CHAPTER

# 1  Humans, gods, and demons 🔓

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**Abstract**

Chapter 1 discusses the latest relevant concepts needed for a good understanding of gender, noun classification, and also number, in current theoretical linguistics. The structure of the volume is presented: it is divided into three parts, each addressing a particular theoretical question that arises when we study gender and noun classification in context. This chapter demonstrates how each of the chapters in the volume speaks to these theoretical questions: (1) What is the role of gender? (2) Where is gender located in the nominal spine? (3) How is gender interpreted?

**Keywords:**  gender, noun classification, classes, number, agreement, phi-features, nominal phrase, syntax, semantics, morphology

**Subject:**  Linguistic Theories, Grammar, Syntax and Morphology

Humans like to categorize things. This is most prevalent in the way we use language to place nouns in specific groups and in the way linguistic structure reflects this cataloguing. For example, in Tamil, nouns come in two super-classes: the 'rational' and the 'irrational'. 'Rational' nouns include humans, gods, and monsters while 'irrational' nouns comprise animals, objects, as well as abstract nouns (Asher 1985: 136; Aikhenvald 2003: 22). 'Rational' nouns are further divided into three categories: masculine singular, feminine singular, and rational plural, while 'irrational' nouns are further split into two classes: irrational singular and irrational plural (neuter forms).

The nature of super-classes varies cross-linguistically: feminine versus masculine forms in Indo-European languages (with a third neuter type in some languages) or inanimate versus animate forms in Algonquian languages. A noun may also simply belong to a given class because it shares a similar morphological form with other nouns.

Despite the variation in content, such a categorizing process is a universal feature of human languages. It is called noun classification or simply gender, and the terms are often used interchangeably (Corbett 1991).

The aim of this volume is to establish what functional or lexical categories are responsible for this type of classification, especially along the nominal syntactic spine, in a theoretical context started with the advent of the Principle and Parameters framework (Jackendoff 1977; Szabolcsi 1981, 1983; Abney 1987; Ritter 1991,

1992, 1993; among others) and further developed within Minimalism and Distributed Morphology. We aim to show where, in the nominal structure, gender is able to function as a classifying device and how, in the absence of gender as a classifying device, determiners and other functional elements in the nominal spine come to fill that gap.

Much discussion will also centre on how gender participates in grammatical concord and agreement phenomena. This is only natural since it is often proposed that gender refers to classes of nouns within a language that are 'reflected in the behaviour of associated words' (Hockett 1958: 231). The feature 'gender' is often referred to as 'gender' in a language if it concerns the classification of the nominal inventory of the language, but only if the inherently assigned gender values found on ↳ nouns are matched by contextually assigned gender values found on targets of agreement in gender. If a language has a system of nominal classification expressed through inflectional morphology, but the feature of nominal classification does not participate in agreement, it does not qualify as 'gender' (Kibort and Corbett 2008). In sum, gender is exclusively a feature of agreement.

In generative grammar, gender features make up, with number and person features, the set of $\varphi$-features that participate in agreement (a topic that has spawned a lot of research, Chomsky 2000, 2001; Béjar and Rezac 2003; Harbour, Adger, and Béjar 2008; Rezac 2011; Preminger 2014). A Probe carrying an uninterpretable feature enters into an agreement relationship with a Goal carrying an interpretable feature (Chomsky 2000, 2001). This is relevant not only for number and person but also for gender features, except that for grammatical gender, the agreement pair is often characterized as uninterpretable(Probe)–uninterpretable(Goal) rather than interpretable(Probe)–uninterpretable(Goal).

Semantic agreement, in contrast, involves a priori a standard agreement pair uninterpretable(Probe)–interpretable(Goal). Semantic or natural agreement, as it is sometimes called, is a phenomenon that has many implications for syntactic theory and theories of interpretation, and it is also discussed at length in this volume. Cases of hybrid agreement (Landau 2015; Smith 2015; de Vries 2015) that arise due to a distinction grammars sometimes encode between natural (or semantic) gender, on the one hand, and grammatical gender, on the other, are also discussed, since this is particularly relevant for any discussion focusing on gender and since it has generated so much interest recently in the literature.

One important conclusion reached from the articles included in this volume is that gender, more often than not, depends on something else: number, person, determination, etc. By discussing gender in the context of articulated theories of the morphology, syntax, semantics, or pragmatics of nouns, we obtain interesting results that contribute to a better understanding of partition and nominal structure. Gender used to be studied independently from other $\varphi$-features or features of the nominal domain and this led to spurious generalizations and problematic proposals. We are now better equipped theoretically and more inclined to study gender from a multifaceted approach. Our collection of articles on the topic contributes to this in many ways.

The volume is divided into Parts I, II, and III, each addressing a particular theoretical question that arises when we study gender and noun classification in context (1a–c). We show how each chapter speaks to these theoretical questions.

(1)

    a. What is the role of gender?
    b. Where is gender located in the nominal spine?
    c. How is gender interpreted?

The number of languages covered in this volume is vast. We mention in particular: Greek, English, French, Arabic, Italian, Persian, Gitksan, Italian, Brazilian Portuguese, Amharic, Lithuanian, Serbo-Croatian,

Slovenian, Japanese, German, Cree, Maay, Haro, Penobscot, Shona, Mi'kmaw, Passamaquoddy-Malisset.

## 1.1 Part I: Gender and partition

Part I consists of two chapters addressing the question in (1a) 'What is the role of gender?' Both chapters are seminal in nature and offer insights, not only for the languages described in those chapters but also for many other languages, since strong cross-linguistic predictions are made. All the other chapters of this book deal one way or another with the core issues introduced by these two introductory chapters and constant reference is made to them throughout the volume.

Chapters 1 and 2 argue that gender is a mechanism for introducing a partition: its function is to classify or categorize. This proposal means that nouns are substructures of DPs and that nominal lexical knowledge can be modelled as a syntactic structure that distributes the content of a noun along the DP projection line. This is in contrast with the traditional, lexicalist view according to which the meaning of a noun is independent from the syntactic context.

To illustrate how partition emerges in natural languages, consider the case of noun classes in Bantu languages. For example, Ndali has 21 different noun classes; in other words, there are 21 different ways nouns are partitioned (Aikhenvald 2003: 64). The classes refer to nouns as follows:

(2)

a. Classes 1 and 2 to persons and kinship terms (1 is for singulars while 2 is for plurals)
b. Classes 3 and 4 to inanimates and natural phenomena (also used for augmentative and pejorative descriptions)
c. Classes 5 and 6 to natural phenomena, body parts, plant names, etc
d. Classes 7 and 8 to miscellaneous referents and to impersonal things
e. Classes 9 and 10 for impersonal, animals, tools, etc
f. Class 11 to impersonal objects, body parts, plants, insects, abstract concepts
g. Classes 12 and 13 to body parts, manners of action
h. Class 14 to abstract nouns, names of geographical areas
i. Class 15 to verbal nouns
j. Class 16 to nouns with locative meaning that involves proximity to someone or something near the speaker
k. Class 17 to nouns with locative meaning that involves proximity to someone or something far from the speaker
l. Class 18 to a situation inside something
m. Class 21 for nouns with augmentative or pejorative meaning.

Another good illustration of the idea that gender creates partitions comes from singulative languages that use gender shift.[1] An interesting example comes from Arabic, in particular the Tunisian dialect, which is

taken as a point of reference for the sake of ↳ discussion. In this language, gender shift (from masculine to feminine) can create a unit out of a collective or a mass noun (Ojeda 1992; Zabbal 2002; Fassi Fehri 2003–2004, 2012). Collective nouns typically refer to masses and aggregates, and denote kinds (Ojeda 1992; Zabbal 2002; Fassi Fehri 2003–2004, 2012; Mathieu 2012a, 2012b, 2013a, 2013b). Singulative nouns denote single units or partitions of a kind (Ojeda 1992). Individuation is achieved without a determiner, gender being the sole marker of categorization (or recategorization in this case).[2] Example (3a) involves a collective noun, grammatically singular, but semantically plural, that becomes singulativized by way of the feminine suffix −*a* to give 'one orange'. Example (3b) involves a mass noun that also gets singulativized by way of the feminine marker −*a* to give this time a measure/portion reading, 'one grain of sand'.[3]

(3)

| a. | bordgen | → | bordgen-a | [Tunisian Arabic] |
|---|---|---|---|---|
| | orange.masc.coll | | orange-fem.sing | |
| | 'oranges' | | 'one orange' | |
| b. | rmal | → | raml-a | |
| | sand.masc.coll | | sand-fem.sing | |
| | 'sand' | | 'one grain of sand' | |

The use of gender shift to create an individual very much depends on the noun being used. If the noun is a collective or mass noun, gender is capable of creating an atom out of something that is not atomized (the collective or mass term can be seen as plural semantically, Chierchia 1998, or simply undivided, Borer 2005a, thus akin to general number nouns, Corbett 2000).

Nouns other than collective or mass terms are individuated differently. Indefinite nouns are bare (with a possible null indefinite determiner, depending on the theory) and are not individuated by the feminine marker (4a–b). They are singulars already (adding the feminine marker is not impossible, but denotes a group (see Zabbal 2002; Fassi Fehri, this volume; Dali and Mathieu 2017). Definite nouns appear with the determiner *el* 'the', used for both masculine (4a') and feminine (4b') nouns.

(4)

| a. | kalb | a'. | el | kalb | [Tunisian Arabic] |
|---|---|---|---|---|---|
| | dog | | The | dog.mas.sg | |
| | 'a dog' | | 'the dog' | | |
| b. | souriya | b'. | el | souriya | |
| | shirt | | the | shirt | |
| | 'a shirt' | | 'the shirt' | | |

p. 5    In sum, the singulative functions like a classifier (Greenberg 1972): it partitions collective and mass terms to return individuals.

Chapter 2, by **Rose-Marie Déchaine** (University of British Columbia, Vancouver, Canada), entitled 'Partitioning the nominal domain: The convergence of morphology, syntax, semantics, and pragmatics' discusses Shona, a Bantu language, which like Ndali, has many noun classes. In addition to Shona, this chapter focuses on Plains Cree (an Algonquian language), a language with an animate–inanimate contrast for nouns. Déchaine proposes that gender is responsible for introducing nominal classes into the nominal domain. Functional categories induce a noun class from roots and each successive F-category introduces another noun class. CLASS (or gender) is proposed to be either the feature of some functional head or it heads its own projection. It can appear high (in association with D) or in the middle (in association with Num) or low (in association with *n*) in the nominal spine. This combination of mode and location predicts six distinct typological possibilities for CLASS to appear within the nominal spine.

Using examples from English and Italian, **Paolo Acquaviva** (University College Dublin, Ireland) in Chapter 3 entitled 'Categorization as noun construction: Gender, number, and entity types' also argues that gender, like number, can be distributed across various functional heads on the nominal spine. His constructionist approach to the ingredients of nominality cross-linguistically involves a nominalized root that is either a root categorized by a nominalizing morpheme *n*, or as a 'self-merged' root with a nominal label (on self-merge, see Adger 2013). While the information signalled by gender is generally expressed very low in DP, it does not represent 'lexical' information contrasting with higher 'grammatical' determinations. Rather, what defines nominality is a certain syntactic structure, with a sequence of functors that between them define a range of possible interpretations. On this view, the structure and the semantic range it can express are anything but arbitrary.

Both Chapters 1 and 2 set the scene for the remainder of the book and discuss issues that come back regularly throughout. In addressing the role of gender in creating partitions, they provide seminal work on
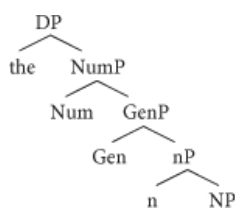
nominal structure within a neo-constructionist approach, offering tremendous insights into the various issues related to nominal classification.

## 1.2 Part II: Locus of gender

The six chapters of Part II address the question in (1b): 'Where is gender located in the nominal spine?' An array of languages are discussed (Arabic, French, Italian, Brazilian Portuguese, Amharic, Greek) and case studies are provided. The introduction of more languages allows us to test Déchaine's prediction of six distinct typological possibilities for CLASS as well as Acquaviva's proposed nominal architecture for gender.

Assuming a structure along the lines of (5), it is proposed historically in the literature that gender occupies *n, Gen, Num*, or D, or a combination of these, depending on the language (but also on the author). Earlier

p. 6    syntactic accounts of ↳ gender proposed a single feature on a single functional head projecting its own phrase, for example, Gen (Picallo 1991), or the lexical noun head/root (Ritter 1993; Alexiadou 2004) or on *n* (Lecarme 2002; Kihm 2005; Lowenstamm 2007).[4]

(5)

```
            DP
          /    \
       the     NumP
             /    \
          Num     GenP
                /    \
             Gen      nP
                    /    \
                   n     NP
```

More recent work pays attention to the interaction between gender and number or gender and person, and focuses on multiple gender features, especially on the location in which they are inserted. For example, taking into account the difference between semantic or natural gender (that applies to most animate nouns) and grammatical gender, Kramer (2009) proposes that there are two gender features: one is located on *n* (natural gender), the other on the noun (grammatical gender)—see Atkinson (2015) for French. Concord in the noun phrase involves grammatical features in the absence of semantic gender features. First, semantic gender features are targeted, but if they are not present, then the target is grammatical gender features. If concord = Agree (Carstens 2000), then the Probe (an unvalued gender feature on the determiner) will search down for a suitable Goal. If a semantic feature, i.e. a potential Goal, is not present then a grammatical gender is the target of agreement, since it is a legitimate Goal (see Panagiotidis, this volume, for discussion; Kučerová, this volume; Percus 2011; and Landau 2015). In this respect, consider example (6). Example (6a) is the abstract representation for Agree with semantic gender while (6b) is the abract representation for Agree with grammatical gender.

(6)

a. $[u\text{Gen}]_{\text{PROBE}} \dots [i\text{Gen}]_{\text{GOAL}} \dots [u\text{Gen}]$    Agree with semantic gender
b. $[u\text{Gen}]_{\text{PROBE}} \dots [u\text{Gen}]_{\text{GOAL}}$    Agree with grammatical gender

In more recent work, Kramer (2015) proposes that gender features are always syntactically located on *n*, a functional head that serves to nominalize category-neutral roots as per Distributed Morphology. Those gender features are either interpretable, as in the case of natural gender, or uninterpretable, as in the case of grammatical gender. Semantic or grammatical agreement will be triggered depending on what Goal is targeted (*i*Gen or *u*Gen).

On this view, and more generally, grammatical gender is thus theoretically like structural Case in that both the Probe and the Goal carry an uninterpretable ↳ feature (semantic or natural gender involves an interpretable feature, perhaps not unlike inherent Case). This is problematic for many researchers, since we lack the asymmetry otherwise seen with features in the case of number and person agreement, and this is why structural Case has been claimed not to involve the traditional interpretable–uninterpretable contrast after all. Instead, it has been proposed that Case depends on agreement. In other words, Case is parasitic on agreement (Chomsky 2000, 2001). Once the relevant φ-features are valued/checked, Case can be assigned. If this is correct, it is possible then that, like Case, grammatical gender is parasitic on agreement (see Wurmbrand 2015 for discussion) and that we therefore do not need to postulate for grammatical gender any uninterpretable–uninterpretable contrast.

We know that gender can definitely be dependent on number (gender shift in Somali and Amharic is seen only in plurals, e.g. Lecarme 2002; Kramer 2009, 2015) or person (it is common for 3rd person pronouns to be marked for gender, but not common—there are only a few exceptions—for 1st and 2nd person pronouns). The reverse is also true: number can depend on gender (in Tamil, number marking is obligatory on nouns denoting 'rational' beings—adult humans, gods, and demons—whereas 'irrational' beings, which includes infants and animals, do not have to be marked for number (Asher 1985: 135; Aickhenvald 2000: 248), and perhaps more strikingly, gender can behave like number. This is most obvious in singulative languages (Welsh, Breton, Arabic) where gender has a clear role for noun classification and reclassification (see Section 1.1, this chapter, and Fassi Fehri in Chapter 4).

The chapters in Part II all deal with the locus of gender and more specifically where gender features are introduced. While gender is often treated as the lame duck of φ-features—it is either ignored or involves much hand waving—this volume contributes to advances in gender linguistic theory by specifying where and how gender features are articulated in the nominal structure. It thus joins the recent boom in gender studies in linguistic theory (Ferrari 2005; Lowenstamm 2007, 2012; Fathi and Lowenstamm 2016; Acquaviva 2008; Kramer 2009, 2015, 2016; Carstens 2010; among many others).

In addition, many chapters in Part II show that φ-features are intertwined and that gender features cannot be studied out of context. Other features and categories need to be taken into account. We observe this interconnection further in certain tendencies that arise cross-linguistically: 'both number and gender distinctions are frequently lost with respect to person, but in opposite fashion' (Adger and Harbour 2008: 24). In other words, there is a sort of complementary distribution between number and gender when person is involved. In particular, 'where language is most likely to make number distinctions (in first, or first and second person), it is least likely to make gender distinctions' (ibid.).

Many chapters in Part II also address the issue of semantic gender versus grammatical gender and occasional agreement mismatches. Some authors question the traditional contrast between semantic gender features and grammatical features in that both types are claimed to be interpretable (Hammerly, Chapter 5). Others (e.g. Fassi Fehri, Chapter 4) entertain, explicitly or implicitly through the data they ↳ introduce, the idea according to which grammatical gender is higher than semantic gender. We see this in the singulative. Gender shift from masculine to feminine is located in Div, higher than *n* (Borer and Ouwayda 2010; Mathieu 2012a, 2012b; Fassi Fehri, this volume; but for another view, see Kramer 2015). Yet others (e.g. Panagiotidis) argue that semantic gender is higher than grammatical gender. Despite the differences between the different proposals, all argue, along the lines of Paolo Acquaviva (Chapter 3), that gender is distributed along the nominal spine.[5]

The chapter by **Abdelkader Fassi Fehri** (Mohammed V University, Rabat, Morocco), entitled 'Multiple facets of constructional Arabic gender and "functional universalism" in the DP', shows that gender is more productive than previously thought and is not limited to the expression of sex or class. It can categorize or recategorize. In this respect, Fassi Fehri's chapter ties nicely with Déchaine's, in Part I, since the Arabic data

provide evidence for gender creating partitions directly (see also Tunisian data in Section 1.1, this chapter). Thus, the author directly addresses the theoretical question in (1a), but by giving an articulated nominal structure for Arabic nouns, very much along the lines of what Acquaviva proposes in Part I, he also addresses the theoretical question in (1b) above. Discussion on plurals, in particular plurals of singulatives, and other types of Arabic plurals, is also provided. There is thus a connection with chapters in Part III, for example, Kouneli's (Chapter 11), since the latter deals, in part, with plurals.

Using French grammatical gender as a case study, **Christopher Hammerly** (University of Massachusetts, Amherst, USA) proposes in Chapter 5 entitled 'Limiting gender' that gender is located on a nominal categorizing head, $n$, and that a bare noun minimally has the structure { n, { n, √ } }, but that the traditional interpretable–uninterpretable distinction on which gender commonly relies is mistaken. While traditionally natural gender is treated as interpretable and grammatical gender uninterpretable, Hammerly argues that even if a feature itself does not receive a denotation over the course of interpretation at LF (the case of grammatical gender), it still must provide the context for the interpretation of pieces of structure. Therefore, arbitrary gender cannot be uninterpretable (i.e. invisible) at LF. This solves the problem mentioned above, namely that a pair of uninterpretable features for grammatical gender is strange, since other φ-features have asymmetric agreement pairs. The novel generalization proposed by Hammerly is that all features are interpretable, in the sense that they are visible to LF.

In Chapter 6, 'The double life of gender and its structural consequences: A case study from Standard Italian', **Ivona Kučerová** (McMaster University, Hamilton, Ontario, Canada) presents data from Standard Italian to show that gender features may be valued from the context: *il chirurgo* 'the surgeon' can denote a female even if it bears morphological masculine features. The article explores the potential consequences this has on φ-feature chains that are valued in the nominal structure. Kučerová distinguishes gender valuation from the lexicon (narrow syntax) from valuation via the syntax–semantics interface. She argues

that unvalued φ-features ↳ within the DP are always introduced by D. On the other hand, if valued φ-features appear on lower functional heads, it is either by Agree with D, or it may be encoded in the lexical entry of a nominal root.

**Danniel da Silva Carvalho** Universidade Federal da Bahia/Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (UFBA/CAPES), in Chapter 7 entitled 'On gender and agreement in Brazilian Portuguese', examines cases of non-canonical gender agreement in Brazilian Portuguese. He argues that a set of gender mismatches observed in the grammar of that language stems from the interaction between semantic and syntactic constraints. Carvalho uses Preminger's (2014) theory of relativized probing and proposes that gender mismatches in Brazilian Portuguese are due to under-specification of the structure of the DP that contains this feature, and its combination with other features available in the inventory.

Chapter 8 by **Ruth Kramer** (Georgetown University, Washington DC, USA), entitled 'A novel kind of gender syncretism', deals with syncretism and the relationship between number and gender. It assumes previous work by the author where interpretable and uninterpretable gender features are located on $n$, but describes and analyses a novel type of syncretism where plural agreement is not only syncretic with the singular agreement but also associated with a specific gender (i.e. masculine in Amharic). Kramer uses data from Afroasiatic languages to develop a Distributed Morphology analysis of the syncretism and shows how it makes a correct prediction about default gender in Amharic. She also distinguishes morphological syncretism from a syntactic effect, concluding that convergent-to-gender syncretism is truly morphological: the masculine marker is inserted by default and does not result from a syntactic effect of plural number rendering all nouns masculine.

In '(Grammatical) gender troubles and the gender of pronouns', Chapter 9 and the last contribution of Part II, **Phoevos Panagiotidis** (University of Cyprus, Nicosia) uses evidence from 'empty nouns', as well as linguistic transgendering in Brazilian Portuguese and Greek, to locate semantic and grammatical gender.

Observing empty nouns shows that the presence of semantic gender on strong pronouns is associated with more structure, while the absence of semantic gender on weak pronouns (clitics) is due to the fact that they have less articulated internal structure. The data from transgendering in Brazilian Portuguese and Greek suggest that natural (semantic) gender can only be indicated through concord. Based on this evidence, Panagiotidis argues that grammatical gender is encoded on the nominalizer *n*, and that semantic gender is on a higher head.

In summary, all the contributions in Part II discuss partition in one way or another and propose a certain mapping of gender in the nominal spine. Many of the chapters discuss gender agreement (grammatical or semantic), with matching or mismatching situations, providing general theoretical contributions to our understanding of how gender is valued in the derivation.

## 1.3 Part III: Morphosemantic noun classification

Part III, with its four chapters, deals with number and/or animacy and/or the mass-count distinction. The contributions show how number and/or animacy interacts ↳ with noun classes. The first chapter, by Forbes, can be seen as the number-based counterpart of Déchaine's Chapter 2, Part I. The second chapter (Kouneli) deals with plurality and shows that plurals can appear in different positions along the nominal spine. This is in agreement with several articles that have recently proposed that morphemes corresponding to the plural can occupy not just one (Borer 2005a) but several functional positions (Acquaviva 2008; Harbour 2008, 2011; Tsoulas 2009; Wiltschko 2008, 2012; Butler 2012; Mathieu 2013a, 2013b; Mathieu and Zareikar 2015; Dali and Mathieu 2017; Gillon 2015). Thus, both gender and number can appear in different positions along the nominal spine.

Let us briefly summarize Borer's (2005) proposed theory of nominal structure, since it will allow us to appreciate fully the arguments made by the contributors to Part III about plurality and the mass-count distinction. Borer (2005) argues that nouns enter the derivation as neither count nor mass, but become count by the addition of structure (a *neo-constructionist* view). In particular, according to Borer (2005a), the addition of the plural has an individuating effect: it is not an operation on singulars (Krifka 1989), but rather an operation that takes a mass denotation and divides it into portions. In many contexts, indeed, the plural is not just about plurality, but it includes the singular (Sauerland 2003; Sauerland, Anderssen, and Yatsushiro 2005; Spector 2007; Zweig 2009). Both (7b–c) are possible answers to the question in (7a).

(7)

> a. *Do you have children?*
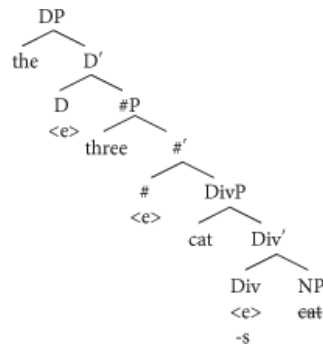> b. Yes, I have one child.
> c. Yes, I have two children.

In fact, as the answer (8b) to the question in (8a) shows, the plural need not even refer to individuals (singulars) at all, since in this case we do not even have one child being referred to.

(8)

> a. *What is the average number of children at home per family in your country?*
> b. 0.3 children.

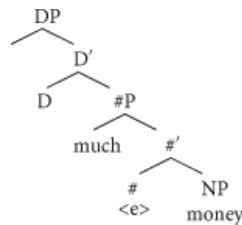Rather than counting, the plural creates individuals. This operation is dubbed *Division* (Div). Once mass has been portioned out through Div, a counting function can operate. This is the locus of a higher phrase, namely a Number phrase (NumP), where numerals such as 'one', 'two', 'three' can be used as in 'three children'.[6] Finally, a definite determiner can be inserted in the D domain. The structure is given in example (9).

(9)

```
                    DP
                  /    \
                the     D′
                      /    \
                    D       #P
                   <e>     /   \
                         three   #′
                               /    \
                              #      DivP
                             <e>    /    \
                                  cat     Div′
                                        /     \
                                      Div       NP
                                      <e>       cat
                                       -s
```

For mass nouns, we have a much simpler structure with no Div level as shown by the representation in example (10), since nothing here is divided.

(10)

```
                 DP
               /    \
                     D′
                   /    \
                 D       #P
                       /    \
                    much      #′
                            /    \
                           #      NP
                          <e>    money
```

It turns out that not all plurals are equal: their interpretation varies and this seems to correlate with specific positions in the nominal spine. For example, while the plural of simple nouns such as *kalb* 'dog' and *souriya* 'shirt' in Tunisian Arabic are inclusive (they refer to pluralities as well as individuals), the plural of singulative, as described in Part I, as in (11) are exclusive, referring only to pluralities, with an added restriction, since the plural is interpreted as paucal.

(11)

a. bordgen-a          →  bordgen-at              [Tunisian Arabic]
   orange-fem.sing        orange-fem.pl
   'one orange'           'a few oranges'

b. raml-a             →  raml-at
   sand-fem.sing          sand-fem.pl
   'one grain of sand'    'a few grains of sand'

We thus see from these examples that number interacts with noun classes (and thus gender) and depending on where number is inserted, we have different semantic specifications.

In Chapter 10, 'Number, names, and animacy: Nominal classes and plural interactions in Gitksan', **Clarissa Forbes** (University of Toronto, Canada) looks at three types of noun classification in Gitksan, a Tsimshianic language. She discusses the mass–count distinction and proposes that plurality in Gitksan is the property of the count noun and the mass noun needs to be individuated in order to be counted. This individuation happens via an inner aspect phrase as suggested in Wiltschko (2012). The second type of classification is suggested to be determinacy that occurs between common and determinate nouns. Such a classification is argued to resemble the common/proper distinction. The distinction is grammaticalized and it interacts with functional elements like pronouns and demonstratives, thus at the D level. The third type is the animacy distinction that is identified in the pronoun and agreement system. It is shown that plural pronouns and plural agreement are only possible with animate referents.

**Maria Kouneli** (New York University, USA), in Chapter 11, 'Plural marking on mass nouns: Evidence from Greek', discusses the meaning of plural morphology on mass nouns, an observation that is problematic for many accounts (especially those that treat mass nouns as inherently plural). Kouneli argues that the meaning of plural marking in Greek mass nouns is not 'a great amount of mass', as has been argued in the literature, but rather 'spread over a surface in a disorderly way' (not unlike what happens in Persian, see Sharifian and Lotfi 2003). She argues that the plural that appears with mass nouns in Greek is generated on *n*, while the plural morphology on count nouns is generated on NumP.

In Chapter 12, 'Productivity vs predictability: Evidence for the syntax and semantics of Animate gender in four Northeastern-area Algonquian languages' **Conor McDonough Quinn** (University of Southern Maine, USA), argues that, although Algonquian gender, which is based on a masculine/feminine contrast but on animacy, has been commonly presented as largely arbitrary, a number of predictable patterns must be recognized. On the other hand, while gender in Algonquian may sometimes look semantically based, this is not always the case, and the existing facts are part of a unified grammaticalized system that calls for a formal analysis. The contribution of animacy in the languages described varies according to where it is introduced in the nominal structure.

In Chapter 13, 'How to phraseologize nominal number', **Solveiga Armoskaite** (University of Rochester, New York, USA) shows that Lithuanian nominal roots are obligatorily inflected for number, gender, and case. The Lithuanian data are number related, but in the author's view, not in a way that is connected to noun classes. The author shows that Lithuanian has lexical nominalization where nominal number may participate in lexeme-preserving derivation. This happens with the derivation of deverbal nouns with -yb-. The feature inventory of the nominalizer -yb- contains [± animate] [± sentient] but lacks [± singular]. The nominalizer -yb- selects for particular roots containing particular features, and resolves the tension between two distinct types of verbal bases by phraseologizing (idiomatizing) the singular versus the plural paradigm of derived nouns. Armoskaite's chapter provides evidence for the non-trivial role of roots in the grammar in

terms of their features. ↳ Chapter 13 also touches upon the issue of animacy and how it interacts with gender in the grammar.

The last two articles in Part III bring in considerations that the other more formal chapters do not, namely family resemblances and idiomatic morphology.

## 1.4 Conclusion

In summary, the aim of this volume is to introduce the latest findings in gender and noun classification research. Gender has been an extremely popular topic in recent years. This is due, in part, to the general interest in φ-features that we see in Minimalism, but also in other frameworks. The chapters of this volume are arranged in such a way that they correspond to one of the following questions asked: (1) What is the role of gender? (2) Where is gender located in the nominal spine? (3) How is gender interpreted? In this volume, we show how gender interacts with other φ-features, how it participates in noun categorization, and how it contributes to meaning beyond the traditional masculine–feminine distinction found in Indo-European languages. A large array of empirical facts about gender are introduced, with many languages covered, together with a set of theoretical proposals that will contribute to our understanding of noun classification

and other such topics. ↳

## Notes

1    Gender shift can also have an evaluative/expressive value. See Goddard (2002) and Déchaine (this volume), for

Algonquian; Panagiotidis (this volume) for Greek and Portuguese; and Fassi Fehri (this volume) for Standard Arabic. Cross-linguistically, evaluative morphology is not uncommon. See Maho 1999 on Bantu; Steriopolo 2008 on Russian; Wiltschko and Steriopolo 2010 on German; and Kramer 2015 on multiple languages. It appears to be high in the noun phrase, above #, and possibly even above D.

2    It is also possible in some dialects of Arabic for gender to create individuals that refer to groups (see Zabbal 2002; Dali and Mathieu 2018).

3    Singulative systems are not always ostensible. While it might be tempting to argue that this or that language lacks a count/mass distinction because they lack certain properties seen in Indo-European languages (as has been done by Davis and Matthewson 1999 for St'át'imcets; Dalrymple and Mofu 2012 for Indonesian; and Wiltschko 2008, 2012 for Halkomelem and Blackfoot), several languages appear to have underlying singulative systems (see Mathieu, 2012a, 2012b for Ojibwe; Gillon 2012 for Innutut; and Deal 2017 for Nez Perce) suggesting that all languages make countability distinctions and that the count/mass distinction is grammaticalized in every language (Deal 2016).

4    Ritter (1993) argues that gender is located on the lexical noun head in Hebrew but on the inflectional number head in Romance.

5    For an early idea that gender is distributed, see Steriopolo and Wiltschko (2010).

6    The functional categories in the noun phrase (and generally) need to be licensed (hence the presence of <e>in the following derivations): the licensing can be done by something in the specifier (via f-morphs, i.e. free morphemes) or something on the head (via head features, i.e. bound morphemes). There is thus a binding relationship between the licensor and the open value as well as referential index.