding Theory effects are easily accounted for with syntactic approaches to ellipsis (Kennedy, 2003). Below, (5a) disfavors a ‘strict’ interpretation, in which Charlie also blames Rowan for the cake mishap.

(5)    a. Rowan blamed herself for the cake mishap, and Charlie did, too.
      b. Rowan blamed herself for the cake mishap, and Charile [\textit{vp} blamed herself] too.

The reading in (5a) follows from the fact that it is derived from (5b). The strict reading would violate Condition A of Binding Theory, which requires a reflexive pronoun to find its antecedent locally. Likewise, the disjoint reference effect in (6a) is a direct consequence of Condition B of Binding Theory, which rules out coreference between a pronoun and a co-argument:

(6)    a. *Brynn takes care of him\textsubscript{i} because he\textsubscript{i} won’t.
      b. Brynn takes care of him\textsubscript{i} because he\textsubscript{i} won’t [\textit{vp} take care of him\textsubscript{i}]
Semantic theories of identity propose that the elided material be truth-conditionally equivalent to the antecedent, regardless of their syntactic makeup.\(^6\) Following this approach, elided constituents have no syntactic representation at all, but rather can be fully explained in terms of a more general theory of information retrieval. This can be seen in (7), where a structure like (7a) is assigned a semantic representation of the sort in (7b), where \(P\) is a free variable over properties that needs to be resolved. The problem of ellipsis is the problem of solving the value of \(P\), which is done by abstracting over parallel elements in some previous clause to generate a property-denoting expression, as shown in (7c), and substituting this expression for \(P\).

\[
(7) \quad \begin{align*}
a. \text{Rowan ate the cake because Charlie did.} \\
   b. \quad & \text{eat}(\text{Rowan, the cake}) \text{ BECAUSE } P(\text{Charlie}) \\
   c. \quad & P = \lambda x. \text{eat}(x, \text{the cake}) \\
   d. \quad & \text{eat}(\text{Rowan, the cake}) \text{ BECAUSE } \lambda x. \text{eat}(x, \text{the cake})(\text{Charlie})
\end{align*}
\]

A positive aspect of this type of approach is that it doesn’t run into the problems associated with purely syntactic accounts: if ellipsis does not involve syntactic representation, we should not expect to find syntactic effects inside the ellipsis site. However, this advantage is also its disadvantage: as noted above, there are a number of contexts in which we do find clear evidence of syntactic effects within the ellipsis site.\(^7\)

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\(^6\)Ellipsis is also subject to other types of specific semantic conditions that are not defined as identity conditions in the literature, such as the inheritance of content effect (e.g. Chung et al.) or Kennedy’s syntactico-semantic generalization about argument-contained ellipsis (Kennedy, 2008). Another condition that appears in many different types of ellipsis is a condition called parallelism. In its most concrete form, this notion means parallelism of scope; see Fox and Lasnik (2003) for further discussion. I do not investigate these semantic conditions in this chapter since they seem to not play a crucial role in Spanish nominal ellipsis and gender asymmetry.

\(^7\)Other work attempts to account for the apparently paradoxical sensitivity of ellipsis to syntactic constraints by developing a “mixed” syntactic/semantic analysis, in which whether
Research on identity conditions—be they syntactic, semantic, or mixed—has concentrated on finding the limits of tolerable and intolerable semantic and formal mismatches between the antecedent and its presumed elliptical counterpart. This is the goal of this chapter: to find the limits of tolerable and intolerable formal and semantic mismatches pertaining to gender in Spanish nominals.

4.2.2 Nominal Ellipsis in Spanish

Various proposals exist to account for nominal ellipsis data in Spanish. Brucart’s (1987) foundational work on ellipsis in Spanish postulates that nominal ellipsis is always an instance of LF fill-in.8 Focusing on subject drop and the elision of the head N in NPs, Brucart argues that an empty category e is base-generated in the ellipsis site rather than resulting from syntactic deletion. Brucart assumes that such a process is responsible for one-anaphora in English.

In response to this proposal, Kornfeld and Saab outline two arguments against e being base generated: (i) nominal ellipsis in Spanish differs from one-substitution in English with respect to the possibility of the ellipsis site selecting complements; and (ii) there are ellipsis constructions that suggest e has internal structure, favoring an analysis in which a complex syntactic structure is present at some point in the derivation.

For (i), the authors cite the parallel ellipsis example between English and Spanish from Panagiotidis (2003). In (8b), the Spanish definite article los ‘the.M.PL’ plays an elided constituent has internal syntactic structure or not depends on the discourse context in which it appears. Such work argues that the requirement for syntactic representation in ellipsis depends on the type of “coherence relation” an elided VP participates in. This relation may consist of a CAUSE-EFFECT or RESEMBLANCE relationship, which in turn affects acceptability (e.g. Kehler, 2000).

8Specifically, Brucart cites proposals by Sag and Hankamer (1976) and Hankamer and Sag (1976) on deep anaphora; see footnote 3 this chapter.
the apparent role of the English *ones* (8a), yet does not incur ungrammaticality with an *of*-complement:

(8)  

a. *The students of physics are taller than the *ones* of chemistry.

b. Los estudiantes de física son más altos que los de química.

Panagiotidis (2003) attributes the ban of *of*-complements with English *ones* to the lack of conceptual content of *one*, which he considers to be a pseudo-pronominal category.9 Lacking semantic content, *one* cannot assign a θ-role to its complement. As an alternative explanation, Lobeck (1995) analyzes empty nominals as pro-forms that must be properly head governed by an X0 specified for strong agreement. In either case, the acceptability of Spanish (8b) over English (8a) is due to Spanish’s possession of some sort of material that allows the elided material to be properly reconstructed.

Kornfeld and Saab thus assume that, for Spanish, *e* possesses the semantic features of the N that is ultimately elided prior to Spell-Out. This speaks to a larger point in considering the nature of nominal ellipsis in Spanish: *los* does not seem to signal the 3rd strategy noted above for ellipsis, but rather signal that, while some material is elided, the determiner is left behind with important feature-related information to retrieve that material.

Regarding (ii), the authors point to evidence such as (9):

---

9Panagiotidis (2003) challenges the traditional analysis of *one* as an NP-level element and argues instead that it be analyzed as N0. He also identifies the behavior of *one* with a phonologically empty element. These N heads lack descriptive content, which is shown to be the source of two distinctive properties: their inability to take arguments, which accounts for their superficially phrasal status, and their triggering of pronominal reference. The existence of a [PRONOMINAL] feature is argued against; instead, Panagiotidis argues that the lack of descriptive content is mistakenly interpreted by LF as pronominal.
Nunca he comido una torta con higos, pero Laura probó \(~\text{she has never eaten a cake made of figs, but Laura tried}\) la \(~\text{the cake}\) que hizo Sandra y dice que le pareció deliciosa. \(~\text{that made Sandra and says that to her it seemed delicious}\) ‘I’ve never eaten a cake made of figs, but Laura tried one that Sandra made and said it was delicious.’

In (9), \(e\) has both a relative clause that modifies it \((\text{que hizo Sandra} ‘\text{that Sandra made}\)\) and may be referred back to anaphorically; the authors argue that such constructions suggests internal structure of \(e\) different from its analysis as semantically null. Nevertheless, (9) may be understood in two ways: \(e\) may be an elided \(\text{torta con higos} ‘\text{cake made of figs}\) or simply an elided \(\text{torta}\). This is evidenced by (10):

Nunca he comido una torta con higos, pero Laura probó \(~\text{she has never eaten a cake made of figs, but Laura tried}\) la \(~\text{the cake}\) con fresas \(~\text{with strawberries}\) que hizo Sandra y dice que le pareció deliciosa. \(~\text{that made Sandra and says that to her it seemed delicious}\) ‘I’ve never eaten a cake made of figs, but Laura tried one made of strawberries that Sandra made and said it was delicious.’

Kornfeld and Saab instead argue for an analysis in which nominal ellipsis in Spanish is the result of PF-deletion following strict nominal identity. This analysis is based on the assumption that number is not calculated for strict identity, so while number mismatch is allowed in ellipsis (11), gender mismatch is not (12):

Felipe visitó a su tío ayer, y Alfredo prometió visitar a sus tías mañana. \(~\text{Felipe visited his uncle yesterday, and Alfredo promised to visit his aunts and uncle tomorrow}\) ‘Felipe visited his uncle yesterday, and Alfredo promised to visit his aunt and uncle tomorrow.’
b. Felipe visitó a sus tíos ayer, y Alfredo prometió visitar al e suyo mañana.
‘Felipe visited his aunt and uncle yesterday, and Alfredo promised to visit his uncle tomorrow.’

(12) a. *Felipe visitó a su tío ayer, y Alfredo prometió visitar a la e suya mañana.
Felipe visited to his.M.SG uncle.M.SG yesterday and Alfredo promised to-visit to the.F.SG e his.F.SG tomorrow.
‘Felipe visited his uncle yesterday, and Alfredo promised to visit his aunt tomorrow.’

b. *Felipe visitó a su tía ayer, y Alfredo prometió visitar al e suyo mañana.
Felipe visited to his.M.SG aunt.F.SG yesterday and Alfredo promised to-visit to-the.M.SG e his.M.SG tomorrow.
‘Felipe visited his aunt yesterday, and Alfredo promised to visit his uncle tomorrow.’

For (11), Kornfeld & Saab argue that strict identity only applies to the noun tío ‘uncle,’ which possesses masculine gender. The lexical item tío is not inserted because it is identical to its antecedent in the first part of the sentence; the plural node is afterwards associated with the determiner. The authors adopt the view of late insertion of phonological features and propose that ellipsis is the result of non insertion of phonological features into terminal nodes under strict identity of lexical and formal features. For (12), this analysis does not work, as tío ‘uncle’ and tía ‘aunt’ do not share their gender feature. Thus, strict identity is not fulfilled, so the non-insertion of phonological features cannot be accomplished.
Depiante and Masullo (2001) also offer a theoretical explanation for the differential behavior of gender and number in Spanish nominal ellipsis. Examples such as (11-12) show that, while elided nouns must not always coincide with their antecedent in number (11), they must coincide in gender (12). The explanation given by Depiante & Masullo for this pattern is based on the theory that nominal ellipsis results from PF deletion under strict formal identity. The authors claim that gender is a root property of nouns and thus nouns enter the derivation already expressing gender. Number, on the other hand, is the result of a morphological process: the authors locate it on a functional, intermediate syntactic projection between NP and DP (NumP). The authors point to work by Lasnik (1995) on verbal ellipsis, claiming that while nouns that differ in number still meet identity criteria as they can be argued to show identity at the beginning of the syntactic derivation, those differing in gender do not. Thus, the identity requirement only applies to nPs.

Saab (2010) challenges Depiante & Masullo’s explanation of the data patterns in (7) by arguing that not all instances of illicit mismatches involving nominal ellipsis produce the same level of unacceptability. The author points to sentences such as (13):

(13) *El padre de Antonio y la e de Antonia
    the.M.SG father.M.SG of Antonia and the.F.SG e of Antonia
    ‘Antonio’s father and Antonia’s mother’

10 Experimentally, gender and number display differing properties, as well. Armstrong (2015) has demonstrated that gender mismatches in ellipsis are more difficult to process for adults than number mismatches, reflected in slower reaction times and fewer looks to target items in gender mismatch cases. Children also show reduced performance on number items involving plural marking, which has been interpreted to reflect a delayed acquisition of number morphology relative to gender. Fuchs et al. (2015), investigating reaction times in agreement attraction constructions, additionally provide evidence for number and gender being dissociated syntactically.

11 It is unclear how this condition then relates to ellipsis as PF deletion, as Kornfeld and Saab also point out; the authors do not address this.
Compared to the examples in (12), (13) is much less acceptable. Though the semantic relationship between madre/padre ‘mother/father’ parallels that of tío/tía, the difference between suppletion and inflection is what seems to give rise to the increased unacceptability.\textsuperscript{12}

From this, Saab concludes that elided nouns and their antecedents must match in two properties for nominal ellipsis to be acceptable: (i) their root; and (ii) their gender feature. For suppletive pairs of nouns, GENDER is argued to be located on the root itself and the value that appears on \textit{n} as the GENDER feature is the result of a process that takes the semantic information represented on the root and expresses it morphologically. For nouns that display gender via inflection such as tío/tía, Saab locates GENDER on \textit{n}; these noun pairs are presumed to share the same root. Thus, for Saab, nominal ellipsis in Spanish is \textit{nP} ellipsis. He refers to \textit{nP} as the \textit{ellipsis domain}, while the functional projections above \textit{nP} (NumP and DP) constitute the \textit{domain of the licenser}. To explain this, Saab outlines the following conditions:

(14) Constraints on Noun Ellipsis:

\begin{enumerate}
\item Elements outside the \textit{nP} cannot be elided
\item A constituent \textit{C} can be elided if there is a constituent \textit{C}' identical to \textit{C} in the syntax\textsuperscript{13}
\end{enumerate}

Identity:

\begin{enumerate}
\item An abstract morpheme \textit{α} is identical to an abstract morpheme \textit{β} iff \textit{α} and \textit{β} match all their semantic and syntactic features.
\end{enumerate}

\textsuperscript{12}Saab develops a mini-typology of noun classes in Spanish as part of his analysis. The reader is directed to the original paper for details.

\textsuperscript{13}Updated to work within a Minimalism framework, (14b) states that a constituent \textit{C} can be elided if there is a constituent identical to it in the syntax (as intermediate levels cannot be reference by the grammar).
b. A root A is identical to a root B iff A and B have the same label.

With (14), Saab states that a purely formal identity condition on nominal ellipsis (as proposed by Depiante & Masullo) is not a sufficient condition; rather, a structural condition must be added to the theory. (14) formalizes that nominal ellipsis only affects the nP layer (the lexical domain of DP), excluding NumP as a possible target for non-pronunciation. Additionally, nPs must match in their roots and their semantic and syntactic features. This hypothesis fully accounts for the fact that number, but not gender, is not subject to the identity condition on ellipsis.\(^\text{14}\) It also allows for gender to be located either on the root or on \(n\), as both are subject to the identity condition.

Saab updates his analysis in Saab 2011 and Saab 2015, where he addresses ellipsis as a general linguistic phenomena.\(^\text{15}\) As I integrate Saab (2015) into my analysis in 4.4, I save discussion of it until then.

\(^{14}\)Saab’s account is also meant to explain why some nouns in the left periphery of the DP cannot be elided even when an identical antecedent is available in the linguistic context (Saab, 2011).

\(^{15}\)Saab (2011) is basically an extension of Saab (2010), in which Saab argues that gender identity effects under ellipsis are due to interpretable “sex” features in the form of \([\text{male}]\) and \([\text{female}]\). Saab claims that these interpretable features are syntactically scattered throughout the nominal phrase: specifically, located either just on \(n\) (for pairs such as \(tío/tía\)), or both on \(n\) and the nominal root (for pairs such as \(padre/madre\)). Additional suppletive pairs are cited in support: \(caballo/yegua\) ‘horse/mare’, \(macho/hembra\) ‘male/female’, \(yerno/nuera\) ‘son-in-law/daughter-in-law’, etc. In the case of suppletive nouns, roots specified for sex must select for the \(n\) specified for the corresponding sex. Morphologically visible gender is thus the result of a complex interaction between sex features, class markers, and morphological gender itself. The interested reader is directed to Saab’s full paper for discussion as well as work by Vadella (2017) on the interaction between Spanish gender and class in the context of diminutive markings.
4.2.3 Summary

There have been several accounts put forward to account for nominal ellipsis across languages, in particular: (i) PF-deletion, or “true ellipsis”; (ii) LF fill-in accompanied by a covert *pro*; and (iii) no ellipsis, signaled by an overt pronoun. Proposals concerning Spanish have alluded to all three strategies as possibilities in the language, though only (i) and (ii) find strong support. Table 4.1 shows a summary of these approaches.

<table>
<thead>
<tr>
<th>Ellipsis Analysis</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brucart (1987)</td>
<td>LF fill-in</td>
</tr>
<tr>
<td>Depiante &amp; Massullo (2001)</td>
<td>PF deletion</td>
</tr>
<tr>
<td>Kornfeld &amp; Saab (2004)</td>
<td>PF deletion</td>
</tr>
<tr>
<td>Saab (2010, 2011)</td>
<td>PF deletion</td>
</tr>
</tbody>
</table>

Previous analyses highlight the importance of several factors in Spanish nominal ellipsis constructions:

1. The role of the determiner (when present) in facilitating identity conditions for its apparent anaphoric role.
2. The differential behavior of GENDER and NUMBER in Spanish ellipsis constructions, such that number features may go unpronounced while gender features may not.

3. The interaction between gender marking, animacy (sex), and morphological form in determining the contribution of gender to identity requirements.

In the analysis presented in 4.4, I draw on several insights from previous work on the role of gender in Spanish nominal ellipsis. As (1) in this chapter shows, gender may be treated like number in certain ellipsis constructions, in which it seems to not affect ellipsis identity conditions. In these cases, I argue that all gender is presuppositional. In unacceptable cases, I argue that feminine gender is assertional. To account for the asymmetry between presuppositional and assertional gender, I analyze nominal ellipsis in Spanish as primarily a post-syntactic process and is licensed by the elided material forming a subset of the antecedent (Murphy, 2016; Saab, 2015). I discuss the connection between semantic truth-conditions of gender and its morphosyntactic reflex individually for distinct noun classes.

Before the analysis itself, I review analyses of ellipsis asymmetries in other languages, specifically Italian and Greek. These analyses outline language specific interactions between the interpretation of nominal gender features, nominal morphosyntax, and ellipsis acceptability. Nevertheless, several key observations hold across languages and are relevant for Spanish.

4.3 GENDER MISMATCHES IN NOMINAL ELLIPSIS

Several recent proposals have addressed the central observation that, in some instances, gender can be ignored in the calculation of the identity/parallelism requirement for ellipsis, while in others, it is relevant and violates this requirement.
The asymmetry observed in sentences like (1) and (2) has been extended to include additional classes of nouns, as well as to compare the behavior of these noun classes in both predicate and argument position. I review these accounts here, presenting the data in tandem, before focusing on Spanish specifically.

4.3.1 **Bobaljik & Zocca (2008, 2011)**

Bobaljik and Zocca (2008, 2011) investigate the ellipsis gender asymmetry by focusing on three categories of predicative nouns in six languages: English, Brazilian Portuguese, Spanish, German, Russian, and Romanian. The authors’ goal is to document and explain when and why the morphological expression of gender on nouns is relevant to ellipsis identity/parallelism considerations. The authors divide nouns into three classes depending on their behavior under ellipsis:

1. **CLASS I:** Inflected Nouns (‘the médica nouns’)
2. **CLASS II:** Derived Nouns (‘the actress nouns’)
3. **CLASS III:** Noble Nouns (‘the princess nouns’)

For class I nouns, gender mismatches incurred under ellipsis are licit (1,15); for class II nouns, there is an asymmetry for acceptability between antecedents with masculine and feminine gender (2,16); and in class III, no gender mismatches are allowed (17):

\[(15) \quad \text{a. Pablo es médico y Marta también.} \]
\[
\begin{align*}
\text{Pablo is doctor.M.SG and Marta also} \\
\text{‘Pablo is a doctor, and Marta is too.’}
\end{align*}
\]

\[
\text{b. (?)Marta es médica y Pablo también.} \\
\text{Marta is doctor.F.SG and Marta also}
\]

\[\text{As noted earlier, native speakers of Spanish variably accept (15b). In an informal poll,} \]
\[
\text{those who find it ungrammatical are from some regions of Spain and Chile. Nevertheless,} \]
\[
\text{the contrasting judgments for sentences (16) and (17) are much stronger than for (15) for} \]
\[
\text{all speakers. Bobaljik and Zocca notes this weak effect for Brazilian Portuguese, too.} \]

---

\[144\]
‘Marta is a doctor, and Pablo is too.’

(16) a. Pablo es actor y Marta también.
    ‘Pablo is an actor, and Marta is too.’

b. *Marta es actriz y Pablo también.
    ‘Marta is an actress, and Pablo is too.’

(17) a. *Pablo es príncipe y Marta también.
    ‘Pablo is a prince, and Marta is too.’

b. *Marta es princesa y Pablo también.
    ‘Marta is a princess, and Pablo is too.’

The challenge in explaining these three classes of nouns is to address and unify previous proposals that can only account for one class at a time. For pairs like (15), gender may be understood merely as an inflectional feature and thus be irrelevant for the resolution of ellipsis identity (e.g. Nunes and Zocca, 2015; Sauerland, 2008). For (16), gender is relevant for ellipsis identity resolution in an asymmetric manner such than only overt feminine marking needs to be matched in an elided conjunct. This may be explained if feminine is the marked gender, thus needing to be copied onto the elided conjunct and clashing with a masculine subject; masculine, in turn, would be underspecified and/or unmarked, and thus acceptable with a feminine subject (e.g. Jakobson, 2011). For (17), gender is relevant for ellipsis identity resolution in all cases.

The authors explain these data by suggesting a three-way GENDER contrast in the semantics: MALE vs. FEMALE vs. UNSPECIFIED. This three-way semantic contrast does not align with the two-way distinction that the morphology and morphosyntax observe: FEMININE vs. UNSPECIFIED. This lack of alignment results in the asymmetrical patterns observed in (11-13). To explain the three-way semantic
contrast, the authors argue that certain nouns are lexically specified for gender. Specifically, this is always the case for Class III nouns that display masculine gender: *príncipe* ‘prince’ is thus lexically specified for masculine gender.\(^\text{17}\)

Regarding nouns of Classes II and III, feminine gender suffixes display ambiguity in whether or not they add or change gender information and, subsequently, whether they incur violation effects in ellipsis structures. The authors present the example of *lion/lioness*, where the suffix *-ess* is analyzed to carry an additive/intersective meaning: a *lioness* is a [lion] + [female].\(^\text{18}\) *Lion*, then, is not inherently specified for gender, since gender may be added to it. The authors thus propose an analysis for all Class II nouns (*‘the actress nouns’*) in which all roots are unspecified for gender, and feminine gender (when present) appears on *n*. This analysis does not work for *prince/princess* and other Class III nouns, however, as a *princess* is not a female prince. In this case, the meaning of the morpheme *-ess* gives rise to an interpretation of ‘the female counterpart to X’, where the specific nature of the ‘counterpart’ relation is left vague and perhaps established by convention. The authors take this as evidence that Class III nouns must be lexically specified for gender.

Finally, Class I nouns are not lexically specified for gender: gender is purely morphosyntactic and inflectional, arising via agreement with the masculine or feminine features of the human referent it is in an agreement relationship with. In this manner, Class I nouns possess a morphosyntax more like that of adjectives

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\(^{17}\) And, though the authors do not state it explicitly, the corresponding feminine nouns are lexically specified for feminine gender. Potentially, the feminine nouns could lack lexical specification and result from the combination of such an unspecified lexical root with a nominalizing *n[+FEM]* head, but why a similar root would, in some instances, be unspecified and only select for * [+FEM]* heads, while in others be inherently masculine, is unclear.

\(^{18}\) Spanish has a parallel morpheme that denotes feminine gender, *-esa*, deriving a similar contrast: *león* ‘lion’, *leonesa* ‘lioness’ (though the inflected opposition of *león/leona* is more frequent). This will be discussed in the analysis, as it is not clear that the morphemes are entirely analogous.
than of Class II and III nouns. They additionally lack any sort of presupposition associated with either gender, unlike the other classes in the analysis.

To summarize, the authors’ proposal for division of noun classes is as follows:

- **CLASS I: INFLECTED Nouns (‘the médica nOuNS’).** Nouns are not inherently specified for gender. Gender is assigned on \( n \) via agreement (presumably with a human referent), making these nouns appear more adjective-like in their morphosyntax. Gender is not semantically meaningful, as it is merely a reflex of agreement.\(^{19}\)

- **CLASS II: DERIVED Nouns (‘the actress nOuNS’).** Nouns are not inherently specified for gender. Gender is assigned on \( n \) as \([+\text{FEMALE}]\) (for female-denoting nouns) or left unspecified for male-denoting nouns. Gender is presuppositional.

- **CLASS III: NOBLE Nouns (‘the princess nOuNS’).** Both male and female nouns are lexically specified for gender as \([+\text{MALE}]\) and \([+\text{FEMALE}]\). Presumably, this gender is matched on \( n \), though the authors don’t state this explicitly. Gender is either presuppositional or assertional.\(^{20}\)

These differing behaviors, and the mismatch between a three-way valued semantic system and a two-way valued morphosyntactic system for gender, create the asymmetric ellipsis patterns observed.

It is convincing that some nouns (i.e. Class III) encapsulate the sex of the referent as an irreducible part of their content while others (Class I and II) may express it but also sideline it. Nevertheless, the question arises as to whether lexical specification is

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\(^{19}\)Though the authors do not outline the mechanism for this type of agreement, presumably it occurs between a referent that is coindexed with the noun, such that the noun receives its gender features from the referent.

\(^{20}\)The authors note that either analysis is compatible with their proposal.
the most effective explanation for the data or whether there may be other factors at work. Class III especially exhibits a range of curious behaviors (see analysis below) that clearly set it apart; whether these behaviors are the result of lexical specification or not remains to be confirmed. Additionally, the analysis of Class I nouns as adjective-like fails to account for instances such as the following:

(18) Alba es abogado/ doctor/ profesor.
   ‘Alba is a lawyer/ doctor/ professor.’

In such examples, a female human referent ought to assign the same gender to the noun in question, being of Class I. Nevertheless, this agreement does not take place. A more detailed analysis needs to explain why these nouns can remain unvalued for gender in clear agreement relationships.

On this point, Bobaljik and Zocca’s analysis of médico/a nouns is based on usage and acceptability in Brazilian Portuguese (BrP). The authors note in footnote 23 that Spanish and Italian, like BrP, display the same -o/-a alternation on some nouns as on adjectives. Typically, the authors state, inflectional gender is ignored in these languages in computing parallelism for structures like (15), yet the authors note that these nouns appear to pattern with the actress class (Class II) and not the médica class (Class I). The authors note that this is a problem for their account that they cannot explain. It seems, then, that Class I nouns in Spanish may have a slightly different if not distinct analysis from the Class I nouns of BrP presented in Bobaljik and Zocca (2011). Nevertheless, the discrepancy in Class I nouns behaving as if they were Class II nouns arises for some Spanish speakers, as well; I will return to this matter in the analysis in 4.4.
Related to this point, however, Bobaljik & Zocca’s analysis appears to miss a group of nouns in Spanish. These nouns are unvarying in their forms across masculine and feminine gender, and they exhibit patterns in ellipsis similar to Class I. An example is seen as follows:

(19) a. Pablo es artista, y Marta también.
   Pablo is artist.SG and Marta too
   Pablo is an artist, and Marta is too.

b. Marta es artista, y Pablo también.
   Marta is artist.SG and Pablo too
   Marta is an artist, and Pablo is too.

Fortunately, examples such as (19) are present in the literature on Greek ellipsis (4.3.2 below).

Finally, though the authors note that Class I and Class II nouns behave differently under ellipsis, their only explanation for this is that morphosyntactically inflectional gender versus derived gender must be different. They note that the inflection/derivation contrast is “a notoriously thorny division to make precise” (fn. 22).

4.3.2 MERCHANT (2001, 2014)

Merchant (2014) adopts Bobaljik and Zocca’s and others’ classification of nouns under ellipsis and analyzes them for both predicate and argument (20-21) uses in Greek. For argument uses, Merchant argues that all three classes of nouns disallow gender mismatches when elided as arguments. This extension, he argues, is crucial to understanding the full implications of the data for theories of ellipsis licensing. To explain this additional data, Merchant proposes that Greek possesses two possible sources of nominal ellipsis: (i) ‘true ellipsis’, in which PF-deletion occurs for a nominal constituent; and (ii) model theoretic anaphora, in which a null proform ($e_N$) is used
in place of the nominal constituent. Examples of the three classes of nouns used as arguments in ellipsis follow Merchant\(^\text{21}\); table 4.2 outlines Merchant’s observed ellipsis patterns by noun class across constructions, where \(M = \textit{masculine}; F = \textit{feminine}; A = \textit{antecendent}; \) and \(E = \textit{elided} \).

(20) Class I (\textit{jatros} ‘doctor’\(^\text{22}\))

a. O Petros exi enan jatro stin Veria, ala dhen exi mia
   the Petros has a.M.SG doctor in-the Veria but not has one.F.SG
   stin Katerini.
   in-the Katerini.
   ‘Petros has a (male) doctor in Veria, but he doesn’t have one (female
doctor) in Katerini.’

b. O Petros exi mia jatro stin Veria, ala dhen exi enan
   the Petros has a.F.SG doctor in-the Veria but not has one.M.SG
   stin Katerini.
   in-the Katerini.
   ‘Petros has a (female) doctor in Veria, but he doesn’t have one (male
doctor) in Katerini.’

(21) Class II (\textit{dhaskalos/dhaskala} ‘teacher’)

a. O Petros exi enan dhaskalo stin Veria, ala dhen exi
   the Petros has a.M.SG teacher.M.SG in-the Veria but not has
   mia stin Katerini.
   one.F.SG in-the Katerini.
   ‘Petros has a (male) teacher in Veria, but he doesn’t have one (female
teacher) in Katerini.’

b. *O Petros exi mia dhaskala stin Veria, ala dhen exi
   the Petros has a.F.SG teacher.F.SG in-the Veria but not has
   enan stin Katerini.
   one.M.SG in-the Katerini.

\(^{21}\) Though Merchant shifts the class labels to fit his analysis, I maintain Bobaljik and Zocca’s division for ease of comparison.

\(^{22}\) Merchant does not gloss the nouns \textit{jatro} in (20a,b) with a gender, but they are commonly understood as masculine.
Table 4.2: Summary of Noun Class Patterns in Greek (Merchant, 2014).

<table>
<thead>
<tr>
<th>Can N vary under ellipsis as (part of) a(n)...</th>
<th>...predicate?</th>
<th>...argument?</th>
<th>examples of N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class I</td>
<td>Yes</td>
<td>No</td>
<td>\textit{jatros/jatros} ‘doctor’</td>
</tr>
<tr>
<td></td>
<td>\textit{M ↔ F}</td>
<td>\textit{M ↔ F}</td>
<td></td>
</tr>
<tr>
<td>Class II</td>
<td>One way only</td>
<td>No</td>
<td>\textit{dhaskalos/dhaskala} ‘teacher’</td>
</tr>
<tr>
<td></td>
<td>\textit{M_A → F_E}</td>
<td>\textit{M ↔ F}</td>
<td></td>
</tr>
<tr>
<td>Class III</td>
<td>No</td>
<td>No</td>
<td>\textit{adherfos/adherfi} ‘brother/sister’</td>
</tr>
<tr>
<td></td>
<td>\textit{M ↔ F}</td>
<td>\textit{M ↔ F}</td>
<td></td>
</tr>
</tbody>
</table>

‘Petros has a (female) teacher in Veria, but he doesn’t have one (male teacher) in Katerini.’

(22) Class III (\textit{adherfos/adherfi} ‘brother/sister’)

a. *O Petro\做\做 exi enan \textit{adherfo} stin Veria, ala dhen exi the Petros has a.M.SG brother.M.SG in-the Veria but not has mia stin Katerini. one.F.SG in-the Katerini.

‘Petros has a brother in Veria, but he doesn’t have one (sister) in Katerini.’

b. *O Petro\做\做 mia \textit{adherfi} stin Veria, ala dhen exi enan the Petros has a.F.SG sister.F.SG in-the Veria but not has one.M.SG stin Katerini. in-the Katerini.

‘Petros has a sister in Veria, but he doesn’t have one (brother) in Katerini.’

Before proposing the two distinct strategies for nominal ellipsis in Greek, Merchant outlines the semantics of gender he assumes for Greek nouns. Following previous proposals regarding the interpretation of gender on pronouns (Cooper, 2013; Kratzer and Heim, 1998), Merchant assumes that all gender for human nouns is presuppositional. Human gender may have one of two values: \textsc{masculine} (24a) or \textsc{feminine} (24b). Neuter or unspecified are not options. Merchant assumes that
gender combines with human denoting nouns as in (23). The valued gender features in this projection denote the partial functions give in (24):

(23) 

(24)  

a. \( [\text{masculine}] = \lambda P_e \lambda x \varepsilon : x \text{ is male}[P(x)] \)  

b. \( [\text{feminine}] = \lambda P_e \lambda x \varepsilon : x \text{ is female}[P(x)] \)  

The major intuition behind analyzing gender in the pronominal domain is that it is dependent on the presupposed content, and that it is cancellable. For example, the context and utterance in (25) shows that either a masculine or feminine pronoun can be used to refer back to the antecedent even when the natural gender of the referent is known (Hammerly, 2017).

(25) Pronominal gender (English)  

a. Context: Paula is at the zoo and is looking at a lion. She reads the small placard describing the animal, and sees that it is a female lion. Noticing how healthy the lion looks, she says:  

i. The lion is big! He is strong, too.  

ii. The lion is big! She is strong, too.  

Gender on the pronoun can either match the masculine grammatical gender (i) or the presupposed feminine gender (ii). This can occur even if the two do not align, as
in (ii). Though (ii) would be the preferred utterance if the gender is known, the fact that gender is presuppositional only makes (i) infelicitous, but not false.

Yet, for Spanish, an example like (25) is difficult to reconstruct. The exact parallel example would not work, as animals are not referred to with personal pronouns. A context could be created where someone is looking at a room of babies in a hospital, genders known, and slips up in referring to a female baby as él ‘he.’ Again, though not false, a statement like this is disfavored by native Spanish speakers. Such evidence suggests that gender presuppositions in Spanish may behave slightly different from those in other languages, a point I will return to in section 4.4.

Merchant assumes that (23) and (24) remain stable across all human noun classes, and he thus proposes that the lexical meaning of the various nouns in the three classes vary for whether or not they are inherently specified for gender, as well. Specifically, Merchant’s proposal echoes Bobaljik and Zocca’s in arguing that Class III nouns are lexically specified for the gender of the entities that they denote; Class I and II nouns are not. The syntactic structures with gender encoded for each noun class follow:

(26) CLASS I (DOCTOR):

\[
[jatros] = \lambda x_{e}[\text{doctor}(x)]
\]

| a. nP | b. nP |
| masc NP | fem NP |
| jatros | jatros |

(27) CLASS II (TEACHER):

\[
[dhaskalos] = \lambda x_{e}[\text{teacher}(x)]
\]

a. [dhaskalos] = \lambda x_{e}[\text{teacher}(x)]
Merchant’s proposal echoes Bobaljik and Zocca’s: Class I nouns lack lexical (or inherent) specification for gender; Class II nouns asymmetrically possess lexical specification for gender, such that only female nouns are inherently female; and Class III nouns all possess lexical specification for gender. In the latter two cases, an additional gender value from the functional projection associated with gender \( n \) serves to “strengthen” the presupposition of the lexically assigned gender. How such strengthening is formalized is left unexplained. More generally, Merchant emphasizes that these classes of nouns only differ semantically; syntactically they are the same.

Merchant’s two possible sources of ellipsis then proceed as follows. The first, PF-deletion of GenderP (the \( nP \) headed by the nominal Gender feature or the \( n \) head
with Gender, depending on the exact formalism), only occurs for cases where the elided and antecedent nouns are matched for gender. This process assumes that a complete syntactic structure underlies the ellipsis site. In Greek, this assumption is supported for the facts that both extraction and agreement out of the ellipsis site is possible. Merchant demonstrates this, with an accompanying syntactic structure, as follows:

(29) Tis istorias idha ton palio [proedhro ___], kai...
    the history GEN I saw the M.SG old M.SG chair M.SG and
    ‘I saw the former (male) chairperson of the history department, and...’

a. ...tis glossologias tha dho ton kenurio.
    the linguistics GEN FUT I see the M.SG new M.SG
    (lit.) ‘of linguistics, I’ll see the new (male) one.’

b. [tis glossologias]₃ tha dho
   DP
   D NumP
   ton
   [ φ :masc ] AP NumP
   kenurio
   [ φ :masc ] Num [ E ] NumP
   <nP>
   NP
   N t₃
   proedhro

The structure in (29b) shows the extraction out of the ellipsis site of the genitive argument [tis glossologias], as well as agreement out of the ellipsis site, resulting in the gender features on D ton and A kenurio. At the beginning of the derivation, the phrase [tis glossologias] sits at the bottom of the tree, where t₃ is visible in (29).
Before this phrase is extracted, the gender feature on *proedhro, masc*, values D and A for gender features; this occurs via Agree, as D and A enter the derivation without values for these phi-features. This agreement out of what becomes the ellipsis site is evidence for the existence of syntactic structure at an early stage of the derivation. Extraction out of the ellipsis site then occurs. Following, the E(ellipsis) feature appears here on Num. E in (29) is assumed to be in its ‘nominal variant’ (Eₙ), a result of which it is compatible with Num, but not Gender. The structural claim that E as an ellipsis licensor may only appear on Num is taken from Saab (2008), though Merchant’s implementation differs slightly. E imposes semantic identity between the meaning of the node it ‘deletes’ and that node’s antecedent: \[ [XP_A] = [YP_E] \].

The notion that E imposes semantic identity between the node it deletes and the antecedent originates with Lobeck (1995), who proposed that ellipsis is licensed “if an empty, non-arbitrary pronominal [is] properly head-governed, and governed by an X⁰ specified for strong agreement” (Lobeck, 1995:41). This view rests on the assumption that ellipsis sites are empty categories (*pro*), and that general requirements on empty categories also apply to ellipsis processes. Though Merchant does not assume that ellipsis sites are empty categories, E functions as a similar form of ellipsis licensor that, similar to a *pro* account, has no detectable property other than its triggering of ellipsis. What restricts E’s combination with only those heads that license ellipsis? Why do such heads license ellipse of their complements, while others do not? Merchant (and many other proposals for ellipsis that involve head-licensing) must stipulate this.

Merchant’s understanding of semantic identity is stated in his ‘e-GIVENness’ requirement, seen here:
(30) e-GIVENness (Merchant, 2001:26):

An expression E counts as e-given iff E has a salient antecedent A and, modulo ∃-type shifting:

i. A entails F-clo(E), and

ii. E entails F-clo(A)

(30) states that ellipsis requires a salient antecedent and there must be a mutual entailment relation between the F(ocus)-clo(sure) of the antecedent and the ellipsis site. F-clo involves the existential closure of the elided and antecedent categories.

E is the ellipsis strategy used for gender matching cases such as (29). Merchant claims that the PF-deletion strategy regulated by the E-feature is not available for cases of gender-mismatches. In such cases, the E feature is too high in the structure and imposes semantic identity on the nP nodes. For the constructions in (20-22) and considered in this chapter, the nPs contain conflicting semantic gender specifications.

Merchant’s second solution, a null proform, is invoked in all gender mismatched cases. Following Panagiotidis (2003) for Greek, a null noun, $e_N$, is interpreted by reference to an assignment function that assigns values to free variables, which are given by the index—here, the antecedent:

(31) $e_N$ must be indexed: it introduces a free variable over possibly complex nominal meanings whose value is given by the contextual assignment function:

$[e_N]^g = g(i)$

For the cases of interest in this chapter, $e_N$ needs an antecedent; this requirement can be implemented with coindexing with an antecedent noun, though it need not be. In other words, free indices may matter—they can indicate antecedence relations among elements that may not (and typically do not) stand in a c-command relationship.
In this way, $e_N$ acts like English *one* and is dependent on the existence of this index/antecedent:

(32)  
\[ \text{a. Fran brought an old book}_2 \text{ and I brought a new one}_2. \]
\[ \text{b. } [\text{one}_2]^g = g(2) = [\text{book}_2]^g \]

(33) If $\beta$ is a noun and $i$ is an index, then for any assignment $g$ where $i$ is the domain of $g$, $[\beta_i]^g = [\beta]$ if $g(i) = [\beta]$ (else undefined)

To put (33) in words, $e_N$ is interpreted by reference to an assignment function that assigns values to free variables. In (32), the variable is given by the index and the value is *book*. The assignment function can be constrained by this indexing, including on antecedents. Yet, the index on *one* need not correspond to an index on an antecedent, particularly (though not only) when the antecedent consists of a complex nominal expression, with modifiers or arguments. In such cases, the assignment function will need to assign to the value of the index on *one* a complex expression (of the semantic type of such nominal expressions, typically \(<e,t>\) in standard approaches. formed by composing the antecedent phrase or by incorporating other information from the context. Like other anaphoric devices, these may be used when the antecedent is partially or completely constructed from the context and lacks a linguistic expression.

Both English *one* and the Greek null $e_N$ can take both single nouns (with or without arguments) and multi-word nominal expressions as antecedents. The difficult question of how the appropriate antecedent is determined in any given context is one for the pragmatics of anaphora resolution to resolve.

The hypothesis for Greek then takes the following form:

(34) Greek $e_N$ is a pro-noun selected for by Num (or is a pro-nP)
A key component of Merchant’s analysis is that the null proform resumes the nP, which includes the gender feature, which would normally value the φ-features on the adjective and on D. Instead, these unvalued φ-features agree upwards with their subject (Baker, 2008). If the closest subject is male, there are two options: (i) for Class I, the proform nP will lack any gender presupposition and may be preceded by either a male or female antecedent; (ii) for Classes II and III, the proform nP will possess a presupposition of maleness and may only preceded by a male antecedent. If the closest subject is female, the proform nP is valued for female gender (presupposing a female referent) and is incompatible with a male antecedent.

Though Merchant’s proposal has received many critiques (see discussion of Sudo & Spathas below), many of his observations are important for broad analyses of ellipsis. Specifically, the notion that there exists some sort of ellipsis feature to license ellipsis is intriguing. Recent work by Elbourne (2008), Bentzen et al. (2013) and Messick and Thoms (2016) have shown that the E feature does not determine only the size of the E-site but also determines its antecedent by providing a specific type of contextual restriction. This process is semantic and pragmatic in nature, but it is independent of any syntactic identity condition. Nevertheless, such a feature (in addition to being located in the syntax) is stipulative for why it may only appear on Num apart for accounting for the data.\footnote{The location is also stipulative in the sense that it must be language-specific and cannot account for cross-linguistic ellipsis data in the verb phrase (Saab, 2015).} Additionally, it would be favorable to have one account of ellipsis that can explain number and gender ellipsis data with the same mechanism and simply isolate a condition that each feature imposes on a noun’s identity that results in (un)acceptability.
4.3.3 Sudo & Spathas (2015, 2016)

Sudo and Spathas (2015, 2016) respond directly to Merchant’s two claims that (i) there exist three classes of nouns with distinct behaviors in Greek and (ii) gender mismatches of Greek nouns in argument position are disallowed. The authors claim that (ii) is incorrect and this, in turn, invalidates Merchant’s theoretical proposal about the two distinct mechanisms for nominal ellipsis in Greek.

Citing the examples from Merchant in (20-21) above, Sudo & Spathas demonstrate that these sentences are unacceptable independent of nominal ellipsis due to two confounds. The first: under the scope of clause-mate negation (as the second conjuncts are), the use of negative concord indefinite determiners (kanenan and kamia instead of enan and mia) are almost obligatory. Making these conjuncts positive results in the same grammaticality patterns by noun class that Merchant observes for predicative nouns.

The second confound speaks to a larger proposal of Sudo & Spathas’ that gender, and competition between opposing genders, plays an important role in information structure and, in turn, acceptable ellipsis constructions. For these authors, Class I nouns only possess presuppositional gender (which may be ignored in ellipsis constructions). Class II nouns are lexically specified only when feminine, in which case they both assert and presuppose the gender. Class III nouns are all lexically specified, and they thus—the authors claim—both assert and presuppose their gender. The authors support these claims with evidence from focus constructions, which have been noted to ignore presuppositions triggered by φ-features such as gender so that they are semantically inert. The authors demonstrate this with a contrast between class I and class III nouns as follows:
(35) a. Mono o Petros ine kalos jatros.
only the.M.SG Petros is good.M.SG jatros
‘Only Petros is a good doctor.’ \(\implies\) Maria is not a good doctor.

b. Mono o Petros ine adherfos tu Jani.
only the.M.SG Petros is brother.M.SG the.GEN Janis.GEN
‘Only Petros is a brother of Janis.’ \(\nRightarrow\) Maria is not a sibling of Janis.

In (35a), the class I noun *jatros* ‘doctor’ is interpreted without respect for its gender feature (masculine) such that Maria is considered a relevant alternative for a good doctor. In (35b), the class III noun *adherfos* ‘brother’ must be interpreted with respect to its gender and cannot entail that Maria is not a sister of Janis. In similar examples, class II nouns show the observed asymmetry for gender and entailment:

(36) a. Mono o Petros ine dhaskalos.
only the.M.SG Petros is teacher.M.SG
‘Only Petros is a teacher.’ \(\implies\) Maria is not a teacher.

b. Mono i Maria ine dhaskala.
only the.F.SG Maria is teacher.F.SG the.GEN Janis.GEN
‘Only Maria is a teacher.’ \(\nRightarrow\) Petros is not a teacher.

Following this data, the authors propose the following denotations of gendered nouns in (37-39). In contrast to Merchant, they assume that only [feminine] gender carries with it a presuppositional value; [masculine] gender lacks any semantic value.\(^{25}\)

This interpretive asymmetry has been noted across languages on independent grounds (Percus, 2011; Sauerland, 2008; Heim, 2008). Additionally, lexically specified nouns (38b; 39a,b) also assert their gender.

\(^{24}\)The data in (35-36) is questionable for some speakers of Greek. Translated to Spanish, too, the entailments do not pattern the same. I will return to this in section 4.4.

\(^{25}\)The authors do not explicitly posit gender features in the syntax apart from the semantic values they carry. They make reference, however, to Sauerland’s (2008) proposal for \(\phi P\), whereby interpretable gender sits outside the DP and values its internal elements.
(37) Class I (‘doctor’)
   a. $\llbracket \text{jatros} \rrbracket = \lambda x_e [\text{doctor}(x)]$

(38) Class II (‘teacher’)
   a. $\llbracket \text{dhaskalos} \rrbracket = \lambda x_e [\text{teacher}(x)]$
   b. $\llbracket \text{dhaskala} \rrbracket = \lambda x_e : \text{female}(x) [\text{female}(x) \land \text{teacher}(x)]$

(39) Class III (‘brother/sister’)
   a. $\llbracket \text{adherfos} \rrbracket = \lambda x_e : \text{male}(x) [\text{male}(x) \land \text{sibling}(x)]$
   b. $\llbracket \text{adherfi} \rrbracket = \lambda x_e : \text{female}(x) [\text{female}(x) \land \text{sibling}(x)]$

The data from ellipsis falls out as follows. The authors cite previous work (Ross, 1967; Fiengo and May, 1994; Johnson, 2014) that ellipsis constructions tolerate any mismatch in $\phi$-presuppositions. Thus, Class I nouns are easily explainable, as all gender features are presuppositional and thus allowed in mismatch constructions.

For class III nouns, no mismatches are allowed, as gender is assertional in both directions and contributes to the semantic identity of the noun. For Class II nouns, the authors’ analysis incorrectly predicts that all cases of ellipsis should be prohibited, since feminine gender is assertional.\(^{26}\) Instead, the authors argue that what is actually elided in Class II ellipsis scenarios when a feminine noun serves as the antecedent is a masculine noun. The analysis can be seen as follows:

(40) a. O Petros episkefthike enan dhaskalo sti Veria, ke the Petros visited one.M.SG teacher.M.SG in.the Veria and mia dhaskalo stin Katerini. one.F.SG (teacher.M.SG) in.the Katerini

\(^{26}\) The authors also note that ellipsis should not be licensed with an asymmetric entailment, as this class creates.
b. *O Petros episkefthike mia dhaskala sti Veria, ke the Petros visited one.M.SG teacher.F.SG in.the Veria and enan dhaskalo stin Katerini. one.F.SG (teacher.M.SG) in.the Katerini

‘Petros visited a female teacher in Veria and a male teacher in Katerini.’

The authors use evidence from focus constructions in Greek to support the claim that unmarked masculine nouns may appear with feminine determiners and not restrict the resulting interpretation to females only. There are no cases of feminine nouns with masculine determiners, so presumably this case is ruled out entirely in Greek.  

To account for the permissible ellipsis constructions in Class II, as well as to reconcile the fact that masculine pronouns may be gender neutral unless in a female-restricted context, the authors postulate a principle forcing the use of the more specific form of the masculine and feminine pair whenever possible (Sudo and Spathas, 2015:12):

(41) **The Principle of Gender Competition**

a. Informally, “Given the masculine and feminine forms, use the form with more lexical specification, whenever it is felicitous and the choice of the gender does not make a difference for the overall meaning.”

b. Formally, let $S$ and $S'$ be sentences that differ only in the form of some gendered item, $\alpha$ vs. $\alpha'$. The use of $S$ in the context $c$ is infelicitous if:

i. $\alpha'$ asymmetrically entails $\alpha$ in the presupposition and/or assertion (in the sense of generalized entailment); and

---

27 Further evidence for the unmarkedness of masculine gender comes from pronouns. In Greek, masculine pronouns can be used as gender-neutral pronouns. This asymmetry between masculine and feminine can be observed, for example, when the pronoun is bound by a quantifier with individuals of both gender in the domain of quantification. In such contexts, a masculine pronoun is felicitous but not a feminine pronoun.
ii. the presupposition of $\alpha'$ is satisfied in the sentence (i.e. in its local context); and

iii. the assertions of $S$ and $S'$ are contextually equivalent.

The relevant notion of entailment from (41) is generalized entailment, defined between two expressions with identical conjoinable types (Sudo and Spathas, 2016:10):

(42) a. *Conjoinable types*

i. $t$ is a conjoinable type

ii. If $\sigma_1$ is a type and $\sigma_2$ is a conjoinable type, then $\langle \sigma_1, \sigma_2 \rangle$ is a conjoinable type.

iii. Nothing else is a conjoinable type.

b. *Generalized Entailment*: For any $x$ and $y$ of the same conjoinable type $\tau$,

i. $x$ entails $y$ iff $x = 0$ or $y = 1$ or for each $z$ of type $\sigma_1$ such that $\tau = \langle \sigma_1, \sigma_2 \rangle$, $x(z)$ entails $y(z)$

ii. $x$ and $y$ are equivalent iff $x$ entails $y$ and $y$ entails $x$

The Principle of Gender Competition accounts for data like (40a), as the masculine noun or pronoun has no presupposition by assumption and is gender-neutral by interpretation. An infelicitous example such as (40b) is explained because the feminine form does not entail the masculine presupposition. In cases where the feminine counterpart could be used felicitously, data suggests that a masculine pronoun ceases to be gender-neutral. The Principle of Gender Competition predicts this. The authors further assume that the principle in (41) is checked at every local context.\(^\text{28}\)

\(^{28}\)The authors nevertheless argue that (41), though typically active, is not employed in cases of ellipsis. This permits masculine nouns to be elided, leaving feminine determiners
The notion in (42) appears to be a helpful piece of the puzzle in explaining the general morphosyntactic duality of masculine and feminine gender across the languages seen in this chapter. However, there is no account for how agreement occurs in the mismatched gender ellipsis site. Conceivably, it is D instead of N that is valued for gender within the ellipsis site. Whether or not this is always the case is left unanswered, as well as how D then participates in nominal agreement processes. The authors’ recourse to a default nominal in ellipsis appears to sidestep morphological questions of how gender is valued on the noun, and how it may exhibit differing strengths.

4.3.4 Alexiadou (2017)

Alexiadou (2017) approaches the same data as the papers mentioned above with the intention to explain such data with a nominal structure that does not necessitate lexically specifying gender on nouns. Working within the DM framework and citing Kramer’s (2015) work on the morphosyntax of gender, Alexiadou argues that the locus of gender is always n. She focuses on cases of nominalizations of categories apart from roots, which are often gendered across languages.\textsuperscript{29} Alexiadou additionally cites data from word internal mixing as further evidence of gender on n.

Alexiadou adopts the class distinction originally made by Bobaljik & Zocca and cited by Merchant and Sudo & Spathas for Greek. She additionally follows Sudo & Spathas’ critique of Merchant’s dual-strategy ellipsis theory for Greek, noting that the class distinction holds in both predicate and argument ellipsis contexts.\textsuperscript{30} Instead, and modified material. Were the nouns not elided, they would need to appear in feminine form.

\textsuperscript{29}For example, French deadjectival nouns are feminine (\textit{la faible-esse} ‘weakness’, \textit{la modernité} ‘modernity’). Alexiadou also gives examples from Greek and German deverbal nouns.

\textsuperscript{30}Alexiadou further notes that, in predicative contexts, subject-predicate agreement cannot alone resolve the asymmetry puzzle. Presumably, this is because the predicate is
Alexiadou focuses on Bobaljik & Zocca’s intuition that the distinct behaviors for Class I and Class II nouns is a result of inflected versus derived gender morphology, respectively: while the latter cannot be ignored by ellipsis, the former may be. Specifically, the gender denotations fall out as follows:

(43) a. CLASS I (‘doctor’): GENDER is assigned structurally in \( n \) via agreement with a human referent

b. CLASS II (‘teacher’): Feminine \([iGENDER]\) surfaces as derivational affix; masculine gender assigned as default inflectional gender on \( n \) reflexive of declension class

c. CLASS III (‘brother/sister’): All \([iGENDER]\), located on \( n \)

Class I nouns all pertain to the same declension class, and thus ellipsis under complete identity is always possible\(^{31}\). In this way, these nouns are not adjectival, as Bobaljik & Zocca proposed. With respect to gender, Alexiadou follows Sudo & Spathas in analyzing such nouns as lacking gender specification. Instead, gender is only visible on surrounding nominal material such as D and A and assigned structurally on \( n \) via agreement with a human referent. In other words, gender ends up on \( n \) but does not matter for ellipsis if nouns are of the same declension class. Unclear from Alexiadou’s analysis is if, once a human referent is established, gender is assigned first to D and then to other nominal elements, or assigned to \( n \) and then valued via something like Agree to other elements. Presumably, if there is no referent available, the gender receives a default form.

\(^{31}\)Note: this analysis is in reference to Greek, in which Class I nouns are indistinguishable between masculine and feminine in bare form. The same is not true for Spanish.
Class II nouns carry the caveat that, by deriving the feminine gender, these nouns become a distinct declension class; these nouns thus cannot be ignored for ellipsis identity. For all class II nouns, feminine gendered nouns are derived from their masculine counterparts. This is supported by data that masculine plural nouns of Class II can refer to mixed gender groups, as follows:

(44) a. i dhaskales [fem] = a group of female teachers only
    b. i dhaskali [masc] = a group of male teachers, or a mixed group

To explain the special behavior of Class III nouns, Alexiadou appeals to an additional presupposition that this class must possess to explain the behavior. As noted in the literature, Class III comprises noun pairs that are both morphologically related (45a) and not (45b):

(45) a. adhelfos / adhelf-i ‘brother/sister’
    kiri-os / kiri-a ‘gentleman/gentlewoman’
    vasil-ias / vasil-is-a ‘king/queen’
    b. pateras ‘father’ / mitera ‘mother’
    andras ‘man’ / gineka ‘woman’
    jos ‘son’ / kori ‘daughter’
    gabros ‘groom’ / nifi ‘bride’

Alexiadou suggests the possibility that Class III nouns introduce presuppositions that limit their semantic values, similar to D-elements, though this idea is not fleshed out. Alternatively, Class III nouns may be comprised of both derivational masculine and feminine affixes (similar to Class II), such that neither may precede the other in ellipsis constructions.
Alexiadou’s proposal is brief and to the point, and as a result there is much left unexplained in detail for how the mechanisms behind ellipsis and gender assignment work. Nevertheless, her focus on the morphosyntax helps formalize the intuition of this dissertation (mentioned in chapter 2) that gender itself is not a property of roots, given that it is category-specific. This notion does not rule out the possibility that another property (perhaps animacy or sex) may be lexically specified and in turn may condition the expression of gender, specifically in its interpretable form.

4.3.5 Summary

A summary table of the above approaches is in this chapter’s appendix. Echoing initial proposals for Spanish nominal ellipsis constructions, there is disagreement as to where gender is located, what its semantics are, and how these two factors interact to produce different readings. Nevertheless, each analysis reviewed highlights a distinction between gender as a mere morphosyntactic feature that appears to be ignored in ellipsis, and gender as a semantically meaningful feature that is tied to a notion of natural gender of the referent. How this distinction is formalized ranges from varying the location of gender to be on the lexical root (in cases of semantic import; Bobaljik & Zocca, 2011; Merchant, 2014), to $n$ (in hybrid and semantically ignorable cases; Sudo & Spathas, 2015), to $D$ (when gender is not semantically meaningful; Alexiadou, 2017). For all proposals, though gender is presumed to be presuppositional, its morphosyntactic location impacts whether or not it can be ignored for ellipsis.

The proposals above highlight an important piece of this chapter’s puzzle: the morphological structure of the noun. Both Bobaljik and Zocca and Alexiadou mention derivational affixes as important components of identity calculations, though it is not entirely clear what contribution these affixes make or if they themselves are a reflection
<table>
<thead>
<tr>
<th>Class I</th>
<th>Class II</th>
<th>Class III</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘doctor’</td>
<td>‘teacher’</td>
<td>‘brother/sister’</td>
</tr>
<tr>
<td>Gender is assigned on n via agreement; nouns are adjectival in nature.</td>
<td>Gender is assigned on n for either [+female] or [-female]; Gender is presuppositional.</td>
<td>Gender is lexically specified as either [+male] or [+female]; Gender is presuppositional or assertional (authors are agnostic).</td>
</tr>
<tr>
<td>Bobaljik &amp; Zocca (2011)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender is assigned on n or in Gender Phrase; ellipsis occurs via PF deletion.</td>
<td>Feminine gender is lexically specified; masculine is default; gender presuppositions are strengthened with identification on Gender Phrase; ellipsis occurs as nominal pro-form.</td>
<td>Gender is lexically specified as either [+male] or [+female]; gender presuppositions are strengthened with identification on Gender Phrase; ellipsis occurs as nominal pro-form.</td>
</tr>
<tr>
<td>Merchant (2014)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender is assigned on n; gender is presuppositional and ignored in ellipsis.</td>
<td>Feminine gender is lexically specified and assertional; ellipsis involves default masculine form when antecedent is masculine.</td>
<td>Feminine and masculine gender is lexically specified and assertional.</td>
</tr>
<tr>
<td>Sudo &amp; Spathas (2015)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender is structurally assigned on n via agreement with human referent.</td>
<td>Feminine gender is a derivational affix; masculine gender is unvalued on n.</td>
<td>(i) Masculine and feminine genders are assigned on n with accompanying presupposition; or (ii) Masculine and feminine genders are derivational affixes.</td>
</tr>
<tr>
<td>Alexiadou (2017)</td>
<td></td>
<td></td>
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</tbody>
</table>
of an underlying semantic specification. Additionally, although the morphosyntax of each language surveyed differs slightly, the designation of three classes that are identical in their ellipsis patterns is stable. Regarding gender mismatch and nominal ellipsis acceptability in Spanish, roughly the same patterns play out, though with slightly different acceptability judgments and morphological expression for each class. I turn to this main analysis now.

4.4 Spanish: Analysis

The analysis presented here combines insights from three main ideas. First, ellipsis licensing in Spanish requires elided material to constitute a subset of its antecedent (4.4.2). I analyze \([+\text{fem}]\) gender to constitute a subset of unspecified gender \((n)\) when presuppositional, which results in acceptability asymmetries between ellipsis constructions with masculine (acceptable) versus feminine (unacceptable) antecedents in classes II and III. The differences between Class I nouns, on one hand, and Class II and III nouns, on the other, in this regard (as Class I nouns permit both masculine and feminine antecedents) is that Class I gender is presuppositional, while in Classes II and III it is assertional. This difference is due to the morphological makeup of these noun classes: feminine Class II nouns possess a feature of femaleness on their root, and feminine Class III nouns possess this same feature in the form of a derivational affix. I present my analysis of the semantics of gender in line with Percus’ (2011) account of Italian gender, adapting certain details to account for the presupposition-assertion difference.

Second, I claim that nominal ellipsis is Spanish is the result of postsyntactic processes that reduce the feature set of a given node to the empty set in the context that the subset condition is met (4.4.3). This process, Murphy’s (2016) *Total Impoverishment*,
involves the insertion of null exponents at PF in ellipsis constructions. I augment Murphy’s operation with the refined condition taken from Saab (2015) that the elided material and antecedent need to settle the same propositions. This view is distinct from an analysis of ellipsis as null pronunciation, as it is contingent on a ‘late insertion’ approach to morphology as promoted in DM. It also crucially relies on the distinction between presuppositional and assertional gender that affects the subset licensing in the first place.

Finally, I discuss three possible explanations for the further asymmetries observed in acceptability for Class III. The first is the presence of presuppositional masculine gender \(i\square^{-}\text{FEM}\) on all male-denoting nouns. The second is the presence of a uniqueness presupposition that prohibits a similar, singular constituent in ellipsis constructions, but that allows the denotation of a gender-inclusive set in plural. The third (related to the second) posits that the \(n\) of this class projects a specifier in keeping with the members of this class being relational or possession-related nouns. For this third option, the need for a specifier results in the inability to form subset relations with either male or female antecedents, resulting in unacceptability across all cases.

Before walking through an analysis for each noun class, I outline their makeup and detail the key theoretical assumptions that support my analysis (4.4.1).

4.4.1 Spanish Noun Classes

I follow previous proposals in making similar noun class distinctions for Spanish, such that the classes for Spanish are as in (10-12), repeated in (46-48):
(46) Class I (nouns where either gender may antecede the other)

a. Pablo es médico y Marta también.
   Pablo is doctor.M.SG and Marta also
   ‘Pablo is a doctor, and Marta is too.’

b. (?)Marta es médica y Pablo también.
   Marta is doctor.F.SG and Pablo also
   ‘Marta is a doctor, and Pablo is too.’

(47) Class II (nouns where only masculine can anteced feminine)

a. Pablo es actor y Marta también.
   Pablo is actor.M.SG and Marta also
   ‘Pablo is an actor, and Marta is too.’

b. *Marta es actriz y Pablo también.
   Marta is actress.F.SG and Pablo also
   ‘Marta is an actress, and Pablo is too.’

(48) Class III (nouns where—typically—neither gender may antecede the other)

a. *Pablo es príncipe y Marta también.
   Pablo is prince.M.SG and Marta also
   ‘Pablo is a prince, and Marta is too.’

b. *Marta es princesa y Pablo también.
   Marta is princess.F.SG and Pablo also
   ‘Marta is a princess, and Pablo is too.’

Though these classes conform to Bobaljik and Zocca’s initial designation, the data from Class I in both Brazilian Portuguese (BrP) (médico/médica ‘doctor’) and Greek (jatros ‘doctor’) points to an additional class of nouns in Spanish. These nouns are invariant in bare form; gender is only visible on agreeing elements like D and A (not present below):

(49) a. Pablo es dentista y Marta también.
   Pablo is dentist.SG and Marta also
   ‘Pablo is a dentist, and Marta is too.’
As seen in (49) and (50), these invariant nouns do not incur ellipsis violations with either a male or female antecedent. In this way, they are more analogous to the *jatros* class of nouns found in Greek than canonical Class I nouns in Spanish. Moving forward, then, I will initially adopt the following division of classes, separating Class I into two parts:

\begin{align*}
(51) \text{CLASS I} \\
&\text{a. Dentista nouns, comprised of nouns that are invariant for GENDER} \\
&\text{b. Doctor/a nouns, comprised of nouns that inflect for GENDER in their final vowel (-o for masculine, -a for feminine)}^{33}
\end{align*}

\begin{align*}
(52) \text{CLASS II: Actor/actriz nouns, comprised of nouns where the feminine form possess a root that lexically entails femaleness and the masculine form is gender neutral}
\end{align*}

\begin{align*}
(53) \text{CLASS III: Príncipe/princesa nouns, comprised of nouns primarily denoting nobility and kinship where the feminine and masculine forms are suppletive}
\end{align*}

---

32Example (50) shows the behavior of a true *epicene* noun, which displays additional variation for gender. This will be discussed briefly in this chapter and more fully addressed in chapter 6.

33This morphology is not a direct expression of gender, but rather of inflection class that is conditioned by gender (Kramer, 2015). This will be discussed further in 4.4.4.
or derived (do not share a common base). Feminine derived nouns possess affixes that lexically entail femaleness.

The class divisions in (51-53) highlight a key component of the analysis presented in this chapter: Spanish possesses a distinct noun class (Class Ib) that is unaccounted for in previous literature. Though this class superficially mirrors the Class I of BrP due to the inflectional nature of its gender, for many speakers, this class behaves like Class II in its acceptability patterns. I leave the question as to how gender with similar morphosyntactic properties in BrP and Spanish possesses distinct interpretive properties between the two languages for future research.

4.4.2 Subset Relations and Spanish Gender Features

Ellipsis is, in many ways, possible due to linguistic redundancy: that is, “elliptical processes capitalize on the redundancy of certain kind of information in certain contexts, and permit an economy of expression by omitting the linguistic structures that would otherwise be required to express this information” (Merchant, 2001). Though many approaches focus on syntactic or semantic identity (or a mix of the two) as a precondition for ellipsis (see 4.2 above), recent work has begun to explore the idea that the ellipsis site constitutes a subset of the antecedent in some manner (Merchant, 2013; Rooryck and Schoorlemmer, 2014; Saab, 2015). How to formalize the relevant conditions for such a subset relation is the focus of much of this research. For nominal ellipsis involving gender mismatches in Spanish, a central question is what kind of linguistic information is redundant from the antecedent to the elided nominal. Such information may inform whether or not an ellipsis construction is acceptable and help explain the variation in acceptability judgments between noun pairs and noun classes.
Enhancing his proposal for E and e-GIVENness to address overgeneration concerns, Merchant (2016) developed a more precise definition of ellipsis licensing based on subset relations. This definition refines an idea proposed by Chung (2013) that every lexical item in the numeration that ends up being elided must be identical to an item in the numeration of the antecedent. Merchant formalizes this as the *No new lexeme requirement*:

\[
\forall m [m \in M_E \land m \neq t \rightarrow \exists m' (m' \in M_A \land m = m')],
\]

where \( M_E \) is the set of lexemes in the elided phrase marker and \( M_A \) is the set of lexemes in the antecedent phrase marker. (\( M_E - t \subseteq M_A \))

Following (54), for all lexemes \( m \) that occur in an elided phrase and are not a trace element, \( m \) must have an equivalent overt correlate \( m' \) in the antecedent phrase. In other words, there cannot be additional material in the ellipsis site that is not present in the antecedent. (54) still leaves room for ambiguity. Either the set of terms or lexemes in the ellipsis site must be a subset of the elements in the antecedent, or the morphosyntactic features of the ellipsis site must be a subset of those in the antecedent. Much work has focused on addressing the second point. Rooryck and Schoorlemmer (2014) discuss several cases where it seems that it is the morphosyntactic features of the ellipsis site that must be a subset of the antecedent. The impossibility of active/passive voice mismatches under sluicing demonstrate this (Merchant, 2013):

\[
\begin{align*}
\text{(55) a.} & \quad \text{*The vase was stolen, but we don’t know who } \langle \text{stole the vase} \rangle. \\
\text{b.} & \quad \text{*Someone murdered Joe, but we don’t know who by } \langle \text{Joe was murdered} \rangle.
\end{align*}
\]
Examples (55a-b) are unacceptable because there are active (55a) or passive (55b) features in the ellipsis site that are not present in the antecedent phrase. Following, no subset relation exists between the two.

Additional evidence for the role of morphosyntactic features in ellipsis subset licensing comes from the -ing progressive form of English verbs. Rooryck and Schoorlemmer give the following examples:

(56) a. Mary is leaving and I can see that Peter already has ⟨left⟩.
    b. ??Mary hasn’t left yet, but I can see that Peter already is ⟨leaving⟩.

The examples in (56) are claimed to show that the -ing form of the verb leave has more functional structure than its past participle. Specifically, the authors claim that the progressive form introduced an underspecified mood feature. Though both verbal forms possess a [-FIN] tense feature, the extra mood feature on leaving results in an asymmetry that causes the oddness of (56b).

Saab (2015) further examines how subsets are important for ellipsis licensing. Saab applies his analysis to Bias Vehicle Change, a type of discourse-based ellipsis where a lexical change is produced and permitted in the particular bias of some lexical expression, characterized by mismatches such as the following:

(57) A: Will you help John?
    B: I will ⟨help him⟩.

Saab argues that pronouns such as him can be understood as D elements with an index and phi-features that are transferred post-syntactically (e.g. Kratzer, 2009). A representation for (57) could then be as in (58):
In (58B), the D element is coindexed with John, possessing the sum of its phi-features. It lacks, however, the overt reference to John himself. Saab formalizes this intuition with a subset condition on ellipsis as in (59):

(59) **Subset condition on ellipsis** (Saab 2015)

The morphosyntactic features in the ellipsis site must be a proper subset of those in the antecedent ($F_E \subset F_A$).

Applying (59) on its own to ellipsis data, Saab notes, largely overgenerates. Thus, Saab cites others (Merchant, 2001; Elbourne, 2008; Messick and Thoms, 2016) in the need to supplement (59) with some type of contextual restriction that makes reference to the semantic component of the two sites. Specifically, Saab is interested in entailments (as many before; see Sudo & Spathas above), and he suggests the following:

(60) **The Settlement Condition (SC):**

A constituent E can be elided only if there is a salient antecedent A such that both A and E settle the same set of propositions.

In other words, if constituents A and E contain equivalent information about a non-empty, downward closed set of propositions, E can be elided. By stating the conditions for ellipsis in a pragmatic way with connections to truth-conditions, Saab avoids committing to either a purely syntactic or semantic explanation for ellipsis. The SC is basically an enriched mutual entailment condition that allows for the bias in vehicle change (and its use) to trigger entailment relations among propositions (or individuals and propositions) in addition to the truth-conditional aspects of meaning.
Yet, the notion of entailment can seemingly only make reference to propositions. For
NP-ellipsis, this would need to assume that the identity condition makes reference to
the relevant type of NPs: properties. As Saab writes, if NPs are of the \(<e,t>\) type, an
NP can be elided only if there is a salient antecedent NP in the discourse such that
\([\text{NP}_A] = [\text{NP}_E]\). It is crucial to distinguish such an approach from a lexical-syntactic
one according to which NP-ellipsis is legitimate only if \([\text{NP}_A] = [\text{NP}_E]\), as this imposes
stricter syntactic identity.

Extending Saab’s reasoning to Spanish, the property denoted by a BN needs to
be equivalent between the ellipsis and antecedent sites for ellipsis to be licensed.
Adding gender to the mix, while presuppositional gender does not affect the property
denotation of the noun, assertional gender does. This can be formalized by adapting
the proposal made by Percus (2011) for gender in Italian to Spanish. Following Percus’
analysis, all gender features are presuppositional and guarantee that the nouns they
attach to entail maleness or femaleness. Female sex is further guaranteed with a silent
affix that operates at LF as a last-resort option in the case that a noun root cannot
semantically combine with the female presupposition. Denotations are as follows:

(61) a. \([^a\text{fem}] = \lambda P: (\text{if } P \text{ entails natural gender then } P \text{ entails femaleness}(P))\)
b. \([^a\text{masc}] = \lambda P: (\text{if } P \text{ entails natural gender then } P \text{ entails maleness}(P))\)
c. Silent affix \((\phi): \text{‘and is female’ (introduces [fem] feature)}\)
   \quad = [\phi] \lambda P. \lambda x. \lambda w. P(x)(w) = 1 \text{ and } x \text{ is female in } w

Importantly, there is no corresponding affix (e.g. \(\mu\)) that introduces [masc] and that
means ‘and is male.’ The denotations in (61) allow for masculine-feminine noun pairs
that share a root to have the masculine form unrestricted, while the feminine form
is both restricted and entails femaleness. In Italian, this is seen for a pair of nouns denoting (male and female) workers:

(62) a. \( \text{operaio} = [\text{np WORKER} (\partial^{\text{masc}})] \)

b. \( \text{operaia} = [\text{np WORKER } \phi] (\partial^{\text{fem}}) \)

Central to Percus' account is the notion that gender is not always interpreted. Percus formalizes this in a condition called “No Needless Feature Deletion (NNFD),” which states that a feature cannot be left uninterpreted when using an interpreted feature in its place would yield the same result. For nouns such as \( \text{operaia} \), this equates to the \( \partial^{\text{fem}} \) feature going uninterpreted and \( \phi \) being inserted at LF to guarantee an interpretation of femaleness. Percus argues that, in the same way that noun roots can “select” the gender features they combine with, they can also select the possibility of leaving these features uninterpreted. Nevertheless, this process is constrained by the grammar.

Percus' account centers on noun pairs like (62) that share the same root; these are equivalent to Class I nouns in Spanish. For Class II and Class III nouns, Percus' analysis needs to be updated slightly to account for the feminine nouns that systematically entail femaleness (though see footnote 9 of Percus' paper for a short mention of these nouns). Specifically, Percus' analysis can be adjusted for Spanish so that, in cases of Class II and Class III feminine nouns, there is no option for gender features to go uninterpreted. Whereas for Class I nouns, \( \phi \) is inserted at LF as a last resort to guarantee interpretation, for Class II and III feminine nouns, \( [\partial^{\text{fem}}] \) (present from the beginning of the syntactic derivation) carries an LF interpretation with it.

\[34 \text{In this sense, } [\partial^{\text{fem}}] \text{ behaves as } u[+\text{FEM}] \text{ following Kramer (2015).} \]

\[35 \text{Specifically, with a Tidiness condition, which states that a noun phrase cannot contain an uninterpreted gender feature when another noun phrase with the same root has the resulting denotation.} \]
from the start. This difference in denotation has morphosyntactic consequences and impacts ellipsis licensing, explained in the next section. Class I feminine nouns possess gender features that are presuppositional and may go uninterpreted, and they therefore license the subset condition detailed above for nominal ellipsis; Class II and III feminine nouns possess gender features that are assertional and must go interpreted, and they therefore do not license the subset condition when they constitute the antecedent.

4.4.3 Total Impoverishment (Murphy, 2016)

Murphy (2016) presents an account of ellipsis in which ellipsis licensing is contingent on the elided material constituting a subset of the antecedent. Murphy proposes a novel operation, *Total Impoverishment*, that involves the insertion of null morphemes into the ellipsis site in accord with a late insertion framework such as that posited by DM. Though the operation is developed with the aim to explain Ross’ (1970) generalization that backward gapping is restricted to OV contexts, the precondition of a subset relationship and the focus on the role of morphosyntactic features is applicable to gender asymmetries in Spanish nominal ellipsis. Total Impoverishment completely reduces the feature set of a given node to the empty set, in the context that the subset condition described in 4.4.2 is met. Integrating Saab’s contextual restriction in (60) and an analysis of presuppositional versus assertional gender, a subset condition will be met either in the case that masculine and feminine gender are both presuppositional (and entail the same property denotation of NP) or if masculine gender antecedes feminine gender (such that the elided site entails the same propositions as the antecedent, regardless of whether or not it entails additional ones). In the case where feminine assertional gender antecedes masculine gender, the
subset condition should not be met, as the elided material does not settle the same propositions as the antecedent.

The basic architecture of DM, presented in chapter 1, posits that lexical material is inserted into terminals created by syntax. The Vocabulary Item (VI) that can be inserted as part of the morphology must be a subset of the terminal into which it is inserted. This is formalized in the Subset Principle (Halle, 1997):

(63) **Subset Principle**

(i) The phonological exponent of a Vocabulary Item is inserted into a position if the item matches all or a subset of the features specified in that position.

(ii) Insertion does not take place if the Vocabulary Items contain features not present in the morpheme.

(iii) Where several Vocabulary Items meet the condition for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen.

In DM, the feature specifications of nodes generated in the syntax can be further manipulated by postsyntactic operations. One such set of rules, *impoverishment rules* (Bonet, 1991), deletes features on terminals prior to insertion, resulting in the realization of a lexical element in a less marked form. Total Impoverishment is a variant of an impoverishment rule that deletes all features on a given terminal:

(64) **Total Impoverishment**

For any $F$, $F$ a feature on $L$, $F \rightarrow \emptyset$ iff there is an $L'$ such that $F \in L'$ and $L_F \subset L'_F$. 

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The condition in (64) ensures that the feature set of a lexical item $L$ is reduced to the empty set in the context in which there is another (distinct) instance of that lexical item $L'$ and the feature set of $L$ is a proper subset of the feature set of $L'$. Compared to Impoverishment, Total Impoverishment is more suited to ellipsis constructions, as it reduces the number of postsyntactic steps. Were Spanish nominal ellipsis due to Impoverishment rules alone (still assuming the subset condition applies), feminine gender features would be deleted postsyntactically in ellipsis constructions in order to insert the less marked (masculine) form. Following this step, antecedent and ellipsis sites would be identical, but an explanation for the ellipsis process itself would still need to be sought. In what follows, I outline how the Total Impoverishment operation based on the subset condition works for each class and its corresponding gender semantics in Spanish nominal ellipsis constructions.

4.4.4 CLASS I NOUNS

Class I nouns in Spanish exhibit ellipsis behavior as in (65-66), and they may be divided into subclasses as in (67)36:

(65)  

a. Pablo es dentista y Marta también.
   Pablo is dentist.SG and Marta also
   ‘Pablo is a dentist, and Marta is too.’

b. Marta es dentista y Pablo también.
   Marta is dentist.SG and Pablo also
   ‘Marta is a dentist, and Pablo is too.’

(66)  

a. Pablo es médico y Marta también.
   Pablo is doctor.M.SG and Marta also
   ‘Pablo is a doctor, and Marta is too.’

36For now I exclude epicene nouns such as el testigo ‘the.M.SG witness.M.SG’ and la victima ‘the.F.SG victim.F.SG’, seen in (50), as these nouns display fixed grammatical gender even with determiners. I return to these nouns in the final analysis of this dissertation in chapter 6.
b. (?)Marta es médica y Pablo también. Marta is doctor.F.SG and Marta also ‘Marta is a doctor, and Pablo is too.’

(67) CLASS I

a. *Dentista* nouns, comprised of nouns that are invariant for GENDER

b. *Doctor/a* nouns, comprised of nouns that inflect for GENDER in their final vowel (-o for masculine, -a for feminine)

As noted above, the correspondence in Class I between -o endings for masculine gender and -a endings for feminine gender is not a direct expression of gender on n. I follow Kramer (2015) in this assumption that word-final vowels such as -o and -a are not morphological expressions of gender; rather, these endings are theme vowels, also known as declension class markers. Extending the analysis of class markers in Spanish, Kramer presents a refined analysis of Spanish declension class seen in chapter 2, repeated in Table 4.4. Class I nouns are divided between Declension class/Theme I (masculine) and Declension class/Theme II (feminine).

Table 4.4: Spanish Declension Classes (Kramer, 2015).

<table>
<thead>
<tr>
<th>Declension class</th>
<th>Theme vowel</th>
<th>Noun</th>
<th>Gloss</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>-o</td>
<td>li-o</td>
<td>‘muddle’</td>
<td>masculine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>man-o</td>
<td>‘hand’</td>
<td>feminine</td>
</tr>
<tr>
<td>II</td>
<td>-a</td>
<td>di-a</td>
<td>‘day’</td>
<td>masculine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pas-a</td>
<td>‘raisin’</td>
<td>feminine</td>
</tr>
<tr>
<td>III</td>
<td>-e/∅</td>
<td>padr-e</td>
<td>‘father’</td>
<td>masculine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>madr-e</td>
<td>‘mother’</td>
<td>feminine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>lápiz-∅</td>
<td>‘pencil’</td>
<td>masculine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>luz-∅</td>
<td>‘light’</td>
<td>feminine</td>
</tr>
</tbody>
</table>

Kramer notes that gender cross-cuts declension class, though generalizations can be made. Though gender and declension class are separate and distinct phenomena,
gender features on $n$ are local enough that they have the ability (but are not required) to affect declension class.

(68) Structure at Syntax for a feminine noun:

```
nP
  n[+FEM] √P
    | 
    √
```

(69) At PF: Theme Node Insertion:

```
nP
  nP  √P
    | 
    n[+FEM] Th √
    √
```

(70) Theme node insertion rules for Spanish

a. i. Insert [theme, III] in the contexts of $√MADR$, $√PADR$, $√LÅPIZ$, $√LUZ$...
   ii. Insert [theme, II] in the context of $√DĪ$...
   iii. Insert [theme, I] in the context of $√MAN$...

b. Insert [theme, II] in the context of $n[+FEM]$

c. Insert [theme] elsewhere

(71) Vocabulary Insertion for Theme node in Spanish

a. for [theme, III] $\leftrightarrow -e/∅ / __$ Num
b. for [theme, II] $\leftrightarrow -a / __$ Num
c. for [theme] $\leftrightarrow -o / __$ Num
d. for [theme] $\leftrightarrow ∅$

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Kramer follows Embick (2010) in arguing that the dissociated Theme node (not present during syntax) carries the declension class feature in Spanish. The class marking is thus a reflex at PF during Theme Node Insertion. The set of rules in (70) inserts Theme nodes with particular declension class features in the context of certain roots.

Following Percus’ analysis of gender, Spanish Class I nouns directly map on to the noun denotations seen in 4.4.2. Repeating the denotations for Spanish nouns, we get as follows:

\[(72)\] CLASS I (MÉDICO/MÉDICA):

a. \( \text{médico} = [_{np} \text{DOCTOR } (^9\text{masc})] \)

b. \( \text{médica} = [_{np} [\text{DOCTOR } \phi] (^9\text{fem})] \)

Structures for Ib (a. \textit{médico} and b. \textit{médica}) can be seen as follows:

\[(73)\] a. \( nP \) b. \( nP \)

\[ n \ \sqrt{\text{MEDIC}^–} \ \ \ \ \ \ n \ \sqrt{\text{MEDIC}^–} \ \ \ \ \ \ i[-\text{FEM}] \]

Integrating the morphosyntactic proposal of Kramer (2015) and the semantic one of Percus (2011) does not present many obstacles. The \( i[-\text{FEM}] \) feature carries the presuppositional element \( (^9\text{fem}) \) with it.\(^{37}\) I analyze the bare masculine forms of Class I as bare \( n \) rather than \( n \ i[-\text{FEM}] \), as there does not seem to be any entailment of maleness with the bare masculine form.\(^{38}\) Again, if we follow Percus’ analysis and

---

37 As this feature does not directly compose with the noun property in Percus’ analysis, the locus of interpretation may not be on \( n \). I discuss this further in chapter 6.

38 A distinct analysis could posit that this bare \( n \) sits above a \( n \ i[-\text{FEM}] \), which would be compatible with Kramer’s analysis that \( i[-\text{FEM}] \) ns may be licensed under \( n \) that lacks these features.
posit that this element is not interpreted regardless, as well as the fact that there is no operator similar to \( \phi \) that guarantees maleness, there ought to be no substantial difference between bare \( n \) and one with \( i\text{-FEM} \). Nevertheless, data from Class III suggest that there are instances where a presupposition of maleness complicates ellipsis judgments, so for now I will still assume a bare \( n \).

The important takeaway from the semantic discussion of Class I nouns is that all gender features are presuppositional, and they are thus irrelevant for licensing the subset condition explained in 4.4.3 and licensed with Saab’s (2015) SC seen in (60). For Class I nouns, ellipsis proceeds as in (74) when a masculine noun precedes a feminine one. The complete utterance before ellipsis is shown in (74a). Following Total Impoverishment (74b), the features on \( médica \) satisfy the condition of comprising a subset of the features on \( médico \). This results in the reduction of the feature set of \( médica \) to the empty set, resulting in the construction in (74c).

\[(74) \quad \text{a.} \quad \text{Pablo es médico y Marta [es médica] también.} \]
\[\quad \text{Pablo is doctor.M.SG and Marta is doctor.F.SG also} \]
\[\quad \text{‘Pablo is a doctor, and Marta is a doctor too.’} \]

\[\text{b. Following Total Impoverishment:} \]
\[\quad \text{(i) For } i[+\text{FEM}] \text{ on } médica, i[+\text{FEM}] \rightarrow \emptyset \text{ as there is an antecedent} \]
\[\quad \text{médico and } i[+\text{FEM}] \in n \text{ (unspecified) and médica } \subset médico \]
(ii) Marta es médica

\[
\begin{align*}
\text{VP} & \quad nP \rightarrow \emptyset \\
\text{DP} & \quad V \\
\text{Marta} & \quad nP \\
\text{BE} & \quad n \\
& \quad \sqrt{\text{MEDIC}} \\
& \quad i^{[+\text{FEM}]}
\end{align*}
\]

When the feminine form precedes the masculine form, this process is slightly different. The structure before ellipsis is shown as in (75a). Following Total Impoverishment (75b), it is unclear if the the morphosyntactic features on médico satisfy the condition of comprising a subset of the features on médica. Yet, following the added stipulation that, if these features settle the same proposition, (75b) ought to hold such that both médico and médica are subsets of the other. This results in the reduction of the feature set of médica to the empty set, resulting in the construction in (75c).

     Marta is doctor.F.SG and Pablo is doctor.M.SG also
     ‘Marta is a doctor, and Pablo is a doctor too.’

b. Following Total Impoverishment:

   (i) For \( n \) on médico, \( n \rightarrow \emptyset \) as there is an antecedent médica and \( n \in n\)

\[ i^{[+\text{FEM}]} \] and médico \( \subset \) médica
(ii) *Pablo es médico*

\[
\begin{align*}
\text{VP} & \quad nP \rightarrow \emptyset \\
\text{DP} & \quad V \\
\text{Pablo} & \quad \text{BE} \\
& \quad n \\
& \quad \sqrt{\text{MEDIC}^–} \\
& \quad i^{[+FEM]}
\end{align*}
\]

c. Marta es médica y Pablo es médico también.

‘Marta is a doctor, and Pablo is a doctor too.’

As noted above, (75c) is not felicitous for all speakers, contrary to data for Class I nouns from other languages. Thus, there needs to be further explanation for the contribution of \(i^{[+FEM]}\) (\(^{0}\text{fem}\)) gender on médica that, in some cases, disallows médico as a subset and prohibits the process in (75).

Though most accounts of ellipsis propose that presuppositional phi-features are not calculated as part of ellipsis identity requirements, and (following Percus) these initial presuppositions may be ignored in regular interpretation, it seems this variable interpretability is not possible for some Spanish speakers with Class I feminine forms. This is perhaps due to a suggestion by Sudo (2015)\(^{39}\) that while some presuppositions are cancellable and null in ellipsis constructions, other presuppositions possess strong entailments and behave more like assertions. Spanish \(i^{[+FEM]}\) gender appears to possess a dual behavior in this manner: for some speakers, \(i^{[+FEM]}\) gender merely presupposes female gender without entailing it, not contributing to ellipsis identity.

\(^{39}\)Thank you to Florian Schwarz for suggesting this idea.
calculations and resulting in the acceptability of (75c); for other speakers, $i_{-\text{FEM}}$
gender both presupposes and entails female gender, contributing to ellipsis identity
calculations and resulting in the unacceptability of (75c). Thus, if in the antecedent
clause, a presupposition and entailment of femaleness carries over to the ellipsis site,
the following, false interpretation would result:

\[(76)\] Marta es médica y Pablo [es médica] también.
Marta is doctor.F.SG and Pablo is doctor.F.SG also
‘Marta is a (female) doctor, and Pablo is a (female) doctor too.’

If the entailment that Pablo is female must hold, (76) is false, and an ellipsis
construction that carries that interpretation is judged unacceptable. This is exactly
what occurs in Class II, although the entailment of femaleness is the result of a
different morphosyntactic structure and semantic denotation of the root in feminine
form. I discuss this in detail in 4.4.5, and I return to possible explanations of why
Spanish Class I nouns display variable interpretability for feminine gender in chapter
6.

What must be further accounted for is the difference between Class Ia and Ib. Effects
of asymmetric acceptability described above are not observed for Class Ia, where
bare forms like *dentista* carry no presupposition for either gender. Class Ia may be
analyzed as follows:

\[(77)\] CLASS Ia (DENTISTA):
\[
[dentista] = \lambda x [dentist(x)]
\]
\[
NP
\]
\[
[\sqrt{\text{DENTIST}}]
\]

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For now, I claim that all members of the dentista class lack gender specification in bare form. These nouns require more syntactic structure for interpretable gender. Although this does not rule out the presence of an interpretable feature on n, ellipsis data is insufficient to prove the existence of one.

In summary, Class I Spanish nouns do not exhibit asymmetry in their ellipsis behavior. This is explained adopting the semantics of gender proposed by Percus (2011) for Italian, in which feminine gender is presuppositional and does not affect the denotation of the property denoted by BNs. Thus, masculine and feminine forms of a noun that share the same root possess the same set of propositions, and both meet the conditions established in 4.4.2 and 4.4.3 for subset licensing and Total Impoverishment. The observed disfavoring for a feminine antecedent by some speakers necessitates further explanation, either in the form of a stronger presupposition for feminine over masculine gender in Class I, or a larger systematic difference in speakers’ gender systems. I explore the latter possibility briefly in the final analysis in chapter 6. I now turn to Class II nouns.

4.4.5 Class II Nouns

Class II nouns in Spanish exhibit ellipsis behavior as in (78):

(78)  
a. Pablo es actor y Marta también.  
Pablo is actor.M.SG and Marta also  
‘Pablo is an actor, and Marta is too.’

b. *Marta es actriz y Pablo también.  
Marta is actress.F.SG and Pablo also  
‘Marta is an actress, and Pablo is too.’

For Class II nouns, while ellipsis constructions in which a masculine antecedent precedes a feminine counterpart are always acceptable, constructions in which a
feminine antecedent precedes a masculine counterpart are never acceptable. Unlike Class I, for which speakers exhibit variation in their acceptability judgments, Class II nouns receive uniform and unequivocal judgments across speakers.

As noted before, the acceptability patterns of Class II can be explained if the entailment of femaleness on the feminine noun is obligatory; this is achieved if feminine gender in Class II is assertional and non-defeasible. Following the system from above, the denotations for the respective nouns are as follows:

(79)  

a. \( \text{actor} = [np \ \text{ACTOR} (\partial \text{masc})] \)

b. \( \text{actriz} = [np \ \text{ACTRESS} (\partial \text{fem})] \)

There is no need for the covert feminizer \( \phi \) to be part of \( \text{actriz} \), as \((\partial \text{fem})\) is sufficient to entail femaleness and guaranteed to combine with the nominal root. This will be ensured by the denotation of the nominal root, which ought to possess additional information about femaleness apart from information regarding being an actor (hence, \( \text{actress} \)). I analyze the morphosyntax of Class II nouns as in (80):

(80)  

a. \[
\begin{array}{c}
\text{nP} \\
\text{n} \hspace{1cm} \sqrt{\text{ACTOR}} \\
\end{array}
\]

b. \[
\begin{array}{c}
\text{nP} \\
\text{n} \hspace{1cm} \sqrt{\text{ACTRESS}} \\
\end{array}
\]

i\([+\text{FEM}]\]

The masculine forms of Class II (80a) are analyzed as parallel to Class I masculine nouns: without any gender presupposition. Yet, the same discussion applies as for Class I nouns where these nouns could possess a \( i[-\text{FEM}] \) feature that is licensed by \( n \). The difference in denotation between the feminine and masculine nominal roots is seen in the root form itself.
The acceptability differences between Class I and Class II nouns where a feminine antecedent precedes a masculine elided noun boils down to the difference between implicature and entailment. While an implicature that arises from presupposed feminine gender, as observed in Class I, suggests that the elided material is also feminine, it does not require it. An entailment that arises from asserted feminine gender, as observed in Class II, requires that the elided material be feminine. When this condition is not met, ungrammaticality results.40

The assertional nature of feminine gender in Class II nouns plays a more significant role in regards to the subset licensing condition required for Total Impoverishment than the presuppositional nature of feminine gender in Class I nouns does. This is due to the condition established in (60): while both actor and actriz denote a property regarding the ability to act, only actriz denotes a property of femaleness. Given the acceptability patterns, Class II nouns demonstrate that the contextual restriction of (60) impacts the licitness of ellipsis. This can be observed walking through the ellipsis process. For Class II, ellipsis proceeds as in (74) for Class I above when a masculine noun precedes a feminine noun. This is repeated for Class II in (85). Structure before ellipsis is shown in (81a). Following Total Impoverishment (81b), the features on actriz satisfy the condition of comprising a subset of the features on actor. This results in the reduction of the feature set of actriz to the empty set, resulting in (81c).

---

40Further evidence for the pattern in Class II comes from the noun vampiro ‘vampire.’ This noun possesses two distinct feminine forms, resulting in the following judgments:

(i)  (a) Pablo es vampiro y Sara también.
     (b) ?Sara es vampira y Pablo también.
     (c) *Sara es vampiresa y Pablo también.

While (a) and (b) exhibit the canonical pattern of Class I, (c) behaves like a Class II feminine noun. The suffix -esa also appears in Class III.
   ‘Pablo is an actor, and Marta is an actor too.’

b. Following Total Impoverishment:

   (i) For \(i|^{+\text{FEM}}\) on actor, \(i|^{+\text{FEM}}\) → ∅ as there is an antecedent actor
       and \(i|^{+\text{FEM}}\) ∈ \(n\) (unspecified) and actor ⊂ actor

   (ii) \textit{Marta es actor}

   \[
   \begin{array}{c}
   \text{VP} \\
   \text{DP} \\
   \text{Marta} \\
   \text{BE} \\
   \text{nP} \\
   \text{n} \sqrt{\text{ACTOR}} \\
   i|^{+\text{FEM}}
   \end{array}
   \]

   \(nP → ∅\)

   ‘Pablo is a doctor, and Marta is a doctor too.’

The licitness of (81) needs further explanation. Following the steps for Total Impoverishment, I analyze the elided noun as \textit{actor} instead of \textit{actriz}. This is possible because \textit{Marta es actor} is an acceptable sentence, and for ellipsis to occur, the nouns in question need to share the same root. The interpretation of the elided material in (81) is not strictly \textit{Marta es actriz}. As \textit{actriz} denotes an additional property of femaleness\(^{41}\), it is not a viable candidate for ellipsis. Thus, Class II ellipsis acceptability, similar to Class I, is due in large part to the masculine noun lacking strong gender inferences.

\(^{41}\)And, possibly, of something else related to actress-ness, though I do not explore this possibility here.
For the reverse situation, the structure before ellipsis is shown in (82). Following Total Impoverishment (82b), the features on *actor* do not satisfy the condition of comprising a subset of the features on *actriz*, as the nouns possess different roots. Thus, the feature set of *actor* cannot be reduced, and full pronunciation results.

Marta is actress.F.SG and Pablo is actor.M.SG also
‘Marta is an actress, and Pablo is an actor too.’

b. Following Total Impoverishment:
   (i) Cannot apply: *actor* \(\not\subset\) *actriz*.
   (ii) *Pablo es actor*
       \[
       \begin{array}{c}
       \text{VP} \\
       \text{DP} \\
       \text{BE} \\
       nP \\
       n \\
       \end{array}
       \]
       \[
       \quad nP \rightarrow \emptyset
       \]

c. **Full pronunciation, no ellipsis:**
   Marta es actriz y Pablo [es actor] también.
   Marta is actress.F.SG and Pablo is actor.M.SG also
   ‘Marta is an actress, and Pablo is an actor too.’

If and when ellipsis applies, the result is infelicitous: the only possible reading is that Pablo is an actress.

A word is necessary about the morphosyntax of Class II nouns. In Bobaljik and Zocca’s (2011) analysis, these nouns are analyzed as the derived noun class, in which the feminine form is derived from the masculine form. This is a potential path for analysis.
in Spanish, although the nominal forms are different enough that it is not clear that actriz is merely actor with a derivational affix. Similar to the derivational affix -dor/dora\(^{42}\), the affix -riz is used to form adjectives: matriz ‘original/mother’ (though uncommonly used) and locomotriz ‘locomotive’ are two examples. Matriz also serves as a noun, ‘womb’, supporting the idea that the affix -riz, though not as productive as other affixes, ports a semantic contribution on its own.\(^{43}\) Following this line of reasoning, Class II nouns would then need to possess ns of i[+FEM] that first select for a bare nP. Presumably, then, if a Class II n with i[+FEM] feature combined with a root instead of a bare nP, the derivation would crash. As this is all stipulative, I do not adopt this analysis.

In summary, Class II nouns show asymmetrical behavior in Spanish nominal ellipsis: though masculine nouns may precede feminine ones, feminine nouns may not precede masculine ones. I analyze the acceptability patterns of Class II as the result of masculine and feminine forms possessing different roots, and of the feminine form in particular possessing assertional gender and entailing femaleness. This propositional difference between genders prohibits ellipsis and poses a contrast to Class I nouns, which possess presuppositional gender that is irrelevant for the licensing of ellipsis. Of note is the restricted set of nouns that belong to Class II in Spanish. While previous proposals cited productive Class IIIs in other languages, this seems to be a closed set of nouns in Spanish. As seen in the analysis of Class III nouns, this is in part due to an overlap between Class II and Class III nouns, for which those that display similar characteristics to Class II nouns possess the additional semantics of being relational.

\(^{42}\)To which the RAE directs readers looking for information on the actor/actriz distinction.  
\(^{43}\)A perhaps additional piece of evidence for the derivational status of -riz comes from phonology (Creemers et al., 2018). This affix is stressed across the nouns it appears with: emperatriz ‘empress’, institutriz ‘governess’, dominatriz ‘dominatrix.’
The analysis of Class II nouns is thus perhaps more interesting for providing a basis with which to understand the multi-faceted group of Class III nouns.

4.4.6 Class III Nouns

Class III nouns inhabit a peculiar position at the crossroads of morphosyntax and semantics: while their morphosyntax exhibits properties of both Class I and II, nouns in this class port additional information that seems to contribute to their behavior in ellipsis structures. I present three different analyses for how to understand this additional information, which is not uniform across members of Class III. The relationship of Class III nouns to both Class I and Class II can be seen in the following examples: in (83), Class III nouns morphologically inflect for gender like Class I; in (84), Class III nouns display similar but not clearly related morphosyntax; finally, in (85), Class III nouns exhibit derivational suffixes. Importantly, the acceptability judgments are distinct from the previous classes:

(83) a. *Pablo es marqués y Marta también.
    Pablo is marquis.M.SG and Marta too.
    ‘Pablo is a marquis and Marta is, too.’

    b. *Marta es marquesa y Pablo también.
    Marta is marquess.F.SG and Pablo too.
    ‘Marta is a marquess and Pablo is, too.’

(84) a. *Pablo es príncipe y Marta también.
    Pablo is prince.M.SG and Marta too.
    ‘Pablo is a prince and Marta is, too.’

    b. *Marta es princesa y Pablo también.
    Marta is princess.F.SG and Pablo too.
    ‘Marta is a princess and Pablo is, too.’

(85) a. *Pablo es conde y Marta también.
    Pablo is count.M.SG and Marta too.
    ‘Pablo is a count and Marta is, too.’
b. *Marta es condesa y Pablo también.
Marta is countess.F.SG and Pablo too.
‘Marta is a countess and Pablo is, too.’

In relation to Class I, several pairs of nouns in this class express gender as morphological inflection similar to (83): hermano/hermana ‘brother/sister’; tío/tía ‘aunt/uncle’; marqués/marquesa ‘marquis/marquess.’ Several pairs of nouns in this class exhibit a derivational relationship like that in (85): conde/condesa ‘count/countess’ and duque/duquesa ‘duke/duchess’ are such examples. Finally, Class III has a unique category of suppletive noun pairs that behave similarly to Class II nouns: príncipe/princesa ‘prince/princess’; padre/madre ‘father/mother’; macho/hembra ‘male/female’. With this third category of nouns, ellipsis constructions are unacceptable regardless of the gender of the antecedent:

(86) a. *Pablo es padre y Marta también.
Pablo is father.M.SG and Marta too.
‘Pablo is a father and Marta is, too.’

b. *Marta es madre y Pablo también.
Marta is mother.F.SG and Pablo too.
‘Marta is a princess and Pablo is, too.’

As a first pass, I divide Class III into subclasses noted above on primarily morphosyntactic grounds:

(87) CLASS III A (MARQUES/MARQUESA):

a. marques = [np MARQUIS (θmasc)]
b. marquesa = [np [MARQUIS φ] (θfem)]
Class III A morphosyntactically expresses gender in the same manner as Class Ib, but the behavior observed in (83) is explained by the presence of a presupposition for masculine gender in addition to feminine gender. Thus, in cases where the masculine antecedent precedes the feminine elided noun, the acceptability is similar to Class Ib when feminine nouns carrying presuppositional gender precede unspecified masculine nouns. Though the resulting sentence suggests that the feminine referent of the ellipsis clause is male, it does not require it and the presupposition can be canceled. Nevertheless, the presuppositional material present on the masculine form appears to be stronger and verge on an entailment, such that most speakers disprefer it. In contrast, I analyze Class III A feminine nouns to possess assertional gender, similar to the actriz nouns of Class II, as no speaker allows it to antecede the masculine form. Unlike Class II nouns, this gender is still located on n and not on the lexical root, resulting in a slightly weaker unacceptability than for parallel cases of Class II nouns.

A second subclass of Class III can be understood as in (88):

(88) **CLASS III B (CONDE/CONDESA):**

a. conde = [np CONDE (\(^{0}\)masc)]

b. condesa = [np [np CONDE −esa \(\phi\)] (\(^{0}\)fem)]
This subclass is comprised of feminine forms derived from their counterparts. I analyze the derivational affix as contributing assertional gender parallel to the root forms of feminine Class II nouns. In other words, the femaleness entailed by the derivational affix is non-defeasible and explains the acceptability judgments found for this subclass.

Finally, a third subclass, behaves parallel to Class II. These noun pairs appear to possess distinct roots that nevertheless contain overlapping information. For example:

(89) CLASS III C (PRÍNCIPE/PRINCESA):

a. \textit{príncipe} = [\textit{np} PRÍNCIPE (\textit{masc})]

b. \textit{princesa} = [\textit{np} PRINCESA (\textit{fem})]

Similar to Class II, the feminine form of Class III C nouns only possesses a (\textit{fem}) feature for interpretation, as \(\phi\) is not necessary. Curiously, although \textit{princesa} is not derived in the same way that \textit{condesa} (Class III B) is, it exhibits the same affix –esa.

The \textit{n i [+FEM]} for Class III B and C, then, appears to take the same morphological

\[44\] And, sometimes, additional information similar to is the counterpart of \(x\). Though this information is not present in current day usage of these derived forms, many of them originated to designate the female spouse of the royal male. A modern-day usage in Brazilian Portuguese is the pair embaixador/embaixatriz ‘embassador/embassador’s wife.'
form. Nevertheless, while for Class III B this \( n \) is selected for by a genderless \( nP \), for Class III A it selected for by the root itself. Thus, the noun pair of \textit{príncipe/princesa} seems to straddle the boundary between a derivational noun pair like those of Class III B, and a suppletive noun pair. The pair’s acceptability patterns for ellipsis seem to mirror this, though they tend towards behaving as true suppletive nouns, similar to \textit{padre/madre} ‘father/mother’, \textit{hombre/mujer} ‘man/woman’, or \textit{rey/reina} ‘king/queen’.

The three way division of subclasses for Class III nouns is further supported by acceptability judgments from speakers regarding the following sentences\textsuperscript{45}:

\begin{enumerate}
\item \textit{Acudieron todos los marqueses:} Antonio, Fernando, attended all.M.PL the.M.PL marquee.M.PL Antonio Fernando Esther y Agustin.
\item \textit{Acudieron todos los condes:} Antonio, Fernando, Esther attended all.M.PL the.M.PL count.M.PL Antonio Fernando Esther y Agustin.
\item *\textit{Acudieron todos los príncipes:} Antonio, Fernando, Esther attended all.M.PL the.M.PL prince.M.PL Antonio Fernando Esther y Agustin.
\end{enumerate}

\begin{quotation}
\textit{All of the marqueses attended: Antonio, Fernando, Esther, y Agustin.}
\textit{All of the counts attended: Antonio, Fernando, Esther, y Agustin.}
\textit{All of the princes attended: Antonio, Fernando, Esther, y Agustin.}
\end{quotation}

For Class III b and c nouns, the acceptability is increased as the ratio of males to females increases. This is bolstered by data in (91), where the Class III b noun from (91b) results in less acceptability if there is not a list of male counts of which the female countess forms part:

\textsuperscript{45}10 native Spanish speakers were polled from Spain, Chile, Mexico, and Argentina.
(91) a. Acudieron todos los marqueses, incluso Esther.
attended all.M.PL the.M.PL marquee.M.PL including A Esther
‘All of the marquees attended, including Esther.’

b. *Acudieron todos los condes, incluso Esther.
attended all.M.PL the.M.PL count.M.PL including A Esther
‘All of the counts attended, including Esther.’

Class III nouns exhibit peculiarities in their gender interpretation between singular and plural forms. The plural morpheme is standardly analyzed as a distributive operator, which is a kind of universal quantifier (Link, 1983). Specifically, it takes the denotation $d$ of a singular noun and turns it into something that applies to any group of individuals each of whom makes $d$ true. Thus, if representations such as those in (89) hold, the plural forms of Class III C nouns ought to possess an equivalent presupposition of maleness. This presupposition nevertheless appears to be affected by the semantic number of the group the plural noun denotes.

How do we explain the variability in interpretation evidenced by (90) and (91)? If gender is specified on $n$, the gender of a plurality has implications for the genders of individual members. While Class I and Class II pluralities of masculine gender are fully inclusive, those of feminine gender can only include females:

(92) Class I

a. Acudieron todos los médicos, incluso Esther.
attended all.M.PL the.M.PL doctor.M.PL including Esther
‘All of the doctors attended, including Esther.’

b. *Acudieron todas las médicas, incluso Esteban.
attended all.F.PL the.F.PL doctor.F.PL including Esteban
‘All of the (female) doctors attended, including Esteban.’

(93) Class II

a. Acudieron todos los actores, incluso Esther.
attended all.M.PL the.M.PL actor.M.PL including Esther
‘All of the actors attended, including Esther.’

b. ¿*Acudieron todas las actrices, incluso Esteban.
attended all.F.PL the.F.PL actor.F.PL including Esteban
‘All of the (female) doctors attended, including Esteban.’

For Class III nouns, the presupposition of maleness appears to be more defeasible the larger a plurality becomes. Thus, an alternative explanation is that this class of nouns does not possess $i$[-FEM] gender on $n$, but that there is something else in the noun’s root or morphosyntax that can explain these effects.

As noted before, this class is comprised primarily of kinship and nobility nouns, nouns that are notoriously idiosyncratic in their behavior across constructions. Many of these nouns seem to possess some root denotation that projects their uniqueness and/or locates them in a specific type of relationship: This can be seen with the following data:

(94)  
\begin{tabular}{ll}
\text{a.} & Carlos es *(el) \hspace{1em} \text{rey} \hspace{1em} \text{de España.} \\
 & Carlos is *(the.M.SG) \hspace{1em} \text{king.M.SG of Spain} \\
 & ‘Carlos is *(the) king of Spain.’ \\
\text{b.} & Carlos fue \hspace{1em} \text{rey} \hspace{1em} \text{por dos días/ antes de Felipe.} \\
 & Carlos was king.M.SG for two days/ before (of) Felipe \\
& Carlos was king for two days/ before Felipe.
\end{tabular}

(95)  
\begin{tabular}{ll}
 & *Carlos es \hspace{1em} \text{rey} \hspace{1em} \text{y Felipe también.} \\
 & Carlos is \hspace{1em} \text{king.M.SG and Felipe too} \\
 & ‘Carlos is king and Felipe is too.’
\end{tabular}

(96)  
\begin{tabular}{ll}
 & Sofia es hermana \hspace{1em} *(de Carla). \\
 & Sofia is sister.F.SG *(of Carla) \\
 & ‘Sofia is sister *(of Carla).’
\end{tabular}

(94a) and (95) demonstrate that certain Class III terms are unacceptable in generic contexts or where they do not display uniqueness. (94b) demonstrates that these
contexts are only acceptable if they are bounded in time. (96) shows the necessity of kinship nouns that entail relationships to possess complement structure that reflects that property.

These Class III nouns thus exhibit a property whereby the constructions that they can appear in, and seemingly their corresponding expression of gender, is conditioned by the underlying root meaning. Taking rey as an example, it is possible that the noun possesses a uniqueness or specificity presupposition for this class, something like:

\[(97) \quad [\text{rey}] = \lambda x: x \text{ is unique}\] \[\text{rey}(x)\]

This, in combination with the \([i]^{-\text{fem}}\) feature on \(n\) that induces a maleness presupposition could be what causes the variable acceptability in (94) and (95).

Yet, it is worth entertaining a third possibility that could explain all of the data for Class III nouns without (or in addition to) positing distinct presuppositions for this class. For example, similar to how Class II nouns possess \(ns\) of \([i]^{+\text{fem}}\] that select for a bare \(nP\), Class III could possess \(ns\) that project and require either specifier or complement or both (Adina Williams, personal communication). This would look like (98):

\[(98) \quad nP\]

\[\text{SPEC} \quad nP\]

\[nP\]

\[\text{n}\]

\[\text{i}[\pm \text{fem}]\]

\[\sqrt{\text{princ}}\]

\[\sqrt{\text{complement}}\]
In addition to possessing a structure such as that in (98), relational nouns would denote a semantic type distinct from being a property. For ellipsis, then, acceptability would only be possible if the property interpretation of this noun were somehow contextually isolated to favor felicity. This is possible, as seen in (99-100):

(99) a. *Context:* There is a party for members of various royal European families.
    One of the hosts is identifying the attendees for her friend, and seeing two men together, she explains:
    
    b. Carlos es rey y Felipe también.
       Carlos es king,M.SG and Felipe too
       ‘Carlos is king and Felipe is too.’

(100) a. *Context:* At orientation for kindergarten, the students are instructed to talk and find things they have in common. Sofia and Carla talk, and...
    
    b. Se dan cuenta que Sofia es hermana, y Carla también.
       SE give account that Sofia is sister,F.SG *(of Carla)
       ‘They realize that Sofia is a sister, and Carla is, too.’

Class III nouns thus exhibit variation in their ellipsis acceptability as a result of factors: morphosyntactic structure that either parallels Class I or II or is derivational; uniqueness presuppositions that disfavor ellipsis constructions with nouns that possess similar denotations; and a relational morphosyntax and semantics that presents an obstacle for the contextual restriction in (60) stating that antecedent and elided material must settle the same propositions. Future work can more carefully investigate the relationship between derived and suppletive nouns in this class, as well as the presence of a strong presupposition of maleness on singular masculine forms.
4.4.7 Summary and Remaining Issues

The above analysis of Spanish nouns by class has implications for all three questions that are the focus of this dissertation:

(i) Where is gender located in the nominal spine?

(ii) When is gender interpretable?

(iii) How is gender interpreted?

For (i), I return to the structure in (3), now updated with possible locations for interpretable gender by class. Notably, the structure in (101) is different from before in possessing an additional $nP$ level, which represents the derivational suffixes in Class III:

(101)

Spanish nominal ellipsis data is conclusive that gender is located on $n$, although there are some nominal roots (Class II and IIIC feminine) that additionally entail femaleness and require the gender on $n$ to be assertional in its interpretation.
Ellipsis data regarding (ii) and (iii) is a bit more complex to interpret. I follow Percus (2011) and assume a default presuppositional interpretation for both masculine and feminine gender features. However, these features do not always have to be interpreted. Feminine gender for all noun classes is always interpreted, and Class II and IIIb-c guarantee an entailment of femaleness with assertional gender. Masculine gender seems to be systematically interpreted in Class III singular nouns, although its presuppositional nature is still defeasible. Adopting Percus’ analysis of gender further, the locus of interpretation for gender in Spanish appears to be variable. The following examples (adapted from Italian) possesses two readings depending on where gender is interpreted. Interpretation 1, ‘second female grandchild’, arises when ‘second’ scopes over the feminine gender feature; interpretation 2, ‘female second grandchild’, arises when the gender feature has highest scope.

(102) La segunda nieta suya es rubia.
The.F.SG second.F.SG granddaughter.F.SG their.F.SG is blonde.F.SG

a. Interpretation 1: segunda [[ [NP GDCHILD _____ suya | φ | ʃ fem ] ]

   ‘second female grandchild of theirs’

b. Interpretation 2: [ [ segunda [NP GDCHILD _____ suya ] ] φ | ʃ fem

   ‘female second grandchild of theirs’

Example (102) illustrates perhaps an extreme case of feature movement, when a gender feature cannot combine with the noun because of a type mismatch (above, a relational noun when gender is seeking a property). As Percus notes, different speakers might have different preferences for how far to raise the [ʃ fem] feature, such that some speakers may prefer a high reading, others a low reading, and other who lack a specific preference at all.46 For Spanish, then, to sufficiently answer the question (iii)

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46Percus notes that, for Italian, he has encountered all three types.
of how gender is interpreted, a more in-depth survey of the noun classes and possible interpretations with modifiers is necessary to pinpoint where gender is interpreted and how this may affect the ultimate reading of a construction.

Additional Class I data adds to the discussion of when and how gender features are interpreted. Though constructions like (103a) are felicitous, (103b) is preferred:

(103)  a. ?Marta es médico.
       Marta is doctor.M.SG
       ‘Marta is a doctor.’

   b. Marta es médica.
       Marta is doctor.F.SG
       ‘Marta is a doctor.’

Though médico may not be the preferred form for (103), the following forms are quite productive across speakers:

(104)  Alba es abogado/ doctor/ profesor.
       ‘Alba is a lawyer/ doctor/ professor.’

Forms like abogado, doctor, profesor can be used predicatively with a female subject. These seem to be fossilized forms in the sense that only certain nouns are productive in these constructions, and they appear to lack gender specification (similar to dentista nouns). For speakers who produce and accept these forms, this may be that there exists a root form of these nouns that does not entail natural gender, and thus no gender feature is necessary. Informally, speakers note that sentences like (104) reflect “old” Spanish that used to be taught in school. Formally, the use of a [-FEM] predicate that is coindexed with a female referent needs to be accounted for in the grammar. The above data is complemented with examples like the following:
(105) Alba es abogado *chileno.
Alba is lawyer.M.SG Chilean.M.SG
‘Alba is a Chilean lawyer.’

For (105) to be felicitous, speakers need to inflect the adjective chileno for feminine gender and reconstruct the utterance. It is ineffable to have the adjective in masculine form, as a speaker who attempted to produce the utterance displayed\(^{47}\):

(106) Alba es abogado... chilena... abogada chilena.
Alba is lawyer.M.SG... Chilean.F.SG... lawyer.F.SG Chilean.F.SG
‘Alba is a lawyer... and Chilean... a Chilean lawyer.’

Examples (104-106) demonstrate that certain Class Ib nouns, which typically inflect to show feminine gender, may also behave like Class Ia nouns and be invariant for gender specification. This variation appears to be tied to generational tendencies and/or the fossilization of certain profession-denoting nouns. Interestingly, this tendency seems contrary to the tendency of nouns that inflect for feminine gender to both presuppose and entail female gender. On one hand, as certain nouns are fossilizing in their (masculine) default noun, those nouns that express feminine gender express it in a stronger manner than, say, Brazilian Portuguese. This may be simply a characteristic of the Spanish gender system, or a result of the changing hierarchy of gender markedness in Spanish, ideas that I will return to in chapter 4.4. The examples above additionally suggest that the feminine form necessitates additional structure that allows for agreement features to surface.

Apart from discussion of how ellipsis data sheds light on this dissertation’s central questions, I mention several issues that remain to be addressed within the paradigm

\(^{47}\)Nevertheless, Jose es *(un) abogado chileno, in masculine form, is ungrammatical for some speakers, as well, suggesting that the explanation may be more structural than agreement based.
presented in this chapter. First, there is a gap in the paradigm in Spanish in that there is no masculine-feminine pair that has a lexically specified gender only on the masculine noun (i.e. the opposite of *actor/actriz* ‘actor/actress’). This is likely to be due to the general unmarkedness of masculine relative to feminine in Spanish—a trait that seems to hold across Indo-European languages—such that masculine gender can often be used in a gender-neutral manner as an “elsewhere” gender. There are languages where feminine seems to be the less marked gender compared to masculine (see Kramer, 2015:Ch.5), and there might well be pairs where the masculine noun has a lexically specified gender and the feminine does not (see Percus, 2011 for related discussion). Thus, the gender system in Spanish is not representative of a universal unmarked masculine gender.

Second, I do not provide an exhaustive list of which nouns fall into which class. As the multi-tiered division of classes evidences, though nouns may fall into one of the three classes, the root denotations of the nouns themselves also impact their behavior in regards to how their gender is interpreted. This is the case, for example, with *esposo/esposa* ‘spouse.M/spouse.F’. Though superficially a member of Class I (similar to *médico/médica* ‘doctor.M/doctor.F’), the gender inference that results from these nouns seems stronger than of other Class I pairs. Thus, the following contrasts are observed:


Sandra is going to the doctor today. Patricia is a specialist in women’s health.
b. Alfredo lleva cinco años con su [esposo/esposa]. Denise
Alfredo has five years with [spouse.M.SG/F.SG]. Denise
también es argentina pero se conocieron en Georgetown.
also is Argentine but they met at Georgetown
Alfredo has been with his [male/female] spouse for five years. Denise is
also Argentine, but they met at Georgetown.

Apart from the robust generalization that all epicene nouns lack gender specified
on n, there do not seem to be other stable morphological or semantic cues as to
which nouns belong to which class. Morphology alone does not seem to determine the
classification, and this is likely a result of the complex interaction between gender and
noun class in Spanish (see Vadella, 2017; Kramer, 2015; Harris, 1991). Nor is semantic
criteria a consistent predictor of classification: while kinship and royalty terms seem
to group in Class III, there are exceptions to this (hermano/hermana ‘brother/sister’
potentially, and marqués/marquesa ‘marquess/marchioness’ patterns with Class I). As
acceptability judgments for ellipsis constructions in Spanish are quite variable, too,
class membership may also be a matter of inter-speaker variation.48 For example, for
some speakers, Class I nouns behave like Class II nouns, where a feminine antecedent
is unacceptable in all cases. More systematic research is needed to elucidate individual
variation, which I leave for future work.

Third, the class division made in this chapter aligns with the same three classes
in other languages such as Brazilian Portuguese (BrP) and Greek. Between these
languages, noun pairs are not stable. As noted in comparison to Greek, Spanish divides
Class I into epicene nouns like víctima ‘the victim’ that always lacks gender on n, and
nouns like médico/médica ‘doctor.M/doctor.F’ that possess presuppositional gender
on n. Additionally, while tio/tia ‘uncle/aunt’ in BrP are Class I, the same pair of

48Both Bobaljik & Zocca (2011) and Merchant (2014) allude to this possibility, as well.
nouns in Greek is Class II (again, taking into account inter-speaker variation). These issues lead to important questions concerning the acquisition of nouns and their class assignment, a question I leave for future research.

4.5 CONCLUSION

This chapter has developed an analysis of Spanish nominal ellipsis that explains asymmetries observed in ellipsis acceptability between noun classes and between gender features. Building off previous work on Spanish nominal ellipsis and cross-linguistic ellipsis asymmetries, I presented an analysis of ellipsis in three distinct noun classes in Spanish that integrates three principal ideas. First, ellipsis licensing in Spanish requires elided material to constitute a subset of its antecedent with the contextual restriction that both nouns settle the same propositions. I presented an analysis of gender in Spanish in line with Percus’ (2011) analysis of gender in Italian, such that the default interpretation for both masculine and feminine gender is presuppositional in nature. I additionally argued for the existence of assertional feminine gender that entails femaleness in two separate noun class of Spanish: Class II nouns, in which the root itself entails femaleness and selects for feminine gender; and Class III nouns, which display characteristics of both Class II nouns and possess a subclass of derived feminine nouns for which the affix possesses assertional gender. This analysis of gender interacts with the contextual restriction on ellipsis in Spanish to explain the asymmetrical acceptabilities observed. Second, nominal ellipsis in Spanish is the result of postsyntactic processes that reduce the feature set of a given node to the empty set in the context that the condition in (i) is met, a process labelled *Total Impoverishment* Murphy (2016). Finally, further asymmetries in acceptability noted between and within nominal classes result from differences in the semantic
weight of gender either as presuppositional or assertional, as well as whether or not the root possesses a specific presupposition of uniqueness that interacts with the expression of gender. Finally, I presented several possibilities for the variation observed in ellipsis acceptability in Class III nouns, concluding that the interaction of a relational semantics and morphosyntax, uniqueness presupposition, and particular noun morphosyntax can explain these patterns.

The data presented in this chapter supports of view of gender in Spanish nouns that locates it on \( n \), but that is conditioned by the denotation of the root itself. Additionally, while feminine gender is always interpreted, masculine gender is more often left uninterpreted or as a defeasible presupposition. Remaining issues include identifying the locus of interpretability for gender apart from its morphosyntactic expression. This latter phenomenon, of nominal concord, is what I discuss in the next chapter.
5.1 Introduction

Closest conjunct agreement (CCA) occurs in DPs with a conjunction of Ns when an element that agrees with N (D or AP) agrees only with the closest member of the coordination yet modifies the entire conjunction. The pattern is attested for subject-verb agreement in several languages (e.g. Aoun et al. (1994) for varieties of Arabic; Johannessen (1996) for Czech; Benjamoun et al. (2009) for Hindi and Tsez; Bošković (2009) for Serbo-Croatian), and for DP modifiers in Brazilian Portuguese (Villavicencio et al. (2005)) and Catalan (Bonet (2013)). Example (1) illustrates the phenomenon in English, and (2) in Spanish. In both examples, D agrees with the first noun of the coordination (first conjunct agreement) although the coordinate structure is interpreted as plural, as evidenced by subsequent verb agreement:

(1) This boy and girl are/*is eating a pizza. (King and Dalrymple, 2004)

(2) En principio se entiende por hijos matrimoniales aquellos cuya madre y padre están casados entre sí.
‘In principle we take as marital children those whose F.SG mother F.SG and father M.SG are PL married M.PL to each other.’ (El Mundo (Madrid), 9 Dec. 2004)\(^1\)

\(^1\)Real Academia Española. Banco de datos en línea. Corpus de referencia del español actual (CREA). <http://www.rae.es>
The constructions in (1) and (2) are characterized semantically by having a *split reading*, whereby the N conjuncts are interpreted as unique, individual referents. The conjunct as a whole thus denotes a set of individuals, or a plurality. The same structure may also induce a *joint reading*, in which the N conjuncts refer to the same individual. Singular agreement on the verb signals the resulting interpretation of the coordinate structure as one of a singular, not plural, entity:

(3) My friend and esteemed colleague is at the event.

(4) El insigne historiador y arqueólogo publicó...

‘The distinguished historian and archeologist published...’ (Demonte & Pérez Jiménez 2012)

This chapter examines CCA for postnominal APs in apparent split reading structures of type [D N & N], as seen in (2). Data from Spanish plural coordinate structures provides an entry example of CCA in the language. (5a) presents the canonical example of resolving\(^2\) mixed gender coordinates to masculine plural agreement, while both (5b) and (5c) exhibit CCA:

cuban.M.PL
‘The song inspires Cuban hearts and minds.’

b. ¿Esta canción anima los corazones y mentes this song animates the.M.PL heart.M.PL and mind.F.PL cubanas.
cuban.F.PL
‘The song inspires Cuban hearts and minds.’

\(^2\)The notion of gender “resolution” will be discussed further in 5.2.1. In general, the following rules apply: F+F→F; F+M→M; M+M→M.
c. Esta canción anima las/*los mentes y corazones
this song animates the.F.PL/*the.M.PL mind.F.PL and heart.M.PL
cubanos.
cuban.M.PL
‘The song inspires Cuban hearts and minds.’

The discussion in this chapter will focus on examples such as (5b), where postnominal AP agrees only with the second conjunct but is interpreted to scope over both conjuncts. I will first review possible types of coordinate structures and accompanying nominal concord patterns found in Spanish (5.2). I then provide data from a corpus study of CCA in Spanish coordinate structures of definite plural N conjuncts for empirical basis (5.3). Corpus data is important supplementary material to grammaticality judgments, as the scope and frequency of CCA patterns in Spanish is not well documented. Additionally, corpus data provides examples of CCA in natural language, unconstrained by prescriptive rules often followed in formal texts and grammars. The corpus data is supplemented with additional data from definite and bare singular N conjuncts, as well as from cases that exhibit CCA on D and prenominal AP. Following, I will review three distinct previous proposals to explain CCA patterns in Spanish that each formalize a different intuition about these types of constructions (5.4).

Data from the corpus study shows that CCA is a productive agreement strategy for both prenominal and postnominal elements in Spanish coordinate structures of type [D N & N]. My analysis claims that both prenominal (5b) and postnominal (5c) CCA is the result of the interaction between syntactic and semantic features Wechsler and Zlatić (2003) (section 5.5) and the result of a joint-split reading of the coordinate structure, a reading in which two conjuncts that could otherwise be interpreted as distinct objects or individuals are interpreted as a unit or part of a
larger whole. Specifically, for cases like (5c), prenominal AP and D display syntactic agreement features in an Agree relation with N₁. In such a scenario, postnominal AP fails to agree with the conjunction phrase as a unit due to the nature of its probe and the featural makeup of ConjP, and post-syntactic processes that act on gender and number features as a unit are responsible for the observed CCA.

Important to the discussion and analysis presented in this chapter is the role of BNs in a [D N & N] construction. As seen in previous chapters, BNs are number neutral and often lack interpretable gender features. This has implications for the featural make-up of the coordinate phrase as a whole (ConjP), a current area of CCA research (Nevins and Weisser 2019). The principles governing the interaction of coordination and agreement processes are an additional area of current research and connects directly to the featural status of ConjP. This chapter thus contributes to the discussion about both of these topics and will conclude that, for Spanish coordinate structures involving BNs, ConjP does not possess a full set of features and directly impacts possible agreement strategies.

5.2 Concord in Spanish Coordinate Structures

5.2.1 Definitions

I understand nominal concord to be agreement within the nominal domain (DP-internal). Whether or not this agreement process mirrors that of Agree for the clausal domain is a question of current research (see Norris (2014, 2017) for extensive discussion).

I follow Corbett (2006) in understanding an agreement relationship as one that holds between an agreement controller and an agreement target. The controller enters the derivation already in possession of features relevant to agreement, while the target is
the element whose form is determined by agreement with the controller. For nominal (DP-internal) agreement in Spanish, the agreement controller is the noun, while modifying elements such as D and A are agreement targets:

(6) a. La blanca paloma
    the.F.SG white.F.SG dove.F.SG
    ‘the white dove’

    b. Esos libros viejos
    ‘those old books’

Agreement also occurs between a clitic pronoun and its antecedent or referent:

(7) a. A tus hijas las vi ayer
    to you.POSS.PL daughter.F.PL it.F.PL I-saw yesterday
    ‘I saw your daughters yesterday’

    b. Les di tu teléfono a los chicos
    it.PL I-gave you.POSS.SG telephone to the.M.PL kids.M.PL
    ‘I gave your telephone number to the kids’

Finally, agreement occurs between the subject and its attribute, predicate, or participle as part of the passive periphrastic construction:

(8) a. Mi hijo es un santo
    me.POSS.SG son.M.SG is a.M.SG saint.M.SG
    ‘My son is a saint’

    b. Ella se encontraba cansada
    she.F.SG REF found tired.F.SG
    ‘She found herself to be tired’

    c. Esas casas fueron construidas a principios de siglo
    that.F.PL house.F.PL were constructed.F.PL at beginning of century
    ‘Those houses were built at the beginning of the century’
As seen in chapter 3, the bare forms of (6a) and (8a) are ungrammatical unless part of very particular constructions. Similarly, the bare plural counterparts of (6b) and (8c) are also found in very limited distribution. Nevertheless, as the data in this chapter will show, bare singular (BN) and plural (BP) forms appear consistently as conjuncts of type \([N & N]\) and as the second conjunct of type \([D N & N]\), suggesting that the coordinate structure is amenable to such forms and permits a wider distribution.

5.2.2 Two Types of Coordination

Descriptively, two syntactic strategies for coordination exist in Spanish that correspond to the above-noted split readings (1-2) and joint readings (3-4), respectively. For split readings, when two or more distinct entities are coordinated, the preferred structure is for each entity to be preceded by its own determiner:

(9) a. Consiguieron que la madre y la hija
they-obtained that the.F.SG mother.F.SG and the.F.SG daughter.F.SG
se repusieran de las contusiones
REF recovered of the contusions
‘They were able to help the mother and the daughter recover from the contusions.’ (Allende Casa [Chile 1982])

b. Este permiso podrá ser disfrutado indistintamente por la
this permissions will be enjoyed equally by the.F.SG
madre o el padre
mother.F.SG or the.M.SG father.M.SG
‘This leave will be able to be enjoyed by the mother and the father alike.’

(Estatuto [Esp. 1985])

c. Se hizo uso ilegal de mi capital y mis acciones
SE made use illegal of my.SG capital.M.SG and my.PL share.F.PL
bursátiles
stock-market.M.PL

3This descriptive account is adapted from the Real Academia Española’s Diccionario Panhispánico de dudas: http://www.rae.es/recursos/diccionarios/dpd.
‘An illegal use of my money and stock-market shares was made.’ (Proceso [Méx.] 9.2.97)

For joint readings where the coordinated nouns refer to the same entity, it is possible for there to be only one determiner that precedes both conjuncts. This determiner ought to agree in gender and number with the closest NP:

(10) a. La manera de preparar la mamadera o
the manner of to-prepare the.F.SG baby-bottle.F.SG or
biberón
feeding-bottle.M.SG
‘The way to prepare the baby-bottle or feeding-bottle’ (VV. AA. Mamar [Arg. 1983])

b. Según la esposa y representante de Mingote,
according-to the.F.SG wife.F.SG and representative.SG of Mingote
Isabel Vigliola
Isabel Viguila
‘According to the wife and representative of Mingote, Isabel Vigliola.’
(País [Esp.] 1.2.89)

A sole determiner may also be used when a prenominal AP that modifies both conjuncts precedes the coordinate structure (11) or when the conjuncts are understood as a unit and refer to parts of a larger whole (12):

(11) a. Construyó también un horno criollo para cocer su
constructed also a oven homemade for to-cook POSS.3.SG
propio pan y pizza a la piedra
own.M.SG bread.M.SG and pizza.F.SG at the stone
‘(S)he also constructed a homemade oven to cook his/her own bread and
pizza on the stone.’ (Chavarría Rojo [Ur. 2002])

4The coordination in (11) may also be constructed as follows: su propio pan y su propia
pizza ‘his/her own bread and his/her own pizza.’

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(12) a. En mérito a **vuestra** empeño y dedicación in merit to you.POSS.2.SG determination.M.SG and dedication.F.SG
   ‘In honor of your determination and dedication’ (Ventosilla Mariscal [Perú 1985])

   b. Las **ventanas** y balcones estaban herméticamente
      the.F.PL window.F.PL and balcony.M.SG were hermetically
      cerrados
      closed.M.PL
      ‘The windows and balconies were hermetically sealed.’ (Mendoza Verdad [Esp. 1975])

In (11), the nouns *pan* ‘bread’ and *pizza* ‘pizza’ are understood as separate objects. (11) is then a split reading semantically, although it displays the same syntactic modification strategies as employed in (10) for joint readings. In (12), the readings are described as intermediate between joint and split. Though *empeño* ‘determination’ and *dedicación* ‘dedication’ are distinct character traits, they may be understood to form a unit (presumably, as elements of one’s overall character). Similarly, *ventanas* ‘windows’ and *balcones* ‘balconies’—distinct elements of a residence—may be understood as subcomponents of a larger whole.

When a postnominal AP modifies two or more conjuncts in a split reading, it typically must be plural and either agree with both conjuncts in gender (if the same) or surface as masculine (if mixed gender) (see fn. 2):

(13) a. Tiene el pelo y la barba **enmarañados**
   he-has the.M.SG hair.M.SG and the.F.SG beard.F.SG tangled.M.PL
   ‘His hair and beard are tangled’ (Matos Noche [Cuba 2002])

   b. Apareció [...]. vestida con traje y mantilla **blancos**
      she-appeared [...] dressed with suit.M.SG and shawl.F.SG white.M.PL
      ‘She appeared... dressed in a white suit and white shawl.’ (Hernández Secreter [Esp. 1995])
If postnominal AP agrees only with the second conjunct, it is ambiguous whether or not it modifies both conjuncts:

(14) Apareció [...] vestida con traje y mantilla blanca
    she-appeared [...] dressed with suit.M.SG and shawl.F.SG white.F.SG
    ‘She appearead... dressed in a white suit and (?white) shawl.’

As with prenominal AP, if the coordinate structure induces a joint reading in which the conjuncts may be understood as forming a unit, postnominal AP may agree in gender and number with the conjunct closest to it:

(15) La gente de origen y habla francesa predomina en
    the people of origin.M.SG and language.F.SG French.F.SG predominate in
    la provincia de Quebec
    the province of Quebec
    ‘People of French origin and French language predominate in the province of
    Quebec.’ (Tiempo [Col.] 1.7.98)

A question that arises from the difference in interpretation between sentence (14) and (15), as well as between (11) and (12), is how to diagnose whether or not a coordinate structure induces a joint reading. Is this diagnostic morphosyntactic, semantic, or possibly pragmatic? (15), interpreted unambiguously as a joint reading, incurs the scoping of postnominal AP more than (14), which is ambiguous between joint and split. This may be due to the fact that, in (15), the first conjunct origen ‘origin’ is infelicitous without further modification. Whether or not francesa ‘French’ syntactically modifies the noun, it is ultimately interpreted as modifying the first conjunct in addition to the second conjunct, with which it syntactically agrees. In

---

5 A preference for the postnominal AP to only modify the second conjunct in (14) may be due to the fact that ‘suit’ and ‘shawl’ do not typically form a unit. (14) stands in contrast to (15), which clearly form a unit—the notion of which will be discussed throughout this chapter. A question for future research is the influence of the final vowel -e on the first conjunct traje, which superficially is ambiguous for gender.
(14), the situation is slightly different. The first conjunct, *traje*, is felicitous whether or not it is modified by an adjective. Thus, (14) is interpreted with more ambiguity than (15).

Analysis of a slightly different coordinate structure may shed light on how to disambiguate between split and joint readings. For coordinate structures of type [N & N] with two bare nouns (BNs), numerous authors have observed that these constructions are productive, especially when they constitute lists (Alonso, 1933; Lapesa, 1996; Bosque, 1996).\(^6\) For example:

\[(16) \quad \text{a. Madre e hijo permanecieron allí breves días.} \quad \text{mother.M.SG and child.M.SG remained there brief days} \]
\[
\quad \text{‘Mother and child remained there for a few days.’} \\
\text{b. Compré lápiz y papel.} \\
\quad \text{I-bought pencil.M.SG and paper.M.SG} \\
\quad \text{‘I bought pencil and paper.’} \\
\]

Contreras has observed that these constructions are only permissible with stage-level predicates, and that individual-level predicates are unacceptable. The following sentences are thus ungrammatical:

\[(17) \quad \text{a. *Madre e hijo eran altos.} \quad \text{mother.M.SG and child.M.SG were.IMP tall.M.PL} \]
\[
\quad \text{‘Mother and child were tall.’} \\
\]

---

\(^6\)As seen in chapter 3, these examples recreated with a single bare noun are unacceptable:

\[(17) \quad \text{a. *Madre permaneció allí breves días.} \quad \text{mother.M.SG remained there brief days} \]
\[
\quad \text{‘Mother remained there for a few days.’} \\
\text{(b) *Compré lápiz.} \\
\quad \text{I-bought pencil.M.SG} \\
\quad \text{‘I bought pencil.’} \\]
b. *Tortillas y café son caros.

\textit{tortilla.F.PL and coffee.M.SG are expensive.M.PL}

‘Tortilla and coffee are expensive.’

Thus, though these coordinated BNs are less syntactically restricted, they appear to be subject to the same modification restrictions as the BNs discussed in chapter 3.

Unaccounted for in traditional Spanish grammars are constructions of [D N & N] that induce a split reading. Such cases are presumed to be ungrammatical and not exist. The following examples are severely unacceptable as split readings of [D N & N] in Spanish, even as gender is controlled for:

\begin{enumerate}
\item \begin{enumerate}
\item *En el bar vi a un soldado y marino.

\item *El soldado y marino estaban luchando.

\textit{the.M.SG soldier.M.SG and sailor.M.SG were fighting}
\item *Ese soldado y marino se han odiado siempre.

\textit{that.M.SG soldier.M.SG and sailor.M.SG REFL have hated always}
\end{enumerate}
\end{enumerate}

These interpretations change, however, if the conjuncts are introduced by a singular quantifier such as \textit{cada} ‘each’, \textit{todo} ‘every’, or \textit{cualquier} ‘any’:

\begin{enumerate}
\item \begin{enumerate}
\item En el bar vi a todo soldado y marino.

\textit{in the bar I-saw ACC all.SG soldier.M.SG and sailor.M.SG}

‘I saw every soldier and sailor at the bar.’
\item Cada soldado y marino estaba luchando.

\textit{each.SG soldier.M.SG and sailor.M.SG was fighting}

‘Every soldier and sailor was fighting.’
\end{enumerate}
\end{enumerate}

As part of the broader investigation of possible readings and agreement patterns of [D N & N] coordinate structures, this chapter will investigate whether such split readings of [D N & N] without a quantifier are possible. A complete summary of
Table 5.1: Attested Coordination Patterns in Spanish.

<table>
<thead>
<tr>
<th>Type</th>
<th>Num on Ns</th>
<th>Joint?</th>
<th>Split?</th>
<th>Pre. CCA</th>
<th>Post. CCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>[[DN] &amp; [DN]]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>singular</td>
<td>x</td>
<td>✓</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>plural</td>
<td>x</td>
<td>✓</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>[D N &amp; N]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>singular</td>
<td>✓</td>
<td>? (cf. (19))</td>
<td>✓ (oblig.)</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>plural</td>
<td>✓</td>
<td>✓</td>
<td>✓ (oblig?)</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>[N &amp; N]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>singular</td>
<td>✓</td>
<td>✓ (cf. (17))</td>
<td>?</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>plural</td>
<td>?</td>
<td>✓ (cf. (17))</td>
<td>?</td>
<td>?</td>
<td></td>
</tr>
</tbody>
</table>

coordination types and corresponding possible agreement patterns (to be discussed next in 5.2.3) may be seen in Table 5.1. Question marks indicate that there is insufficient evidence to determine whether certain readings or agreement patterns are possible. As evident from the table, [D N & N] structures merit an analysis for postnominal CCA. Additionally, this chapter will look at another variety that lacks a descriptive account: [N & N]. The readings and agreement patterns that such structures allow will offer further insight into the types of coordinate structures that may exist in Spanish and how the syntax and semantics of coordinate structure in Spanish interact.

5.2.3 Agreement in Coordination

This section specifically discusses attested agreement strategies in Spanish coordinate structures to situate the above discussion of distinct types of coordination in the context of concord. In a [D N & D N A] construction for a split reading, full agreement on postnominal AP is always possible. I understand full agreement as agreement in gender and number with both conjuncts. Two distinct conjuncts necessarily invoke plural agreement on a modifier of both; if the conjuncts differ in their gender,
agreement resolution defaults to the masculine, inclusive form (see chapter 4). Partial agreement is evidenced by a modifier agreeing in gender and/or number with only one of the two conjuncts.

In (20), full agreement is evidenced. In (20a), both singular Ns are masculine, AP is masculine, plural. In (20b), the singular Ns show different genders, and AP shows masculine, plural agreement. In (20c), both Ns are feminine, and AP is feminine, and plural. In all examples, AP has scope over both N conjuncts (Camacho, 2003):

(20) a. El secretario y el coordinador
    peruanos
    peruvian.M.PL
    ‘The Peruvian (male) secretary and the Peruvian (male) coordinator’

    b. El secretario y la coordinadora
    peruanos
    peruvian.M.PL
    ‘The Peruvian (male) secretary and the Peruvian (female) coordinator’

    c. La secretaria y la coordinadora peruanas
    the.F.SG secretary.F.SG and the.F.SG coordinator.F.SG peruvian.F.PL
    ‘The Peruvian (female) secretary and the Peruvian (female) coordinator’

The patterns in (20) hold when the N conjuncts are plural, as well. AP may optionally scope in (21a) and (21c); it obligatorily scopes in (21b):

(21) a. Los secretarios y los coordinadores
    peruanos
    peruvian.M.PL
    ‘The Peruvian secretaries and the Peruvian coordinators’
Complication arises when the second N conjunct lacks D, both in singular (22) and plural (23). In such structures, though both conjuncts receive a definite interpretation, D is only pronounced preceding the first conjunct. Agreement on D varies depending on the gender and number of the first noun Demonte and Pérez-Jiménez (2012):

(22) a. El trigo y sorgo disponible
‘the wheat and sorghum available’

b. La agricultura y ganadería europeas
the.F.SG farming.F.SG and cattle.F.SG european.F.PL
‘The European farming and cattle industries’

In the singular examples in (22), D agrees in both gender (masculine (22a) or feminine (22b)) and number (singular) with leftmost conjunct. In the same examples, AP shows variable agreement in gender: it either agrees with the resolution of both conjuncts (masculine (22a), feminine (22b)), or the rightmost conjunct; it is impossible to deduce if gender agreement is separate from number agreement. AP alternates agreement in number: showing singular agreement with the rightmost conjunct in (22a) and plural agreement with the two conjuncts together in (22b). The status of the examples in (22) as split reading coordinate structures is dubious. Though (22b) exhibits a plural postnominal AP, suggesting a split reading, the prenominal, singular D follows agreement patterns for a joint reading. In (22a), the coordinate structure exhibits
agreement patterns for a joint reading, suggesting that wheat and sorghum comprise a unit similar to the sentences in (12).

The plural examples in (23) exhibit a bit more ambiguity as to their underlying structure, as the plural nature of the conjuncts and plural verb agreement for both joint and split readings make it difficult to dissociate agreement patterns (Web-Dialects; CdE:New) (Davies, 2016):

(23) a. Los partidos y movimientos políticos
   ‘the political parties and movements’

   b. Los trabajadores y trabajadoras domésticos
   ‘The domestic workers’

   c. Las trabajadoras y trabajadores domésticos
   ‘The domestic workers’

   d. Los pasos y herramientas adecuadas
   ‘The adequate steps and tools’

   e. ?*Las obreras y obreros despedidas
   the.F.PL worker.F.PL and worker.M.PL laid-off.F.PL
   ‘The laid-off workers’

In (23), D is ambiguous between agreeing only with the first conjunct or with the coordinate structure as a whole in (a), (b), and (d); D agrees in gender only with the first conjunct in (23c) and (23e). In all plural examples in (23), D agrees in number with the first conjunct (plural) or the coordinate structure as a whole (again, it is impossible to know which). In the same examples, AP similarly agrees in number either with the rightmost conjunct or the coordinate structure as a whole. AP alternates for agreement in gender: it may canonically resolve to masculine gender
(23b), or it may assume the gender of the closest conjunct (23d). Cases (23c) and (23d) are examples of CCA, the main subject of this study.

5.3 SOURCE OF THE DATA AND BASIC PARADIGM

5.3.1 CORPUS ANALYSIS

This section contains data pertaining to the corpus analysis that was conducted for this chapter. The corpus analysis, and the resulting data, provide a firm empirical basis for the theoretical analysis in section 5.5. The goal of the corpus analysis was to determine the nature and frequency of non-canonical agreement patterns in structures of mixed gender N conjuncts, outlined in (24) and (25):  

(24) CCA in singular conjuncts

(25) CCA in plural conjuncts

The structures in (24) and (25) superficially reflect the structure for a joint reading in Spanish. Thus, part of the corpus search was to survey the number of joint versus

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7 For reference again, “canonical” or resolved agreement for the constructions in (24) and (25) is masculine gender on postnominal AP.

8 Note: (25a) and (25b) do not reflect CCA per se, as masculine plural agreement on postnominal AP (25a) and D (25b) is expected if modifying conjuncts of mixed gender. This case is difficult to tease apart as genuine CCA, as the number will be plural regardless of the gender of the conjuncts. I analyze this pattern regardless to see whether or not split readings are possible and how its frequency compares to others.
split readings for these constructions. As a point of comparison, I will also investigate the following coordinate structures with bare singular nouns:

(26) CCA in bare singular conjuncts

\[\text{a. } [\text{DP? } N_1 \text{[M.SG]} \text{ y } N_2 \text{[F.SG]} \text{ A? } ] \]
\[\text{b. } [\text{DP? } N_1 \text{[F.SG]} \text{ y } N_2 \text{[M.SG]} \text{ A? } ] \]

Question marks occupy the structure in (26) in two places: (i) on DP, as it is unclear if two bare Ns form a complete DP, given their outlined structure in chapter 3; and (ii) on postnominal AP, as it remains to be seen how agreement is manifested on postnominal AP and whether this corresponds with joint versus split readings.

**Methodology**

To estimate the approximate frequency with which the agreement strategies in (24-25) are used, a directed corpus-based investigation was performed first on plural conjuncts preceded by a definite article. To perform the analysis, searches for occurrences of conjoined NPs followed by plural adjectives that overtly reflect gender were conducted. All data comes from the Corpus del Español (Web-Dialects; CdE:New) (Davies, 2016), a corpus of roughly 5.5 billion words drawn from magazine and newspaper articles on the Web from 21 different Spanish-speaking countries from 2012 to present day. The searches used the following syntax in accord with guidelines for the corpus: los NOUN y NOUN ADJ (for conjuncts headed by masculine plural Ns); and las NOUN y NOUN ADJ (for conjuncts headed by feminine plural Ns). Given that the search syntax cannot specify for gender of the postnominal AP, examples of mixed gender conjuncts were extracted manually.
After the initial search for plural conjuncts, I conducted a search for singular and bare conjuncts corresponding to the structures in (24) and (26). As this search was conducted at a later point, the corpus in question had increased in size, and the search query described above was invalid. As a result, the searches for singular and bare coordinate structures was targeted to specific nouns that are commonly coordinated, described below.

As the goal of the current chapter is to analyze the correlation between the gender of the N conjuncts and the gender of the postnominal AP, only adjectives that overtly reflect gender distinctions were used. Additionally, structures that follow the search syntax above but that display a second, singular N conjunct (e.g. $[DP \ D \ N_1[FPL] \ y \ N_2[MSG] \ A]$) were not included in final counts. Examples of interest were then followed up with informal interviews with native Spanish speakers, both to verify data and to complement corpus data (text-based) with spoken data.

**Results**

A search for ‘*los NOUN y NOUN ADJ*’ (for conjuncts headed by masculine plural Ns) returned 25,966 total results; ‘*las NOUN y NOUN ADJ*’ (for conjuncts headed by feminine plural Ns) returned 20,229. The current chapter reports data from the 25 most and least frequent constructions of all possible combinations between D, N₁, N₂, and A to obtain a representative sample: the most frequent constructions illustrate coordinate structures that are widely accepted across genre and dialect, while the least

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9 Adjectives in Spanish fall into two classes regarding gender agreement: (i) those that inflect for feminine and masculine (e.g. *alto* ‘tall.M’ vs. *alta* ‘tall.F’); and (ii) those which are invariable with respect to gender marking (e.g. *interesante* M/F ‘interesting’, *actual* M/F ‘current’). Examples such as the following were not counted in the current study: *Los niños y niñas menores* ‘the.M.SG boys.M.PL and girls.F.SG young.PL’.

10 Such examples will be addressed in the discussion of the data in 5.3.2.

11 About 10 informants total were interviewed, the informants being from Colombia, Chile, Mexico, and Argentina.
frequent constructions give insight onto specific usages of coordinate structure unique to genre or dialect (which nevertheless may be considered as attested in the grammar). General results are displayed in Table 5.2. Case (a) (and potentially (c)) corresponds to canonical agreement (i.e. masculine plural/default resolution agreement in mixed gender coordinate structures); cases (b) and (c) to CCA; and case (d) to feminine plural resolution agreement of a mixed gender coordinate structure.

I manually searched for and analyzed about 400 instances of singular conjuncts with both pre- and postnominal APs. These searches consisted of the following queries: *el hombre y mujer* ‘the man and woman’ ADJ (25); *la mujer y hombre* ‘the woman and man’ ADJ (10); *el hombre y* ‘the man and’ NOUN ADJ (10); *La radio y televisión* ‘the radio and television’ ADJ (343); *La madre e hijo* ‘the mother and child’ ADJ (2); *La madre e hija* ‘the mother and daughter’ ADJ (5). Additionally, the following searches of bare conjuncts returned about 21,000 results: *madre e hijo* ‘mother and child’ (4322); *madre e hija* ‘mother and daughter’ (7281); *padre y madre* ‘father and mother’ (3004); *madre y padre* ‘mother and father’ (1066); *hermano y hermana* ‘brother and sister’ (255); *hermana y hermano* ‘sister and brother’ (72); *padre e hija* ‘father and daughter’ (2560); *trabajador y trabajadora* ‘(male) worker and (female) worker’ (132); *trabajadora y trabajador* ‘(female) worker and (male) worker’ (19); *rey y reina* ‘king
and queen’ (356); reina y rey ‘queen and king’ (232); príncipe y princesa ‘prince and princess’ (46); princesa y príncipe ‘princess and prince’ (9); esposo y esposa ‘husband and wife’ (93); esposa y esposo ‘wife and husband’ (26); actor y actriz ‘actor and actress’ (650); actriz y actor ‘actress and actor’ (239); hijo e hija ‘son and daughter’ (365); hija e hijo ‘daughter and son’ (84).

Before analyzing the results in detail, general results suggest that both CCA and canonical agreement patterns are available for all types of coordinate structures considered in the search, but that CCA is the preferred agreement strategy for Spanish coordinate phrases of type [D N & N]. Case (b), undeniably CCA, represents 37% of the data, while case (c) (a potential candidate for CCA) represents 40% (77% total).

5.3.2 The Basic Paradigm

Examples from each case type of plural conjuncts of form [D N & N] are presented in (27) with excerpts of surrounding context from the original source. Examples corresponding to each case below are attested for singular conjuncts, as well, and discussed further in 5.3.4. Case letters from Table 5.2 correspond to example letters:

(27)  a. Canonical agreement (possible prenominal CCA)12

...convoca a [todos los hombres y mujeres convenes to all.M.PL the.M.PL man.M.PL and woman.F.PL honestos] de esta planeta honest.M.PL on this planet

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12As noted above, it is difficult to diagnose whether or not the examples noted as “possible” prenominal CCA are CCA or agreement with the conjunction phrase, due to the plural nature of the conjuncts.
b. **Postnominal CCA (possible prenominal CCA)**

...las condiciones necesarias para el ejercicio de [los] derechos y libertades públicas... 

and liberty.F.PL public.F.PL

c. **Prenominal CCA (possible postnominal CCA)**

...con su ejemplo y conocimientos de [las] virtudes y valores humanos] puedan educar a sus hijos. 

value.M.PL human.M.PL they can educate their children

d. **Prenominal CCA, postnominal first-conjunct agreement (rare)**

[Las opiniones y comentarios alojadas] en este blog lo son a título personal... 

blog it are as license personal

The important observation from the data is the preponderance of CCA cases (cases (c) for D (40%), and cases (b) for postnominal A (37%)) as compared to canonical gender resolution agreement in conjunction of mixed gender Ns (case a). Each individual case of CCA (b and c) outnumbers the cases of gender resolution (a). In this respect, the results of the corpus analysis for Spanish differ from those of a similar analysis done for Brazilian Portuguese (BrP), in which cases of canonical agreement significantly outnumbered CCA (Villavicencio et al., (2005)). Such evidence also indicates widespread adoption of CCA for gender in structures where number resolution is unambiguously plural, given that the focus of the corpus search was for coordinate structures of plural conjuncts.

For plural conjuncts, CCA appears to occur regardless of the order of gender on the N conjuncts. The presence of nine cases for non-CCA feminine resolution agreement (case d) additionally contrasts with the absence of any such agreement patterns found in BrP (Villavicencio et al., 2005). Nevertheless, these cases exhibit no clear
systematicities. That is, they are randomly distributed for noun and adjective type and may be analyzed as “noise” that is not relevant to the grammar.

In what follows I will argue from the data that all coordinate structures that incur CCA may be interpreted as a joint reading, or what I term a joint-split reading. I first describe joint-split readings with plural conjuncts (5.3.3) and then turn to such readings with singular conjuncts (5.3.4). I then look at unattested cases from the data (5.3.5), which point to the observation that gender and number participate as a pair in CCA structures. This interpretation of the data paves the way for an analysis where both syntactic and semantic features participate in agreement in Spanish coordinate structures.

5.3.3 Joint-Split Readings: Plural Conjuncts

For plural conjuncts, there are split readings of the plural N conjuncts in the presence of CCA. AP and D, nevertheless, are interpreted to modify both conjuncts. The possibility of a split reading goes against the canonical (superficial) syntactic setup explained previously, which ought to induce a joint reading. In (28), (a) and (b) show CCA; (c) and (d) are ambiguous between CCA and canonical agreement but appear to possess distinct conjuncts:

(28) a. Los comentarios y opiniones contrapuestas
   the.M.PL comments.M.PL and opinions.F.PL opposed.F.PL
   ‘the opposed comments and opinions’

   b. Los logos y marcas registradas
   the.MPL logos.M.PL and brands.F.PL registered.F.PL
   ‘the registered logos and brands’

   c. Las imágenes y textos empleados
   the.F.PL images.F.PL and texts.M.PL employed.M.PL
   ‘the images and texts employed’
d. Las defensoras y defensores públicos
   ‘the public defenders (male and female)’

Example (28a) demonstrates the plural nature of the conjuncts. Contrapuestas ‘opposed’ functions as a collective or symmetric adjective, and it must scope over a plural argument. Additional examples in (28) demonstrate that conjuncts in constructions of this type tend to be of a similar semantic nature: the conjuncts in case (a) are both forms of personal expression; in case (b) of brand marketing; in case (c) of visual material; and in case (d) identical apart from natural gender. In the contexts taken from the corpus, these types of conjuncts that possess split readings tend towards a [+specific] definite reading. Though interpreted as individual referents, such semantic similarity calls into question the split reading status of such conjuncts.

Of note is the different behaviors of examples such as (28a) and (28b) as compared to (28c) and (28d) with regards to speaker interpretations. While informants noted that, though a bit strange, cases such as (28c) and (28d) were acceptable, there was more doubt and conversation surrounding cases such as (28a) and (28b). With a feminine postnominal AP, speakers had a tendency to interpret AP as only modifying N₂ and not the entire coordinate phrase. After much discussion and with a bit of reluctance, all informants confirmed that they produce sentences like (28a) and (28b) with the reading that AP scopes over both conjuncts. Speakers appear to do this unknowingly, as they are more aware of the canonical rule for agreement resolution, which a masculine A in cases (28c) and (28d) better approximates. The feminine D in cases like (28c) and (28d) was agreed to not be as much of an issue for a reading in which D scopes. All speakers confirmed that they would not produce any cases of CCA in written Spanish.
As a slightly different case, there seem to be readings where the first plural N conjunct is a subset of the second plural N conjunct. In this sense, again, the conjuncts are semantically similar and may be understood as forming some type of unit. In such cases, however, AP only scopes over the second N conjunct:

(29) a. Los bancos y entidades financieras
   ‘banks and financial entities’

   b. Los patrocinadores y entidades colaboradoras
   the.M.PL sponsors.M.PL and entities.F.PL collaborator.F.PL
   ‘sponsors and collaborating entities’

   c. Las guerras y enfrentamientos armados
   the.F.PL wars.FPL and conflicts.MPL armed.MPL
   ‘wars and armed conflicts’

   d. Las iglesias y grupos cristianos
   the.F.PL churches.F.PL and groups.M.PL Christian.M.PL
   ‘churches and Christian groups’

These examples exhibit an implicature that N₂ refers to non-N₁ members of the class denoted by N₂. This occurs with conjuncts that exhibit a mass noun in the N₂ position, as well¹³:

(30) a. Los pobres y clase media
   the.M.PL poor.M.PL and class.F.SG middle.F.SG
   ‘the poor and middle class’

   b. Los toros y suerte suprema
   the.M.PL bull.M.PL and luck.F.SG supreme.F.SG
   ‘the bulls and supreme luck’

   c. Las comunidades y población afrohondureñas
   the.F.PL community.F.PL and population.F.SG afro-honduran.F.PL
   ‘the Afro-Honduran communities and population’

¹³Several native speakers dislike these examples and prefer a determiner in front of the second conjunct.
In contrast to examples of split readings, overlap readings seem to be interpreted with [+generic] definiteness. The examples in (28-30) nevertheless all possess a reading that may be understood as a form of set union, or a relation between a plurality and an individual that forms part of it (e.g. Heycock and Zamparelli, 2005).

5.3.4 Joint-Split Readings: Singular Conjuncts

For singular and bare conjuncts, there appears to be optionality between whether or not the conjuncts are interpreted as a unit, and modified in accord (CCA), or interpreted as separate entities. For example, a search for *el hombre y mujer* ADJ ‘the man and woman ADJ’ returned 25 hits. Of these, the top hits were divided equally in regards to the interpretation of postnominal AP between CCA ambiguous for a joint or split reading (*el hombre y mujer humilde* ‘the humble man and woman’ (5)); canonical agreement (*el hombre y mujer nuevos* ‘the new man and woman’ (5)); first conjunct agreement, signaling a joint reading (*el hombre y mujer nuevo* ‘the new man and woman’ (5)); and CCA for a split reading (*el hombre y mujer nueva* ‘the new man and woman’ (5)). An example of each is given with context in (31). The phrase *el hombre y mujer nuevas* returned no results.

(31) a. Le escribo al *hombre y mujer humilde*, que OBJ I-write to-the.M.SG man.M.SG and woman.F.SG humble.SG that junto a sus hijos y sus sueños vuelve a together.M.SG to his/her children and his/her dreams return.3.SG to la pobreza y la desesperanza. the poverty and the despair ‘I write to the humble man and woman, who together with his or her children and dreams returns to poverty and despair.’

b. Hablaba de la *construcción del hombre y mujer nuevos*, solidarios, que sufren con el que sufre... he-spoke of the construction of-the.M.SG man.M.SG and woman.F.SG new.M.PL solidary.M.PL who suffer.3.PL with he who suffers
'He spoke of the construction of the new, solidary man and woman, who suffer with each who suffers...'
c. ...la educación, como parte esencial para la formación permanente the education as part essential for the formation permanent del hombre y mujer nuevo, que of-the.M.SG mand.M.SG and woman.F.SG new.M.SG that den sus mejores aportes a la patria... give.3.PL.SUBJ their best contributions to the homeland '...education, as an essential part of the permanent formation of the new man and woman, who give their best contributions to the homeland'
d. Un canal de TV que está contribuyendo a la formación a channel of TV that is contributing to the formation.F.SG del hombre y mujer nueva, doy 20 puntos a of-the.M.SG man.M.SG and woman.F.SG new.F.SG I-give 20 points to su excelente programación como... its excellent programming like... 'A TV channel that is contributing the formation of the new man and woman, I give 20 points to its excellent programming such as...'

Examples (31b) and (31c) show plural verb agreement for the coordinate subject (el hombre y mujer), though they differ in the agreement shown on postnominal AP (plural masculine in (31b), singular masculine in (31c)). While (31a) and (31c) both show singular number agreement on postnominal AP, (31a) exhibits singular verb agreement (vuelve ‘return.3.SG’) while (31c) exhibits plural verb agreement (den ‘give.3.PL’). This evidence of optionality of interpretation and structure is reinforced by the results for a search for la radio y televisión ADJ, which returned 118 results with the singular postnominal AP pública ‘public’ (and corresponding singular verb agreement) and 73 results with a plural postnominal AP públicas (and corresponding plural verb agreement). These results were the top two hits out of 464 total hits. Examples of each are seen below:
a. Singular postnominal AP, Joint Reading

...es la radio y televisión pública de Europa

it-is the.F.SG radio.F.SG and television.F.SG public.F.SG of Europe

que menos le cuesta al ciudadano: 16,61 euros al año...

that least OBJ cost to-the citizen: 16,60 Euros to-the year

‘...it’s the least expensive public radio and television of Europe for the
citizen: 16,60 Euros per year...’

b. Plural postnominal AP, Joint Reading

...desarrolló la mayor parte de su dilatada carrera profesional en

...developed the great part of his extensive career professional in

la radio y televisión públicas, desde sus

the.F.SG radio.F.SG and television.F.SG public.F.PL from POSS.3.PL

comienzos y hasta sus últimos momentos.

beginning.PL and even POSS.3.PL last.PL moment.PL

‘...he dedicated the better part of his extensive professional career to public
radio and television, from their beginnings to their last moments.’

Similar to coordinate phrases of plural conjuncts, coordinate phrases of singular conjuncts exhibit optionality between joint and split readings.

5.3.5 Unattested Cases

For plural conjuncts, examples where D and N₁ are mismatched in gender but not number are not attested:

(33) a. *Los niñas y niños pequeños


b. *Las valores y virtudes humanas

the.F.PL value.M.PL and virtue.F.PL human.F.PL

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14https://www.elplural.com/politica/trabajadores-de-canal-sur-explostan-contra-juanma-moreno210453102

In both plural and singular conjuncts, examples where D and N₁ are mismatched for number but not gender are also unattested\(^{16}\):

\[(34)\]

\begin{align*}
&\textbf{a.} \quad \textit{Los comentario y opiniones expresadas} \\
&\quad \text{the.M.PL commentary.M.SG and opinion.F.PL expressed.F.PL} \\
&\textbf{b.} \quad \textit{El comentarios y opiniones expresadas} \\
&\quad \text{the.M.SG commentary.M.SG and opinion.F.PL expressed.F.PL}
\end{align*}

It seems, then, that D and N₁ must always agree in gender and number, regardless of whether the conjuncts are singular or plural. This is supported by data from the corpus search of Demonte and Pérez-Jiménez (2012) that observed the same behavior for prenominal AP.

This is the same for postnominal AP agreement with singular conjuncts, seen in (35) and (36). The examples in (35) are acceptable: (35a) shows masculine plural agreement on postnominal AP, evidencing the resolution of both gender and number of the conjuncts. (35b) is CCA. The examples in (36) are unacceptable: (36a) shows feminine plural agreement on postnominal AP, taking the gender of the second conjunct but the number of the coordinate structure as a whole. (36b) shows masculine singular agreement on postnominal AP, evidencing the resolution of the gender of the conjuncts but agreeing in number only with the second conjunct.

\[(35)\]

\begin{align*}
&\textbf{a.} \quad \textit{El relieve y flora argentinos} \\
&\quad \text{the.M.SG landscape.M.SG and flora.F.SG Argentine.M.PL} \\
&\quad \text{‘the Argentine landscape and flora’}
\end{align*}

\(^{16}\)A search for \textit{los hombre y NOUN ‘the.M.PL man.M.SG and NOUN’}, however, returned 122 results. The majority (115) were constructions of \textit{los hombre y mujeres ‘the.M.PL man.M.SG and woman.F.PL’}. My only explanation for this is that /s/ elision and deletion is common in Spanish phonologically. Since the second conjunct is marked for plural, this marking may be doing the work of signaling that both conjuncts are plural. The reader is directed to more phonologically motivated work on /s/ elision and deletion in Spanish for further explanation.
b. El relieve y flora argentina
   the.M.SG landscape.M.SG and flora.F.SG Argentine.F.SG
   ‘the Argentine landscape and flora’

(36) a. *El relieve y flora argentinas
    the.M.SG landscape.M.SG and flora.F.SG Argentine.F.PL
    ‘the Argentine landscape and flora’

b. *El relieve y flora argentino
   ‘the Argentine landscape and flora’

Finally, unattested is coordination of [+count] nouns that possess different number marking:

(37) a. ?el amigo y amigas mexicanas
    ‘the friend and Mexican friends’

b. *?los amigos y amiga mexicana
   ‘the friends and Mexican friend’

A pattern thus emerges: for CCA to occur, it must affect both gender and number simultaneously. Though this observation is tricky to extrapolate from data on plural conjuncts alone (as they all evidence plural agreement, regardless of whether such agreement is CCA or canonical agreement), the data from singular conjuncts strongly suggests this is the case.

5.3.6 Summary

This section has shown that CCA is productive in Spanish coordinate structures involving both singular and plural conjuncts. The pattern that has emerged for both

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17 An informant from Mexico deemed (35a) more acceptable than (35b), though both examples were judged as questionable. For (19a), the informant interpreted A to possibly scope over both conjuncts. The informant could not get a reading for (35b).
prenominal and postnominal CCA in Spanish is that it affects gender and number as a unit; CCA of just gender or number alone is unattested. A complete analysis of CCA in [D N & N] constructions in Spanish will have to capture the following agreement patterns, for which modifiers are understood to scope over both conjuncts:

1. PRENOMINAL AGREEMENT:
   
   (a) D and prenominal AP must agree in both gender and number with $N_1$ for both plural and singular conjuncts (CCA)

2. POSTNOMINAL AGREEMENT (PLURAL CONJUNCTS):
   
   (a) Postnominal AP is always plural

   (b) Postnominal AP may show the gender resolution of its conjuncts ($F + F \rightarrow F; F + M \rightarrow M$ (regardless of order)), or

   (c) Postnominal AP may agree in gender only with the second conjunct (CCA)

3. POSTNOMINAL AGREEMENT (SINGULAR CONJUNCTS):
   
   (a) Postnominal AP may be plural, in which case its gender shows the resolution of both conjuncts ($F + F \rightarrow F; F + M \rightarrow M$ (regardless of order))

   (b) Postnominal AP may be singular, in which case its gender agrees with that of the second conjunct (CCA)

The agreement patterns in (1) for prenominal agreement are well described in the literature and Spanish grammars; the goal here is to explain how these agreement patterns arise. The agreement patterns in (2) and (3) are less described in the literature and grammars; the goal here is to both explain how these agreement patterns are licit syntactically and why they may arise.
Key data for the analysis to come is the observation that CCA cases (both obligatory prenominal and optional postnominal) tend to occur in constructions that possess a reading in which the conjuncts are understood as two parts of a whole. Though not a full joint reading, these constructions do not induce clear split readings, either. The fact that masculine and feminine gender occur about equally in CCA cases does not suggest anything inherent to the genders that triggers CCA but rather suggests a syntactic structure that is amenable to CCA for both genders. I will argue that these patterns are due in large part to the presence of BNs in the coordinate structure, which result in a ConjP that possesses an incomplete feature set and thereby complicates agreement.

5.4 Previous Analyses

Several previous proposals account for CCA in both subject-verb structures with coordinated subjects (e.g. Marušič et al., 2015; Willer et al., 2018; Benmamoun et al., 2009) and in structures with plural N conjuncts (e.g. Demonte and Pérez-Jiménez, 2012; Shen, 2017) by turning to post-syntactic processes to explain the unexpected morphological realization of CCA. PF in particular, functioning as the interface with the syntax where syntactic terminals are linearized and their feature bundles replaced by vocabulary items, is a promising location for agreement mismatch to be explained without positing new syntactic configurations. Nevertheless, these proposals vary in how they analyze the underlying structure of coordination, especially the position and status of D and A. I review two proposals frequently cited for their analysis of Spanish CCA and coordination more generally (5.4.1, 5.4.2). I then review a proposal based on both Spanish and Dutch data that approaches the question of CCA from a
primarily semantic perspective (5.4.3). Details from these three proposals inform my own analysis, presented in 5.5.

5.4.1 Camacho (2003): CCA as a Result of Ellipsis

A first question posed by the data presented in this chapter is whether coordination of type \([D \& N]\) is deep coordination of Ns or NPs, or if it is coordination of two DPs followed by some sort of ellipsis. Camacho (2003) addresses this question in his book on the structure of Spanish coordination. Most basically, Camacho motivates the basic features of a coordinate structure in Spanish: (i) the conjuncts must be c-command asymmetric, such that one conjunct c-commands the other; and (ii) the conjuncts must be licensing symmetric, such that they are each licensed in a similar manner. He then argues that coordination must always occur between like types (see chapter 2 and section 5.4.3 for discussion of this), and as a result, an apparent structure of \([D \& N]\) must result from ellipsis processes. Camacho’s ellipsis analysis assumes that deletion takes place under identity with overt items in the other conjunct; however, the null elements in the second conjunct may be slightly different from the overt elements in the first one.

For prenominal AP, Camacho claims that the structure underlying CCA involves full DP conjunction and licensing of null structure. For D, null D must be licensed in the second DP under identity with parallel elements in the first DP. For a prenominal AP, the same parallel identity could license A in the second DP, as follows:

\[
\begin{align*}
\text{(38) a. La } & \text{ fascinante flora y relieve } \text{ (me} \\
& \text{the.F.SG fascinating.F.SG flora.F.SG and rugged.landscape.M.SG me} \\
& \text{surprendieron mucho).} \\
& \text{surprised much} \\
& \text{‘The fascinating flora and rugged landscape astonished me.’}
\end{align*}
\]
Though this explanation works in theory, further explanation is necessary to license the identity of D when the conjuncts do not match in gender and/or number. This is the same issue raised in the previous chapter with regards to the relationship between phi-features and nominal identity in licensing ellipsis, and it will be addressed further after Camacho’s full proposal is discussed.

For postnominal AP, the explanation is less clear. Camacho refers to cases of partial agreement of postnominal AP in coordinated DPs as *PF agreement structures* since, in these cases, “partial or full agreement does not necessarily correlate with differences in interpretation.” His intuition is that, given the scope of D and AP, these non-syntactic ellipsis processes do not impact the interpretation at LF. More specifically, the intuition reflects the idea that CCA, if syntactic, would signal singular agreement between the concord features of D and N₁, and N₂ and postnominal AP, respectively, without optionality for canonical agreement. The proposed structure can be seen in (39a) (original), with a labeled version (explained beneath) in (39b):

b. \[[\text{DP}_1 \ D \ A \ N] \ y \ [\text{DP}_2 \emptyset_D \emptyset_A \ N]\]
Camacho proposes that partial agreement takes place between the features of the lower Y/A and the features of DP₂ in the specifier of YP/AP. For full agreement, the phi-features are inserted in Y/A and agreement is covert. In the case of partial agreement in gender but full agreement in number, the gender feature is inserted in the lower head Y/A, but the number feature is in X/Agr. Since XP is the projection
where full agreement can be triggered, Camacho ultimately assumes it is an agreement projection AgrP. The fact that the adjective can have scope over both conjuncts is taken to suggest that it raises covertly to X/Agr.

The structure and mechanism that Camacho proposes follows very closely to proposals of subject-verb agreement where partial agreement is observed between the second conjunct and the agreeing head. He thus assumes that the structure of DP, as well as the agreement mechanism, is the same as that for a clause. Camacho elaborates this parallelism further in assuming that coordination involves a functional projection within DP, similar to agreement in IP. While the agreeing head in IP is V, in DP it is A. In this manner, Camacho is able to capture the behavior of both pre- and postnominal AP in coordinate structures. The functional structure also allows for the presence of other functional elements, such as disjunctive operators. Camacho claims that such structures allow for both inclusive and exclusive, collective and distributed readings, since XP may contain various operators.

Though Camacho’s proposed parallelism between DP and clausal agreement is appealing for its simplicity, it does not fully explain some observations. Though IPs may be understood as extended verbal projections, DPs are not typically understood as extended adjectival projections. Similarly, there is no clear explanation for what insertion or covert agreement is for AP, nor why it is motivated to move to X covertly. Additionally, there is no explanation for why the number feature would shift its location within the structure without incurring LF effects.

Yet, it is worth considering an ellipsis analysis in a bit more detail, especially given the similarities observed in 5.3.2 between the joint-split readings in Spanish coordinate structures and the subset relations analyzed to license Spanish nominal ellipsis in chapter 4. An ellipsis analysis can explain the following facts: (i) the plural denotation
of coordinate sequences and subsequent agreement triggered on the verb, since two full DPs are being conjoined; (ii) the scope of the prenominal and postnominal APs, since there would be two instances of each AP in the structure; and (iii) the fact that D must agree with the first noun of the coordination, as the second D is deleted.

However, there are various questions that cannot be easily addressed and answered under the ellipsis analysis. What rules out deleting either prenominal AP on the first conjunct, or postnominal AP on the second conjunct, without a change in the resulting reading? In a similar vein, what rules out deleting the second conjunct entirely, as $N_2$ ought to be in an identity relationship with $N_1$? Deletion of solely D and AP in the second conjunct additionally violates assumptions that phrasal ellipsis affect constituents, which D and AP do not constitute.\(^{18}\)

Although an ellipsis approach could be amended or reformulated to address these questions and fully account for the data, I pursue an analysis that does not assume

\(^{18}\)Demonte & Pérez-Jiménez also note that an ellipsis analysis cannot explain the fact that a hypothetically elliptical sentence has a quantificational reading that its non-elliptical counterpart lacks. They offer the following examples:

(i) Cada niño y cada niño llevan un globo.
   ‘Each boy and each girl carry a balloon.’

(ii) Cada niño y niño llevan un globo.
    ‘Each boy and girl carry a balloon.’

If a context is set up in which there are two boys and two girls, in (i), a total of four balloons are being carried (each of the two boys carries a balloon and each of the two girls carries a balloon). The example in (ii) can have the same meaning but additionally permits the interpretation that a total of only two balloons is being carried (each of them carried by a pair consisting of one boy and one girl). The authors note that if it is assumed, as generally claimed in the literature, that ellipsis processes do not add readings to non-elliptical structures, this set of facts suggests that the pair interpretation of the sentence in (ii) derives from a non-elliptical structure. Following, why (i) and (ii) undergo different processes in coordinate structures would need to be explained.
coordination of two full DPs nor rely on ellipsis for the resulting structure. I briefly discuss, however, how ellipsis as part of Right Node Raising (e.g. Hartman, 2001) could account for the interpretation effects of postnominal AP.

5.4.2 Demonte & Pérez-Jiménez (2012): A Reduced Relative Clause Account

Demonte and Pérez-Jiménez (2012), in their analysis of CCA in singular N conjuncts, assume a coordinate CoP structure of two Ns dominated by a DP:

(40) $[ \text{DP} \text{D} [ \text{CoP} [ \text{N(P)}_1 \text{CO N(P)}_2 ]] ]$

The authors conducted a corpus search for structures like (40) that included both prenominal and postnominal APs. Spanish sentences used for their analysis were extracted from the online Corpus de Referencia del Español Actual (CREA). In order to obtain a representative sample, 7985 sentences were randomly selected for analysis and annotated for (i) adjective number (singular or plural), (ii) adjective position (prenominal, postnominal), (iii) determiner number (singular or plural), and (iv) for whether or not the coordinate structure was the subject of the sentence (triggering plural agreement on the verb) or not (subject vs. non subject).

From their data, the authors propose two mechanisms for the asymmetries found between CCA and canonical agreement, both of which draw upon the same syntactic structure in (40). The authors use examples of minimal pairs from a corpus investigation such as the following as the basis for their analysis. The minimal pairs show the same conjuncts modified by either a singular postnominal AP (a) or a plural postnominal AP (b):
(41) a. el timbre y ritmo perfecto
‘the perfect tone and rhythm’

b. una textura y brillo perfectos
‘a perfect texture and shine’

(42) a. su escasa flora y fauna acuática
its.SG scanty.F.SG flora.F.SG and fauna.F.SG aquatic.F.SG
‘its scanty aquatic flora and fauna’

b. la flora y fauna acuáticas
the.F.SG flora.F.SG and fauna.F.SG aquatic.F.PL
‘the aquatic flora and fauna’

(43) a. la lengua y cultura catalana
the.F.SG language.F.SG and culture.F.SG catalan.F.SG
‘the Catalan language and culture’

b. la lengua y cultura catalanas
the.F.SG language.F.SG and culture.F.SG catalan.F.PL
‘the Catalan language and culture’

For postnominal APs that show plural marking (non-CCA, (b) cases above), the authors propose a structure and agreement mechanism similar in nature to one proposed by Schoorlemmer (2009) for Germanic languages (in which CCA is well-attested), in which adjective agreement is licensed indirectly as the by-product of Agree-relations established by a higher Probe, instead of being the result of a direct Agree relation between AP and N. This is visualized in (44):
For Spanish, Demonte & Pérez-Jiménez propose that postnominal APs that exhibit plural agreement are generated within a reduced relative clause that contains two elements: AP, and a PRO that is coindexed and coreferential with CoP. This structure follows from Cinque’s (2010) proposal for a hierarchy of AP positions and the locus of a relative clause specifically for “indirect modification.” This locus contrasts with adjectives that perform “direct modification” and that involve the merger of different classes of APs in the specifier of various dedicated functional heads of the extended projection of NP (Cinque, 2010). Both indirect and direct modification adjectives originate in the derivation higher than the nominal element. Though indirect modification adjectives are assumed to originate higher than direct modification adjectives in the extended projection of the nominal expression, their ultimate postnominal position is assumed to arise as a result of the merger of a potentially covert complementizer that attracts the NP and any direct modification adjectives.
Notably, indirect modification is underspecified for the values specificity/non-specificity and (to some extent) stage-level/individual-level. This has the effect that such adjectives have the same readings of predicative adjectives in relative clauses, which are compatible with values of either distinction. The authors find that, in the pool of postnominal predicative adjectives appear all adnominal adjectives which can also appear as predicates of copular sentences: participles, qualifying (*perfecto* ‘perfect’), temporal (*actual* ‘actual’), locational (*exterior* ‘exterior’), frequency (*constante* ‘constant’) and even focus and degree adjectives like *absoluto* ‘absolute’ (since in most cases both subclasses accept predicative uses). In the pool of relational adjectives the authors find ethnic or nationality adjectives (*catalán* ‘Catalan’) and classifying adjectives (*acuático* ‘aquatic’), which can also be used in certain cases as predicates of copular sentences.\(^{19}\)

In regards to agreement, the authors posit two distinct sets of phi-features: *concord phi-features* and *index phi-features* (Wechsler and Zlatić, 2000, 2003; Pollard and Sag, 1994; Badecker, 2007). Concord features are formal features related to the morphosyntactic or declensional properties of lexical items and codify instructions to the PF interface. Index features are formal features related to semantic properties of lexical items and codify instructions to the LF interface. CoP (the coordinate phrase seen in (44)), the authors state, only possesses index features: a plural number feature and a gender feature determined by the gender of the N conjuncts. PRO, however, being a nominal category, possesses both index and concord features. The index features of PRO must be compatible with CoP (its coreferent).

Demonte and Pérez-Jiménez follow Wechsler & Zlatic’s (2003) proposal that linguistic constraints hold between concord values and index values, by which gender and

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\(^{19}\)This observation has implications for the data presented in chapter 3, as well, for which adjectives may modify Spanish BNs.
number must be identical in the two bundles. In the syntactic derivation, CoP originates lower than the reduced relative clause containing AP. CoP moves to a higher position within DP above the node hosting the relative clause, where it is able to c-command PRO. As noted above, this movement occurs as a result of the merger of a possibly covert complementizer that attracts NP, as well as any direct modification adjectives. This results in the postnominal position of AP.

For canonical cases of agreement where AP either agrees with the gender of both N conjuncts (if they exhibit the same gender) or resolves to masculine plural, agreement on AP is mediated by PRO, which shares the concord and index features of CoP. AP only possesses concord features. Thus, the result is plural marking and, if the N conjuncts are of mismatched gender, masculine gender on AP.

For CCA, this explanation does not work. The authors reject the possibility that AP agrees with N₂ for concord features. As they argue, if the postnominal AP is generated in the Spec of a functional phrase above CoP (as in 44) and postposition is the outcome of NP movement (e.g. Cinque, 1994), CCA with the first conjunct N₁ would result. Instead, the authors turn to PF and assume that precedence relations are established between syntactic constituents in the process of linearization. In Spanish, a coordinate DP is linearized such that N₂ immediately precedes postnominal AP, making agreement via post-syntactic processes possible.

Demonte & Pérez-Jiménez’ argument for CCA gender in Spanish may be understood as follows: while N₂ possesses a specific gender feature (say, feminine) and AP possesses masculine features, linear adjacency enables a post-syntactic weakening or deletion of the concord values of AP. Following this weakening, feature-copying of

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20The reader is directed to Cinque’s original proposal (Cinque, 2010), based off of Kayne (1994, 2005) for the full account.
N₂’s features occurs, resulting in AP overtly showing the concord features of N₂. As the underlying derivation of the postnominal AP does not differ from that with any other coordinate structure, and PF may only act on concord features, the semantic interpretation of the structure remains unchanged. (45) illustrates this for (43a):

(45) **Syntax:** La [CoP.NUMBER:PL [n₁ lengua[NUMBER:SG]] y [n₂ cultura[NUMBER:SG]]] AP[NUMBER:PL]

**PF:**

a. **Linearization:** La lengua y cultura[NUMBER:SG] AP[NUMBER:PL]

b. **Weakening/deletion:** [A F2] [B F3] → [A F2] [B F]

   La lengua y cultura[NUMBER:SG] AP[NUMBER]

c. **Feature identification under linear adjacency:** [A F2] [B F2]

   La lengua y cultura[NUMBER:SG] AP[NUMBER:SG]

d. **Spell out of terminals:** La lengua y cultura catalana

**Phonology**

In other words, agreement of the postnominal AP with N₂ may be understood as a case of context-sensitive spell-out and PF feature identification process; such a process is proposed by Ackema and Neeleman (2003). According to these authors, processes affecting the featural content of terminals are sensitive to local prosodic domains established at the level of initial prosodic phrasing after linearization. The proposal that linear adjacency plays a crucial role in CCA with postnominal adjectives, the authors claim, receives empirical support from contrasts like the following:

(46) a. la radio y televisión pública catalanas
   the.F.SG radio.F.SG and television.F.SG public.F.SG catalan.F.PL
   ‘The Catalan public radio and television’
b. *la radio y televisión públicas catalana
   the.F.SG radio.F.SG and television.F.SG public.F.PL catalan.F.SG

The sequence $AP_{PL} - AP_{SG}$, in which the second AP shows singular agreement with $N_2$ is ungrammatical. The authors explain this by the observation that these two elements are not linearly adjacent.

Demonte & Pérez-Jiménez demonstrate the multifaceted nature of CCA in Spanish. Contrary to what had been previously claimed (Camacho, 2003; Heycock & Zamparelli, 2005), Spanish is a case of a Romance language that possesses CCA inside DPs with coordinated Ns. The authors support the existence of such CCA in Spanish by examining a wide sample of corpus data, in which conjunctions of different individuals (singular count and group nouns) as well as of other entities (mass, abstract and deverbal nouns) were considered. Though the authors are able to explain distinctions between pre- and postnominal AP in agreement patterns, as well as CCA in number, a more in-depth analysis of why linearization results in CCA in some, but not all, cases is left desired. Specifically, an analysis of CCA that involves gender is necessary.

5.4.3 Le Bruyn & de Swart (2014): The Semantics of Bare Coordination

Le Bruyn and de Swart’s 2014 analysis is of interest primarily for explaining the absence of D before $N_2$, and in turn cases where D appears to agree with only $N_1$ yet retain scope over both conjuncts. The authors begin their analysis with this question of how the definiteness features of D transfer to the second N conjunct in absence of overt agreement. D’s scope is of particular interest since such consistent scope is not always noted for the postnominal AP, suggesting that the two may have different statuses in the underlying syntactic structure of DP.
Like Demonte & Pérez-Jiménez, Le Bruyn & de Swart note that constructions of this sort have been used to argue in favor of two types of number features: one that takes care of agreement on D (concord features) and one that takes care of agreement on the verb (index features).

For coordinated plural NPs, the authors note that it may seem intuitive that D agrees with the entire conjunct, as all elements display plural morphology. Coordinated singular NPs (47) as well as CCA data (repeated in 48), however, call into question the status of D:

(47) El hornero y hornera cobraban en panes.
    the.M.SG baker.M.SG and baker.F.SG were.paid in bread.loaves
    ‘The (male) baker and (female) baker were paid in bread loaves.’

(48) Las guerras y enfrentamientos armados
    the.F.PL war.F.PL and confrontation.M.PL armed.M.PL
    ‘the wars and armed conflicts’

Le Bruyn and de Swart analyze the conjoined structure in (47) as [D N & N] (or deep coordination of NPs), which gives rise to a split reading in which the semantics of the singular definite article applies to the entire coordinated structure, even though the N conjuncts are understood as distinct referents. In accord, plural N coordinate structures such as those in (48) may also be analyzed as [D N & N]. Following Arnold et al. (2006) and Demonte and Pérez-Jiménez (2012), the authors assume that [D N & N] constructions do involve CCA, rather than distributive singular agreement (King & Dalrymple 2004).

Rejecting Camacho’s proposal of an elided D in NP₂, the authors assume that only the first conjunct is a full DP. The authors cite the advantages of their proposed structure in that there is no need to motivate null elements as in Camacho’s proposal, nor do
they need to assume two sets of agreement features as Demonte & Pérez-Jiménez do. Their proposed structure is thus:

\[
(49) \quad [\text{CoordP} \; [\text{DP} \; [\text{NP} \; N_1] \; y \; [\text{NP} \; N_2 \; [\text{AP} \; A]]]]
\]

The assumption that D is in construction with the first conjunct in DN&N constructions accounts in a natural way for CCA, but raises an important semantic question concerning the type mismatch between the two conjuncts. The main problem the structure in (49) faces is that it violates the assumption that conjuncts need to be alike in syntactic category and semantic type. This assumption motivates the generalized conjunction analysis of Partee and Rooth (1983), and underlies the subsequent literature on coordination (e.g. Zamparelli, 2011). The structure in (49) posits coordination of two expressions that do not belong to the same syntactic category, namely a DP and an NP. Assuming that DP is type \(<<e,t>,t>>\), and assuming that the type of an NP is type \(<e,t>\) (to denote a property), as the authors do, the structure possesses two different semantic types as well. To explain this mismatch, the authors ultimately adopt a type-shifting analysis of the second conjunct, and take the covert type-shift to be licensed only under the special matchmaking semantics of conjunction.

Le Bruyn & de Swart construct their analysis within the framework of Discourse Representation Theory (DRT) (Kamp and Reyle, 1993, 2013) for their type-shifting analysis. DRT allows an incremental semantics of coordination such that the first conjunct, DP, in combination with the coordination and (or y in Spanish) triggers the presupposition that another discourse referent will follow. The semantic contribution of the coordinate and (y) is sum formation of the respective discourse referents of its two conjuncts. The incremental interpretation within the coordinate phrase involves
a process of anaphora resolution that identifies the asserted discourse referent \( (N_1) \) as identical to the presupposed discourse referent \( (N_2) \). This process of presupposition binding leads to replacement of all occurrences of \( N_2 \) by \( N_1 \), or DP.

Such presupposition binding is the dynamic semantics counterpart to traditional type-shifting and allows for coordination of unlike types. This is seen in (50) for the Spanish DP *la radio* ‘the radio’ and NP *televisión* ‘television’. Notably, the semantics of *y* ‘and’ consisstes a special matchmaking process that creates sets of pairs that match the two conjuncts:\(^{21}\)

(50) *la radio y televisión*

\begin{enumerate}
\item \( \text{]CoordP [DP [}la radio y [NP [}televisión]]} \)
\item \( [[la radio]] = \langle [x], [radio(x)], \emptyset \rangle_K \)
\item \( [[la radio y]] = \langle x, X, radio(x), X = x \oplus y, \langle y, R(y, x), \emptyset \rangle_L \rangle_K \)
\item \( [[la radio y televisión]] = \langle x, X, radio(x), X = x \oplus y, \text{televisión}(z), z = y, \langle y, z, R(y, x), \emptyset \rangle_L \rangle_K \)
\end{enumerate}

Extending the DRT framework, the identification of \( N_2 \) as a full DP following anaphora resolution works in reverse, as well: postnominal AP on \( N_2 \) is identified to modify the first conjunct. The small nominal nature of \( N_2 \) is unique in allowing this: the same would not occur in structure that coordinates two full DPs. The small nominal in \( N_2 \) position also contributes to the general interpretation often noted for natural coordinates. How this reverse anaphora resolution may be formalized, and what the exact semantic role of the small nominal as second conjunct is, are questions I leave to future research.

\(^{21}\)More specifically, this matchmaking semantics enriches one-place predicates to two-place relations such that the product is the result of intersection. The reader is directed to the original paper for more details.
The coordinate as a whole is thus interpreted in an almost joint manner as a single conceptual unit, although grammatically it is understood as a plurality. This intuition is supported by postnominal AP *pública* in (46) and similar corpus data.

The pragmatic nature of the scope of AP also draws support from the disparity in CCA data between plural and singular conjuncts in coordinate structures. Singular marking is often considered to be the more marked form of number marking (cf. Sauerland 2008); plural marking on AP (assuming it is less marked) may be more easily commandeered pragmatically for broad interpretation over both conjuncts, even if syntactically only modifying (plural) $N_2$. How a plural, feminine postnominal AP may exhibit the same scope (assuming feminine is the more marked gender in Spanish) is another question whose details will be fleshed out in section 5.5.

Le Bruyn & de Swart’s analysis captures CCA of both D and AP, as well as the tendency for AP, if feminine, to be interpreted only as a modifier to $N_2$. The notion of a null D recreated pragmatically through presupposition is satisfying for explaining the definite interpretation of bare $N_2$, as well. Though I ultimately employ the authors’ analysis for the interpretation of [D N & N] coordinate types in Spanish, further explanation is needed on the syntactic side to account for all of the agreement patterns observed.

### 5.4.4 Summary of Previous Proposals

The above proposals are summarized in table 5.3, focusing on the proposed syntactic structure for CCA in Spanish and how the adjective displays idiosyncratic agreement. Previous work on Spanish coordination and CCA patterns in particular offers important insights into the underlying mechanism for such idiosyncratic agreement. First, CCA patterns in [D N & N] constructions do not conform to agreement patterns
expected for coordination of two full DPs. Thus, an ellipsis account has difficulty accounting for all of the data. Second, the complementary behavior of syntactic agreement and semantic interpretation suggest that there are two types of features at work in these structures: specifically, CONCORD features that are sent to PF and are related to the morphosyntactic and declensional properties of lexical items; and INDEX features that are sent to LF and are related to semantic properties of lexical items. Finally, to fully account for the interpretive properties displayed by CCA coordinate structures, some sort of semantic type shift that coerces the ultimate interpretation of the structure may be necessary. The analysis that follows attempts to unify these observations in an account that can explain the syntactic and semantic properties of CCA structures together.

Table 5.3: Summary of Previous Analyses for CCA in Spanish.

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Syntax</th>
<th>CCA Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camacho (2003)</td>
<td>DP &amp; DP</td>
<td>Ellipsis</td>
</tr>
<tr>
<td>Le Bruyn &amp; De Swart (2014)</td>
<td>[D NP] &amp; [NP]</td>
<td>Presupp. binding/type shift</td>
</tr>
</tbody>
</table>

5.5 Current Proposal

The analysis here will focus on the minimal pair of the two following cases, while including prenominal CCA data in comparison: (i) when postnominal AP exhibits CCA and still scopes over both conjuncts; and (ii) when postnominal AP displays canonical agreement and scopes over both conjuncts. I will first return to the distinction between syntactic and semantic features as employed in Demonte and Pérez-Jiménez (5.5.1). I will then motivate the syntactic structures I assume for joint-split readings in Spanish (5.5.1). Following, I will look briefly at obligatory CCA shown by D and prenominal AP to show how it differs from
cases of postnominal AP that are the focus here (5.5.2). I will then discuss the optionality of CCA for postnominal AP (5.5.3). I will argue that this optionality is due in large part to the nature of BN conjuncts within the coordinate phrase and a particular semantics of ConjP that gives rise to the joint-split reading. Specifically, lacking interpretable features, BN conjuncts are unable to value ConjP’s feature set. Postnominal AP thus does not have a suitable Goal for Agree, which results in it both expanding its search space and resorting to postsyntactic processes to value both gender and number features simultaneously. I additionally present an analysis of the reduced relative clause that postnominal AP is generated within that explains both interpretive effects and semantic compositionality. This analysis updates previous proposals (Cinque, 2010; Demonte and Pérez-Jiménez, 2012) and paves the way for future work that specifies the relationship between fine-grained adjective type, nominal location, and resulting interpretation. Finally, I briefly look at an alternative analysis involving Right Node Raising and conclude that it is insufficient to explain all of the data.

5.5.1 Semantic and Syntactic Features

Much work in Minimalism, DM, and other generative frameworks posits that there are two types of syntactic agreement and two sorts of agreement features. The proposal I will make reference to is that of Wechsler and Zlatić (2003). Wechsler and Zlatić propose two sets of features as follows: (i) index agreement features, which are the value of the feature [INDEX]; and (ii) concord agreement features which are the value of a feature [CONCORD]. These features are described as follows:

(i) [INDEX] features: [NUMBER, GENDER, PERSON]; semantically-rooted, mediated by coindexation
(ii) [CONCORD] features: [NUMBER, GENDER, CASE]; morphologically-rooted, mediated by modification

Following the authors’ proposal, nominal categories are doubly specified for [CONCORD] and [INDEX] features. Agreement targets may be selective or not: of interest for CCA constructions, adjectives agree in [CONCORD] features, and determiners display variation in agreeing with [CONCORD] and/or [INDEX].

From previous analyses, I will assume that ConjP does indeed participate in agreement, yet that it only possesses [INDEX] features. ConjP lacks [CONCORD] features, as they are related to the declensional properties of lexical items: the head of ConjP (the conjunction y ‘and’) is not morphosyntactically marked for gender or number. The idea that ConjP bears INDEX features receives its motivation from the semantics of and in group-forming coordinations: the conjunction semantically operates on the indices of its conjuncts, joining them and their references therein (e.g. Dalrymple and Kaplan, 2000; Wechsler and Zlatić, 2003; King and Dalrymple, 2004; Badecker, 2007).

There is nevertheless debate on the featural make-up of ConjP. As indices are understood as feature structures of the INDEX type, it is intuitive that the conjunction joins and thus inherits the INDEX feature bundles of N₁ and N₂. Yet, CCA for PERSON features is very rare across languages, suggesting that ConjP may be better at computing the resolution of certain features than others (Nevins and Weisser, 2019).

---

22 As one particular example of this: Landau (2016), in work on number in hybrid nouns in Hebrew (in particular, be’al-im “owner(s)”, which morphologically is plural and masculine, but which semantically is neutral/unspecified for both features), proposes that the locus of [INDEX] number is the Num head; that of [CONCORD] number (being determined by the morphology of the stem) resides in N. In accord, he argues that parallel assumptions can be made for gender, such that its [INDEX] locus is on Number, while its [CONCORD] locus on N.
As Murphy and Puškar (2018) discuss, too, the mechanism for feature inheritance by ConjP of its conjuncts is vague in the literature, leaving the status of ConjP up for debate.\textsuperscript{23}

One assumption found in current literature is that ConjP is phi-deficient, or lacks the full set of phi-features that NPs possess. A particularly widespread assumption is that ConjP comes with an inherent feature such as \([-\text{sg}]\), or non-plural (e.g. Dalrymple & Kaplan, 2000; Badecker, 2007; Demonte and Pérez-Jiménez, 2012); languages like Slovenian and isiXhosa only permit CCA if the conjuncts are plural or non-singular.\textsuperscript{24} ConjP has also been analyzed to lack number specification altogether (Doron (2005) for Hebrew; Kiss (2012) for Hungarian).\textsuperscript{25} For gender, proposals have been made that ConjP lacks a gender feature and is unable to compute the gender resolution of its conjuncts (e.g. Bhatt and Walkow, 2011, 2013).

Moving forward, I maintain that ConjP possesses a full set of INDEX features that enter the derivation unvalued. As stated above, this is motivated from the semantics of group formation, which necessarily involves the joining of indices of the conjuncts. How these features are determined and participate in agreement will be discussed and motivated in 5.5.3, as the non-canonical agreement patterns of CCA and involvement of BNs in the coordinate structure suggest that the featural structure of ConjP is not identical to that of ConjP in coordinate structures that trigger canonical agreement.

\textsuperscript{23}The authors propose such inheritance can be derived via Agree and a specific order of operations in the derivation. The reader is directed to their paper for further details.

\textsuperscript{24}Non-singular (\([-\text{sg}]\)) can be understood as the number feature equivalent to \([-\text{fem}]\).

\textsuperscript{25}Further discussion regarding features such as humanness and specificity falls in the same vein; see Nevins & Weisser (2019) for more.
Coordinate Structure

The syntactic structure I will adopt is similar to one proposed by Benmamoun, Bhatia, & Polinsky (2009) in (51), widely adopted by other analyses for CCA (Johannessen, 1996; Weisser, 2015). The tree was originally proposed to capture CCA in subject-verb agreement for head-final languages such as Hindi and Tsez, unique due to the fact that the right conjunct is susceptible to CCA with the verb. Both conjuncts are merged as arguments of the conjunction and display an asymmetric relationship that can explain much agreement phenomena observed across languages:

(51)  
```
TP
  NP   T'
     VP   T
      ConjP   V
        NP1   Conj'
             Conj   NP2
```

For Spanish, an initial adapted structure may be understood as in (52). (52) shows the locations of both pre- and postnominal AP. The nature of the XPs will be discussed in 5.5.2 and 5.5.3:

---

26 I do not discuss an alternative structure to (52) in which prenominal and postnominal APs only modify one conjunct. This structure in alluded to in (62), where the APs are inside N1 and N2 instead of outside ConjP.
The structure allows D to c-command ConjP. This allows for the adoption of an agreement strategy in line with Agree, outlined in the Minimalist program (e.g. Chomsky, 2000; here, adapted from Kramer, 2015):

\[(53)\] Agree

a. Agree holds between a probe that has uninterpretable features and a goal that can value the uninterpretable features.

b. The goal must be in the c-command domain of the probe.

c. There is no closer goal in the domain (even if the goal is inactive).

d. Probe and goal must be in the same spell-out domain/phase.

e. Both probe and goal must be “active,” i.e., have uninterpretable features.
5.5.2 Prenominal CCA on D and AP

Prenominal D and A agree with N₁ in all constructions of type [D N₁ & N₂], regardless of the interpretation they induce. Following Wechsler and Zlatić (2003), I assume that nouns possess both INDEX and CONCORD features. For the purposes of illustrating how CCA works, I assume both sets are fully valued from the beginning of the derivation. This is a strong assumption given the analysis presented in chapter 3 for interpretable gender in Spanish BNs. It can thus be weakened for now to the assumption that nouns at least possess all CONCORD features (apart from Case) at the beginning of the derivation. I return to this assumption in the analysis of postnominal CCA.

Adapting an example from Demonte and Pérez-Jiménez, la escasa flora y relieve (38), the features of the two nouns may be understood as follows (ind represents index features and conc represents concord features):

(i) flora ‘flora.F.SG’
   
   (a) \textit{ind}[N(sg), G(fem), P(3)] (or unvalued, see above)
   
   (b) \textit{conc}[N(sg), G(fem ), C( )]

(ii) relieve ‘landscape.M.SG’
   
   (a) \textit{ind}[N(sg), G(masc), P(3)] (or unvalued, see above)
   
   (b) \textit{conc}[N(sg), G(masc), C( )]

Determiners possess both sets of features, as well, yet they are unvalued for these features at the outset of the derivation.\footnote{This does not take into consideration the proposal developed in chapter 4.2.2 regarding gender originating on D and n. A full account of CCA could spell out this interaction more precisely. Nevertheless, this is not a problem for the current analysis, as interpretable gender will only affect INDEX values and not agreement.} Adjectives only possess CONCORD features
(also unvalued from the beginning of the derivation). Coordinate phrases (ConjP) only possess INDEX features and must have these valued from their conjuncts.

(i) D

(a) $ind[N( ), G( ), P( )]$

(b) $conc[N( ), G( ), C( )]$

(ii) AP

(a) $conc[N( ), G( ), C( )]$

(iii) ConjP

(a) $ind[N( ), G( ), P( )]$

Visually, then, the syntactic structure with these feature bundles is as in (54):
If ConjP inherits the features of its daughters, its feature valuation should be simple. Possessing only INDEX features, ConjP will exhibit the resolution of the features present on \( N_1 \) and \( N_2 \): in this case, \( ind[N(pl), G(masc), P(3)] \). This would be different for a joint-reading example like \( Mi\ buen\ amigo\ y\ profesor\ ‘my.SG\ good.M.SG\ friend.M.SG\ and\ professor.M.SG’\). For this joint reading, ConjP would exhibit singular number: \( ind[N(sg), G(masc), P(3)] \). \(^{28}\)

The prenominal AP in (54) is generated as the specifier of a functional head (X) of the extended projection of NP (XP) (Cinque, 2010). These adjectives are attributive and

\(^{28}\)In this case, too, the semantics of ConJP would differ from the semantics of joint-split readings presented in this chapter; see King and Dalrymple (2004) for such an analysis.
exhibit direct modification, as discussed in 5.4. Considering the agreement process for AP first, AP only possesses concord features, which are all unvalued at the beginning of the derivation: \textit{conc}[\textit{N}( ), \textit{G}( ), \textit{C}( )]. AP is thus a suitable probe to participate in an Agree relationship. AP probes down the tree: \textit{N}_1 is the closest and most suitable goal as it also possesses CONCORD features, and these features are valued.\textsuperscript{29} ConjP is not a suitable goal, as it only possesses INDEX features and, more specifically, a PERSON feature. It is conceivable that, if ConjP were the only option available, AP could value its features from ConjP.\textsuperscript{30} However, \textit{N}_1 possessing CONCORD features, AP matches these features. Thus, AP is able to value its own features via Agree with \textit{N}_1 as in (55):

\textsuperscript{29}It seems to be a language-specific characteristic whether or not AP agrees with syntactic (\textit{concord}) or semantic (\textit{index}) features. Czech and French appear to be languages that exhibit semantic adjectival agreement (Wechsler and Zlatić, 2003). As discussed in chapter 4.4, adjectives modifying Spanish epicene nouns appear to vary in their agreement style.

\textsuperscript{30}Kazana (2011), in work on agreement in coordinate structures in Greek, argues that non-canonical agreement on AP is the result of a Contextually Introduced Referent (CIR) implied in the structure that is superordinate to ConjP. For joint-split readings, this CIR assumes the CONCORD features of \textit{N}_1, and modifying APs agree with these features. Though intriguing and perhaps an explanation for prenominal CCA in Spanish, this account would not explain postnominal CCA in Spanish.
D, possessing both INDEX and CONCORD features and in an equally suitable position to participate in Agree, probes down the tree similar to AP. For its INDEX features, D finds a suitable goal in ConjP. It may thus be valued as ind[N(pl), G(masc), P(3)]. Nevertheless, ConjP and N1 are equally local to the Probe D31, and it is viable that N1 could value D’s INDEX features. From an informal survey of the corpus data presented here, CCA cases in subject position tend to trigger plural verb agreement, suggesting

31For “equally local,” I follow van Koppen’s definition in work on agreement in coordination in Dutch (which mirrors that of Chomsky (2000) on equidistance): (i) Y and Z are equally local to X iff (i) X c-commands both Y and Z, and (ii) the set of nodes that c-command Y is identical to the set of nodes that c-command Z (2007:14).
that DP as a whole possesses plural INDEX features. Yet, a more detailed survey can be conducted to determine how D’s INDEX features are valued. An additional possibility is that the syntax establishes an agreement relation with both the coordinated subject as a whole and the first conjunct of the coordinated subject. Subsequently, during the post-syntactic morphological derivation, one of these agreement relations—namely, the CONCORD relation (discussed below)—is overtly expressed on the Probe. The INDEX agreement relation is covert and visible only in verb agreement. This possibility will be further discussed in 5.5.3.

For CONCORD agreement, D also has two potential options. Postulating a multiple Agree situation (e.g. Carstens 2001), both D and A could simultaneously agree with N\textsubscript{1}. Alternatively, AP could be valued first by N\textsubscript{1}, following which D could probe AP for its CONCORD features. The specific mechanism of agreement will not affect the ultimate analysis here, so I remain agnostic as to which process may be occurring for Spanish. A full, valued structure may be seen in (56)

\footnote{I assume that case is assigned once the nominal expression is in a structural position in the sentence. Case would then need to percolate down from D to the other elements. See, for example, Norris (2017) for an account of case in nominal concord.}:
Returning to ConjP, though apparently simple in how it is valued for its INDEX features, ConjP is perhaps the most important in considering the difference between split and joint readings. As noted above, for a true joint reading like *Mi buen amigo y profesor* ‘my.SG good.M.SG friend.M.SG and professor.M.SG’, ConjP will possess singular number features. For joint-split readings like those discussed in this chapter, if N₁ and N₂ form part of a larger whole and are somehow coindexed, ConjP ought to reflect this: rather than denoting a plurality, ConjP should denote a singularity. In this case, D’s morphological expression could potentially express the INDEX features of ConjP as a singular item. Nevertheless, why D would then express the gender of only the first conjunct (thus selectively expressing CONCORD and INDEX features in its spell-out) would need to be stipulated. Thus, it seems that D morphologically
only expresses concord features, and these features are those of $N_1$. The variable plural/singular INDEX feature of ConjP may, however, explain why constructions like those discussed in this section exhibit variable singular and plural verbal agreement.

This discussion raises a larger issue that I will not be able to address in full in this chapter but will return to in the next section: where is the locus of Number in structures like (54)? Though Wechsler and Zlatić’s division of syntactic and semantic features is helpful, the authors assume a framework that allows for nouns to combine with number features pre-syntactically in the lexicon. This is not an assumption of this dissertation, so additional explanation needs to be given for how nouns acquire (or not) number features in coordinate structures. For plural nouns that end in -s, nouns need to at least possess plural CONCORD features. The featural status of singular nouns especially with regards to number is unclear. As the difference in acceptability shown earlier in this chapter between coordination of two bare nouns (16) and a sole bare noun (footnote 4) (repeated in (57)) demonstrate, something syntactic licenses coordinated bare nouns where single bare nouns are disallowed:

\[(57)\]
\[
a. \text{Madre e hijo permanecieron allí breves días.} \\
\text{mother.M.SG and child.M.SG remained there brief days} \\
\text{‘Mother and child remained there for a few days.’}
\]
\[
b. *\text{Madre permaneció allí breves días.} \\
\text{mother.M.SG remained there brief days} \\
\text{‘Mother remained there for a few days.’}
\]

Two options are possible. First, the bare nouns in (57a) may each lack a NumP, in which case ConjP (and, presumably, NumP above ConjP) license their use as a preverbal subject. If true, the distribution and interpretation of these coordinated bare nouns ought to parallel those of bare plurals (also lacking D). Additionally,
this analysis would support proposals that ConjP is phi-deficient for number or pre-specified as [-sg]. Alternatively, (57b) may possess a NumP, but there then exists a restriction in Spanish on bare NumP singular count nouns appearing without a determiner. I continue discussion of this question in the next section.

5.5.3 Agreement on Postnominal AP

Reduced Relative Clause

Postnominal adjectives, in the structures presented in this chapter, show either full agreement with the coordination phrase, or agreement with the rightmost conjunct (N_2). To explain this agreement on postnominal AP, I follow Demonte & Pérez-Jiménez (2012) in assuming that these adjectives correspond to Cinque’s description of “indirect modification” and are generated within a reduced relative clause that originates higher than ConjP in the syntactic tree. The movement of ConjP can be visualized in (58a-b), with the resulting structure in (59); here, I derive the structure for *la flora y relieve argentinos* ‘the.F.SG flora.F.SG and landscape.M.SG Argentine.M.PL:’

(58) a. DP

\[
\begin{array}{c}
\text{(landing site for ConjP)} \\
\text{D}
\end{array}
\]

\[
\begin{array}{c}
\text{XP} \\
\text{[(Red)RC PRO_i AP] ConjP_i}
\end{array}
\]

\[
\rightarrow
\]

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Several analyses have been proposed in which prenominal and postnominal reduced relatives raise in the tree and are merged in the same position. Kayne (1994) claims that both types of reduced relative clauses are the complement of the D, with the antecedent noun raising from within the relative clause to Spec CP. More recently, Cinque (2010) has proposed that both types are merged in the functional projections of the noun, at the left edge of the modifier system. This is his analysis for adjectives in Romance. Cinque supports his analysis with empirical evidence that different
adjective positions correspond to different interpretations and, correspondingly, to different syntactic sources. Additionally, the ordering of these adjectives is fixed, suggesting that adjunction is not a solution to explain adjectival behavior.

Explanation for the movement and subsequent interpretation of ConjP involves the nature of the non-finite reduced relative clause in (58-59). This clause possesses a PRO that is distinct from yet matched with the head of the reduced relative clause: [XP PRO]. Movement of ConjP higher in the tree is necessary for ConjP to control PRO and for it to have an antecedent; in this sense, PRO is an obligatory control PRO (e.g. Boeckx and Hornstein, 2004). This movement is supported empirically by the fact that relative clauses can never precede nouns they modify in Romance languages.

Arguments that show that the head NP of a finite relative clause can be reconstructed into the relative clause carry over to reduced relatives (Bhatt, 1999). A basic structure for what occurs in Spanish is then as follows:

\[
\text{(60)} \quad \begin{align*}
\text{a.} & \quad D^0 [NP/ConjP [XP NP/ConjP [X' ...... ]]] \\
\text{b.} & \quad la [[[ConjP flora y relieve] [XP [ConjP flora y relieve] [X' argentinos ]]]]
\end{align*}
\]

How do we explain the relationship between the two NP/ConjP elements in (60)? Though it is possible to stipulate an LF-condition that forces the head NP and the complement of the relative operator in the finite relative clause and the subject in the reduced relative to be identical, it would then be necessary to stipulate that the relative clause-internal material identical to the head NP is obligatorily deleted.

\[\text{33 As a clear example of this, Larson (2000) observes that whenever an adjective can be found both in pre-nominal and post-nominal position, with different properties, the post-nominal one invariably shows a behavior identical to that of the corresponding predicative adjective inside a restrictive relative clause. The minimal pair } \textit{Sam will interview every possible candidate} \text{ and } \textit{Sam will interview every candidate possible} \text{ illustrates this, in that the second example is only equivalent to } \textit{Sam will interview every candidate that it is possible to interview}.\]
at PF (cf. Sauerland, 2003). I instead follow Bhatt (1999, 2002) and assume that the head NP and the relative clause internal material are related by overt syntactic movement. Though such movement is unorthodox and involves both extraction of unboundedly deeply embedded possessors and projecting movement (movement where the moving phrase instead of the target projects), Bhatt concludes that empirically it poses no problems (see also Iatridou et al. (1999) for arguments in favor of projecting movement). Bhatt’s proposal has the advantage of not stipulating anything about the (non-)pronunciation of relative-internal material: in chains created by movement, the highest element in the chain is pronounced and the other elements are deleted. For postnominal APs in Spanish, the chains created are as follows:

\[
\text{(61) a. } la [\text{[[ConjP flora y relieve]_i [XP [ConjP flora y relieve]_i [X' argentinos [ConjP flora y relieve]_i ]]]]}
\]

b. Chains: (i) Head NP (ConjP) chain; (ii) XP-internal chain A-chain

The interpretive effects of (61) are as follows: A-chain reconstruction is assumed to pattern with other A-chain reconstruction (cf. Lasnik, 1999). For the head NP chain, Safir (1999) has noted that material in the head NP does not pattern with other material in the [Spec,CP] of the relative clause with respect to reconstruction: rather, it may be interpreted outside the CP. Combining the structure of (58-59) with these observations, there thus seem to be many possible interpretive patterns for postnominal APs, which are well documented by Cinque but which this chapter cannot explore all of (I return to this matter in section 5.5.5). Most basically, ConjP may be interpreted either in its landing site or trace. This is supported by Cinque’s (2014) analysis of the semantic properties of direct versus indirect modification adjectives, and his observation specifically that postnominal APs in Romance
generated in reduced relative possess interpretive properties of both prenominal and postnominal adjectives.

A final question is what is the syntactic and semantic nature of PRO seen in (58-59) and proposed for Spanish postnominal structures? I follow others (Bhatt 1999; Iatoridou 1999) and assume that PRO is semantically vacuous. Interpreting the structure \([AP\, PRO\, argentinos]\) yields us an object of semantic type \(<e,t>\) and is thus of the right semantic type to combine with the ConjP via Predicate Modification.\(^{34}\) PRO is an empty category and deleted at LF, though its indexation is identical to ConjP. This final point is important in the discussion of agreement in continuation.

**AGREEMENT**

Turning to the agreement processes, ConjP ought to be valued in the same way as for prenominal agreement: \(\text{ind}[N(\text{pl}), G(\text{masc}), P(3)]\). Previous analyses have proposed that PRO, being a pronominal category, possesses both INDEX and CONCORD features. Yet, to receive these features via Agree, PRO must be c-commanded by its antecedent. Thus, this valuation must take place after ConjP has moved above AP.

Following the analysis above that PRO is semantically vacuous, I propose instead that PRO lacks INDEX features and only possesses CONCORD features. This complicates the coindexation relationship by which PRO ought to receive its INDEX features and, possibly, its CONCORD features. Wechsler and Zlatić (2003, 2005), assuming the presence of both sets of features on PRO, propose that there are linguistic constraints that hold between CONCORD values and INDEX values; these constraints are encoded

---

\(^{34}\)Different proposals exist for whether PRO participates in A (Bhatt, 1999) or A’ movement (Heim and Kratzer, 1998). The details of each are assessed in Bhatt (1999), though implications for the discussion here are trivial. Bhatt’s mechanism of Direct Predication involving only A movement nevertheless seems favorable for keeping movement of PRO local and restricted.
grammatically in the form of a default feature structure for nouns and pronouns, such that the gender and number values are identical in the CONCORD and INDEX bundles. In accord, the number and gender values of the CONCORD bundle of PRO should correlate with those of the INDEX bundle.

Without an INDEX bundle, PRO lacks any features. There are three options that PRO is thus left with to value its CONCORD features:

1. PRO can conduct a search up the tree for a suitable agreement goal that c-commands it, following Birdirectional or Upwards Agree (Baker, 2008; Bjorkman and Zeijlstra, 2014). In this case, it would find ConjP which, in possession of only INDEX, is a suitable but not ideal target (see 5.5.2).

2. PRO can follow the strategy in (1), but it can expand its search space to the daughters of ConjP in search of a more suitable goal that possesses CONCORD features (e.g. Bošković, 2009). In this case, it would find both N₁ and N₂ as possible goals.

3. PRO has failed Agree (e.g. Béjar, 2003; Preminger, 2014).

To evaluate the options, I review possible agreement patterns for conjuncts of mixed gender, in both singular (62) and plural (63) form:

(62) Singular conjuncts
   a. \([D \text{ N}^{\text{masc}} \& \text{ N}^{\text{fem}} \text{ A}^{\text{masc,pl}}]\) (canonical resolution, agreement with ConjP)
   b. \([D \text{ N}^{\text{masc}} \& \text{ N}^{\text{fem}} \text{ A}^{\text{fem,sg}}]\) (CCA)
   c. \([D \text{ N}^{\text{fem}} \& \text{ N}^{\text{masc}} \text{ A}^{\text{masc,sg}}]\) (CCA)

(63) Plural conjuncts

This constraint may be overridden by lexical exceptions: an example from Spanish is la gente ‘the people’, a collective noun that may be referred to as a unit or as a plurality.
a. \([D \text{ N}_{\text{masc}} \& \text{ N}_{\text{fem}} \text{ A}_{\text{masc,pl}}]\) (canonical resolution, agreement with ConjP)
b. \([D \text{ N}_{\text{fem}} \& \text{ N}_{\text{masc}} \text{ A}_{\text{masc,pl}}]\) (CCA or canonical resolution)
c. \([D \text{ N}_{\text{masc}} \& \text{ N}_{\text{fem}} \text{ A}_{\text{fem,pl}}]\) (CCA)

As noted in chapter 4, many accounts have posited that gender and number features ought to be treated separately; this line of thinking has extended to agreement processes (e.g. Bonet, 2013). Spanish CCA data demonstrates the opposite: gender and number agreement comes as a package. I will assume this position moving forward, analyzing (63b-c) as instances of full CCA and leaving the exact nature of why gender and number must be bundled in Spanish CCA for future work.

In regards to PRO’s options for agreement, then, an explanation needs to account for both (i) agreement with ConjP (resolution in both number and gender of conjuncts) and (ii) agreement in both gender and number with \(N_2\) (CCA). Postnominal agreement with \(N_1\) needs to be prohibited, as well as CCA in just gender or number.

Several recent analyses of CCA have articulated a clear division between syntax and post-syntax/PF in agreement (Béjar, 2003; Van Koppen, 2007; Bhatt and Walkow, 2011; Bhatt and Walkow, 2013; Walkow, 2013). These analyses build on distinguishing between the two parts of the operation of Agree proposed by Chomsky (2000, 2001): Match and Value. Match (Chomsky, 2000:122) identifies possible goals for Agree based on c-command and whether the goals have the same type of features as the probe. Value is the transfer of values from the valued member of the probe-goal dependency to the unvalued one.

Recent proposals concur that Match is a purely syntactic operation; they differ in how they allow Value to occur post-syntactically and involve non-syntactic factors such as linear proximity. As a first possibility, the post-syntactic component may be
limited to considering the nodes that have been Matched for Valuation; in this case, the agreement controller must be in a syntactically viable position (i.e. in some c-command relationship, depending on if it is canonical or Upwards Agree) to value the target’s features. As a second option, the post-syntactic component can search inside the Matched coordinate phrase for possible valuators. For Bhatt and Walkow’s and Walkow’s analyses in particular, PF looks at the features of all conjuncts and chooses from them based on linear proximity.

I follow the second approach for Spanish with the same restriction that, at PF, the agreement target chooses the most suitable valuator based on linear proximity. For postnominal CCA, PRO follows option (2) above for agreement: it conducts an upwards search in the tree to ConjP and Matches, given that ConjP has all of the necessary features for agreement (gender and number). This is seen in (64):

(64)  la flora y relieve bonito/bonitos
During linearization (Embick, 2007), AP must agree at the concatenation step with the closest conjunct in order for no functional projections to intervene in the process:

(65) Linearization steps for postnominal CCA in Spanish:

a. Step 1: Linearize bottommost XP
   \[A * ...]^{36}

b. Step 2: Linearize Conj’
   \[\text{Conj} * N2\]

c. Step 3: Linearize ConjP
   \[\text{N1} * \text{Conj} * N2\]

d. Step 4: Linearize upper XP
   \[\text{N1} * \text{Conj} * N2 * A\]

e. Step 5: Linearize DP
   \[D * \text{N1} * \text{Conj} * N2 * A\]

What remains to be explained is why CCA is optional. This optionality will require future inquiry into the exact interpretations of coordinate structures that do and do not exhibit CCA for support, but I will suggest a possible solution in the next section that makes recourse to the dual sets of features present in the structure as well as the joint-split nature observed from the data.

THE JOINT-SPLIT READING

To explain the semantic interpretation of a joint-split reading, or how what otherwise looks like a split reading is interpreted as a unit, I adapt a proposal of Heycock and Zamparelli (2005). Heycock & Zamparelli develop a theory of coordination for

\[36\] I assume that PRO is “pruned” in line with Embick (2010:59). AP is represented as A, as it is the only element in AP.
English, proposing that certain “split” readings signal what they term *set product*; this operation results in a type of reading similar to joint but not fully intersective. In the authors’ proposal, the semantic number of a noun phrase is constructed in stages within the DP; the semantics of conjunction can then mimic either *set union*, *set intersection*, or a novel *set product* depending on the underlying syntax. Distinct from set union, set intersection can be understood for joint readings of predicates (properties) where the ultimate interpretation of the coordinate phrase is a subset of two sets:

(66)  
\[\text{a. My mother is [beautiful and intelligent].} \]
\[\text{b. My mother is [a good writer and an excellent painter].} \]

In (66a), the interpretation of the coordinate structure is such that *my mother* inhabits the intersection of the set of things that are beautiful and the set of things that are intelligent. In (66b), this is the same case with the set of good writers and the set of excellent painters. These readings do not seem to be possible for the following examples with argument noun phrases, which appear to form a plurality of individuals rather than the intersection of the property of being Héctor and the property of being Ruth:

(67)  
\[\text{a. Héctor and Ruth danced zumba.} \]
\[\text{b. Héctor and Ruth met.} \]

In (67), following a theory of set intersection, the intersection of \([\text{Héctor}]\) and \([\text{Ruth}]\) is empty, and the split reading is not captured.\(^{37}\)

\(^{37}\)The examples in (67) are also quite different, in that (a) allows a conjunction reduction reading, while (b) does not.
To remedy the issue faced with set intersection for an example like (67), the authors propose that conjunction be interpreted as an operation which, given two or more sets (the denotations of each conjunct), takes a member from each set, performs set union on the resulting tuple, and then returns the set of all the results. This can be seen semantically for the denotation of set product in (68) and examples of different types of coordination:

\[(68) \text{ Set Product (SP)}\]

\[\text{SP}(S^1, ..., S^n) = \{X : X = A^1 \cup \ldots \cup A^n, A^i \in S^i, ..., A^n \in S^n\}\]

Where two non-empty, non-intersecting sets of elements are combined by the set product operation in (68), the result will be a set of two-membered sets. This can be seen in (69):

\[(69) \text{ a. } [\text{NP}_i] = \{\{a\}, \{b\}\}, [\text{NP}_j] = \{\{c\}, \{d\}\}\]

\[\text{b. } [\text{NP}_i \text{ and NP}_j] = \text{sp} ([\text{NP}_i], [\text{NP}_j]) = \{\{ac\}, \{ad\}, \{bc\}, \{bd\}\}\]

Following these operations, the interpretation of the whole conjunction is a set of all possible pairs consisting of one member of each conjunct. If the sets for each conjunct each consist of one member (as in 67), the result will be a set of two.

How this set of two is interpreted as a unit, as in the corpus examples of CCA, may help explain the optionality of CCA. Whether a ConjP based on Set Product is interpreted as a unit or as a plurality ought to be reflected in ConjP’s index values. Returning to discussion in 5.5.1 on the featural make-up of ConjP, a parallel question emerges: Does ConjP have a preset feature that interacts with and/or prohibits the valuation of its number feature?
I will assume with others that ConjP’s number value begins as [-sg]. In a joint-split reading, this value remains as [-sg], as the coordinate structure as a whole is neither distinctly plural nor singular. Additionally, the BN conjuncts lacking number specification themselves, they would be unable to value ConjP’s number feature. In tandem with this apparent freezing of ConjP’s number value, it is doubtful whether or not ConjP will inherit only the gender features of its conjuncts (without their number features), or whether it will have an unvalued gender feature. Similar to their number features, the BNs likely possess only CONCORD gender values. These features are adequate for agreement with AP, but they cannot value the INDEX features of ConjP (and, as a result, those of D; discussed below). ConjP is left underspecified: ind[G( ), N(-sg), P( )]. ConjP is thus a deficient goal for the PRO/postnominal AP that is looking to value both gender and number features. This failed syntactic agreement will result in the favoring of post-syntactic agreement and CCA described above. Alternatively, if ConjP does not possess a joint-split reading and instead possesses a split reading, postnominal AP will agree with ConjP. Future work will need to tease apart these readings and corresponding agreement patterns more precisely.

This tendency towards joint-split readings of BNs in [D N & N] structures and resulting postnominal CCA relates to the observation and analysis in chapter 3 that BNs exhibit readings of being institutionalized entities in whatever construction they form part of. Coordination seems to be no exception. A corpus search for certain bare coordinate structures of canonical pairs (for example, madre e hijo ‘mother and child’ (4322), madre e hija ‘mother and daughter’ (7281) madre y padre ‘mother and father’ (1066), padre e hija ‘father and daughter’ (2560)) shows that these structures exhibit a range of interpretation and agreement patterns. Coordinated bare nouns
may themselves be adjectival (70); can have a joint reading (71); a split reading with canonical agreement (72); and a split reading with CCA (73):

(70) la relación específica madre e hija
    the.F.SG relation.F.SG specific.F.SG mother.F.SG and daughter.F.SG
    ‘the specific mother and daughter relationship’

(71) Yo fui madre y padre para él
    I was mother.F.SG and father.P.SG for him
    ‘I was mother and father to him’

(72) padre e hija lituanos que dicen poseer...
    father.M.SG and daughter.F.SG lithuanian.M.PL that they-say possess...
    objetos de la KGB
    objects of the KGB
    ‘Lithuanian father and daughter that they say possess... objects of the KGB’

(73) las categorías de mejor actriz y actor
    the.F.SG category.F.SG of best.SG actress.F.SG and actor.M.SG
    secundario
    secondary.M.SG
    ‘the categories of best supporting actress and actor’

Such coordination may be understood as natural coordination, or a semantic relation in which two entities are closely related in meaning and form a conceptual unit (Haspelmath, 2004; Wälchli, 2005). Natural coordination implies that the parts express semantically closely associated concepts, such as ‘brother and sister’, ‘hands and feet’, ‘eat and drink’, ‘knife and fork’, etc., which are on the same hierarchical level, and that the whole meaning (‘siblings’, ‘limbs’, etc.) is more general than the meaning of the parts (Wälchli, 2005). Though semantic in nature, natural coordination has a unique syntax in several languages. In such languages, there is

38Natural coordination may be syntactically realized in co-compounds, word-like units consisting of two parts such as the Georgian (Kartvelian) da’-dzma ‘sister-brother (siblings)’ in contrast to accidental coordination with the conjunction da ‘and’; or Tocharian A (Indo-European) ſnom-klyu ‘name-glory’ (Wälchli, 2005). Natural coordination can also be
generally an asymmetry in strategies: accidental coordination cannot be expressed with the natural coordination strategy, while natural coordination can be expressed by using either the specific structure reserved for it or the more general structure that must be used for accidental coordination.

Returning to the underspecification of ConjP, there needs to be further explanation for how D acquires its INDEX features. D must possess some form of INDEX features, for these seem to be what triggers verbal agreement if DP is in subject position. As noted earlier, this verbal agreement is typically plural:

(74) a. La fascinante flora y relieve (me
the.F.SG fascinating.F.SG flora.F.SG and rugged.landscape.M.SG me
sorprendieron mucho).
surprised much
‘The fascinating flora and rugged landscape astonished me.’

b. Su verdadero desarrollo y expansión han
it.POSS true.M.SG development.M.SG and expansion.F.SG have.PL
venido a partir del siglo pasado.
come.PRT from the century past
‘Its true development and expansion have taken place since the last
century.’

Earlier I presented an analysis whereby D valued its INDEX features via Agree with ConjP; its CONCORD features were valued from N₁ (or prenominal AP, depending on the Agree mechanism). If ConjP lacks specific number and gender features, it cannot value D’s probe. There are three possible options for how D is valued:

expressed by coordinated nouns, coordinated noun phrases, or coordinated verbs. Udihe, Lenakel, Finnish, and Eastern Armenian all express natural coordination via distinct syntactic means (Dalrymple and Nikolaeva, 2006).
1. D is valued by context for both gender and number INDEX features. This would follow the mechanism seen in chapter 4 and will be discussed further in chapter 6.

2. NumP sits between ConjP and D and is somehow able to value its feature from ConjP and serve as a Goal for D.

3. ConjP possesses PERSON features that are born into the derivation already valued that indicate whether or not the phrase refers to the same individual or two separate ones.

For options 2-3, the question still remains of D’s gender features. Thus, it seems that D needs to interact with the context in some fashion to fully value its features. The role of D is not trivial in this sense. In the majority of examples presented in this chapter, BN conjuncts are introduced by a single definite determiner. This may presuppose that the conjuncts are one and the same. Additionally, having a quantifier in place of D impacts resulting readings (see (18)-(19)). I leave it to future work to fully specify what D’s interaction and role is in CCA, but note that there must be additional interaction with context to satisfy its features.

5.5.4 Considering the Alternative

An alternative structure exists for postnominal modification of a [D N & N] structures in Spanish that easily explains CCA patterns, whereby a postnominal AP (AP₁) only modifies N₂. I leave the previous syntactic account of postnominal AP as part of a reduced relative in the structure for comparison purposes (AP₂). This looks like as in (75):
(75) could easily explain the contrasts observed in examples (46), repeated here:

(76) a. la radio y televisión pública catalanas
    the.F.SG radio.F.SG and television.F.SG public.F.SG catalan.F.PL
    ‘The Catalan public radio and television’

b. *la radio y televisión públicas catalana
    the.F.SG radio.F.SG and television.F.SG public.F.PL catalan.F.SG

To explain this agreement, AP₁ would syntactically agree with just N in NP₂: this would correspond to the surfacing of pública in singular feminine in (75a)). AP₂, then corresponding to catalanas in plural feminine in (75b), would exhibit resolved agreement with ConjP: feminine plural.

Questions immediately arise from this analysis. First, if AP₁ is postnominal and constitutes indirect modification, a separate analysis for an extended projection
inside ConjP needs to be posited. This seems overcomplicated and undesirable. For interpretation, an explanation for how AP\textsubscript{1} scopes over both conjuncts needs to be given. Syntactically, this could assume the form of Right-Node-Raising (RNR). Right-Node-Raising (RNR) (Ross, 1967) has long been known to be insensitive to conjunct-internal islands. Typically, identical constituents from both conjuncts are raised to the right of the coordinate structure. For the structure in (75), then, AP\textsubscript{1} would need an identical counterpart on NP\textsubscript{1}. This would look as in (77):

\begin{equation}
(77)
\end{equation}

Following RNR, both APs would be deleted in (77), resulting in (78):

Following RNR, both APs would be deleted in (77), resulting in (78):
RNR would raise the postnominal AP that originates inside both NPs to the postnominal position adjoined to ConjP. Support for an RNR analysis comes from postnominal quantifiers, which are shown to scope over both conjuncts (see examples 41-43). This, then, has the potential to capture both the agreement effects and the scope ambiguity of postnominal AP.

On the agreement side, however, this analysis quickly runs into trouble. For a coordinate structure with two singular NPs, each adjective would show agreement with the number and gender of each conjunct. In a coordinate structure of mixed gender, how to determine the gender of the AP that results in (62) is unclear. Additionally, for coordinate structures that display plural agreement on postnominal adjectives, something would need to be stipulated to derive a plural form from the original singular forms. This analysis additionally runs into the issues discussed above in section 5.4.1 in regards to Camacho’s ellipsis account. Thus, in addition to
having to explain the problems cited above, (62) still does not account for the CCA agreement patterns.

In comparison, the analysis presented above would account for agreement on AP\textsubscript{1} as a result of agreement during Valuation at PF. AP\textsubscript{2} merits further explanation. Given that it displays the resolution of the conjuncts in both gender and number, its agreement seems connected to discussion above of how to value D’s INDEX features, which also display resolution of the features of the conjuncts. A fully outlined syntactic structure for DPs that contain coordinate phrases that captures all possible agreement effects, stacked adjectives included, is thus necessary in future work.

5.5.5 Loose Ends

The interaction between CCA in Spanish and the animacy of the N conjuncts is notable, though for this dissertation I was unable to carry out an extensive corpus study of how, precisely, animacy impacts agreement patterns in coordinate structures. Possessing the feature [+animate] is observed to incur canonical agreement resolution in mixed-gender conjuncts (case b) much more than CCA strategies (cases a and c).\textsuperscript{39} Table 5.3 shows the percentage of [+animate] conjuncts as compared to the total number of examples for each case. Additionally, mismatch examples are judged more favorably when the conjuncts are inanimate:

\begin{itemize}
  \item[(79) a.] \textit{El grupo y organizaciones armadas}
    the.M.SG. group.M.SG and organization.F.PL armed.F.PL
  \item[(79) b.] \textit{Los grupos y organización armada}
    the.M.PL group.M.PL and organization.F.SG armed.F.SG
\end{itemize}

\textsuperscript{39}Case (d) is excluded since the current chapter does not consider it for the final analysis. Of note, however, is the fact that none of the conjuncts attested for case d possesses [+animate] features.
The same informant of footnote 10 judged sentence (79a) to be acceptable, while (79b) was again unacceptable.

While animacy seems to play a role in CCA, the status of D also emerges as a key factor in acceptability of CCA. Specifically, if D does not share the number phi-features of the second conjunct (regardless of its gender), grammatical acceptability is less likely. Animacy does, however, seem to have a small effect on whether or not gender participates in CCA, suggesting that gender associated with animacy may have slightly different agreement behaviors. A full account of animacy, morphological gender expression, and their impacts on agreement in patterns would also consider epicene nouns (see chapters 4 and 6), as such nouns are both animate yet possess strict grammatical gender. I leave this work to future research.

Turning to adjectives, there is reason to question that a unitary analysis for adjectives in pre- and postnominal relatives such as those proposed by Kayne or Cinque and adopted here is correct. Sleeman (2011, 2017) has argued for a mixed analysis of relative clauses that appear as pre- and postnominal modifiers based on previous work distinguishing types of adjectives and participles in both their syntax and semantics (e.g. Embick, 2004). She follows Kayne in analyzing postnominal modifiers as the complement of D with the noun moving to Spec CP. She proposes furthermore that prenominal modifiers are not dominated by a CP projection, but are merged

Table 5.4: Percentage of [+ANIMATE] Conjuncts in Corpus Results.

<table>
<thead>
<tr>
<th>Case</th>
<th>Frequency</th>
<th>Percentage [+animate]</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>31</td>
<td>1.3%</td>
</tr>
<tr>
<td>b</td>
<td>175</td>
<td>12%</td>
</tr>
<tr>
<td>c</td>
<td>65</td>
<td>2.6%</td>
</tr>
</tbody>
</table>
within the functional projections dominated by DP, following Cinque’s analysis of reduced relatives. Sleeman’s proposal allows for a syntactic explanation of the different adjectival interpretations documented by Cinque. Further corpus and elicitation work can pinpoint which adjectives are prone to CCA and what their interpretive properties are and outline a finer-grained syntactic structure in accord.

Related, a complete account of CCA in Spanish will address types and competing positions of A and their interaction with CCA. As it currently stands, the analysis presented here is compatible with both direct and indirect modifying adjectives (Cinque, 2010). Indirect modifying adjectives are compatible with copula structures, which predicts that the following structures may be found:

\[(80)\]

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Los comentarios y opiniones estaban contrapuestos</td>
</tr>
<tr>
<td></td>
<td>the.M.PL commentary.M.PL and opinion.F.PL were opposed.M.PL</td>
</tr>
<tr>
<td></td>
<td>‘The commentaries and opinions were opposed’</td>
</tr>
<tr>
<td>b.</td>
<td>?Los comentarios y opiniones estaban contrapuestas</td>
</tr>
<tr>
<td></td>
<td>the.M.PL commentary.M.PL and opinion.F.PL were opposed.F.PL</td>
</tr>
<tr>
<td></td>
<td>‘The commentaries and opinions were opposed’</td>
</tr>
</tbody>
</table>

Nevertheless, example (80b) is strongly dispreferred by native Spanish speakers. This validates a post-syntactic account of CCA, as $N_2$ and postnominal AP are not linearly adjacent after spell-out.\(^{40}\)

\(^{40}\)Further, a complete understanding of the types and origins of AP includes an understanding constructions such as the following, which shows a slight different pattern of CCA:

\[(i)\]

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>(i)</td>
<td>Las políticas agraria y pesquera del gobierno</td>
</tr>
<tr>
<td></td>
<td>the.F.PL policy.F.PL agrarian.F.SG and fishing.F.SG of-the government</td>
</tr>
<tr>
<td></td>
<td>‘The government’s agrarian and fishing policies’</td>
</tr>
</tbody>
</table>
Finally, not fully discussed in this chapter is the role of D, which impacts whether or not certain readings are available. The following examples are severely unacceptable as split readings in Spanish, even as gender is controlled for:

(81) a. *En el bar vi a un soldado y marino.
   ‘In the bar I saw a soldier and a sailor.’

b. *El soldado y marino estaban luchando.
   ‘The soldier and sailor were fighting.’

c. *Ese soldado y marino se han odiado siempre.
   ‘That soldier and sailor have always hated each other.’

These interpretations change, however, if the conjuncts are introduced by a singular quantifier such as cada ‘each’, todo ‘every’, or cualquier ‘any’. Corpus searches conducted for coordinate structures in this chapter either included a definite article or were left bare. While bare coordination structures exhibited variation between split and joint readings, coordinate structures headed by a definite article tended towards a joint reading. This may support the notion that it is not the syntactic structure itself, but rather a semantic element introduced by the semantics of coordination or the presence of D that induces a joint reading. Further evidence from possessive determiners, which lack gender agreement, seem to support the idea that only quantificational determiners can induce a split reading:

(82) a. Mi buen amigo y profesor.
   ‘My good friend and professor.’

b. Su madre y mejor consejera.
   ‘Her mother and best advisor.’
The sentences in (80) strongly induce joint readings. Both (a) and (b) ought to be accompanied by a singular verb; accompanied by a plural verb they are infelicitous. The current account thus leaves open questions of how CCA patterns are impacted by the element in D, which necessarily connects to how the coordinate structure as a whole is interpreted.

5.6 Conclusions

The primary goal of this chapter was to provide both empirical data and a theoretical analysis for CCA in Spanish. With corpus data, I showed that CCA is a frequent agreement strategy in constructions of [D N & N], both with prenominal and postnominal AP. Specifically, data from the corpus study shows that CCA is the preferred agreement strategy for both prenominal and postnominal elements in Spanish coordinate structures of type [D N & N]. While prenominal CCA is obligatory, postnominal CCA is optional.

My analysis claimed that both prenominal and postnominal CCA is the result of the interaction between syntactic and semantic features (Wechsler and Zlatić, 2003) and of the joint-split interpretation of the conjuncts. I additionally motivated an asymmetric syntactic structure to explain both patterns. I showed that prenominal AP and D display syntactic agreement features in an Agree relation with N₁, resulting in CCA. To analyze postnominal CCA data, I focused on the following minimal pair: (i) when postnominal AP exhibits CCA and still scopes over both conjuncts; and (ii) when postnominal AP displays canonical agreement and scopes over both conjuncts.

I argued that the optionality of postnominal CCA is due in large part to the nature of BN conjuncts within the coordinate phrase and a particular semantics of ConjP that gives rise to the joint-split reading. Specifically, lacking interpretable features,
BN conjuncts are unable to value ConjP’s feature set. Postnominal AP thus does not have a suitable Goal for Agree, which results in it both expanding its search space and resorting to postsyntactic processes to value both gender and number features simultaneously. I additionally present an analysis of the reduced relative clause that postnominal AP is generated within that explains both interpretive effects and semantic compositionality. This analysis updates previous proposals (Cinque 2010; Demonte and Pérez-Jiménez 2012) and paves the way for future work that specifies the relationship between fine-grained adjective type, nominal location, and resulting interpretation. Further investigation ought to also probe the role of Number and D in coordinate structures, as well as whether or not coordinated bare nouns show the same semantic restrictions as their singular counterparts seen in chapter 3.
CONCLUSION: A MORPHOSEMANTICS OF SPANISH GENDER

This dissertation has taken as its empirical focus the expression of interpretable gender in Spanish small nominals, or bare count nouns that lack a determiner (BNs). The main challenge presented by this group of nominals is to account for the surfacing of interpretable gender on \( n \) without the presence of a full DP structure. In accounting for this possibility, I have looked at three primary data points: (i) BNs in pseudo-incorporation structures (chapter 3); (ii) BNs in ellipsis structures (chapter 4); and (iii) BNs in coordinate structures (chapter 5). The chapters of this thesis have each come to bear on the central questions of this dissertation in different ways, providing empirical evidence focused on specific phenomena involving interpretable gender and Spanish small nominals that nevertheless have implications for their overall understanding.

Chapter three presented empirical evidence and an analysis for pseudo-incorporation in Spanish. This data showed that, in pseudo-incorporation structures, the expression of interpretable gender is highly restricted. For pseudo-incorporation structures involving Spanish BNs to be pragmatically felicitous, the structures need to express some sort of generalizable canonical characteristic; this characteristic was captured by adapting the semantics of pseudo-incorporation for Hindi as presented in Dayal (2011). Interpretable gender in Spanish, it seems, introduces a level of specificity into these pseudo-incorporation constructions involving BNs that results in infelicity. This
chapter thus supports that view that interpretable gender can be located on n, but that the larger nominal syntax impacts how acceptable this expression is.

Chapter four presented a range of Spanish ellipsis data in line with previous cross-linguistic proposals to pinpoint how gender is interpreted in Spanish small nominals that do not form part of pseudo-incorporation structures as seen in chapter 3. Data supported the existence of roughly three different classes of nouns that possess different forms of interpretable gender. Adapting a semantics of gender proposed for Italian by Percus (2011), I further argued that, while all masculine gender in Spanish is presuppositional, feminine gender may be both presuppositional and assertive. The assertional nature of feminine gender comes in the form of certain roots (e.g. class II, actriz ‘actress’) and affixes (e.g. -esa for class III nouns). This chapter supported an analysis in which interpretable gender has the ability to occupy multiple sites on the nominal spine depending on the noun class and noun gender.

Finally, chapter five presented the phenomenon of Closest Conjunct Agreement (CCA) in Spanish. In my analysis, I introduced the existence of two types of features into the syntax: (morpho)syntactic and semantic. Idiosyncratic agreement patterns like CCA suggest that these features participate in visible agreement differently. In CCA specifically, a unique semantics of conjunction that gives rise to a joint-split reading causes ConjP to lack full specification of semantic features, resulting in obligatory Agree of prenominal elements with $N_1$ and the failure of Agree for postnominal material. Nominal agreement patterns then result from a two-step process of Match, where a Probe finds a suitable Goal in the syntax (e.g. ConjP), and Value, where the Probe is valued by the closest linear element after spell out (e.g. $N_2$). This analysis further drew on the property nature of Spanish BNs, which
flexibly determine whether a coordinate structure exhibits split, joint, or joint-split reading.

As I will argue in this chapter, I claim following previous chapters that interpretable gender in Spanish may originate on one of two locations in the nominal spine: D or n. This location is dependent on two factors: (i) whether the noun possesses full DP syntax; and (ii) the noun’s class, defined by both morphosyntactic and semantic features.¹ The location of gender impacts both when and how gender in Spanish is interpretable. This claim relates to the idea that interpretable gender in Spanish is constructed in parallel with nominal structure, resulting in its distribution over several nominal categories and various possible interpretations. A further claim I argue here is that interpretable gender in Spanish comes in different strengths, which are also dependent on the initial location of gender.

These claims draw in large part from the paradox that the morphological expression of interpretable gender is seemingly both context-free, as natural gender can be interpreted without reference to a specific individual; and context-sensitive, as natural gender is often linked to a specific individual in the discourse. In other words, while in some cases natural gender appears to be inherent to a noun, in others its expression is dependent on the context. This was seen in the examples presented in chapter 1 and is repeated here. While (1) is a generic statement about female soccer players, (2) refers to a specific soccer player:

(1) Las jugadoras de fútbol tienen que entrenar mucho.
    the.F.PL player.F.PL of soccer have-to.3.PL that train much
    'Female soccer players must train a lot.'

¹Note: As in chapter four, this ‘class’ is different from accounts of Spanish ‘word class’ (e.g. Harris, 1991; Kramer, 2015; Vadella, 2017).
‘Abby Wambach, the U.S. soccer player, scored 100 goals in nine years.’

I turn now to the central questions of the dissertation to explain the observed data (6.1, 6.2, 6.3). I then briefly discuss sources of inter-speaker variation and the implications that such variation has for the theoretical analysis presented here (6.5).

6.1 Where is Gender Located in the Nominal Spine?

Across the literature, four locations for interpretable gender have been proposed: (i) on the root (Alexiadou, 2014; Atkinson, 2015; Kramer, 2015); (ii) on $n$ (Kramer, 2015; Alexiadou, 2017); (iii) in a separate functional projection (Picallo, 2008); and (iv) on $D$ or a related projection high in the nominal structure (Kučerová, 2018; Sauerland, 2008; Heim and Kratzer, 1998)\(^2\). This is visualized in (3):

\(^2\)I group these approaches together here, as they both rely on the presence of $D$ to allow the nominal expression as a whole to communicate with the discourse. Further work can elucidate the pros and cons of each separate projection.
I argue for Spanish that interpretable gender has two possible locations in the nominal spine, and that these locations are dependent on the syntactic structure that is present and the class of noun. For full DPs, Spanish allows interpretable gender to surface on both D and n:
(4) Possible locations for interpretable gender in Spanish DPs (Current Account)

\[
\begin{array}{c}
\text{DP} \\
\text{D} & \text{NumP} \\
\text{\textit{i}[GENDER]} & \\
\text{Num} & \text{nP} \\
\text{n} & \sqrt{P} \\
\text{\textit{i}[GENDER]}
\end{array}
\]

The need for these two locations is evidenced by different classes of nouns. Gender on D is necessary to explain the behavior of Class I nouns like \textit{dentista} ‘dentist’, which from ellipsis constructions display no gender mismatch whatsoever (chapter 4). An example is given as follows:

(5) a. Pablo es dentista y Marta también.
   Pablo is dentist.SG and Marta also
   ‘Pablo is a dentist and Marta is, too.’

b. Marta es dentista y Pablo también.
   Marta is dentist.SG and Marta also
   ‘Pablo is a dentist and Marta is, too.’

These nouns are comprised of bare \textit{n} regardless of the gender of the referent, if a referent is present in the discourse. This can be seen in (6):
As this dissertation does not address full DP structure, I direct readers to proposals by Kučerová (2018) and Sigurðsson (2014, 2018) for analyses of how interpretable gender is valued on D from the context. These accounts touch on how DP-internal agreement is accomplished as well, as traditional Agree would be unable to explain the valuation of phi-features on adjectives within the nominal domain from D.

The second location, n, in full DP structures like (4), is necessary for nouns like la actriz ‘the actress’. For these nouns, gender is assertional and originates on n. Agreement on D is possible via Agree:

\[ (7) \quad \text{la actriz ‘the actress’ (actor.F.SG)} \]
As noted briefly in chapter 3, an additional set of nouns similar to the Class I _dentista_ nouns requires further explanation as to where gender is located. These nouns, epicene nouns, are animate nouns that possess a strict grammatical gender. For example, _el testigo_ ‘the.M.SG witness’ tends to appear in masculine form, while _la víctima_ ‘the.F.SG victim.F.SG’ tends to appear in feminine form, regardless of the sex of the referent. These nouns could be analyzed similar to _dentista_, where neither masculine nor feminine gender is interpretable:

(8)  

a.  _el testigo_ ‘the.M.SG witness.M.SG’

```
(8)  a.  el testigo ‘the.M.SG witness.M.SG’

    DP
      
    D    NumP
      
    u[-FEM]
      
    el    Num
      [±PLURAL]
        n
          √TESTIG–

    u[-FEM]

b.  _la víctima_ ‘the.F.SG victim.F.SG’

    DP
      
    D    NumP
      
    u[=FEM]
      
    la    Num
      [±PLURAL]
        n
          √VICTIM–

    u[+FEM]
```
Yet, in the absence of overt expression of interpretable gender on the noun itself, these
nouns possess interpretable gender that appears on pronouns and anaphora:

(9) a. Daniel fue uno de los testigos del accidente, y
Daniel was one.M.SG of the.M.PL witness.M.PL of the accident and
Marcela fue una/ *uno también.
Marcela was one.F.SG/ *M.SG too
‘Daniel was a witness of the accident, and Marcela was one, too.’

b. Marcela fue uno/ una de los testigos del
Marcela was one.M.SG/ one.F.SG witness.M.SG of the accident and
accident, y Daniel fue uno/ *una también.
Daniel was one.M.SG/ *F.SG too
‘Marcela was a witness of the accident, and Daniel was one, too.’

The nouns in (9) presumably possess interpretable gender, as their referents are
human. As such, (9a) is unacceptable if Marcela is coindexed with uno ‘one.M.SG’,
even though testigo ‘witness.M.SG’ appears to display masculine gender. Yet, it is
possible that in example (9a), Marcela is merely agreeing with una. Further data
nevertheless shows that, in full DP structure, these nouns may express interpretable
gender:

(10) a. Daniel fue el único testigo del accidente.
Daniel was the.M.SG only.M.SG witness.M.SG of the accident
‘Daniel was the only witness of the accident.’

b. Marcela fue la única testigo del accidente.
Marcela was the.F.SG only.F.SG witness.M.SG of the accident
‘Marcela was the only witness of the accident.’

In (10b), though testigo remains unchanged, both D (la) and prenominal A única
inflect for feminine gender, in agreement with the referent Marcela.

Data from a corpus search (Web-Dialects; CdE:New) (Davies 2016) paints a messier
picture of these epicene nouns. For the grammatical feminine epicene noun, la víctima,
the grammatical gender stays visible on N and D even if the referent is male. For the grammatical masculine epicene noun, *el testigo*, the grammatical gender is more susceptible to becoming feminine if the referent is female. Examples from *la víctima* are presented in (11). Though examples (11c) and (11d) are not the preferred forms form most speakers, they are representative of several instances of the same agreement patterns: (11c) shows an instance of agreement on D with the male referent, while A agrees in grammatical gender with the noun; (11d) shows agreement on both D and A with the male referent.

(11) a. La *víctima* ha sido identificada como Rodolfo.  
    the.F.SG *víctima* has been identified.M.SG as Rodolfo  
    ‘The victim has been identified as Rodolfo.’

b. La *víctima* era apasionando al deporte.  
    the.F.SG *víctima* was passionate.M.SG to-the sport  
    ‘The victim was passionate about sports.’

c. El *víctima*, identificada como Martín...  
    the.M.SG *víctima* identified.F.SG as Martín  
    ‘The victim was identified as Ignacio.’

d. El *víctima* fue identificado como Ignacio.  
    the.M.SG *víctima* was identified.M.SG as Ignacio  
    ‘The victim was identified as Ignacio.’
What does this data mean for an analysis of Class I nouns in Spanish, and of the interaction between grammatical and interpretable gender? I sketch a possibility in (12), where grammatical and natural gender coexist in the nominal spine.

(12)

This idea behind (12) is similar to proposals for distinct syntactic and semantic features such as Wechsler and Zlatić (2003), discussed extensively in 5. Yet, a question that the structure in (12) raises is whether there are hidden interpretable (INDEX) gender features on $n$ that are overridden by grammatical (CONCORD) features. Further data can test small epicene nouns and their adjectival agreement patterns to tease this apart.\(^3\) Though I leave it as an open question, it appears that epicene nouns (like Class I dentista) nouns only possess interpretable gender on D. Reformulated as INDEX (interpretable) and CONCORD (uninterpretable) features, then, (12) becomes (13).

\(^3\)A related case that involves grammatical gender alone is the fact that some nouns possess two diminutives: one that expresses the noun class visible on D, and one that expresses the theme vowel ending of the noun. One such example is the noun la mano ‘the hand’, whose corresponding diminutive is manita in Spain and manito in Peru. Such dialectal variation may be phonological in nature (Hualde et al., 2009), but it may also signal that the interaction of grammatical gender and theme vowel is similar to that of syntactic and semantic gender in determining the surface form of diminutives. The reader is directed to Vadella (2017) for more work on Spanish diminutives.
(13) shows the mismatched *la testigo* ‘the.F.SG witness.M.SG’, where D expresses INDEX features. The *n* lacks INDEX features:

(13)

```
(13)   DP
       /   \\ 
      D    NumP
     /     \   \n    la     Num
       \     \  
      ind[N(sg), G(fem), P(3)]  nP
       \   \     \ 
      conc[N(sg), G(masc), C( )]  n
               \       
                vTESTIG
```

In (13), D must value its INDEX feature from a referent in the discourse. This freely chosen feature may optionally be expressed; if expressed, then it must be interpreted. As a result, *la testigo* is understood as a female witness. In contrast, *víctima* ‘victim.F.SG’ shows close to no alternation in the form of its determiner. A structure like (13) for a male victim looks as in (14):

(14)
The observation that emerges from (13) and (14) is that, while interpretable feminine gender can override uninterpretable masculine gender on D (13, \textit{la testigo}), the same is not true of interpretable masculine gender overriding uninterpretable feminine gender (14, \textit{la/*el víctima}). This data suggests a hierarchy of gender features in Spanish, such that feminine always outranks masculine gender, even if uninterpretable. Returning to the question at hand, though, both D and \textit{n} are possible loci for interpretable gender in Spanish. As the next questions will show, this location impacts both when and how gender may be interpreted in Spanish.

6.2 When is Gender Interpretable?

Data from chapter 3 demonstrated that, though all human nouns are capable of expressing interpretable gender, only certain nouns in their bare form may felicitously possess interpretable gender. The felicitous expression of interpretable gender is dependent on (i) the stereotypical default gender for the noun in question (e.g. \textit{perro} ‘dog’ versus \textit{enfermera} ‘nurse’) and (ii) implicit argument structure of the noun’s root (e.g. \textit{hermano} ‘sibling’ and \textit{esposo} ‘spouse’). For cases of (i), interpretable gender is
possible when the gender does not match the stereotypical gender. This is seen for
the pairs of nouns below in (15) and (16):

(15)  a. *perro* ‘dog’
     b. *perra* ‘female dog’

```
      nP
     /\      /
    n    n
   \sqrt{PERR} \sqrt{PERR}
      i[+FEM]
```

(16)  a. *enfermera* ‘nurse’
     b. *enfermero* ‘male nurse’

```
      nP
     /\      /
    n    n
   \sqrt{ENFERMER} \sqrt{ENFERMER}
      u[+FEM]    i[-FEM]
```

For the nouns in (15), the masculine gender expressed as *n* is the default form of the
noun. For (15b), where the feminine gender does not match this default, feminine
gender is interpretable (*i[+FEM]*). For the nouns in (16), the feminine gender is the
default, and it is expressed in its uninterpretable form (*u[-FEM]*)). The appearance of
masculine gender in (16b) is thus interpretable as *i[-FEM]*. This asymmetry in gender
interpretability results in distinct grammaticality effects by noun type:

(17)  a. Elena tiene perro.
      Elena has dog.M.SG
      ‘Elena has (a) dog./ Elena is a dog-owner.’

b. ?#Elena tiene perra.
    Elena has dog.F.SG
    ‘Elena has (a) female-dog./ Elena is a female-dog-owner.’
Yet, several speakers possess readings of (17) and (18) in which all genders are interpretable. Stronger are the judgments for (19) and (20), which pair the small nominals above with different verbs. It thus seems that the interpretability of gender is also dependent on the verb in question: in the examples below, intensional verbs trigger different acceptability (see Zimmerman, 1993)\textsuperscript{4}:

(18) a. ?#Dulce tiene enfermero en casa.
   Dulce has nurse.M.SG in house
   ‘Dulce has a male nurse at home.’

   b. Dulce tiene enfermera en casa.
   Dulce has nurse.F.SG in house
   ‘Dulce has a nurse at home.’

(19) a. Elena busca perro.
   Elena seeks dog.M.SG
   ‘Elena seeks (a) (male or female) dog’

   b. ?Elena busca perra.
   Elena seeks dog.F.SG
   ‘Elena seeks (a) female-dog.’

(20) a. ?Dulce busca enfermero.
   Dulce seeks nurse.M.SG
   ‘Dulce seeks a male nurse.’

   b. Dulce busca enfermera.
   Dulce seeks nurse.F.SG
   ‘Dulce seeks a (male or female) nurse.’

Asymmetries in the interpretability of gender are observed across noun classes, too (chapter 4). As noted in previous literature, it is typically the masculine form of a noun that acts as the default (Harris, 1991; Kramer 2015). This is why gender mismatches such as the following are observed:

\textsuperscript{4} Differences in acceptability were also noted in chapter 3 with telic (more acceptable) versus atelic (less acceptable) verbs (e.g. Dayal, 2011)
(21) Class Ia nouns

a. Pablo es dentista y Marta también.
   Pablo is dentist.SG and Marta also
   ‘Pablo is a dentist, and Marta is too.’

b. Marta es dentista y Pablo también.
   Marta is dentist.SG and Marta also
   ‘Marta is a dentist, and Pablo is too.’

(22) Class Ib nouns

a. Pablo es médico y Marta también.
   Pablo is doctor.M.SG and Marta also
   ‘Pablo is a doctor, and Marta is too.’

b. (?)Marta es médica y Pablo también.
   Marta is doctor.F.SG and Marta also
   ‘Marta is a doctor, and Pablo is too.’

(23) Class II nouns

a. Pablo es actor y Marta también.
   Pablo is actor.M.SG and Marta also
   ‘Pablo is an actor, and Marta is too.’

b. *Marta es actriz y Pablo también.
   Marta is actress.F.SG and Pablo also
   ‘Marta is an actress, and Pablo is too.’

(24) Class III nouns

a. *Pablo es príncipe y Marta también.
   Pablo is prince.M.SG and Marta also
   ‘Pablo is a prince, and Marta is too.’

b. *Marta es princesa y Pablo también.
   Marta is princess.F.SG and Pablo also
   ‘Marta is a princess, and Pablo is too.’

As explained in 6.1, the noun *dentista in (21) lacks gender specification on *n; thus, both (21a) and (21b) are perfectly acceptable. In (22), though most speakers accept
both (a) and (b), some speakers disallow (22b), treating it as if it were (22b). This judgment, related to how gender is interpreted, will be discussed in 6.3. In (23), there is a clear mismatch between the default masculine form *actor* allowing for the ellipsis construction in (23a) and the feminine form *actriz* prohibiting the ellipsis construction in (23b). As explained in chapter 4, this suggests that the feminine form is interpretable and much stronger than in (23b); in fact, it is assertional as opposed to presuppositional (Percus, 2011).

Finally, the Class III nouns in (24) suggest that gender is interpretable in both masculine and feminine form. This class displays an interesting interaction between morphosyntax and semantics, such that morphological complexity appears to strengthen the interpretability of gender in both feminine and masculine forms. This can be seen by dividing this class into subclasses:

(25) CLASS III A (MARQUES/MARQUESA):

a. \([\text{marques}] = \lambda x : x \text{ is male}[\text{marquee}(x)]\)

b. \([\text{marquesa}] = \lambda x : x \text{ is female}[\text{marquee}(x)]\)

Class III A morphosyntactically expresses gender in the same manner as Class Ib, but its behavior in ellipsis constructions appears to pattern with (22). This is potentially explained by the presence of a presupposition for masculine gender with the masculine form in addition to presupposition for feminine gender alongside the feminine form. Thus, in cases where the masculine antecedent precedes the feminine elided noun, the acceptability is similar to Class Ib when feminine nouns
carrying presuppositional gender precede unspecified masculine nouns. Though the resulting sentence suggests that the feminine referent of the ellipsis clause is male, it does not require it and the presupposition can be cancelled. However, Class III A feminine nouns possess assertional gender, similar to the actriz nouns of Class II. As such, ellipsis is unacceptable when these nouns are antecedents to their masculine counterparts.

A second subclass of Class III can be understood as in (26):

(26) CLASS III B (CONDE/CONDESA):

a. \([\text{conde}] = \lambda x : x \text{ is male}[\text{count}(x)]\]

b. \([\text{condesa}] = \lambda x : x \text{ is female}[\text{count}(x)]\)

\[
\begin{array}{c}
\text{nP} & \text{nP} \\
\text{n} & \sqrt{\text{CONDE}} \\
\text{i[-FEM]} & \text{i[+FEM]} \\
\end{array}
\]

Finally, a third subclass, in which both masculine and feminine forms are derived, is as in (27):

(27) CLASS III C (PRÍNCIPE/PRINCESA):

a. \([\text{príncipe}] = \lambda x : x \text{ is male}[\text{prince}(x)]\]

b. \([\text{princesa}] = \lambda x : x \text{ is female}[\text{prince}(x)]\)

\[
\begin{array}{c}
\text{nP} & \text{nP} \\
\text{n} & \sqrt{\text{PRINC-}} \\
\text{i[-FEM]} & \text{i[+FEM]} \\
\end{array}
\]
Curiously, as discussed in chapter 4, the presupposition of maleness is variably defeasible for these Class III nouns in a way that their feminine counterparts are not. For these Class III nouns, the presupposition of maleness appears to be more defeasible the larger a plurality becomes. Thus, an alternative explanation is that this class of nouns does not possess \( i\text{-}\text{fem} \) gender on \( n \), but that there is something else in the noun’s root or morphosyntax that can explain these effects. As explained in chapter 4, this class is comprised primarily of kinship and nobility nouns, nouns that are notoriously idiosyncratic in their behavior across constructions. Similar to the nouns in chapter 3 that display variation in their default gender, many of these nouns seem to possess some root denotation that projects their uniqueness and/or locates them in a specific type of relationship: This can be seen with the following data:

(28) a. Carlos es *(el) rey de España.
Carlos is *(the.M.SG) king.M.SG of Spain
‘Carlos is *(the) king of Spain.’

b. Carlos fue rey por dos días/ antes de Felipe.
Carlos was king.M.SG for two days/ before (of) Felipe
Carlos was king for two days/ before Felipe.

(29) Carlos es rey y Felipe también.
Carlos is king.M.SG and Felipe too
‘Carlos is king and Felipe is too.’

(30) Sofia es hermana *(de Carla).
Sofia is sister.F.SG *(of Carla)
‘Sofia is sister *(of Carla).’

(28a) and (29) demonstrate that certain nobility terms are unacceptable in generic contexts or where they do not display uniqueness. (28b) demonstrates that these contexts are only acceptable if they are bounded in time. (30) shows the necessity of
kinship nouns that entail relationships to possess complement structure that reflects that property.

These Class III nouns thus exhibit a property of nouns in chapter 3, whereby the constructions that they can appear in, as well as their expression of gender, is conditioned by the underlying root meaning. Taking rey as an example, it is possible that the noun possesses a uniqueness or specificity presupposition for this class, something like:

\[(31) \quad [\text{rey}] = \lambda x : x \text{ is unique}[\text{rey}(x)]\]

This, in combination with the \(i[-\text{FEM}]\) feature on \(n\) that induces a maleness presupposition could be what causes the variable acceptability of these nouns. Future work ought to elicit additional data to verify this. Yet, as noted earlier, it is worth entertaining a third possibility that could explain all of the data for Class III nouns without (or in addition to) positing distinct presuppositions for this class. For example, similar to how Class II nouns possess \(n\)s of \(i[+\text{FEM}]\) that select for a bare \(nP\), Class III could possess \(n\)s that project and require either specifier or complement or both (Williams, personal communication). This would look like (32):

\[(32)\]

```latex
\begin{tikzpicture}
  \node (n) at (0,0) {\(nP\)};
  \node (spec) at (-1,-1) {\text{SPEC}};
  \node (nP) at (0,-1) {\(nP\)};
  \node (n) at (-1,-2) {\(n\)};
  \node (i) at (-2,-3) {\(i[\pm\text{FEM}]\)};
  \node (sqrtP) at (0,-2.5) {\(\sqrt{P}\)};
  \node (sqrtPprinc) at (0,-3) {\(\sqrt{\text{PRINC}}\)};
  \node (complement) at (0,-3.5) {\text{COMPLEMENT}};
  \draw (n) -- (spec);
  \draw (n) -- (nP);
  \draw (nP) -- (n);
  \draw (n) -- (i);
  \draw (i) -- (sqrtP);
  \draw (sqrtP) -- (sqrtPprinc);
  \draw (sqrtP) -- (complement);
\end{tikzpicture}
```
Table 6.2: Interpretability of Spanish Gender by Noun Class and Syntax.

<table>
<thead>
<tr>
<th>NOUN</th>
<th>BN, tener</th>
<th>BN, buscar</th>
<th>ELLIPSIS</th>
<th>PLURAL</th>
<th>WITH D</th>
</tr>
</thead>
<tbody>
<tr>
<td>dentista</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>perro</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>perra</td>
<td>yes</td>
<td>yes</td>
<td>partial</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>enfermero</td>
<td>yes?</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>enfermera</td>
<td>variable</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>testigo</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>partial</td>
<td>no</td>
</tr>
<tr>
<td>víctima</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

Class II

<table>
<thead>
<tr>
<th>NOUN</th>
<th>BN, tener</th>
<th>BN, buscar</th>
<th>ELLIPSIS</th>
<th>PLURAL</th>
<th>WITH D</th>
</tr>
</thead>
<tbody>
<tr>
<td>actor</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>partial</td>
</tr>
<tr>
<td>actriz</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>marqués</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>partial</td>
<td>yes</td>
</tr>
<tr>
<td>marquesa</td>
<td>yes</td>
<td>yes</td>
<td>partial</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>conde</td>
<td>yes</td>
<td>yes</td>
<td>partial</td>
<td>partial</td>
<td>yes</td>
</tr>
<tr>
<td>condesa</td>
<td>yes</td>
<td>yes</td>
<td>partial</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>príncipe</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes*</td>
<td>yes</td>
</tr>
<tr>
<td>princesa</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>

In ellipsis constructions, then, if the structure in (32) were populated, neither masculine nor feminine nouns could antecede the other; the morphosyntactic structure and presence of arguments in SPEC and COMPLEMENT would preclude the possibility of a subset relationship in either direction. Future work can tease apart the structure of these nouns and its interaction with the semantic expression of gender.

Returning to the overarching question of when gender is interpreted, the felicitous expression of interpretable gender was said to be dependent on (i) the stereotypical default gender for the noun in question (e.g. perro ‘dog’ versus enfermera ‘nurse’) and (ii) implicit argument structure of the noun’s root (e.g. hermano ‘sibling’ and esposo ‘spouse’). I have also shown that a noun’s interpretability has a relationship to the verb it is a complement of (i.e. tener ‘to have’ versus buscar ‘to seek’, examples
17-20). Class III nouns support (ii), in that the interpretation of their gender is dependent on their implicit argument structure and association with a referent in Spec nP. Class III also shows that the interpretation of gender is contingent on additional presuppositions present in the nominal structure: specifically, masculine gender is more likely to be interpreted if the noun is understood as a unique entity and the morphosyntax of the noun reflects [-FEM] gender. Such gradient and variable interpretations of gender is displayed as a factor of location in table 6.2, and is what I discuss next.

6.3 HOW IS GENDER INTERPRETED?

The third question addressed by this dissertation may be divided in two parts:

i How is gender interpreted with regards to its semantic weight? I.e., is gender presuppositional or assertional? Is this equivalent for masculine and feminine gender?

ii How does gender come to be interpretable on Spanish small nominals that lack full DP structure?

In regards to (i), this dissertation has shown that the interpretation of Spanish gender is gradient in nature. Specifically, Spanish gender in human and animate nouns occupies a continuum of interpretability from lack of interpretability to fully interpretable and assertive. This may be visualized as below:

(33) \textbf{UNINTERPRETABLE} \begin{center} \begin{tikzpicture}
  \node at (0,0) (a) {uninterpretable};
  \node at (4,0) (b) {interpretable};
  \draw[->] (a) -- (b);
\end{tikzpicture}\end{center} \textbf{INTERPRETABLE}

`perro, actor enfermera perra conde príncipe actriz, princesa`

Spanish gender may be either presuppositional or assertional (or null), depending on its noun class. This observation was explored in depth in chapter 4.2.2, where
it was seen that feminine Class I nouns (*médico/médica*) possess presuppositional gender, while their masculine counterparts are bare *ns* and carry no gender-related semantic information; and feminine Class II nouns *actor/actriz* possess assertional gender, while their masculine counterparts are bare *ns* and carry no gender-related semantic information. Nevertheless, Class I Spanish nouns behave differently from Class I nouns in both Brazilian Portuguese (BrP) (Bobaljik and Zocca, 2011) and Greek (Merchant, 2001, 2014; Sudo and Spathas, 2015, 2016).

This is seen in (33) as a continuum of interpretation. The nouns *perro* ‘dog.M.SG’ and *actor* ‘actor.M.SG’ are analyzed as bare *ns* that lack any gender specification.\(^5\) *Enfermera* ‘nurse.F.SG’ appears to be variably interpretable, such that sometimes the gender carries a presupposition of femaleness, and sometimes it does not. Its masculine counterpart, *enfermero* ‘nurse.M.SG’, seems to possess slightly more interpretable gender than *enfermera* ‘nurse.F.SG’, occupying a position similar to *perra* ‘dog.F.SG’. *Perra* occupies a site equivalent to *médica* ‘doctor.F.SG’, which (as seen above and in chapter 4.2.2) seems to both presuppose and entail female gender, resulting in ellipsis asymmetries for Class I nouns unique to Spanish. *Conde* ‘count.M.SG’ and *príncipe* ‘prince.M.SG’ are more interpretable than Class I feminine nouns, but (as analyzed above) this appears to be due to additional argument structure and a uniqueness presupposition, rather than the gender itself. Finally, *actriz* ‘actress.F.SG’ and *princesa* ‘princess.F.SG’ occupy the right side as fully interpretable and assertional feminine gender.

To discuss Class III nouns a bit further, it seems that these nouns possess characteristics of both Class I and Class II. Specifically, feminine nouns carry either presuppositional or assertional gender in direct correlation to whether or not this gender is expressed

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\(^5\)Nouns like *dentista* are perhaps less interpretable than these nouns, and would be located to their left.
via a derivational affix (assertional), like Class II, or whether it is inflectional (presuppositional), like Class I. Masculine nouns appear to exhibit similar behavior, yet with the caveat that the interpretation of their gender is conditioned by a uniqueness presupposition related to their meaning. As a result, while all masculine Class III nouns possess presuppositional gender that implies maleness, this gender is defeasible as the noun is made plural. Additionally, the possibility of such defeasibility correlates with the noun’s morphosyntax: for Class III masculine nouns that possess an inflection morphosyntax similar to Class I nouns, a plurality of these nouns can easily include female members. For Class III masculine nouns that possess a derivational morphosyntax more reminiscent of Class II feminine nouns, it is less easy to defease the presupposition of maleness, even in a group with many male members and one female member.

Thus, the interpretation of gender in Spanish is both contingent on the syntactic structure that the noun possesses, as well as the noun class to which the noun belongs. Future work can further elucidate the relationship between root meaning and the default or defeasible expressions of gender as seen above.

In consideration of (ii), though I suggest a possible explanation here, the empirical takeaways of the data presented in this dissertation does not hinge upon this analysis. Rather, this analysis is a suggestion for how gender may come to be interpretable on small nominals that lack full DP structure. This analysis runs a bit contrary to the assumptions posited by the Minimalist and Distributed Morphology (DM) frameworks assumed in this thesis, but it suggests a possible future line of work that allows the context and the syntax to interact.

I suggest that, for Spanish, nP may be a phase specifically in BN constructions that lack additional nominal syntax (Kramer, 2015; Bošković, 2013). I extend Sigurðsson’s
analysis of interpretable gender on D as a edge-linker. Following this analysis, certain phase edges (D being one) allow context to interact with syntax and value features that may be unspecified in the grammar. This idea formalizes the syntactic side to context linking, whereby context-scanned features are computed at the phase edge in relation to phrase-internal elements. Sigurðsson terms this phenomenon edge computation. Though this linking and computation approach goes against the widely adopted assumption that syntax is autonomous and context free, it allows Merge itself to be context independent while the linking of one phase to another or to the wider context is not.

To formalize this idea, I propose that nP, as a phase, will possess a silent edge layer where interpretable gender may be valued from context. I label this silent edge φnP, following Sauerland’s (2008) notation for a similar layer high in DP. This, syntactically, is constructed as in (34) and (35):

(34) \[ \phi nP \\
\quad \left[ \begin{array}{c} \text{i} \mid \text{GENDER} \end{array} \right] \quad nP \]

(35) \[ \text{CONTEXT } ... [CP... [\phi nP \ i \mid \text{GENDER} ] ] \]

Following the structure in (34), if φnP sits atop nP as a phase head, only those features on φnP will be interpreted and participatory in agreement processes. For my analysis, I assume that φnP is only utilized to value gender features. Number and person features are located higher in DP, and they are thus not present in the nP form. The structure and mechanism in (34) and (35) follows closely to a proposal by Sigurðsson (2014, 2018) for phi-features on pronouns. Additionally, valuation of
interpretable gender features by context is proposed by Kučerová (2018) for Italian via D.

Given the above analysis, interpretable gender is optionally valued from context on $\phi nP$ in one of two situations. In the first case, if the interpretable gender is known and does not conform to the default gender implied by the noun’s frame (e.g. (17b), (18a), repeated below in (36b), (37a)), it may be valued as such following (35). These cases, however, will result in more morphologically complex nouns that are banned from BN structures seen throughout this dissertation.

(36) a. Elena tiene perro.
   Elena has dog.M.SG
   ‘Elena has (a) dog./ Elena is a dog-owner.’

   b. ?#Elena tiene perra.
   Elena has dog.F.SG
   ‘Elena has (a) female-dog./ Elena is a female-dog-owner.’

(37) a. ?#Dulce tiene enfermero en casa.
   Dulce has nurse.M.SG in house
   ‘Dulce has a male nurse at home.’

   b. Dulce tiene enfermera en casa.
   Dulce has nurse.F.SG in house
   ‘Dulce has a nurse at home.’

In the second case, if the interpretable gender is known yet maintains the establishedness of the noun’s frame, it may be valued in $\phi nP$ and expressed on BN without any syntactic consequences. This is seen in (38), where the noun hermano ‘sibling’ possesses a relationship for which gender is crucial to a complete understanding. In (39), as well, esposo ‘spouse’ denotes a relationship of two people where gender is also crucial to a complete understanding:
A further observation about the process of gender valuation by context as in (24) is that such valuation may occur inside embedded clauses. This is seen as in (29):

(40) Carolina dijo que Carlos busca esposa.
    Carolina said that Carlos seeks wife.
    ‘Carolina said that Carlos is looking for a wife.’

This observation is important in connecting the gender features located in $\phi n P$ to features that have been proposed in the periphery of CP for speaker-addressee relations (e.g. Portner et al., 2019; Yamada (to appear)). For example, Portner et al., in a survey of Korean and Romance languages, propose that politeness markers fall into two distributional classes: ‘content-oriented markers of politeness’, which can occur in complement clauses; and ‘utterance-oriented markers of politeness’, which are restricted to matrix contexts. Gender being content-oriented, it is permitted in embedded clauses. For a sentence like (40), the valuation of $i[+_FEM]$ is possible either
with Carlos, Carolina, or the speaker of the sentence valuing the gender feature on $\phi nP$.

Nevertheless, for the explanation that interpretable gender is located on the edge of an $nP$ phase, there needs to be further syntactic evidence such as minimality or interaction effects to validate it. Alternatively, if interpretable gender is related to an abstract feature high in CP, this raises the potential problem of having multiple and different interpretable genders within the same sentence. For this dissertation, it is enough to say that interpretable gender in small nominals is a freely chosen feature, and once present in the syntax, is checked against the context for felicity. In the case of presuppositional gender, a gender mismatch is not enough to cause a false or unacceptable statement; in the case of assertional gender, a gender mismatch does result in a false or unacceptable statement. Again, as seen from the data presented throughout the chapters, interpretable gender in Spanish seems to possess gradient and variable strengths in this respect, which makes its analysis all the more intriguing.

6.4 Limitations of this Dissertation

This dissertation seeks to develop a comprehensive analysis of the morphosemantics of gender in Spanish small nominals. Nevertheless, there are limitations on its scope and depth. For example, the focus of this dissertation is the expression of gender in small nominals, or nouns that lack overt determiners. A complete morphosemantics of gender in Spanish will consider the expression of gender in the range of nominal types in Spanish with an analysis of how each element present in the nominal spine contributes. Although I mention the role of functional projections above $nP$ (NumP and DP in particular) throughout the dissertation, the contributions of these projections and their interactions with $nP$ merits closer attention.
I also do not provide a complete account of gender agreement in Spanish (otherwise known as nominal concord) though the data and analysis I present suggest that agreement processes inside the noun are distinct from those involving subject-verb agreement (Agree). Currently, concord is an active area of research for whether or not it is based on the same mechanism as subject-verb agreement (e.g. Polinsky, 2016; Carstens, 2001; Collins, 2004; Norris, 2014). Concord has been argued to involve gender, number, case, and definiteness; furthermore, nearly every word class that can occur inside a nominal expression is capable of showing concord (Norris, 2017). Concord is commonly characterized as “agreement with the head noun,” as the modifiers of the head noun tend to express the same features and feature values as the noun itself. As Norris (2017) wisely observes, however, “the formalization [of concord] need not directly reflect the description of concord as agreement with the head noun” (1). As alluded to above, many existing approaches to concord aim to assimilate it to existing mechanisms of agreement, primarily those involving subject-verb agreement (Agree) (e.g. Collins, 2004). A parallelism between nominal and clausal agreement would be fitting within a grammar designed for efficiency. Nevertheless, there are many differences between nominal and clausal agreement in the both the participant elements and the agreement effects observed between the two, as will be discussed throughout the exam. As a result, there are a significant number of approaches that deem concord unlike existing mechanisms of agreement, and unlike Agree in particular. I address this topic in chapters 4 and 5 to explain the origin and agreement patterns of gender in Spanish nouns. While data in 5 may

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6Norris (2017) notes that PPs and CPs, both in adjunct and complement position, are the only exceptions he is aware of. Additionally, a DP in Spanish such as las habitaciones que están ocupadas “the rooms that are occupied” could be understood to contain phi-features on the complementizer. This proposal could extend to relative pronouns such as el/la/los/las/lo que, which additionally show agreement.
be fully explained with a theory that aligns concord and Agree, data in 4 (if my analysis is correct) necessitates an agreement mechanism that allows bidirectionality (similar to Baker’s Bidirectional Agree (2008)) and a novel view of how semantics and morphology interact during Spell-Out.

This dissertation is also limited in empirical scope for practical reasons. Spanish, with more than 437 million speakers worldwide and serving as the official language in at least 20 countries, is characterized by variation. This variation can be infinitely subtle to the point that seeking to establish geographical or social boundaries between varieties is perhaps inappropriate. As Spanish variationist and historian Ralph Penny puts is, “language presents itself to us in the form of orderly but undivided heterogeneity” (Penny, 2004:11). My research here is focused squarely within the theoretical linguistics tradition, and as a result I will not engage directly with sociolinguistic or psycholinguistic approaches to gender and language variation. Nevertheless, as the gender system in Spanish appears to be changing in some regions primarily as a result of social factors, I mention possible impacts of this change on observed data throughout the dissertation. I offer some final thoughts on how the results of this dissertation may be affected by social factors and potentially be different in the years to come in chapter 6.

6.5 Gender in Contemporary Spanish

Were this dissertation to be written ten years in the future, it might have presented a different analysis, specifically in regards to how gender is interpreted. The Spanish language is currently experiencing changes in its gender system, spawned largely by social factors. An internet search for “neuter gender in Spanish” elicits results that, in addition to a few descriptive explanations of the existing neuter gender found in
words such as *ello* ‘it’, *esto* ‘this’, and *lo* ‘it/what’, address the need for a gender apart from masculine and feminine in order for the language to be representative of its speakers.

This is especially the case for pronouns. An article published in 2018 in Spain titled *La lengua no tiene sexo: Elle esté cansade* ‘Language doesn’t have sex: they (gender neutral) are tired’ explains how non-binary or genderqueer people are adopting the pronoun *elle*. This pronoun does not conform to the masculine *él* ‘he’ nor the feminine *ella* ‘she’. It additionally triggers agreement on modifiers that end in -e instead of -o or -a. Additional search results offer guidance on how to properly change determiners, clitics, collective personal pronouns, and words where an -e suffix would change to the pronunciation depending on the preceding consonant.

Additionally, *Latinx* is a gender neutral term used in lieu of *Latino, Latina, and even Latine*. The term was first seen online in 2004 and, according to Google Trends, spiked in interest in 2016. The term is a politicized neologism that has gained traction among advocacy groups that intersectionally combine the identity politics of race and gender, and it is used primarily by community activists and in higher education settings by students, faculty, staff, and some administrators who seek to advocate for individuals living on the borderlines of gender identity. The term has an alternative form, *latin@*, which is also understood to be inclusive of all gender identities.

More recently, this discussion has surfaced in linguistics publications as a plea to linguists to approach the changing gender system in Spanish and the social reality it reflects as a research opportunity. Zentella (2018)\(^7\) proposes a new term, *LatinU/Us*, which she argues represents the largest and fastest growing minority in the USA: Spanish-English bilinguals. This term also distinguishes singular from plural, is in

\(^7\)Thank you to Victor Fernandez-Mallat for suggesting this article to me.
accordance with Spanish spelling norms, and can be pronounced easily in both Spanish and English. The linguistic contributions of the Spanish-English bilingual community in the US is of interest to linguists not only because of the research opportunities LatinUs represent, but, as Zentella argues, because linguists champion and protect linguistic diversity. Linguists who come from a variety of LatinU/US communities in particular are in an optimal position to deepen the understanding of many research questions involving languages and dialects in contact, second language acquisition, and bilingual competence and performance, among others. The investigation of these issues may then challenge the notions of “the ideal bilingual” who never switches codes “in unchanged speech situations, and certainly not within a single sentence” (Weinreich, 1953:73) or the “ideal speaker-hearer” as the model generator of deep grammatical structures, with no role in grammar for language use.

The Real Academia Española (RAE), Spain’s official institution to ensure the stability of the Spanish language, has no official position on the -e or -x morphemes according to its website. Its twitter handle, however, @RAEconsultas, has a systematic response to inquiries about the use of gender-neutral terms. The handle refers to the “supposed” gender markers of -e, -x, and @ morphemes as foreign to Spanish morphology and unnecessary, as the masculine gender already serves this function as the unmarked form for gender.

In support of its stance expressed on social media, the RAE states in its grammar that phrasing such as los ciudadanos y las ciudadanas ‘the (male) citizens and the (female) citizens’ or los niños y las niñas ‘the boys and the girls’ instead of the collective los ciudadanos ‘the citizens’ or los niños ‘the children’ is unnecessary from a linguistic point of view. For entities that are designated as animate beings, the masculine form may be used generically to designate ‘the class’ of all individuals of that type, without
distinction of sex (Española, 2009). This is a result of the masculine gender being the unmarked form in the masculine/feminine opposition. The explicit mention of the feminine is justified only when the opposition of sexes is relevant in the context, for example:

(41) El desarrollo evolutivo es similar en los niños y las niñas de esa edad.

‘Evolutionary development is similar in boys and girls of that age.’

The RAE’s prescription apart, speakers are aware of their use of gendered language to the point of its impacting their speech. The Spanish Minister for Equality in 2008, Bibiana Aído, during an address to Spanish Congress, repeatedly addressed the members as los miembros y las miembras ‘the (male) members and the (female) members’, even though the word miembra is not officially recognized by the RAE. Critics of the address ranged from calling Aído dyslexic to lauding her “conscious” use of the term, albeit a stupid use. The RAE rejected Aído’s petition to add miembra ‘female member’ to the dictionary.

In interviews conducted for this dissertation, speakers were also very conscious of their use of gender in referring to humans. A Chilean speaker who produced the following utterance (adapted for chapter 4) apologized for her “sexist” language, noting that she was not sure where it had come from and that she is trying to change it:

(42) Mi amiga Rocío es abogado... chilena... abogada chilena.

‘My friend Rocío is a lawyer... and Chilean... a Chilean lawyer.’
Additionally, while eliciting acceptability judgments for chapter 4 on ellipsis constructions, many speakers qualified their judgments for Class I nouns with something like “it should be acceptable because médico can be either a man or a woman.” Though certain patterns of acceptability were consistent, speakers exhibited variation in the threshold they permitted when a masculine gendered noun could not refer to a female referent.

These matters necessarily raise questions that impact any theoretical study of language: How much does spoken language change the grammars of a larger population? As regards gender in Spanish, is language changing in such a way that perhaps what was once assertional gender is now presuppositional, as analyzed in chapter 4? Or is it that all gender is somehow identified via gender competition, and changing social norms are eroding the effectiveness of this process?

Pursuing this line of thought, principles such as Maximize Presupposition (Heim, 1991) or the Gender Competition Rule proposed by Sudo & Spathas (2015, 2016) explained in chapter 4 may be understood in one of two ways. On the one hand, these principles may be a normative constraint on language use, akin to a rule in a game. On the other, they may act similarly to Grice’s (1975) Maxims of Conversation, which capture defeasible tendencies in behavior motivated by general considerations about cooperative communication. The first view is supported by the observation that obvious violations of Gender Competition lead to infelicity (43b); the second is favored by the observation that there are cases where Gender Competition appears to be obviated (44b).

(43) a. Pablo es actor y Marta también.
Pablo is actor.M.SG and Marta also
‘Pablo is an actor, and Marta is too.’
b. *Marta es actriz y Pablo también.
   Marta is actress.F.SG and Pablo also
   ‘Marta is an actress, and Pablo is too.’

(44) a. Pablo es médico y Marta también.
   Pablo is doctor.M.SG and Marta also
   ‘Pablo is a doctor, and Marta is too.’

b. (?)Marta es médica y Pablo también.
   Marta is doctor.F.SG and Marta also
   ‘Marta is a doctor, and Pablo is too.’

Though the changing landscape of Spanish gender may support the second view, a
variationist or diachronic linguist is much better equipped to answer these questions
than I am. I note here merely that such questions cannot be ignored by theoretical
approaches to gender systems, and that a fully explanatory theory should strive to
accommodate such variation.

6.6 Final Remarks

This project forms part of an established and growing literature on the interaction
between the interpretability of phi-features and nominal morphosyntax. Though prior
work has addressed the interpretability of gender features and the structure of Spanish
small nominals independently, there has been no work that integrates the two as
completely this thesis does. This project thus contributes to the literature on gender,
feature interpretability, and featural expression at the various interfaces, though work
remains to be done to fully elaborate a theory of gender interpretation as a factor of
syntactic structure for Spanish and other languages.

As noted in section 6.5, dialectal variation and the changing status of gender features
in Spanish may shed further light on these phenomena and their interactions. If a
third, neuter gender is truly emerging, this may impact how gender is expressed when
no specific referent is present, as the “default” gender will be morphologically different. The changing landscape of interpretable gender in Spanish also has implications for the status of phi-features independently, offering empirical evidence for how they participate in diachronic change. More focused elicitation is necessary to test these hypotheses.

From an empirical standpoint, this dissertation has contributed to questions regarding the productivity of Spanish small nominals, their various interpretations, and their agreement patterns. Theoretically, this data bears on central questions pertaining to both the syntax/semantics and syntax/morphology interfaces: how to definite (un)interpretable features; interpretability and hierarchy of syntactic structure; and agreement and concord. Future work will continue to explore these questions and elicit further data to support or refute the analyses presented here.
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