THE SYNTAX AND SEMANTICS OF ARABIC POSSESSION

by

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Simin has been my advisor since my first year in the program. Joining a complex-predicate group that she coordinated was how I met her for the first time. I was always inspired by her passion for Minimalism, which radiated with energy and enthusiasm. I had always been intimidated by Minimalism, but her teaching style and the assignments she gave in different classes I took with her provided the necessary knowledge I would later apply in writing my prelim papers, dissertation, and future work. Simin's commitment to excellence was truly inspiring. Her expertise, encouragement, and dedication have been instrumental in shaping the direction and quality of all my work throughout my graduate education. Her guidance served to maintain my focus and motivation, and her steadfast dedication to my success was unwavering. She has always been readily available to provide feedback on abstracts I needed to submit or on slides or handouts I needed to present, and she has always been responsive to time-sensitive requests made by my sponsor, which made my life a lot less stressful. I cannot thank Simin enough for her academic and emotional support, for which I can never fully express my appreciation.

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DEDICATION

I dedicate this dissertation to the three women I love the most

my mother, my grandmother, and my wife

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LIST OF ABBREVIATIONS

1	First person
2	Second person
3	Third person
ACC	Accusative
APPL	Applicative
BEN	Benefactive
CS	Construct State
DAT	Dative
DU	Dual
EXPL	Expletive
FG	Free Genitive
F	Feminine
GEN	Genitive
M	Masculine
NOM	Nominative
OBJ	Object
PL	Plural
POSS	Possessive
PRES	Present
PST	Past
SG	Singular
SUBJ	Subject

ABSTRACT

This dissertation is about the constituents that build possession sentences and the elements that compute their semantics. Through a detailed study of clausal possession formation in the Saudi variety of Arabic, this work contributes to a line of research in which possession relations are introduced in a nominal domain and establish a dependency between two nominal arguments. It argues that the domain where this dependency is fulfilled may go beyond the nominal phrase. The major theoretical claim of this work is that syntax is less deterministic of thematic roles; an object may serve as the syntactic argument of a head without being its semantic argument. Thematic roles are treated as parts of the semantic component of grammar. In the present system, the possessor thematic role is saturated in two different places, leading to differences in the range of possession meanings associated with each structure. First, the possessor thematic role may be saturated in the complement of the head that introduces it. This possessive construction is essentially attributive, and deriving clausal possession from this construction involves extracting the possessor from its base position through the DP edge. Second, the possessor thematic role may be saturated in the specifier of a higher expletive head. The present approach fits in the contemporary literature that argues for the multiplicity of structures leading to possession sentences.

CHAPTER 1. INTRODUCTION

1.1 Aim and Scope

This dissertation is a study of the relation between syntax and semantics as they interact
in clausal possession in the Saudi variety of Arabic. Syntax in a generative sense is un-
derstood as the engine putting together elements of language and establishing some sort of
relation among them, while semantics is understood as the system that supplies the syntactic
output with a licit interpretation. Although some generative perspectives take an extreme
stance in which syntax is viewed as the sole determinant of meaning, with semantics being
entirely dependent on the syntactic structure, some contemporary viewpoints allow for the
possibility that certain elements of meaning, including thematic roles, may be determined by
operations outside syntax (Heim and Kratzer, 1998; Schäfer, 2008; Bruening, 2013; Wood,
2015; Myler, 2016). This is consistent with the tenets of Distributed Morphology (Halle
and Marantz, 1993), according to which the interpretation of a linguistic expression lies in
the interface between compositional semantics and world knowledge (*encyclopedic knowl-
edge*).

The shift in perspective that is presented by DM has significant implications, which are
elaborated upon in the works of Wood (2015) and Myler (2016). One such implication is
the idea that the meaning of a terminal node can differ based on the surrounding structure,
and that some terminal nodes may not have any significant semantic content. Additionally,
this perspective suggests a division of labor between syntax and semantics, meaning that an
object may serve as the syntactic argument of a head without being a semantic argument of

the same head. My purpose in this dissertation is to develop this suggestion, and I will use predicative possession in Arabic as my empirical domain.

One must acknowledge that the questions possession raises have tantalized many linguists from different traditions and with varying theoretical interests such as syntax (see among others Abney (1987); Fox (1981); Freeze (1992); Hawkins (1981); Harley (2002); Kayne (1993); Mahajan (1994); Szabolcsi (1981, 1983)), semantics (e.g. Barker (1995, 2019); Beavers et al. (2008); Partee (1983); Francez (2009); Partee and Borschev (2001)), and lexical semantics (see for example Cruse et al. (1986) and Chappell and McGregor (1989)). This diverse range of traditions has allowed for a variety of programmatic approaches to the study of possession. Nevertheless, the complexity of possession in languages around the world makes it an especially attractive subject for further exploration. In the context of Arabic, there has been relatively little research conducted on Arabic clausal possession, and the majority of the work that has been done is focused on syntax (see, for example, Ouhalla (1996) and Boneh and Sichel (2010)). However, as this current work will demonstrate, gaining a more comprehensive understanding of possession requires the incorporation of various modules of grammar beyond syntax. In light of the development in generative thinking, embarking on a quest to study Arabic clausal possession has become increasingly intellectually captivating. This is largely due to the fact that prior analyses have been predominantly discipline-specific, and the theoretical frameworks that guided them do not display the same level of abstraction. This dissertation aims primarily to offer a descriptive analysis of Arabic predicative possession constructions that takes into account the syntactic and semantic facts relevant to possessive constructions. While the data will primarily be derived from Arabic, it is my aspiration that the basic approach will carry over to languages further afield.

My proposal begins with the fundamental premise that language, in its broadest sense, can be viewed as that which consists of relations mapping together the constituent parts they comprise. Possession, accordingly, can then be simply understood as a syntactic inter-

dependence linking the projections of two nominal arguments (Szabolcsi, 1981; Kayne, 1993; Partee, 1999; Myler, 2016). Although this concept may appear to be obvious, it prompts the question of how the argument structure of clausal possession distinguishes itself from that of attributive possession. Essentially, both possession constructions involve a similar relation with identical argument types. One plausible explanation is that the two constructions are wholly autonomous from a syntactic standpoint, whereas another hypothesis suggests that possession is fundamentally attributive but takes on a predicative nature through the use of a copula. Defense for the latter possibility has gained some momentum in recent years (Pustet, 2003; Tham, 2013; Myler, 2016), and it turns out to have a number of advantages. One advantage is that it constrains the domain in which possession is introduced within a given structure, reducing the number of functional heads and resulting in a more coherent generalization of the typology of possession across languages. Another advantage is that it makes a cross-linguistic prediction that some languages may extract the possessor from its DP source to serve as the sentential subject of a clausal possession.

Although these two advantages may be interrelated, one could think of a number of considerations to bring to bear on the question of where in the possessive construction the possessor is introduced. This has indeed been the question asked so often in the generative literature, the technical details of which will be discussed in the next chapter. For instance, the approach to possession proposed independently by Freeze (1992) and Kayne (1993) claims that possessive constructions are derived from a single syntactic structure that is not necessarily dedicated for possession as it can give rise to other language properties. Deriving possession from this structure involves moving the possessor from its home in response to semantic triggers such as definiteness. Consider the following structure proposed in Freeze (1992).

(1.1)   Freeze's (1992) D-structure for locatives, existentials, and possessives

```
                         IP
                    ╱        ╲
                SPEC          I′
                           ╱      ╲
                          I         PP
                        +Agr     ╱     ╲
                        +loc    NP        P′
                               ╱──╲     ╱    ╲
                        Theme/Possessee  P      NP
                                              ╱──╲
                                        Location/Possessor
```
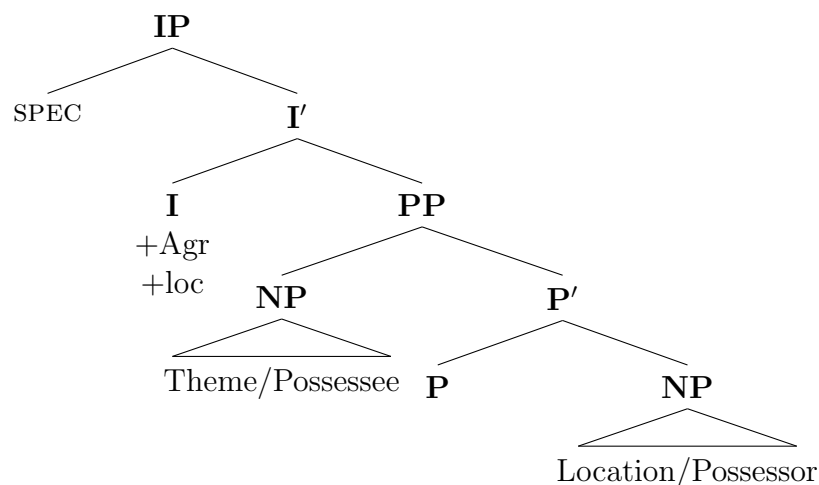
Recent work, such as Boneh and Sichel (2010) and Myler (2016), however, has departed from this tradition and posited an inventory of possessive structures that capture the syntactic difference between the two major classes of possession: BE-based possession and HAVE-based possession. Within this tradition, some of these structures involve extracting the possessor from the possession domain (the complement of v), while others semantically introduce the possessor within its possession domain but syntactically project it outside. Consider Myler's (2016) structures for BE-based possession.

(1.2)   a. Unaccusative BE Possession   b. Unergative BE Possession
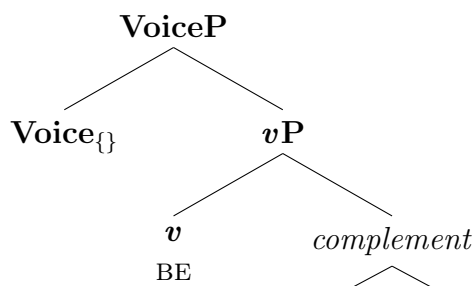
```
          VoiceP                                VoiceP
        ╱      ╲                              ╱      ╲
    Voice_{}     vP                         DP        Voice′
             ╱      ╲                      ╱──╲      ╱      ╲
            v      complement         Voice_{D}      vP
            BE        ╱──╲                         ╱      ╲
                                                 v      complement
                                                 BE        ╱──╲
```

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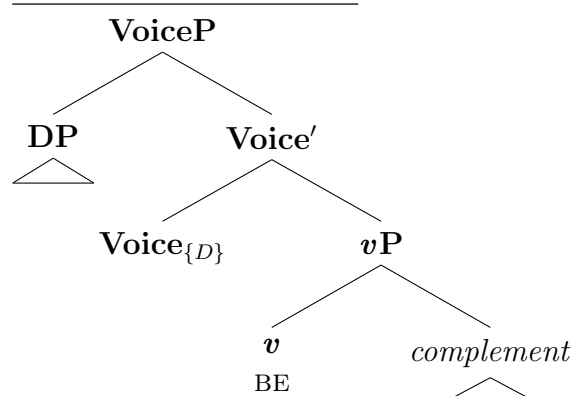
Although the multiplicity of possessive structures view has offered great insight into this domain of inquiry, it nevertheless raises some questions about the ways in which possession is expressed in certain languages. For example, one might wonder as to why any language would utilize multiple structures for expressing clausal possession. Additionally, if a possession construction involves extracting the possessor from the possessed DP, what are the potential semantic implications of this process?

In this work, these questions are addressed through a study of Arabic predicative possession. In this language, predicative possession is expressed using different possessive markers, as shown below:

(1.3) a. ʕɪnd POSSESSOR POSSESSEE

   b. maʕ POSSESSOR POSSESSEE

   c. lɪ POSSESSOR POSSESSEE

The elements preceding the possessor of each sequence are prepositions elsewhere in the language, and, henceforth, they will be glossed as *at*, *with*, and POSS, respectively. I will show that the first two sequences do not differ in the distribution of possession meanings they host; alienable and inalienable possession meanings can be both expressed through either sequence[1]. On the other hand, the sequence in (1.3c) differs from the previous two in that it licenses only inalienable possession meanings. I argue that the different patterning between the first two sequences (1.3a&b) on the one hand, and the third sequence (1.3c) on the other hand, underlies a structural difference. The possessor in ʕɪnd- and maʕ-marked possession is first merged outside the domain where it is semantically introduced. The possessor in lɪ-marked possession is however merged internally to the possessed DP. I will use the term *inclusive construction* to refer to the syntactic structure deriving possession relations marked with *ʕɪnd* or *maʕ* to indicate their ability for expressing alienable and inalienable possessions,

---

[1]Further explanation as to what counts as alienable or inalienable is provided in Chapter 2.

and *inalienable construction* to refer to that which licenses inalienable possessions only. The proposed structures are given below:

(1.4)   Inalienable Construction

```
              vP
           /      \
         v        PredP
               /        \
            Pred         DP
                      /      \
               POSSESSOR  POSSESSEE
```

(1.5)   Inclusive Construction

```
              vP
           /      \
         KP         \
       /    \  v      \
   POSSESSOR          \
                   /        \
                Pred         DP
                          /      \
                        POSSESSEE
```
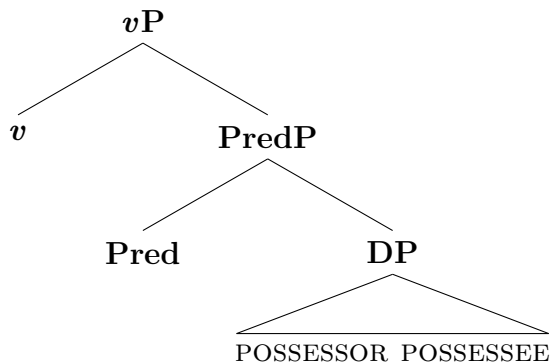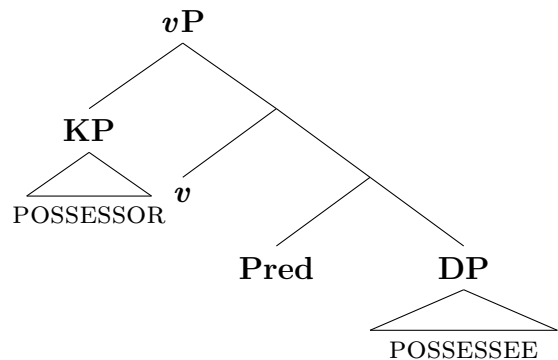
For the inalienable construction in (1.4), I will argue that deriving clausal possession involves extracting the possessor from the possessed DP. Furthermore, I will show that possessor extraction is a property of the inalienable construction only, which I take to be a further indication of the analysis that the two proposed structures are independent and that they cannot be related through movement. Moreover, I follow Ritter (1988, 1991) in assuming that KP is a genitive phrase that contains a possessor. I do not attach any significance to it other than the fact that the nominal inside it is always a possessor. This is to distinguish PPs that take possessors as a complement from other PPs. Further discussion as to why possessors in Arabic possession sentences need to be inside prepositional phrases is given in Chapter 3.

With respect to the internal structure of the possessed DP, I assume previous accounts pointing out the structural distinctions between relational nouns and non-relational nouns (Barker and Dowty, 1993; Barker, 1995; Partee, 1999). Relational nouns are inherently argument-introducing elements whereas non-relational heads are made relational via combining with a relationalizing head, which, based on Barker (1995), is Poss. Assuming this distinction, I argue that possession is introduced in the inclusive construction by either the

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root noun if it is relational or else a Poss head. On the other hand, only relational nouns introduce possession relations in the inalienable construction. Hence, the internal structure of the possessed DPs in the previous trees are given in (1.6) for the inclusive construction and in (1.7) for the inalienable construction.

(1.6)   INCLUSIVE STRUCTURES

    a. Alienably Possessed DP

$$
\begin{array}{c}
\textbf{DP} \\
\diagup \quad \diagdown \\
\textbf{D} \qquad \textbf{PossP} \\
\lambda y_e.\lambda x_e.\lambda e_s.\text{house}(x) \\
\wedge \text{Poss}(x,y,e) \\
\diagup \qquad \diagdown \\
\textbf{Poss}_{\{\}} \qquad\qquad \textbf{nP} \\
\lambda P_{<e,t>}.\lambda y_e.\lambda x_e.\lambda e_s.P(x) \quad \lambda x_e.\text{house}(x) \\
\wedge \text{Poss}(x,y,e) \\
\diagup \quad \diagdown \\
\textbf{n} \qquad \sqrt{\text{beit}} \\
\sqrt{\text{HOUSE}}
\end{array}
$$

    b. Inalienably Possessed DP

$$
\begin{array}{c}
\textbf{DP} \\
\diagup \quad \diagdown \\
\textbf{D} \qquad \textbf{nP} \\
\lambda y_e.\lambda x_e.\lambda e_s.\text{girl}(x) \\
\wedge \text{daughter-to}(x,y,e) \\
\diagup \quad \diagdown \\
\textbf{n} \qquad \sqrt{\text{bint}} \\
\sqrt{\text{DAUGHTER}}
\end{array}
$$
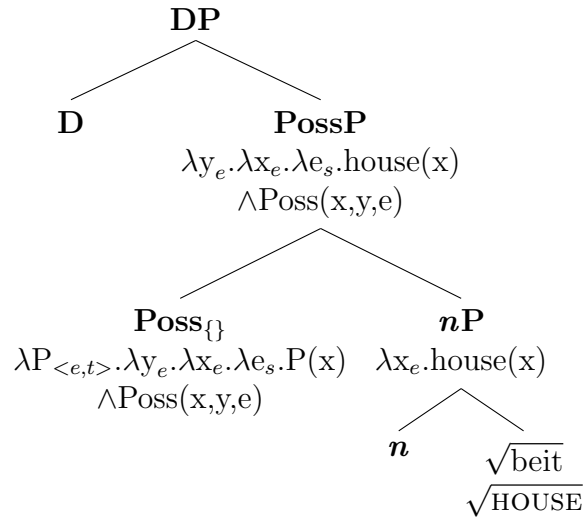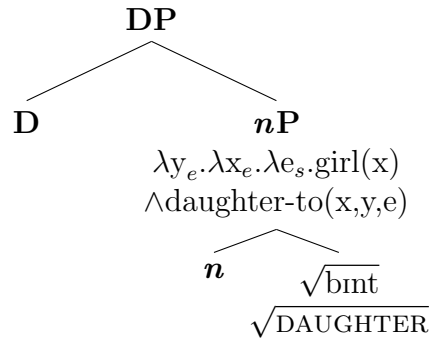
Note that the Poss head in (1.6a) is specifierless, confirming Myler's (2016) account for the mircro-parametric variation among languages with regards to whether Poss requires (or allows) a specifier. As I will show in Chapter 3, specifierless Poss yields a unified analysis of

expressing possession via the inclusive construction. Moreover, the difference between (1.6a) and (1.6b) lies in the capacity of n to introduce the possession relation. The nominal *beit* 'house' is non-relational, and it combines with Poss. On the other hand, *bınt* 'daughter' is a relational noun; it can introduce the possession relation.

Consider now the inalienable structure in (1.7).

(1.7)   INALIENABLE STRUCTURE
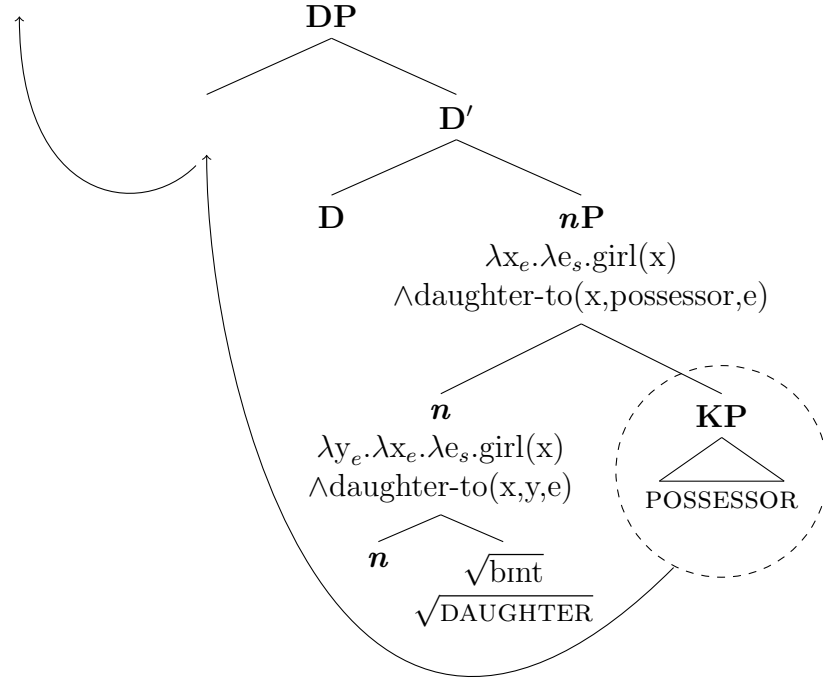
In this structure, possession is introduced by the noun root. The difference between this structure and the previous two is that in this structure, the possessor is introduced inside the possessed DP. It then is extracted through the DP edge and surfaces in a higher position.

Observe that the possession expressed in the proposed structure in (1.7) is essentially built on top of an attributive possession, and it is expected that possession meanings associated

with the attributive domain will carry over to the clausal domain. However, there is more to the semantics of the possessed DP in attributive vs predicative possession than what the structure in (1.7) can tell us. Consider the following examples.

(1.8)   a. lɪ-l-baːb   mɪftaːħ
            POSS-the-door   key

        'The door has a key.'
        (implication: the door has at least one key.)

        b. ḍajjaʕ-t   lɪ-l-baːb   mɪftaːħ
            lost-1SG   POSS-the-door   key

        'I lost a key of the door.'
        (implication: the door has more than one key, but one is missing.)

Note that the semantic contribution by which a possession relation is attributive vs predicative varies in terms of the implication conveyed such that attributive possession, but not predicative possession, exhibits anti-uniqueness effects, in the sense of Barker (1998). To account for this contrast, I propose to assign the following denotation to the head of QP below D, which takes the possession relation as its argument and restricts its cardinality to anything greater than one.

(1.9) $[\![Q]\!] = \lambda R_{<e<s,t>>}.\lambda x_e.\lambda e_s[R(x)(e) \wedge \partial[|R| > 1]]$

Fleshing out the internal structure of the possessed DPs above relies on a further assumption that I believe needs to be made explicit here. I follow Myler (2016) in the idea of conceptualizing possession as a relation holding between two individuals and a state. That is, the element that introduces a possession relation contributes an eventuality variable that can be modified by a temporal morpheme. Languages that morphologically encode the distinction between past and present possession lend support to this claim. For example, consider the following data from Macushi (Abbott, 1991:86-87, cited in Myler, 2016, p.53)

(1.10)   <u>Inalienable Possession in Macushi</u>

    a.   u-ye   b.   u-ye-rî'pi

         1SG-tooth   1SG-tooth-former.possession

         'my tooth'   'my former tooth'

(1.11)   <u>Alienable Possession in Macushi</u>

    a.   u-wa'ka-ri   b.   u-wa'ka-ri-rî'pi

         1SG-axe-POSS   1SG-axe-POSS-former.possession

         'my axe'   'my former axe'

As Myler points out, the position of the temporal morpheme *rî'pi* is where it is expected. The Poss head introduces an eventuality variable, which gets modified by the temporal morpheme on its left.

The present proposal, briefly outlined above, is formulated within the tenets of certain frameworks. In the next section, I present an overview of the guiding assumptions behind my approach.

1.2   The Architecture of the Grammar

Language, in technical generative terms, is a computational cognitive system that incorporates, in its core, a hierarchical syntactic structure that pairs phonological and semantic representations (Chomsky, 1993b; Bolhuis et al., 2014; Berwick and Chomsky, 2016). A theory of language, in the sense just described, is a theory that aims to explain the mechanisms by which this computational system interacts with the other two components of the grammar, namely morphophonology and semantics. Recent development in the generative thinking has indeed maintained this viewpoint and held that a theory of grammar must posit for what is considered conceptually necessary and seek answers for what is empirically attested (Chomsky, 2000).

The basic architecture of the grammar I assume in this work draws from the Minimalist Program (Chomsky, 1993b, 2000, 2001) combined with the assumptions of Distributed Morphology (Halle and Marantz, 1993, 1994; Marantz, 1997). In this system, syntax is taken to be the structure-building device for all complex expressions of language—from the morpheme scale on up. This notion of a generative syntactic engine rejects the lexicalist hypothesis, attributed to Chomsky (1970), which places the burden of structure-building on the lexicon. Phonology and semantics in the present system are independent interfaces that respectively realizes and interprets the output of the syntactic device. This model is known as the Y-model, illustrated in (1.12).

(1.12)   <u>Architecture of the Grammar (Y-Model)</u>

syntax

Phonological Form   **Logical Form**
morphophonology   *semantics*
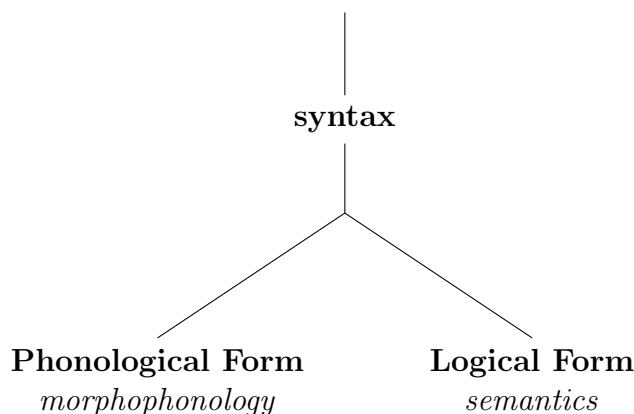
Unlike previous models of the grammar, this model pares the grammar down to the minimum essentials necessary for the PF and LF representations. It incorporates the intuition that abstract terminal nodes and their syntacticosemantic features are manipulated by the syntactic device with no influence from the PF component of the grammar. This constitutes the first list of the grammar in Distributed Morphology terms (Halle and Marantz, 1993, 1994): *narrow syntax*. After the syntactic derivation is complete, *Late Insertion* comes into effect and supplies the terminal nodes with morphophonological features. The third list of the DM architecture is the *encyclopedia*, which is an LF operation, and it provides the appropriate interpretation for the given syntactic structure.

These DM assumptions predict that the formal features put together by the syntactic device will potentially show their effect on the two interfaces. The morphophonological side of the grammar serves as a realizational tool for the syntax, and, hence, the absence of overt morphology can cast suspicion on the absence of the relevant formal features in the syntax. The implication of this reasoning is that positing a syntactic feature active in a given language must be supported by overt realizations of that feature somewhere in that language (for further discussion, see also Wood (2015) and Myler (2016)).

In the following subsection, I give a brief discussion of each of the components of the architecture in (1.12). These introductions will lay out the specific assumptions of the theoretical frameworks pursued in this work.

1.2.1 Syntax

In Minimalist syntax (Chomsky, 1993b, 1994), the essence of language is reduced to a single algorithmic operation, called *Merge*. This operation simply takes two syntactic objects α and β and puts them together in a set containing them: $\{\alpha,\beta\}$. This new set is labeled with a copy of one of the elements it contains[2]. Supposing that α projects itself, the structure can be notated as $\{\alpha, \{\alpha, \beta\}\}$. In the present work, syntactic structures will generally be presented as tree structure formats. The structure in (1.13) illustrates the result of projecting α from the set $\{\alpha,\beta\}$.

(1.13)

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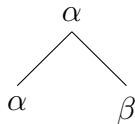
[2]I will not go into the details of how the computational system determines which head projects its label or whether labeling plays a necessary role in the syntactic computation. For further discussion of this matter, see Chomsky (2013), where he argues that labeling is not part of Merge, but instead, occurs at the phase level, or Hornstein (2009)

The elements combined via Merge can be either lexical morphemes or functional morphemes (in the sense of Harley and Noyer (1998)). The recursive power of Merge stems from the fact that Merge can also operate on combining with a new head a complex object that has already been put together by Merge at an earlier derivational step, leading the way to the infinite expressability of language. To illustrate, the structure in (1.13) is a complex object, and it can be further combined with a new head γ. Assuming γ is a projecting head, the result of merging γ with (1.13) gives the structure in (1.14).

(1.14)

```
        γ
       / \
      γ   α
         / \
        α   β
```
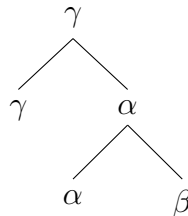
Since the syntactic operands α, β, and γ are distinct elements and are drawn directly from the lexicon, the type of Merge operation they have undergone is called *External Merge*. When a complex syntactic object is merged with another element taken from inside the complex object, we have what is known as *Internal Merge* (or movement). For example, supposing that β is internally merged with γ, we get the structure in (1.15). The standard assumption is that a label of a phrase is a projecting head (Chomsky, 1994, 2000; Fukui and Narita, 2014)[3], and, hence, internally merged elements do not project.

(1.15)

```
        γ
       / \
      β   γ
         / \
        γ   α
           / \
          α   β
```
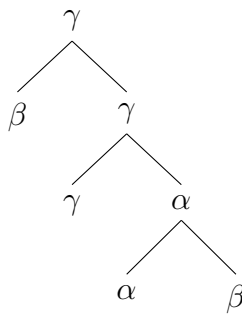
─────────────────────
[3]For criticism of this view, see Donati (2006).

The structure in (1.15) has two instances of the same lexical item, namely β. The syntactic device shifts the responsibility of which copy gets realized to the PF component of the grammar, and although languages vary in their choices, it is generally the higher copy that gets morphophonological realization. For convenience, the silent copy will be marked with strikethrough notation as follows:

(1.16)

```
              γ
           ／    ＼
          β       γ
               ／    ＼
              γ       α
                   ／    ＼
                  α       β̶
```
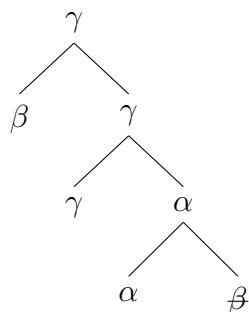
One of the consequences of assuming Merge as a structure-building machine is the elimination of bar-level and XP-level labels used in previous stages of generative theorizing (Chomsky, 1970; Jackendoff, 1977). However, for ease of exposition, I will maintain these labels in the present work without attaching any theoretical significance to them. Hence, a structure like (1.16) will be labelled as in (1.17).

(1.17)

```
              γP
           ／    ＼
          β       γ′
               ／    ＼
              γ       αP
                   ／    ＼
                  α       β̶
```
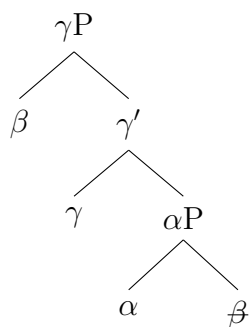
The discussion laid out above has only shown how a hierarchical structure is built via Merge, but Merge itself, by virtue of being a mere syntactic device, cannot determine the

syntactic elements found within syntactic phrases. The content of each phrase is determined by the features (formal, categorial, or selectional) of the head, which act as constraining influences on the heads that carry them. As soon as a derivation satisfies all its syntactic features, it is sent to the interfaces (PF and LF), at which point no further syntactic computation takes place as the derivation now is part of what is known as a *phase* (Chomsky, 2007, 2008; Marantz, 2007). Failure to satisfy any of the features specified on the head will cause the derivation to crash at at least one of the interfaces.

Because heads are the locus of their phrases, some of the features they bear are responsible for introducing arguments and eventualities. While some arguments, such as direct objects, are introduced by some verbs, there are other arguments that are introduced by dedicated argument-introducing heads in the verbal functional projection (Pylkkänen, 2008). Despite their distribution, argument-introducing heads are more alike than different with respect to their syntactic properties that the possibility of reducing them to a single head in some languages seems tenable (Sigurðsson, 2011; Wood, 2015). Nonetheless, a common property shared among heads, and relevant to the present work, is their susceptibility to the following properties (adopted from Wood, 2015, p.15):

(1.18)   <u>Syntactic Properties of Heads</u>

      a. **C-selection:** a head may specify the category of its complement.

      b. **Case-selection:** a head may specify the case of its complement or specifier.

      c. **Specifier requirement:** a head may be specified to take a specifier or not.

Heads endowed with a feature for a specifier forces the syntactic device to create a terminal node for a nominal element within its projection. Following Schäfer (2008), I annotate this feature with {D}. While a positive value for {D} results in a projection of a specifier, Schäfer argues that the DP element occupying the specifier position does not necessarily participate in a thematic relation with the verb; the head projecting them can

be expletive positively specified for the {D}-feature (see chapter 5 of Schäfer's (2008) work for further discussion). When argument-introducing heads are not expletive, however, the semantic interpretation of their specifiers is determined by the head that projects it. More discussion of thematic arguments is given in the following subsection.

Heads can also be endowed with formal features that trigger the establishment of syntactic dependencies via *Agree* relation (Chomsky, 2000, 2001, 2004, 2007, 2008). Agree relates to each other two remote heads, one of which require valuation by the other, provided that the two heads bear the same formal feature. The agreement relation takes place via probe-goal mechanism. Once a head, a *Probe*, with unvalued uninterpretable features is merged, it seeks a *Goal* within its minimum search, c-commanding domain. There are, however, conditions on the application of Agree, given in (1.19).

(1.19)   Agree

α can agree with β iff:

a. β is the closest to α within α's c-commanding domain.

b. α bears unvalued and uninterpretable features and β bear valued and interpretable features of the same identity.

c. α and β are found within the same phase.

d. β has unvalued and uninterpretable features of its own.

Since it was first proposed, Agree has received significant attention, and different aspects of its mechanistic operation have been frequently challenged (see among others Baker, 2008; Hiraiwa, 2001, 2005; Preminger, 2011; Pesetsky and Torrego, 2007). I will take an agnostic view on these challenges as they do not play a major role in the present work.

1.2.1.1 Argument Structure

One of the primary aims of working on the argument structure of a given language is to determine the size of the category of the functional argument-introducing heads employed in the language. Functional heads are often seen as elements of a universal inventory from which languages select their heads (Chomsky, 2000). Cross-linguistic variation is, according to Pylkkänen (2008), determined by two sources: selection, in the sense of Chomsky (2000), and the way the functional elements are bundled into a syntactic head. The discussion here will concentrate primarily on the functional argument-introducing heads found in Arabic.

Recent development in the structure of the clause holds that a clause consists of three domain: thematic domain; inflectional domain; and the left periphery (Cinque, 1999, 2004; Rizzi, 1997; Julien et al., 2002). The domain where arguments are introduced is the thematic domain. Canonically, Voice, as first proposed by Kratzer (1996), introduces external arguments, such as agents; Appl[icative] introduces indirect objects; and p introduces a *figure*, the subject of a small clause forced by the predication of the locative prepositional complement, in the sense of Hale and Keyser (1993) building on Talmy (1975, 1985). The following example illustrates a basic transitive sentence.

(1.20) a. kasar   saːmi   l-baːb

           broke.3SG.M   Sami   the-door

           'Sami broke the door.'

b.

VoiceP
- DP$_{\text{AGENT}}$
  - saːmi
    Sami
- Voice′ AGENT
  - Voice AGENT
  - vP
    - v
      - v
      - √ksr √BREAK
    - DP
      - l-baːb *the door*
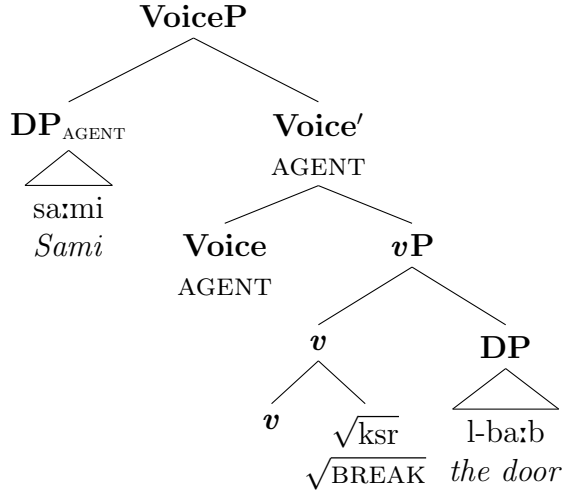
The intuition implemented here is that Semitic roots are category-neutral (more in-depth discussion is given in section 1.3 below); they receive their semantic interpretation and phonological information when they occur within the domain of a category-determining head, such as v (Marantz, 1997, 2001, 2007; Embick and Marantz, 2008)[4]. In this structure, the merging of a transitive Voice results in introducing the external argument *saːmi*.

The thematic domain also contains argument-introducing heads such as applicative heads (Marantz, 1993; Pylkkänen, 2008). These heads come in two varieties identified by their positions in the structure: *high Appl*, which selects for a vP complement and *low Appl*, which takes the direct object as its complement (Pylkkänen, 2008). The analysis of double object construction, for example, involves a low Appl head introducing the indirect object in its specifier. Consider the structure of a sentence such as (1.21a) given in (1.21b).

(1.21) a. ʔahdaː   saːmi   ʕali   kɪtaːb

gave.gift.3SG.M   Sami   Ali   book

‘Sami gave Ali a book as a gift.’

---

[4]Although not specifically important for the main thesis of this work, the position of the verb root is determined by whether it indicates an eventuality or a change of state. Contemporary work, such as Marantz (2009a,b, 2013) and Irwin (2012), suggests that event-modifying roots are adjoined to v whereas change-of-state-modifying roots to the DP complement.

b.

VoiceP
- DP_AGENT
  - saːmi
  - *Sami*
- Voice′ AGENT
  - Voice AGENT
  - *v*P
    - *v*
      - *v*
      - √hdj √GIFT
    - ApplP GOAL
      - DP_GOAL
        - ʕali
        - *Ali*
      - Appl′ GOAL
        - Appl GOAL
        - DP
          - kıtaːb
          - *book*
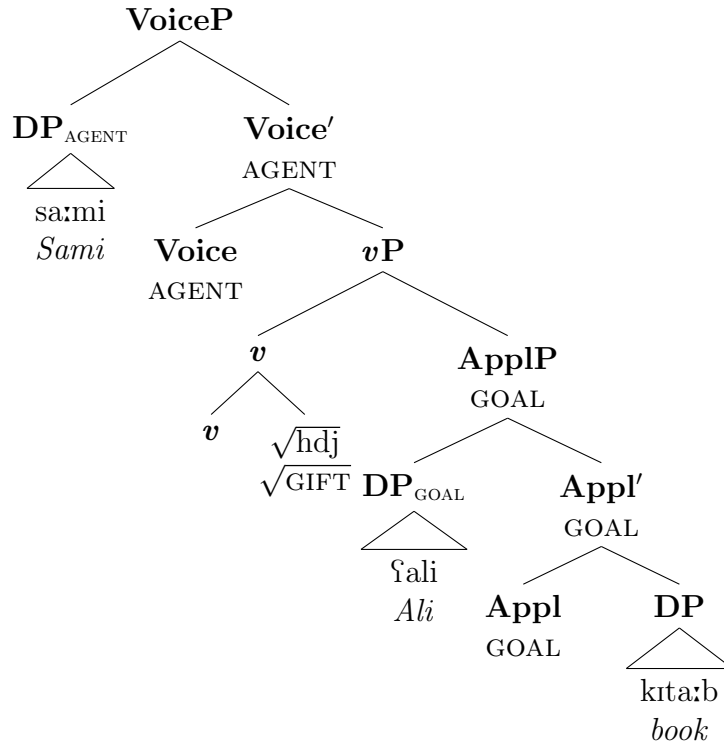
This structure is similar to the previous one except that the low Appl head projects the indirect object in its specifier.

Finally, the p head introduces a *figure* argument, which serves as the external argument of a motional or locational relation that maps it to a *ground*. Both terms, figure and ground, are defined as follows (taken from Talmy, 1985, p.61):

(1.22) a. The **Figure:** is a moving or conceptually movable object whose path or site is at issue;

  b. The **Ground:** is a reference-frame, or a reference-point stationary within a reference-frame, with respect to which the Figure's path or site is characterized.

Consider the following sentence. The p head introduces the Figure argument of the prepositional phrase.

(1.23)   a. ṭallaʕ   saːmi   l-kıtaːb   mın   əʃ-ʃanṭah
         took.out.3SG.M   Sami   the-book   from   the-bag

         'Sami took the book out of the bag.'

   b.
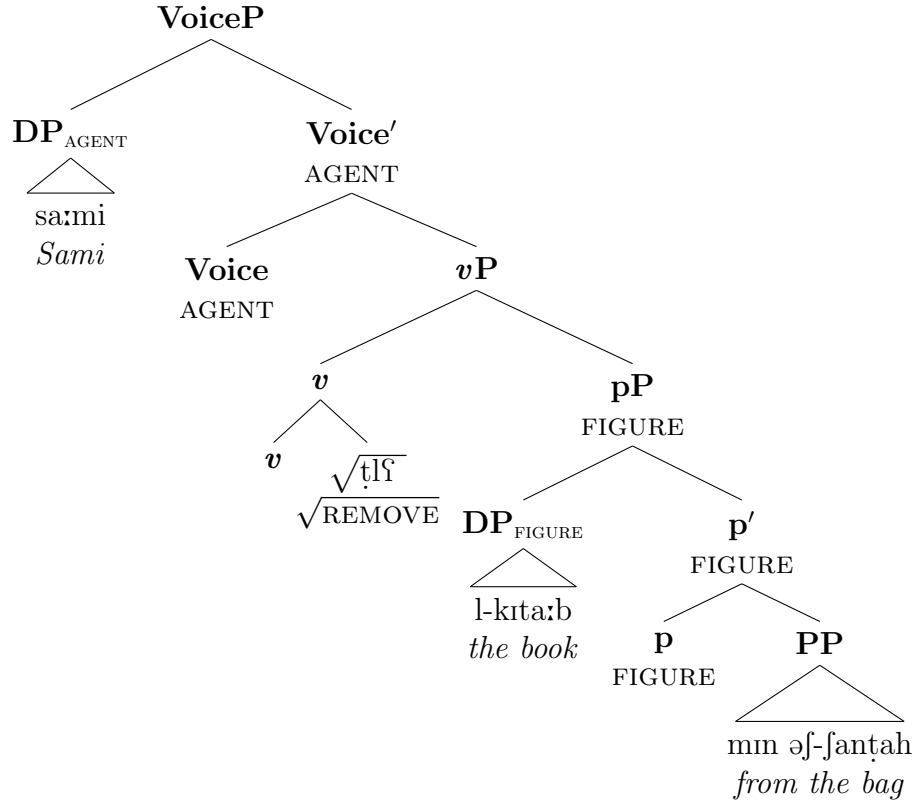
The discussion laid out thus far has focused on argument-introducing heads within the domain of a verbal predicate. However, the argument to be made as this work progresses relies on some assumptions about the structure of copular predicates, existential and predicative. Following Citko (2008) and Irwin (2012) for their account for small clauses and Myler's (2016) account for copular constructions involving BE as a light verb, I assume that a predicate locative construction with a PP predicate complement is similar to the p head discussed above; It involves a Pred head that introduces the subject in its specifier and takes a locative PP as its complement. To illustrate, the predicate phrase for (1.24a) is given in (1.24b).

(1.24) a. saːmi   fi   l-beit

            Sami   in   the-house

            'Sami is in the house.'

    b.

```
                    VoiceP
                   /      \
               Voice       vP
                          /   \
                         v    PredP
                             /     \
                           DP      Pred'
                           /\      /    \
                         saːmi  Pred     PP
                         Sami            /\
                                     fi l-beit
                                    in the house
```
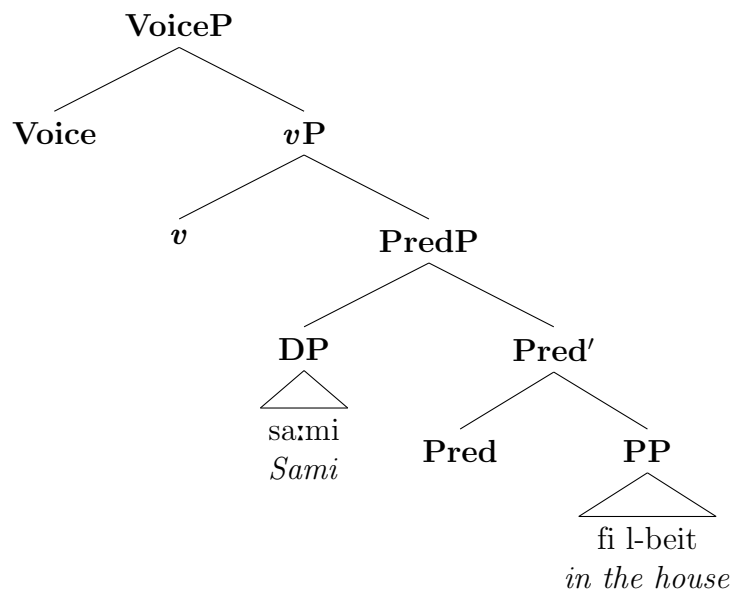
In predicate nominals, however, the subject of the small clause is not projected by the Pred head; rather, as argued in Harves (2002) and Irwin (2012), it is introduced by a higher head, which, following Myler (2016), I take to be the Voice head. By way of illustration, consider (1.25).

(1.25) a. saːmi   ṭajjaːr

            Sami   pilot

            'Sami is a pilot.'

b.

```
                    VoiceP
                   /      \
                 DP        Voice′
                 /\        /    \
              saːmi    Voice      vP
              Sami             /     \
                              v       PredP
                                     /     \
                                  Pred      DP
                                            /\
                                         ṭajjaːr
                                          pilot
```
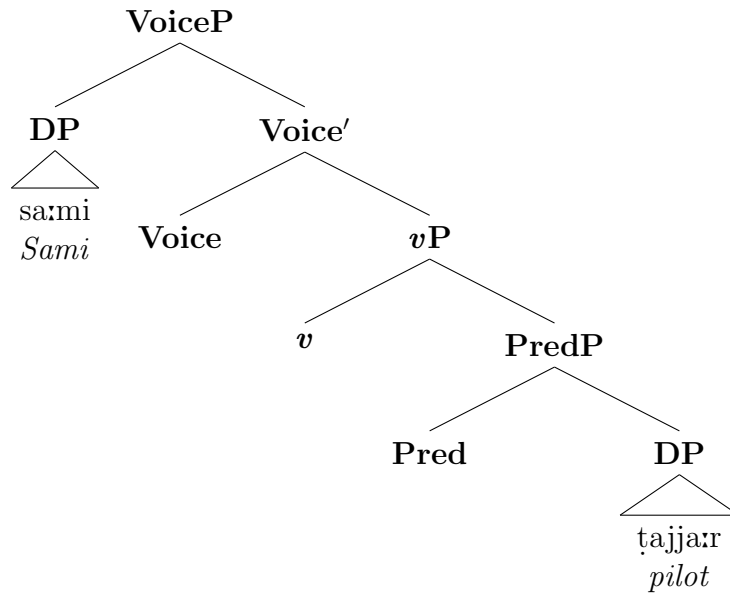
Finally, I assume Hazout's (2004) and Williams's (1994) account for existential construc-
tions in that they involve a small clause as the complement of v with an expletive element
in the specifier of that small clause. Consider the following example and its structure.

(1.26)   a. fiːh   maṭar

             EXPL   rain

             'There is rain.'

b.

```
                VoiceP
               /      \
          Voice        vP
                      /   \
                     v     PredP
                          /     \
                      fiːh       Pred′
                      EXPL      /     \
                             Pred      DP
                                      /\
                                   maṭar
                                    rain
```
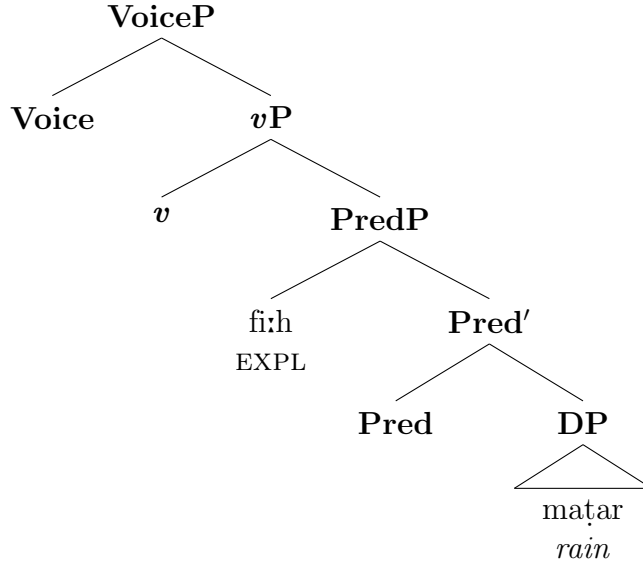
This concludes the discussion of argument structure and of the syntactic component of the grammar. To summarize, sets of formal syntactic features are combined by the syntactic operation Merge. This operation applies recursively allowing the building of more syntactic elements in a hierarchical structure. Moreover, other syntactic features specified on heads determine the size and content of the projection of each head, which, in other words, act as constraining influences on the heads. When there is no further syntactic computation within a phase, the output of the syntax serves as the input for the other two components of the grammar, PF and LF. The specific operations associated with these two representations are given in the consecutive subsections.

1.2.2 Morphophonology

The purpose of the morphophonological component of the grammar is to realize the abstract features that have been put together in a hierarchical structure by syntax. This representation is external in the sense that the operations that take place within this side of the grammar are relevant to the language-external systems, namely sensory-motor systems. In this work, I take as background the system outlined in Embick (2010) for *Vocabulary Insertion*. The discussion developed in this work does not rely on the assumptions about other

post-syntactic operations such as Impoverishment, Morphological Metathesis, or other oper-
ations that are tangential to explaining the primary data under investigation, and, therefore,
I will lay aside the discussion of these issues in this section[5].

Vocabulary Insertion is the process by which the abstract hierarchical structure built by
the syntax is converted into a linear string of sounds. This system holds that no phono-
logical information is present in the syntactic component of the grammar; it is only when
the terminal nodes are spelled out that the PF component can access the underlying mor-
phophonological forms of these terminal nodes, known as *Vocabulary Items*. Vocabulary
Insertion, as described in Embick (2010), involves a series of stages. To begin, consider the
following structure (from Embick, 2010, p.33).

(1.27)

```
              VP
            /    \
          V       DP
         eat     /   \
               D       NP
              the       |
                        N
                       cake
```
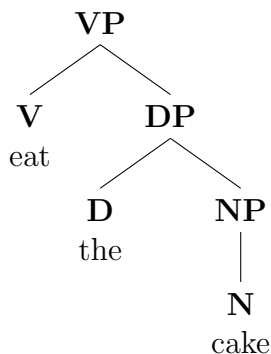
After the structure in (1.27) is transferred from syntax, Embick argues that the PF
system has the terminal nodes undergo a linear precedence procedure, which retains syntactic
bracketing. Embick uses the '*' notation, read as *to the left-adjacent to* to indicate how the
PF system encodes this information[6]. To illustrate, the structure in (1.27) is precedence-
linearized as shown in (1.28).

---

[5]For discussion of these issues, see Bobaljik (2000, 2012); Embick (2010); Embick and Noyer (2001); Halle
and Marantz (1993); Ritter and Harley (1998) to name a few.

[6]An alternative approach proposed by Kayne (2011) argues that linear precedence, as delineated in Embick
(2010), is encoded in the syntax as a part of Merge. That is, two syntactic elements combined via Merge are
automatically an ordered set $< \alpha, \beta >$, and not as discussed above where Merge yields an unordered pair
α, β. Immediate linear precedence follows naturally as a consequence of this proposal.

(1.28)   a. (V * DP)

b. (V * (D * NP))

c. (V * (D * (N)))

Once terminal nodes are linearized, they, then, undergo concatenation, annotated with the binary operator '⌢', as illustrated in (1.29):

(1.29)   a. V⌢D

b. D⌢N

Finally, these concatenated elements are, using Embick's term, *chained* into a single linear statement, notated with a hyphen as shown below.

(1.30)   V-D-N

One of the basic assumptions of the framework of Distributed Morphology is that functional elements, including category-defining heads, are deprived of any phonological content (Arad, 2006; Marantz, 1995, 1997); Embick (2010) argues that they are supplied with the phonological content at the concatenation stage, as shown in (1.29) above. This Late Insertion hypothesis makes reliable predictions about conditioned allomorphy. Consider, as a first case, the root $\sqrt{\text{MARRY}}$. The simple nominal form is *marriage* because the application of the affix -*age* is triggered by the identity of the root. Hence, in the context of a root such as $\sqrt{\text{MARRY}}$, it applies, but not in the context of a root like $\sqrt{\text{DISTRUCT}}$. The derivation of *marriage* is given in (1.31) (adopted from Wood, 2015, p.19).

(1.31)   a.

b. $\sqrt{\text{MARRY}}$⌢n   (Concatenation)

c. $\sqrt{\text{MARRY}}$⌢[n, -age]   (Vocabulary Insertion)

The second case involves an operation which Embick (2010) names *pruning*, which is basically the notion that the morphophonological form of a functional head can be sensitive to the identity of the root only if the former is adjacent to the latter, shown schematically in (1.32) (taken from Embick, 2010, p.59).

(1.32) <u>Pruning Schema</u>

$\sqrt{\text{ROOT}}^\frown [\text{x, -}\varnothing], [\text{x, -}\varnothing]^\frown \text{Y} \longrightarrow \sqrt{\text{ROOT}}^\frown \text{Y}$

To illustrate the effect of (1.32), consider the past tense forms of the verbs *hit* and *tolerate*. As pointed out in Embick (2010), the distribution of the null allomorph as the verbalizer in the structure of the verb *hit* is idiosyncratic to a list of roots. The verb *tolerate*, on the other hand, is a composition of the root $\sqrt{\text{TOLER}}$ and the verbalizing affix *-ate*. Establishing that, Embick argues that the reason the past form of the verb *hit* is *hit*, and not **hitted*, is that at the concatenation stage, the v head is pruned because it is null, and the T_{PAST} is concatenated with the root directly, allowing the conditioning of a special allomorph of T_{PAST}. By contrast, the verbalizing allomorph *-ate* in *tolerate* is inserted in the v head, which intervenes between the concatenation of T_{PAST} with the root. The insertion of the overt allomorph *-ate* consequently prevents pruning the v head, which further prevents conditioning a special allomorph of T_{PAST}, yielding T_{PAST} to receive the elsewhere allomorph *-ed* (i.e. *tolerated*).

Before concluding the discussion of the PF component, I will briefly make explicit the assumption about how the realization mechanism takes place. As the previous example showed, the T_{PAST} can be realized by different exponents, which raises the question of how vocabulary items are selected. As shown in Embick (2010), there are two properties that determine the selection, stated in (1.33) (taken from Embick, 2010, p.32, his (5))

(1.33)   <u>Properties of Vocabulary Insertion</u>

      a. *Ordering:* Vocabulary items are ordered (according to specificity, in the normal case).

      b. *Uniqueness:* Only one vocabulary item may apply to a terminal node.

These two properties enforce a competition for realization such that a more specified vocabulary item wins out over less specified ones.

Furthermore, in cases where distinct sets of formal features are phonologically realized by the same exponent, a phenomenon known as syncretism (Embick, 2015; Harley, 2015), Halle (2000) proposes that the encoding of syncretic patterns takes place via underspecification, stated as the Subset Principle (Halle, 2000, p.123).

(1.34)   <u>Subset Principle</u>

The phonological exponent of a Vocabulary item is inserted into a morpheme in the terminal string if the item matches all or a subset of the grammatical features specified in the terminal morpheme. Insertion does not take place if the Vocabulary item contains features not present in the morpheme. Where several Vocabulary items meet the conditions for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen.

This concludes the discussion of the morphophonological component of grammar. In the next subsection, I introduce the main assumptions about the interpretive device, the semantics.

1.2.3   Semantics

The semantic component is responsible for supplying the hierarchical structure produced by syntax with the appropriate interpretation. Following Myler (2016) and Wood (2015), I will assume the view that the translation of the formal syntactic features into a semantic

representation is mediated by form of Late Insertion that occurs at the LF side. What is attained from adopting this position is that the appropriate semantic interpretation of a given terminal node can be idiosyncratic to the surrounding structure, a situation that is termed *conditioned allosemy* in Myler (2016). Like the other two components, the semantic component involves various compositional operations that apply to combine the terminal nodes. The four compositional rules are Functional Application, Event Identification, Function Composition, and Predicate Conjunction. I will first describe each of these rules and their applications, and then discuss the denotations of certain syntactic heads.

First, Functional Application applies when an element is found within the domain of a function. Formally, Functional Application is defined by Heim and Kratzer (1998, p.44) as follows.

(1.35)   Functional Application

If α is a branching node, $\{\beta, \gamma\}$ is the set of α's daughters, and $[\![\beta]\!]$ is a function whose domain contains $[\![\gamma]\!]$, then $[\![\alpha]\!] = [\![\beta]\!]([\![\gamma]\!])$.

To illustrate the effect of Functional Application with a simple example from Kratzer (1996), the denotation for T_{PAST} is as such (taken from Kratzer, 1996, p. 125):

(1.36) $[\![T_{PAST}]\!] = \lambda P_{<s,t>} \exists e_s.\ P(e) \wedge past(e)$

Note that domain of the lambda operator must be any expression from events to truth values. If T_{PAST} c-selects for a VoiceP complement, which is a set of events, then VoiceP can serve as the argument for the lambda operator in (1.36), and Functional Application applies.

The next compositional rule is Event Identification, which applies when a function from individuals to a set of events combines with a set of events. The result of its application

yields a function from individuals to the adjunction of the two events. It is formally defined by Kratzer (1996, p.122) as follows.

(1.37) Event Identification

If α is a branching node, $\{\beta, \gamma\}$ is the set of α's daughters, where $[\![\beta]\!]$ is in $D_{<e,<s,t>>}$ and $[\![\gamma]\!]$ is in $D_{<s,t>}$, then $[\![\alpha]\!] = \lambda x_e.\lambda e_s.[\![\beta]\!](x)(e) \wedge [\![\gamma]\!](e)$.

The semantic contribution of Event Identification allows us to combine argument-introducing heads with their complements. The significance of Kratzer's (1996) account lies in the proposal that the agent argument is introduced by Voice. For example, consider the semantic denotation of Voice when composed with the denotation of its VP complement *feed the dog* (taken from Kratzer, 1996, p.121).

(1.38) a. $[\![$ Voice $]\!] = \lambda x_e \, \lambda e_s. \, \text{AGENT}(x,e)$

b. $[\![$ VP $]\!] = \lambda e_s. \, \text{feed(the dog, e)}$

The VP has the type $<s, t>$ and Voice has the type $<e, <s, t>>$, and by the structural description of Event Identification, they can compose yielding the result in (1.39).

(1.39) $\lambda x_e \lambda e_s. \, \text{AGENT}(x,e) \wedge \text{feed(the dog, e)}$

The next rule, Predicate Conjunction, takes two predicates of the same type and conjoins them. It is formally defined as follows (taken from Wood, 2015, p.23).

(1.40) Predicate Composition

If α is a branching node, $\{\beta, \gamma\}$ is the set of α's daughters, and $[\![\beta]\!]$ and $[\![\gamma]\!]$ are both in D_f, f a semantic type which takes n arguments, then $[\![\alpha]\!] = \lambda(a_1, \ldots a_n) \, . \, [\![\beta]\!](a_1, \ldots a_n) \wedge [\![\gamma]\!] \, (a_1, \ldots a_n)$.

Pylkkänen's (2008) analysis of depictives, such as *Sue saw Peter tired*, where *tired* can be depictive of *Sue*—subject depictive—or of *Peter*—object depictive, employs this rule

to combine them with verbal projection that has the same semantic type as depictives, $<e,<s,t>>$. The subject depictive phrase composes with an intermediate projection of Voice and the object depictive phrase with an intermediate projection of V.

The final compositional rule is Function Composition, which applies when the output of a function provides an input for another function. A formal definition is given below (taken form Wood, 2015, p.26).

(1.41)   <u>Function Composition</u>

If α is a branching node, $\{\beta, \gamma\}$ is the set of α's daughters, where $[\![\beta]\!]$ is in $D_{<b,c>}$ and $[\![\gamma]\!]$ is in $D_{<a,b>}$, then $[\![\alpha]\!] = \lambda(x_a) . [\![\beta([\![\gamma(x)]\!])]\!]$.

Following Wood (2015), I assume that this rule applies only when all other rules fail to apply. Wood illustrates the application of this rule with the following pair of sentences (2015, p.26).

(1.42)   a. John broke Mary out of jail.

b. John broke out of jail.

As shown in Wood (2015), the complement of the verb *break* in both sentences in (1.42) denote a set of states. In (1.42a), the causative verb combines with the complement *Mary out of jail* via Functional Application. In (1.42b), however, the complement is an unsaturated predicate, and it combines with the verb via Function Composition.

This completes the compositional rules that operate within the LF side of the grammar. They can be summarized informally as follows (from Wood, 2015, p.27):

(1.43)   a. **Functional Application** applies when the sister of A is the type A is looking for.

b. **Event Identification** applies when the sister of A is one argument away from being the same type as A.

40

c. **Predicate Composition** applies when the sister of A is the same type as A.

d. **Function Composition** applies when the sister of A is one argument away from being the type A is looking for.

I now turn to the basic assumptions about the semantic denotations of some syntactic heads. I will begin with the semantic denotations of the v head. Following Myler (2016), I assume that there are two interpretive characterizations of v: substantive v, and copula v. The interpretive characterizations of substantive v are further classified into three basic allosemes, shown in (1.44) (adopted from Wood, 2015, p.28).

(1.44)   a. $[\![\,v\,]\!] \leftrightarrow \lambda e_s.$ activity(e)

        b. $[\![\,v\,]\!] \leftrightarrow \lambda e_s.$ state(e)

        c. $[\![\,v\,]\!] \leftrightarrow \lambda P_{<s,t>}\ \lambda e_s\ \exists e'_s.$ activity(e) $\wedge$CAUS(e, e') $\wedge$ P(e') / ____ (eventuality)

Much like Vocabulary Insertion, the allosemes in (1.44) participate in a competition. The choice among the first two allosemes is determined by the lexical semantics of the root and as long as the structural description of the the more specified alloseme in (1.44c) is not met. Moreover, (1.44c) is a causative alloseme, which, as argued in Marantz (2009a,b), is selected just in case the complement of v denotes an eventuality.

The copula v, on the other hand, does not exhibit variation in its interpretation, and following Partee (1999) and Roy (2013), I take its semantic contribution to the thematic interpretation to be virtually nothing. Hence, I assume Myler's (2016) denotation for the copula v, given in (1.45), which simply indicates that the copula v is a type-neutral identity.

(1.45) $[\![\,v\,]\!] \leftrightarrow \lambda x\ .\ x$

Next, the interpretation of the Voice head is dependent upon the eventuality of its complement. That is, if the complement of Voice denotes a set of dynamic events, then Voice

maps that set onto an agentive external argument that is projected in the specifier, and if the complement denotes a set of states, then Voice relate that set to a holder external argument (Kratzer, 1996). Moreover, if the complement is not a predicate of eventualities that would conceptually trigger the projection of an external argument, then Voice is interpreted as an *expletive Voice* (Schäfer, 2008). These three denotations of Voice are given in (1.46) (taken from Wood, 2015, p.30).

(1.46) a. $[\![$ Voice $]\!] \leftrightarrow \lambda x_e \, \lambda e_s$. AGENT$(x,e)/$ ＿＿ (agentive, dynamic event)

   b. $[\![$ Voice $]\!] \leftrightarrow \lambda x_e \, \lambda e_s$. HOLDER$(x,e)/$ ＿＿ (stative event)

   c. $[\![$ Voice $]\!] \leftrightarrow \lambda P_{<s,t>}$. P$/$ ＿＿ (elsewhere)

I turn now to the semantics of the Pred head, which manifests sensitivity to the stage level/individual level distinction. This sensitivity can show its effect by deriving different structures for the two levels of the Pred head (Citko, 2008). Hence, the semantic denotation assigned to the Pred head, as argued in Adger and Ramchand (2003), must reflect the interpretation as a stage level or an individual level, and, therefore, the Pred head has the following allosemes (from Myler, 2016, p.44, based on Balusu, 2014).

(1.47) a. $[\![$ Pred$_{stage}$ $]\!] \leftrightarrow \lambda P_{<e,t>}$. λx_e . λe_s. hold$(P,e) \wedge$ Holder(x,e)

   b. $[\![$ Pred$_{indiv}$ $]\!] \leftrightarrow \lambda x.x$

The difference between the allosemes in (1.47) is fundamentally that the individual-level Pred is an expletive head, in the sense that it does not introduce an eventuality variable as the stage-level Pred.

Finally, with respect to the semantics of existential constructions, I assume the systems developed in Francez (2007, 2009) along with Partee (1999). More specifically, Francez takes the core meaning of an existential sentence to be contributed by the pivot. In (1.48) (from Francez, 2007, p.74), the pivot is "*war*", and the meaning it conveys is such that a war

existed. However, modifying elements (or codas) such as *"in 1967"* in (1.48) introduce a contextual closure (time interval in this case) to the interpretation of the existential proposition.

(1.48)   There was a war in 1967.

To capture this discussion in a formal sense, the pivot is a second-order predicate, as represented in (1.49) below (from Francez, 2009, p.8). The variable τ stands for any simple type, $\mathbf{Q}$ for any relation between sets, which can be filled by a determiner, N for the denotation of the head noun, and finally P for the context set.

(1.49) $[\![$ There be NP $]\!] = [\![$ NP $]\!] = \lambda P_{<\tau,t>} \cdot [\mathbf{Q}_{<<\tau,t>,<<\tau,t>,t>>} (N_{\tau,t}, P)]$

For the purpose of this work, I will leave aside the element of context and the role of pragmatics[7]. What is important for the present work is the idea that no semantic contribution is made on the part of the expletive element or the copula, which leads to Partee's (1999) account for how the entity argument introduced by the N is existentially closed. This can be done by assigning a denotation to the determiner in the derivation, which, in effect, would existentially close only the variable corresponding to the nominal. In the context of possession, I will assume that D has the two allosemes in (1.50), the input of either of which is entirely free, but the wrong input will lead to interpretation failure. The difference between these two allosemes is that (1.50b) allows D to compose with relations whose possessors have been existentially closed.

(1.50) $[\![D]\!] = \begin{cases} \text{a.} & \lambda R_{<e<e<s,t>>>}.\lambda y_e.\lambda e_s.\exists x_e.R(y)(x)(e) \\ \\ \text{b.} & \lambda R_{<e<s,t>>}.\lambda e_s.\exists x_e.R(x)(e) \end{cases}$

This concludes the basic assumptions of the semantic component of the grammar, and also of the architectural system assumed in this work. In summary, syntax is assumed to be

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[7]If interested, the reader may check Francez's (2007; 2009; 2010) original work for a better understanding of how pragmatic determinism is accounted for in this system.

the only generative structure-building device, and PF and LF function as the interpretive interfaces that transform the formal features transferred from syntax to different representations usable by language-external systems. Following previous work, such as Halle and Marantz (1993), Marantz (1997, 2009a,b), Myler (2016), and Wood (2015), I have assumed that the process by which the abstract features are translated into different kinds of features takes a series of steps that involve competitions over insertion in both interpretive components.

1.3 A Brief Overview of Arabic Morpho-Syntax

In this section, I aim to provide a brief overview of Arabic morpho-syntax. The purpose of this section is primarily to give the reader the background that I feel to be necessary to understand the Arabic data shown in the subsequent chapters. What I hope to accomplish from this review is generally to show where Arabic lies on two dimensions: syntax and morphology.

1.3.1 Roots and Patters

Arabic, from a morphological vantage point, is generally a non-concatenative language, in which roots, tri/quad-consonantal, are the lexical kernels that undergo syntactic computation and are inserted into morphological templates (McCarthy, 1981; McCarthy and Prince, 1990; Watson, 2002). Roots on their own are bound and cannot be pronounced. They, nonetheless, carry the lexical semantic representation that allows their interpretation in different environments. Consider, for example, the different representations associated with the Arabic root $\sqrt{\text{ktb}}$ in (1.51).

(1.51)   Some Realizations of the root $\sqrt{\text{ktb}}$

      a. katab   'to write'

      b. kɪtaːbah   'writing'

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    c. kɪtaːb   'book'

    d. kaːtɪb   'writer'

    e. maktabah 'library'

    f. maktab   'office'

Note that the words in (1.51) share a component of interpretation that is ascribable to the inherent meaning of $\sqrt{\text{ktb}}$. The precise meaning of root-derived words is, however, determined relative to some syntactic and phonological factors (Arad, 2006; Embick, 2015; Marantz, 1995, 1997).

Moreover, work on the locality domain of idiosyncratic meaning of roots, such as that established by Marantz (2001), has demonstrated that the boundary for the domain of special meanings is defined by certain heads in a give syntactic structure (e.g. the head introducing the agent argument in a verbal environment (Marantz, 2001)). Heads beyond this boundary cannot negotiate a special interpretation of the root. Likewise, Arad (2003, 2006) argues, for a similar state of affairs in Hebrew, that roots can, but do not have to, be assigned multiple meanings depending on the hosting environment, a phenomenon termed Multiple Contextualized Meaning (MCM). This phenomenon manifests itself in phonologically and semantically related words that "do not arise derivationally from other words but are instead independently derived from the root itself" (2006, p.15). This notion checks out for Arabic as will. To illustrate, consider the multiple meanings assigned to the Arabic root $\sqrt{\text{qbl}}$ in (1.52)

(1.52)   Arabic Verb Patterns for $\sqrt{\text{qbl}}$

FORM	SHAPE	MEANING
I	$C_1aC_2\text{ɪ}C_3$	'to accept/to admit'
II	$C_1aC_2C_2aC_3$	'to kiss/to sublet'

Arad, following Marantz (2001), highlights the locality constraint imposed on MCM such that the property of assigning multiple meanings is reserved for roots only; the meaning assigned to a root is fixed within the domain of the immediate category-defining head [8].

With respect to morphological patters, verb formation in Arabic is predicated on whether the root is tri-consonantal or quad-consonantal, for each of which there is a limited set of patterns. Some patterns within each group can be organized into alternating pairs[9]. Each verb pattern conveys certain syntacticosemantic (synsem) content that may overlap with those of different templates but, more importantly, never with that of its alternant. For example, while Form I is the causative alternant of Form VII, it is also the anticausative alternant of Form II in verbs where causation is absent in Form I (Ryding, 2005; Wright, 1875). To illustrate, consider the data in (1.53).

(1.53)   a. <u>Causative-Anticausative Alternation</u>

       i. <u>Form I</u>   ii. <u>Form IV</u>

          maːt   'to die'   mawwat   'to cause to die'

    b. <u>Active-Non-Active Alternation</u>

       i. <u>Form I</u>   ii. <u>Form VII</u>

          sadd   'to clog / to block'   msadd   'to (be) clog(ged)/block(ed)'

Note that Form VII in (1.53) can be interpreted as passive or unaccusative; contexts determine the appropriate interpretation.

While Arabic verbs are reduced to a finite set of skeletal patterns and are never expressed independently of the Arabic template system, nouns and adjectives that are not derivationally derived manifest a higher degree of morphological flexibility. Hence, as far as templatic

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[8]Harley (2014) argues against this claim that the meaning of a root is interpreted exclusively within the first phase. Providing counter-examples from English (*hospital*:*hospitality*, *editor*:*editorial*), Harley argues that the domain for root meaning assignment can be stretched to include higher category-defining heads.

[9]For a detailed description, see Ryding (2005) or Wright (1875).

morphology goes, nouns and adjectives in Arabic (and Hebrew as noted by Arad (2006)) are open categories while verbs are not. Consider for example the case of borrowings that are fully integrated into Arabic. Borrowings that are expressed as verbs in Arabic are very rare because the language imposes a constraint on borrowings that admits only those that can be expressed according to the Arabic verbal template system. Nouns and adjectives do not undergo such a constrain, accounting for their abundance in Arabic.

1.3.2 On the Data

The primary data for this work comes from the Saudi dialect of Arabic. It is however necessary to point out that although *Saudi Arabic* may sometimes be used as a cover term for the different varieties of Arabic spoken in Saudi Arabia, including Hijazi and Najdi; the socioeconomic changes that have impacted the Saudi society since the establishment of the country have created a new national identity independent of historical group identities or social or cultural affiliations (Toufik, 1985). These drastic socioeconomic and political changes have resulted in the emergence of a national shared variety, "*Koiné*", as described by Al-Rojaie (2020). The variety of Arabic used in the data presented here will be the Koiné variety of Saudi Arabic, and throughout this work, I will refer to this variety as Saudi Arabic (SA for short).

1.4 Structure of this Dissertation

The following chapters are structured in the following way. In Chapter 2, I provide a review of the generative literature on the syntax and semantics of predicative possession, and how my own approach to Arabic possession relates to earlier ones. Chapter 3 makes up the theoretical core of the dissertation. In light of the guiding assumptions developed in section 1.2 above, I present a detailed analysis of Arabic predicative possession and substantiate the claims made above that predicative possession in Arabic takes on different syntactic structures that cannot be related by movement. Chapter 4 moves away from predicative

possession and towards attributive possession. It discusses some of the semantic consequences related to some of the conclusions established in the previous chapter. Mainly, this chapter sheds light on the semantic differences between *li*-marked attributive possession and the predicative possession derived from it. Chapter 5 contextualizes my approach to predicative possession in Arabic within the broader literature, specifically that which is summarized in Chapter 2. This chapter presents some data that, although poses a challenge to some earlier analyses that attempted to reduce possession to a single structure, supports the line of research that argues for a multiplicity of structures. Finally, Chapter 6 summarizes the main arguments and concludes the dissertation.

CHAPTER 2. PRIMARY LITERATURE ON PREDICATIVE POSSESSION

A cursory glance at the literature on predicative possession constructions can quickly reveal that the seeming arbitrariness and structural intricacy of the phenomenon in question can be reduced to what Myler (2016) designates as the *too-many-meanings* puzzle and the *too-many-(surface)-structures* puzzle. Categorizing possession as such stems from the fact that cross-linguistically the syntactic structure mediating the archetypal possessive meanings for ownership, for example, can also be employed to express other meanings of possession, and, likewise, expressing possessions in any given language can be mediated by multiple syntactic structure. Consider the sentences in (2.1) for the *too-many-meanings* puzzle and (2.2) for the *too-many-(surface)-structures* puzzle.

(2.1)   Too-Many-Meaning (Myler, 2016, p.3)

    a.   John has a Playstation 3.   (Ownership)

    b.   John has a sister.   (Kinship)

    c.   John has blue eyes.   (Body Part)

    d.   This table has four sturdy legs.   (Part-Whole)

    e.   John has a cold.   (Disease)

    f.   John has a great deal of resilience.   (Attribute)

(2.2)   Too-Many-Structure (Myler, 2016, p.5)

    a.   I have a book.

    b.   Ég   er   með   bók.   (Icelandic)

            I   am   with   book.ACC

'I have a book.'

c.   Noqa   libru-yoq   ka-ni.   (Cochabamba Quechua)

     I   book-YOQ[1]   be-1SUBJ

'I have a book.'

d.   u   menja   est'   kniga.   (Russian)

     at   me.GEN be_{exist}3SUBJ   book

'I have a book.'

e.   Nekem   van   könyvem.   (Hungarian)

     I.DAT be_{exist}3SUBJ   book.3POSS.NOM

'I have a book.'

Note that in (2.1), one lexical item, *have*, is used to express six possessive relations. Similarly, the possessive relation for ownership in (2.2) surfaces in diverse structures in different languages despite their identical meanings.

My goal in this chapter is to summarize previous approaches to the two puzzles above. I do not seek to provide a comprehensive and systematic overview of predicative possession as the literature on it is very rich and diverse, and it can be interconnected at different parts of its constituents. Its complexity goes far beyond the scope of this chapter to do it justice. Instead, I will pick and choose from among many established generative proposals that would play a major role in understanding the intuition implemented in reaching the conclusion of the argument presented in this work. Further, this chapter is also intended to help the reader understand how my proposal relates to those of others.

The following discussion is divided into sections. Section (2.1) concentrates on the generative solutions to the too-many-structures puzzle exemplified in (2.2). In the first half of

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[1]Myler (2016) argues that -YOQ is a nominal suffix attached to the possessee in a possession construction. In Chapter 6 of his book, he shows that -YOQ converts possessees into predicate nominals.

this section, I discuss the two high-impact proposals by Freeze (1992) and Kayne (1993), building on earlier work by Szabolcsi (1981, 1983). The Freeze-Kayne approach to possession has been a source of inspiration for many subsequent analyses on the topic. The second half of the section is devoted to discussing the approach advanced by Boneh and Sichel (2010), and later defended by Myler (2016), which rejects the Freeze-Kayne reductionist solution to the puzzle. In section (2.2), I discuss the semantic literature on possession sentences. I focus primarily on Partee (1999) and Beavers et al. (2008), arguing that the semantics of possession is contributed by either the noun root if the noun is relational (as opposed to sortal, a distinction that would be made clear in the introduction of section (2.2)) or a dedicated possession-introducing head.

2.1   Syntactic Accounts

Within the generative framework, tackling the question of why clausal possession surfaces differently within and across languages has taken as a starting point the idea that the theory of Theta-role assignment must be respected at all costs, and, hence, any proposed analysis was to be approached by reducing the different syntactic structures for predicative possession to the minimum underlying structures possible, in conformity with the Uniformity of Theta Assignment Hypothesis (UTAH), stated in (2.3).

(2.3)   The Uniformity of Theta Assignment Hypothesis (UTAH) (Baker, 1988, p.46)
        Identical thematic relationships between items are represented by identical structural
        relationships between those items at the level of D-structure.

It is a minimalist goal to establish a theory of grammar that can optimally assimilate distinct surface representations to the fewest possible structures. This has indeed been the standard assumption, albeit mostly implicit, that underpins theorizing in generative thinking. Accordingly, various attempts have been made to unify analyses of possession and other syntactic constructions and find potential correlations between the syntax of possession and

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that of other properties of language, most notably, Freeze (1992) and Kayne (1993), both of which drew much of their inspiration from work by Szabolcsi (1981, 1983); namely, movement derives different surface structures for possessors, and possessors can be found embedded within a possessed DP. The common ambitious theme in Freeze and Kayne was to reduce different syntactic (surface) structures of possession to one underlying structure. Freeze and Kayne independently have had a considerable influence on a number of subsequent proposals (see for example Mahajan (1994), Hoekstra (1994), Harley (2002), and Ruvalcaba (2018) to name a few), specifically their claim that the structure of HAVE involves an incorporation of adpositional element into BE. The mechanism of such incorporation will be discussed below.

However, a good theory of syntax is one that aims to furnish an adequate description for all languages, and the theory needs to be reshaped as new, yet contrary, evidence comes to light. However tempting it may be to maintain the Freeze-Kayne tradition for its simplicity and parsimony, its failure at explaining the complexity of possession constructions as manifested cross-linguistically makes the departure from it and the conformity to the Theory of Theta-role assignment an attractive outcome. Accordingly, Boneh and Sichel (2010) argue that distinct possession sentences need not be assimilated into one if empirical evidence suggests otherwise. This view is later defended in Myler (2016). This radical alternative approach was the result of realizing that languages form their predicative possession differently and in ways that ultimately defy the reductionist analyses previously put forth. The acknowledgement of the multiplicity of possessive constructions has recently opened up a line of research with the prospect of properly accounting for languages that had been unaccommodated under earlier approaches.

The goal of this section is to summarize the empirical and conceptual arguments of the works just referenced above. In subsection (2.1.1), I briefly go over major proponents for the reductionist approach, namely Freeze (1992) and Kayne (1993). However, I begin the

subsection by laying out Szabolcsi's (1981; 1983) insights not only because they impact Freeze's and Kayne's accounts, but also because some of them prove applicable in part to my proposal in Chapter 3. In subsection (2.1.2), I highlight arguments for the multiple-possessives approach from the opposite end, particularly those by Boneh and Sichel (2010) and Myler (2016).

2.1.1 Reductionist Approaches

When browsing the previous literature on possession, one cannot deny the overwhelming tendency to unify analyses of possession or derive it from other properties of language. Despite this rich body of research, I concentrate primarily on the proposals put forth by Freeze (1992) and Kayne (1993). These two accounts share the same ambitious theme of reducing different syntactic structures to one underlying structure. However, because the core of both analyses is predicated on Szabolcsi's (1981; 1983) work, I believe Szabolcsi's work deserves special mention here as an antecedent of the work influenced by it.

2.1.1.1 Szabolcsi (1981; 1983; 1994)

One of the highlights in Szabolcsi (1981, 1983) is the discussion of the parallelism between the structure of DPs and that of IPs in Hungarian with respect to agreement and case-assignment; Szabolcsi claims that DPs are sentence-like in that they involve (i) an inflectional domain and (ii) a left-peripheral domain. The evidence for this claim comes from observing the case-marking of the possessor in two possessive constructions. Consider the first construction (from Szabolcsi, 1981, p.263).

(2.4)   a.   az   én-ϕ kar-ja-i-m

              the   I-NOM   arm-POSS-PL-1PL

              'my arms.'

b.   az   te-ϕ kar-ja-i-d

      the   you-NOM   arm-POSS-PL-2SG

      'thy arms.'

c.   (a)   Péter-ϕ kar-ja-i-ϕ

      the   Peter-NOM   arm-POSS-PL-3SG

      'Peter's arms.'

There are two points to note from this set of data that would show the contrast between this construction and the one that follows. First, the possessor appears to the right of the definite article; and second, it is Case-marked as nominative. This construction alternates with another one, illustrated in (2.5) (from Szabolcsi, 1981, p.265). In this construction, the possessor appears to the left of the definite article and is marked with dative case.

(2.5)   a.   én-nek-e-m   a   kar-ja-i-m

            I-DAT-POSS-1SG   the   arm-POSS-PL-1PL

            'my arms.'

       b.   te-nek-e-d   a   kar-ja-i-d

            you-DAT-POSS-2SG   the   arm-POSS-PL-2SG

            'thy arms.'

       c.   Péter-nek   a   kar-ja-i-ϕ

            Peter-DAT   the   arm-POSS-PL-3SG

            'Peter's arms.'

Szabolcsi's (1981; 1983) account for this contrast is that in Hungarian DP, there is an A-position below the D node, where the possessor is introduced and is associated with nominative Case. The possessor can move outside this argument domain to spec-DP, an A-bar position, associated with dative Case. Szabolcsi provides two independent pieces of

evidence for this analysis. The first comes from the fact that possessor *wh*-operators in Hungarian must be dative and must precede the definite article. This is illustrated as such (from Szabolcsi, 1981, p.268).

(2.6)   a.   * (a)   ki-ϕ kar-ja-ϕ

           the   who-NOM   arm-POSS-3SG

           'whose arm'

   b.   ki-nek   a   kar-ja-ϕ

           who-DAT   the   arm-POSS-3SG

           'whose arm'

The second piece of evidence stems from the fact that nominative-marked and dative-marked possessors differ in terms of their mobility; that is, dative-marked possessors can be reordered with the possessed DP and also extracted from it while nominative-marked possessors cannot. To illustrate, consider the following examples (from Szabolcsi, 1981, p.264 & 265).

(2.7)   a.   * Péter-ϕ_i hosszú-ak   [(a) t_i kar-ja-i-ϕ-ϕ]

           Peter-NOM   long-PL   the   arm-POSS-PL-3SG-NOM

           'It is Peter whose arms are long.'

   b.   Péter-nek$_i$ hosszú-ak   [(a) t_i kar-ja-i-ϕ-ϕ]

           Peter-DAT   long-PL   the   arm-POSS-PL-3SG-NOM

           'It is Peter whose arms are long.'

Szabolcsi then shows how these facts about case marking are reflected in predicative possession in Hungarian. This is illustrated with the following data (based on Szabolcsi, 1981, her (43) and (9c) respectively), which Szabolcsi also uses to point out the striking similarity between predicative and attributive possession.

(2.8) a. Péter-nek   van   kar-ja-ϕ

           Peter-DAT   BE   arm-POSS-3SG

           'Peter has an arm.'

       b. Péter-nek   a   kar-ja-ϕ

           Peter-DAT   the   arm-POSS-3SG

           'Peter's arm.'

Observe that the possessor in (2.8) carries dative Case and that the possessee is marked with possessive morphology. Szabolcsi argues that the presence of the possessive morphology makes dubious the notion that *Péter* and *kar* in (2.8a) are separate arguments of *van*; she states "agreement [in person and number] between co-arguments seems unattested in human language" (1981, p.276) [2].She then proposes that Hungarian predicative possession formation involves a possessed DP, from which the possessor is extracted.

Szabolcsi (1981) admits that the idea of possessor extraction faces an empirical challenge, which is that predicative possession requires extracting the possessor in Hungarian. In the examples given in (2.9) (based on Szabolcsi, 1981, p.276), the possessor and possessee remain as a single constituent in spite of different positions with respect to the predicate.

(2.9) a. hosszú   [(a)   Péter-ϕ kar-ja-ϕ]

           long   the   Peter-NOM   arm-POSS-3SG

       b. hosszú   [Péter-nek$_i$ a   t$_i$ kar-ja-ϕ]

           long   Peter-DAT   the   arm-POSS-3SG

---

[2]The inflectional morphology appearing on the possessee indicates agreement with the possessor. This is reflected in the data shown in (2.5c) above, repeated in (i), in which the possessee is inflected for number and also agrees with the possessor.

(i) Péter-nek   a   kar-ja-i-ϕ
    Peter-DAT   the   arm-POSS-PL-3SG

    'Peter's arms.'

'Peter's arm that's long.'

c.   [Péter-nek$_i$ a   t$_i$ kar-ja-ϕ]$_j$ hosszú   t$_j$

     Peter-DAT   the   arm-POSS-3SG   long

'It's Peter's arm that's long.'

By contrast, when the verb is *van*, it is not possible to maintain the possessor-possessee constituency when expressing a predicative possession, as illustrated below (based on Szabolcsi, 1981, p.277).

(2.10)   a.   * van   [(a)   Péter-ϕ kar-ja-ϕ]

           BE   the   Peter-NOM   arm-POSS-3SG

   b.   * van   [Péter-nek$_i$ a   t$_i$ kar-ja-ϕ]

           BE   Peter-DAT   the   arm-POSS-3SG

   c.   * [Péter-nek$_i$ a   t$_i$ kar-ja-ϕ]$_j$ van   t$_j$

           Peter-DAT   the   arm-POSS-3SG   BE

'Peter has an arm.'

Szabolcsi (1981) points out that although the obligatoriness of possessor extraction is unusual, it does not threaten the analysis wherein the possessor is first merged inside the possessed DP. This is because alternatively it is unlikely that the possessor and the possessee are two independent arguments of *van* that must agree with each other. In her (1994) paper, Szabolcsi claims that the obligatoriness of possessor extraction is triggered by the fact that a non-specific interpretation of the possessee is required. She observes that for Hungarian possessed DPs to be non-specific, they must have the possessor extracted; otherwise, they have a specific interpretation, as shown below (Szabolcsi, 1994, p.43).

(2.11)   a.   Nem   olvas-t-ad   [Chomsky-ϕ vers-é-ϕ-t]

           not   read-PAST-2SG   Chomsky-NOM   poem-POSS.3SG-ACC

'You haven't read Chomsky's poem.' (specific)

b.   Chomsky-nak$_i$ nem   olvas-t-ad   [t_i t_i vers-é-ϕ-t]

       Chomsky-DAT   not   read-PAST-2SG   poem-POSS.3SG-ACC

'You haven't read any poem of Chomsky's.'(non-specific)

This observation furnishes an explanation for why it is obligatory to extract the possessor in clausal possession in Hungarian, as shown below (from Szabolcsi, 1994, p.43).

(2.12)   Mari-nak$_i$ van-nak   [t_i t_i kalap-ja-i-ϕ]

         Mari-DAT   BE-3PL   hat-POSS.PL-3SG

         'Mari has hats.'

Szabolcsi proposes that possessor extraction is required to render the possessed DP non-specific. This is because Hungarian possession sentences are existential, and existential constructions require a non-specific complement. This idea is given in her generalization, understood as follows (from Szabolcsi, 1994, p.44).

(2.13)   The HAVE-sentence in Hungarian is an existential sentence with a [+Poss] nominative argument. Given that (1) the existential verb requires a nonspecific indefinite argument and (2) a [+Poss] DP has a non-specific indefinite interpretation only if its possessor is extracted, possessor extraction in the HAVE-sentence is obligatory.

In summary, Szabolcsi's (1981; 1983) proposal can be viewed as twofold: predicative possession can be built on top of a possessed DP, whose subject (the possessor) can be extracted and moved to a higher position within the possessed DP or away from it. This insight into Hungarian predicative possession not only forms the basis of the two papers discussed below, but also motivates one of the claims I make in Chapter 3 about Saudi Arabic predicative possession. In the remainder of this subsection, I discuss Freeze (1992) and Kayne (1993), whose proposals are an extension of Szabolcsi's (1981; 1983).

2.1.1.2 Freeze (1992)

Freeze's (1992) goal is to unify predicate locatives, existentials, and possessives (exemplified in (2.14) (taken from Freeze, 1992, p.553)) to one analysis, proposing that the D-structure underlying these sentences is as sketched in (2.15)

(2.14) a.   The book is on the bench.   (Predicate locative)

    b.   There is a book on the bench.   (Exhistential)

    c.   Lupe has a book.   (HAVE)

(2.15) Freeze's (1992) D-structure for locatives, existentials, and possessives
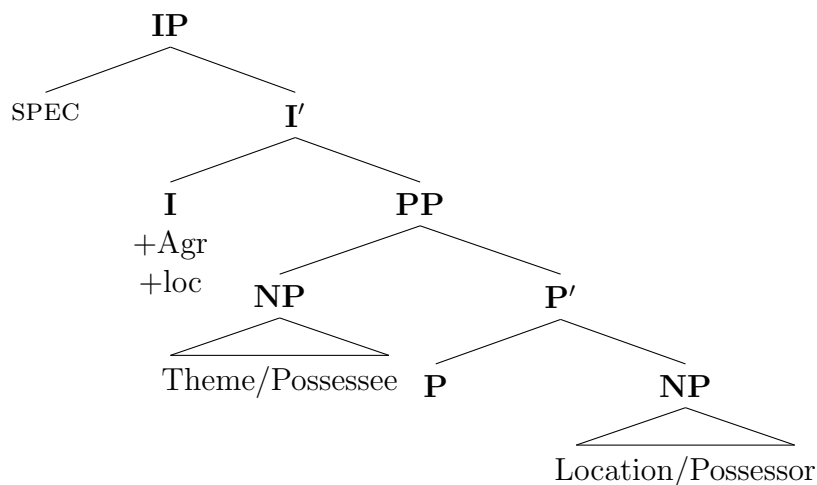
Observe that the argument structure for each of the sentences in (2.14) lies within the projection of P. Locatives and existentials are identified from each other by the element that moves to the specifier of IP. Locatives move the theme argument from the spec-PP to spec-IP, whereas in existentials, the P′ moves to spec-IP. Movement to spec-IP is determined by the definiteness rank. That is, if the theme is definite, it moves; otherwise, it is an existential structure. Possessives come in three forms (BE-possessives, HAVE-possessives, and WITH-possessives), and, Freeze (1992) argues, are more similar to existentials than to locatives. That is, in languages that use the copula in possessive constructions (BE-possessives) such

as Russian, illustrated in (2.16) (taken from Freeze, 1992, p.554), the Possessor-Possessee order mirrors the existential Location-Theme order with the only difference being the value of the feature HUMAN specified on the Location.

(2.16)   u   menja   byla   sestra.   (Russian)
         at   me.GEN   was   sister.NOM

         'I have a sister.'

Likewise, in languages that use HAVE-possessives, such as English, the Possessor corresponds to the Location and moves to the subject position. Further, the adposition (see the structure in (2.15)) incorporates into I and the complex head is spelled out as HAVE.

Finally, WITH-possessives, as illustrated by the Portuguese data in (2.17) (taken from Freeze, 1992, p.587), behave as HAVE-possessives and generally are subject to the same analysis. The only difference is that the incorporation of I and P is established by a process of reanalysis, the result of which suggests that the *está com*, not *com fome*, forms a constituent.

(2.17)   o   menino   está   com   fome.   (Portuguese)
         the   child   is   with   hunger

         'The child is hungry.'

In summary, Freeze's (1992) account is an attempt to unify Locatives, Existentials, and possessives under one analysis where they are derived from a single underlying structure. Under this analysis, the locative/existential copula is realized as either HAVE if it incorporates an adposition to it, or otherwise BE. Freeze's paradigm accounts for a wide range of languages, with marginal differences that can be reduced to parametric sensitivity to definiteness and animacy.

2.1.1.3 Kayne (1993)

Kayne (1993) is quite similar in spirit to Freeze (1992). Its primary goal is to unify the analyses for HAVE and BE under one that encompasses both the possessive and aspectual uses. Kayne argues that proper understanding of the auxiliary HAVE is predicated on the proper understanding of its function as the verbs in possession sentences. The analysis proposed relies in different aspects of its structure on Szabolcsi's (1981; 1983) account for Hungarian possessive constructions and Freeze's (1992) treatment of HAVE as an instance of BE, into which a prepositional head is incorporated. Kayne proposes the following D-structure for possession sentences (Kayne, 1993, p.7).

(2.18)   ... BE $[_{DP}$ SPEC D/P $[DP_{poss}$ [AGR QP/NP]]]

In languages like Hungarian, the element D/P (Prepositional Determiner), Kayne (1993) argues, is endowed with the ability to assign an oblique Case to the element in its specifier. However, in languages–like English–that lack this ability, Kayne claims that the possessor raises to the subject position. However, this movement is illicit due to Improper Movement since spec-D/P is an A-bar position, as argued in Szabolcsi (1981, 1983), but Kayne proposes that the movement is established via the incorporation of D/P into BE, allowing D/P to count as an A-position and resulting in the spelling out of the incorporated head as HAVE. By way of illustration, *John has three sisters* is given the following derivation (based on Kayne, 1993, p.7).

(2.19)   John$_i$ $\overset{\text{has}}{\text{D/P}_j\text{+BE}}$ $[_{DP}$ [e$_i$] $[_{D/P}$ e]$_j$ [[e$_i$] [AGR^0 three sisters]]]

Turning to the aspectual uses, Kayne's proposed structure is similar to the one given in (2.18) except that the Agr head in the aspectual uses is replaced with a verbal head, as shown in (2.20), taken from (Kayne, 1993, p.8).

(2.20)   ... BE $[_{DP}$ SPEC D/P $[VP_{subj}$ [V DP$_{obj}$]]]

Note that the subject position is below spec-D/P, just like the possessor in (2.18). Because the subject requires Case, movement across spec-D/P to an A-position would result in Improper Movement. However, Kayne's account for this constraint moving the subject is similar to the one proposed for moving the possessor; that is, D/P is incorporated into BE, giving rise to HAVE. To illustrate, consider the derivation proposed for *John has broken the window* (based on Kayne, 1993, p.8).

(2.21) John$_i$ $\overset{\text{has}}{\text{D/P}_j\text{+BE}}$ [$_{DP}$ [e$_i$] [$_{D/P}$ e]$_j$ [$_{VP}$[e$_i$] [$_V$ break [$_{DP}$ the window]]]]

In summary, the core of Kayne's proposal for the argument structure of predicative possession is that it is derived from attributive possession in the sense that the copula takes as complement a possessed DP with the possessor in the specifier. Kayne extends this analysis further to derive the aspectual uses of HAVE and BE from the same structure associated with possession. Similar to Freeze (1992), Kayne's treatment for HAVE involves incorporating an adposition into BE.

2.1.2 Multiple BE-Possessives

The theme of this section is that different languages may derive their predicative possession from multiple syntactic structures that are ultimately irreducible. This shift in the perspective on predicative possession can offer a better solution to the puzzle Myler (2016) dubbed too-many-(surface)-structures puzzle. In this section, I briefly summarize the main claims in two works in this line of thinking: Boneh and Sichel (2010) and Myler (2016).

2.1.2.1 Boneh and Sichel (2010)

Boneh and Sichel (2010), in light of evidence from Palestinian Arabic, offer an opposing account to the Freeze-Kayne approach. Their analysis assigns three different structures to the BE-possessive constructions. The first structure involves the copula taking a possessed DP as its complement, sketched in (2.22) (based on Boneh and Sichel, 2010, p.32). The

possessor is subsequently extracted from the possessed DP and realized as the sentential subject[3]. This structure hosts a wide range of inalienable possession.

(2.22)   Inalienable Possession

    a.   kaan   la-əš-šajara   ʕruʔ   ktar   (Boneh and Sichel, 2010, p.4)

        was.3SG.M to-the-three branches many

        'The tree had many branches.'

    b.
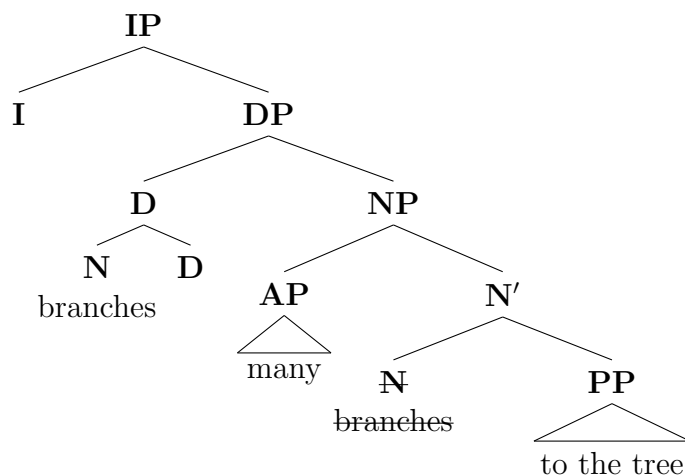
The second structure is Location, as dubbed by Boneh and Sichel (2010). This structure involves a small clause, headed by a Rel(ator), which takes a locative PP as its complement. An example of this construction is depicted in (2.23) (based on Boneh and Sichel, 2010, p.24).

(2.23)   Location

    a.   kaan   jamb   əṣ-ṣabra   wardaat   (Boneh and Sichel, 2010, p.4)

        was.3SG.M beside the-cactus   flowers

        'Beside the cactus were flowers.'

---

[3]I encourage the reader to read section 6 of Boneh and Sichel (2010) for in-depth analysis of how movement operations yield the surface word order in the examples provided here.

b.

```
              IP
           ／    ＼
          I        RelP
               ／      ＼
             DP          Rel′
            ╱△╲        ／    ＼
          flowers    Rel        PP
                              ╱△╲
                          beside the cactus
```
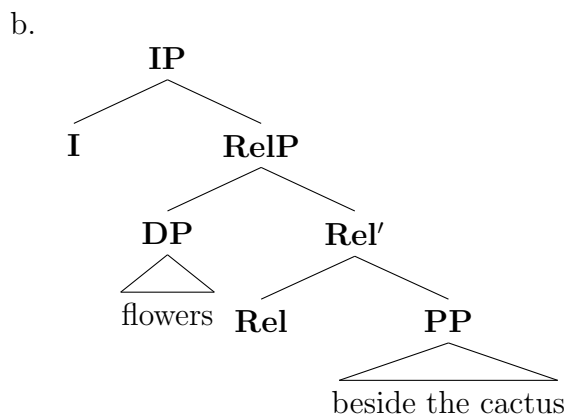
The evidence Boneh and Sichel (2010) provide for attributing different syntactic structures to inalienable possessions and location constructions in Palestinian Arabic is predicated on agreement patterns. Boneh and Sichel show that the agreement morphology on the verb is not required in existential constructions, but it is elsewhere. Boneh and Sichel, then, argue that, with regard to agreement patterns, Palestinian Arabic allies inalienable possessions with existentials and location constructions with predicate locatives. To illustrate, consider the examples in (2.24) and (2.25).

(2.24) Inalienable Possession Patterning with Existentials   (Boneh and Sichel, 2010, p.12)

    a.   kaan   xams   ʕruʔ   la-əš-šajara

           was.3SG.M   five   branches   to-the-tree

           'The tree had five branches.'

    b. ?? kaan-u   xams   ʕruʔ   la-əš-šajara

           were-3PL   five   branches   to-the-tree

           'The tree had five branches.'

(2.25) Location Structure Patterning with Locatives   (Boneh and Sichel, 2010, p.12)

    a. * kaan   tlat   ʕšuuš   ʕind   əš-šajara

           was.3SG.M   three   nests   at   the-tree

           'Three nests were near the tree.'

b.   kaan-u   tlat   ʕšuuš   ʕind   əš-šajara

        were-3PL   three   nests   at   the-tree

        'Three nests were near the tree.'

Boneh and Sichel argue that the agreement patterns illustrated in (2.24) and (2.25) suggest a distinction in the syntactic structure of inalienable possessions and that of location.

The third structure involves the copula taking ApplP as its complement, as illustrated in (2.26) (from Boneh and Sichel, 2010, p.26). Different possessive meanings (alienable possession and different classes of inalienable possession) can be conveyed via this structure.

(2.26)   <u>Alienable Possession</u>

        a.   ʕind   mona   tlat   ʔalaam   (Boneh and Sichel, 2010, p.27)

            at   Mona   three   pens

            'Mona has three pens.'

        b.
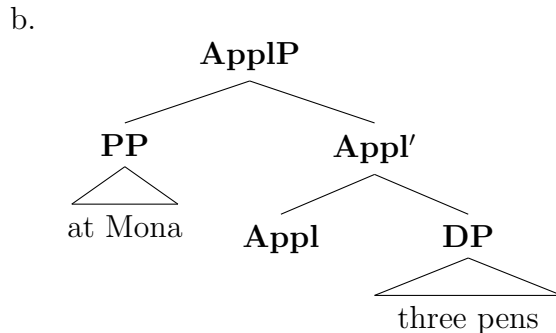
Boneh and Sichel provide evidence for why inalienable possessions, such as (2.22a), and alienable/inalianable possessions, as in (2.26a), cannot be derived from a single structure. The evidence stems from the fact that topicalizing the possessor in inalienable possessions is grammatically permissible, whereas topicalizing the possessor in alienable/inalianable possessions is not. Consider the data in (2.27) and (2.28) (taken from Boneh and Sichel, 2010, p.32–33)

(2.27) Topicalization in Inalienable Possessions

    a.   kaan   la-mona   ʕijreen   ṭuwal

         was.3SG.M   to-Mona   legs   long

         'Mona had long legs.'

    b.   la-mona   kaan   fiih   ʕijreen   ṭuwal

         to-Mona   was.3SG.M   EXPL   legs   long

         'Mona had long legs.'

(2.28) Topicalization in Alienable/Inalienable Possessions

    a.   kaan   ʕind   mona   tlat   ulaad

         was.3SG.M   at   Mona   three   kids

         'Mona had three kids.' (inalienable)

         'Mona had three kids.' (locative)

    b.   ʕind   mona   kaan   fiih   tlat   ulaad

         at   Mona   was.3SG.M   EXPL   three   kids

         'Mona had three kids.' (locative)

Boneh and Sichel note that the inalienable reading of the alienable/inalienable possession, as shown in (2.28), does not survive topicalization, a constraint which is not imposed on inalienable possessions, as shown in (2.27). This is independently supported by the contrast between PP$_{ʕind/maʕ}$-DP order (Bare Inversion) and PP$_{LOC}$-DP order (PP-Inversion) with respect to the requirement of an overt copula. Boneh and Sichel note that pure locative PPs require an overt presence of the copula, whereas PPs headed by *ʕind/maʕ* do not, as shown below (from Boneh and Sichel, 2010, p.22).

(2.29)   Bare Inversion vs PP-fronting

    a.   ʕind / maʕ / *waraʔ / *ʕala / *jamb   mona   tlat   ulaad

        at   with   behind   on   beside   Mona   three   kids

        'Mona has three kids.'

    b.   kaan   ʕind / maʕ / waraʔ / ʕala / jamb   mona   tlat   ulaad

        was.3SG.M   at   with   behind   on   beside   Mona   three   kids

        'There were three kids at/with/behind/on/beside Mona.'

Following Den Dikken (1995, 2006) and Sichel (1997) on their analyses of domain extending head movement, Boneh and Sichel argue that PP-Inversion occurs as a consequence of head-moving Rel to I, forcing the realization of the copula and allowing the movement of PP$_{\text{LOC}}$ to spec-IP. Subsequent movement of the copula to the left periphery yields a copula-PP$_{\text{LOC}}$-DP word order. Boneh and Sichel further argue that the fact that no domain extension is necessary in Bare Inversion is an indication that PP$_{\text{ʕind/maʕ}}$ cannot be in the same start position as PP$_{\text{LOC}}$, and that it must be generated in a specifier position.

Boneh and Sichel's (2010) analysis of BE constructions offers a perspective that seems to be going in the right direction by attributing different structures for the BE domain in Palestinian Arabic. They argue that possession in this variety of Arabic can be expressed in two ways: a possessed DP as the complement of the copula and an applicative structure. While I am in agreement with Boneh and Sichel's idea of structurally distinguishing locatives from possessives and also the notion that predicate possession can appear in multiple structures that cannot be reduced to one single underlying structure, I would, however, make the following objections to some aspects of their analysis. First, the analysis they proposed attributes different sources for inalienable possession; that is, while possession relations in their inalienable structure are introduced by the relational head, no explicit account is given for how an inalienable interpretation is generated in the applicative structure. Second, possession is a relation relating two arguments to each other, and while this fact is captured

in Boneh and Sichel's inalienable structure, it is left vague in the context of the applicative structure, which calls for a different way of conceiving of the source of possession (alienable and inalienable) in the applicative structure. Lastly, the possessor in Boneh and Sichel's inalienable structures is introduced as the complement of the relational head, but whether moving the possessor from its base position and away from the DP is successively cyclic or involves one fell swoop remains unclear. As I show in Chapter 3, these issues of Boneh and Sichel's analysis will be addressed.

2.1.2.2 Myler (2016)

Along the lines of Boneh and Sichel's work, Myler (2016) defends the claim that acknowledges the multiplicity of BE constructions for possession sentences. In light of the evidence brought up by Cochabamba Quechua data, Myler argues that "thematically identical possession constructions cannot always be related by movement" (p.182). Consider the data in (2.30).

(2.30) Possession in Quechua (Myler, 2016, p.182)

a. noqa-qta   auto-s-ni-y   tinya-n   (BE)

I-GEN   car-PL-EUPH-1POSS be_{exis}-3SUBJ

'I have cars.' lit. 'There are cars of mine.'

b. noqa-qta   auto-s   tinya-pu-wa-n   (BE-APPL)

I-GEN   car-PL be_{exis}-APPL-1OBJ-3SUBJ

'I have cars.' lit. 'There are cars for me.'

Myler argues that the two sentences in (2.30) are derived independently by two different structures: in the BE construction, the possessor is introduced inside the possessee DP, whereas in the BE-APPL construction, it is introduced outside the possessee DP, in spec-Appl. The two structures are respectively illustrated in (2.31) (Myler, 2016, p.190-191).

(2.31)   a. <u>BE Construction</u>

```
                    vP
                  /    \
              PredP     tiya-
             /     \
          EXPL     Pred′
                  /     \
                DP       Pred
               /  \
         noqaqta autosni
```

b. <u>BE-APPL Construction</u>

```
                    ApplP
                  /       \
               DP          Appl′
              /  \        /     \
         noqaqta         vP      Appl
                        /  \      -pu
                    PredP   tinya-
                   /     \
                EXPL     Pred′
                        /     \
                      DP       Pred
                     /  \
                   autos
```
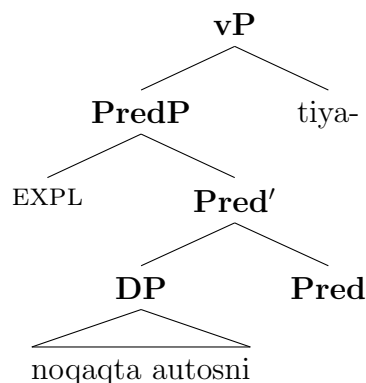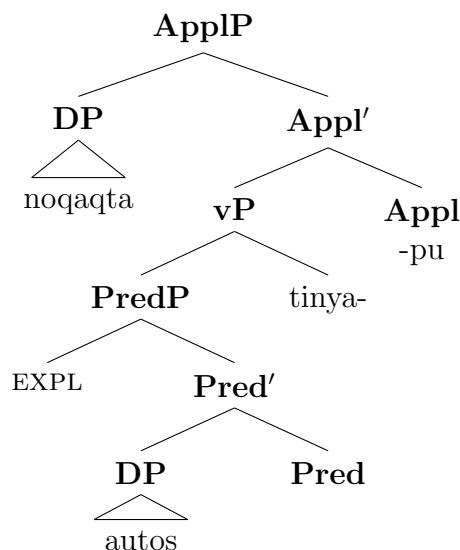
Myler gives three morphosyntactic arguments for why BE possessives and BE-APPL possessives cannot be assimilated to one underlying syntactic structure. The first argument (also the most obvious one) comes from the fact that the BE-APPL construction contains the morpheme '*pu*', which is the realization of the high applicative head elsewhere in the language, as indicated by the fact that it can combine with predicates regardless of valency and also by its benefactive semantic relation. Consider the data below (taken from Myler, 2016, p.192, based on Kerke, 1996, p.33).

(2.32) a. mama-y   (noqa-paq)   wayk'u-pu-wa-n

mother-1POSS   I-BEN   cook-APPL-1OBJ-3SUBJ

'My mother cooks for my benefit'

b. tata-y   (noqa-paq)   llaqta-man   wayk'u-pu-wa-rqa-ϕ

father-1POSS   I-BEN   town-DAT   go-APPL-1OBJ-PST-3SUBJ

'My father went to town so that I wouldn't have to.'

The second argument is reflected by the fact that clitic-doubling of objects (applied or otherwise) are required in Cochabamba Quechua, as illustrated in the following data (Myler, 2016, p.194).

(2.33) a.   Juan   noqa-ta   riku-**wa**-n

Juan   I-ACC   see-1OBJ-3SUBJ

'Juan sees me.'

b.   * Juan   noqa-ta   riku-n

Juan   I-ACC   see-3SUBJ

'Juan sees me.'

c.   wawqe-y   noqa-paq   wasi-ta   picha-pu-**wa**-n

brother-1POSS   I-BEN   house-ACC   sweep-APPL-1OBJ-3SUBJ

'My brother sweeps the house for my benefit.'

d.   * wawqe-y   noqa-paq   wasi-ta   picha-pu-n

brother-1POSS   I-BEN   house-ACC   sweep-APPL-3SUBJ

'My brother sweeps the house for my benefit.'

Given Myler argument that the possessor in BE-APPL constructions is introduced in the specifier of ApplP, it is predicted that the clitic-doubling of the object in BE-APPL possessive

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construction is required, whereas it is impossible in BE possessive constructions, a prediction that is borne out by the following data (Myler, 2016, p.194).

(2.34) a. noqa-qta   auto-y   tinya-(*$\mathbf{wa}$)-n   (BE Construction)

     I-GEN   car-1POSS   be$_{exis}$-1OBJ-3SUBJ

     'I have a car.

   b. noqa-qta   auto-y   tinya-pu-*($\mathbf{wa}$)-n   (BE-APPL Construction)

     I-GEN   car-1POSS   be$_{exis}$-APPL-1OBJ-3SUBJ

     'I have a car.'

The third argument involves the requirement of possessor agreement morphology on the possessee. In BE constructions it is required, but it is merely optional in BE-APPL constructions. Consider the following data (Myler, 2016, p.195).

(2.35) BE Construction

   a.   noqa-qta   auto-$\mathbf{y}$ tinya-n

     I-GEN   car-1POSS   be$_{exis}$-3SUBJ

     'I have a car.

   b. * noqa-qta   auto   tinya-n

     I-GEN   car   be$_{exis}$-3SUBJ

     'I have a car.

(2.36) BE-APPL Construction

   noqa-qta   auto-($\mathbf{y}$)   tinya-pu-wa-n

   I-GEN   car-1POSS   be$_{exis}$-APPL-1OBJ-3SUBJ

   'I have a car.'

The agreement pattern in (2.35) is accounted for under Myler's analysis since the possessor is first merged inside the possessee DP. By the same logic, the fact that agreement is not obligatory in BE-APPL constructions falls naturally since the possessor is merged outside the possessee DP.

To summarize, Myler (2016) incorporates the intuition Boneh and Sichel (2010) suggest in their analysis of Palestinian Arabic that BE-based possession constructions can differ in where the possessor is first merged. The data from Cochabamba Quechua offer three independent pieces of evidence that BE possession and BE-APPL possession cannot be reduced to a single structure, which led Myler to conclude that the two possession constructions are achieved by different syntactic structures.

2.1.3   Summary

The analyses summarized in this section lie on opposite sides of the generative literature on the topic; Freeze (1992) and Kayne (1993) each attempts to derive possession sentences from other structures present in the language, in an attempt to reduce the complexity of the theory of syntax to a minimum, and Boneh and Sichel (2010) and Myler (2016) independently acknowledge the multiplicity of BE-based possession constructions. The perspective Boneh and Sichel and Myler independently offer in the discussion of the BE domain provides a better treatment than their predecessor for the fact that predicative possession can appear in diverse structures within and across different languages, which would ultimately prove impossible to accommodate under the sort of account Freeze (1992) and Kayne (1993) bring forward.

2.2   Semantic Accounts

The semantic literature on predicative possession acknowledges the challenge posed by possession sentences in language after language as that which lies in recycling the same

lexical element(s) (such as *have* in English) that is used in expressing a canonical possession relation (e.g. ownership) to generate other possession relations such as kinship. Reconciling this semantic puzzle has quickly polarized: on the one hand, there are those that assign a lexical semantics to HAVE but the meaning is to be left vague, in an attempt to explain the variety of possession meanings in languages that have HAVE. Those who argue in favor of this position include Tham (2005, 2006). On the other side are those that argue for a meaningless HAVE and that the meaning of possession is semantically contributed by elements other than HAVE itself. Partee (1999) and Beavers et al. (2008) fall in this side of the literature. In this section, I concentrate on the latter approach. Since the semantic puzzle described above is found cross-linguistically, it is reasonable to assume that HAVE-based languages and BE-based languages introduce possession relations similarly; otherwise, the puzzle would remain unresolved if explanatory accounts were constrained by the limited typology.

The papers discussed in this section rely on certain assumptions about the relational-sortal noun distinction. This contrast is the underlying trigger for the corresponding distinction between inalienable and alienable possession relations such that inalienable possession relations involve a relational concept while alienable relations do not (Barker, 2019). To illustrate their semantics, relational nouns, such as *friend*, are distinguished from sortal nouns, such as *man*, in that the former are inherently argument-taking nouns (Barker, 1995, 2019; Barker and Dowty, 1993; Asudeh, 2005). Put concretely, *friend* denotes a lexical relation between two individuals (two-place), whereas *man* denotes a lexical relation that holds for only one individual (one-place). This contrast can manifest itself plainly in possession constructions: relational nouns, but not sortal nouns, are able to take a postnominal genitive *of*-phrase, as illustrated in (2.37) (from Barker, 2019, p.2):

(2.37)   English *of*-Phrase Test for relationality

a. SORTAL   b. RELATIONAL

    i. * a day of someone   i. a birthday of someone

    ii. * a person of someone   ii. a child of someone

    iii. * an animal of someone   iii. a pet of someone

Likewise, in languages like the Kampan languages of Arawaken family, the distinction between relational nouns and sortal nouns is marked morpho-syntactically in possession relations such that alienable possession relations involve more morpho-syntactic complexity than their inalienable counterparts, as shown below (taken from Michael, 2013, p.8-9):

(2.38)   a.   no-gito   b.   no-tabiri-te

          1SG-head   1SG-tree.resin-POSS

          'my head'   'my tree resin'

Languages tend to vary in terms of the grammatical distinction between relational and sortal nouns, which, as a result, can determine which roots can be inalienably possessed and which cannot (Heine, 1997). The burden of sorting this out is placed on the lexical semantics utilized in each language. Nonetheless, inalienably possessed nouns, unlike alienably-marked nouns, usually form a closed class in languages that have them, as pointed out in Nichols (1992), explaining why they are much rarer than alienably-marked nouns.

The core insight of the analyses summarized below take as background the assumptions about the alienable-inalienable distinction given above, and it is to spell out the implicit premises in these analyses before stating their conclusions.

2.2.1 Partee (1999)

The general idea of Partee (1999) is that possessive HAVE in English is meaningless, and that the possession relations in a relational HAVE (that which takes a relational noun as complement) is essentially the semantic contribution of the complement of HAVE. Partee observes that relational HAVE cannot occur with certain determiners, as shown in (2.39) (taken from Partee, 1999, p.1).

(2.39)   a.   John has two sisters.

         b.   * John has every sister.

Partee notes that the deviance in (2.39b) parallels the deviance triggered by definiteness effects in existential constructions, as observed in Milwark (1977). Further, she argues that the complement of HAVE in (2.39b) behaves as a typical generalized quantifier, in which case it is necessary for it to be weak. However, the complement of HAVE in (2.39a), the argument goes, semantically denotes a relation for which the subject of HAVE is interpreted as the subject. This is semantically illustrated in (2.40), (taken from Partee, 1999, p.3).

(2.40)   a.   *John has two sisters*: $\exists x[\text{sister-of'}(j)(x)]$

         b.   *have a sister*: $\lambda y[\exists x \, [\text{sister-of'}(j)(x)]]$

To reconcile the relational nature of *sister* with definiteness effects, Partee proposes that the complement of HAVE is a relational generalized quantifier of type $<< e, t, >, < e, t >>$, and that HAVE denotes what Keenan (1987) calls *exist* predicate, as shown in (2.41), (taken from Partee, 1999, p.3). Important to note is that the compositional semantics of the predicate *have a sister* would have the denotation in (2.41a) take the one in (2.41b) as its first argument.

(2.41)   a.   *a sister*: $\lambda P \lambda y[\exists x[\text{sister-of'}(y)(x) \wedge P(x)]]$

         b.   *have*: $\lambda R[R(\text{exist})]$

Partee's analysis raises the question of how determiners would combine with nouns that are not relational. Partee then introduces two allosemes for the indefinite determiner '*a*' and a general rule for other determiners. These are all given in (2.42) and (2.43), respectively, (taken from Partee, 1999, p.3).

(2.42) a.   Normal *a*: $\lambda Q \lambda P[\exists x[Q(x) \wedge P(x)]]$

   b.   Relational*a*: $\lambda R \lambda P \lambda y[\exists y[R(y)(x) \wedge P(x)]]$

(2.43) a.   If Det has a normal translation $\lambda Q \lambda P[\Phi(Q,P)]$, i.e. Φ, then its translation as a "relational" Det is $\lambda R \lambda P \lambda y[\Phi(R(y),P)]$

While Partee's (1999) analysis focuses on HAVE and can be implemented to capture a wide range of generalizations in languages that employ HAVE in their possessive constructions, it also offers some significant insight for BE-based languages, such as Arabic. It contains the seeds of the idea of attributing possession relations to relational nouns in inalienable possession, an innovation that would account for the parallelism between inalienable possessive DPs and inalienable predicative possession in Saudi Arabic, as discussed in depth in Chapter 3.

2.2.2   Beavers, Ponvert, and Wechsler (2008)

Beavers et al. (2008) can be taken as an extension of Partee's (1999) approach in the sense that the possession relation, as exemplified in (2.44) is introduced in the complement of HAVE, which can percolate up the derivation.

(2.44) a.   John has a sister.   (Beavers et al., 2008, p.210)

   b.   John has a car.

   c.   John has the car (for the weekend).

   d.   John has the widows (to clean).

Beavers et al. offer a unification account for alienable and inalienable possession sentences. They follow Partee's (1999) analysis that inalienable possession is introduced by the inalienable relational noun, and Barker's (1995) account for non-relational nouns that can be made relational via a Poss head. The evidence they provide for their claim that possession is introduced DP-internally comes from the fact that it is possible to conjoin an alienable possession with an inalienable possession, as in the example below (taken from Beavers et al., 2008, p.122).

(2.45)   John has a condo and a generous sister who pays all the bills.

Beavers et al.'s analysis of HAVE is formulated under HPSG assumptions where it is treated as raising verbs in that the embedded subject is missing, but later identified and construed as the subject of the predicate. HAVE, in Beavers et al.'s approach, takes, as complement, a possessed DP missing its possessor and relates it to its subject.

Beavers et al.'s conclusions are in part an antecedent of the approach I am developing in Chapter 3 to possession constructions in Saudi Arabic. That is, SA manifests compelling evidence for the notion that possession relations are introduced DP-internally. Moreover, I show that in one of the possession constructions in SA, alienable possession relations relate their DP-internal possessees to their possessors remotely, in a matter similar to the treatment of HAVE proposed in Beavers et al. (2008).

2.2.3   Summary

In this section, I have briefly reviewed previous literature on the semantics of predicative possession and the inherent semantic properties of the noun that determine which syntactic head introduces possession relations. The two major accounts discussed above attribute the semantics of possession to the complement of HAVE and take HAVE itself to be meaningless. This approach to the semantics of predicative possession is well motivated by the fact that variety of meanings can arise from possession in languages that lack a lexical item corre-

sponding to HAVE, and attributing possession semantics to it would pose a challenge for the theory to account for possession in BE-based languages, such as the primary language in this work.

2.3   Chapter Conclusions

In this chapter, I have given a broad overview of the generative literature on the syntax and semantics of predicative possession. The conclusions that can be summarized from the accounts discussed above are as follow: (i) there is evidence supporting the Freeze-Kayne treatment of BE and HAVE as two realization of the same syntactic head; (ii) BE-based and HAVE-based constructions need not be reduced if the argument structure of certain constructions remain unaccounted for; and (iii) possession relations are introduced in the complement of (and independently of) BE or HAVE, accounting for the potential overlap in the meaning of distinct structures.

In the chapter that follows, I develop an approach to Saudi Arabic predicative possession that is in harmony with the general conclusions reached in this chapter. This approach, moreover, aims to provide a descriptive account for how different argument structures generating SA predicative possession can produce identical semantic representations, and similarly, how different possession meanings can be generated by a certain argument structure.

CHAPTER 3. BE IN ARABIC LOCATIVES AND POSSESSIVES

One of the lessons that can be learned from the brief review of the literature on predicative possession given in Chapter 2 is that the typology of possession proves to be too fine-grained to be caught in the net of the Freeze-Kayne approach that typological variations in possession constructions are attributable to movement operations. Rather, as Myler (2016) points out, possessors can vary in the places where they are introduced in possession constructions, which could give rise to different possession relations depending on the semantic contributions of their constituent parts.

Along this line of thinking, my goal in this chapter is to provide an analysis of the possession constructions in Saudi Arabic that falls in with the acknowledgment of the multiplicity of BE-possessive construction, following the tradition established by Boneh and Sichel (2010) and Myler (2016). While I retain their conceptual argument, I differ from Boneh and Sichel's in much of the empirical argument, the specifics of which is provided as this chapter unfolds[1]. More specifically, I begin by providing further evidence from SA against Freeze's (1992) Locative Paradigm, undermining the claim that predicative possession is essentially derived from a locative structure. Second, I show that predicative possessive constructions in SA, as shown in (3.1) below, are the spell-out of two syntactically distinct structures, sketched in (3.2) and (3.3), respectively,

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[1]I believe that this divergence is attributable to two factors: (i) the two dialects of Arabic (Palestinian and Saudi) do not always share the same grammaticality judgment for some of the properties used to support Boneh and Sichel's argument; and (ii) Boneh and Sichel's analysis, as I pointed out in Chapter 2, created some puzzling questions than need to be addressed.

(3.1) a. (kaːn) l-i ʔʊχt ṭawiːlah

         was.3SG POSS-1SG sister tall

    b. (kaːn) ʕmd-i ʔʊχt ṭawiːlah

         was.3SG at-1SG sister tall

       'I have/had a tall sister.'

(3.2)
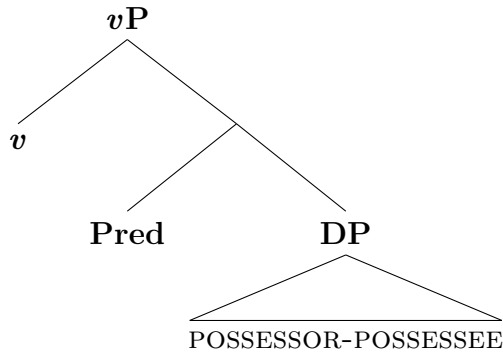
(3.3)
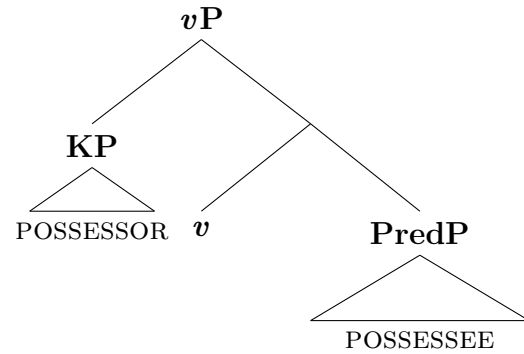
As depicted above, I argue that each structure projects the possessor in different places. Furthermore, I show that potential differences in the meaning of possession relations can vary depending on how possession sentences are built, such that one structure (namely (3.2)) produces only inalienable possession sentences whereas the other structure produces all kinds of possession sentences.

The chapter is structured as follows. In section (3.1), I defend the claim that locative predicates are structurally distinct from predicative possession despite their potentially identical representations. Contributing to the cumulative evidence against the Freeze's (1992) locative paradigm, I present two more pieces of evidence obtained from the variety made use of here. In section (3.2), I propose two syntactic structures for clausal possession that differ structurally in terms of the first-merge position of the possessor and also in terms of the possession relation conveyed by each structure. In motivating these proposed structures,

I show that each of them makes certain predictions about other facts of SA grammar that cannot be fulfilled by the other structure.

3.1 Locative Structure

The view that possession is subsumed under location is overwhelmingly attested in the literature (to name a few: Clark, 1978; Jackendoff, 1985; Baron and Herslund, 2001; Heine, 1997). These claims are generally grounded in the idea that canonical possession and locative expressions are derived from one basic cognitive notion, namely $[x \text{ BE.AT } y]$, where x is a THEME and y is LOCATION (Payne, 2009). The strength of this view comes from the fact that it is highly constrained; for instance, it does not assign a new semantic role (e.g. *possessor*) to x merely because possession relations are triggered by animacy.

To the contrary, the literature criticising previous locative approaches to possession has also been equally overwhelming (see for example Langacker, 1993; Harley, 1995; Velázquez-Castillo, 1996; Van Valin et al., 1997; Kemmer, 2003; Tham, 2005, 2006). For example, Tham (2005, 2006) argues that the two properties must be distinguished even in languages where they are identically marked, such as Marathi, where the possession/locative ambiguity disappears when certain locative markers are used, as shown in (3.4), taken from (Tham, 2005, p.22-23)

(3.4)   a. māzhyā-jawaḷ   ek   pustak   āha
            my-OBL-near   one   book   is

            'I have a book.'

            'There is a book near me.'

        b. tithe   pustak   āha
            there$_{loc}$ book   is

            'There$_{loc}$ is a book.'

Along Tham's criticism, Boneh and Sichel (2010) also provide an argument for decoupling locatives from possessives in Palestinian Arabic, discussed in section (2.1.2.1) of the previous chapter. Briefly, Boneh and Sichel (2010) point out that locative-possessive ambiguity arises with only a subset of locative prepositions, namely ʕind 'at' and maʕ 'with', an observation that is, rightly I think, taken as a clue for a structural difference between the two constructions. The basic intuition implemented from these arguments is the idea that the potential ambiguity between a locative reading and possession reading of sentences such as the one in (3.5) is brought about by some post-syntactic operations, and that the syntax of locative constructions is distinct from that of possession.

(3.5) ʕind   saːrah   nabtah

       at   Sarah   plant

       'Sarah has a plant.' (possession)

       'Sarah has a plant (near her).' (locative)

In the possession interpretation, *saːrah* and *nabtah* relate to each other by some sort of a possession relation, whereas no such relation holds between *saːrah*, as an entity, and *nabtah* in the locative interpretation. This thematic relation disparity reflects a disparity in the syntactic structures of the two readings. Boneh and Sichel (2010), as discussed in the previous chapter, argue that the source of the ambiguity between possessive and locative construals is structural, and not really lexical. They ascribe it to the fronting of the locative PP to the specifier of TP; the possessor in their analysis is introduced in a structurally higher position (*spec*-ApplP) than pure locative PPs.

I am very much in agreement with Boneh and Sichel's separating possession from locativity, and I simply acknowledge their account for PP-fronting as a fact. My goal in the remainder of this section, however, is to offer two more arguments against the locative paradigm, leading my analysis to the conclusion that the possessive reading of a possessive-

locative ambiguous sentence does not involve the locative structure, sketched in (1.24), the relevant part of which repeated in (3.6), but rather the structure represented in (3.7)

(3.6)   Locative Structure

PredP
├── DP
│   └── nabtah / *a plant*
└── Pred′
    ├── Pred
    └── PP
        └── ʕɪnd saːrah / *at Sarah*

(3.7)   Possessive Structure

vP
├── PP
│   └── ʕɪnd saːrah / *at Sarah*
└── v′
    ├── v
    └── PredP
        └── nabtah / *a plant*
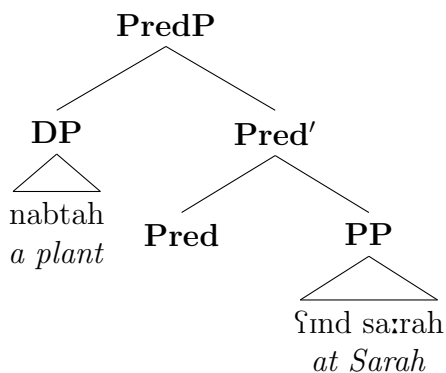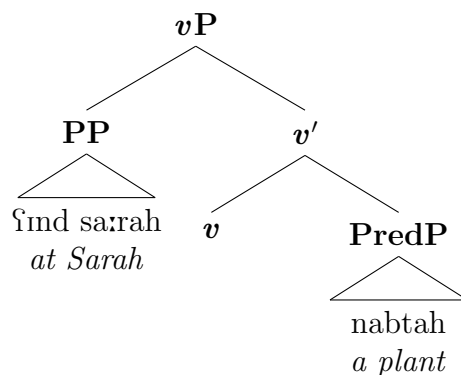
3.1.1   Two Arguments Against the Locative Paradigm

The arguments presented below are motivated by finding the environments in which one of the constructions fails to survive; specifically, I demonstrate how animacy effects and possessive-locative coexistence can illuminate the structural differences between these two constructions.

3.1.1.1   Argument 1: Animacy Effect

While animacy in Freeze's (1992) approach plays a major role, along with definiteness, in triggering movement operations that consequently produce linearization differences between locatives and possessives on the one hand and existentials on the other, it can also throw doubt on the idea of deriving possession from a locative structure.

Consider the following data:

(3.8)   a.   ʕɪnd   saːmi   jadd-ein   ṭawiːlah

             at   Sami   hand-DU   long

             'Sami has long hands (good for grip strength).' (inalienable)

             'Sami has long handles (to install on the door).' (alienable)

'There are long hands/handles near Sami.' (locative)

    b.   ʕɪnd   əl-baːb   jadd-ein   ṭawiːlah

          at   the-door   hand-DU   long

'# The door has long handles ' (inalienable)

'* The door has long handles (ready to be installed).' (alienable)

'There are big hands/handles near the door.' (locative)

Note that (3.8a) is ambiguous in two ways: first, it is ambiguous between possession and locative; and second, in the possessive reading, it is ambiguous between inalienable possession and alienable possession. When the complement of ʕɪnd is inanimate as in (3.8b), it is distinguished from (3.8a) by the absence of possession interpretations (particularly the inalienable possession, i.e. *the door has big handles*). The absence of ambiguity in (3.8b) can be the first clue to suggest that the three-way ambiguity in (3.8a) is due to the fact that the element that introduces LOCATION in predicate locatives is recycled to introduce the possessor in predicate possessives, and the animacy effect shown in (3.8) is clearly a constraint on the complement of the possessor-introducing ʕɪnd/maʕ, and not elsewhere.

To argue in favor of the locative paradigm is to argue that the locative construal persists regardless of the animacy effects on possessive construal. However, this line of reasoning can be subjected to Hornstein et al.'s (1995) test that distinguishes part-whole relations from locatives. That is, Hornstein et al. observe that while existential constructions license both the part-whole and locative readings in English, preverbal indefinites are restricted to the locative interpretation. Consider the contrast between the sentence in the two pairs below (examples from Boneh and Sichel, 2010, p.5, based on Hornstein et al. (1995)):

(3.9)   a.   There were ten kids in the building.

          b.   Ten kids were in the building.

(3.10) a. There were ten stories in the building.

b. *Ten stories were in the building.

Implementing this diagnosis, we can see that the notion that the locative reading is always available with the marker ʕɪnd is not corroborated by the data in (3.11). The relation expressed in (3.11a) cannot be expressed in a canonical locative structure (i.e. DP-PP word order). When contrasted with (3.11b), (3.11c) licenses the locative construal.

(3.11) a.

ʕɪnd	saːrah	θalaːθ	lʊʁaːt
at	Sarah	three	languages

'Sarah has three languages.' (intended: Sarah speaks three languages)

b. *

θalaːθ	lʊʁaːt	ʕɪnd	saːrah
three	languages	at	Sarah

'Three languages are at Sarah's.'

c.

θalaːθ-a(t)	aṭfaːl	ʕɪnd	saːrah
three-F	kids	at	Sarah

'Three kids are at Sarah's (place).'

Note that the contrast between the sentences in (3.11) is independent of the question of animacy and is expected when the THEME argument *lʊʁaːt* 'languages' is taken to be a psychological state that cannot be spatially located, a condition by which a predicate locative is generally interpreted[2]. If possession were structurally parasitic on locatives, we would expect (3.11a) to parallel the grammaticality pattern of (3.11b). Rather, arguing that the two structures are independent of each other can account for cases such as the data presented above.

---

[2]Emphasis is on *generally* because locative PP predicates, as discussed in Francez (2007), are not restricted to purely locative readings. Francez illustrates this point with this sentence *There are some meat dishes on the menu* which does not mean *There are dishes situated physically on the menu*, a point I am fully in agreement with.

3.1.1.2   Argument 2: Possessive-Locative Coexistence

The second difference that argues against the Locative Paradigm springs from the fact that a possessor and a locative PP can co-occur within one structure. Given the Locative Paradigm, one is led to ask what the syntactic trigger is by which a structure with two locative PPs is judged to be possessive or locative. In other words, given two locative PPs, what qualifies one to be interpreted as the possessor? Theoretically, under the Locative Paradigm, locative PPs with identical semantic features are equally potential candidates to move to the subject position of a possession sentence. However, the following data indicate that there is a hierarchical relation between the possessor and the locative PP.

(3.12)   a.   kaːn   ʕɪnd   saːmi   kaʊb   ʕɪnd   əṭ-ṭaːwɪlah

was.3SG.M   at   Sami   cup   at   the-table

'Sami had a cup, and it is at the table.'

b.   ʕɪnd   saːmi   ʔaʊlaːd   ʕɪnd   ʕali

at   Sami   children   at   Ali

'Sami had children that are at Ali's (place).'

'*Ali had children that are at Sami's (place).'

It is not unexpected that only *Sami* is unambiguously the possessor, signalling structural independence from locativity. To argue otherwise (i.e. that the possession is derived from a locative structure) is roughly to argue that moving either PP to the left of the possessee/theme is negotiable. In (3.12a), *ʕɪnd saːmi* 'at Sami' is interpreted as the possessor because arguably it bears the 'ANIMACY' feature. However, in (3.12b), *Sami* and *Ali* are identical in their semantic features, yet only *Sami* is interpreted as the possessor. Moreover, while the locative PP can be fronted as argued in Boneh and Sichel (2010), the Locative Paradigm fails to account for the absence of the locative reading of *ʕɪnd saːmi* 'at Sami'. An alternative analysis would have the possessor-introducing PP projected in a place where it

always precedes the possessee. This is reflected in the fixed interpretation of (3.12b), where *Sami* can only be interpreted as the possessor. Hence, the data in (3.12) lends support to the idea that the possessor-introducing ʕind and the locative ʕind are introduced in distinct domains.

3.1.2 Summary

The arguments presented above support the claim that the PP introducing the LOCATION argument is structurally independent of that which introduces the possessor. Specifically, argument 1 illustrated a constraint that is placed on possession but not on predicate locatives, and the fact that possessive readings can be obtained without a locative construal is indicative of its structural independence. Argument 2 shows that a locative PP can coexist with a possession relation, which indicates that the two structures are independent. This conclusion, moreover, is consistent with previous analyses, assumed in this work, (see for example, Citko (2008) and Irwin (2012)) which argue that predicate locative constructions involve BE as a light verb taking a small clause as complement with the subject in its specifier and a locative PP as its complement, as illustrated in (1.24), repeated as (3.13)

(3.13)
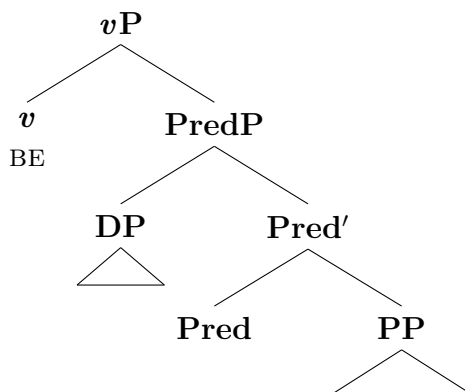
The remaining question is if predicate locatives involve a PP predicate complement, as sketched in (3.13), where in the structure of ʕind-possession is the possessor introduced?

One of the aims of the next section is to argue that possessor-introducing ʕind is merged outside the domain of PredP.

3.2   Predicative Possession in Saudi Arabic

In the previous section, I argued, following the literature cited, that the structure of predicate locatives involves a copula that selects for a small clause with a PP predicate complement. In this section, I introduce two other structures of BE that are associated with possession constructions. In one construction, predicative possession is built on top of attributive possession, in the sense that a possessed DP, from which the possessor is extracted and interpreted as the sentential subject, serves as the complement to the copula, in a manner similar to Kayne's (1993) approach, building on earlier work by Szabolcsi (1981, 1983). This structure is characterized by the fact that it takes a relational noun and relates it to its DP-internal possessor in a tight inalienable possession relation. Unlike the first construction, the second construction is not constrained by the valency of the possessee (relational vs sortal), which explains not only its wider distribution but also its potential alienable-inalienable ambiguity. In this structure, the possessor is projected outside the domain wherein the possession relation is introduced.

Before I delve into the analysis for the constructions just mentioned and the evidence that supports each, I set out the scale of the problem by examining how possession relations are distributed across three possessive markers in Saudi Arabic. In Table (3.1), I show the distribution of possession relations based, to a great extent, on the taxonomy described in Heine (1997), building on Miller and Johnson-Laird (1976), along with Pustejovsky (1998). That SA can express predicative possession in different ways makes this taxonomy useful because it deconstructs possession relation to their semantic subtypes that could potentially map onto syntactic generalizations among the different ways of expressing possession sentences.

Table 3.1   Possessive Marker Distribution

Possession Relation	l- '*of*'	ʕɪnd '*at*'	maʕ '*with*'
Kinship	OK	OK	OK
Body Parts	OK	OK	OK
Part-Whole	OK	restricted	restricted
Agentive	OK	OK	OK
Physical Possession	*	OK	OK
Temporary Possession	*	OK	OK
Ownership	*	OK	OK
Disease	*	OK	OK
Psychological State	*	OK	OK
Abstract Property	*	OK	OK
Physical Sensation	*	*	*

Note that there is not much variation in how the possession relations are distributed across three possessive markers in SA. In what follows, I present the data substantiating (3.1). Because ʕɪnd 'at' and maʕ 'with' have an identical distribution, only ʕɪnd is used in the data below to contrast it with the possessive marker *l-*.

(3.14)   Kinship

    a.   lɪ-leila   θala:θ   ʔaχwa:t[3]

        POSS-Layla   three   sisters

    b.   ʕɪnd   leila   θala:θ   ʔaχwa:t

        at   Layla   three   sisters

        'Layla has three sisters.'

---

[3]In Arabic, BE is covert in the present tense. Compare (3.14) to (i) below:

(i) ka:n   lɪ-leila   θala:θ   ʔaχwa:t

    was   POSS-Layla   three   sisters

(ii) ka:n   ʕɪnd   leila   θala:θ   ʔaχwa:t

    was   at   Layla   three   sisters

    'Layla had three sisters.'

(3.15) Body Parts

  a.   lɪ-leila   ʃaʕar   ṭawi:l

       POSS-Layla   hair   long

  b.   ʕɪnd   leila   ʃaʕar   ṭawi:l

       at   Layla   hair   long

       'Layla has long hair.'

(3.16) Part-Whole (*Inanimate Possessor*)

  a.   l-əʃ-ʃad͡ʒarah   d͡ʒɪðʕ   kabi:r

       POSS-the-tree   trunk   big

  b.   * ʕɪnd   əʃ-ʃad͡ʒarah   d͡ʒɪðʕ   kabi:r

       at   the-tree   trunk   big

       'The tree has a big trunk.'

(3.17) Part-Whole (*Animate Possessor*)

  a.   lɪ-l-faqqarijja:t   ʕamu:d   faqari

       POSS-the-vertebrae   column   spinal

  b.   ʕɪnd   əl-faqqarijja:t   ʕamu:d   faqari

       at   the-vertebrae   column   spinal

       'Vertebrae have a spinal column.'

Agentivity, in Pustejovsky's (1998) theory of lexical structure, is a qualia role representing the essential attribute of an object. For our purposes, agentive possession relations are roughly defined as those in which the possessor is involved in the creation of the possessee[4].

---

[4]Pustejovsky (1998) proposes four levels of lexical representations: argument structure, event structure, qualia structure, and lexical inheritance structure. The qualia structure is further stratified into four layers (roles): constitutive, which maps an object onto its constitutive parts (e.g. body part and part-whole relations), formal, telic, and agentive. For further discussion, see chapter 5 of Pustejovsky (1998).

These relations pattern with inherent relations illustrated above. Consider the examples (3.18).

(3.18) Agentive Possession

    a.   lɪ-t͡ʃomɪski   waragah   d͡ʒadiːdah   fɪ-l-mad͡ʒallah

          POSS-Chomsky   paper   new   in-the-journal

    b.   ʕɪnd   t͡ʃomɪski   waragah   d͡ʒadiːdah   fɪ-l-mad͡ʒallah

          at   Chomsky   paper   new   in-the-journal

    'Chomsky has a new paper (that he authored) in the journal.'

The parallelism in the grammatical patterning between the possessive markers *l-* and *ʕɪnd* occurs only in expressing inalienable possession relations or possession connoting a sense of creation, as indicated in table (3.1)[5]. In inalienable possession relations, *ʕɪnd* can be replaced with *l-* without affecting the grammaticality of the sentence. The reverse is, however, not necessarily true; *ʕɪnd*-marked part-whole possession sentences, as already pointed out in section (3.1), react to animacy effects such that only animate possessors are permitted. In comparison to the sentence in (3.17b), the sentence in (3.16b) is unacceptable under the possession interpretation because the possessor is inanimate.

(3.19) Physical Possession

    a.   * lɪ-saːrah   galam   ʕala   l-maːsah

          POSS-Sarah   pen   on   the-desk

    b.   ʕɪnd   saːrah   galam   ʕala   l-maːsah

          at   Sarah   pen   on   the-desk

    'Sarah has a pen on the desk.'

---

[5] If we reduce the definition of relational nouns to those expressing two-argument relations, then agentive possessive expressions are also relational in the sense that the two roles *creator* and *created* cannot exist independently of each other. Therefore, in the remainder of this chapter and the one that follows, I will use the term *relational* as an umbrella term for both relational and agentive possessive expressions.

(3.20) <u>Temporary Possession</u>

    a.   * lɪ-saːrah   kɪtaːb   mʊstaʕaːr   mɪn   əl-maktabah

          POSS-Sarah   book   borrowed   from   the-library

    b.   ʕɪnd   saːrah   kɪtaːb   mʊstaʕaːr   mɪn   əl-maktabah

          at   Sarah   book   borrowed   from   the-library

          'Sarah has a book borrowed from the library.'

(3.21) <u>Ownership</u>

    a.   * lɪ-saːmi   saːʕah   ħɪlwah

          POSS-Sami   watch   nice

    b.   ʕɪnd   saːmi   saːʕah   ħɪlwah

          at   Sami   watch   nice

          'Sami has a nice watch.'

It is not unsurprising that the grammaticality patterns in (3.19-3.21) are consistent. These three possession relations are canonically alienable possession, and SA expresses them all identically.

(3.22) <u>Disease</u>

    a.   * lɪ-l-mariːð̣   ħaraːrah   ʕaːlɪjah

          POSS-the-patient   fever   high

    b.   ʕɪnd   əl-mariːð̣   ħaraːrah   ʕaːlɪjah

          at   the-patient   fever   high

          'The patient has a high fever.'

(3.23) <u>Psychological State</u>

    a.   * lɪ-saːrah   fuːbija   mɪn   əl-ʕanaːkɪb

          POSS-Sarah   phobia   from   the-spiders

b. ʕɪnd   saːrah   fuːbija   mɪn   əl-ʕanaːkɪb

at   Sarah   phobia   from   the-spiders

'Sarah has a phobia of spiders.'

(3.24)   <u>Abstract Property</u>

a. * lɪ-saːrah   nazaːhah   ʕaːlɪjah

POSS-Sarah   integrity   high

b.   ʕɪnd   saːrah   nazaːhah   ʕaːlɪjah

at   Sarah   integrity   high

'Sarah has high integrity.'

For Heine (1997), psychological states and diseases are construed as abstract properties that can be inalienably possessed in languages that mark possession morphosyntactically. In SA, however, they pattern with alienable possession, as illustrated in the data (3.22-3.24).

(3.25)   <u>Physical Sensation</u>

a. * lɪ-saːrah   bard

POSS-Sarah   cold

b. * ʕɪnd   saːrah   bard

at   Sarah   cold

'Sarah has cold.' (intended: 'Sarah feels cold.')

The sentence in (3.25) suggests that SA does not pattern with languages that express physical sensation in a possession construction such as the following Spanish example:

(3.26)   Physical Sensation   (Myler, 2016, p.181)

     a.   Juan   tiene   frío

              Juan   has   cold

              'John is cold.' (i.e., he's feeling the cold.)

Instead, SA utilizes different constructions to express this relation independent of possession. Compare (3.27) to the ungrammatical sentences in (3.25) above.

(3.27)   a.   t-əħɪs   saːrah   b-bard

             3SG.F-feel   Sarah   with-cold

             'Sarah feels cold.'

     b.   saːrah   bardaːnah

             Sarah   cold

             'Sarah is cold.'

To reiterate, the most conspicuous difference between *l*-marked possession sentences and ʕɪnd-marked ones is the eponymous one: *l*-marked possession sentences are tied to inalienable and agentive possession relations only (inalienable construction, henceforth), whereas ʕɪnd-marked possession sentences display a greater extent of freedom (inclusive construction, henceforth). Despite the overlap between the inalienable and inclusive constructions in the inalienable possession relations, the difference in the grammaticality patterns between the two constructions elsewhere is a manifestation of an underlying difference in the syntax. This is indeed the claim I am putting forth here and defend as this chapter progresses.

In the remainder of this section, I argue, along with Boneh and Sichel (2010), that the two constructions just described differ structurally in the place where the possessor is first merged. However, as pointed out in the previous chapter, the data presented in this chapter sheds light on certain aspects of Boneh and Sichel's analysis that require a certain amount

of bookkeeping. That said, my proposal is as follows: in *l*-marked possession sentences, I argue, following the literature on relational nouns (see Barker and Dowty, 1993; Barker, 1995, 2019; Heller, 2002; Partee, 1983, 1999; Partee and Borschev, 2003), that possession relation is introduced by the possessed relational noun root. The noun head then combines with the possessor within the same projection. Given this structurally tight bond between the possessee and the possessor, it should not come as a surprise that only inalienable possession relations are introduced in this construction, as pointed out by Heine (1997) and Nichols (1992) in their generalization about inalienable possession. For ʕɪnd/maʕ-marked possession sentences, on the other hand, possession relations are introduced in two different ways; inalienable possession relations are introduced by the root, as in the first construction, but for alienable possession relations, I argue, following Barker (1995), that they involve a Poss head whose role, as Barker points out, is essentially to relationalize *n*Ps that are inherently sortal. The possession relation introduced by either Poss or the noun root remotely relates the possessee in the domain of DP to the possessor merged outside this domain, namely in the specifier of *v*P. This remote mapping between the possession arguments bears out Myler's (2016) delayed gratification analysis, wherein syntactic representations are absent in the lower domain in which the argument's thematic role is introduced. The two constructions are depicted in (3.28) and (3.29), respectively.

(3.28) Inalienable Construction
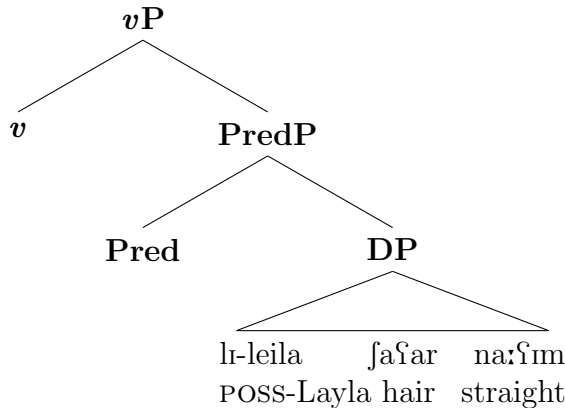
(3.29) Inclusive Construction
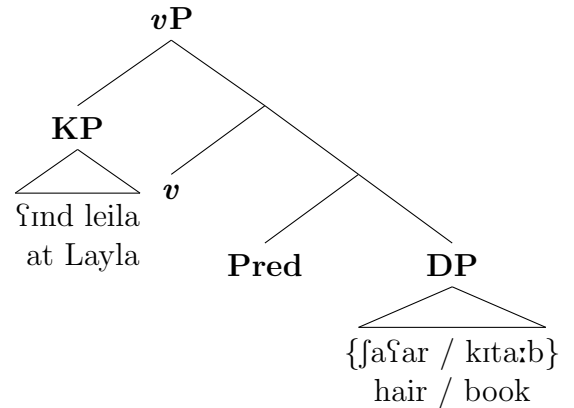
An excursus is necessary at this point on the role of modifying elements in inalienable constructions. Note that the inalienable construction in (3.28) fundamentally involves an existential structure with the possessed DP acting as the pivot, in the sense of Francez (2007, 2009). This can offer a means of explanation as to why modifying elements are pragmatically required. As briefly discussed in Chapter 1, Francez (2007, 2009) argues that modifying elements (codas) introduce a contextual closure to the interpretation of the existential proposition. Francez's analysis can be extended to capture the contrast in (3.30). If uttered without an appropriate contextual modifier, which may not necessarily be explicit, the inalienable clausal possession in (3.30a) is infelicitous. No restriction is placed on inclusive constructions however, as shown in (3.30b)[6,7].

(3.30) a. # lɪ-ʕali   ʔaχwaːn

           POSS-Ali   siblings

           'Ali has siblings.'

      b. ʕɪnd   ʕali   ʔaχwaːn

           at   Ali   siblings

           'Ali has siblings.'

This contrast constitutes a pragmatic difference between the two possession constructions; besides their wider distribution in Table (3.1), inclusive constructions also have a wider pragmatic distribution. Although I do not intend to bring a pragmatic perspective to bear on the analysis presented here, pointing this distinction out was thought necessary to provide the rationale for including modifying adjuncts in structures of inalienable constructions below.

---

[6]One context where (3.30a) can be felicitous is when it is in a focus position.

[7]It must be admitted that this discussion of codas is oversimplified, and I should stress that codas are not free from idiosyncrasies. Francez points out some restrictions that apply to them. McNally (1992) analyzes adjectival codas in English as depictives, and likewise, Milsark (1974) observes that they are tied to stage-level predicates. While these idiosyncrasies might be true for canonical existential constructions in Arabic, they do not appear to show their affects in possession.

Insofar as the depictions in (3.28) and (3.29) correctly represent the two constructions of possession in SA, they make certain predictions as to how the two constructions differ with respect to other facts about Saudi Arabic grammar. Among these predictions are the following:

(3.31) Predictions of the Present Proposal:

a. Inclusive constructions, to the exclusion of inalienable constructions, cannot be used attributively because the possessor is not saturated within the possessed DP.

b. Coordination of possession arguments is unsuccessful when one of the arguments contained in a coordinate comes from a possession construction different from that which is contained in the other coordinate.

These predictions constitute the evidence for the conclusion I am arguing for; that is, inalienable and inclusive possession constructions differ structurally and cannot be reduced to one where they are related by movement operations. In the subsection that follows, I evaluate each of these predictions by showing that no means of generating the structural description necessary to assess each prediction yields a grammatical sentence.

3.2.1   Evaluating (3.31)

In motivating the claim that the inclusive possession construction is structurally distinct from the inalienable possession construction in SA (as represented by the trees in (3.28) and (3.29), I argue here that the predictions in (3.31) are correct. This is because the core of my proposal is predicated on the idea that the arguments of the inalienable construction form a constituent, whereas in the inclusive construction they do not, and, therefore, if any of the predictions in (3.31) came unfulfilled, it would be a suggestion of the invalidity of the claim.

3.2.1.1 Prediction 1: Attributive Possession

The claim I am defending here is that the two predicative possession constructions of SA differ underlyingly such that the possessor and possessee form a constituent in one construction (inalienable construction), but they do not in the other construction (inclusive construction). This underlyingly structural distinction manifests itself clearly in attributive possession, wherein the possessor and possessee relate to each other within phrasal, rather than clausal, boundaries (Heine, 1997)[8]. If this claim is on the right track, it is then expected that where *l*-marked possession is used attributively, the structure is grammatical. However, this is not true for ʕɪnd/maʕ-marked possession. To illustrate, consider the data in (3.32).

(3.32)   *l*-Marked Inalienable Possession

    a.   fiːh   [kɪtaːb   lɪ-saːrah   maftuːħ]

          EXPL   book   POSS-Sarah   open

          'There is a book of Sarah's open.'

    b.   fataħ-t   [kɪtaːb   lɪ-saːrah]

          opened-1SG   book   POSS-Sarah

          'I opened a book of Sarah's.'

Observe that it is possible to express an *l*-marked inalienable possession attributively without breaking the constituency of the possessed DP. In (3.32a), the possessed DP is the sole argument of the non-overt copula, and in (3.32b), it is the grammatical object of the verb. This is a coherent indication that the possessor and possessee in this construction are both introduced and fully saturated with the domain of the DP projection.

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[8]It should be emphasized that using attributive possession as a criterion for classifying possession constructions in SA should not be taken as an implicit suggestion that the phrasal-clausal syntax is the only aspect that distinguishes attributive possession from predicative possession. The two types differ also on the semantic dimension (in terms of presupposition and eventuality). For further discussion of this matter, the reader is invited to read section 2 of chapter 1 and chapter 2 of Heine (1997).

If we turn now to expressing attributive possession using ʕɪnd, we find that neither struc-
tural relation is viable; as illustrated in (3.33) below, no method of rendering the possessor
and possessee into a constituency together yields a grammatical sentence.

(3.33)   ʕɪnd-Marked Possession

    a.   * fiːh   [kɪtaːb   ʕɪnd   saːrah   maftuːħ]

          EXPL   book   at   Sarah   open

          'There is a book of Sarah's open.'

    b.   * fataħ-t   [kɪtaːb   ʕɪnd   saːrah]

          opened-1SG   book   at   Sarah

          'I opened a book of Sarah's.'

Recall from the discussion in section 3.1 that locative-possessive ambiguity can lurk in
this construction; however, the judgments in (3.33) are given for the possessive reading,
which, as shown, is unavailable. This is predicted by the structure depicted in (3.29). The
possessor in the ʕɪnd-marked possession construction is not derived from inside the possessed
DP, which renders expressing this construction via an attributive possessive construction
ungrammatical.

This grammaticality contrast between the data in (3.32) and (3.33) simply confirms the
prediction made above about the structural distinction between the two possessive construc-
tions: predicative inalienable construction involves a possessed DP constituent that can be
used attributively elsewhere in the language, whereas predicative inclusive construction does
not.

3.2.1.2 Prediction 2: Unsuccessful Coordination

The second prediction is that which exploits the identity of constituents in a coordi-
nation construction (Zwicky and Sadock, 1975; Lasersohn, 2013). This condition has been
recognized in the literature since Chomsky's (1965) Aspects to determine the category and

boundaries of a given constituent. Basically, it requires that two conjoined phrases be of the form $X–A–Y$ and $X–B–Y$, where A and B are both constituents of the same type (Zwicky and Sadock, 1975). That said, the proposed structures in (3.28) and (3.29) are clearly distinct in terms of where the two arguments of possession are introduced, and it is predicted that no way of conjoining a constituent of one possessive construction with a corresponding constituent of the other possessive construction would yield a grammatical sentence.

To evaluate this prediction, consider first the examples in (3.34) and (3.35) where coordination applies to arguments that share the same possessive construction.

(3.34)   Inalienable Construction

    a.   lɪ- [saːmi   w-ʕali]   χʊʃuːm   kabiːrah

            POSS-Sami   and-Ali   noses   big

            'Sami and Ali have big noses.'

    b.   [lɪ-saːmi   w-l-ʕali]   χʊʃuːm   kabiːrah

            POSS-Sami   and-POSS-Ali   noses   big

            'Sami and Ali have big noses.'

(3.35)   Inclusive Construction

    a.   ʕɪnd   [saːmi   w-ʕali]   χʊʃuːm   kabiːrah

            at   Sami   and-Ali   noses   big

            'Sami and Ali have big noses.'

    b.   [ʕɪnd   saːmi   w-ʕɪnd   ʕali]   χʊʃuːm   kabiːrah

            at   Sami   and-at   Ali   noses   big

            'Sami and Ali have big noses.'

In the first sentences of each pair, (3.34) and (3.35), the two possessors are conjoined beneath one possessive marker, whereas in the second sentences, conjunction targets a higher

node (i.e. conjoining two possessive markers with their complements)[9]. Coordination as exemplified in the second examples above can reveal whether or not conjoining two different possessive markers is viable. The implementation of this test is predicated on the fact that the grammar of SA independently licenses coordination of PPs headed by distinct prepositions. This is reflected not only in coordinating locative PPs as in (3.36a) but also in coordinating the possessive markers ʕɪnd 'at' and maʕ 'with', which pattern alike with respect to possession meanings.

(3.36) a. fiːh [ʕala ʃ-ʃaːrɪʕ w-ħaʊl əl-beit] aʃd͡ʒaːr kaθiːrah

         EXPL on the-street and-around the-house trees many

         'There are many trees on the street and around the house.'

       b. [ʕɪnd ʕali w-maʕ ħasan] seijjaːrat-ein

           at Ali and-with Hassan car-DU

           'Ali and Sami have two cars each'

The conjoined PPs in (3.36) have identical structural description, and it is not surprising that (3.36) is grammatical. This data is taken as the control case for the assessment of conjoining two different prepositions and their complements.

Consider now conjoining the two possessor-introducing prepositions in SA.

(3.37) a. *[ʕɪnd saːmi w-l-ʕali] χʊʃuːm kabiːrah

         at Sami and-POSS-Ali noses big

         'Sami and Ali have big noses.'

       b. *[l-ʕali w-ʕɪnd saːmi] ʕaʊlaːd kaθiːr

           POSS-Ali and-at Sami children many

---

[9]It should be pointed out, however, that it is more natural and stylistic to apply conjunction at the DP level, as in the *a* examples, than in the *b* ones; however, the *b* examples can be made sound equally natural if the first conjunct is followed by a short pause.

'Sami and Ali have many children.'

The deviance of (3.37) is not attributable to disjoint distribution of the possessive markers; the two possession relations (body parts and kinship) occur where the two possessive markers overlap, as shown in Table (3.1) above. Rather, the deviance of (3.37), if this analysis is on the right track, is due to the difference in the argument structure of each possession construction. Wherefore, the sentences in (3.37) are, as predicted, ungrammatical because the two constructions introduce possession differently.

3.2.2 Deriving Possession

In the previous subsection, I discussed two properties of the grammar predicted to interact differently with the two possessive constructions depicted in (3.28) and (3.29), repeated as (3.38) and (3.39) respectively, and showed that these properties are explained under the analysis where the possessor in each construction differs in the place where it is first introduced and that the two constructions are not related by movement.

(3.38) Inalienable Structure

vP
├─ v
└─ PredP
   ├─ Pred
   └─ DP
      lɪ-leila   ʃaʕar   naːʕɪm
      POSS-Layla hair   straight

(3.39) Inclusive Structure

vP
├─ KP
│ ʕɪnd leila
│ at Layla
│ └─ v
└─ (Pred / DP)
   ├─ Pred
   └─ DP
      {ʃaʕar / kɪtaːb}
      hair / book
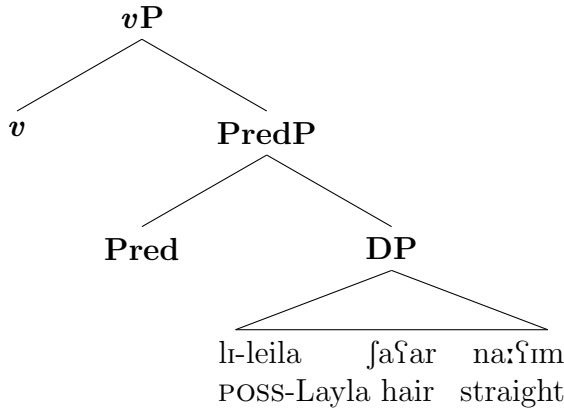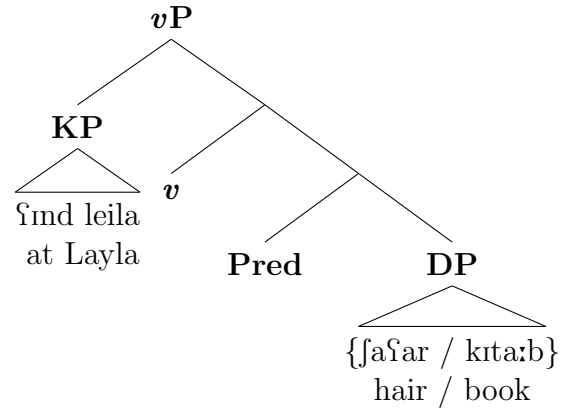
In this subsection, I illustrate how the syntactic elements of these constructions are put together, giving rise to different possession interpretations. The discussion provided here is divided as follows: in (3.2.2.1), I zoom in on the inalienable construction as represented in (3.38) and show that the deriving clausal possession out of this structure is determined by

the presence of the genitive phrase in the left periphery of the possessed DP; and in (3.2.2.2), I begin by providing the arguments that motivate the analysis of projecting the possessor in the specifier of vP, as sketched in (3.39). Then, I show how the derivations of alienable and inalienable possession relations proceed.

3.2.2.1   Building Inalienable Possession

Established above is the fact that the possessor in inalienable constructions is introduced inside the possessed DP. Though not depicted in (3.38), the possessor is subsequently extracted from the possessed DP and moves to a position where it is interpreted as the subject of the sentence in clausal possession, just as is argued in Szabolcsi (1981, 1983) for a similar state of affairs in Hungarian. This is reflected in the fact that predicate modifiers can intervene between the possessor and possessee, as shown in (3.40).

(3.40)   lɪ-n-naχl   daːjɪman   d͡ʒʊðuːʕ   ṭawiːlah

POSS-the-palm.trees   always   trunks   long

‘Palm trees always have long trunks.’

In what follows, I assume Boneh and Sichel's (2010) argument that the possessor is first merged as a complement to n; however, I argue that the possessor is extracted through the specifier of DP and then moves up the tree to where it is produced. Consider the following structure in (3.41).

(3.41)   Possessed DP Leading to Predicative possession
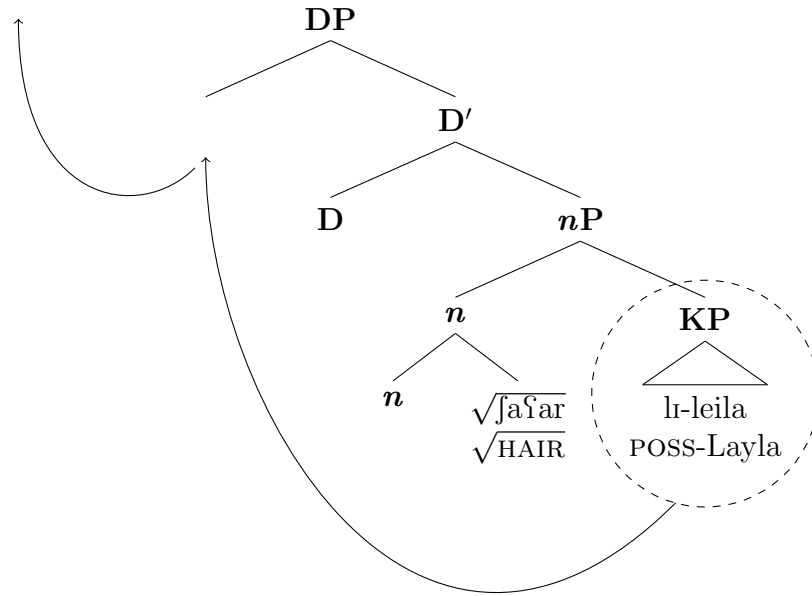
The idea for a clausal possessor to have its source in a possessed DP is not new (Szabolcsi, 1981, 1983; Kayne, 1993), but is further supported by the Arabic data (see section 3.2.1.1). One piece of evidence to argue that extraction is established through the specifier of DP springs from how possessors linearize in relation to numerals and when they leave a resumptive trace. Assuming the structure of DP, described in Borer (2005) and Borer and Ouwayda (2010), which involves a projection of ΓP, which hosts cardinals and is between D and n, we expect that if it is the case that the possessor can only be extracted through the specifier of DP, a resumptive pronoun can only be inserted when it precedes everything inside the possessed DP. This is because when the extraction occurs at the DP edge, it is expected that the resumptive pronoun would be followed by all other nominal materials inside the DP. This is borne out by the following data.

(3.42)   a.   kaːn   əl-beit$_i$ [la-h$_i$ θalaːθat   ʔabwaːb   kabiːrah]

was.3SG   the-house   POSS-it   three   doors   big

'The house had three big doors.'

   b.   * kaːn   əl-beit$_i$ [θalaːθat   la-h$_i$ ʔabwaːb   kabiːrah]

was.3SG   the-house   three   POSS-it   doors   big

   c.   * kaːn   əl-beit$_i$ [θalaːθat   ʔabwaːb   la-h$_i$ kabiːrah]

was.3SG   the-house   three   doors   POSS-it   big

   d.   * kaːn   əl-beit$_i$ [θalaːθat   ʔabwaːb   kabiːrah   la-h$_i$]

was.3SG   the-house   three   doors   big   POSS-it

As the data above indicates, the sequence that maintains its grammaticality is that where the possessor is extracted from the DP edge, in a manner similar to Hungarian (Szabolcsi, 1981, 1983), summarized in Chapter 2. This is taken to suggest that moving the possessor from its base position and away from the possessed DP can only be done through the DP edge.

An additional point that warrants explication concerns the presence of the preposition that selects the possessor as its argument. It is reasonable to posit that this preposition serves a role in the context of Case marking. Notably, Case is a property of the functional structure in syntax (Marantz, 2000; Baker, 2015). Nouns form part of the lexical structure, ruling out scenarios where the possessor receives Case-marking from the head noun. Hence, because nouns must be case-marked by some functional Case-marking projection, the preposition operates as a means of fulfilling this requirement. This rationale bears significance not only in the context of the inalienable structure but also in that of the inclusive structure, to which I will delve deeper in the next subsection.

Establishing that, I turn now to the semantics of the possessor-introducing phrase. In (3.41), the genitive phrase that introduces the possessor is K(ase)P. I follow Partee and

Borschev's (2001) treatment of genitive phrases as a function that takes an individual as its first argument and a relation as its second argument. Additionally, recall that the intuition implemented here is that possession relations introduce an eventuality variable (see section 1.1 of Chapter 1 for details), and, therefore, it is added to the semantics of KP accordingly. The semantic denotation of the genitive head *l-* is given as follows (based on a similar denotation for the genitive phrase in Quechua in Myler, 2016, p.220)[10].

(3.43) $[\![l\text{-}]\!] = \lambda x_e.\lambda R_{<e<e<s,t>>>}.\lambda y_e.\lambda e_s.R(x)(y)(e)$

Having given all the bits and pieces of the syntax and semantics, I show below how they fit together and generate clausal possession from an inalienable construction. For ease of exposition, I show in (3.45) the denotations of all the pieces within the domain of *v*P involved in the derivation of the possession sentence in (3.44).

(3.44) lɪ-saːrah   walad   mʊbtaʕaθ

       POSS-Sarah   child   studying.abroad

       'Sarah has a child studying abroad.'

(3.45) <u>Semantic Pieces</u>

     a. $[\![walad]\!] = \lambda y_e.\lambda x_e.\lambda e_s.\text{boy}(x) \wedge \text{kin-to}(x,y,e)$

     b. $[\![saːrah]\!] = \text{Sarah}_e$

     c. $[\![mʊbtaʕaθ]\!] = \lambda y_e.\lambda e_s.\text{studying.abroad}(y, e)$

     d. $[\![l\text{-}]\!] = \lambda x_e.\lambda R_{<e<e<s,t>>>}.\lambda y_e.\lambda e_s.R(x)(y)(e)$

     e. $[\![D]\!] = \lambda R_{<e<s,t>>}.\lambda e_s.\exists x_e.R(x)(e)$

     f. $[\![Pred]\!] = \lambda x.x$

     g. $[\![v]\!] = \lambda x.x$

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[10]Although the core argument here is that the predicative inalienable construction is derived from attributive possession, the denotation for *l-* will be slightly more complex for attributive possession. That is because *l*-marked attributive possessives exhibit presuppositional properties that are not present in predicative possession. More on this is in the next chapter.

Note that the possessor is semantically introduced by the relational possessee (3.45a), and it occupies the complement of n as a genitive phrase. The genitive phrase composes with the possession relation and yields an expression of type $< e, < s, t >>$, which combines with the adjunct modifier by Predicate Modification and subsequently serves as the argument for D. The semantics supplied by D then existentially closes the open entity argument that corresponds to the lexical element for *boy*. Since Pred and v are both expletive, the meaning of both PredP and vP is identical to the meaning of the possessed DP: the set of events where there is a child whose mother is Sarah and is studying abroad. Recall that the argument I am putting forth is predicated on the idea that clausal possession in inalienable construction is an existential construction. In essence, this means that the meaning of the possessed DP is essentially the meaning of the possession sentence. Consider the tree representation of the possession sentence in (3.44).

(3.46) lɪ-saːrah   walad   mʊbtaʕaθ

       POSS-Sarah   boy   studying.abroad

'Sarah has a son studying abroad.'

v**P**
$\lambda e_s.\exists x_e.boy(x)$
$\wedge kin\text{-}to(x,Sarah,e)$
$\wedge st.abroad(x, e)$

v
$\lambda x.x$

PredP
$\lambda e_s.\exists x_e.boy(x)$
$\wedge kin\text{-}to(x,Sarah,e)$
$\wedge st.abroad(x, e)$

Pred
$\lambda x.x$

DP
$\lambda e_s.\exists x_e.boy(x)$
$\wedge kin\text{-}to(x,Sarah,e)$
$\wedge st.abroad(x, e)$

D
$\lambda R_{<e<s,t>>}.\lambda e_s.\exists x_e.R(x)(e)$

n**P**
$\lambda y_e.\lambda e_s.boy(y)$
$\wedge kin\text{-}to(y,Sarah,e)$
$\wedge st.abroad(x, e)$

n**P**
$\lambda y_e.\lambda e_s.boy(y)$
$\wedge kin\text{-}to(y,Sarah,e)$

AP
$\lambda y_e.\lambda e_s.st.abroad(y, e)$

mʊbtaʕaθ
studying.abroad

n
$\lambda y_e.\lambda x_e.\lambda e_s.boy(x)$
$\wedge kin\text{-}to(x,y,e)$

KP
$\lambda R.\lambda y_e.\lambda e_s.$
$R(Sarah)(y)(e)$

n
$\sqrt{\text{walad}}$
$\sqrt{\text{BOY}}$

K
$\lambda x_e.\lambda R.\lambda y_e.\lambda e_s.$
$R(x)(y)(e)$
l-

DP
saːrah
Sarah

108
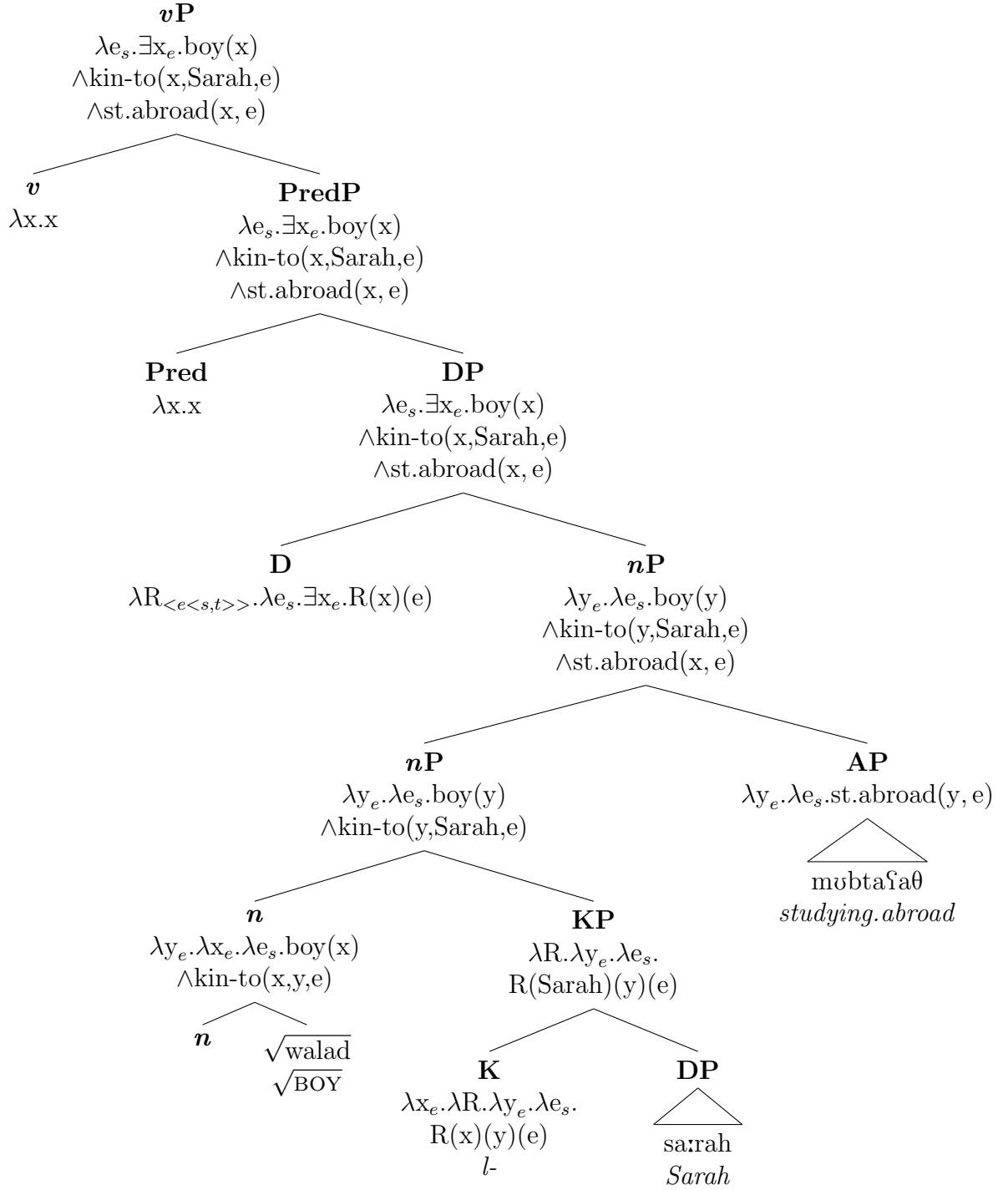
To summarize, building on Boneh and Sichel's (2010) argument structure for the inalienable possession structure, I have argued in this subsection that the possessor of *l*-marked possessions (or as I have dubbed them *inalienable constructions*) is an argument of *n*. Expressing possession relations predicatively requires extracting the possessor from its DP source through the DP edge and moving it to a higher A-position.

3.2.2.2 Building Inclusive Clausal Possession

One of the conclusions I have arrived at in the previous two sections is that inclusive clausal possessions differ structurally from locative and inalienable constructions. While this conclusion is argued for elsewhere in the literature (see Tham (2005) and Boneh and Sichel (2010) for example), the proposed structure for this sort of clausal possession differs substantially from the one proposed in Boneh and Sichel for the same possession construction in Palestinian Arabic. The reason motivating this departure is to achieve a unified analysis of clausal possession of this sort beyond the variety of Arabic made use of here. In what follows, I provide the evidence motivating the structure proposed in (3.29), repeated as (3.47).

(3.47)   <u>Inclusive Structure</u>
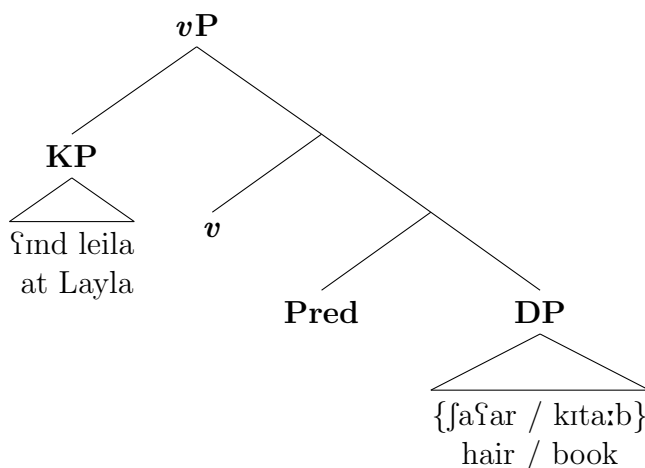
In the previous subsection, I showed that the possessor in inclusive constructions cannot be first merged inside the possessed DP, as indicated by the fact that the predictions in (3.31) proved correct. This amounts to evidence that the possessor is merged in the specifier of a

higher head, such as Pred or *v*. Below I argue that it cannot be the specifier of Pred. This is substantiated by the fact that individual-level Pred and stage-level Pred can be successfully conjoined, as shown below (here I am inspired by Beavers et al.'s (2008) argument for the source of possession relations; refer to section (2.2.2) of Chapter 2 for further details.).

(3.48)   Context: Sarah is getting married soon and is stressed out about it.

ʕɪnd   saːrah   [d̪ʊʁuːt̪   mɪn   əz-zawaːd͡ʒ]   w-[ʕaːjɪlah   maː   tɪfakkɪr   tɪsaːʕɪd-haː]

at   Sarah   stresses   from   the-marriage   and-family   not   think   help-her

'Sarah has [stress over marriage] and [a family that doesn't care to help.]'

Note that *Sarah* is the possessor of two predicates: the stage-level predicate with the psychological-state possession, and the individual-level predicate with the kinship possession. The two Pred heads involved in the structure of (3.48), needless to say, have independent projections with different structural descriptions (Kratzer, 1989; Adger and Ramchand, 2003; Myler, 2016), which questions the adequacy of having the possessor sit in the specifier of the Pred head. Instead, the arguments of the conjunction phrase must be the maximal projection of the predicate heads[11]. Hence, it can be quite clear that this would then indicate that the coordination phrase sits in the complement of *v* and takes two PredPs as its coordinate arguments. What this entails with regards to the possessor is that it is introduced outside the complement of *v*.

There is reason to argue that the possessor is introduced in the specifier of *v*P as depicted in (3.47)[12]. If Cinque (1999) is correct that the projection hosting adverbs denoting continuative aspect occupies a position higher than the verb projection in the structural hierarchy,

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[11]My claim here is based on standard assumptions about the syntax of coordination, in which the first coordinate occupies the specifier position of Conj and the second coordinate occupies the complement position of Conj (Munn, 1993; Benmamoun, 1992).

[12]Kratzer (1989) argues that this position is occupied by the subject of a stage-level predicate and that the subject of an individual-level predicate must be higher, as in the specifier of TP (IP in her analysis). While I agree with her that in either case, the subject is outside the complement of *v*, I do not follow her in proposing that the possessor occupies the specifier of TP in Arabic, as that would make wrong predictions about certain properties such as nominalization, as will be discussed in Chapter 5.

it is expected that these adverbs would naturally precede the possessor. This is indeed borne out by the data in (3.49)[13].

(3.49)   a.   kaːn   baːgi   ʕɪnd   saːmi   əχtɪbaːraːt

             was.3sg   still   at   Sami   exams

             'Sami still had exams.'

   b.   * kaːn   ʕɪnd   saːmi   baːgi   əχtɪbaːraːt

             was.3sg   at   Sami   still   exams

   c.   * baːgi   kaːn   ʕɪnd   saːmi   əχtɪbaːraːt

             still   was.3sg   at   Sami   exams

Note that the difference between the sentences in (3.49a) and the other two is in the scope of the continuative adverb *baːgi* 'still'. As Cinque (1999) points out, adverbs of this sort take scope over verbal projections. In (3.49b), the adverb seems to be taking scope over PredP, which is too narrow, and in (3.49c), the scope is too wide, which is beyond the domain of aspect-denoting adverbs, as pointed out in Cinque (1999). Aside from that, if my analysis that the possessor is first merged in the specifier of vP is correct, the adverb taking scope over the whole vP falls out naturally and is supported by the data in (3.49). I will then assume that the v head requires a DP element in its specifier to satiate the possessor thematic role passed up by the complement of v. There is reason to argue in favor of this assumption based on work by Hale and Keyser (1993, 2002). That is, note that the complement of v is a predicate denoting an eventuality in which something is possessed. This predicate requires a "subject" to serve as the possessor of the possessed predicate. The specifier of vP can be argued to be forced by predication.

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[13]It should be pointed out that the data in (3.49) involves a v-to-T movement of the copula. I will not motivate this movement operation here since it has been argued for elsewhere. For further discussion, see Benmamoun (1992); Chung and McCloskey (1987); Fassi Fehri (1993); Sproat (1985). to name a few

Moreover, merging the possessor in the specifier of vP holds a certain intuitive appeal when considered within the context of Case-marking. As pointed out in the previous subsection, the presence of the preposition is motivated for Case-marking purposes. To my knowledge, v is not equipped with Case-marking capabilities; hence, the necessity of a preposition is justified. Merging the possessor in a specifier of a Case-marking projection would leave unexplained the presence of the preposition in possessive expressions marked with either ʕınd or maʕ.

This concludes the discussion of the syntactic position of the possessor in inclusive possession constructions. Before I demonstrate how a possession sentence is built, it is necessary to point out the semantic denotation of elements that have not been introduced yet. Argued above is the fact that the projection hosting the possessor-introducing ʕınd is distinct from that hosting its homophonous LOCATION-introducing counterpart. Similarly, there has to be a way to reflect their distinction semantically. Recall that the genitive phrase in inalienable possession construction takes an individual as its first argument and a relation as its second argument. The same semantics can be adjusted and assigned to ʕınd in possession relations. Accordingly, I follow Myler's (2016) proposal of adding another alloseme to genitive phrases to allow their composition with relations that have existentially closed their second argument. Given that the place at which the possessor in inclusive constructions is introduced is higher than the possessed DP and as a result the argument corresponding to the possessee has been existentially closed by the existential semantics of D[14], the denotation of ʕınd given in (3.50) differs from that of *l-* in (3.43) in the number of open entity arguments of the possession relation.

(3.50) $[\![\text{ʕınd}]\!] = \lambda x_e.\lambda R_{<e<s,t>>}.\lambda e_s.R(x)(e)$

Although the denotation in (3.50) is given for ʕınd, it is also the denotation I am assigning to maʕ. Recall from Table (3.1) that both ʕınd and maʕ have the same distribution with

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[14]See Section (1.2.3) of Chapter 1 for the assumptions about the semantics of determiners.

respect to possession relations, and, as a result, I assume that they have identical semantics despite their disparate realization.

That said, consider now the following tree structure. In this derivation, the possessee is inherently non-relational, which makes it incapable of introducing a relation. This is when the Poss head comes into play, as Barker (1995) argues, and introduces the possession relation that maps the possessee onto its possessor. To illustrate, the nP serves as the input of Poss. Then, the existential semantics of D closes the argument corresponding to the possessee. Because Pred and v are both semantically vacuous, all they do semantically is passing up the denotation of the DP, which still has an open argument of Poss. This open argument is then saturated by the possessor in the specifier of vP. At this point, the meaning of vP is the set of eventualities where there is a house owned by Ali.

(3.51) ʕɪnd   ʕali   beit

at   Ali   house

'Ali has a house.'

vP
$\lambda e_s.\exists x_e.house(x)$
$\wedge Poss(x,Ali,e)$

KP
$\lambda R.\lambda e_s.R(Ali)(e)$

v′
$\lambda y_e.\lambda e_s.\exists x_e.house(x)$
$\wedge Poss(x,y,e)$

K
$\lambda x_e.\lambda R.\lambda e_s.R(x)(e)$
ʕɪnd
at

DP
ʕali
Ali

$v_{\{D\}}$
$\lambda x.x$

PredP
$\lambda y_e.\lambda e_s.\exists x_e.house(x)$
$\wedge Poss(x,y,e)$

Pred
$\lambda x.x$

DP
$\lambda y_e.\lambda e_s.\exists x_e.house(x)$
$\wedge Poss(x,y,e)$

D
$\lambda R_{<e<e<s,t>>>}.\lambda y_e.$
$\lambda e_s.\exists x_e.R(y)(x)(e)$

PossP
$\lambda y_e.\lambda x_e.\lambda e_s.house(x)$
$\wedge Poss(x,y,e)$

Poss$_{\{\}}$
$\lambda P_{<e,t>}.\lambda y_e.\lambda x_e.\lambda e_s.P(x)$
$\wedge Poss(x,y,e)$

nP
$\lambda x_e.house(x)$

n

$\sqrt{beit}$
$\sqrt{HOUSE}$
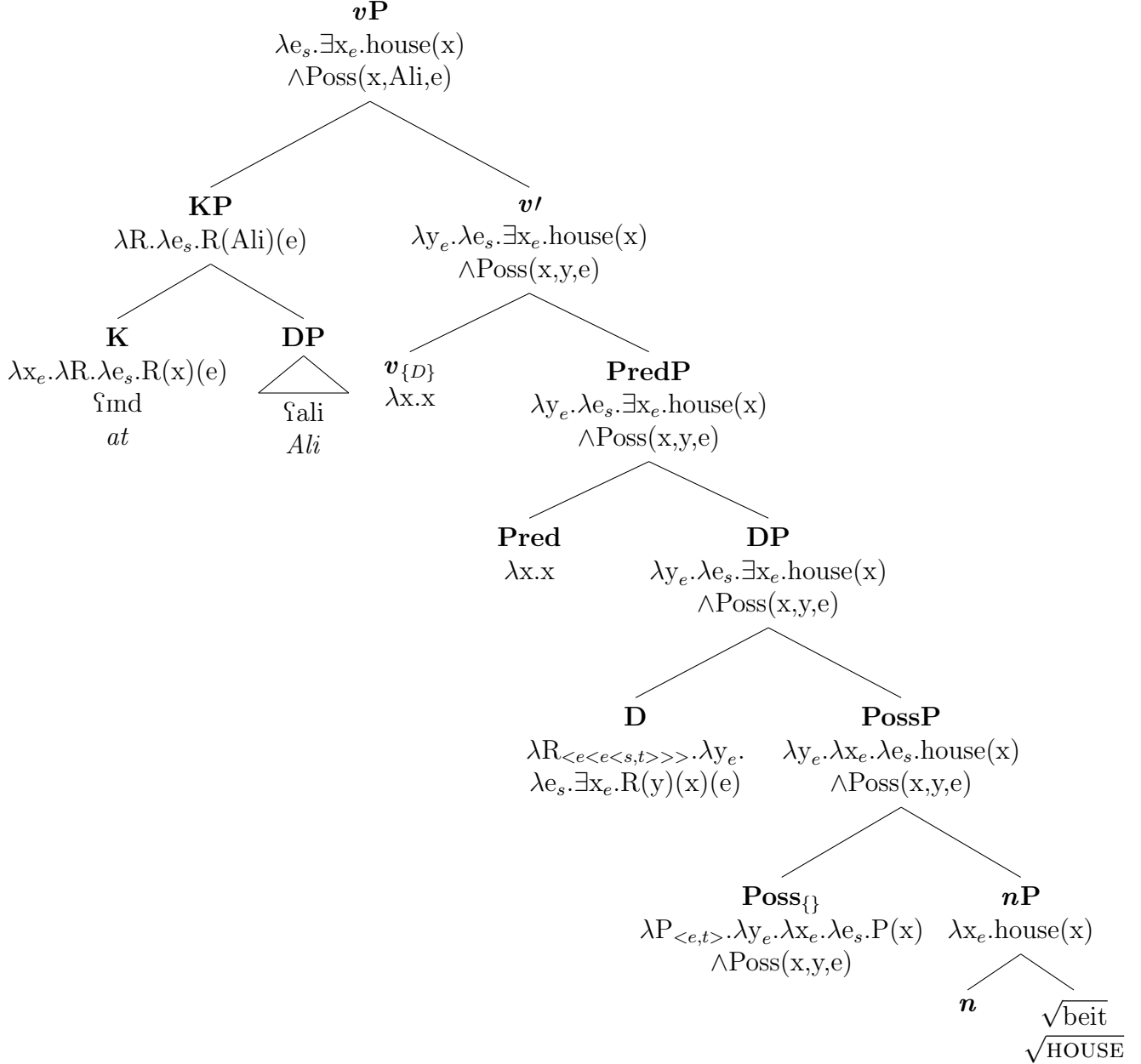
As pointed out in the discussion of Table (3.1), inclusive constructions are dubbed *in-clusive* because they can freely express inalienable and alienable possession relations. The

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tree above illustrates the structure for an alienable possession (ownership), and the following tree illustrates the structure for an inalienable possession (kinship). Note that this structure differs from the previous one in the absence of Poss. As already pointed out, relational nouns contribute the possession semantics, which obviates the need for a relationalizer, such as Poss. Hence, the complement of D is already a relation and can go in for the first argument of D. As before, the meaning of the DP remains unchanged until it combines with the genitive phrase resulting in the set of events in which there is a daughter to whom Ali is related through kinship.

(3.52) ʕɪmd ʕali bmt

at Ali daughter

'Ali has a daughter.'

$\mathbf{vP}$
$\lambda e_s.\exists x_e.\text{girl}(x)$
$\wedge\text{kin-to}(x,\text{Ali},e)$

$\mathbf{KP}$
$\lambda R.\lambda e_s.R(\text{Ali})(e)$

$\mathbf{v\prime}$
$\lambda y_e.\lambda e_s.\exists x_e.\text{girl}(x)$
$\wedge\text{kin-to}(x,y,e)$

$\mathbf{K}$
$\lambda x_e.\lambda R.\lambda e_s.R(x)(e)$
ʕɪmd
at

$\mathbf{DP}$
ʕali
Ali

$\mathbf{v}_{\{D\}}$
$\lambda x.x$

$\mathbf{PredP}$
$\lambda y_e.\lambda e_s.\exists x_e.\text{girl}(x)$
$\wedge\text{kin-to}(x,y,e)$

$\mathbf{Pred}$
$\lambda x.x$

$\mathbf{DP}$
$\lambda y_e.\lambda e_s.\exists x_e.\text{girl}(x)$
$\wedge\text{kin-to}(x,y,e)$

$\mathbf{D}$
$\lambda R_{<e<e<s,t>>>}.\lambda y_e.$
$\lambda e_s.\exists x_e.R(y)(x)(e)$

$\mathbf{nP}$
$\lambda y_e.\lambda x_e.\lambda e_s.\text{girl}(x)$
$\wedge\text{kin-to}(x,y,e)$

$\mathbf{n}$

$\sqrt{\text{bmt}}$
$\sqrt{\text{GIRL}}$
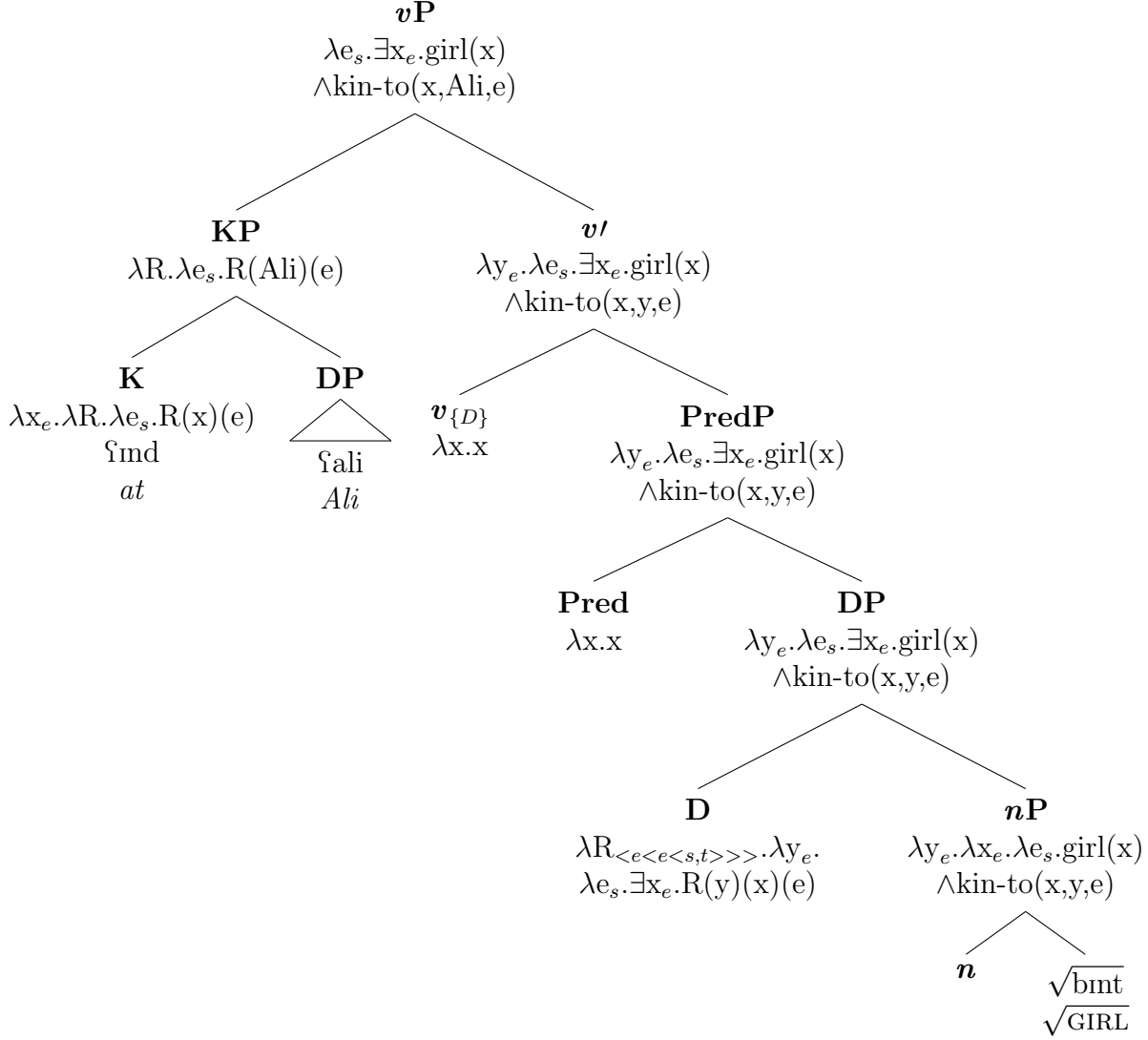
In summary, I have argued that inclusive possession constructions introduce the possessor outside the domain where possession relations are established. The data I have presented here lends support to my claim that the possessor is introduced in the specifier of vP. With respect to the internal structure of the possessed DP, I have argued, following previous literature, that the complement of D varies depending upon the lexical properties of the

noun. If the noun is relational, it inherently introduces a possessor thematic role, and, consequently its maximal projection, nP, can be the complement of D. If, on the other hand, the noun is inherently non-relational, it combines with the relationalizing head Poss, whose maximal projection sits in the complement of D.

3.2.3 Summary

Extending the literature on relational nouns and possessive heads (Barker, 1995, 2019; Partee, 1983, 1999), I have argued in this section that clausal possession relations in Saudi Arabic emanate from two sources: the inherent lexical semantics of the possessed noun (relational noun), or a possessive head dedicated to relationalize possessed nouns that otherwise are non-relational. In the two possessive constructions discussed above, I have proposed two postulates for the place where the possessor is first introduced, from which different predicative possessive expressions are derived. That is, if the possessor is introduced as an argument of the relational n, it instantly closes the open possessor argument introduced by the head noun. The possessed DP in this possessive construction is, at this point, fully interpreted and may be used attributively. Deriving a predicative construction out of this possessed DP requires extracting the possessor through the specifier of DP and moving it away to a higher position. On the other hand, if the possessor is projected outside the possessed DP, namely in the specifier of vP, it yields a clausal possession open to potential alienable-inalienable ambiguity. Put differently, it can be argued that projecting the possessor in the specifier of vP is the elsewhere case. The other position is more specified syntactically, and its distribution is limited to expressing inalienable possession relations only, as argued in Boneh and Sichel (2010). Table (3.2) summarizes these postulates and their consequences.

Table 3.2   Possessor Syntactic Distribution

Possessor Postulate	Marker	Relation	Structure Type
argument of n	l-	inalienable	predicative / attributive
specifier of v	ʕ*ind* / *maʕ*	(in)alienable	predicative

3.3 Chapter Conclusions

In this chapter, I have put forward various arguments in support of the literature on the multiplicity of BE. I have shown that the potential overlap between locative and possessive structures in Saudi Arabic is merely accidental, and contrary to the literature that equates them together, further probing has indicated their independent structures. Moreover, I have claimed that possession constructions in SA differ in the place where the possessor is first merged, and proposed two distinct positions accordingly. These proposed argument structures bear on the predictions of analyses that construe syntax and semantics as independent computational systems.

The discussion in this chapter has concentrated on clausal possession. In the next chapter, I turn to phrasal possession. I will show that while some of the conclusions established in this chapter syntactically account for *l*-marked phrasal possession constructions, there remain some puzzling semantic constraints acting on these possession constructions, and it is one of the primary goals of the next chapter that these constraints are justified and explained.

CHAPTER 4.   REMARKS ON ATTRIBUTIVE POSSESSION

Attributive possession, also known as nominal possession, exhibits relatively the same degree of structural complexity and typological diversity as predicative possession. Despite their inherent similarity in involving some sort of a possession relation between two nominals, attributive possession is categorically distinguished from predicative possession in at least three aspects (Heine, 1997, p.143):

(4.1)   a.   it presents typically presupposed rather than asserted information;

b.   it involves object-like, time-stable contents rather than event-like contents; and

c.   it involves phrasal rather than clausal syntax.

My goal in this chapter is to relate some of the conclusions established in the course of the preceding chapter about predicative possession to structures of attributive possession. More specifically, I argued in the previous chapter that *l*-marked clausal possession is underlyingly an existential BE-based possession construction, with a possessor extraction mechanism deriving the surface linear order. This conclusion bears on the claim that existential sentences inherently require a non-specific indefinite complement (Milsark, 1974). Consider now the prediction made when assuming the conclusions of the previous chapter along with Heller's (2002) claim that Construct State possessives exhibit uniqueness effects. It is predicted that the two nominal possessives in Arabic differ in terms of their semantic contribution. In this chapter, I argue that this prediction is borne out; *l*-marked attributive possession and Construct State nominals differ in terms of their semantic contributions. For lack of a better term, I will refer to *l*-marked attributive possession as Free Genitives. By way of illustration, consider the following data.

(4.2) a. ga:bal-t   ṣadi:g   ʕali   (CS)

met-1SG   friend   Ali

'I met Ali's friend.'

b. ga:bal-t   ṣadi:g   l-ʕali   (FG)

met-1SG   friend   POSS-Ali

'I met a friend of Ali's.'

(4.3) a. garɪ-t   əl-kɪta:b   { l-d͡ʒadi:d / əlli ʔaʕd͡ʒab-ak }   l-ʕali   (FG)

read-1SG   the-book   the-new / that impress-2SG.M   POSS-Ali

'I read the (new book / book that you like) of Ali's.'

b. garɪ-t   (*əl)-kɪta:b   l-ʕali   (FG)

read-1SG   the-book   POSS-Ali

'I read the book of Ali's.'

c. garɪ-t   kɪta:b   ʕali   (CS)

read-1SG   book   Ali

'I read Ali's book.'

Observe that in (4.2), *ṣadi:g* 'friend' has only a specific reading in the Construct State nominal, but can have a non-specific reading in the Free Genitive nominal. Further, the data in (4.3) reveals a constraint imposed on Free Genitives only; note that the matrix nominal *kɪta:b* 'book' in (4.3b) cannot combine with the definite determiner unless it receives modification by either an adjective or a relative clause, as shown in (4.3a).

I proposed to attribute this semantic disparity to two types of effects: uniqueness effects, in the sense of Fodor and Sag (1982), and anti-uniqueness effects, in the sense of Barker (1998). For uniqueness, I follow Partee (1999) and Ouwayda (2012) in arguing that it is contributed by the semantics of the determiner, making Construct State nominals no different in

its distribution than a typical noun. In addition, I argue that the specific interpretation of *l*-marked possessives is contingent on the possessive structure type; extracting the possessor, as in the derivation of clausal possession, removes the specific reading, corroborating Szabolcsi's (1994) analysis for a similar set of circumstances in Hungarian. For anti-uniqueness, on the other hand, I will claim that the source of anti-uniqueness is found within the domain of D, implying that the cardinality of the set denoted by the possession relation must be greater than one ($[\ |R| > 1\ ]$). Due to such specification, the matrix noun cannot combine with the uniqueness-denoting determiner unless it receives restrictive modification. On that account, I argue, along the lines of Barker (1998), that additional modification in definite Free Genitives, albeit syntactically optional, is semantically obligatory to achieve uniqueness.

The structure of this chapter is as follows.

In section 4.1, I provide a cursory exposition of the related research on the criteria established to isolate possession from other possessive look-alike constructions. This is to lay out the assumptions and definitions followed in determining the scope of the proposed analysis. This section can safely be skipped without risking failure to take in the claims put forth as the subsequent sections unfold. It is however thought necessary to spell out the semantic assumptions about possession in attributive possession constructions. In section 4.2, I present Arabic data showing the distribution of possession meanings across the two possessive structures discussed in this work. One thing to note here is the fact that the possession meanings conveyed via Free Genitive constructions are identical to those discussed for the inalienable predicative construction, described in Chapter 3, which is not surprising if the conclusions of the previous chapter are assumed. Construct State possessives have a wider distribution of possession meanings and is not idiosyncratic to the alienable-inalienable distinction, unlike Free Genitive possessives. Next, section 4.3 is the semantic heart of this chapter. It presents empirical data explaining the rationale behind categorizing the distinct semantic contribution of the Arabic possessive nominals into uniqueness and anti-

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uniqueness effects. On the basis of this semantic analysis, section 4.4 demonstrates how meaning channels through the syntactic structure. Finally, in section 4.5, I summarize the main points and conclude the chapter.

4.1 Definitions and Theoretical Considerations

Various parts of the literature (see, for instance, Barker, 2019; Heine, 1997; Peters and Westerståhl, 2013) emphasize the fact that the syntactic device that generates a configuration that properly hosts attributive possession in a given language can also assign the same structure for non-possessive expressions in the same language. This indefinite variability in the interpretation of a seemingly possessive structure has made some linguists state that "a possessive NP may bear any relation whatever to the head noun; this is a great exaggeration, but it is a first approximation that is difficult to improve upon" (Williams, 1981, p.89). Heine (1997, citing Seiler, 1977) illustrates this potential structural ambiguity with the example in (4.4) (Heine, 1997, p.155-156), where the interpretation of (4.4a) can be any of the possible ones in (4.4b).

(4.4)   a. Karls   Haus   (German)

             Karl's House

       b.   i. 'the house that Karl has/owns'

            ii. 'the house that Karl has built'

           iii. 'the house that pleases Karl'

           iv. 'the house in which Karl has lived'

Arabic, and other Semitic languages (Hazout, 2000; Ritter, 1988, 1991; Shlonsky, 2004; Siloni, 1997), can further illustrate a case of structural preservation, wherein attributive possession constructions may not be assigned a dedicated possession-introducing structure. While used for possessive expressions, Construct State nominals in this language family can also serve as the structural description for superlatives and measures, as shown in (4.5)

(4.5) a. ʔafḍal   madiːnah   b.   koʊb   gahwah

           best   city   cup   coffee

           '(the) best city'   'cup of coffee'

Despite the productivity of the syntactic device, the meanings of possession, as argued in Nikiforidou (1991), are not arbitrary, but rather motivated. Further, because properties of possession may not be visible from only looking at the (surface) structure produced by syntax, tracing the motivation for possession, therefore, needs to be independently supported, and the semantics of possession can prove useful in identifying possessive descriptions from the set of expressions that are mapped to one syntactic structure. Accordingly, the goal of this section is to outline the semantic criteria by which possessive expressions are motivated. I will primarily focus on three semantic diagnoses of possession, as discussed in various works (Barker, 2019; Partee, 1983; Peters and Westerståhl, 2013; Vikner and Jensen, 2002): quantification over possessions, primacy of possessors, and freedom. These diagnoses constitute the characteristics of what it takes to carry a possessive reading when possession is not intrinsic. That is, while these properties can manifest themselves in relational nouns, possession relations expressed by relational nouns are inherently established. However, the diagnoses are meant essentially to disambiguate paradigmatic possessives from non-possessives.

4.1.1 Quantification Over Possessions

This property of possession is also known as *narrowing* (Barker, 1995, 2019). What it describes is roughly the fact that quantificational possessors have a restricted quantificational scope such that what at issue are only the elements relating to the possessee in the relevant possession relation. By way of illustration, consider the following example (from Barker, 2019, p.18).

(4.6) Most planets' rings are made of ice.

Barker notes that checking the truth or falsity of (4.6) would require examining only the planets that have rings. Barker further argues that narrowing is an automatic and contextually dependent type of accommodation, in which the listener supplies the appropriate interpretation given the intention of the speaker. In Peters and Westerståhl's (2006) words, it is a "local presupposition accommodation in the possessor's restriction argument" (p.264). Moreover, narrowing is found to be restricted to attributive possession only (Barker, 1995, 2019); predicative possession, as shown in (4.7) (from Barker, 2019, p.19), does not carry narrowing implications. The meaning of (4.7), albeit possessive still, does not show any sensitivity to whether or not planets have rings.

(4.7)   Most planets have rings made of ice.

Peters and Westerståhl (2006, 2013) offer an account to accommodate the sensitivity of nominal possessions to narrowing. They argue that narrowing in English possessives is built into the syntax and semantics. The proposal is motivated by the fact that possessions involve either implicit or explicit quantification, and that quantification is endowed with what is termed in their work as possessive existential import[1].

4.1.2   Freedom

In the beginning of this chapter, I briefly discussed the fact that the meaning of attributive possession can be pragmatically set. This was clearly reflected in the fact that besides the canonical possessive ownership interpretation of (4.4a), multiple other interpretations are also permitted. This property of possessive, according to Peters and Westerståhl (2006, 2013) is known as freedom, defined in (4.8).

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[1]Possessive existential import as defined in Peters and Westerståhl (2006) is the notion that a universal proposition is true as long as the set denoted by the quantified expression is not empty. Formulaically:

$$Q_M(A, B) \implies A \neq \emptyset \qquad \text{(Peters and Westerståhl, 2006, p.123)}$$

(4.8) FREEDOM

> Every possessive DP can be used in a sentence S in a context where that DP's possessive relation is none of the options provided semantically by S but instead comes somehow from the context in which the sentence is used.

<div align="right">(from Peters and Westerståhl (2013, p.29))</div>

Peters and Westerståhl (2013) observe that freedom manifests itself in relational possessed nouns as well. Consider the following data (from Peters and Westerståhl, 2013, p.29).

(4.9) a. As a young lawyer, I was really learning to do cases from fathers of mine around the country.

b. Dozens of fossils of a graduate student's are missing.

The meaning of each sentence in (4.9) is pragmatically supplied: in (4.9a), *fathers* can refer to individuals the lawyer represents, and in (4.9b), *fossils* can refer to those studied by the graduate student.

Freedom can be a useful diagnosis for ascertaining possessive expressions and distinguishing them from their possessive look-alike counterparts. The system developed in Peters and Westerståhl (2006, 2013) takes freedom into account. The semantic rule they proposed for possession inserts a relational parameter that is to be contextually closed.

4.1.3 Primacy of Possessors

The third characteristic property separating possessives (specifically post-nominal possessives) from non-possessive expressions is primacy of possessors (Barker, 2019; Peters and Westerståhl, 2013). Roughly, the scope of quantified possessor DPs must be wide enough to take in the possessive relation. Peters and Westerståhl argue that this scope taking is a by-product of the fact that for possessive DPs to quantify over sets of possessions, it is a nec-

essary condition that possessors be specified. To illustrate, consider the following examples (from Peters and Westerståhl, 2013, p.27).

(4.10)   children of two mothers

Peters and Westerståhl argue that only when the scope of the possessor is wide enough to quantify over the possession relation does the expression have a possessive reading. By this criterion, Peters and Westerståhl point out that only the non-relational reading of (4.10a) is a paradigmatic possessive. To illustrate, (4.10) is ambiguous between the relational reading and a non-relational one. In the relational reading, children have two mothers apiece (e.g. birth mother and adoptive mother). This reading gives a narrow scope of the quantified possessor. The other reading, which is the paradigmatic possessive reading, as Peters and Westerståhl argue, requires no filial relation. The context provided in Peters and Westerståhl (2013) has mothers be assigned to chaperone school children. To interpret this DP with this possessive reading, Peters and Westerståhl argue that the possessor *two mothers* must have a wide scope, which correctly yields the reading where two chaperons are in charge of children.

Similarly, Barker (2019) shows the effect of wide scope on binding. Consider the following examples (from Barker, 2019, p.17).

(4.11)   a. One person from every city hates it.

         b. One sibling of every celebrity resents her fame.

         c. Every celebrity's siblings resent her fame.

To illustrate the point of interest, Barker uses the non-possessive example in (4.11a) to show that the quantificational element *every city* takes wide scope over the whole DP, and it also binds the pronoun *it*. The same behavior repeats itself in the possessive examples in (4.11b&c). Barker points out that while the standard Quantifier Raising approach prohibits quantificational DPs to raise out of their containing DP (Heim and Kratzer, 1998; Büring,

2004), modifying prepositions can provide an adjunction site within the DP for the quantifier (Heim and Kratzer, 1998). With respect to the prenominal possessive in (4.11c), this strategy does not work. Ruys (2000) captures this phenomenon in his generalization, which states that if A takes scope over B and is contained in C, which also binds B, then A can bind B. Barker notes that Ruys's generalization permits the quantified possessor in (4.11) to bind the pronoun considering that the conditions are all met.

4.1.4 Summary

The main point of this section was to emphasize the notion that syntax needs not to dedicate a specific structure to a specific property; rather, it may recycle structures to express different properties. That possessive structures can be implemented in deriving non-possessive expressions makes the semantic tests described above valuable not only for identifying which structure is possessive, but also for which possessive structure is paradigmatically possessive.

4.2 Attributive Possession Distribution in Saudi Arabic

Just as for clausal possession, attributive possession in Saudi Arabic varies in the syntactic forms in which they appear, and onto which the meaning of possession relations are mapped. In Table (4.1), I show the distribution of possession relations expressed attributively in SA. This taxonomy is based greatly on Vikner and Jensen's (2002) map of possessive meanings, often discussed in various pieces of literature.

Table 4.1   Attributive Possession Distribution

Possession Relation	Construct State	Free Genitive
Kinship	OK	OK
Body Parts	OK	OK
Part-Whole	OK	OK
Agentive	OK	OK
Physical Possession	OK	*
Ownership	OK	*
Other	OK	*

It should not come as a surprise that the distribution of Free Genitive nominals is limited to inherent and agentive relations only. As argued in the previous chapter, inalienable predicative possession is derived from attributive possession, and, therefore, it is expected that they have an identical distribution. In what follows, I provide evidence substantiating Table (4.1). It should be pointed out that the following data involve modifying elements. These modifiers are necessary for the grammaticality of definite Free Genitive possessions. A more in-depth discussion will be provided in the next section as to why they are required.

Consider first the inalienable possession relations in (4.12)-(4.14).

(4.12)   Kinship

    a.   walad   ʕali   l-ʔawwal

           child   Ali   the-first

           'Ali's first child'

    b.   əl-walad   əl-ʔawwal   lɪ-ʕali

           the-child   the-first   POSS-Ali

           'The first child of Ali's'

(4.13)   Body Parts

    a.   ʔɪbhaːm   saːrah   əl-ʔeɪman

           thumb   Sarah   the-right

           'Sarah's right thumb'

    b.   əl-ʔɪbhaːm   əl-ʔeɪman   lɪ-saːrah

           the-thumb   the-right   POSS-Sarah

           'The right thumb of Sarah's'

(4.14)   <u>Part-Whole</u>

    a.   saːħıl   maṣr   əʃ-ʃargi

           coast   Egypt   the-east

           'Egypt's east coast'

    b.   əl-saːħıl   əʃ-ʃargi   lı-maṣr

           the-coast   the-east   POSS-Egypt

           'The east coast of Egypt'

Observe that SA makes no distinction between the grammaticality of Construct State nominals and that of Free Genitive with respect to expressions of inherent possession relations [2]. Inalienable relations are found in both constructions as shown in Table (4.1). Further, this is also consistent with the analysis proposed in the previous chapter that relational nouns can project their possessors in an *l*-headed Genitive phrase.

Parallel to the inherent possession relations are agentive possession relations. To illustrate, consider the following examples.

(4.15)   <u>Agentive</u>

    a.   kıtaːb   ʕali   əl-d͡ʒadiːd

           book   Ali   the-new

           'Ali's new book'

    b.   əl-kıtaːb   əl-d͡ʒadiːd   lı-ʕali

           the-book   the-new   POSS-Ali

           'The new book of Ali's (that he authored)'

---

[2]Neither do many languages, as far as I am concerned. In English, for example, prenominal and postnominal genitives behave alike when the possessee is relational (Barker, 2019). Consider *John's brother* and *a brother of John*. *Brother* is relational and hence the two constructions are grammatical.

To the extent that Ali in (4.15) is the author of the book, expressing this relation in either construction is grammatical. It must be stressed however that while the Construct State (4.15a) allows the agentive reading along with many other pragmatically supplied interpretations (as pointed out above), the Free Genitive (4.15b) yields it as the only natural reading. Put in another way, non-relational possessed nouns pattern with relational nouns with respect to surfacing in a Free Genitive construction if the possessor carries an agentive interpretation; otherwise, they relate to their possessors in Construct State constructions. This is shown in possession relations such as ownership and physical possession, as illustrated below.

(4.16) <u>Ownership</u>

a. saːʕat   saːmi   l-ʁaːlɪjah

    watch   Sami   the-expensive

    'Sami's expensive watch (that he bought)'

b. * əs-saːʕah   əl-l-ʁaːlɪjah   lɪ-saːmi

    the-watch   the-expensive   POSS-Sami

    'The expensive watch of Sami (that he bought)'

(4.17) <u>Physical Possession</u>

a. ʕaṣa   ʕali   əl-kabiːrah

    stick   Ali   the-big

    'Ali's big stick (that he's holding)'

b. * əl-ʕaṣa   əl-kabiːrah   lɪ-ʕali

    the-stick   the-big   POSS-Ali

    'The big stick of Ali's (that he's holding)'

Both ownership and physical possession relations are two instances of what Vikner and Jensen call *control* relations, the idea of which is such that an animate object has some sort

of control over an inanimate object. Insofar as only relational nouns and nouns involving an agentive element can participate in Free Genitive nominals, the grammaticality contrast in (4.16) and (4.17) is expected; control (or alienable) relations are not licensed to surface in Free Genitive constructions.

Similarly, other possession relations, including (and not limited to) diseases, psychological states, and abstract properties, pattern with control relations in their grammaticality. Consider the following sets.

(4.18) Disease

  a. ṣʊdaːʕ ʕali əl-mʊzmɪn

    headache Ali the-chronic

    'Ali's chronic headache'

  b. * əṣ-ṣʊdaːʕ əl-mʊzmɪn lɪ-ʕali

    the-headache the-chronic POSS-Ali

    'The chronic headache of Ali'

(4.19) Psychological State

  a. galag ʕali əz-zaːjɪd

    stress Ali the-excessive

    'Ali's excessive stress'

  b. * əl-galag əz-zaːjɪd lɪ-ʕali

    the-stress the-excessive POSS-Ali

    'The excessive stress of Ali'

(4.20) Abstract Property

  a. ʔɪχlaːṣ saːrah fi əl-ʕamal

    dedication Sarah in the-work

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'Sarah's dedication to (her) work'

b. * əl-ʔɪχlaːṣ   fi   əl-ʕamal   lɪ-saːrah

the-dedication   in   the-work   POSS-Sarah

'The dedication to the work of Sarah'

What the relations in (4.18)-(4.20) have in common with the control relations in (4.16) and (4.17) is the absence of the relationality factor; that is, the possessed noun in each of these expressions is non-relational, and non-relational nouns are incompatible with *l*-marked possessives.

To summarize, to the extent that only relational possession nouns (including agentive meanings) are licensed in Free Genitive constructions, SA makes a syntactic distinction between alienable and inalienable nominal possession relations. The grammaticality patters observed in this section parallel those discussed in the previous chapter; if clausal possession of inalienable relations can be derived by extracting the possessor from the possessed DP, the possession meanings permitted in *l*-marked clausal possession are expected to be identical to the ones in Free Genitive nominals. In the next section, I show two semantic properties of Free Genitive nominals that categorically distinguish them from Construct State nominals.

4.3   Semantic Differences

In the previous section, I showed that Construct States and Free Genitives differ with respect to the element of relationality; possessive expressions can surface in Free Genitive nominals only if the possessed noun is inherently relational or connotes a result of creation. If this condition is not met, the possession relation can be expressed in a Construct State construction, which permits all sorts of possession relations regardless of their alienable-inalienable specifications. In this section, however, I aim to dive into the core of the puzzle associated with the Free Genitive nominals and illuminate two semantic properties: non-specificity and anti-uniqueness. Separate subsections will be devoted to discussing each of

these aspects. In subsection (4.3.1), I show that the two nominal possessive constructions in Arabic differ in terms of specific/non-specific semantic contribution. Then, in subsection (4.3.2), I argue, along similar lines to Barker (1998), that Free Genitive possessives exhibit anti-uniqueness effects, requiring that the property denoted by the noun must not be a singleton set. I show that this condition justifies the semantically obligatory restrictive modification in definite Free Genitive possessives.

4.3.1 Specificity Effects

The question of what makes a DP specific has been asked too often in the literature to be overlooked, and various attempts have been made to define specificity based on how it manifests itself. For example, Farkas (1994) defines three classes of specificity: epistemic, which, in the sense of Fodor and Sag (1982), denotes an entity in the mind of the speaker; partitive, which interprets a specific DP as part of a previously introduced discourse (Enç, 1991); and scopal, which takes a specific DP to be one that has wide scope over other contextually present operators (Enç, 1991). Scopal specificity can be argued to be the most wide view in the literature, and, for present purposes, it will be mostly implemented in the discussion below.

Marking specificity differs cross-linguistically. Languages that encode specificity morphologically, such as Turkish (Enç, 1991) Persian (Karimi, 1990), and Lillooet Salish (Matthewson, 1998) provide a stronger, and rather easier, contrast between specific and non-specific DPs. Other languages, such as English, may turn to adjectives, like *certain* and *particular*, (Enç, 1991). Nonetheless, possessive DPs can potentially provide an environment that allows specificity to show its effect structurally. Languages of this sort include English (Barker, 1998; Szabolcsi, 1994), Hungarian (Szabolcsi, 1994) Hebrew (Heller, 2002), and Arabic, as I will show below.

My goal in this section is to show that the two possessive constructions in Arabic discussed above involve distinct specificity semantics. I show that Free Genitive possessives are

ambiguous between specific and non-specific readings whereas Construct State possessives are only specific. This distinction will be illustrated using definite possessor, where uniqueness effects are easily identified. Furthermore, I will show that the specific reading found in Free Genitives is contingent on the possessive structure being attributive. Extracting the possessor, as in the derivation of clausal possession described in Chapter 3, removes–as a by-product–the specific reading of the head, an outcome that lends support to Szabolcsi's (1994) generalization for a similar state of affairs in Hungarian.

Marking specificity in possessive DPs in Arabic does not exceptionally differ from how it is done in languages that contribute distinct specificity semantics to different possessive structures. Consider English as an example. Szabolcsi (1994) shows that the specificity of a possessee in English is sensitive to whether its definite possessor precedes it or follows it, as illustrated in the following examples (from Szabolcsi, 1994, p.42).

(4.21)   a.   I haven't read Chomsky's poem.

         b.   I haven't read a poem of Chomsky's.

Szabolcsi argues that at least one poem, written by Chomsky, would render (4.21a) felicitous. Such commitment, she argues, is not found in (4.21b); the speaker may be skeptical that Chomsky has in fact written any poem or that there is a specific poem authored by Chomsky that they have not read. Similarly, specificity effects interact with universal quantifiers. Szabolcsi observes that the first sentence in (4.22) (from Szabolcsi, 1994, p.43) has a specific reading only; it is true only if everyone has read the same poem. By contrast, different poems by Chomsky can also make the second sentence true.

(4.22)   a.   Everyone has read Chomsky's poem.

         b.   Everyone has read a poem of Chomsky's.

In the context of Arabic, the possessor always follows the possessee regardless of the possessive construction. However, a different mechanism of encoding specificity, which, nonethe-

less involves distinct syntactic structures (as opposed to morphological marking) is utilized. Possessive DPs with a definite possessor invariably have a specific (or rather a contextually unique) reading when the hosting structure is a Construct State, which may arguably be attributable to Definiteness Spread, which roughly states that the definiteness feature on the subject of a Construct State determines the definiteness of the whole nominal phrase (Borer, 1984; Ritter, 1988, 1991; Siloni, 1997, among others), but may have a non-specific reading when the hosting structure is a Free Genitive. Consider the following examples.

(4.23) a. maː   gɪd   gareɪ-t   gaṣiːdat   t͡ʃomɪski

            not   PERF   read-1SG   poem   Chomsky

            'I have not read Chomsky's poem.'

        b. maː   gɪd   gareɪ-t   gaṣiːdah   l-t͡ʃomɪski

            not   PERF   read-1SG   poem   POSS-Chomsky

            'I have not read a poem of Chomsky's.'

The meanings assigned to (4.23) are identical to their counterparts in (4.21). The first sentence has only a specific interpretation of the possessee, whereas the second sentence has a specific and a non-specific readings. Note also that the specific/unique reading is characterized by the fact that it takes scope over the negation. By way of illustration, although specificity in the Arabic examples interact with definiteness in the Construct State possessives, the operator that binds *poem* must take wider scope to denote uniqueness or specificity. The result of ordering the scope binders in this way yields one interpretation for the Construct State example in (4.23a) and two for the Free Genitive example in (4.23b), as shown in (4.24) and (4.25), respectively.

(4.24) LF for (4.23a)

        $\iota(x)$, such that x is the contextually salient poem that Chomsky has authored and I have not read x.

(4.25)   LF for (4.23b)

    a. $\exists(x)$, such that x is a specific poem that Chomsky has authored and I have not read x.

    b. $\neg\exists(x)$, such that x is any book that Chomsky has authored, and I have read x[3].

Moreover, the interaction between specificity and universal quantifiers is likewise identical to the one observed in Szabolcsi (1994) for English. Consider the Arabic version of (4.22).

(4.26)   a.

gɪd	gara	kʊl	waːħɪd	gaṣiːdat	t͡ʃomɪski
PERF	read	every	one	poem	Chomsky

'Everyone has read Chomsky's poem.'

    b.

gɪd	gara	kʊl	waːħɪd	gaṣiːdah	l-t͡ʃomɪski
PERF	read	every	one	poem	POSS-Chomsky

'Everyone has read a poem of Chomsky's.'

Like (4.22), the sentences in (4.26) exhibit different specificity effects: *poem* in (4.26a) is a unique entity, and the sentence is true only if everyone has read the same poem; (4.26b), however, beside the specific reading, permits the reading where everyone has read a different poem.

What the Arabic data given so far indicates is the fact that Free Genitive constructions differ from Construct States in involving a non-specific reading of the head noun. Although the added interpretation can potentially result in ambiguity, it provides the necessary semantic description for clausal possession. That is because clausal possession inherently requires a non-specific complement (Szabolcsi, 1994; Partee, 1999), and if *l*-marked clausal possession

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[3]This expression is equivalent to "$\forall(x)$, such that if x is any poem that Chomsky has authored, I have not read x". The point of using the existential operator and not the universal operator in the example above was to show that the specific reading of *poem* disappears when negation takes wide scope over the the existential binder.

has its source in an attributive possession, as argued in the previous chapter, the mechanism through which the specific reading in (4.27b) is eliminated needs to be explained.

(4.27) a.   fataħ-t $[_{DP}$ lɪ-l-beit   baːb]

            opened-1SG   POSS-the-house   door

            'I opened a door of the house.' (specific and non-specific)

        b.   lɪ-l-beit$_i$ $[_{DP}$ t_i baːb   maftuːħ]

            POSS-the-house   door   open

            'The house has a door open.' (only non-specific)

Note that the specific reading of *door* is only available when the possession construction is attributive. The contrast in (4.27), it turns out, is predicted by Szabolcsi's (1994) analysis for Hungarian possession sentences[4]. Szabolcsi observes that Hungarian possessed DPs requires possessor extraction to be non-specific, as shown below (based on Szabolcsi, 1994, p.43).

(4.28) a.   Nem   olvas-t-ad   [Chomsky-ϕ vers-é-ϕ-t]

            not   read-PAST-2SG   Chomsky-NOM poem-POSS.3SG-ACC

            'You haven't read Chomsky's poem.' (specific)

        b.   Chomsky-nak$_i$ nem   olvas-t-ad $[t_i$ t_i vers-é-ϕ-t]

            Chomsky-DAT   not   read-PAST-2SG   poem-POSS.3SG-ACC

            'You haven't read any poem of Chomsky's.'(non-specific)

        c.   Mari-nak$_i$ van-nak $[t_i$ t_i kalap-ja-i-ϕ]

            Mari-DAT   BE-3PL   hat-POSS.PL-3SG

            'Mari has hats.' (non-specific)

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[4]Refer to section 2.1.1.1 in Chapter 2 for an in-depth discussion of her account.

Szabolcsi argues that the possessor extraction in clausal possession in Hungarian is required to signal the non-specific interpretation of the possessee, which otherwise would be specific.

Szabolcsi's argument for the obligatoriness of possessor extraction contains the seed for the justification of the contrast in the Arabic data in (4.27)[5]. Note that the non-specific interpretation is always available; it is however the specific reading whose presence is dependent on weather the possessive structure is attributive. Building on the conclusions of the previous chapter, I assume that the the possessed DP in (4.27b) is only non-specific because of two interwoven factors: (i) extracting the possessor from its DP source is obligatory to derive clausal possession; and (ii) Arabic possession sentences are essentially existential, and existential sentences inherently require a non-specific complement, as argued in Milsark (1974).

I turn now to Construct State possessives. One of the challenges to syntactic accounts for Construct State possessives is one that is posed by uniqueness semantics. That is, in the absence of a strong enough context, Construct State possessives exhibit specificity/uniqueness effects. Tracing the source of these effects has been a point of divergence between whether a Construct State nominal is an individual-denoting expression or a property-denoting expression. For example, Heller (2002) argues that it is a referential expression denoting an individual entity. Her argument is received with criticism from Ouwayda (2012), who argues for the opposite view. Here, I agree with Ouwayda's objection to Heller proposal, and although I follow Ouwayda's main argument, I slightly modify some aspects of her analysis so as to capture the facts that have been discussed so far.

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[5]It is worth noting that Szabolcsi's (1994) hypothesis that the need for possessor extraction to derive predicative possession in Hungarian is triggered by specificity effects receives independent support not only from Arabic, as I argue in this section, but also from Quechua and Isbukun Bunun, as shown in Myler (2016).

The crux of Heller's claim is that the uniqueness effects in Construct State possessives are attributable to the construction itself and not dictated by world knowledge. Heller's claim is supported by the following Hebrew data (from Heller, 2002, p.131).

(4.29) a. [$_{\text{CS}}$ ovdey   sifriya   axat]   patxu   be-ʃvita ...
            employees   library.F   one-F   opened   in-strike

            'A library's employees went on strike ...'

        b. [$_{\text{FG}}$ ovdim   ʃel   sifriya   axat]   patxu   be-ʃvita ......
            employees   of   library.F   one-F   opened   in-strike

            'Employees of a library went on strike ...'

        c. aval   ovdim   axerim   hif'ilu   et   ha-sifriya   ka-ragil
            but   employees   others   operated   ACC   the-library   as-usual

            '...but other employees operated the library as usual.'

The continuation (4.29c) to (4.29a) would not refer to the same set of individuals denoted by the Construct State, but rather employees of a different library. Adding the same continuation to the Free Genitive DP (4.29b), however, would denote a different set of employees from the same library. This contrast, Heller argues, reflects the fact that Construct State nominals denote contextually unique entities. Accordingly, she argues that the head noun in Construct State possessives is an entity of type $< e, e >$ that takes a possessor of type $< e >$ as its input and returns a type $< e >$ phrase.

One advantage of this analysis is that it predicts that Construct State nominals are incompatible with definite determiners, which is borne out, as shown below.

(4.30) Hebrew (Heller, 2002, p.128)

(*ha-)galgaley   ha-otobusim
the-wheels   the-buses

'The buses' wheels'

(4.31) Arabic

(*əl-)kafarat   əl-baːṣaːt
the-wheels   the-buses

'The buses' wheels'

While I agree with Heller's intuition about uniqueness effects in Construct State possessives, I also agree with Ouwayda's (2012) objection to Heller's semantic treatment of the possessive construction. Ouwayda points out that the individual approach predicts that Construct State possessives cannot compose with quantifiers or any modifications, a prediction that proves to be wrong, as the following data indicates (from Ouwayda, 2012, p.82-83).

(4.32) a.   kteib   hanna   l-adiːm

             book   Hanna   the-old

             'Hanna's old book'

        b.   kell/aʁlab   wleːd   d͡zaːret-na   ṭwaːl

             all/most   children   neighbor-1PL   tall

             'All/most of our neighbor's children are tall'

Ouwayda argues that the adjective in (4.32a) modifies *Hanna's book*, and not just the head *book*, so the interpretation is such that the book is old relative to Hanna's other books. Similarly, Ouwayda, following Partee (1973), argues that restrictive reading of the possession relation or any complement is obtained by combining the head with its argument before quantifying the head. This requirement is fulfilled in (4.32b); the meaning is such that *children* denotes the set of *our neighbor's children*, and not other children.

Establishing that, Ouwayda, then, argues that the head of Construct State possessives is relational of type $< e, < e, t >>$, which composes with the possessor and returns a predicate that can compose with predicate modifiers or quantifiers. Under this system, uniqueness/specificity effects are contributed by the semantics of the determiner, likening Construct State nominals to canonical nominal predicates. Moreover, the relationality of the head is indicated by the fact that the head is bound, in the sense that it cannot exist independently of another noun. Its boundness can, in some cases, be morpho-phonologically realized. Consider the following examples.

(4.33)   <u>Arabic</u> (based on Ouwayda, 2012, p.86)

      a.   sajjaːrat ↔ Construct State

      b.   sajjaːrah ↔ elsewhere

      'car'

(4.34)   <u>Hebrew</u> (based on Ritter, 1991, p.40)

      a.   beyt ↔ Construct State

      b.   bayit ↔ elsewhere

      'house'

Observe that the Construct State form differs morpho-phonologically from the elsewhere form in both Arabic and Hebrew. This surface alternation can be understood to reflect a distinction in the syntacticosemantic features of the head, a position I am taking here.

The semantic insight behind Ouwayda's analysis is intuitively satisfying; however, Ouwayda admits that her account does not explain the ban on the definite determine in Construct State nominals. For this, she assumes a phrasal movement analysis, following Shlonsky (1997) and Fehri (1999), the specifics of which is described in the subsequent section.

I am very much in agreement with Ouwayda's intuition that the head of a Construct State is relational. However, I slightly adjust her proposed type by (i) adding an eventuality variable to capture the facts noted in Chapter 1; and (ii) giving it a second alloseme for when the head is lexically inalienable. The choice between these two allosemes is, however, not free. Recall that Construct State possessives are insensitive to alienable-inalienable distinction, and although the structure itself is taken to be relational, its relationality does not necessarily entail that its head is inalienable. Accordingly, I propose that the semantics of the head of Construct State should indicate whether the possession relation is alienable or not. By way of illustration, consider the denotations in (4.35) for the predicate 'ʃaʕar' (*hair*).

(4.35)   a. $[\![\text{ʃaʕar}]\!] = \lambda y_e.\lambda x_e.\lambda e_s.\text{hair}(x) \wedge \text{body-part-of}(x,y,e)$

         b. $[\![\text{ʃaʕar}]\!] = \lambda y_e.\lambda x_e.\lambda e_s.\text{hair}(x) \wedge \text{Poss}(x,y,e)$

Note that the denotation for when *hair* is inalienable, (4.35a), is identical to the proposed semantics for inalienable lexical items illustrated in Chapter 3. For the alienable possession in (4.35b), on the other hand, the element contributing the relational semantics emanates from the fact that it is a possession relation. Without this element, the nominal is no longer an argument-taking head, thereby no longer licensed to serve as the head of a Construct State possessive.

To summarize, I have shown above that the two nominal possessive constructions in Arabic differ in terms of their semantic contribution. Construct State nominals denote a specific reading of the possessed noun whereas their Free Genitive counterparts can give rise to the ambiguity between specific and non-specific interpretations. I have argued that extracting the possessor from the possessed DP consequently removes the specific reading of the DP, confirming Szabolcsi's (1994) prediction for the consequences of possessor extraction from Hungarian possessed DPs. Furthermore, I have maintained Ouwayda's (2012) claim that Construct State nominals are relational predicates, whose uniqueness is contributed by the semantics of the determiner, and not inherently structural, pace Heller (2002). The obvious advantage of taking this position is that it demonstrates its empirical adequacy. Additionally, the proposed analysis attributes greater lexical semantic complexity to Construct States than Free Genitives. This is to reflect the fact that expressing possession in Construct States is not restricted, allowing the interpretation of the head to potentially vary between alienable and inalienable meanings, provided the proper lexical semantics.

4.3.2   Anti-Uniqueness Effects

My goal in this section is to argue that Free Genitive possessives in Arabic are subject to a peculiar constraint that renders them incompatible with the definite determiner unless they

receive some sort of modification. This phenomenon was first observed in Jackendoff (1968) to affect partitives and double genitives in English, and was given a detailed explanation much later by Barker (1998), where this phenomenon was termed *anti-uniqueness*. By way of illustration, consider the following examples (from Barker, 1998, p.679).

(4.36) a. *I met the [one of John's friends].

        b.   I met the [[one of John's friends] that you pointed out last night].

(4.37) a. *I met the [friend of John's].

        b.   I met the [[friend of John's] that you pointed out last night].

Both the partitives in (4.36) and the double genitives in (4.37) cannot merge with the definite determiner unless they receive additional modification. Jackendoff claims that partitives and double genitives are inherently indefinite, but modification produces a nominal head that is definite, allowing it to combine with the definite determiner.

These anti-uniqueness effects appear to manifest themselves in Arabic Free Genitives as well. Consider the following data.

(4.38) a. ʁejjar-t   [əl-ʁaṭa   { l-maksuːr / əlli   ɪnkasar }   lɪ-l-d͡ʒawwaːl]
            replaced-1SG   the-case   the-broken / that   broke   POSS-the-phone

            'I replaced the (broken case of the phone / case of the phone that broke).'

        b. *ʁejjar-t   [əl-ʁaṭa   lɪ-l-d͡ʒawwaːl]
            replaced-1SG   the-case   POSS-the-phone

            'I replaced the case of the phone.'

Observe that the grammaticality patterns of (4.38) are identical to those of the English data above; the Free Genitive constructions are incompatible with the definite marker unless the domain of the head is restricted by modification. Anti-uniqueness does not af-

fect Construct State possessives, however, and, hence, imposing a requirement of additional modification is not applicable. Consider (4.39).

(4.39) ʁejjar-t   [ʁaṭa   l-d͡ʒawwaːl]
        replaced-1SG   case   the-phone

        'I replaced the phone's case.'

Furthermore, Barker argues that anti-uniqueness can also show its effect on indefinite possessives in cases where there is any implication of uniqueness. Consider the following example, and note that no additional modification can restore its grammaticality (Barker, 1998, p.710).

(4.40)   * I met the/a mother of John's that you pointed out last night

Arabic Free Genitives are also consistent in patterning with English in this regard. Consider the following example, uttered in a context, in which *Sami* has only one mother (i.e. birth mother).

(4.41)   a.   gaːbal-t   ʔʊm   saːmi   (Construct State)
               met-1SG   mother   Sami

               'I met Sami's mother.'

         b. * gaːbal-t   ʔʊm   l-saːmi   (Free Genitive)
               met-1SG   mother   POSS-Sami

               'I met a mother of Sami's.'

In the absence of a strong enough context, sentence (4.41b) may warrant a response of *"how many mothers does Sami have?"*.

The contrast between the sentences in (4.38) and the ones in (4.41) suggests the impact of anti-uniqueness on Free Genitive nominals only. Further, it also lends support to Barker's

(1998) argument that anti-uniqueness is a semantic matter, and, accordingly, any account for it should stand on semantic grounds. Barker's rationale behind his nearly pure semantic approach stems from the fact that accounts which rely on the distinction between definite and indefinite determiners would fail to explain the data in (4.40) or (4.41). Barker's account for anti-uniqueness in English offers a deep insight to my account for the same phenomenon found in Arabic Free Genitive possessives. In the remainder of this section, I begin by a brief outline of Barker's assumptions about his proposal, and although I do not follow the specifics of his English-specific semantic treatment to accommodate the Arabic data, it is intended to demonstrate how his argument relates to the one I am proposing afterwords.

Barker's account is predicated on assumptions about the Partitive Constraint (Jackendoff, 1977; Barwise and Cooper, 1981; Hoeksema, 1984), whose effect can be shown in the contrast between the expressions in (4.42) (from Barker, 1998, p.681). The partitive Constraint rules (4.42b) out because *both men* differs from *two men* in that the former is quantificationally irreducible.

(4.42)   a.   one of the two men

b.   * one of both men

Building on this notion, Barker takes the semantics of the partitive *of*, as in *two of John's friends*, to be intimately related to the semantics of the double genitive *of*, as in *a friend of John's*. He proposed the following denotations: (4.43a), which is a slightly modified version of the one proposed by Hoeksema (1984), is for partitive *of*; and (4.43b) is for double genitive *of* (possessive-partitive) (from Barker, 1998, p.700).

(4.43)   a. $[\![\ of_{\text{PART}}\ ]\!] \leftrightarrow \lambda x \lambda P \lambda y [P(y) \wedge y < x]$

b. $[\![\ of_{\text{POSS-PART}}\ ]\!] \leftrightarrow \lambda \mathscr{D} \lambda P \lambda y [P(y) \wedge y < \mathscr{D}(P)]$

Observe that Barker's denotations assumes proper partitivity so as to reflect the require-ment that using a partitive is only appropriate when there is proper partitivity, as shown by the contrast in (4.44) (from Barker, 1998, p.703)[6].

(4.44)   a.   two of my books

         b.   # two of my parents

Furthermore, note that (4.43b) is characterized by the fact that the property serving as the argument to the possessor is the same that denoted by the nominal modified by *of*. This semantic identity captures the fact that the overt head noun and the covert nominal are identical. By way of illustration, *tools of John's* is given the following denotation (from Barker, 1998, p.701).

(4.45)   a.   [[of]]([[John's]])] ([[tools]])

         b. $\lambda y[\text{tools}(y) \wedge y < \text{John's-tools}]$

What (4.45b) indicates is that the entities in the domain of *John's tools* are exactly those that constitute proper sets of the set *John's tools*.

Establishing that, we are now in a position to demonstrate why Barker's semantic anal-ysis would not adequately describe anti-uniqueness effects in Arabic Free Genitive construc-tions. The core motivation behind Barker's double-genitive-as-partitive semantic denotation in (4.43b) is predicated on the fact that the overt matrix head noun is semantically identical to the covert nominal in the genitive phrase (i.e. <u>tools</u> *of John's* <u>tools</u>). When it comes to Arabic, Free Genitives do not involve the semantic identity between nominals found in partitives, as shown in (4.46), and, as a result, Free Genitives should not be reduced to partitives.

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[6]Barker (1998) explains and justifies this assumption in section 3.4 of his work. For the purpose of my work, I take his proposal to be adequate, and I offer no further justification for the idea of proper partitivity here.

(4.46) a. kɪtaːb [$_{PP}$ mɪn kʊtʊb t͡ʃomɪski]   (Partitive)

            book   from   books   Chomsky

            'a book of Chomsky's books'

        b. kɪtaːb [$_{KP}$ l-(*kʊtʊb) t͡ʃomɪski]   (Possessive)

            book   POSS-books   Chomsky

            'a book of Chomsky's'

Note that *books* in (4.46b) cannot appear inside the genitive phrase, nor can it be implied, as is the case for English. Additionally, note that the lexical item for the partitive preposition is different from the one for possessive, which can strengthen the position that distinguishes partitives from possessives in Arabic.

Given these differences, one might wonder how to account for anti-uniqueness in a manner that is appropriate for Arabic. To answer this question, we need to make explicit the fact that the nominal head expressed by a Free Genitive possessive must not denote a unique entity. This can be guaranteed by stipulating that the cardinality of the set of entities corresponding to the possessee is greater than one. Incorporating this element would require a slight adjustment to the semantics of the matrix head. Assuming the intuition that indefinites carry an existence entailment (Abbott, 2006; Coppock and Beaver, 2012), I argue that a nominal implies existence if it denotes a non-empty set ([|NP| $\geq$ 1])(cf. Jasbi, 2020, for a similar discussion), and anti-uniqueness if the cardinality of the set denoted by the nominal is greater than 1 ([|NP| $>$ 1]). The discrepancy between these implications manifests itself clearly in the contrast between *l*-marked clausal possession and its nominal counterpart. The clausal possession in (4.47a) implies that owls have at least one beak each, whereas the attributive possession, which exhibits anti-uniqueness effects, implies that owls have more than one beak each, explaining its semantic deviance.

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(4.47)   a.   lɪ-l-buːmah   mɪngaːr   (Predicative)

POSS-the-owl   beak

'Owls have beaks.' (literally: the owl has a beak.)

b.   # masak-t   [mɪngaːr   lɪ-l-buːmah]   (Attributive)

touched-1SG   beak   POSS-the-owl

'I touched a beak of the owl's.'

Although I established in the previous chapter that (4.47) is built on top of attributive possession, anti-uniqueness effects do not persist to the clausal possession construction. This suggests that the semantics of the possessed DP in the derivation of Free Genitives needs to integrate more specifications to reflect the anti-uniqueness implication. Further, because nominals generally denote non-empty sets of entities, and the nominals in the derivation of clausal possession patterns with these nominals, I assume it is trivial to add the existence implication ([|NP| $\geq$ 1]) since this class of nominals has the wider distribution. Therefore, I cling tenaciously to the same assumptions about the semantics of possessed DPs in clausal possessions, described in Chapter 3. For Free Genitives, I argue that the structure involves an obligatory projection dedicated to quantity. This functional projection is QP, as argued in Borer (2005) and Borer and Ouwayda (2010). I propose that the head of this projection contributes the necessary anti-uniqueness implication[7]. Consider the following denotation I give to the head of QP, using Beaver and Krahmer's (2001) trigger operator ∂.

(4.48) $[\![Q]\!] = \lambda R_{<e<s,t>>}.\lambda x_e.\lambda e_s[R(x)(e) \wedge \partial[|R| > 1]]$

One of the intuitive key insights behind (4.48) is that the domain of R is restricted to quantifiable entities only, which correctly predicts that relational mass nouns cannot occur in Free Genitives. Consider the following data.

---

[7]Although the intuition here is clear, the execution can be tricky. For now, I assume that the nominal head is singular. I will leave discussions of bare plurals and the presence of cardinals to a different occasion.

(4.49) a. lɪ-l-χaruːf   ṣuːf   (Predicative)

POSS-the-lamb   wool

'The lamb has wool.'

b. * d͡ʒazzei-t   [$_{DP}$ ṣuːf   lɪ-l-χaruːf]   (Attributive)

sheared-1SG   wool   POSS-the-lamb

'I sheared a wool of the lamb.'

The contrast between the two sentences in (4.49) is predicted by (4.48). Relational mass nouns do not compose with unit-requiring elements, and, hence, they cannot fulfill the quantity condition of the anti-uniqueness implication, rendering (4.49b) ungrammatical.

Before closing, it is worth noting how the semantic analysis carried out above accounts for the puzzle with which we started; namely, why is the definite determiner incompatible with Free Genitive possessives unless they receive additional modification? I argued above that Free Genitives carry anti-uniqueness implication, which is antithetical to the uniqueness implication triggered by definiteness (Abbott, 2006). This is where modification contributes the intermediary semantics needed to achieve the uniqueness implication of the definite article. To illustrate, the presence of a modifier in environments where anti-uniqueness exists is motivated semantically, not syntactically, as pointed out in Barker (1998). This is reflected in the fact that the semantics these modifiers contribute must be restrictive, as shown below.

(4.50) a. batar-u   [$_{DP}$ r-rid͡ʒl   əl-mʊṣaːbah   lɪ-l-mariːḍ]

amputated-3PL   the-leg   the-infected   POSS-the-patient

'They amputated the infected leg of the patient's.'

b. * batar-u   [$_{DP}$ r-rid͡ʒl   lɪ-l-mariːḍ]

amputated-3PL   the-leg   POSS-the-patient

'They amputated the leg of the patient's.'

Note that in (4.50a) uniqueness is achieved by restricting the domain of the set *the patient's legs* via the use of a modifier (*əl-muṣaːbah* 'the infected'), without which the sentence is unacceptable, as shown in (4.50b). The anti-uniqueness implication that the patient had more than just one leg is also warranted by essentially the use of the Free Genitive construction.

Consider now a context where the patient's nose is the part amputated.

(4.51) * batar-u   [$_{DP}$ l-χaʃm   əl-muṣaːb   lɪ-l-mariːḍ]

         amputated-3PL   the-nose   the-infected   POSS-the-patient

         'They amputated the infected nose of the patient's.'

Comparing (4.51) to (4.50a), we can observe that anti-uniqueness is indeed contingent on context and independent of syntax, as claimed in Barker (1998). Note that in spite of the restrictive modifier fulfilling the uniqueness effect, (4.51), nevertheless, fails the anti-uniqueness implication because a typical individual has at most one nose.

To summarize, I have argued above that Free Genitives exhibit anti-uniqueness effects, requiring that the possession relation must not have any implication of uniqueness. I have shown that these effects clash with the implication contributed by definiteness, which explains the obligatory nature of modification (by adjectives or relative clauses) in definite Free Genitives. I proposed that the semantics of relational nouns in Free Genitives more specified in that it integrates the anti-uniqueness implication that the set denoted by the possession relation is not a singleton set (i.e. containing one element at most). This analysis lends support to Barker's (1998) claim that anti-uniqueness is a semantic matter.

4.4 Building Syntactic Structures

The goal of this section is to demonstrate how the components of the two possessive structures discussed in the previous sections are put together in syntactic structures. Subsection 4.4.1 begins by laying out the basic syntactic analyses of Construct State nominals that underlie the proposed structure provided afterwards. Then, in subsection 4.4.2, I reintroduced the structures for *l*-marked possessives sketched in Chapter 3, but I incorporate the semantics for the head of Free Genitive constructions argued for above.

4.4.1 Construct State Possessives

The structure of Construct State nominals exhibit peculiar properties that have received a lot of attention in the generative literature. For present purposes, the scope of this subsection will be restricted to discussing two of these properties; namely, the strict adjacency of the possessor to the possessee, and the syntactic mechanism by which the definiteness feature is checked.

Like Ouwayda (2012), I follow Siloni and Borer (2005) in arguing that a bound morpheme does not spell out unless a lexical morpheme is adjoined to it. One advantage of this analysis is that it partially accounts for the ban on the definite determiner in Construct State nominal. Combining this analysis with the remnant movement analysis of Shlonsky (2004) (and also phrasal movement of Fehri (1999)) yields a coherent picture of not only why the definite determiner is not realized morphologically, but also how the probe-goal mechanism allowing the definiteness feature to be checked takes place. Hence, following these accounts, I assume that the head noun moves to Classifier phrase via head movement, realizing the number feature (Borer, 2005), and yielding the surface linear order of the possession arguments[8]. Moreover, the functional projection (Classifier Phrase), which contains the Construct State

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[8]For further description of the DP projection and an in-depth discussion, see Borer (2005)

head and its argument, subsequently moves to the specifier of DP. To illustrate, I assume the Construct State possessive in (4.52) has the structure below.

(4.52)   galam   saːmi

        pen   Sami

        'Sami's pen'

DP
$\lambda e_s.\iota y_e.\text{pen}(y)$
$\wedge \text{Poss}(\text{Sami},y,e)$

D′
$\lambda e_s.\iota y_e.\text{pen}(y)$
$\wedge \text{Poss}(\text{Sami},y,e)$

D
$\lambda R_{<e<s,t>>}.\lambda e_s.\iota y_e.R(y)(e)$

CLP
$\lambda x_e.\lambda e_s.\text{pen}(x)$
$\wedge \text{Poss}(\text{Sami},x,e)$

CL

n**P**
$\lambda x_e.\lambda e_s.\text{pen}(x)$
$\wedge \text{Poss}(\text{Sami},x,e)$

DP

saːmi
Sami

$n_{\{D\}}$
$\lambda y_e.\lambda x_e.\lambda e_s.\text{pen}(x)$
$\wedge \text{Poss}(y,x,e)$

n

$\sqrt{\text{galam}}$
$\sqrt{\text{PEN}}$
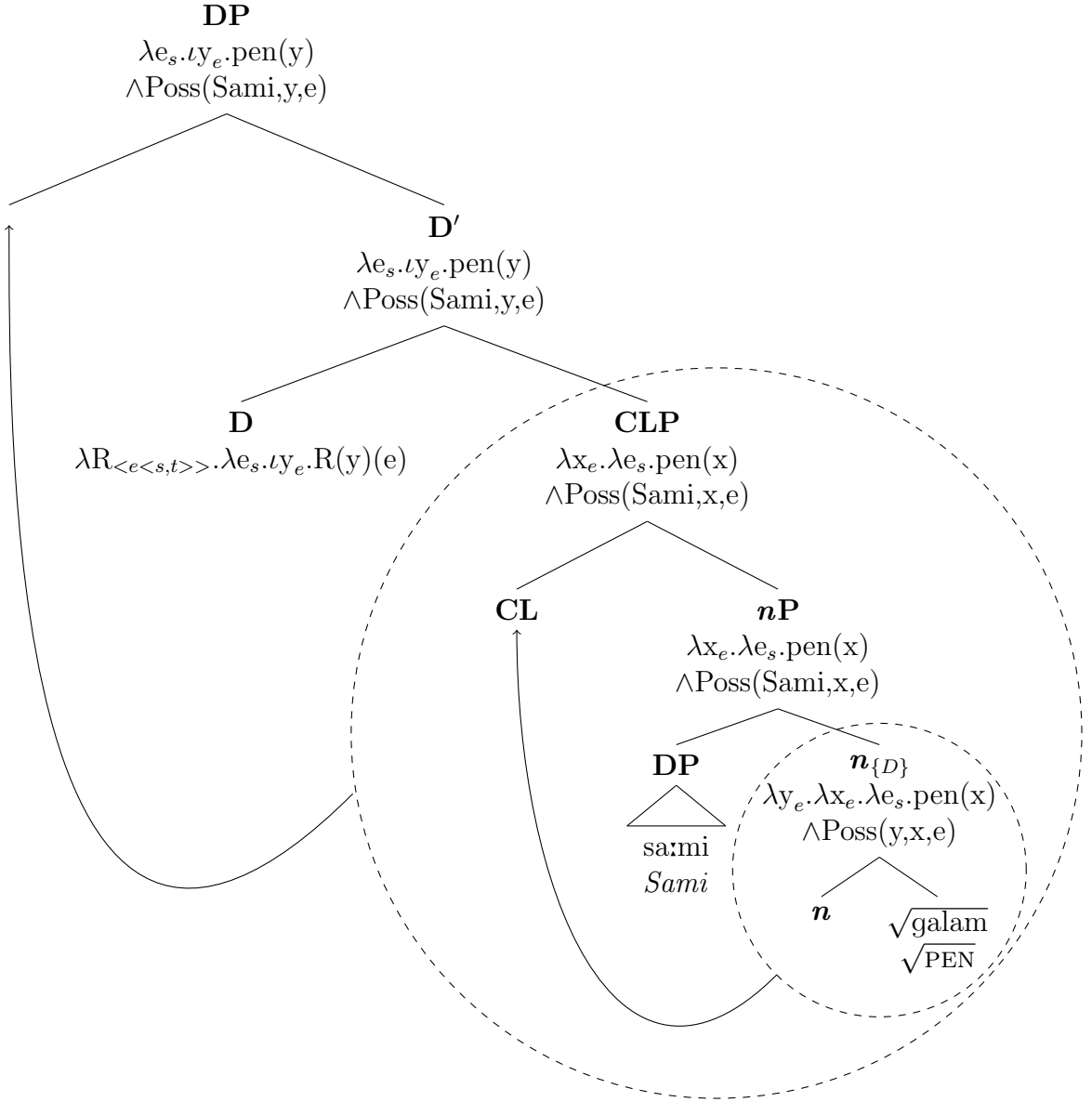
Note that the head, in this structure, is relational, as indicated by the possession relation, and it is not inalienable, which denotes the fact that the possessor corresponds to the set of entities that stand in the *owner-of* relation to the head noun[9]. Moreover, the head is endowed with a $\{D\}$ feature, which introduces the possessor in the specifier of nP. For now, I assume the head CL is semantically vacuous, so the meaning of nP is passed up and composes with the definite semantics of D, yielding a definite description of the argument corresponding to the possessee. Syntactically, the active definite feature on D probes a goal in its domain triggering the movement of the functional phrase to its specifier. At this point, the meaning of this DP is the set of eventualities where there is a unique pen whose owner is Sami.

It is worth noting that definite Construct State nominals are characterized by having the specifier of DP filled by raising CLP. I assume specific indefinites involve a similar movement operation. Indefinite Constructs, however, lack the necessary syntactic features to attract this phrasal movement, and although CLP can potentially raise to the specifier of a higher intermediate projection, it does not move away from the domain of D (Borer, 2005; Ouwayda, 2012)[10]. Further, the open entity argument corresponding to the possessee in indefinite Constructs is closed by the existential semantics of D, repeated as (4.53).

(4.53) $[\![D]\!] = \lambda R_{<e<s,t>>}.\lambda e_s.\exists x_e.R(x)(e)$
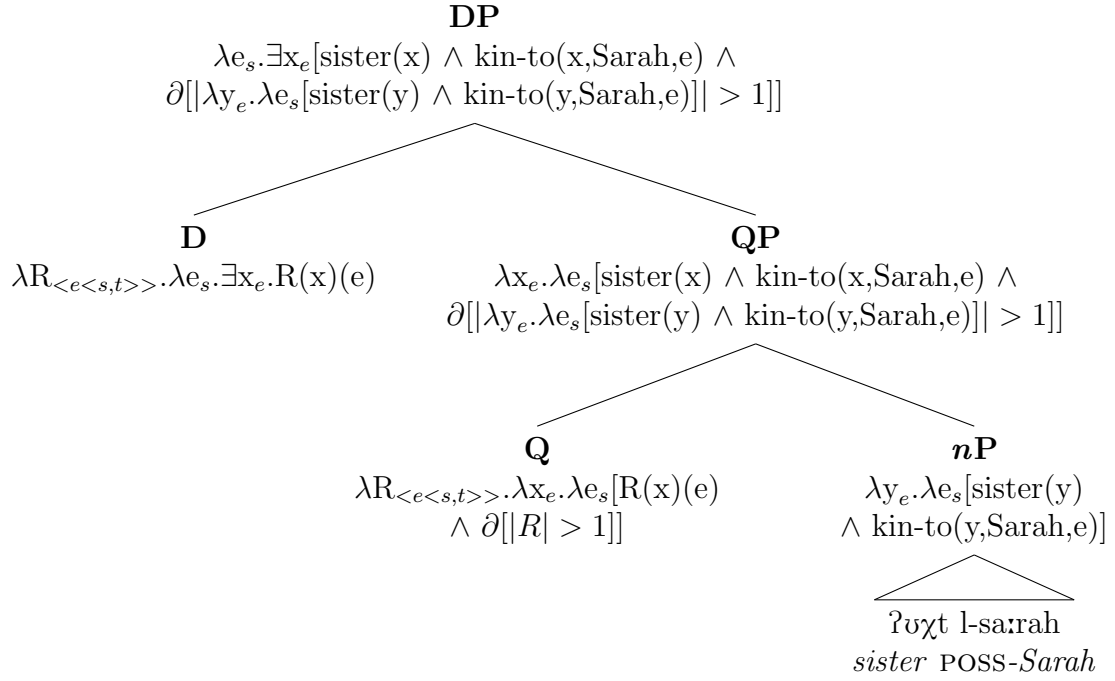
4.4.2   Free Genitive Possessives

In light of the analysis developed so far, the following trees illustrate the semantic composition of a possessed DP leading to a Free Genitive construction (*a sister of Sarah*).

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[9]Recall that sortal nouns, such as *pen*, can participate in an inalienable possession relation (agentive relation) if the possessor is interpreted as the creator of the possessee. The alienability of *pen* in (4.52) is indicated by the element *Poss* in the denotation of the head, as argued above.

[10]Borer (2005) proposes two functional projections above ClP so as to account for materials that appear inside DPs, such as quantifiers and cardinals. It is beyond the scope of this work to motivate these projections. Further discussion can be found in Borer (2005) and Borer and Ouwayda (2010)

(4.54)

DP
$\lambda e_s.\exists x_e[\text{sister}(x) \wedge \text{kin-to}(x,\text{Sarah},e) \wedge$
$\partial[|\lambda y_e.\lambda e_s[\text{sister}(y) \wedge \text{kin-to}(y,\text{Sarah},e)]| > 1]]$

D
$\lambda R_{<e<s,t>>}.\lambda e_s.\exists x_e.R(x)(e)$

QP
$\lambda x_e.\lambda e_s[\text{sister}(x) \wedge \text{kin-to}(x,\text{Sarah},e) \wedge$
$\partial[|\lambda y_e.\lambda e_s[\text{sister}(y) \wedge \text{kin-to}(y,\text{Sarah},e)]| > 1]]$

Q
$\lambda R_{<e<s,t>>}.\lambda x_e.\lambda e_s[R(x)(e)$
$\wedge \partial[|R| > 1]]$

nP
$\lambda y_e.\lambda e_s[\text{sister}(y)$
$\wedge \text{kin-to}(y,\text{Sarah},e)]$

ʔʊχt l-saːrah
sister POSS-*Sarah*

In light of the argument put forth in the previous chapter, note that with the anti-uniqueness implication, we have set the lower bound of the cardinality of the set denoted by the possession relation to be at least 2.

4.5   Chapter Conclusions

The discussion in this chapter can be summarized in two points. First, the distribution of Free Genitive possessives is more restricted than that of Construct State possessives in that they license inalienable possession relations only. Basically, this is a natural consequence of assuming the argument put forth in the previous chapter; namely, *l*- marked inalienable clausal possession has its source in a possessive DP, and, hence, possession meanings expressed in *l*-marked clausal possession were identical to those expressed in Free Genitive constructions. Second, Free Genitive possessives and Construct State possessives differ in terms of their semantic contributions. Free Genitive possessives were shown to trigger anti-uniqueness implication ruling out relational nouns denoting singleton sets. The addition of the anti-uniqueness implication was argued to have the semantic description necessary to

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yield a natural interpretation of Free Genitive possessives. Further support for the added implication comes from the requirement of modification in definite Free Genitive.

CHAPTER 5.   IMPLICATIONS AND CONSEQUENCES

In this chapter, I aim to contextualize my proposal for predicative possession in Arabic, described in Chapter 3, within the broader literature on clausal possession. As a brief reminder, my approach involves the belief that the way a structure is interpreted as possessive is a function of the input of a single syntactic head; that head can either be lexical (i.e. relational noun) or functional (i.e. Poss). The choice between either head is determined by whether the possession relation is alienable or inalienable. One of the advantages of this idea is that it reduces the domain where possession relations are introduced to a minimal syntactic unit, which is argued to be the complement of BE. In the context of Arabic, I have proposed two independent structures to account for predicative possession. One construction posits that predicative possession is obtained by extracting the possessor from an otherwise attributive possession. The other construction contends that the possessor is introduced semantically in the complement of BE but is syntactically merged outside of it. This analysis aligns with Myler's (2016) prediction of the typology of BE-based possession; that is, Myler points out that that possession is introduced low in the structure allows Universal Grammar to choose from the domain of VoiceP as to where to first merge the possessor.

The idea behind introducing possession low in the structure has an intuitive appeal. For one thing, it predicts that cross-linguistic variations between BE-based possession and HAVE-based possession can be pared down to variations amongst the initial merge positions of the possessor, assuming that HAVE-based possession also introduces possession inside the complement of HAVE (Partee, 1999; Beavers et al., 2008; Myler, 2016). In other words, it seems that the substantial difference between BE-based possession and HAVE-based posses-

sion rests in the extended projection of v only, and not in the domain where possession is introduced. Arguing in favor of this view is the primary goal of this chapter.

This chapter proceeds in the following sequence. Section 5.1 aims to sketch the core structural properties of the domain of possession between BE and HAVE languages. After a brief reminder of the assumptions about how possession relations are introduced in the two types of possession, I show that languages categorized on a BE-HAVE basis share the same structural properties of the domain where possession is introduced but differ in the place where the possessor is first merged. I will support this claim by drawing evidence from bilingual speeches; code-switching is argued to be systematic, and intra-sentential code-switching, defined as that which is sentence-bound, is assumed to be constrained to occur in categorically distinct syntactic structures (Mahootian, 1996). In section 5.2, I go over the observable differences between the structural properties of the domain of possession between BE and HAVE languages. I attribute these differences to the syntactic components of the v projection; the possessor in HAVE languages is structurally Case-marked and morphologically marked for agreement, whereas in BE languages, it is neither. Then, section 5.3 builds on the conclusions of the two previous sections and argues that possessor extraction is a BE-based possession property. Finally, section 5.4 summarizes the main points and concludes the chapter.

5.1 Shared Domain

The present approach to Arabic possession described in Chapter 3 is predicated on certain analyses for the typology of possession. The essence of these analyses is reiterated as follows:

(5.1)   Canonically, possession relations are introduced by either a relational noun yielding inalienable possession or else a dedicated possessive head, Poss (Barker, 1995, 2019; Partee, 1999).

The idea behind (5.1) is to motivate possession relations structurally and attribute variations in possession meanings to different syntactic heads. This approach implies a deviation from the the Freeze-Kayne tradition, described in Chapter 2, which takes possession to emerge from certain effects, such as definiteness and animacy. By reducing possession to n and Poss, one can gain a clear understanding of the possession domain, which exists where these heads are initially merged, which, as argued in Chapter 3 of this work, building on prior work, is within the complement of v. Accordingly, the typology of possession is predicted to assimilate into a single category languages that have possession embedded inside the complement to a v. On the basis of this criterion, BE-based possession languages, such as Arabic, and HAVE-based possession languages, such as English, pattern alike in terms of the domain where possessive relations are put together. Their shared domain is sketched in (5.2).

(5.2)   Possession Domain in BE and HAVE Languages
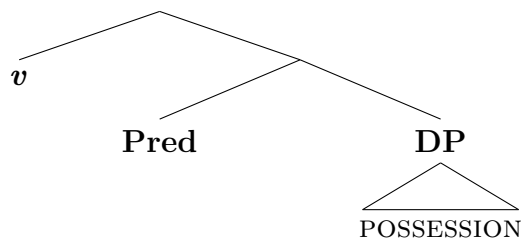
To argue that possession is introduced in the complement of v in BE and HAVE languages is to argue that BE and HAVE contribute nothing to the semantics of possession. This view follows from the generalization stated in (5.1). To illustrate, recall that Partee's (1999) argument for a meaningless HAVE, outlined in detail in Chapter 2 is predicated on the idea that HAVE denotes an *exist* predicate. Semantically, HAVE, in Partee's system, is an argument of the possessed nominal, as illustrated below (5.3) (taken from Partee, 1999, p.3)
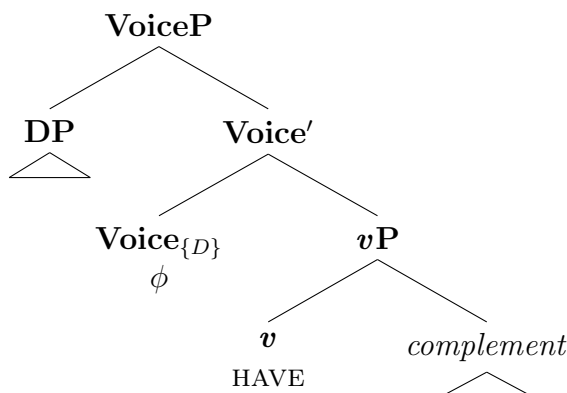
(5.3)   a.   *a sister*: $\lambda P\lambda y[\exists x[\text{sister-of'}(y)(x) \wedge P(x)]]$

b.   *have*: $\lambda R[R(\text{exist})]$

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Building on Partee's analysis, Beavers et al. (2008) draw support for the meaningless HAVE argument from the fact that the complement of HAVE can be a conjunction of alienable and inalienable possessed DPs, as shown in (5.4) (taken from Beavers et al., 2008, p.122), and attributing possessive semantics to HAVE would fail to meet descriptive adequacy in accounting for when the complement is relational or non-relational.

(5.4)   John has a condo and a generous sister who pays all the bills.

From a syntactic point of view, Myler (2016), along the lines of Hoekstra (1994) and Jung (2011), argues that HAVE-based possession is a realization of a transitive BE when Voice introduces an external argument that checks the phi-features on Voice[1]. Consider the following configuration (based on Myler, 2016, p.254).

(5.5)   <u>HAVE-Based Possession</u>

$$
\begin{array}{c}
\textbf{VoiceP} \\
\diagup \quad \diagdown \\
\textbf{DP} \qquad \textbf{Voice}' \\
\triangle \qquad \diagup \quad \diagdown \\
\textbf{Voice}_{\{D\}} \qquad \textbf{\textit{v}P} \\
\phi \qquad \diagup \quad \diagdown \\
\textbf{\textit{v}} \qquad \textit{complement} \\
\text{HAVE} \qquad \triangle
\end{array}
$$

Myler claims that possession is introduced inside the complement of v, and although the argument corresponding to the possessor is semantically introduced inside the complement, it is closed under what Myler refers to as *delayed gratification*, meaning that the Theta-role corresponding to the possessor is assigned to the DP in the specifier of VoiceP. Similar to

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[1]Myler's (2016) proposal may seem to contradict our understanding of Kratzer's (1996) Voice head. However, Myler defines two types of Voice, one of which is an expletive Voice, which projects a specifier but does not give it a Thematic role. Myler's expletive Voice is instantiated in three ways, all of which lead to HAVE: (i) relational HAVE, which generates clausal possession; (ii) locative HAVE; and (iii) experiencer HAVE. For motivation and examples, see chapter 4 of his work.
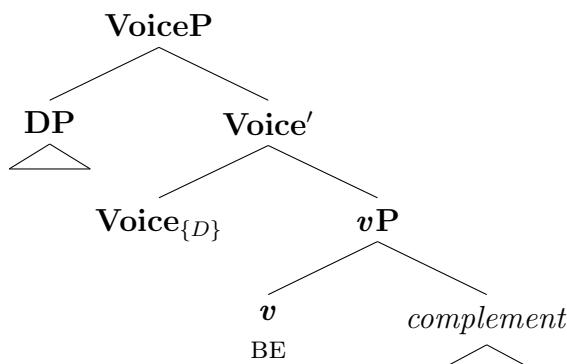
Partee's (1999) analysis, Myler's has the effect of pushing the possession relation found in the complement of v up the tree to the whole verb phrase.

With respect to BE-based possession, the structure starts in a similar manner to that of HAVE-based possession. Recall from the discussion outlined in Chapter 2 that BE-based possession can be expressed in a variety of structures; nonetheless, the common denominator for all of them is that v is a light verb that takes a complement. Myler (2016) argues that the variety of structures in BE-based possession is ascribable to the internal structure of the complement of BE; a BE-based possessive structure is unaccusative if the possession arguments are introduced and semantically closed within the complement of BE, and it is unergative if the possessor is semantically introduced within the BE's complement but syntactically merged outside it. This is illustrated as follows (from Myler, 2016, p.253).

(5.6)   Unaccusative Configuration for Predicative Possession: Leads to BE

$$
\begin{array}{c}
\textbf{VoiceP} \\
\diagdown \\
\textbf{Voice}_{\{\}} \quad \textbf{\textit{v}P} \\
\diagdown \\
\textbf{\textit{v}} \quad \textit{complement} \\
\text{BE}
\end{array}
$$

(5.7)   Unergative Configuration for Predicative Possession: Leads to BE

$$
\begin{array}{c}
\textbf{VoiceP} \\
\diagdown \\
\textbf{DP} \quad \textbf{Voice}' \\
\diagdown \\
\textbf{Voice}_{\{D\}} \quad \textbf{\textit{v}P} \\
\diagdown \\
\textbf{\textit{v}} \quad \textit{complement} \\
\text{BE}
\end{array}
$$
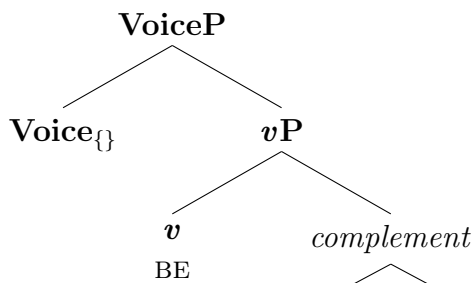
One of the major claims in Myler's analysis is that thematic roles are parts of the semantics of functional heads, which vary in terms of bearing semantic content or being null. In the structures above, Myler takes BE to be thematically inert in the sense that it does not contribute a Theta-role. In other words, BE, in Myler's system, has the semantics of a type-neutral identity function.

My approach to possession in Arabic described in Chapter 3 is consistent with Myler's idea of BE-based possession. The two constructions for predicative possession in Arabic, discussed in Chapter 3, involve a possessed DP that sits in the complement of BE. In one construction, dubbed *inalienable constructions*, predicative possession is expressed in an unaccusative configuration, whereas in the other construction, dubbed *inclusive construction*, it is expressed in a relatively similar structure to the unergative configuration in (5.7). The slight difference between my proposed structure for inclusive possession constructions and Myler's unergative construction is that mine has the possessor merged in the specifier of vP, while in Myler's, it is in the specifier of VoiceP[2].

Establishing the basic components of vP, one can observe that the structure Myler (2016) proposes, and assumed in this work, for HAVE overlaps with the inventory of structures for BE; namely, it is identical to the configuration for unergative BE-based possession. This overlapping structure can make a cross-linguistic prediction. That is, if we find two languages whose clausal possessive expressions differ on the basis of BE and HAVE, and these two languages are in contact, then we expect the rules of grammar to permit code-switching within the complement of v. This is because the general framework assumed in this work takes morpho-phonology to be the realization of the structure produced by syntax, and code-switching, as Bokamba (1989) points out, is an integration of structural facts about the language pair involved. Therefore, if syntax generates the same structure for the complement of v in BE-based possession and HAVE-based possession, there is no reason to assume

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[2]See Chapter 3 for further discussion and motivation.

that code-switching between BE and HAVE languages would be constrained inside this struc-
ture.

It turns out that bilingual speech is replete with cases of this sort. Here, I will illustrate
some naturally occurring Arabic-English code-switching examples extracted from the Twitter
platform using non-developer tools. Consider the following examples[3].

(5.8) a. ʕmd-i   **brodʒɪkt**   w-ɪt-tasliːm   bʊkrah
           at-me   project   and-the-submission tomorrow

           'I have a project and the deadline is tomorrow.'

       b. ʕmd-i   **ʃuːrt**   **heir** ...
           at-me   short   hair

           'I have short hair.'

Observe that the possessed nominals in (5.8) are in English. The key idea to highlight
is that, regardless of how a language's morpho-phonology expresses a possessed DP, the
syntactic derivation of that DP remains the same. Expanding on the conclusions established
in Chapter 3, we can argue that the possession relations are introduced inside the possessed
DPs such that in (5.8a), it is contributed by the Poss head (alienable possession), and in
(5.8b), it is contributed by the relational noun root. The next step is to identify the projection
at which the switch point takes place. Considering that Arabic does not encode indefinite
determiners morphologically, as shown in (5.9), we can argue that the switch point occurs at
the D level because otherwise the possessed nominal in (5.8a) would have preceded by the
English indefinite determiner (i.e. *a project*).

(5.9) fiːh   φ-namɪr   fɪ-l-beit
       EXPL   INDEF-leopard   in-the-house

---

[3]The IPA transcriptions of the English forms were based on how they were expressed in the Arabic
orthography.

'There is a leopard in the house.'

Observe that the nominal in (5.9) is marked with the null morpheme, signalling its indefinite semantics, just like the possessed nominals in (5.8). Nonetheless, the fact that the complement of D is conducive for code-switching is very much supported by the literature on bilingual speech (Dussias and Courtney, 1994; Parafita Couto and Stadthagen-Gonzalez, 2019; Suurmeijer et al., 2020). However, given the claims that this is the domain where possession relations are introduced, we can argue that the complement of D in Arabic and English provides the same structural description for possession independently of whether v is BE or HAVE. In other words, if BE or HAVE had any effect on the structure of possession, we would have expected the possession relations in (5.8) to be HAVE-based since the domain where possession is introduced is realized in a HAVE-based language.

Moreover, if code-switching is facilitated by congruent syntactic structures (Thomason, 2001), it is predicted that a sequence such as (5.10), where the switch point occurs above v, would not be attested.

(5.10)   a.   * ʕmd-i   have a house.   b.   * I   beit.

         at-me   have a house   I   house

        'I have a house.'   'I have a house.'

The fact that (5.10) is unattested follows naturally from the analyses outlined above; though possession relations are introduced similarly in BE and HAVE languages, the extended projection of v differs in these possession types, as shown in the configurations above. As Myler (2016) argues, the possessor in HAVE-based possession is projected in the specifier of VoiceP and carries the phi features specified on Voice. These structural properties are not found in BE-based possession. Therefore, it is reasonable to argue that the morpho-phonology of the possessor depends on whether syntax produces the structural description for HAVE or BE.

To summarize, the claim presented in this section argues that the typological distinctions between BE-based possession and HAVE-based possession can be significantly minimized upon the implementation of the analysis that reduces the domain where possession relations are introduced to the complement of v. This view draws support from analyses that treat BE and HAVE as meaningless light verbs whose role is essentially to sentencify a possessive meaning that would otherwise remain phrase-bounded (Pustet, 2003; Tham, 2013; Myler, 2016). I have also drawn support for this view from bilingual speeches: code-switching was predicted to be licensed between languages with overlapping structures, and it was observed that switching between Arabic, a BE language, and English, a HAVE language, occurs in this domain, confirming the prediction of the structural congruence of the possessed DPs.

In the next section, I discuss the source of variations between BE and HAVE languages and argue that these variations emanate from the extended projection of v.

5.2   Parametric Differences

Established in the previous section was the claim that the core structural properties of possession found in the complement of v do not change as a function of whether v is BE or HAVE. This was taken to suggest that the BE- and HAVE-based possessions are fundamentally similar, which raises the question of where their observable differences originate from. In this section, I argue that they originate from the extended projection of v. Building on the analyses of HAVE-based possession as a transitive construction (Hoekstra, 1994; Beavers et al., 2008; Myler, 2016, among others), and the analysis of BE-based inclusive possessive construction I proposed in Chapter 3, I show that the distinctive features separating BE-based possession from HAVE-based possession are essentially parametric: a possessive construction is HAVE-based if it projects the possessor in the specifier of VoiceP and checks its ϕ-features; otherwise, it is a BE-based possessive construction. One straightforward consequence of this assertion is that, to a first approximation, in BE-based possessive constructions, the copula does not agree with the possessor. Consider the following data from Arabic.

(5.11)   a.   kaːn-*(at)   saːrah   ħaːmɪl

was-F   Sarah   pregnant

'Sarah was pregnant.'

   b.   *kaːn-at   ʕɪnd   saːrah   bɪnt

was-F   at   Sarah   daughter

   c.   kaːn   ʕɪnd   saːrah   bɪnt

was   at   Sarah   daughter

'Sarah had a daughter.'

Note that the copula in the non-possessive sentence (5.11a) must agree with the subject in gender. However, when the construction is possessive, the copula must not agree with the possessor. Similar patterns can also be found in other BE languages, such as Hungarian or Russian (Szabolcsi, 1994); where there is agreement morphology on the copula, it is generally with the possessed DP, not with the possessor, as illustrated in Hungarian, Russian (from Szabolcsi, 1994, p.40), and Mongolian (Stassen, 2013, ex.3).

(5.12)   a.   Mari-nak   van-nak   kalap-ja-i   (Hungarian)

Mari-DAT   BE-3PL   hat-POSS.3SG-PL

'Mari has hats.'

   b.   U   Mari-i   byl-i   shl'ap-y   (Russian)

at   Maria-GEN   BE.PST-3PL   hat-PL

'Maria had hats.'

   c.   na-dur   morin   bui   (Mongolian)

1SG-at   horse   BE.3SG.PRES

'I have a horse.'

By contrast, the copula in HAVE languages agrees with the possessor, as argued in Myler (2016), which aligns with analyses that treat HAVE-based possession as a transitive construction[4]. Consider the following examples.

(5.13) a. The child has hats.   (English)

   b. tu   ai   un   stilou   (Rumanian)
       you.NOM   have.2SG.PRES   a   pen

       'You have a pen.' (Stassen, 2009, p.65)

   c. nan   daram   (Persian)
       bread   have.1SG.PRES

       'I have bread.' (Lambton, 1974, p.33)

   d. ngaba-nga-ju   karnarinymi   (Jingulu)
       have-1SG-PRES   spear

       'I have a spear.' (Stassen, 2009, p.66)

The fact that agreement morphology in BE and HAVE languages differs signals a structural distinction in the verbal projection between the two possessive construction, which makes a prediction that turns out to be correct. The prediction is that nominalizing HAVE-based clausal possession should pattern with any canonical event nominalization, and it should be expressed without any ordinary constraints; for BE-based clausal possession, on the other hand, it is predicted to be constrained; arbitrary PRO cannot occupy the possessor position. Consider the difference in nominalizing clausal possession in English and Arabic, respectively.

(5.14) a. [PRO$_{arb}$ having a Ferrari] does not justify speeding.

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[4]It should be pointed out that the claim here is such that the copula in HAVE languages agrees with the possessor. This does not suggest that it cannot agree with the possessee too. Indeed, there are languages, such as Basque and Ubykh (Stassen, 2009), in which HAVE is inflected for agreement morphology with both the possessor and the possessee. However, to the extend that the analyses of HAVE assumed in this work are right, HAVE-based possessions are predicted to not show agreement with only the possessee.

b.   [John's having a Ferrari] does not justify that he speeds.

(5.15)   a.   * [koʊn   PRO$_{arb}$ faraːri]   maː   jɪbarrɪr   əs-sʊrʕah.

              being   Ferrari   not   justify   speeding

              Intended: 'Having a Ferrari does not justify speeding.'

     b.   [koʊn   ʕɪnd   ʕali   faraːri]   maː   jɪbarrɪr   ɪnn-ah   jɪsraʕ.

              being   at   Ali   Ferrari   not   justify   that-3SG.M   speed

              'Ali's having a Ferrari does not justify that he speeds.'

The contrast between (5.14) and (5.15) signals a distinction in the position of possessor argument between Arabic and English; English licenses PRO to appear as the possessor while Arabic does not. Because PRO independently exists elsewhere in Arabic, as shown in (5.16), I argue that it is blocked in (5.15) because clausal possession in Arabic is BE-based, and BE is not a transitive structure (cf. Myler, 2016).

(5.16)   [faħṣ   PRO$_{arb}$ əs-sajjaːrah   b-ʃakl   doʊri]   ḍaruri.

         inspecting   the car   in-manner   periodic   necessary

         'Inspecting the car periodically is necessary.'

In order to understand as to why this is the case, one might aim to approach this question by examining the environments in which PRO is licensed. First, it is important to identify the type of PRO in the examples above. Williams (1980) defines two types of environments where PRO is expected: obligatory control and non-obligatory control. The former differs from the latter in that it requires a c-commanding local antecedent (Bouchard, 1982; Manzini, 1983; Koster, 1984; Hornstein, 1999)[5]. By this requirement, it can be argued that PRO in the data above is a non-obligatory control PRO. Assuming Hornstein's (1999) analysis, non-obligatory control PRO behaves like *pro* in *pro*-drop languages. Hornstein's claim is predicated on the

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[5]For motivation, refer to the papers cited.

fact that movement from non-obligatory control environment is prohibited, as illustrated below (from Hornstein, 1999, p.92).

(5.17)   a.   It is believed that Bill's/*pro* shaving is important.

   b.   *Bill's is believed that shaving is important.

Hornstein argues that the formal features of the immediate projection of Bill's/*pro* need to be checked, and because this position cannot be an escape hatch, moving an expression through this position is illicit, as indicated by (5.17b). Thus, Hornstein contends that *pro* can occupy this position and meet the feature checking requirement, assuming it needs no Case.

Hornstein's insight provides the seeds of the solution to the puzzle posed by the contrast between (5.14) and (5.15). If HAVE-based possession differs from BE-based possession in that the former introduces the possessor in the specifier of a Voice head bearing phi-features, as argued in Myler (2016), it is expected that PRO would be able to check those features in a non-obligatory control environment, where movement is prohibited, and it is that the English data in (5.14) confirms this expectation. By contrast, v in BE-based possessions does not bear formal features to be checked by PRO, which inhibits its insertion in the possessor position, accounting for the ungrammaticality of (5.15a) above.

Another aspect of Hornstein's account to consider in relation to the data in (5.14) and (5.15) is one that makes cross-linguistic predictions regarding Case assignment differences in BE and HAVE languages. Hornstein's claim is predicated on the assumption that non-obligatory control PRO (or *pro*, interpreted as *one* in English, as he argues) is Caseless, explaining its distribution in non-finite domains where movement is blocked. This assumption suggests that the possessor in HAVE-based possession acquires structural Case at some point, and, hence, it is reasonable to argue that the Caseless PRO_{arb} in nominalizing predicative possession is in complementary distribution with a structural-Case-marked possessor

(e.g. Nominative)[6]. On the basis of this analysis, if PRO_{arb} alternates with structural-Case-marked nominal, we expect its insertion to be blocked in nominalizing possession sentences in Arabic, as shown in (5.15). This is because in Arabic there is no structural Case for PRO_{arb} to alternate with; Arabic introduces the possessor in possession sentences as the object of a preposition, and objects of prepositions receive non-structural Case (Chomsky, 1993a; Blake, 2001; Woolford, 2006). This is independently corroborated by the data in (5.18): while lexical Case marking (Genitive) on nominals of the Arabic data used in this work has undergone deflexional change, it is, however, still visible on *wh*-operators.

(5.18)   a.   mm / *miːn   ʔaχað   ṣuːrah   l-saːrah

                who / whom   took   picture   POSS-Sarah

                'Who took a picture of Sarah?'

    b.   *l-mm / l-miːn   ʔaχað-t   ṣuːrah

                POSS-who / POSS-whom   took.2SG   picture

                'Whom did you take a picture of?'

Hence, PRO_{arb} in (5.15a) cannot be a formative to save the derivation because there is no structural Case for it to alternate with. In English, on the other hand, structural Case is marked on the possessor in possession sentence, and because PRO_{arb} alternates with structural-Case-marked nominal, where there is no structural Case, PRO_{arb} can be used as a formative.

Extending this analysis, we can incorporate Myler (2016) and Hornstein (1999) to make a generalization about how the typology of Case marking looks like in BE and HAVE languages. If a given language expresses possession with HAVE, we expect that language to license PRO_{arb}

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[6]This notion that PRO_{arb} possessor is in complementary distribution with a structural-Case-marked possessor aligns with Hornstein's (1999) original analysis that *pro* and PRO are in complementary distribution with each other. Hornstein argues that PRO should be treated as an NP-trace, and, accordingly, the head of an NP chain receives structural Case. On the other hand, *pro*, in his analysis, is the elsewhere case because it is found in environments from which movement is blocked.

to occupy the possessor position in nominalized possession sentences, provided the language permits nominalization; and if it expresses possession using BE, we then expect it to block PRO$_{arb}$ in clausal possession due to the absence of structural description.
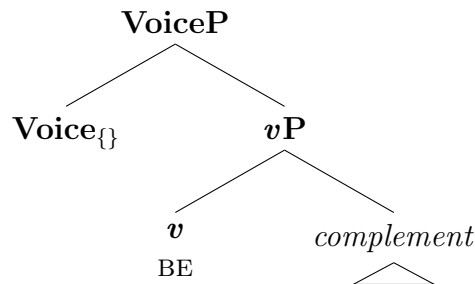
To summarize, I have argued above that differences between BE-based possession and HAVE-based possession, focusing on data from Arabic in comparison with English, are peripheral to the domain of possession. HAVE possessions, but not BE possessions, are structurally characterized by requiring a nominal with feature-checking capabilities in the specifier of VoiceP. Evidence from nominalization suggests that this nominal element needs not be overt so long as it is able to check the relevant features on its projection. This conclusion lends support to the claim that HAVE-based possession is structurally transitive with the possessor and possessee acting as the grammatical subject and object, respectively. Furthermore, the discussion above has also pointed out the implications of Hornstein's (1999) account that PRO$_{arb}$ alternates with a structural-Case-marked nominal. That is, if a language marks the possessor with structural Case in possession sentences, we expect PRO$_{arb}$ to occupy the possessor position in a nominalized possession sentence. This conclusion accounts for why nominalized BE-based possession lacks the necessary structural description that motivates its insertion.

5.3   Possessor Extraction: a BE-Based Possession Property

On the basis of the argument that HAVE possessions are transitive (Hoekstra, 1994; Beavers et al., 2008; Myler, 2016), we are now in a position to provide a theoretical justification for why possessor extraction is a distinctive characteristic of BE-based possession, contrary to Kayne (1993) and Ouhalla (1996). The basic assumption on which the present analysis is grounded is that possession is essentially a relation mapping two DPs to each other (Szabolcsi, 1981; Kayne, 1993; Partee, 1999). We have also established that although possession relations are introduced inside the complement of v, the place at which the possessor is introduced varies amongst languages. Accordingly, those that choose to merge the possessor

inside the possessed DP may potentially extract it to derive clausal possession. Given the analyses of HAVE-based possession, we can assume, with a fair degree of confidence, that a possessive construction where the possessor is introduced syntactically inside the possessed DP is a BE-based possession. A construction of this sort is configurationally unaccusative, based on Myler's (2016) inventory for BE, repeated from section 5.1 as (5.19).

(5.19)   <u>Unaccusative BE-based Predicative Possession</u> (Myler, 2016, p.253)

```
                    VoiceP
                   /      \
              Voice{}      vP
                          /  \
                         v    complement
                        BE      △
```

The fact that the possessor is first merged internally to the possessed DP in the complement of BE makes reasonable sense to argue that unaccusative BE-based possession provides the structural description for possessor extraction. Ultimately, unaccusative BE-based possessions are built on top of attributive possession; they basically involve a possession relation that is linked to tense via the use of a copula (Pustet, 2003; Tham, 2013; Myler, 2016). In the absence of the verbal projection to sentencify the possession meaning, we expect that that possession relation would be expressed in the form of a nominal expression, considering that its arguments are fully interpreted. This is indeed the case for BE-languages including Arabic, Hungarian, and Quechua, to name a few. Consider the data in (5.20)-(5.22)

(5.20)   <u>Arabic</u>

    a.   lɪ-ʕali   walad

           POSS-Ali   son

           'a son of Ali's'

b.   φ   lɪ-ʕali   walad[7]

        BE.PRES   POSS-Ali   son

        'Ali has a son.'

(5.21)   <u>Hungarian</u> (based on Szabolcsi, 1981, p.263 & p.276 respectively)

    a.   Péter-nek   a   kar-ja-φ

        Peter-DAT   the   arm-POSS-3SG

        'Peter's arm.'

    b.   Péter-nek   van   kar-ja-φ

        Peter-DAT   BE   arm-POSS-3SG

        'Peter has an arm.'

(5.22)   <u>Quechua</u> (based on Myler, 2016, p.196 & p.200 respectively)

    a.   Juan-pata   tata-n

        Juan-GEN   father-3POSS

        'Juan's father'

    b.   Juan-pata   tata-n   tiya-n

        Juan-GEN   father-3POSS be_{exist}-3SUBJ

        'Juan has a father.'

Abstracting away from the semantic differences found in each pair, we can observe a striking similarity between nominal possession and predicative possession in the data above; the latter of each pair differs from the former in involving a BE projection. This is borne out by analyses that take the copula to be a "sentencifier", turning a phrase-bound meaning to a

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[7]Recall that BE is covert in the present tense in Arabic. The sentence in (5.20b) would be expressed in the past tense as in (i):

(i) kaːn   lɪ-ʕali   walad

   was   POSS-Ali   son

   'Ali had a son.'

clause-typed expression. Although the derivation of predicative possession in the data above involves a certain amount of bookkeeping (most notably possessor extraction), possession relations in these languages would still be syntactically expressible.

This striking similarity between the nominal possession in predicative possession in languages such as exemplified above throws some reasonable doubt on Kayne's (1993) formal treatment of possession sentences in HAVE-based possession. Recall that Kayne's ambition was to reduce predicative possessive constructions to one that essentially involves extracting the possessor from a possessed DP, as shown below (Kayne, 1993, p.7).

(5.23)   . . . BE $[_{DP}$ SPEC D/P $[DP_{poss}$ [AGR QP/NP]]]

Note that the basic idea behind (5.23) can coherently account for unaccusative BE-based possessions. It is however problematic for HAVE languages, such as English. As argued in Stassen (2009), Case marking on the possessor is one of the properties where BE and HAVE differ, a fact briefly highlighted in the previous section. In unaccusative BE-based possessions, the Case morphology on the possessor is presumably checked before extracting the possessor from the possessed DP. This is because at this point, the possession relation can be expressed as a nominal possession, as reflected in the data above (5.20-5.22). It is then expected that when possessor extraction takes place, the possessor would maintain its Case morphology, which is supported by the Hungarian and Quechua data, where Case is overtly marked. Hence, on the basis of Case distribution, we cannot argue that the possessor in HAVE-based possession is extracted from an otherwise nominal possession. This is because in nominal possession, the possessor is necessarily Case marked with inherent Case (Chomsky, 1993a; Blake, 2001); however, in predicative possession, it carries structural Case, as discussed in the previous section. Case marking poses a serious challenge to Kayne's treatment of HAVE languages, which further indicates that the place where the possessor is introduced in HAVE-based possessions is too far to fit the BE paradigm.

The discussion developed so far leads us to the conclusion that extracting the possessor from a DP source in predicative possession is a property of BE-based possession. Indications that support this conclusion include the fact that the possessor undergoing extraction bears the same Case morphology available to it before it moves out of its DP domain. This Case morphology is nonetheless non-structural, a characteristic that fundamentally distinguishes BE possession from HAVE possession. Relating this discussion of Case morphology to that of nominalization in the previous section, we can reasonably conclude that the claim that the possessor of HAVE-based possessions is introduced inside the possessed DP and is subsequently extracted to a higher position leads to more empirical challenges than it appears to explain.

5.4   Chapter Conclusions

This chapter has focused on identifying the commonality of structural properties and the differences between BE and HAVE possessive constructions, using Arabic and English as the primary sources of data for these possession types, respectively. Its basic idea is rooted in the notion that possession is introduced by a relational noun or a possession-introducing head (Barker and Dowty, 1993; Barker, 2019; Partee, 1999), an intuition that accordingly argues that BE and HAVE are similar enough to share the domain where possession relations are introduced. However, there are still enough differences in the extended verbal projection between the two types of possessions that they cannot be entirely reduced to a single structure. Although this conclusion places the present analysis within the camp that rejects the Freeze-Kayne tradition of deriving HAVE possession entirely from BE possession (Boneh and Sichel, 2010; Myler, 2016), there is an important element of Kayne's (1993), originally Szabolcsi's (1981; 1983), that was embraced for its theoretical foundation and empirical predictions, which is the notion that predicative possession is built on top of attributive possession. This is consistent with the intuition based on which I have argued for this conclusion: possession is a relation introduced by a root noun or a possessive head and maps two arguments.

CHAPTER 6.   SUMMARY AND CONCLUSIONS

In this dissertation, I embarked on a detailed investigation of the construction of predicative possession in the Saudi variety of Arabic. Guided by the assumptions about alienable-inalienable possession, I have shown that clausal possession in Arabic is adequately accounted for under the approach that treats possession as a relation introduced in the complement of *v*. I have argued, along the lines of Wood (2015) and Myler (2016), for a syntactic system that generates possessive structures but does not fully determine their thematic roles. Instead, thematic roles are understood in this work as part of the semantic interface, and they are interpreted as part of the encyclopedic knowledge, in Distributed Morphology terms. This claim is substantiated by the interpretation of the possessor in different syntactic structures, in each of which the possessor varies in its grammatical relation to its head.

First, a relational head may introduce the possessor in its complement. This structure is argued for in Boneh and Sichel (2010). It gives rise to inalienable possession relations only. The output of this possessed DP is fully interpreted in the sense that the possession relation saturates its arguments within its nominal domain. This is reflected in the fact that this possessive structure can be used attributively. Additionally, it can also serve as the possessed DP in a possession sentence. This structure was referred to as the *Inalienable Construction* in Chapter 3. The linear surface order of predicative possession is derived through a mechanism that involves extracting the possessor from the possessed DP, as shown in the following example where an adverbial modifier is sandwiched between the possession arguments.

(6.1) lı-l-wazz   ʔaħjaːnan   riːʃ   ʔaswad

       POSS-the-geese   sometimes   feathers   black

       'Geese sometimes have black feathers.'

Second, a relational head may introduce a possession relation whose possessor is not syntactically closed within the domain where it is semantically introduced. This process is termed as *delayed gratification* in Myler's typology of possessive argument structures. I have shown in Chapter 3 that Arabic instantiates this mechanism in what I called *Inclusive Construction*, denoting the fact that this construction is not idiosyncratic to the alienable-inalienable distinction, as shown in the example below. I argued that the possessor in this construction occupies the specifier of an expletive v. This claim is predicated on how the possessor is linearized with respect to functional heads, like Pred and Asp.

(6.2) ʕınd   saːmi   { walad   /   ħaraːrah }

       at   Sami   child   fever

       'Sami has a {child / fever}.'

Despite the fact that these two positions vary syntactically, they are identical in their semantic interpretation, which is closing the semantic argument that corresponds to the possessor. The Table below (based on Table 3.2) summarizes the main claims made in Chapter 3 regarding the place where the possessor is first merged.

Table 6.1 Possessor First Merge Position

Possessor Postulate	Marker	Relation	Structure Type
argument of n	l-	inalienable	predicative / attributive
specifier of v	ʕınd / maʕ	(in)alienable	predicative

One of the advantages of the present approach to Arabic possession worth emphasizing is the fact that possession under this system is structurally motivated. This was reflected in arguing for possessive structures that emerge from two possession-introducing heads. Ul-

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timately, this idea leaves no room for negotiation between possessive relations and other possessive look-alike relations, such as locatives. Furthermore, it differentiates the present approach from the standard approach independently developed in Freeze (1992) and Kayne (1993) on conceptual grounds. Possession in the present system is evidently not an outcome of post-syntactic operations, nor is it induced by semantic features such as definiteness. Moreover, my approach is also differentiated from those looking into Arabic possession, such as Ouhalla (1996) and Boneh and Sichel (2010), in that the alienable-inalienable distinction was integrated into the semantics of the possession-introducing heads. Incorporating this semantic distinction was shown to motivate the possession meaning where there is a possibility for ambiguity, and, hence, the meaning by which a possessive construction is alienable vs inalienable was argued to have its basis rooted in the semantics of the head introducing the possession relation.

The other major claim of this dissertation has been that which looks into the difference in semantic contribution between *lɪ*-marked attributive possession and its clausal derivative. As argued in Chapter 3, the inalienable construction for possession is derived by extracting the possessor from its DP source through the DP edge. Besides the conspicuous difference this movement creates, Chapter 4 delved into the semantic proportion by which attributive possession differs from clausal possession. I have argued that *lɪ*-marked attributive possession triggers anti-uniqueness effects, which I have accounted for by giving the functional head Q the necessary semantics. The added semantics guaranteed that the possession relation pushed up by nP must not denote a singleton set. With this implication, contextually unique objects were shown not to be licensed in this structure; furthermore, quantificationally irreducible relational nouns (e.g. *hair*) were also correctly ruled out.

The analysis proposed for Arabic possession fits in the typology of possession, described in Myler (2016). Reducing the domain where possession relations are introduced to a possessed DP coherently accounts for the structural congruence between the complement of BE

and that of HAVE, and it was not hard to see why reducing the possession domain to the complement of the copula would have a competitive advantage over analyses that stretch it further. First, it obviates the need to account for cross-linguistic differences by relating one possessive structure to another through movement, an analysis for which the Freeze-Kayne tradition advocated. Instead, possession relations are introduced by relational heads within a nominal domain, and cross-linguistic variations occur within the extended verbal projection. One example of these variations is the place where the possessor is first merged. As emphasized by Myler (2016), introducing possession relations low in the structure allows Universal Grammar to choose where in the structure of VoicP the possessor can be merged. Second, it accounts for languages that derive clausal possession by extracting the possessor from its base position inside the possessed DP. Languages of this sort are predicted by the analysis wherein possession is understood as a semantic relation mapping one nominal to another, and, therefore, deriving predicative possession through extracting the possessor from an otherwise attributive possession construction can only be possible if possession relations are introduced in a nominal domain.

Finally, the primary empirical contribution of this work has been an in-depth study of Arabic possession sentences. This study has brought novel grounds for taking this empirical domain, enhancing the typology of clausal possession and the theory that underpins it. Analyses of possession structures in Arabic (or in any language for that matter) need to be structurally motivated, which would result in decoupling possessive structures from sequences that appear possessive due to post-syntactic operations. Moreover, analyses of possession from any theoretical perspective also need to account for any potential effect produced by idiosyncrasies to the alienable-inalienable distinction. The analysis presented in this work has taken these facts into account. Moreover, the analysis invites a closer look at the semantic differences between clausal possession that is derived by possessor extraction and attributive possession.

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