

Family Agreement: An Investigation of Possession in Moroccan Arabic

Aidan Kaplan

Advisor: Jim Wood

*Submitted to the faculty of the Department of Linguistics
in partial fulfillment of the requirements for the degree of
Bachelor of Arts*

Yale University

May 2017

Abstract

This essay takes up the phenomenon of apparently redundant possession in Moroccan Arabic. In particular, kinship terms are often marked with possessive pronominal suffixes in constructions which would not require this in other languages, including Modern Standard Arabic. In the following example ‘sister’ is marked with the possessive suffix *hā* ‘her,’ even though the person in question has no sister.

- (1) ما عندهاش خُتْهَا
mā ‘end-hā-sh khut-hā
not at-her-NEG sister-her
‘She doesn’t have a sister’

This phenomenon shows both intra- and inter-speaker variation. For some speakers, the possessive suffix is obligatory in clausal possession expressing kinship relations, while for other speakers it is optional. Accounting for the presence of the ‘extra’ pronoun in (1) will lead to an account of possessive suffixes as the spell-out of agreement between a Poss^o head and a higher element that contains phi features, using Reverse Agree (Wurmbrand, 2014, 2017). In regular pronominal possessive constructions, Poss^o agrees with a silent possessor *pro*, while in sentences like (1), Poss^o agrees with the PP at the beginning of the sentence that expresses clausal possession. The obligatoriness of the possessive suffix for some speakers and its optionality for others is explained by positing that the selectional properties of the D^o head differ between speakers.

In building up an analysis, this essay draws on the proposal for the construct state in Fassi Fehri (1993), the proposal that clitics are really agreement markers in Shlonsky (1997), and the account of clausal possession in Boneh & Sichel (2010). The framework for explaining variation within the Minimalist Program (Chomsky, 1995) developed in Adger & Smith (2005) is applied to the Moroccan data, explaining variability with the choice of lexical items with differing feature sets.

Acknowledgements

Thanks first of all to my advisor, Jim Wood, who patiently guided me through the research and writing process, answered countless questions, and gave invaluable comments on my drafts. I'd also like to thank my fellow linguistics majors, as well as Maria Piñango, for her guidance to all of us this semester, and Raffaella Zanuttini, for her advice and encouragement not only last semester but throughout my time at Yale. This essay could not have been written without the help of my amazing consultants, Jonas Elbousty and Khadija El-Hazimy, who provided their grammaticality judgments and insights. Finally, my deep gratitude to the people whose love and support have kept me going: my parents and brothers, who have supported me since the beginning, and still listen when I talk about linguistics; my friends at 115 Howe, who have become my second family; and my partner, Layla Treuhaft-Ali, who has been with me every step of the way and brought me so much joy. I couldn't have done it without you.

لكم جزيل الشكر على كل ما قمتم به من اجلي .

Contents

Acknowledgements	1
1 Introduction	3
1.1 What is possession?	3
1.2 Moroccan Arabic	5
1.2.1 Overview	5
1.2.2 A note on transcription and glosses	6
1.2.3 Relevant grammatical properties	7
1.3 Sources of the data	12
1.4 Theoretical preliminaries	13
2 The puzzle of kinship terms	16
2.1 I don't have my brother	16
2.2 Mom and Dad	20
2.3 Her dad of my mom	24
2.4 Summarizing the puzzle	25
3 Possession in the DP and the Clause	27
3.1 DP-internal possession	27
3.1.1 The Construct State	27
3.1.2 Pronominal Possessors	30
3.1.3 The Analytic Genitive	33
3.2 Clausal possession	39
3.2.1 Boneh & Sichel (2010)	39
3.2.2 Extending Boneh & Sichel (2010) to Moroccan Arabic	43
3.3 Summarizing MA possessive structures	44
4 Generating Variation	46
4.1 The problem of variation	46
4.2 Completing the account of possession	47
4.2.1 Finding an element to agree with	47
4.2.2 Definite mom and dad	51
4.2.3 Agreement on <i>dyāl</i> 'of'	52
4.3 Summarizing the solution	53
5 Conclusion	55
Bibliography	57

1 Introduction

1.1 What is possession?

One of the questions that the study of syntax aims to answer is: how do relationships in the real world get encoded in the grammar? This essay seeks to provide some insight into this issue through an examination of the syntax of possession in Moroccan Arabic (MA). Possession is a rather vague notion, and may refer to relations including ownership, kinship, body part, part-whole, disease, and attribute—what Myler (2016) calls the *too-many-meanings* puzzle. I do not aim to solve the too-many-meanings puzzle; however, I will present evidence for a syntactic distinction between different types of possession relationships. In particular, I will focus on kinship relations, which have special properties in MA.

It will be useful to begin with an overview of the types of possession generally expressed in natural language, both in terms of syntax and semantics. Syntactically, there are two main types of possession: possession expressed at the level of the clause (clausal possession), and possession expressed at the level of the noun phrase (DP-internal possession). In English, for example, clausal possession is expressed with the verb *have*, as in (2), while DP-internal possession is expressed with the preposition *of* or with the morpheme *'s*, as illustrated in (3).

(2) Alex has a book.

- (3) a. Alex's book
b. the door of the house

As is mentioned above, clausal possession in English is expressed using a verb, *to have*. While a student of Western European languages may assume that this is typical (cf. French *avoir*, Spanish *tener*, German *haben*), having a verb for clausal possession is in fact exceptional among the world's languages, which was pointed out by Freeze in his 1992 study of possession. Freeze's account seeks to unify three apparently unrelated types of sentences: predicative locatives, existential constructions, and 'have' constructions, i.e. clausal possession. These three types are exemplified in (4) and (5), which I here reproduce from Freeze (1992).¹

- (4) a. Predicate locative: The book is on the bench.
 b. Existential: There is a book on the bench.
 c. 'Have': Lupe has a book.

- (5) Russian:
 a. kniga byla na stole.
 book.NOM.F was on table.LOC
 'The book was on the table.'
 b. na stole byla kniga.
 on table.LOC was book.NOM.F
 'There was a book on the table.'
 c. u menja byla sestra.
 at 1SG.GEN was sister.NOM
 'I had a sister.'

Note that in the Russian example, the same verb, *byla* 'was,' is used in all three constructions. The possessive meaning in (5c) is expressed not with a dedicated verb like English *have*, but with the combination of a prepositional phrase *u menja* 'at me' and the copula *byla*. Arabic is like Russian (and many other languages) in this respect. The sentence in (6) shows this for Modern Standard Arabic (MSA):

- (6) كانت لي أختٌ
 kānat l-ī 'ukht-un.
 was.3F.SG to-me sister-NOM.INDF
 'I had a sister.'

¹Abbreviations in glosses: ACC = accusative, CS = construct state, F = feminine, FUT = future, GEN = genitive, INDF = indefinite, LOC = locative, M = masculine, NEG = negative, NOM = nominative, PL = plural, SG = singular.

The colloquial Arabic dialects differ significantly from MSA in many respects; however, all major dialects are similar both to MSA and to one another in lacking a verb for ‘have.’

As noted above, English has two main ways to express DP-internal possession: *'s* and *of*. The two are not interchangeable, and the constraints on their use have been described in multiple ways. Barker & Dowty (1993) give an account in which possessive constructions using *of* must involve relational nouns. They illustrate this with the distinction between (7a) and (7b), claiming that the reason that (7b) is degraded because the noun *dog* is not inherently relational.

- (7) a. John's dog
- b. ?* the dog of John

Other researchers have claimed that the choice of *'s* versus *of* is based on the animacy of the nouns involved. Rosenbach (2002, 2008) finds a tendency for animate possessors to appear in *'s* constructions, and inanimate possessors in *of* constructions. No matter the analysis of English DP-internal possession, it is clear that there is some interaction between the type of possessive relationship being expressed and the syntax that is used to encode it. Over the course of this essay, we will see that MA syntax also distinguishes between types of possession, focusing in particular on the properties of kinship possession.

1.2 Moroccan Arabic

1.2.1 Overview

Moroccan Arabic (MA) is a Semitic language spoken by 24 million people in Morocco, or about 90% of the country's population according to the 2004 census (High Commission for Planning, 2004). Arabic is a diglossic language, meaning that there is a large difference between the formal and informal varieties of the language, often called H (high) and L (low) following Ferguson (1959). In Arabic, the H variety is called *al-lughā al-‘arabiyya al-fuṣḥā* ‘the most eloquent Ara-

bic language.’ While the H variety is largely uniform across the Arabic-speaking world, the L variety differs significantly from place to place. In Morocco, the L variety is called *al-dārija al-maghribiyya* ‘Moroccan colloquial.’ Throughout this essay I will refer to the two ends of the diglossic spectrum as Modern Standard Arabic (MSA) and Moroccan Arabic (MA). Although these terms do not capture the full complexity of the linguistic situation, they will be sufficient for the present purposes.² Because of the diglossic nature of Arabic, MA, like other dialects, has no written standard. This lack of a uniform standard contributes to the large amount of variation between different regions and even among speakers from the same region.

MA forms part of a language continuum that spans the Maghreb region, and is to a large extent mutually intelligible with Algerian and Tunisian Arabic. One factor that distinguishes Maghrebi dialects from other varieties of Arabic is their Amazigh (Berber) influence, which is apparent in MA phonology, lexicon, and sometimes even morphology and syntax. Amazigh languages are the indigenous languages of the region, and are spoken by around 28% of Moroccans (High Commission for Planning, 2004). Additionally, MA has a large number of loanwords from French and Spanish, due to the colonial period (1912–1956), during which Morocco was a protectorate of France and Spain.

1.2.2 A note on transcription and glosses

Arabic dialects do not have standardized spelling, but I have tried to strike a balance between MA pronunciation and MSA spelling norms in the Arabic orthography. There are also many different transliteration schemes for Arabic. I have adopted the transliteration scheme of the *International Journal of Middle East Studies*, with a few exceptions necessary for the dialects.³ No transliteration system is perfect, but I hope this one strikes a good balance between accuracy and

²For more on Arabic diglossia, see Badawi (1973, 1985); Suleiman (2013), among others.

³The chart of correspondences between English and Arabic letters in the IJMES system can be found at <https://ijmes.chass.ncsu.edu/docs/TransChart.pdf>.

legibility. One feature of the IJMES system that should be noted is that the definite article /al-/ is always spelled with an *l*, even when the /l/ is assimilated to the following consonant. Even though MA does not pronounce the /a/ in *al*, I have kept the *a* in the transcription to avoid confusion with the preposition *l* ‘to.’ I have also not indicated emphatic consonants where Arabic orthography would not do so. For example, ‘the man’ is pronounced [r^ʕr^ʕɑːʒəl] but spelled *al-rājel*.

For MA, I have spelled and transliterated vowels as long when they would be written as such by someone trying to follow MSA spelling, despite the fact that in practice MA does not have much of a length distinction. I have spelled short epenthetic vowels as *e*, following the practice of Harrell (2004). The attached form of the third person masculine singular pronoun I have transliterated as *-u* when it follows a consonant and *-h* when it follows a vowel. In Arabic, I always spell it with the letter *hāʕ*, هـ, indicating the /u/ vowel with a *ḍamma*, ُ, after consonants.

I have spelled the vowels /e/ and /o/, which are present in the dialects, but not in MSA, as *e* and *o*. For example the Palestinian Arabic word for ‘house’ would be spelled *bēt*, not *bayt*. This does create a possible confound between /e/ and /ə/ in MA, which would both be spelled *e*, but luckily, the vowel /e/ is only present in loanwords in MA, and in fact does not come up in this essay.

For examples taken from other sources, I have updated the transliteration, glossing schemes, and tree notation to match my own. For examples from non-English sources, I have given my own glosses and translation.

1.2.3 Relevant grammatical properties

MA predominantly uses SVO word order, although VSO is also available. It is a pro-drop language, showing rich agreement on verbs (person, number, and gender). Adjectives follow the nouns they modify, and also inflect to agree with the nouns they modify in number, gender, and definiteness, as illustrated here for the word *meʕellem* ‘master (of some skill or profession), expert, teacher.’ In the plural, nouns show a gender distinction, and adjectives occasionally show feminine plural

agreement when referring to humans, but usually use the masculine plural for both genders, as can be seen in the optionality in (11).

- | | | |
|------|--|---|
| (8) | a. معلم مزيان
me‘ellem mezyān
expert.M.SG good.M.SG
‘a good (male) expert/teacher’ | b. المعلم المزيان
al-me‘ellem al-mezyān
the-teacher.M.SG the-good.M.SG
‘the good (male) expert/teacher’ |
| (9) | a. معلمة مزيانة
me‘ellem-a mezyān-a
teacher-F.SG good-F.SG
‘a good (female) expert/teacher’ | b. المعلمة المزيانة
al-me‘ellem-a al-mezyān-a
the-teacher-F.SG the-good-F.SG
‘the good (female) expert/teacher’ |
| (10) | a. معلمين مزيانين
me‘ellem-īn mezyān-īn
teacher-M.PL good-M.PL
‘good experts/teachers’ | b. المعلمين المزيانين
al-me‘ellem-īn al-mezyān-īn
the-teacher-M.PL the-good-M.PL
‘the good experts/teachers’ |
| (11) | a. معلمات مزيانات / مزيانين
me‘ellem-āt mezyān-āt / mezyān-īn
teacher-F.PL good-F.PL / good-M.PL
‘good (female) experts/teachers’ | b. المعلمات المزيانات / المزيانين
al-me‘ellem-āt al-mezyān-āt /
the-teacher-F.PL the-good-F.PL /
al-mezyān-īn
the-good-M.PL
‘the good (female) experts/teachers’ |

Verbs do not show feminine plural agreement, using the masculine plural for both genders:

- | | | |
|------|---|---|
| (12) | a. البنات خرجوا
al-bnāt kherj-ū
the-girl.F.PL left-3M.PL
‘The girls left.’ | b. الولاد خرجوا
al-wlād kherj-ū
the-boy.M.PL left-3M.PL
‘The boys left.’ |
|------|---|---|

Like some other Arabic dialects, MA has two-part negation, *mā...sh*. Various grammatical categories can be negated in this way, including verbs, adjectives and prepositional phrases:

- | | |
|------|---|
| (13) | a. خديجة ما خرجاتش
khadija mā kherjāt-sh
Khadija not exited.3F.SG-NEG
‘Khadija didn’t go out.’ |
|------|---|

- b. خديجة ما مريضاش
 khadīja mā mrīḍā-sh
 Khadija not sick.F.SG-NEG
 ‘Khadija is not sick.’
- c. خديجة ما حداهاش الكاس
 khadīja mā ḥdā-hā-sh al-kās
 Khadija not beside-her-NEG the-cup
 ‘Khadija doesn’t have the cup next to her.’

The *sh* ‘NEG’ is in complementary distribution with NPIs such as *ḥettā/tā* ‘any’ or *wālū* ‘anything/nothing.’⁴

- (14) a. * خديجة ما خداتش والو
 khadīja mā khdāt-sh wālū
 Khadija not took.3F.SG-NEG nothing
- b. خديجة ما خدات والو
 khadīja mā khdāt wālū
 Khadija not took.3F.SG nothing
 ‘Khadija didn’t take anything.’

The *sh* ‘NEG’ is optional when the predicate is an indefinite noun, but obligatory for definite nouns, as illustrated here:

- (15) a. ما عندي (ش) فلوس
 mā ‘nd-ī-(sh) flūs
 not at-me-(NEG) money
 ‘I don’t have any money.’
- b. ما عندي*(ش) الفلوس
 mā ‘nd-ī-*(sh) al-flūs
 not at-me-*(NEG) the-money
 ‘I don’t have the money.’

MA is a null-copula language. In tenses other than the simple present, the BE verb is *kān*.

- (16) a. الدار كبيرة
 al-dār kbīra
 the-house.F.SG big.F.SG
 ‘The house is big.’

⁴The distribution of the *sh* seems to vary between speakers, and my consultants had inconsistent judgments on sentences like this. The data presented in (14) and (15) show the canonical pattern.

One of the most well-known phenomena in Semitic languages is the construct state (CS), called *iḍāfa* in the Arabic grammatical tradition. The CS is a nominal construction used to express possession and other relations between nominals. A few of its relevant properties are described here. For a more comprehensive description, see Mohammad (1999).

The word order in the construct state is Possessee Possessor. Only the last word in a construct may carry the definite article *al*, and its presence or absence determines the definiteness of the entire DP. Marking any word other than the last one with *al* results in ungrammaticality, as demonstrated in (21).⁵

- (21) a. راس الولد
rās al-weld
head the-boy
'the boy's head'
- b. *الراس الولد
al-rās al-weld
the-head the-boy
intended: 'the boy's head'

Constructs may be arbitrarily long, as illustrated below:

- (22) بنت جارة صاحب مول الحانوت
bint jār-t ṣāḥb mūl al-ḥānūt
daughter neighbor.F-CS friend owner the-store
'the daughter of the (female) neighbor of the friend of the owner of the store'
'the store-owner's friend's neighbor's daughter'

Certain nouns are morphologically marked when they are non-final members of a CS. The most common example of this is the *-a/-t* alternation on regular feminine nouns. For example, in (22), *jāra* '(female) neighbor' has become *jārt*.

The CS forms a single syntactic and prosodic unit, and there cannot be any words intervening between possessor and possessee, as demonstrated in (23a). Adjectives modifying non-final terms

⁵For a discussion of adjectival constructs, which do not quite follow this rule, see Fassi Fehri (1993, p. 218).

in the CS come after the entire structure, leading to potential ambiguity, as in (23b), where *al-zwīna* ‘pretty’ could refer to either the girl or the neighbor.

- (23) a. * بنت زوينة الجارة
bint zwīna al-jāra
daughter pretty the-neighbor
Intended: ‘the neighbor’s pretty daughter’
- b. بنت الجارة الزوينة
bint al-jāra al-zwīna
daughter the-neighbor the-pretty
‘the neighbor’s pretty daughter’ OR ‘the pretty neighbor’s daughter’

1.3 Sources of the data

Many of the example sentences presented in this essay come from my work with two consultants, Khadija El-Hazimy and Jonas Elbousty (henceforth KH and JE). KH was born and raised in Qal‘at al-Srāghna, a town roughly 80 kilometers northeast of Marrakech, and is a native speaker of the variety of MA spoken in her region. She was monolingual until she moved to Connecticut at the age of 14, at which point she learned English as a second language. Her husband is a native speaker of MA, and she speaks MA at home with her family. She is also proficient in MSA and prefers reading in Arabic to reading in English. She currently lives in Connecticut and works at the Yale Medical Library.

JE is an American of Moroccan descent. His father’s family is originally from Agadir, a city in the south of Morocco on the Atlantic coast, and he grew up both in Morocco and abroad. He is a native speaker of MA, and also speaks French, English and Spanish. He currently lives in New York and serves as the Director of Undergraduate Studies in Yale’s department of Near Eastern Languages and Civilizations, where he teaches Arabic language and literature.

I met with both consultants one-on-one multiple times eliciting grammaticality judgments. The sessions were conducted in a mix of English and Arabic, and the atmosphere was fairly informal, following the lead of Henry (2005). Both consultants understood the nature of the task, and

I was careful to ask questions like, “Could you say this?” rather than, “Does this sound right?” in order to avoid prescriptive or pragmatic confounds. Both KH and JE were clear about the distinction between their home dialects and the norms of Modern Standard Arabic or the colloquial varieties of other regions, and they often could identify interference when it arose. During the sessions, the consultants could see my notes and comment on them or make corrections as necessary. The difference between KH and JE’s judgments will be important in this paper, and in cases where there is variation I have tried to indicate clearly whose judgments I am reporting when. Where example sentences have been taken from previously published work, they are cited accordingly.

1.4 Theoretical preliminaries

The syntactic analysis that I present in this paper is broadly part of the tradition of generative grammar, and more specifically fits within the Minimalist Program (Chomsky, 1995). In looking at linguistic variation from a Minimalist standpoint, I take as a starting point the framework of Adger & Smith (2005). In this framework, lexical items are understood as bundles of features, including syntactic features, as well as phonological and semantic features. Syntactic features may be interpretable or uninterpretable. Interpretable syntactic features have some bearing on the semantics of an item, such as a [number] feature on a noun, which might specify it as singular, dual, or plural. Uninterpretable syntactic features do not affect a word’s semantics, but they can do a lot of work in the syntax. Examples of uninterpretable features are Case and EPP.⁶ Following convention (Pesetsky & Torrego, 2001), uninterpretable features are marked with a *u*, so, for example, *u φ* indicates uninterpretable phi features (person, number, and gender).

⁶The EPP feature is a formalization of the notion that certain heads require specifiers.

It will be useful to examine briefly the case of optionality that Adger & Smith (2005) use to illustrate the viability of their approach. They use data from Buckie, Scotland, a small fishing town about 60 miles north of Aberdeen. These speakers have a *was/were* alternation, as illustrated here:

- (24) a. He says, “I thoct you *were* a diver or something.”
‘He said, “I thought you *were* a diver or something.”’
b. Aye, I thoct you *was* a scuba diver.
‘Yes, I thought you *were* a scuba diver.’

To account for both of the possibilities, *you were* and *you was*, Adger & Smith (2005) propose the existence of two different lexical items for the past tense T head, one of which has a number feature, and one of which does not:

- (25) a. T[tense:past, *ucase*:nom, *unum*:_, *upers*:_]
b. T₂[tense:past, *ucase*:nom, *upers*:_]

Without getting bogged down in the details of the agreement system in Buckie, it is fairly easy to see how this proposal accounts for variation. The first option for T shows agreement according to number, while the second option, T₂, does not, always spelling out as *was*. Since the difference between these items is only in the uninterpretable features, both T and T₂ have the same meaning.

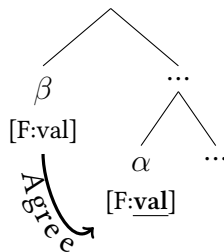
This type of explanation for variation is quite attractive because it does not add unnecessary complication to the grammatical system. As Adger & Smith (2005, p. 164) put it: “Notice that this is a very minimal theory, since the idea that speakers have to choose lexical items is one which we simply cannot do without. Localizing morphosyntactic variation in choice of lexical items means that we do not have to posit any special mechanism to deal with variation: variation is precisely what we should expect.”

In the example above, I glossed over the mechanics of agreement that Adger & Smith (2005) use in their proposal, because I will adopt a slightly different mechanism. The approach that I will take to agreement is “Reverse Agree” (Wurmbrand, 2014, 2017), which is stated as follows:

- (26) **Reverse Agree:** A feature F: _ on α is valued by a feature F:val on β iff β c-commands α .

In this model of agreement, lower elements with unvalued features get values from higher elements in the structure, as summarized in the following tree. In the trees in this paper, I will indicate feature values that are assigned by agreement with underlining and boldface, as shown in (27).

(27)



One of the benefits of adopting Reverse Agree is that proposals that use Spec-Head agreement need no modification to work with Reverse Agree, since specifiers always c-command their heads.

Now, having established the relevant grammatical properties and theoretical assumptions that will inform the rest of the paper, we can turn to the puzzle of kinship possession in MA. In Chapter 2, I will describe the properties of different grammatical structures used to express kinship possession in MA. In Chapter 3, I will present previous analyses of relevant structures in Arabic, and apply them to the Moroccan data, arriving at a working analysis for DP-internal and clausal possession. Then, in Chapter 4, I will refine the analysis, incorporating the variation between my consultants' judgments, before concluding in Chapter 5.

2 The puzzle of kinship terms

We turn now to the case of possessive constructions involving kinship terms in Moroccan Arabic. These constructions have several unusual properties that have been reported in the literature. In approaching these constructions, the aims of this essay are twofold: (1) to contribute to the description of these phenomena through the presentation of native speaker judgments, and (2) to present a syntactic analysis of possession in Moroccan Arabic that can account for the data.

2.1 I don't have my brother

In her book *The Syntax of Spoken Arabic*, Kristen Brustad concludes based on her data that speakers of Moroccan Arabic “consistently avoid using terms for male relatives in the indefinite” (Brustad, 2000, p. 41). She reports that her Moroccan consultants have difficulty finding an indefinite form of the word for ‘brother.’ Example (28) comes from an older speaker from the north of Morocco (Brustad, 2000, p. 40). Note that the word that she uses for brother, *khā* is different from the word used further south, *khū*, which is the word used by the speakers consulted for this essay.¹

¹In MSA, *ʾakh* ‘brother’ is one of *al-ʾasmāʾ al-khamsa*, ‘the five nouns,’ a class of nouns that realize case endings as long vowels instead of short vowels in the construct state. Thus in the construct state MSA has both *ʾakhū* ‘brother.NOM’ and *ʾakhā* ‘brother.ACC,’ which may explain the existence of multiple MA forms for ‘brother.’

- (28) ما عندي خاي ما عندي عمّي ما عندي تا شي واحد ماش ينوب عليا
 mā ‘end-ī khā-y mā ‘end-ī ‘amm-ī mā ‘end-ī tā shī wāḥed māsh ynūb
 not at-me brother-my not at-me uncle-my not at-me even any one will act-on-behalf
 ‘liyā
 of-me
 ‘I don’t have a brother, I don’t have an uncle, I don’t have anyone who would act on my
 behalf’

Traditionally, words with possessive suffixes are treated as definite nouns, just as if they were in a construct where the final noun is definite. However, it is clear here that *khāy* ‘my brother’ and ‘*ammī* ‘my uncle’ are playing a role more similar to indefinite nouns. The interpretation of (28) is that the speaker has no brother or uncle at all, not merely that they are temporarily absent.

Contrast this with possessives involving kinship in other contexts, such as (29).

- (29) شفت خوها
 shuft khū-hā
 saw.I brother-her
 ‘I saw her brother.’

Here, the word *khūhā*, like the English phrase *her brother* creates a presupposition of that person’s existence. The presupposition survives under negation, and we can see its effect in the infelicity of the following sentence:

- (30) ما شفتش خوها، ولكن ما عندهاش خوها #
 mā shuft-sh khū-hā, walākin mā ‘end-hā-sh khū-hā
 not saw.I-NEG brother-her, but not at-her-NEG brother-her
 ‘I didn’t see her brother, but she doesn’t have a brother.’

The use of *khūhā* in the first clause indicates that the speaker knows that the person in question has a brother, and so following it up by saying that she in fact has no brother is contradictory. We see no such effect, however, in (28); it is not contradictory for the speaker to use the word *khāy* ‘my brother’ or ‘*ammī* ‘my uncle’ while denying that she has a brother or uncle.

The morphosyntax also indicates that the theme in (28) is indefinite. As illustrated in (15), repeated here, MA, like some other Arabic dialects, has two-part negation. For many speakers,

the second negative particle, *-sh*, is mandatory with definite themes, as in (15b), but is optional with indefinite ones, as in (15a).

- (15) a. ما عندي (ش) فلوس
 mā ‘nd-ī-(sh) flūs
 not at-me-(NEG) money
 ‘I don’t have any money.’
- b. ما عندي*(ش) الفلوس
 mā ‘nd-ī-*(sh) al-flūs
 not at-me-*(NEG) the-money
 ‘I don’t have the money.’

The absence of *-sh* in (28) points to the indefiniteness of *khāy* ‘my brother’ and *‘ammī* ‘my uncle.’ However, JE and KH gave different judgments regarding the use of *-sh* in negation, so this is not a conclusive piece of evidence, since we cannot be sure of that speaker’s negation system. The semantic evidence, however, remains convincing.

While Brustad’s consultants may not have produced an indefinite form for ‘brother,’ other speakers of MA do have such a term. In fact, Diem (1986), who Brustad cites in her discussion of definiteness in MA, actually gives an example of *khā* ‘brother’ being used in the indefinite by a consultant from Fes (p. 278).

- (31) عندهُ خا كبير
 ‘end-u khā kbīr
 at-him brother big
 ‘He has an older brother.’

One of my consultants, KH, has no trouble at all producing bare indefinite forms for most kinship terms. For her, both of the following are possible.

- (32) a. عندها خوا / ختها
 ‘end-hā khū-hā / khut-hā
 at-her brother-her / sister-her
- b. عندها خو / خت
 ‘end-hā khū / khut
 at-her brother / sister
 ‘She has a brother/sister’

This is in contrast with my other consultant, JE, who rejects (32b), apparently falling more in line with the claim in Brustad (2000). It seems, then, that KH and JE have two different grammars governing the expression of kinship relations.

It should be noted that JE provided a couple examples where *khū* could appear, for him, without being in the construct state:

- (33) a. عندها خو واحد
 ‘end-hā khū wāḥed
 at-her brother one
 ‘She has one brother.’
- b. ما كاين شي خو (على الأرض) ما كيبيغيش خُته
 mā kāyn shī khū (‘lā al-‘arḍ) mā kaybghī-sh khut-u
 not being any brother (on the-earth) not he.loves-NEG sister-his
 ‘There is no brother (in the world) who doesn’t love his sister.’

Of particular interest is (33b), which should be compared to (44a) in the discussion of the words for ‘mom’ and ‘dad’ below. It seems, then, that JE’s restriction is not that the word *khū* ‘brother’ can never appear in the indefinite; rather, in clausal possession, the possession relation is expressed both at the level of the clause and at the level of the DP.

This apparently redundant possessive marking with an indefinite meaning is restricted to kinship terms for both KH and JE. Attempting double-marking of possession on a disease, for example, results in ungrammaticality.

- (34) a. عندها السكر
 ‘end-hā al-sukkar
 at-her the-sugar
 ‘She has diabetes.’
- b. * عندها سكرها
 ‘end-hā sukkar-hā
 at-her sugar-her
 Intended: ‘She has diabetes.’

For physical objects, such as cars, there are two possible possessive relations, ownership and temporary possession (proximity, availability, etc.). In (35), the presence of the possessive suffix disambiguates between these possibilities.

- (35) a. شكون اللي عنده طوموبيلة؟
 shkūn llī ‘end-u ṭōmōbīla ?
 who that at-him car ?
 ‘Who has a car?’ (ownership, may be temporarily available or not)
- b. شكون اللي عنده طوموبيلته؟
 shkūn llī ‘end-u ṭōmōbīlt-u ?
 who that at-him car-his ?
 ‘Who has their car?’ (must be temporary possession, i.e. available or nearby)

Crucially, in the case of a physical object like a car, the presence of the possessive suffix rules out the indefinite reading, whereas for kinship terms, the presence of the possessive suffix is compatible with an indefinite reading.

2.2 Mom and Dad

The words *bbā/bābā* ‘dad’ and *māmā* ‘mom’ exhibit slightly different properties from *khū/khā* ‘brother’ and *khut* ‘sister.’² Many of the following examples use the word *bbā* ‘dad,’ but in general, the word *māmā* ‘mom’ behaves in exactly the same way; I never found an example where ‘dad’ and ‘mom’ behaved differently apart from gender agreement.

Diem (1986) shows the contrast between *bbā* ‘dad’ and *khā* ‘brother’ by contrasting the sentence in (36) with the sentence in (31), where the bare noun *khā* ‘brother’ is used in a clausal possessive construction. Trying to use *bbā* ‘dad’ in a similar sentence results in ungrammaticality:

- (36) * عنده بّا مشهور
 ‘end-u bbā meshhūr
 at-him dad famous
 ‘He has a famous dad.’

²According to my consultants, *bbā* and *bābā* do not differ in syntax or semantics, although they do differ sociolinguistically, where *bbā* is associated with more rural speech, while *bābā* is associated with more urban speech.

To fix the ungrammaticality, Diem (1986) gives the following sentence, which avoids clausal possession entirely, opting to express the possession within the noun phrase *bbāh* ‘his father,’ in a simple equational sentence.

- (37) *بَاه مَشْهُور*
bbā-h meshhūr
 dad-his famous
 ‘His dad is famous.’

He presents this case as parallel to expressing possession for body parts, giving the following minimal pair:

- (38) a. * *عِنْدَهُ رَاسٌ كَبِيرٌ*
 ‘end-u rās kbīr
 at-him head big
 ‘He has a big head.’
 b. *رَأْسُهُ كَبِيرٌ*
 rās-u kbīr
 head-his big
 ‘His head is big.’

However, the parallel between ‘mom/dad’ and ‘head’ breaks down upon examination. Diem’s labeling (38a) as ungrammatical is too strong. While both my consultants find it degraded, (38a) is not as bad as (36), which is completely out for them both. Nonetheless, it is clear that (38b) is by far preferred over (38a) to express this meaning. The same type of sentence with other body parts yields similar judgments, with the sentences that used ‘*end*’ ‘at’ to express possession being judged as either degraded, or totally ungrammatical.³

The parallel between *bbā* ‘dad’ and *rās* ‘head’ breaks down even further when we consider the following contrast. Brustad (2000) reports that (36) can be made grammatical by the addition of possessive marking on *bbā*, and she presents (39) as the grammatical alternative. This judgment is confirmed by both of my consultants.

³For JE, using ‘*end*’ ‘at’ for body parts is improved in the less literal context of telling a parent, referring to their child, ‘*endhā* ‘aynīk ‘She has your eyes.’ KH, on the other hand, still finds examples of this kind degraded.

- (39) عنده باه مشهور
 ʿend-u bbā-h meshhūr
 at-him dad-his famous
 ‘He has a famous dad,’ or ‘His dad is famous.’

In contrast, trying to fix a body-part possessive sentence by adding an extra possessive suffix yields ungrammaticality.⁴

- (40) * عندها عينيها (الزرقيين)
 ʿend-hā ʿaynī-hā (al-zerqīn)
 at-her eyes-her (the-blue)
 Intended: ‘She has (blue) eyes’

One of the interesting properties of *bbā/bābā* ‘dad’ and *māmā* ‘mom’ is that, in the absence of a possessive suffix, they seem always to refer to the parent of the speaker, while the addition of a possessive suffix allows the words to refer to others’ parents.

- | | | | | | |
|------|----|-------------------------|--|----|--------------------------|
| (41) | a. | بابا سميتُه حمزة | | b. | باباها سميتُه سعيد |
| | | bābā smīt-u ḥamza | | | bābā-hā smīt-u saʿīd |
| | | dad name-his Hamza | | | dad-her name-his Said |
| | | ‘My dad is named Hamza’ | | | ‘Her dad’s name is Said’ |

Trying to add the first person possessive suffix, which is *yā* for vowel-final words, results in ungrammaticality:

- (42) * مامايا
 māmā-yā
 mom-my
 Intended: ‘my mom’

In fact, despite the absence of the definite article *al*, they are treated as definite, as indicated by the presence of the definite article on adjectives modifying *bābā* or *māmā*:

⁴On the relevant reading. JE suggested that perhaps one could say ʿendhā ʿaynihā if referring not to literal eyes but to a car’s headlights, with the meaning that they are working. This seems to be a case of temporary possession, which in general works with the extra possessive suffix.

- (43) a. ماما الحبيبة / العزيزة
 māmā al-ḥbība / al-‘zīza
 mom the-darling.FSG / the-dear.F.SG
 ‘my darling/dear mom’
- b. بابا الحبيب / العزيز
 bābā al-ḥbīb / al-‘zīz
 dad the-darling.M.SG / the-dear.M.SG
 ‘my darling/dear dad’

Crucially, these words cannot be used to speak about dads or moms in the abstract. Consider the contrast in (44).

- (44) a. * ما كاين شي بآ ما كيبيغيش ولده *
 mā kāyn shī bbā mā kaybghī-sh weld-u
 not being some dad not he.loves-NEG son-his
 Intended: ‘There is no dad who doesn’t love his son.’
- b. ما كاين شي أب / راجل / والد ما كيبيغيش ولده
 mā kāyn shī ‘ab / rājel / wālid mā kaybghī-sh weld-u
 not being some dad / man / father not he.loves-NEG son-his
 ‘There is no dad/man/father who doesn’t love his son.’

The three options in (44b) were supplied by KH and JE as ways to make (44a) grammatical. The first, ‘*ab* ‘dad,’ is an MSA word, and its use is an instance of code-switching and is perceived by my consultants as such. The second, *rājel* ‘man,’ arrives at roughly the same meaning by avoiding actually using a kinship term. The third, *wālid* ‘father,’ is more puzzling. Certainly ‘father’ is a type of kinship, but *wālid* ‘father’ does not behave syntactically like other kinship terms; however, the way a language treats kinship is not necessarily entirely determined by the real-world notion of kinship—though they are certainly related—so odd behavior of a few lexical items is not so surprising. One possible explanation for the behavior of *wālid* ‘father’ is that it might refer to the role of fatherhood, rather than the relation itself. Indeed, it is common to hear speakers use *al-wālid* ‘the father’ or *al-wālida* ‘the mother,’ to refer to their own parents, whereas other words for family members usually appear with possessive suffixes, not with the definite article. It is also worth noting the status of *wālid(a)* ‘father/mother’ as a loan from MSA (not a

code-switch—it is certainly part of colloquial vocabulary). This makes it seem likely that it would have slightly unusual syntactic behavior. This status as a loan is evidenced by the presence of the /i/ in the second syllable. These words are pronounced [wæ:lɪd(a)] in MSA and [wæːliːd(a)] in MA, and they are the masculine and feminine of the active participle of the MSA verb *walada* ‘to give birth/beget.’ The cognate MA verb is *wled*, which has the same meaning, and has an active participle, *wāld(a)*, following regular MA morphology. However, this participle only has the verbal meaning of ‘giving birth,’ and not the nominal meaning of ‘parent,’ which is reserved for the MSA-sounding *wālid(a)*.

2.3 Her dad of my mom

Another place where a surprising possessive suffix has been reported is in the “double” genitive construction. In the following example, given by Harning (1980, p. 132), we see the possessor expressed twice: once as the pronominal suffix *hā* ‘her,’ and once as the DP *yimmā*, a regional term for ‘mom.’

- (45) باباها د يَمَّا
 bābā-hā d yimmā
 dad-her of mom
 ‘my mom’s dad’

Double genitives are reported by Heath (2015) as a feature of pre-Hilalian dialects, which are concentrated in the far north, and also include archaic urban dialects from some central Moroccan cities.⁵

- (46) خاها د المرّا
 khā-hā d al-mrā
 brother-her of the-woman
 ‘the woman’s brother’

⁵North African Arabic dialects are divided into pre-Hilalian and Hilalian dialects, terms which refer to the arrival of the Banu Hilal tribe in North Africa in the tenth and eleventh centuries (Versteegh, 1997, p. 164).

Additionally, Boumans (2006) reports several examples of double genitives from Dutch speakers of MA, all with pronominal possessors. His examples include body parts, kinship, and a name:

- | | | | |
|------|--|---|--|
| (47) | a. ضهره دياله
dehr- u dyāl- u
back- his of- him
'his back' | b. خاي ديالي
khā-y dyāl- i
brother- my of- me
'my brother' | c. سميته دياله
smīt- u dyāl- u
name- its of- it
'its name' |
|------|--|---|--|

Neither of my consultants uses the word *yimmā* for 'mom,' so they could not give a judgment on (45); however they both reject the analogous sentence that uses *māmā* 'mom,' a word that they both use. In fact, both of them rejected double genitives across the board. This fits with the claim in Heath (2015), since neither JE nor KH come from regions that still speak pre-Hilalian varieties.

JE did mention the following phrase as possible, though uncommon. (It is also the title of a somewhat popular song by a Moroccan-Israeli artist.)

- (48) **ماما ديالي**
māmā dyāl-**i**
mom of-me
'my mom'

Given that *māmā* 'mom' is always interpreted as 'my mom,' despite the absence of a possessive suffix, this does also seem to be a double genitive.

2.4 Summarizing the puzzle

We have now seen several examples of possessive marking in MA that appears unusual, at least compared to English and other varieties of Arabic. First, we have seen cases where a kinship term with a possessive suffix does not behave like a definite noun with specific reference. For example, the sentence in (49) is grammatical and felicitous despite the fact that *khuthā* 'her sister' does not refer to any existent person:

- (49) ما عندها ش ختها
 mā ‘end-hā-sh khut-hā
 not at-her-NEG sister-her
 ‘She doesn’t have a sister’

We have also seen that the properties of this construction are not uniform across speakers. For one consultant, JE, the extra possessive suffix is obligatory, while for another consultant, KH, it is optional.

Second, we have seen that the words for ‘dad’ and ‘mom’ are always interpreted as definite, and in the absence of a possessive suffix refer to the speaker’s parent. This leads to the presence of unexpected possessive suffixes as well, as in (39), repeated here, where possession is expressed both at the clause level with *‘endu* ‘he has’ and in the DP with *bbāh* ‘his dad.’

- (39) عنده باه مشهور
 ‘end-u bbā-h meshhūr
 at-him dad-his famous
 ‘He has a famous dad,’ or ‘His dad is famous.’

For a speaker like KH, for whom the redundant possessive marking was optional for terms like ‘brother’ and ‘sister,’ it is mandatory for ‘mom,’ and ‘dad,’ indicating that kinship terms do not all have the same syntactic behavior.

Finally, we have seen examples of double genitives, where possession is expressed twice within a single DP, rather than once at the level of the DP and once at the level of the clause. Although these have been reported in the literature, neither of my consultants accepted double genitives, which meant I was unable to investigate their properties for this paper. This appears to be yet another case of interspeaker syntactic variation.

Having described the phenomena under investigation, the remainder of this essay will be dedicated to their analysis. It will be necessary, before tackling the syntax of kinship possession, to first arrive at a working understanding of possession in the DP and the clause, which will be the subject of Chapter 3. At that point, I will have laid the groundwork needed to present a final analysis.

3 Possession in the DP and the Clause

3.1 DP-internal possession

3.1.1 The Construct State

The syntax of the Semitic construct state (CS), called *idāfa* in the Arabic tradition, is relatively well-studied. Traditionally, the term “construct state” technically refers only to the properties of the first noun in the synthetic genitive construction, where the noun is in the construct state, as opposed to being definite or indefinite. However, I follow Mohammad (1999) in referring to the whole construction as “CS.”

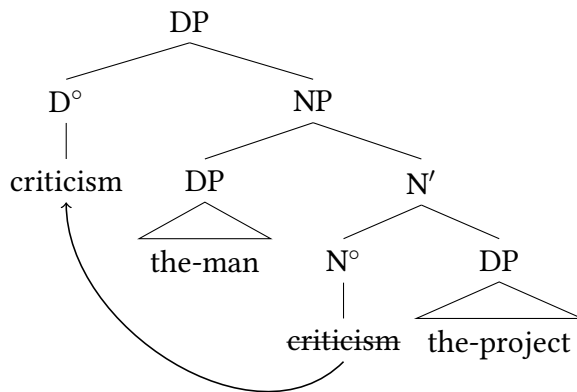
Many analyses of the CS present the DP as parallel to the IP (Mohammad, 1988; Fassi Fehri, 1993; Shlonsky, 1997). This is a particularly attractive analysis considering the properties of the Arabic verbal noun, or *maṣḍar*, which often appears in a CS with the same arguments that the corresponding verb would take. The following example from MSA shows this parallelism quite clearly. The *maṣḍar* is even able, like a verb, to assign accusative case to the theme, as in (50b), though the theme may also (more commonly) be introduced by a preposition, *li* ‘to,’ as in (50c).

- (50) a. انتقد الرجلُ المشروعَ
intaqada al-rajul-u al-mashrū‘-a
criticized the-man-NOM the-project-ACC
‘The man criticized the project.’

- b. انتقادُ الرجلِ المشروعَ
 intiqād-u al-rajul-i al-mashrū‘-a
 criticism-NOM the-man-GEN the-project-ACC
 ‘the man’s criticism of the project’
- c. انتقادُ الرجلِ للمشروعِ
 intiqād-u al-rajul-i li-l-mashrū‘-i
 criticism-NOM the-man-GEN to-the-project-GEN
 ‘the man’s criticism of the project’

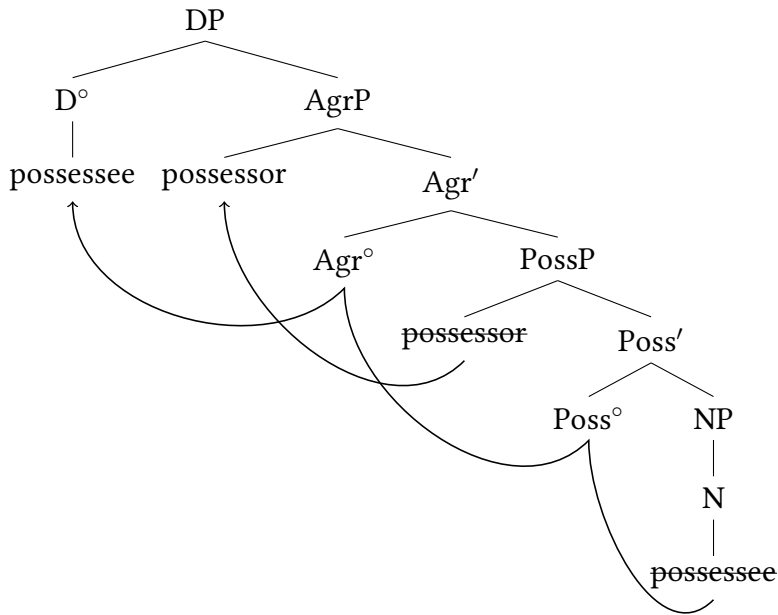
It is worth noting the similarity between the Arabic *mašdar* and English nominalized verbs, of the kind discussed in Chomsky (1970). Fassi Fehri (1993) gives the structure in (51) for CS constructions headed by a *mašdar*. The positions of the subject and object correspond to their positions in the VP under the VP-internal subject hypothesis. The head noun which starts in N° raises to D° , giving the desired word order and also mirroring the raising of V° to I° in the IP.

(51) Adapted from Fassi Fehri (1993)



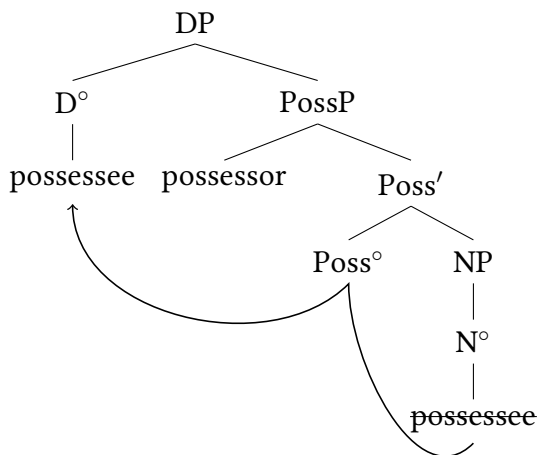
However, the picture gets more complicated for a CS that does not contain a *mašdar*. Without any verbal semantics, the CS does not seem like it should obviously parallel the IP. Fassi Fehri (1993) proposes that there needs to be extra structure to provide theta roles and Case, since nouns do not normally introduce arguments. To accomplish this, he adds a PossP, where Poss° is a functional head responsible for theta role assignment, and an AgrP, where Case is assigned.

(52) From Fassi Fehri (1993)



In light of more recent approaches to agreement, where agreement need not have its own projection, I will remove the AgrP and allow the PossP to handle both agreement and theta role assignment. The structure shown below, which is the one in Fassi Fehri (1993) with AgrP removed, will be the starting point for the structure I will use for the remainder of this paper.

(53) My modification of Fassi Fehri (1993)

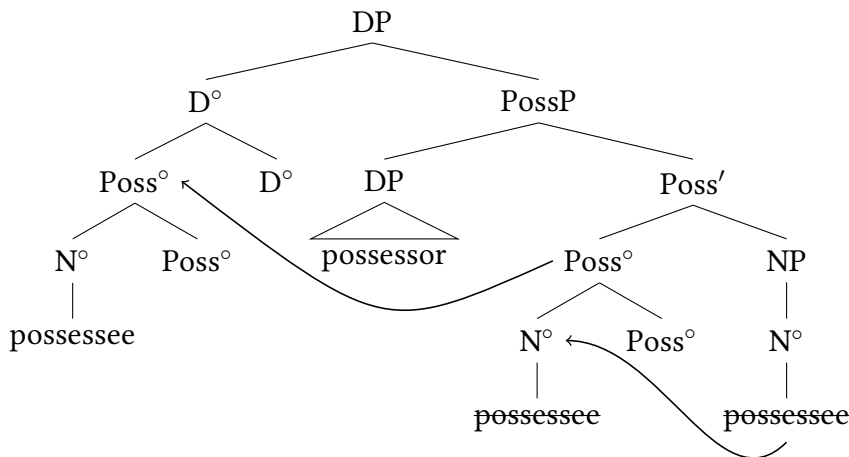


Leaving aside the extra layers of structure, the key feature of all of the analyses of the CS mentioned above is that the possessor begins in a specifier position, and the possessee raises

from N° to D° , possibly through some intermediate projection or projections, to give the surface word order, in which the head noun comes first. The current proposal falls in this family of approaches.

Before moving on to other possessive constructions, it will be useful to add a little more detail to the structure in (53). The PossP forms the core of the CS, with $Poss^\circ$ bringing in the two arguments: a DP possessor as its specifier, and an NP possessee as its complement. As the head noun moves from N° through $Poss^\circ$ to end up in D° , I will assume left-adjunction of heads, giving the following structure:

(54) My proposed structure for the CS with lexical possessee and possessor



In the case of a CS with lexical nouns as the possessee and possessor (as opposed to a pronominal possessor), D° and $Poss^\circ$ are both phonologically null. The head noun may undergo some morphological changes triggered by being combined with a $Poss^\circ$ head (such as the *-a/-t* alternation on feminine nouns described in Section 1.2.3).

3.1.2 Pronominal Possessors

The CS is sometimes called the synthetic genitive, because there is no independent word meaning ‘of.’ Rather, the possessor and possessee combine to form a single DP, which, as noted in section 1.2.3, forms a syntactic and prosodic unit, with nothing able to intervene between the words in

the CS. Their relationship is sometimes marked by morphology on the possessee, such as the *-a/-t* alternation on feminine nouns. The motivation for calling the CS “synthetic” is even clearer with pronominal possessors, which appear attached to the head noun.

- (55) a. *خو سكينه*
 khū sukayna
 brother Soukaina
 ‘Soukaina’s brother’
- b. *خوها*
 khū-hā
 brother-her
 ‘her brother’

It is not immediately clear what one should call elements such as *hā* ‘her.’ In the Arabic grammatical tradition, they are called *al-ḍamā’ir al-muttaṣila* ‘attached pronouns,’ a fairly broad term that also includes inflectional affixes on verbs. Harrell (2004) follows this tradition, and calls them “the suffixed pronouns.” Often, they are labeled as clitics, specifically enclitics, since they can only appear attached to the end of some other word. Shlonsky (1997), however, challenges the idea that these elements are clitics, arguing instead that they are agreement markers.

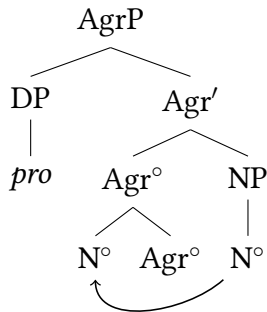
Shlonsky (1997) does not use Reverse Agree, the approach I adopt in this essay, summarized in Section 1.4. Rather, he uses Spec-Head Agreement, in which agreement takes place between a specifier and its head. This difference in theoretical frameworks poses no problem for incorporating Shlonsky’s account, however, because specifiers c-command their heads, meaning that any case of Spec-Head Agreement can also be explained with Reverse Agree. Note that the reverse does not hold, as in many configurations that are valid for Reverse Agree, Spec-Head Agreement would not apply, with Reverse Agree crucially being able to capture relationships between nodes over a larger distance than Spec-Head Agreement.

Much of the motivation in Shlonsky (1997) for finding a non-clitic analysis of these pronominal elements comes from the dissimilarity between Semitic and Romance, which provides the canonical case of clitics. One way in which Semitic and Romance clitics differ is that Romance

clitics appear only on verbs and auxiliaries, while Semitic attached pronouns may appear on various parts of speech, as noted in Section 1.2.3. Another point of difference is that Semitic clitics are always enclitics, attaching to the right of their host word, while Romance clitics often appear to the left of their verb.

Shlonsky shows that an agreement analysis of Semitic clitics can account for these and other properties. He proposes that various XPs, such as PP or NP, may be contained inside of an AgrP. Then, the word in X° raises to Agr° , combining by left-adjunction of heads. This allows for the presence of agreement marking on prepositions, nouns, verbs, etc., as well as correctly deriving that the clitics should always be enclitics. Agr° needs an element in its specifier to agree with, since Shlonsky assumes Spec-Head agreement, and this role is played by a silent *pro*. He suggests that *pro* may raise from some lower position, but for present purposes it is sufficient to merely note its presence in the specifier of AgrP. The following tree structure summarizes Shlonsky's account, using NP as an example.

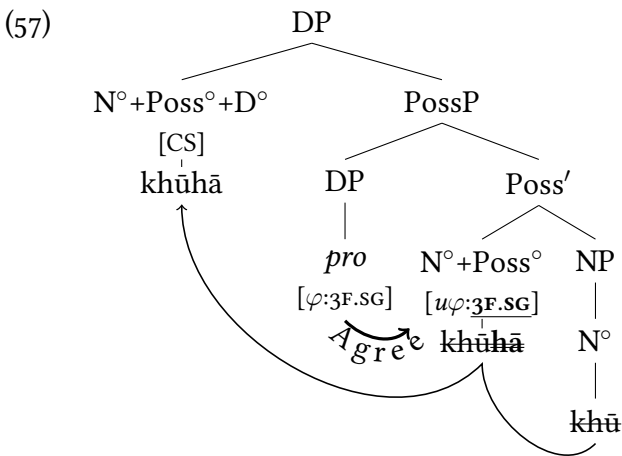
(56) Semitic clitics according to Shlonsky (1997)



As noted above, recent work in syntax tends not to posit AgrP, because the work of agreement can be done by other functional projections that have semantic content. As Shlonsky (1997, p. 191) puts it, “AgrPs have one role to play: they enable feature checking to be carried out in a Spec-head configuration. Beyond that they are entirely redundant.” With this in mind, it is easy to see how the structure in (56) fits naturally with the proposal for regular CS constructions in (54). If AgrP is relabeled as PossP and the outer DP layer is added, the structures are the same. The

silent *pro*, which provides the features that will be spelled out as a possessive suffix/“clitic,” is in the specifier position, exactly where the possessor is in (54).

Combining (54) and (56) then gives the structure in (57) for *khūhā* ‘her brother’ in its regular usage, where it refers to a definite individual. I have added the phi-features on *pro* and unvalued phi-features on Poss°, showing agreement with Reverse Agree as discussed in Section 1.4. I also show a [CS] feature on D° to indicate that this is the silent D° that selects for a PossP, forming a CS.



We will return to this structure in Chapter 4, in the discussion of the unexpected use of *khūhā* ‘her brother’ with indefinite reference that was discussed in Chapter 2.

3.1.3 The Analytic Genitive

In addition to the CS, spoken Arabic can express DP-internal possession using an analytic genitive construction, which varies substantially between dialects. (See Harning (1980) for a survey.) There are two genitive exponents in Moroccan Arabic: *dyāl/d* and *(n)tā*^c. I will focus on *dyāl* here. Unlike the CS, both nouns in an analytic genitive construction are independently marked for definiteness. For example, in (58) both ‘the bike’ and ‘the man’ are marked as definite.

- (58) البيكالة ديال الراجل
 al-pikāla dyāl al-rājel
 the-bike of the-man
 'the bike of the man,' 'the man's bike'

In most cases, the CS and analytic genitive can both express the same meaning, as illustrated in the following minimal pair:

- (59) a. راس ملكة
 rās malika
 head Malika
 b. الراس ديال ملكة
 al-rās dyāl malika
 the-head of Malika
 'Malika's head'

How speakers choose between the two is outside the scope of the present paper, but see Boumans (2006) for one study that investigates the distribution of the CS and analytic genitives. For present purposes, it is sufficient to note that the meaning of DP-internal possession with *dyāl* 'of' does not differ significantly from that of the CS.

The word *dyāl* 'of' may optionally show gender and number agreement with the head noun (the possessee). Some previous authors (Brustad, 2000; Harning, 1980) mention that this has been reported, but find no attested examples, while others (Boumans, 2006) mention that it is possible, but uncommon. My consultants confirm that the feminine form *dyālt* and plural form *dyāwl* are both possible, although their use is optional, and the unmarked form *dyāl* may be used in every case, as illustrated in (60). There is no feminine plural form of *dyāl*, which fits the pattern that the feminine plural is uncommon in MA for grammatical categories other than nouns. (I suggested *dyālāt* to KH and JE, but they did not accept it.)

- (60) a. i. الكتاب ديال منى
 al-ktāb dyāl monā
 the-book.M.SG of Mona
 ii. *الكتاب ديالت منى
 al-ktāb dyālt monā
 the-book.M.SG of.F.SG Mona

- iii. * الكتاب دياول منى
al-ktāb dyāwl monā
the-book.M.SG of.PL Mona
- b. i. الطوموبيلة ديال منى
al-ṭōmōbila dyāl monā
the-car.F.SG of Mona
- ii. الطوموبيلة ديات منى
al-ṭōmōbila dyālt monā
the-car.F.SG of.F.SG Mona
- iii. * الطوموبيلة دياول منى
al-ṭōmōbila dyāwl monā
the-car.F.SG of.PL Mona
- c. i. الكتب ديال منى
al-ktūb dyāl monā
the-book.M.PL of Mona
- ii. * الكتب ديات منى
al-ktūb dyālt monā
the-book.M.PL of.F.SG Mona
- iii. الكتب دياول منى
al-ktūb dyāwl monā
the-book.M.PL of.PL Mona
- d. i. البنات ديال منى
al-bnāt dyāl monā
the-girl.F.PL of Mona
- ii. * البنات ديات منى
al-bnāt dyālt monā
the-girl.F.PL of.F.SG Mona
- iii. البنات دياول منى
al-bnāt dyāwl monā
the-girl.F.PL of.PL Mona

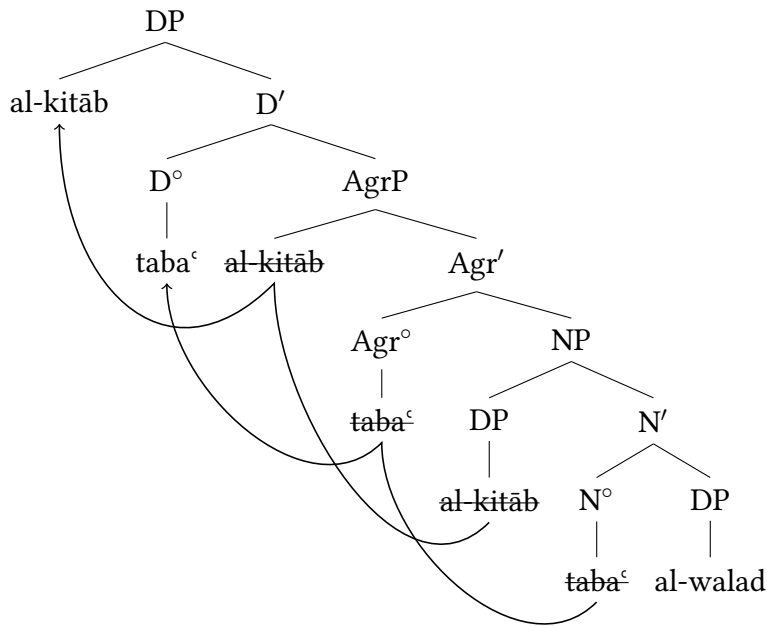
The genitive exponent in Palestinian Arabic (PA), *tabaʿ*, is at the core of a reworking of the syntax of DP-internal possession in Mohammad (1999), in which he seeks to unify the analytic and synthetic genitive constructions. This analysis looks rather different from the structure of the CS discussed above. The key change in his analysis is that the possessor no longer starts in the specifier position, but instead is the complement of the possessee.

The idea in Mohammad (1999) is that in a phrase like (61), the genitive exponent *tabaʿ* and the possessor form a CS. The possessee is brought in as the specifier of the NP.

- (61) الكتاب تبع الولد
 al-kitāb tabaʿ al-walad
 the-book of the-boy
 'the boy's book'

Mohammad (1999) has both 'the boy' and 'the book' start out in the same NP. This is the DP version of the VP-internal subject hypothesis, as Mohammad (1999) follows previous work in looking for parallelism between DP and IP. Here is the proposed structure, which is motivated by considerations of agreement and Case in PA and MSA:¹

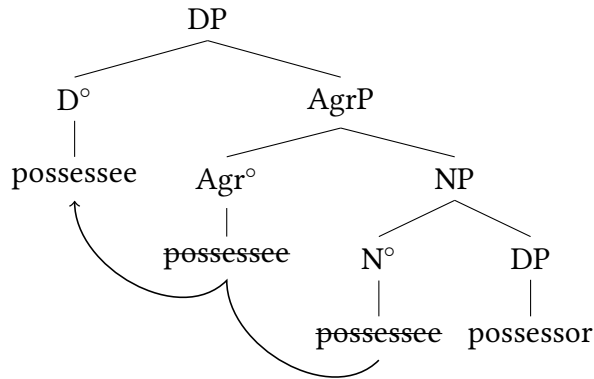
- (62) Adapted from Mohammad (1999)



While Mohammad (1999) does not present a structure for regular constructs, we can infer the following structure from the rest of his proposal.

¹The structure printed in Mohammad (1999) has extra edges in the tree on the bottom layer, making it appear that the words are base generated in multiple positions. I have assumed that this was a typesetting error, and inferred the intended structure based on the discussion.

(63) Interpretation of Mohammad (1999)



The reworking of the underlying structure of possessives in Mohammad (1999) is based in large part on the properties of PA *tabaʿ* ‘of.’ However, there are a number of reasons to think that MA *dyāl* ‘of’ is not exactly equivalent to *tabaʿ* ‘of.’

For one thing, the distribution of *dyāl* ‘of’ is wider than that of *tabaʿ* ‘of,’ appearing not only in possessives, but also in partitives, which is impossible for *tabaʿ* ‘of.’²

- (64) a. بزّاف ديال الناس
bezzāf dyāl al-nās
a.lot of the-people
‘a lot of people’
- b. ثلاثة ديال الولاد
tlāta dyāl al-ulād
three of the-boys
‘three boys’

- (65) a. *كثير تبع الناس
ktīr tabaʿ al-nās
a.lot of the-people
- b. *ثلاثة تبع الولاد
talāte tabaʿ al-ulād
three of the-boys

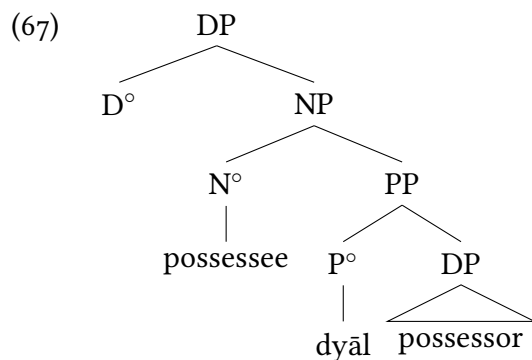
Additionally, the agreement between the possessee and the genitive exponent, which is obligatory in PA, is optional in MA (so optional that many descriptions of *dyāl* ‘of’ fail to mention it). Furthermore, while phrases with *tabaʿ* ‘of’ can not be introduced by the relative pronoun *illī* in PA, phrases with *dyāl* ‘of’ in MA can be introduced by the cognate relative pronoun *llī*, as in the following phrase taken from the web (<http://riada.kifache.com/19631>).

²Thanks to Sara Maani for her grammaticality judgments on (65).

- (66) المنحة اللي ديال الجامعة
 al-minḥa llī dyāl al-jāmi‘a
 the-scholarship that of the-university
 ‘the scholarship that’s from the university,’ ‘the university scholarship’

While Mohammad (1999) treats *taba* ‘of’ as a noun, in most discussions of MA grammar, *dyāl* ‘of’ is called a preposition, or simply a ‘particle.’ There are a number of words in Arabic that correspond to prepositions in English which have traditionally been treated as nominal by Arab grammarians, such as *taḥta* ‘below’ and *bayna* ‘between,’ so *dyāl* ‘of’ is not alone in exhibiting a mix of prepositional and nominal properties. It seems that genitive exponents in different varieties may fall in different places on this preposition-noun continuum. MA *dyāl* ‘of’ seems to be closer to the preposition side, especially considering the short form of *dyāl* ‘of,’ *d*. The single phoneme *d* ‘of’ bares a striking resemblance other short prepositions, such as *b* ‘with,’ *f* ‘in,’ and *l* ‘to.’

The above evidence leads me to depart from Mohammad (1999) in my analysis of *dyāl*, and instead to analyze it as a preposition, analogous to English *of*, as shown here:



It may seem odd, at first, to posit phi feature agreement on a preposition. However, there are other languages, such as Irish, that show agreement on prepositions (McCloskey & Hale, 1984; Brennan, 2009). Additionally, if we assume that lexical items are made up of bundles of features, it is not unreasonable to assume that a preposition may have phi features, just like a noun, verb, or adjective. I will take up the problem of generating this optional gender and number agreement on *dyāl* ‘of’ in Chapter 4.

Because I have not adopted Mohammad’s (1999) analysis of the analytic genitive, which is at the base of his proposal, I will not adopt his analysis of the CS either. Rather, I will use the structure in (54), which I developed above.

3.2 Clausal possession

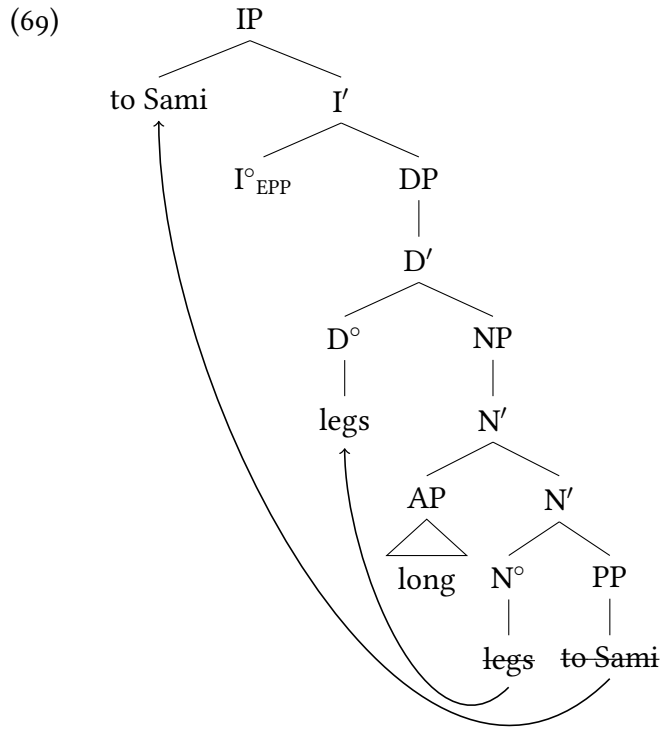
Arabic has no verb that corresponds to English *have*, but rather expresses clausal possession using a preposition such as *ind* ‘at’ or *li* ‘to.’ The use of a prepositional phrase to express clausal possession naturally suggests an analysis in which clausal possession is derived from a locative structure, as suggested by Freeze (1992) and others. However, the locative account as first proposed falls short in explaining all of the properties of clausal possessive structures. For an overview of the extensive literature on the syntax and typology of clausal possession, see Chapter 2 of Myler (2016). For this essay, the most important previous proposal is Boneh & Sichel’s (2010) account of clausal possession in Palestinian Arabic (PA). After reviewing their key points, I will apply their proposed structures to the MA data.

3.2.1 Boneh & Sichel (2010)

In their study of PA, Boneh & Sichel (2010) argue for three separate possessive structures for different types of clausal possession. The first of these is what they call the Part-Whole structure, which is expressed in PA using the preposition *la* ‘to,’ as in (68) (Boneh & Sichel, 2010, ex. 65).

- (68) لسامي إجرين طوال
la-sāmi `ijrēn ṭuwāl
to-Sami legs long
‘Sami has long legs.’

They use the term “Part-Whole” to refer to all PA clausal possession that uses the preposition *la* ‘to.’ This includes actual part-whole relationships like the relation between a tree and its branches, but it also extends to kinship. The structure that they give for Part-Whole sentences is in (69).



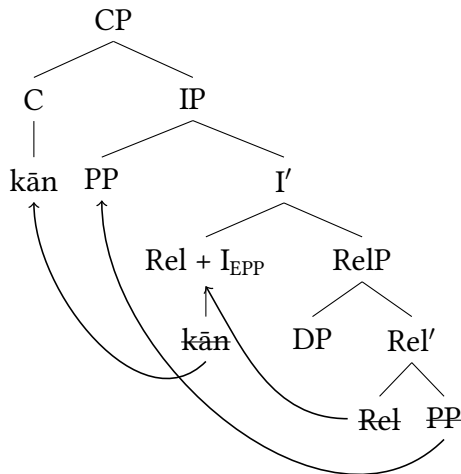
The key element of this structure is that the PP originates within the NP and then raises out of it, ending up in SpecIP, where it checks the EPP feature on I° . Having the PP start as the complement of N° helps capture the close relationship that is necessary in Part-Whole possession. This contrasts with the locative structure described below, in which the PP is part of a RelP and does not come from within the same NP as the head noun.

The second structure that Boneh & Sichel (2010) propose is the locative construction, which they give as an analysis for sentences like (70). Note that the PP in a locative sentence can be headed by any preposition, such as ‘behind’ or ‘on.’ This lack of restriction distinguishes the locative structure from other possessive sentences in PA, which are restricted to just three prepositions: *la* ‘to,’ *ind* ‘at,’ or *ma* ‘with.’

- (70) كان عند / مع / وراء / على / جنب منى ثلاث ولاد
 kān ‘ind / ma^c / warā’ / ‘alā / jamb monā tlāt ulād
 was at / with / behind / on / beside Mona three kids
 ‘There were three kids *chez*/with/behind/on/beside Mona’
 ‘Mona had three kids *chez*/with/behind/on/beside her’ (my gloss)³

Following Den Dikken (2006) this analysis of locative possessives has them begin as an asymmetrical small clause, which is called a RELATOR Phrase. In this example, the PP starts as the complement of Rel^o and needs to move to SpecIP to get the observed word order. In an instance of domain-extending movement, the Rel^o head moves to I^o, which is realized as the copula *kān* ‘was.’ The movement of Rel^o to I^o makes the specifier DP and complement PP equidistant, following definitions that go back to Chomsky (1995). This allows the PP to move past the DP on its way to SpecIP. The copula *kān* ‘was’ subsequently moves to C^o, which gives the surface word order.

- (71) Adapted from (Boneh & Sichel, 2010, ex. 52)



Technical details aside, the main crux of the locative structure is that it is just that—a locative sentence rather than a truly possessive sentence.

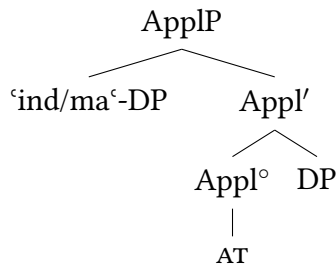
³The preposition ‘ind ‘at,’ when combined with a person *p* can mean ‘at *p*’s house,’ similar to the French word *chez*, which I use in the gloss.

Finally, Boneh & Sichel (2010) present the applicative structure. Semantically, this is the most flexible, and can be interpreted as either temporary or inalienable, depending on the context, as illustrated in (72) (Boneh & Sichel, 2010, ex. 60):

- (72) a. عند منى ثلاث ولاد (في هالمدرسة)
 ‘ind monā tlāt ulād (fi-ha-l-madrased)
 at Mona three kids in-this-the-school
 ‘Mona has three kids in this school.’
- b. عند منى خمس مية ولاد (في هالمدرسة)
 ‘ind monā khams-mīt ulād (fi-ha-l-madrased)
 at Mona five-hundred kids in-this-the-school
 ‘Mona has five hundred kids in this school.’

The most salient interpretation of (72a) is that the children are Mona’s. On the other hand, real world knowledge makes an inalienable interpretation of (72b) highly unlikely, and so the salient interpretation is one where Mona is not the children’s mother, but stands in some other relation to them, such as being their school principal. The point here is that the applicative structure is semantically underspecified, which is captured, structurally, by having a possessor that does not depend on the properties of the possessee. Instead, the PP containing the possessor is base-generated in the specifier of the ApplP and merges with the stative Appl°_{AT} (Cuervo, 2003) head as shown here:

(73) Boneh & Sichel (2010, example 57)



Boneh & Sichel (2010) specifically point out that a relational noun is not required in the applicative structure, which is what makes it different from the Part-Whole structure presented earlier. The inalienable interpretation that arises in applicative sentences like (72a) is not encoded in the grammar; it is merely an inference.

3.2.2 Extending Boneh & Sichel (2010) to Moroccan Arabic

While Boneh & Sichel (2010) provide a compelling account of Palestinian Arabic possession, their analysis cannot easily be transferred to Moroccan Arabic. One small but surmountable issue is that the examples in Boneh & Sichel (2010) typically have prepositional phrases where the complement is a full DP, as in ‘*ind monā* ‘at Mona.’ In MA, it is much more natural to left-dislocate the full DP and then have a pronominal suffix on the preposition, as illustrated by the following minimal pair.

- (74) a. عند منى كتاب ؟
‘end monā ktāb
at Mona book
‘Mona has a book.’
b. منى عندها كتاب
monā ‘end-hā ktāb
Mona at-her book
‘Mona has a book’

This relatively minor difference aside, there are several differences between possession in PA and MA. The first is that, apart from locative sentences similar to the example in (70), as far as I know MA only uses one preposition for clausal possession: ‘*end* ‘at.’ The analogs of the other two prepositions that PA uses—*l* ‘to’ and *m‘ā* ‘with’—are not used in MA to express clausal possession. This immediately casts doubt on the idea that the Part-Whole structure in (69) is used in MA, since these constructions were identified in PA chiefly based on the presence of the preposition *la* ‘to.’

It does seem plausible, however, that MA makes use of the applicative structure from Boneh & Sichel (2010). The preposition used in MA possessive sentences is the same as the one used in PA applicatives. We also see the same wide range of semantics for ‘*end* ‘at’ sentences that we see in PA. The optionality of the inalienable possessive reading in (72) for PA is exactly parallel in MA:

- (75) a. منى عندها ثلاثة د الولاد (ف هاد المدرسة)
 monā ‘end-hā tlāta d al-ulād (f hād al-medrasa)
 Mona at-her three of the-kids in this the-school
 ‘Mona has three kids in this school.’ (She is probably their mother.)
- b. منى عندها خمس مية ولد (ف هاد المدرسة)
 monā ‘end-hā khams-mīt weld (f hād al-medrasa)
 Mona at-her five-hundred kid in this the-school
 ‘Mona has five hundred kids in this school.’ (She is probably the principal/teacher.)

The similarity between the properties of possessive sentences that use ‘*ind* ‘at’ in PA and possessive sentences that use ‘*end* ‘at’ in MA leads me to adopt Boneh & Sichel’s (2010) applicative structure for MA.

3.3 Summarizing MA possessive structures

We have now seen a number of previous approaches to analyzing the syntax of Arabic possessive structures, and applied those approaches to MA. In analyzing the CS, or synthetic genitive construction, I have taken as a starting point the proposal of Fassi Fehri (1993). This analysis begins by positing parallelism between the DP and the IP, especially for verbal nouns. For other nouns, I adopt Fassi Fehri’s (1993) suggestion that there must be a PossP that assigns thematic roles to the possessor and possessee. I add to this account the idea that pronominal possessive suffixes are realizations of agreement, as argued by Shlonsky (1997). I let the PossP do the work of both agreement and theta role assignment, which allows the two analyses in Fassi Fehri (1993) and Shlonsky (1997) to fit together easily in one analysis.

For the analytic genitive, I posit that the genitive exponent *dyāl* ‘of’ is a preposition. This differs from the analysis of the PA genitive exponent *tabaʿ* ‘of’ as a noun in Mohammad (1999). I justify this departure by showing that, while *dyāl* and *tabaʿ* have some similar characteristics and are both glossed as ‘of,’ their syntactic properties significantly differ.

Turning to possession at the level of the clause, I focus on Boneh & Sichel’s (2010) analysis of PA clausal possession, which breaks down possessive sentences into three distinct structures:

Part-Whole, locative, and applicative. I adopt their applicative structure as my analysis for MA possessive sentences, which use the preposition ‘*end*’ ‘at.’

These previous analyses, however, do not fully explain the data on kinship relations presented in Chapter 2. The wrinkle appears when we consider the redundant possessive marking of kinship terms in certain constructions. Recall the two ways, repeated here, that KH could say ‘She has a brother/sister,’ only the first of which was grammatical for JE.

- (32) a. $\text{عندها خواها / خُتْها}$
‘*end-hā khū-hā* / *khut-hā*
at-her brother-her / sister-her
- b. % عندها خو / خُت
‘*end-hā khū* / *khut*
at-her brother / sister
‘She has a brother/sister’

The extra possessive suffix is possible only with kinship terms, and its distribution shows intra- and inter-speaker variation, which we have yet to account for. Finding a solution to this puzzle will be the focus of Chapter 4.

4 Generating Variation

4.1 The problem of variation

Linguistic variation is of great interest to the study of syntax, because it provides a window into the range of possibilities for the grammar of natural language. The data I have presented point to two types of variation: variation across languages (or between varieties of one language), and variation within a single speaker's grammar. The two types present slightly different, but related, challenges for syntactic analysis. In the first case, we must identify parameters that differ between two languages that can explain the fact that a construction is available in one variety, but unavailable in another. In the second case, we must identify what options are at a speaker's disposal when constructing a sentence such that they sometimes use one form, and sometimes use another.

In this essay, we have encountered varieties that are extremely close—the Moroccan Arabic from two different regions of the country—as well as varieties that are related slightly more distantly—Moroccan and Palestinian Arabic. In analyzing how they differ, I am drawing on the approach described by Kayne (2005). Microcomparative syntax, Kayne argues, is valuable in part because it is “the closest we can come, at the present time, to a controlled experiment in comparative syntax.” The fact that MA and PA, for example, are the same in very many respects, means that we can more easily isolate the parameters that produce their differences than if we were comparing, say, Moroccan Arabic and Russian. The comparison between the varieties spoken

by KH and JE is even better for isolating individual parameters, because those varieties are even more similar.

Variation within the language of a single speaker is perhaps a greater challenge for the study of syntax. At first glance, it seems that a language should, for example, either require agreement or show no agreement in a given construction. English past tense, for example, does not inflect for person or number, while Spanish past tense does; one expects this difference to be encoded as a parameter in the grammar somewhere. So what can we make of optionality? How does a single grammar, which we expect to be an invariable system for constructing sentences, permit a sentence to have two different forms?

One option is to posit that speakers have multiple grammars, which are in competition, a theory that has been invoked to explain diachronic syntactic change (Kroch, 2003). It is of course not implausible that a person should have more than one mental grammar if they are bilingual or even bidialectal. However, this is not a satisfactory explanation for variation where both forms belong to the same dialect and even the same register. Instead, I will follow Adger & Smith (2005) in looking for a source of variation at the level of the choice of lexical items with differing feature sets, as described in Section 1.4.

4.2 Completing the account of possession

4.2.1 Finding an element to agree with

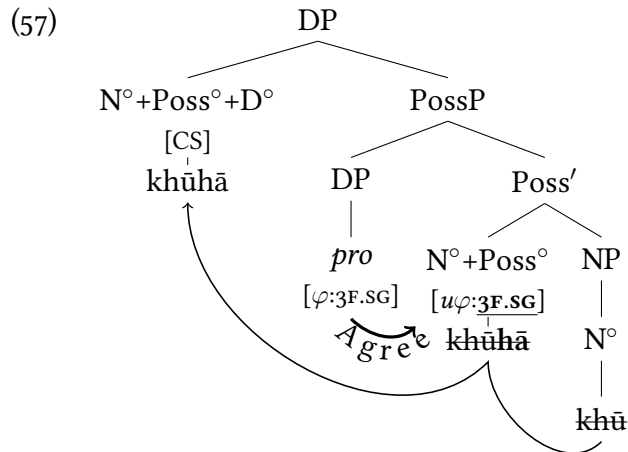
The solution to the main puzzle that this essay has presented needs to account for the following phenomena: first, the presence of an apparently redundant possessive suffix on kinship terms in clausal possessive sentences such as (32a), second, the interpretation of the DPs in these sentences as indefinite despite the presence of a possessive suffix, and third, the availability of the bare

kinship term, shown in (32b), for some speakers, but not for others. The key example is repeated here:

- (32) a. $\text{عندها خواها / ختها}$
 ‘end-hā khū-hā / khut-hā
 at-her brother-her / sister-her
- b. $\% \text{عندها خو / خت}$
 ‘end-hā khū / khut
 at-her brother / sister
 ‘She has a brother/sister’

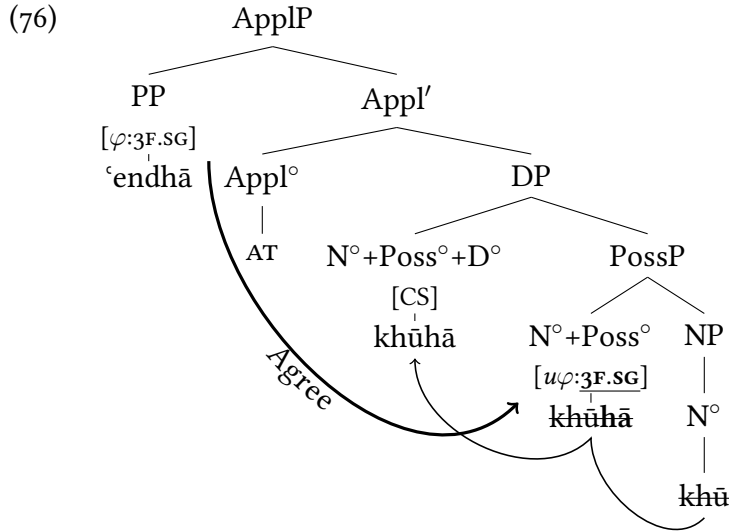
It is apparent that the *hā* ‘her’ attached to *khū* ‘brother’ in (32a) does not behave like a normal possessive suffix, since it does not render the DP definite. I propose that it is in fact the spell-out of agreement with the PP ‘*endhā* ‘at her.’

Before looking at the structure of (32a), recall the structure of *khūhā* ‘her brother’ in its normal usage. The *hā* ‘her’ suffix is the spell-out of agreement, between a silent *pro* in the specifier of PossP, and the Poss° head, where *pro* provides the phi features. This structure is repeated here:



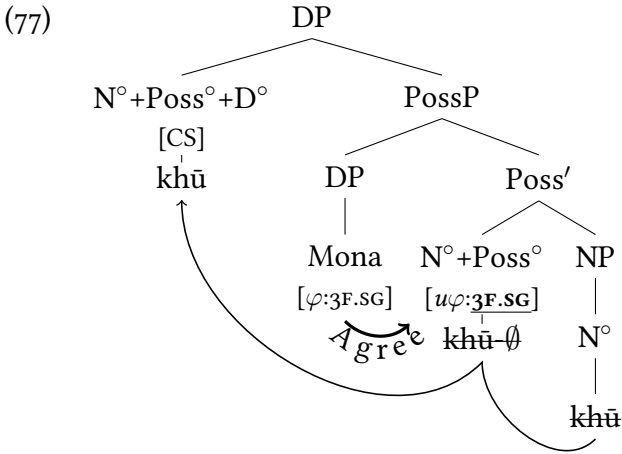
Recall that the D° head that selects for a CS (i.e. a PossP), is null, so in this case we hear just the N° *khū* ‘brother’ and the Poss° which spells out as *hā* ‘her’ after agreeing with *pro*. Additionally, recall that the definiteness of a CS is determined by the definiteness of the possessor. Silent *pro* has definite reference, so we correctly predict the whole CS in (57) to be interpreted as definite. In (32a) on the other hand, *khūhā* does not have definite reference. We can explain this by positing

that the silent *pro* is absent. However, Poss° still spells out as *hā* ‘her,’ so where does it get its phi-features from? It must look higher up in the tree, finding the PP ‘*endhā*’ ‘at her.’ The PP c-commands Poss° , so we are able to apply Reverse Agree, as shown:



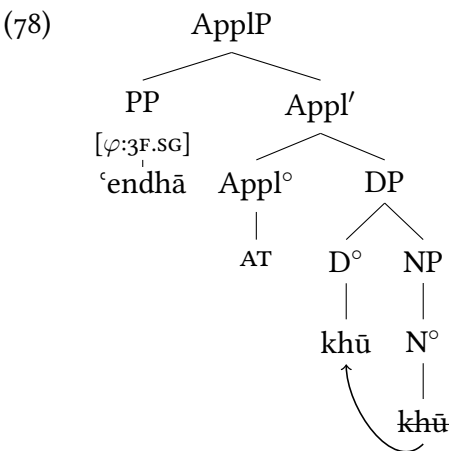
We can account for the fact that a structure like (76) is possible for kinship terms, but not for other nouns, by positing that there are two Poss° heads. The usual one brings in both a specifier and complement, and is used for regular CS constructions. The one in (76), on the other hand, has no specifier, and selects only for kinship terms.

The structure in (57) raises a question about what happens in a CS with a full DP possessor. If there is agreement between silent *pro* and Poss° , why is there no spelled-out agreement between *monā* and Poss° in *khū monā* ‘Mona’s brother’? To explain this, we need to invoke some version of the Generalized Doubly Filled Comp Filter (Koopman, 2003, p. 338), which derives from the Linear Correspondence Axiom of Kayne (1994). The GDFCF is a prohibition on both a specifier and its head being spelled out in the same XP. Here, the claim is that the possessor in the CS must be pronounced exactly once, so if there is an overt specifier, Poss° remains silent. This gives us the following structure for *khū monā* ‘Mona’s brother’:



It is not entirely surprising to find a construction that shows agreement with pronominals, but no agreement with full DPs, as similar phenomena have been documented in other languages. In Irish, for example, inflected forms of prepositions can only appear with pronominal arguments, and not with overt pronouns or lexical DPs (McCloskey & Hale, 1984; Brennan, 2009).

The last questions, regarding (32) are, what is the structure of (32b), and why is it possible for KH, but not JE? The first part is relatively simple. The DP *khū* ‘brother’ is simply a bare noun, introduced by the same silent D° that introduces any other indefinite noun. This gives us the following structure:



So why is (78) ruled out for JE? We can rule it out fairly straightforwardly through the selectional features of the silent indefinite D° , which for KH can select for any NP, but for JE cannot select

for kinship terms like *khū* ‘brother’ and *khut* ‘sister.’ This successfully explains the availability of indefinite *khū* ‘brother’ for JE in (33), repeated here.

- (33) a. عندها خو واحد
 ‘end-hā khū wāhed
 at-her brother one
 ‘She has one brother.’
- b. ما كاين شي خو (على الأرض) ما كيبيغيش خُته
 mā kāyn shī khū (‘lā al-’arḍ) mā kaybghī-sh khut-u
 not being any brother (on the-earth) not he.loves-NEG sister-his
 ‘There is no brother (in the world) who doesn’t love his sister.’

Just like in *khūhā* ‘her brother,’ where there is a PossP between D° and NP, in the phrases *khū wāhed* ‘one brother’ and *shī khū* ‘any brother,’ there is another level of structure beneath D° that can select the NP *khū* ‘brother,’ such as a NumP or QP, allowing it to appear outside of a CS.

4.2.2 Definite mom and dad

Unlike *khū* ‘brother’ and *khut* ‘sister,’ the words *māmā* ‘mom’ and *bābā/bbā* ‘dad’ are unavailable with an indefinite interpretation for both KH and JE, as seen in (44a), repeated here:

- (44) a. * ما كاين شي بّا ما كيبيغيش ولده *
 mā kāyn shī bbā mā kaybghī-sh weld-u
 not is some dad not he.loves-NEG son-his
 Intended: ‘There is no dad who doesn’t love his son.’

Recall that these words in their bare form must refer to the speaker’s mother or father, but this can be overridden by the presence of possessive suffix such as *h* ‘his’ or *hā* ‘her.’

- | | | | |
|---------|-------------------------|----|--------------------------|
| (41) a. | بابا سميتُه حمزة | b. | باباها سميتُه سعيد |
| | bābā smīt-u ḥamza | | bābā-hā smīt-u sa‘īd |
| | dad name-his Hamza | | dad-her name-his Said |
| | ‘My dad is named Hamza’ | | ‘Her dad’s name is Said’ |

We can explain the properties of these words by positing, first, that *māmā* ‘mom’ and *bābā/bbā* ‘dad’ obligatorily appear in a PossP, and second, that there is a special spell-out rule that says that

the first person singular Poss^o head spells out as null when attached to these words instead of being realized as the usual suffix of *-ī/-y(ā)*. This would be an unsurprising historical development, since the most common mom or dad that a person mentions is their own parent, making first person singular a reasonable default interpretation.

The spell-out of *māmā+1.SG* as *māmā* ‘my mom’ and *bābā+1.SG* as *bābā* ‘my dad’ explains why these words never get an indefinite interpretation. Since the bare forms are the ‘my’ forms, the bare forms can no longer be interpreted as indefinite. This also explains the absence of the definite article on ‘mom’ and ‘dad’ in (43), repeated here. They are actually definite CS constructions, and the first term in a CS never has the article *al*.

- (43) a. *العزيزة / الحبيبة* / *ماما الحبيبة*
māmā al-ḥbība / *al-‘zīza*
 mom the-darling.FSG / the-dear.F.SG
 ‘my darling/dear mom’
- b. *العزيز / الحبيب* / *بابا الحبيب*
bābā al-ḥbīb / *al-‘zīz*
 dad the-darling.M.SG / the-dear.M.SG
 ‘my darling/dear dad’

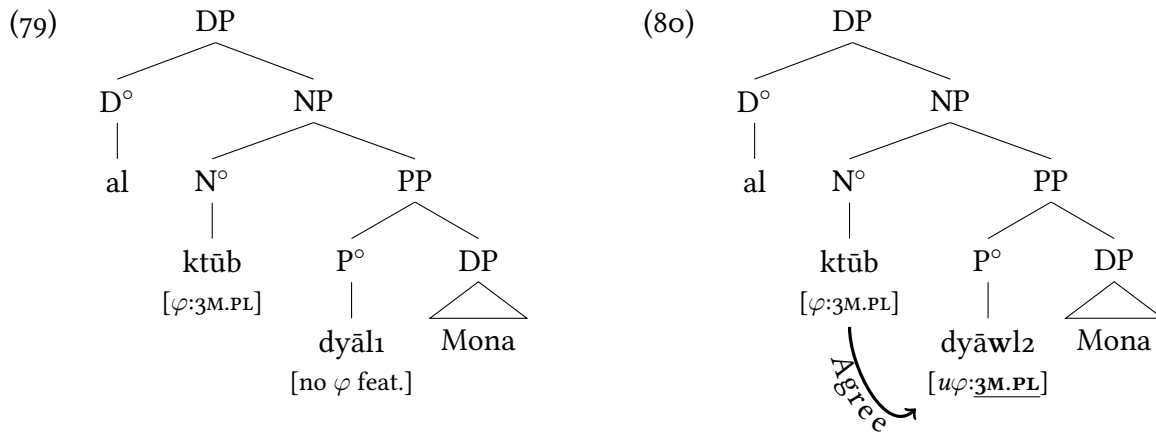
4.2.3 Agreement on *dyāl* ‘of’

It was noted above that *dyāl* ‘of’ optionally shows phi-feature agreement with the possessee, so that, for example, both (60c-i) and (60c-iii), repeated here, are grammatical.

- (60) c. i. *الكتوب ديال منى*
al-ktūb dyāl monā
 the-book.M.PL of Mona
- iii. *الكتوب دياول منى*
al-ktūb dyāwl monā
 the-book.M.PL of.PL Mona
 ‘Mona’s books’

Accounting for this optionality in the framework laid out in Adger & Smith (2005) is quite straightforward. We only need to posit two lexical items, *dyāl₁* and *dyāl₂*, which are identical

except that *dyāl1*, like most prepositions, has no phi features, while *dyāl2* does have unvalued uninterpretable phi features. When speakers choose *dyāl1*, which seems to be the most common choice, there is no agreement, as shown in (79), but when speakers choose *dyāl2*, there is agreement, as shown in (80). For completeness, I have shown full phi-features on the nouns and *dyāl2*, even though the morphology on nouns only reflects number and gender, and in the plural of *dyāl* there is no distinction between masculine and feminine.



4.3 Summarizing the solution

In arriving at an account of DP-internal and clausal possession in MA, I have drawn on several previous analyses of Arabic syntax. Fassi Fehri (1993) analyzes CS constructions in a way that roughly parallels the IP, with the head noun of the CS playing the role of V° . To explain theta role assignment in CS constructions headed by a normal noun (as opposed to a *mašdar*, or verbal noun), he posits a PossP, which I adopt in my own proposal. I add to this structure the notion that Arabic “clitics” are really agreement marking, as argued by Shlonsky (1997). Using Reverse Agree (Wurmbrand, 2014, 2017), I show how we can derive CS constructions with both pronominal and lexical possessors. Turning to clausal possession, I adopt the applicative structure proposed by Boneh & Sichel (2010) for PA possessive sentences beginning with *ma^ʿ/ind+DP* as my proposed structure for MA possessive sentences beginning with *ʿend*.

By combining these accounts, I am able to derive the apparently redundant possessive marking on MA kinship terms in clausal possession. Crucially, my account allows the possessive suffix on a word like *khū* ‘brother’ to agree with the clausal possessor at the beginning of the sentence (e.g. ‘*end-hā* ‘at-her’), resulting in possessive marking without the definite specific interpretation that usually comes with possession. The analysis of possessive suffixes as agreement also allows for a straightforward account of both intra- and inter-speaker variation. Speakers like KH for whom the redundant possessive marking is optional choose freely between two D° heads that differ in terms of their selectional features, allowing either a bare kinship term or a CS that shows agreement. On the other hand, speakers like JE for whom the redundant possessive marking is obligatory do not have a D° head that can select for a bare kinship term.

Along the way, we have encountered other interesting properties of possessive constructions, including possessive marking on *māmā* ‘mom’ and *bābā/bbā* ‘dad,’ and optional agreement on *dyāl* ‘of.’ In the case of ‘mom’ and ‘dad,’ it was necessary to stipulate special spell-out rules for their agreement, which led the bare forms to be interpreted as referring necessarily to the speaker’s parents. In the case of *dyāl* ‘of,’ the facts fit easily into the framework of agreement and variation that I have adopted, as long as we accept the (not implausible) idea that prepositions may have phi features.

5 Conclusion

In this essay, I have aimed to present an account of possession in Moroccan Arabic that fits with previous analyses of possession and grammatical variation. This account has brought in novel data about the grammatical system of MA, including a discovery of syntactic variation, where my two consultants had significantly different grammaticality judgments on sentences expressing kinship possession.

A number of questions are left open for future research. This study has documented a case of syntactic variation between only two speakers. More investigation would be needed to learn how these individuals' grammars fit into wider patterns of grammatical variation across time and space. Which system for expressing kinship possession is more common? How are these grammars distributed throughout the country? Is one grammar becoming more common over time, or is the linguistic situation stable?

There are also many questions left open regarding the grammatical system for possession that I was not able to explore in this essay. We have seen that, in general, the analytic genitive and synthetic genitive are both possible, but what are the factors that push a speaker to choose between them? We have also seen that there is optional gender and number agreement in the analytic genitive, but what are the factors that lead speakers to choose the agreeing version of *dyāl* 'of' instead of the non-agreeing version?

One major lesson from this essay is that the literature on MA is rather incomplete, and more work with native speaker consultants is necessary to flesh out the field's picture of the gram-

mar of spoken Arabic. Major works such as Harrell (2004) and Brustad (2000) provide a good introduction to the properties of MA grammar, but in my experience, within the first few minutes of working with a consultant, their judgments will differ from the ones reported in previous literature. This variation—numerous small differences between different speakers’ grammars—is of great interest to microcomparative syntax, to Arabic dialectology, and to the study of Arabic more broadly.

Bibliography

- Adger, David & Jennifer Smith. 2005. Variation and the minimalist program. In Leonie M. E. A. Cornips & Karen P. Corrigan (eds.), *Syntax and variation: Reconciling the biological and the social* (Amsterdam Studies in the Theory and History of Linguistic Science 265), 149–178. Amsterdam: John Benjamins.
- Badawi, El-Said M. 1973. *Mustawayāt al-‘Arabīya al-Mu‘āšira fī Miṣr: Baḥth fī ‘Alāqat al-Lughā bi-l-Ḥaḍāra* [*Levels of Contemporary Arabic in Egypt: An Investigation of the Relationship Between Language and Society*]. Cairo: Dār al-Ma‘ārif.
- Badawi, El-Said M. 1985. Educated spoken Arabic: A problem in teaching Arabic as a foreign language. In Kurt R. Jankowsky (ed.), *Scientific and Humanistic Dimensions of Language*, 15–22. Amsterdam: John Benjamins.
- Barker, Chris & David Dowty. 1993. Non-verbal thematic proto-roles. In *North East Linguistic Society (NELS)*, vol. 23, 49–62.
- Boneh, Nora & Ivy Sichel. 2010. Deconstructing possession. *Natural Language & Linguistic Theory* 28(1). 1–40.
- Boumans, Louis. 2006. The attributive possessive in Moroccan Arabic spoken by young bilinguals in the Netherlands and their peers in Morocco. *Bilingualism: Language and Cognition* 9(3). 213–231. doi:10.1017/S1366728906002598.
- Brennan, Jonathan. 2009. Pronouns, inflection, and Irish prepositions. *NYU Working Papers in Linguistics* 2.
- Brustad, Kristen. 2000. *The Syntax of Spoken Arabic: A Comparative Study of Moroccan, Egyptian, Syrian, and Kuwaiti Dialects*. Washington, DC: Georgetown University Press.
- Chomsky, Noam. 1970. Remarks on nominalization. In Roderick A. Jacobs & Peter S. Rosenbaum (eds.), *Readings in English Transformational Grammar*, 184–221. Waltham, MA: Ginn.
- Chomsky, Noam. 1995. *The Minimalist Program* (Current Studies in Linguistics 28). Cambridge, MA: MIT Press.
- Cuervo, María Cristina. 2003. *Datives at large*. Cambridge, MA: MIT dissertation.

- Den Dikken, Marcel. 2006. *Relators and Linkers: The Syntax of Predication, Predicate Inversion, and Copulas*, vol. 47. Cambridge, MA: MIT Press.
- Diem, Werner. 1986. Alienable und inalienable Possession im Semitischen. *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 136(2). 227–291.
- Fassi Fehri, Abdelkader. 1993. *Issues in the Structure of Arabic Clauses and Word Order*. Dordrecht: Kluwer Academic Publishers.
- Ferguson, Charles A. 1959. Diglossia. *Word* 15(2). 325–340.
- Freeze, Ray. 1992. Existentials and Other Locatives. *Language* 68(3). 553–595. doi:10.2307/415794.
- Harning, Kerstin Eksell. 1980. *The Analytic Genitive in the Modern Arabic Dialects* (Orientalia Gothoburgensia 5). Göteborg: Acta Universitatis Gothoburgensis.
- Harrell, Richard S. 2004. *A Short Reference Grammar of Moroccan Arabic*. Washington, DC: Georgetown University Press.
- Heath, Jeffrey. 2015. D-possessives and the origins of Moroccan Arabic. *Diachronica* 32(1). 1–33. doi:10.1075/dia.32.1.01hea.
- Henry, Alison. 2005. Non-standard dialects and linguistic data. *Lingua* 115(11). 1599–1617. doi:10.1016/j.lingua.2004.07.006.
- High Commission for Planning. 2004. Recensement général de la population et de l'habitat 2004. http://www.hcp.ma/Recensement-general-de-la-population-et-de-l-habitat-2004_a633.html.
- Kayne, Richard S. 1994. *The Antisymmetry of Syntax*. Cambridge, MA: MIT Press.
- Kayne, Richard S. 2005. Some notes on comparative syntax: With special reference to English and French. In *Movement and silence*, 277–333. Oxford: Oxford University Press.
- Koopman, Hilda J. 2003. *The Syntax of Specifiers and Heads: Collected Essays of Hilda J. Koopman*. London: Routledge.
- Kroch, Anthony S. 2003. Syntactic Change. In Mark Baltin & Chris Collins (eds.), *Handbook of Contemporary Syntactic Theory*, 699–729. Oxford: Blackwell. doi:10.1111/b.9781405102537.2003.00024.x.
- McCloskey, James & Kenneth Hale. 1984. On the syntax of person-number inflection in modern Irish. *Natural Language & Linguistic Theory* 1(4). 487–533. doi:10.1007/BF00417057.
- Mohammad, Mohammad A. 1988. On the parallelism between IP and DP. In *West Coast Conference on Formal Linguistics*, vol. 7, 241–254.

- Mohammad, Mohammad A. 1999. Checking and licensing inside DP in Palestinian Arabic. In Elabbas Benmamoun (ed.), *Perspectives on Arabic Linguistics XII*, 27–44. Amsterdam: John Benjamins.
- Myler, Neil. 2016. *Building and Interpreting Possession Sentences*. Cambridge, MA: MIT Press.
- Pesetsky, David & Esther Torrego. 2001. T-to-C movement: Causes and consequences. In Michael Kenstowicz (ed.), *Ken Hale: A Life in Language* (Current Studies in Linguistics 36), 355–426. Cambridge, MA: MIT Press.
- Rosenbach, Anette. 2002. *Genitive Variation in English: Conceptual Factors in Synchronic and Diachronic Studies* (Topics in English Linguistics 42). Berlin: Walter de Gruyter.
- Rosenbach, Anette. 2008. Animacy and grammatical variation: Findings from English genitive variation. *Lingua* 118(2). 151–171. doi:10.1016/j.lingua.2007.02.002.
- Shlonsky, Ur. 1997. *Clause Structure and Word Order in Hebrew and Arabic: An Essay in Comparative Semitic Syntax*. Oxford: Oxford University Press.
- Suleiman, Yasir. 2013. Arabic folk linguistics. In Jonathan Owens (ed.), *The Oxford Handbook of Arabic Linguistics*, 264–280. Oxford: Oxford University Press.
- Versteegh, Kees. 1997. *The Arabic Language*. New York: Columbia University Press.
- Wurmbrand, Susi. 2014. The merge condition. In Peter Kosta, Steven Franks, Teodora Radeva-Bork & Lilia Schürcks (eds.), *Minimalism and Beyond: Radicalizing the Interfaces*, 130–167. Amsterdam: John Benjamins.
- Wurmbrand, Susi. 2017. Feature sharing or how I value my son. In Claire Halpert, Hadas Kotek & van Urk (eds.), *The Pesky Set: Papers for David Pesetsky* (MIT Working Papers in Linguistics 80), 173–182. Cambridge, MA: MITWPL.