Studies in Nominal Modification in Bohairic Coptic

Thesis

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Abstract

Linguists specializing in Afro-Asiatic languages have, more often than not, focused on the Semitic branch, e.g Arabic and Hebrew. In doing so, much attention has been paid to certain phenomena that are characteristic of the Afro-Asiatic language family: (i) the bipartite and tripartite consonantal root system, allowing for non-concatenative (using the traditional interpretation of concatenation) morphological inflection (McCarthy 1981), (ii) definiteness spreading throughout the noun phrase (Ritter 1991/1992), (iii) the construct state (CS), and (iv) the interaction between VSO and SVO canonical word orders (Ouhalla 1994). Following in their footsteps, I pursue investigation of similar phenomena, however, this time within Bohairic Coptic.

Coptic is the final stage of the Egyptian languages, and was spoken from the fourth to the fourteenth century CE, and the Bohairic dialect survives today, as the liturgical language within the Coptic Orthodox Church. In this thesis, I argue that a Functional approach to grammar best captures the cross linguistic variation, intralinguistic variation, and contact induced changes found in the data revolving around the noun phrase in Bohairic Coptic. I then show the importance of focusing an investigation around the phrases, within the nominal system, that utilize the particle ⲛ̀, because of ⲛ̀'s manifestation in various phrases, as well as the historical progression of the phrases in which it appears throughout various stages of Egyptian.

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Chapter 1

Introduction

In this thesis, I argue that a Functionalist approach to grammar best accounts for the nature of the Bohairic Coptic noun phrase. In doing so, I will show that a Functionalist approach to grammar is best able to capture (i) cross-linguistic differences in the Construct State, in Chapter 2 (ii) intra-linguistic differences within the variant ordering of Bohairic Coptic adjectives with respect to the nouns they are modifying, in Chapter 3 and (iii) contact induced changes in the agreement patterns that manifest when Greek adjectives modify Bohairic Coptic nouns, in Chapter 4. Afterwards, I will discuss why I have limited my investigations within this thesis to the nominal constructions in which ⲛ̀ is used, in Chapter 5, by illustrating that ⲛ̀ cannot be a case marker, as well as discussing its historical manifestation in these phrases.

Before delving into the analysis, I will first use this present chapter to introduce the history of the Egyptian languages in Section 1.1, the basic underlying principles behind the four main approaches to grammar, mainly Mainstream Generative, Categorial, Lexicalist, and Functionalist in Section 1.2, and the productive article system found in Bohairic Coptic in Section 1.3.

1.1 The Egyptian Languages

Ancient Egyptian constitutes its own branch in the Afroasiatic language family, it shows the closest relations to Beja (Cushitic), Semitic and Berber, and it was confined to the Nile valley and delta, broadly within the borders of modern Egypt. The productive history of

Egyptian is divided into two main stages: Earlier Egyptian and Later Egyptian. This divide in the two main stages is characterized by a major change from synthetic, Earlier Egyptian, to analytic, Later Egyptian, patterns in the nominal syntax and the verbal system. For instance, Earlier Egyptian displays a full set of morphological suffixes indicating gender and number, exhibits no definite article, and maintains the VSO order in verbal formations, while Later Egyptian replaces the suffixal markers of morphological oppositions with prefixal indicators such as the article, incorporates definiteness, derived from the demonstrative "this," and indefiniteness, derived from the numeral "one," and follows more of an SVO pattern. Due to the centralized nature of the political and cultural models underlying the evolution of Ancient Egyptian society, there is hardly any evidence of dialect differences in pre-Coptic Egyptian (Loprieno 1995).

Earlier Egyptian consists of Old Egyptian and Middle Egyptian. Old Egyptian was spoken from approximately 3000-2000 BCE during the Old Kingdom and the First Intermediate Period, while Middle Egyptian was spoken from approximately 2000-1300 BCE from the Middle Kingdom to the end of Dynasty XVIII, and is considered to be the *classical* language of Egypt. Later Egyptian consists of Late Egyptian, Demotic, and Coptic. Late Egyptian was spoken from approximately 1300-700 BCE during the latter part of the New Kingdom. The texts surviving of this phase of the language show various degrees of interference between classical Middle Egyptian and Late Egyptian, living in a diglossic situation, where Middle Egyptian was the High variety, while Late Egyptian served as the Low variety. Demotic was spoken during the Late Period, from the seventh century BCE to the fifth century CE, and was fairly similar to Late Egyptian in terms of grammatical structure (Kramer 2012).

Finally, Coptic was spoken from the fourth to the fourteenth century CE, although it is debatable how natively it was spoken by the end of that timespan. Even though it was superseded by Arabic after the Arab conquest of Egypt, it remains in use liturgically. It has two major dialects: Sahidic, the standard dialect, and Bohairic, which survives as the

liturgical language. Coptic, unlike the four other stages of Egyptian, is written using the Greek alphabet, with the addition of six extra signs, derived from Demotic, for uniquely Egyptian phonemes. Coptic also features a large number of loanwords from Greek.

1.2 Theories of Syntax

Presently, there are four main approaches to grammar in the field of Syntax: Mainstream Generative, Categorial, Lexicalist, and Functionalist. In this section I provide the basic underlying principles behind Mainstream Generative approaches to grammar in Section 1.2.1, Categorial approaches to grammar in Section 1.2.2, Lexicalist approaches to grammar in Section 1.2.3, and Functionalist approaches to grammar in Section 1.2.4.

1.2.1 Mainstream Generative Grammar

In Mainstream Generative Grammar, linguistic competence is described as a set of rules, where strings of words and morphemes are put together to meet well-formedness conditions. Mainstream Generative grammars are mainly concerned with the form of a sentence. The methodology of $uniformity$ is used within Mainstream Generative approaches to grammar, and is aimed at eliminating any redundant grammatical formulations. It does so via three forms of uniformity:*interface uniformity*, *structural uniformity*, and *derivational uniformity*. With interface uniformity, it is assumed that sentences with the same meaning would share a similar syntactic representation, structural uniformity requires the same underlying representation of two constituents in two different sentences that have the same grammatical function, and derivational uniformity assumes that at least some sentence with the same meaning but different superficial structures are derived transformationally (Culicover 2014).

1.2.2 Categorial Grammar

In Categorial grammar, all grammatical constituents are distinguished by a syntactic type, where the grammar consists of a small set of primitive categories, as well as recursively defined categories, which come together to define other, more complex, categories.

It is best to describe recursively defined categories through demonstration, by taking the example of VP. Instead of labeling the category VP as a primitive category, we are actually able to break down that expression in the following way: any expression that is of the category VP can be recast as $S/_R NP$[1], where it is looking for an NP sister on its right in order to produce a sentence, for intransitive verbs, or $(S/_R NP)/_L NP$, where the expression of this category is first looking for an NP sister on its left, to produce the expression $S/_R NP$ which is now looking for an NP sister on its right in order to produce a sentence, for transitive verbs (Jacobson 2014). While there are some primitive categories, such as NP and PP, in the more complex expressions we find that the name of a category encodes what sister categories it syntactically combines with to produce a mother category.

1.2.3 Lexicalist Grammar

In Lexicalist approaches to syntax there are no syntactic transformations that map one sentence's structure to another. Instead words are equipped with information about the way they combine with other constituents and the meaning of the resulting combinations. In Head Driven Phrase Structure Grammar (HPSG), the lexicon, a small number of universal principles, and the immediate dominance schemata are responsible for well-formedness, all of which are presented in an attribute value matrix. The lexicon contains all relevant information pertaining to lexical items, called lexical signs[2], which include phonological (PHON),

[1] Using the same notation found in Jacobson (2014), directionality is subscripted onto the slash, and so an expression of category A/B is interpreted as either $A/_R B$, where this expression combines with an expression of category B to its *right* to get an expression of category A, or $A/_L B$, where this expression combines with an expression of category B to its $left$ to get an expression of category A.

[2] The basic type that HPSG deals with is the *sign*. Words and phrases are two different subtypes of *sign*. A word has two features: [PHON], the sound or phonetic form, and [SYNSEM], the syntactic and semantic information, both of which are split into subfeatures.

syntactic and semantic information (SYNSEM), as well as some pragmatic or contextual information. The SYNSEM information is contained in either a LOCAL or NONLOCAL attribute, where the NONLOCAL attribute is used in dealing with unbounded dependencies, while the LOCAL attribute is divided into three attributes: category CAT, content CONT, and context CONTEXT. Syntactic information is contained in the CAT attribute, which contains other attributes, such as HEAD and VALENCE, where the HEAD attribute contains information such as concord features and tense, while VALENCE attribute contains lists of the head's dependents, such as subject SUBJ, specifier SPR, and complements COMP. Semantic information is contained in the attribute called CONT. There are some universal principles in HPSG, such as the Valence Principle, which insures that the items on the valence list are cancelled off whenever they are added to the phrase, and the Head Feature Principle, which insures that the information on the HEAD percolates up to all projections of that head (Pollard & Sag 1994, Zlatic 1997 Chapter 3, Mueller & Wechsler 2014).

1.2.4 Functionalist Grammar

The central point of Functionalist approaches to grammars is that syntactic structures have aspects of meaning associated with them that cannot be explained strictly in terms of the meanings of their constituents. Goldberg (2003) highlights seven main tenets of Constructions which I reiterate here. First, all levels of description are understood to involve pairings of form with semantic or discourse function, including morphemes or words, idioms, partially lexically filled and fully abstract phrasal patterns. Second, an emphasis is placed on subtle aspects of the way we conceive of events and states of affairs, where different surface forms are typically associated with slightly different semantic or discourse functions. Third, a method of 'what you see is what you get' approach to syntactic form is advocated, where no underlying levels of syntax or any phonologically empty elements are posited. Fourth and fifth, because Constructions are understood to be learned on the basis of the input and general cognitive mechanisms, crosslinguistic variation is expected

and explained by appealing to general cognitive constraints together with the functions of the constructions involved. Sixth, language-specific generalizations across constructions are captured via inheritance networks, in order to create a composite Construction that combines conditions from the two or more general Constructions. And, seventh, the totality of our knowledge of language is captured by a network of constructions: a 'construct-i-con.'

1.3 Articles in Bohairic Coptic

In this section I introduce the productive article/definiteness system found in Bohairic Coptic.

Bohairic Coptic makes use of a productive article/definiteness system incorporated within each noun phrase. Here, the definiteness marker, which can be an article, is prefixed noun initially, and is inflected for gender, number and definiteness; the Bohairic Coptic article/definiteness marker cannot appear independently. Lastly, nouns in Bohairic Coptic can be either masculine or feminine; there is no neuter gender.

The definite singular masculine marker is characterized by the Bohairic Coptic prefix ⲡⲓ-, and introduces masculine nouns as seen in (1).

(1) ⲡⲓⲛⲟⲩϯ

pi-noti
DEF.SG.M-god

'the god'

(Mallon 95)

The definite singular feminine marker is characterized by the Bohairic Coptic prefix ϯ-, and introduces feminine nouns as seen in (2).

(2) ϯⲥⲁⲓⲱ

ti-ɪshimi
DEF.SG.F-woman

'the woman'

(Mattar 498)

A distinction is made between strong and weak singular definite markers in Bohairic Coptic[3].

The singular definite masculine marker (ⲡⲓ-) is the strong counterpart to the weak singular definite masculine marker (ⲡ̀-) as seen in (3).

(3) ⲡ̀ⲣⲟ

ɪp-uro
DEF.SG.M-king

'the king'

(Mattar 499)

There are some morpho-lexical alternations within Bohairic Coptic that will change the form of (ⲡ̀-) to (ⲫ̀-) when preceding certain sounds, or sound units as seen in (4).

(4) ⲫ̀ⲛⲟⲩⲧ

ɪv-noti
DEF.SG.M-god

'God'

(Mallon 95)

For the singular feminine definite definiteness marker, the weak counterpart to the strong (ⲧ-) is (ⲧ̀-), as seen in (5).

[3]This distinction is not as sharp, or necessary, aside from looking at the genitive phrase, which will be discussed further in Chapter 2, particularly Section 2.3.

(5) ⲧⲫⲉ

ɪt-veə
DEF.SG.F-heaven

'the heaven'

(Younan 30)

Once again, as is the case with (ⲡ-) and (ⲫ-), the same morpho-lexical alternations are applied to (ⲧ-) where its form is changed to become (ⲑ-) when preceding certain sounds, or sound units, as seen in (6).

(6) ⲑⲙⲁⲩ

ɪθ-mɔv
DEF.SG.F-mother

'the Mother (referring to the Virgin Mary)'

Since it is a richly inflected language, Bohairic Coptic also indicates possession by morphological inflection of pronominal affixation. In cases such as these, the definiteness marker will agree with the head noun, and not the possessive pronoun, as seen in (7).

(7) ⲡⲉⲥⲓⲱⲧ

pi-ɪs-jot
DEF.SG.M-3.SG.F-father

'her father'

(Mattar 138)

Unlike the definite singular definiteness markers, the definite plural marker does not mark gender. The plural definite marker in Bohairic Coptic (ⲛⲓ-) can appear with both masculine nouns (8a), and feminine nouns (8b).

(8) a. ⲛⲓⲱⲟⲩⲏⲣⲓ

ni-ʃeɪri
DEF.PL-son
'the sons'

(Mallon 162)

b. ⲛⲓⲥⲱⲛⲓ
ni-soni
DEF.PL-sister
'the sisters'

(Younan 30)

There is a weaker definite plural marker as well, mainly, (ⲛⲉⲛ-). This can be seen in (9a) on a masculine Bohairic Coptic noun, and in (9b) on a feminine Bohairic Coptic noun.

(9) a. ⲛⲉⲛϣⲏⲣⲓ
nɪm-ʃeɪri
DEF.PL-son
'the sons'

(Younan 28)

b. ⲛⲉⲛⲥⲱⲛⲓ
nɪm-soni
DEF.PL-sister
'the sisters'

(Younan 28)

Moving on to the indefinite markers, the Bohairic Coptic indefinite singular marker (ⲟⲩ-) does not distinguish between gender, and can therefore be applied to both masculine nouns (10a), and feminine nouns (10b).

(10) a. ⲟⲩⲣⲱⲙⲓ
u-romi
INDEF.SG-man
'a man'

(Younan 31)

b. ⲟⲩⲥⲟⲛⲓ

u-ɪshimi
INDEF.SG-woman
'a woman'

(Younan 31)

Lastly, the plural indefinite Bohairic Coptic marker (ϩⲁⲛ-) can appear with both masculine nouns, as in (11a), as well as feminine nouns, as in (11b).

(11) a. ϩⲁⲛⲣⲱⲙⲓ
hɑn-romi
INDEF.PL-man
'(some) men'

(Younan 31)

b. ϩⲁⲛⲥ̀ϩⲓⲙⲓ
hɑn-ɪshimi
INDEF.PL-woman
'(some) women'

(Younan 31)

Chapter 2

Genitives – Cross-linguistic Variation

In this Chapter I introduce the Construct State phenomena in Section 2.1, and discuss how it has been analyzed within various approaches to grammar in Section 2.2. I then introduce a Construct State like construction in Bohairic Coptic, in Section 2.3, and discuss the similarities and difference between the Construct State in Bohairic Coptic and the Construct State in Semitic languages in Section 2.4. I show how a Functionalist approach to grammar best accounts for the cross-linguistic differences between Construct States in Semitic languages and Construct State in Bohairic Coptic in Section 2.5.

2.1 The Construct State

In this section I illustrate the Construct State with examples from Egyptian Arabic.

A Construct State is a syntactic noun phrase consisting of at least two nominal members that are in a genitive relationship (Benmamoun 2006). A Construct State nominal consists of a phonologically reduced head nominal[1], which is immediately followed by an embedded nominal phrase, the head and the specifier, respectively. There is no limit on the number of embedded nominal phrases that can concatenate within the Construct State.

A definite noun in Arabic takes the definiteness marker [el], as seen in (12a), while the absence of an [el], as seen in (12b), indicates that the noun is indefinite.

(12) a. el-Tifl
DEF-child

[1]Empirically, it is not the case that all head nouns are phonologically reduced, however, when there is a phonologically reduced variant of a full noun form, it is required when in the head position of the Construct State.

'the child'

b. Tifl
child
'child'

In Arabic, a Construct State can be syntactically definite or indefinite, as seen in (13). An example of a definite Construct State, marked by the definite article [el], can be seen in (13a), while an example of an indefinite Construct State, marked by the absence of the definiteness marker [el], can be seen in (13b).

(13) a. kitab el-Talib
book DEF-student
'the student's book (lit. the book of the student)'

b. kitab Talib
book student
'a student's book (lit. a book of a student)'

In Arabic, (in)definiteness is marked only on the last constituent of the Construct State. This means that the first member, the head, cannot carry (in)definiteness marking and that the (in)definiteness status of the last member of the specifier provides the syntactic definiteness of the whole Construct State.

When (in)definiteness is marked on a constituent other than the final specifier in the Construct State, different interpretations arise, in Egyptian Arabic (14a) is the intended reading of the Construct State, and (14b) and (14c) are infelicitous readings of the Construct State.

(14) a. kitab ukh-t el-ustaaz
book sister.F DEF-teacher
'the teacher's sister's book'

b. kitab el-ukh-t el-ustaaz
book DEF-sister.F DEF-teacher
lit: 'the sister's book that is the teacher'

c. el-kitab ukh-t el-ustaaz
DEF-book sister.F DEF-teacher
lit: 'The book is the teacher's sister.'

The Construct State, although phrasal, acts as one prosodic unit (Siloni 2001). This is most clearly seen when feminine head nouns manifest an overt [-t]. In order to explain this point, I first review the role of grammatical gender in Arabic.

Arabic feminine nouns are marked by the *ta marbuta* morpheme, as seen in (15). (15a) is a masculine noun, and (15b) has the same base, with a suffixed *ta marbuta*, manifested as [a], marking it as a feminine noun.

(15) a. SaHib
friend
'male friend'

b. SaHib-a
friend-F
'female friend'

When a clitic is suffixed onto a feminine noun marked with a *ta marbuta*, the *ta marbuta* is then realized as a [t], rather than as an [a], as seen in (16), where the pronominal clitic [-i], marking first person, singular, possessive, is suffixed on [SaHiba], realizing it as [SaHibti].

(16) SaHib-t-i
friend-F-1.SG.POSS
'female friend'

This is also the case when the head nominal item of the Construct State is feminine. In (17), [Hafla], meaning 'party,' is a feminine noun marked as such by the *ta marbuta*[2]. It is realized as a vowel [a] when standing alone, as seen in (17a), or modified by an adjective, as in (17b). On the other hand, we find that the *ta marbuta* is realized as the consonant [t] when it occurs with a suffixed pronominal clitic, as in (17c), or in the Construct State, as in (17d).

[2]Unlike with [SaHiba], in (15), and (16), where the *ta marbuta* could be separated from its base [SaHib], in the case of [Hafla] the *ta marbuta* cannot be separated from [Hafla].

(17) a. Hafl.a
party.F.SG
'party'

b. el-Hafl.a el-kibeer-a
DEF-party.F DEF-big-F
'the big party'

c. Hafl.t-i
paty.F.SG-1.POSS.SG
'my party'

d. Hafl.t el-ragil
party.F.SG DEF-man
'the man's party'

Furthermore, support for the claim that the Construct State acts as one prosodic unit, is that just as it is ungrammatical for [Hafla], meaning 'party,' to retain its vowel when a pronominal clitic is suffixed onto it, as in (18a), it is also ungrammatical for [Hafla] to retain its vowel [a] when it is the head of a Construct State, as in (18b).

(18) a. *Hafl.a-i
party.F.SG-1.POSS.SG
'my party'

b. *Hafl.a el-ragil
DEF-party.F DEF-man
'the mans party'

Being a prosodic unit, the Construct State requires strict adjacency. It can not have any intervening modifiers, such as an adjective, between the head and the specifier.

Before demonstrating this strict adjacency, I must first explain the agreement patterns of adjectives in Arabic. Modifying adjectives in Arabic appear postnominally, and agree with the noun they are modifying in gender, number, and definiteness. This is demonstrated in (19). In (19a), [bayt], meaning 'house,' is definite, as indicated by the prefixed [el], singular, and grammatically masculine. For this reason, [kibeer], meaning 'big,' is also in its singular, masculine form with a prefixed definite marker [el], to agree in gender, number,

and definiteness. In (19b), [bayt] is indefinite, as indicated by the absence of [el], and so [kibeer] is also indefinite. In (19c), [sit], meaning 'woman,' is grammatically feminine, and so the *ta marbuta*, marking feminine gender in Arabic, is suffixed onto [kibeer] to agree in gender with the noun it is modifying. In (19d), [kibeer] is modified in number appearing as [kubaar], because [nas] meaning 'people' is plural.

(19) a. el-bayt el-kibeer
DEF-house DEF-big
'the big house.'

b. bayt kibeer
house big
'a big house.'

c. el-sit el-kibeer-a
DEF-woman.F DEF-big-F
'the big woman'

d. el-nas el-kubaar
DEF-people DEF-big.pl
'the big people'

Since the Construct State requires strict adjacency between the head and its specifier, no modifier can come in between them. If we want to modify the head of the Construct State, we would have to do so outside of the Construct State itself, as seen in (20a). If, however, we want to modify the specifier of the construct state, we could do that within the construct state as seen in (20b). We can see that 'big' is modifying 'house,' in (20a), since it agrees in gender with 'house,' and that 'big' is modifying 'woman,' in (20b), since it agrees in gender with 'woman.'

(20) a. bayt el-sit el-kibeer
house DEF-woman.F DEF-big
'the woman's big house'

b. bayt el-sit el-kibeer-a
house DEF-woman.F DEF-big-F
'the big woman's house'

Had we tried to modify [bayt], meaning 'house,' within the Construct State itself, we would get ungrammaticality as in (21).

(21) *bayt el-kibeer el-sit
house DEF-big DEF-woman.F
'the woman's big house'

Ambiguity arises in Egyptian Arabic when the head and the specifier are of the same number and gender, as seen in (22) where it is unclear whether [kibeer] is modifying [ragil], meaning 'man,' or [kitab], meaning 'book.'

(22) kitab el-ragil el-kibeer
book DEF-man DEF-big
'the book of the big man' OR 'the big book of the man'

In this section I introduced the Construct State, showing its combinatory restrictions, and syntactic nature. Before introducing a similar construction found in Bohairic Coptic, in Section 2.3, I discuss how the Construct State data has been analyzed through various approaches to grammar in Section 2.2. Afterwards, I describe the similarities and cross-linguistic differences found between the Semitic Construct State and the Bohairic Coptic Construct State in Section 2.4, and propose a Functionalist approach that accounts for these similarities and cross-linguistic differences in Section 2.5.

2.2 Previous Approaches to the Construct State

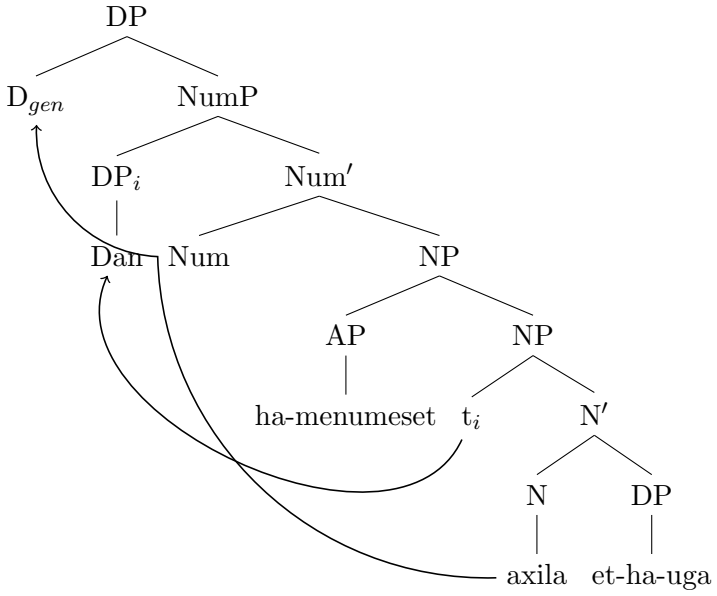
Previously, the Construct State has been analyzed within Mainstream Generative, Categorial, and Lexicalist approaches to grammar. In this section, I recount these previous analyses. Most of the discussion here is heavily influenced by the discussion found Danon (2007).

There have been many studies within Mainstream Generative grammar that have formulated accounts for the Construct State within Semitic languages. Here, I summarize Ritter's

1991 proposal, since it is the most classic view on the Construct State within Mainstream Generative approaches to grammar. Ritter 1991 proposed that the Construct State should be analyzed as a DP. She then went on to claim that the head-initial order of Construct States is derived by head movement of the head of NP, which moves to the D position through an intermediate functional projection, NumP, and that there is then subsequent phrasal movement of the embedded genitive DP to the specifier of NumP which yields the observed word order in the presence of adjectival modifiers, her analysis can be seen in (23b). Genitive case is then assigned by the phonetically empty D after N-raising provides it with phonetic content that makes it visible as a case assigner. Construct State noun phrases are DPs, headed by a phonologically null determiner called D_{gen}. Both D_{gen} and *ha-*, the definiteness marker in Hebrew, are DETs and appear in complementary distribution, which explains why *ha-* never attaches to Construct State heads. In the free genitives, the head of of the DP is realized as *ha-*. (Ritter 1991, Danon 2007, Wintner 2000).

(23) a. axilat Dan ha-menumeset et ha-uga
eating Dan the-polite ACC the cake
'Dan's polite eating of the cake'

b.



Within Categorial approaches to Grammar, Heller (2002) proposed that the morphophonological change observed in the Construct State coerces all nouns into functional nouns, via a type-shifting operator. This means that in the lexicon we have two entries, one for relational nouns which is an N looking for a PP[of] to its right, and has the type <e,<e,t>>, and the other for the preposition *of* which is a PP[of] that looks for an NP to its right, and has the type of the identity function. There is then a type shifting principle that states if there is an expression of the form N/PP[of] with the type <e,<e,t>>, then that expression can be shifted into a functional noun of the form NP/NP[GEN] with the type <e,e>. Heller (2002) also claims that the construct form of the noun, or the head noun of the Construct State, is analyzed as a functional noun, and so, while the free form, where a genitival preposition is used, of the noun denotes a set of individuals with type <e,t>, the construct form of the noun evokes a type-shifting rule and shifts the head noun in genitive constructions into an <e,e> function, and then denotes a function from individuals into individuals, with a type <e,e>. This function takes the genitive phrase as its argument, and the Construct State as a whole then denotes the individual which is the output of the function for that input individual.

Within a Lexicalist approach to grammar, Wintner 2000 proposed that the construct form is generated from the absolute form by means of a morphological process, which modifies the phonology of the nominal and selects for a noun phrase. Wintner 2000 also claims that, since nouns are specified for a possessor in their COMPS list, there is no need to add a subcategorized complement for Construct State nouns, and that the rule only picks a noun phrase complement from the list rather than a genitive prepositional phrase. He then claims that this process is possible by assuming that all nouns have two forms, an absolute one and a construct one, even if the construct phonology is identical to the absolute form. An example of this can be seen in the following (24). Here the head noun *bayt* meaning 'house,' requires an NP specifier that enters into a possessive relationship with it.

(24)
$$\begin{bmatrix} \textit{word} & \\ \text{PHON} & \left\langle \textit{bayt} \right\rangle \\ \text{SYNSEM} \mid \text{LOCAL} & \begin{bmatrix} \text{CATEGORY} & \begin{bmatrix} \text{HEAD} & \left[\textit{noun} \right] \\ \text{VALENCE} & \left[\text{SPR} \quad \text{NP}\boxed{1} \right] \end{bmatrix} \\ \text{CONTENT} & \begin{bmatrix} \textit{possessive relationship} & \\ \text{POSSESSOR} & \boxed{1} \end{bmatrix} \end{bmatrix} \end{bmatrix}^{3}$$

In this section I introduced the previous approaches, within Mainstream Generative, Categorial, and Lexicalist grammars, that have accounted for the Construct State phenomena. While in Mainstream Generative approaches to grammar movement is posited in order to get the head initial word order, this order is accounted for by type-shifting principles in Categorial approaches grammars and distinct lexical entries in Lexicalist approaches to grammar. However the head-specifier order is accounted for in various stages, these grammars cannot account for cross-linguistic differences as will be seen in Section 2.4.

2.3 Construct State in Bohairic Coptic

In this section I provide the Construct-State like data as is found in Bohairic Coptic.

In Bohairic Coptic, possession can be expressed in three ways: the *direct genitive*, as in instances of pronominal possessives seen in (7), the *short possessive*, a Construct State like construction, and the *long possessive*, utilizing the genitive preposition (Haspelmath 2015). In this section, I discuss the *short possessive*, marked by the particle ⲛ̀, and the *long possessive*, marked by the genitival preposition ⲛ̀ⲧⲉ, and argue that the *short possessive* is in fact a Construct State construction.

In both the *short possessive* and *long possessive* constructions, the possessed comes before the possessor. When the definiteness marker on the possessed component of the genitive phrase is *strong*, that is, when the definiteness marker on the possessed is either

[3]This is not the AVM presented in Wintner 2000, but rather my own rendition of the lexical entry that would be necessary for the construct form.

(ⲡⲓ-, ϯ-, ⲛⲓ-), the genitive phrase must be marked with the (ⲛ̀ⲧⲉ) genitive marker, as seen in (25).

(25) ϯⲉⲟϯ ⲛ̀ⲧⲉ ⲡⲃⲟⲓⲥ

ti-hoti ɪntei ɪp-tʃois
DEF.DET.SG.F-fear GEN DEF.DET.SG.M-lord

'the fear of the Lord'

(Mallon 175)

When the definiteness marker on the possessed component of the genitive phrase is indefinite, that is, when the definiteness marker is either (ⲟⲩ- or ⲉⲁⲛ), the genitive phrase must be marked with the (ⲛ̀ⲧⲉ) genitive marker, as seen in (26).

(26) ⲟⲩⲭⲗⲟⲙ ⲛ̀ⲧⲉ ⲉⲁⲛⲉⲟⲙⲧ

u-klom ɪntei hɑn-homt
INDEF.SG-crown GEN INDEF.PL-grace

'a crown of grace.'

(Mallon 175)

Lastly, when the possessed component is in any way modified, whether by a personal pronoun, adjective, etc., the genitive phrase must be marked with the (ⲛ̀ⲧⲉ) genitive marker, as seen in (27).

(27) ⲡ̀ϣⲏⲣⲓ ⲛ̀ⲃⲁⲗⲉ ⲛ̀ⲧⲉ ⲫⲣⲱⲙⲓ

ɪp-ʃiri ɪm-tʃalei ɪntei ɪv-romi
DEF.SG.M-son ATTR-crippled GEN DEF.SG.M-man

'the man's crippled son'

(Mattar 327)

Now, if, and only if, the possessed item carries one of the *weak* definiteness markers (ⲡ̀-, ⲧ̀-, ⲛⲉⲛ-), and is not modified, then it can take the (ⲛ̀-) particle to mark the genitive between the possessed and the possessor, as seen in (28). This is the only time where this construction is allowable.

(28) ⲛⲉⲛⲃⲁⲗ ⲛ̀ⲡ̀ⲟⲓⲥ

nɪn-val ɪm-ɪp-tʃɔɪs
DEF.PL-eye PRT-DEF.SG.M-lord

'the eyes of the Lord.'

(Mallon 174)

The restrictions listed above, however, are in fact merely indicating where (ⲛ̀-) cannot appear. I should make clear that (ⲛ̀ⲧⲉ) can always be used to mark the genitive, as seen in (29), but it is only obligatory in marking the genitive when one of the above situations, in examples (25)-(27) is at play.

(29) ⲛⲉⲛⲃⲁⲗ ⲛ̀ⲧⲉ ⲡ̀ⲟⲓⲥ

nɪn-val ɪntei ɪp-tʃɔɪs
DEF.PL-eye GEN DEF.DET.SG.M-lord

'the eyes of the Lord.'

(Mallon 174)

In this section I have explained how the genitive is expressed in Bohairic Coptic. I show the restrictiveness of the genitive phrases marked by the particle ⲛ̀, which shows similarities in the restrictions that are present in the Semitic Construct State in Section 2.1.

2.4 Comparing Semitic and Egyptian Construct States

When comparing the Bohairic Coptic *short possessive* genitive data, utilizing the ⲛ̀ particle with the Construct State data, as is found in Semitic languages, we find that the *short*

possessive shows the same restrictions as those of the Semitic Construct State. First, both phrases require strict adjacency between the possessed and the possessor, as, seen by the examples in (21), for Egyptian Arabic, and (27), for Bohairic Coptic, which I repeat in (30).

(30) a. *bayt el-kibeer el-sit
house DEF-big DEF-woman.F
'the woman's big house'

b. *ⲡ̀ϣⲏⲣⲓ ⲛ̀ⳇⲁⲗⲉ ⲛ̀ⲫ̀ⲣⲱⲙⲓ
ɪp-ʃiri ɪm-tʃaleɪ ɪm-ɪv-romi
DEF.SG.M-son ATTR-crippled PRT-DEF.SG.M-man
'the man's crippled son'

Second, both phrases experience some sort of phonological alternation with the possessed, which is present with certain nouns in Semitic languages, and justified by the use of the *weaker* definite articles in Bohairic Coptic. Third, both phrases manifest prosodic unity, as seen by the overt manifestation of the *ta marbuta* in Egyptian Arabic, and the change of ⲛ̀ to ⲙ̀ⲙ when preceding certain phonemes.

The Construct State in Bohairic Coptic and Egyptian Arabic, however, do differ in the location of the definiteness marker. As is seen from the Egyptian Arabic examples, definiteness is only allowed on the most embedded specifier, while in the Bohairic Coptic examples, definiteness is marked on the head. In explaining the manifestation of the definiteness marker on the head rather than the most embedded specifier in Bohairic Coptic, I argue that the location of definiteness within the Construct State has been misanalysed in earlier works, and that the location of definiteness is cross-linguistically variant. This is because previous work on the Construct State, although exhaustive and influential, has focused solely on the Construct State as is found in Hebrew and Arabic, and within these two languages there is no presence of (i) an overt indefinite article/marker, or (ii) a copula. I posit that the definiteness marker appears on the most embedded specifier, in these languages, in order to disambiguate the genitive phrases from predicative copular clauses and adjective phrase, and not because the syntax of the Construct State forces it that way,

meaning that this is a language specific requirement, and not a typological fact of the Construct State phenomena as a whole. Take for instance the example in (14), which I reiterate here in (31). In (31), we see infelicitous readings when definiteness is placed on anything other than the most embedded specifier, however when the definiteness marker is placed on other members of the Construct State, we do not get ungrammatical readings. Definiteness on the most embedded specifier is a matter of disambiguation, rather than grammaticality.

(31) a. kitab ukh-t el-ustaaz
book sister.F DEF-teacher
'the teacher's sister's book'

b. ?? kitab el-ukh-t el-ustaaz
book DEF-sister.F DEF-teacher
lit: 'the sister's book that is the teacher'

c. el-kitab ukh-t el-ustaaz
DEF-book sister.F DEF-teacher
lit: 'The book is the teacher's sister.'

Seeing the similarities in the restrictiveness of the two phrases, as found in Egyptian Arabic and Bohairic Coptic, and explaining the manifestation of definiteness via cross-linguistic variation, I now proceed in analyzing the Bohairic Coptic *short possessive* as a Construct State.

2.5 Cross-linguistic Variation

In this section I provide the proposed Constructions used for analysis. I show that they do in fact capture descriptive adequacy, and are able to account for the cross-linguistic differences previously alluded to.

First, I discuss my criticisms of the previous analyses that have been proposed to account for the Construct State. My criticism of a Mainstream Generative approach to grammar is that I do not agree with the underlying principle that the Construct State construction is derived from the the free form that utilizes the genitival preposition. Instead, I posit

that these are in fact two different constructions, independent of one another. I back up this intuition with Egyptian Arabic data showing that the Construct State and the free form provide different interpretations, at least pragmatically. As seen in (32)[4], when the Egyptian Arabic genitival preposition is used in place of the Construct State, within a Measure Phrase, we get a different interpretation. While (32a) picks out four cups of water, (32b) on the other hand four cups that are used for water. For this reason, the fact that the free form and the Construct State are not completely interchangeable, I do not think that the Construct State should be analyzed as being derived from the free form.

(32) a. arba3 kubayaat mayya
four cups water
'four cups of water'

b. arba3 kubayaat bituu3 mayya
four cups GEN water
'four cups for water'

My main criticism of a Categorial approach to grammar, with respect to the Construct State, is that it does not account for the restrictiveness of the Construct State as whole. By this, I mean that Categorial approaches to grammar do not have the formal tools to disallow modification of the head noun when in this construction. The type shifting principle that is used to shift relational nouns into functional nouns only states that a relational noun becomes a functional noun, but it does not require strict adjacency, where the functional noun cannot be modified, as is found in the Construct State. For instance, there is nothing in the type shifting operator that restricts an N *big mother* to become a functional noun.

Lastly, my main criticism against a Lexicalist approach to grammar when analyzing the Construct State is that it does not give power to the construction itself. Within a Lexicalist approach to grammar, the meaning that comes out of the Construct State is solely explained by the meanings of its compositional parts, however this is not the case.

[4]I am thankful to Jefferson Barlew and Eric Snyder for introducing me to Measure Phrases, as well as the elicitation sessions that led to this realization. Further work on Measure Phrases within the Semitic Construct State can be found in Rothstein (2011).

The Construct State is a construction that provides its own meaning, in and of itself. The genitive interpretation is not brought about by the sequence of nouns, but rather by the Construction itself. A Lexicalist approach to grammar does not capture this intuition about the phrase.

In order to capture the uniqueness, restrictiveness, and intuitions of the Construct State, as well as the cross-linguistic differences, I now propose a Functionalist approach. First I propose the marco-construction as is found in (33). Here, I have captured the restrictiveness of the Construct State in the phonology, by indicating, with '-', that ϕ, which correlates to N, the possessed head of the phrase, must come immediately before ψ, the possessor NP.

(33)
$$\begin{bmatrix} \textsc{phon} & \phi_1\text{-}\psi_2 \\ \textsc{syn} & \left[_{NP}\ \mathrm{N}_1,\ \mathrm{NP}_2\right] \\ \textsc{cs} & 1'\left[\textsc{Poss}{:}2'\right] \end{bmatrix}$$

This macro-construction then splits off into two micro-constructions, for Semitic languages, as seen in (34a), and for Bohairic Coptic, as seen in (34b). The two micro-constructions then account for the cross-linguistic differences that are found, while inheriting the properties of the macro-construction that accounts for all instances of the Construct State in (33). While in Semitic languages the definiteness marker appears on the most embedded specifier, and can give either a definite or indefinite interpretation, in Bohairic Coptic it can only be definite and appears on the head. Bohairic Coptic also manifests a particle, ⲛ̀, that appears between the head and the specifier.

(34) a. Semitic

$$\begin{bmatrix} \textsc{phon} & \phi_1\text{-}\psi_2 \\ \textsc{syn} & \left[_{NP}\ \mathrm{N}_1,\ [\pm\textsc{def}]\mathrm{NP}_2\right] \\ \textsc{cs} & 1'\left[\textsc{Poss}{:}2'\right] \end{bmatrix}$$

b. Bohairic Coptic

$$\begin{bmatrix} \text{PHON} & \phi_1\text{-ⲛ̀-}\psi_2 \\ \text{SYN} & \left[_{NP}\ [+\text{DEF}]\text{N}_1,\ \text{NP}_2\right] \\ \text{CS} & 1'\left[\text{POSS:}2'\right] \end{bmatrix}$$

The construction in (34b) not only allows for instances such as those found in (28), but it also blocks those in (35)-(37). Since Bohairic Coptic distinguishes between *weak* and *strong* articles, I predict that the phonological reduction is necessary, explaining why only *weak* article headed nouns are able to enter in this derivation. Because of the phonological reduction that is required, the Construction blocks (35), when the *strong* article is used on the head, and we get an ungrammatical reading[5].

(35) *ϯϩⲟϯ ⲙ̀ⲡⲃⲟⲓⲥ

ti-hoti ım-ıp-tʃois
DEF.DET.SG.F-fear PRT-DEF.DET.SG.M-lord

'the fear of the Lord'

The Construct State macro-construction, as well as the cross-linguistic micro-constructions, require strict adjacency. Because of this, we find that modified head nominals are blocked from entering this construction, as shown by the ungrammaticality of (36).

(36) *ⲡ̀ϣⲏⲣⲓ ⲛ̀ⲃⲁⲗⲉ ⲛ̀ϥⲣⲱⲙⲓ

ıp-ʃiri ım-tʃaleı ım-ıv-romi
DEF.SG.M-son ATTR-crippled PRT-DEF.SG.M-man

'the man's crippled son'

Lastly, it is a language specific requirement of Bohairic Coptic that the possessed noun be definite, and so we find that indefinite possessed nouns are blocked from entering this construction, as seen by the ungrammaticality of (37).

[5]Since my data comes from consulting grammar books, I do not have negative data, and so any ungrammatical data indicated in this thesis is assumed to be so based on study of Bohairic Coptic syntax.

(37) *ⲟⲩⲭⲗⲟⲙ ⲛ̀ⲛⲁⲛⲟⲙⲧ

u-klom ɪm-hɑn-homt
INDEF.SG-crown PRT-INDEF.PL-grace

'a crown of grace.'

2.6 Conclusion

In this Chapter I have shown that a Functionalist approach to grammar best accounts for the cross-linguistic data of the Construct State when comparing the Egyptian Arabic Construct State to the Bohairic Coptic Construct State. After introducing the Construct State in Egyptian Arabic, I then showed how it has been analyzed within various approaches to grammar, mainly Mainstream Generative, Categorial, and Lexicalist. Afterwards, I introduced the Construct State like construction, found in Bohairic Coptic, and described its similarities and differences with the Semitic Construct State. I then proposed a Functionalist approach to grammar to account for these cross-linguistic differences, via macro and micro constructions, a formal tool that is unavailable in the other approaches to grammar.

Chapter 3

Adjectives – Intra-linguistic Variation

In this chapter I show that a Functionalist approach to grammar is best able to account for intra-linguistic variation when looking at the linear order of adjectives with respect to the noun they are modifying in Bohairic Coptic.

3.1 Adjectives in Bohairic Coptic

Bohairic Coptic distinguishes between three sets of adjectives: core, derived, and borrowed. The core adjectives are adjectives that are native to Bohairic Coptic, and in most cases, can be traced back to older stages in Egyptian. The derived adjectives are adjectives which are formed from either the stative form of a Bohairic Coptic verb, or Bohairic Coptic nouns. Lastly, borrowed adjectives are adjectives that have been borrowed, through language contact; these are typically from Greek, which will be further discussed in Chapter 4.

The adjective phrase in Bohairic Coptic is manifested through two constructions: one that utilizes the particle ⲛ̀- and another that utilizes a form of the relativizer ϵⲧ-. Both ⲛ̀- and ϵⲧ- undergo morpho-lexical transitions yielding as ⲙ̀ⲙ- and ϵϑ-, respectively, when appearing before certain phonemes. The core Bohairic Coptic adjectives, the borrowed adjectives, and the derived adjectives being formed from Bohairic Coptic nouns use the particle ⲛ̀-, whereas the derived adjectives, being formed from the stative forms of Bohairic Coptic verbs will use the relativizer to mark attribution.

When a Bohairic Coptic noun is modified by a core adjective, a borrowed adjective, or an adjective being derived from an already existing noun, the ⲛ̀ particle is used, and the ordering of the adjective with respect to the noun is variable.

There is a certain closed set of core Bohairic Coptic adjectives that can appear both prenominally and postnominally, as seen in (38). Here, the adjective ⲁⲡⲁⲥ meaning 'old' modifies the noun ϫⲱⲙ meaning 'book'. However in (38a), the adjective appears postnominally, while in (38b) the adjective appears prenominally.

(38) a. ⲡⲓϫⲱⲙ ⲛ̀ⲁⲡⲁⲥ

pi-gom ɪm-ɑpɑs
DEF.SG.M-book PRT-old
'the old book'

b. ⲡⲓⲁⲡⲁⲥ ⲛ̀ϫⲱⲙ

pi-ɑpɑ s ɪm-gom
DEF.SG.M-old PRT-book
'the old book'

(Mattar 322)

On the other hand, other Bohairic Coptic core adjectives, such as the word (ⲛⲓⲱϯ) meaning 'great', have a prenominal preference, as seen in (39).

(39) ⲡⲓⲛⲓⲱϯ ⲛ̀ⲁⲣϫⲏⲁⲅⲅⲉⲗⲟⲥ

pi-nɪʃti ɪm-ərʃɪʌŋlos
DEF.SG.M-great PRT-archangel
'the great Archangel'

(Younan 39)

It is typical in languages to have a construction with two nouns, where one noun modifies the other. When this kind of thing occurs in Bohairic Coptic a fixed order between the

modified noun and the noun acting as the modifier is necessary. In Bohairic Coptic the noun attached to the particle ⲛ̀ would function as the adjective, whereas the noun attached to the definiteness marker would be the noun that is modified, as seen in (40).

(40) ⲧⲉ̀ϫⲱⲙ ⲛ̀ⲛⲟⲩⲧ

ti-əcmi m-noti
DEF.SG.F-voice PRT-god

'the divine voice'

(Mallon 177)

3.2 Previous Approaches to the Adjective Ordering

In order to account for this variant ordering, Mainstream Generative, Categorial, and Lexicalist approaches to grammar would utilize different theoretically internal principles. Consider Mainstream Generative grammar. A movement analysis allows for the adjective to appear either prenominally or postnominally. In this kind of analysis, however, whatever principles would be set as a motivation for movement would fail to account for the data found in (38), where the adjective can appear either prenominally or postnominally. Within a Categorial and Lexicalist approaches to grammar, the directionality features on the adjectives would be altered with each lexical entry of the adjective in order to select for a noun either to the right or the left of it. Here, enough power is given to the lexicon. However these approaches then fail to show that it is only within the construction utilizing the ⲛ̀ particle that we get this variant ordering of the adjectives, since if an adjective modifying a Bohairic Coptic noun is marked by the relativizer ⲉⲧ[1], the ordering is fixed, and the adjective must appear postnominally with respect to the noun it is modifying.

Bohairic Coptic verbs can be either active or stative; by prefixing the pronominal relativizer marker ⲉⲑ- onto the stative form of the verbs, the verb is then given an attributive

[1]Although the phrase utilizes a relativizer, these cases are different from Relative Clauses.

function, as seen in (41a). When a derived adjective modifies a Bohairic Coptic noun, the noun must appear with the definiteness marker, and the adjective must appear with the relativizer, in this case **ϵθ-**. The order is invariant, with the adjective obligatorily appearing postnominally. Had we tried to switch the order of the adjective and noun, we would get ungrammaticality as in (41b).

(41) a. **ⲡⲓ̀ⲡⲛⲉⲩⲙⲁ ⲉⲑⲟⲩⲁⲃ**

pi-ɪbnɪvmɑ ɪθ-oab
DEF.SG.M-spirit REL-holy
'the Holy Spirit'

(Mattar 448)

b. ***ⲡⲓⲟⲩⲁⲃ ⲉⲑⲏ̀ⲡⲛⲉⲩⲙⲁ**

pi-oab ɪθ-ɪbnɪvmɑ
DEF.SG.M-holy REL-spirit
'the Holy Spirit'

From the data given in Section 3.1, we see that an analysis of the adjectives in Bohairic Coptic needs to account for the varying order of adjectives and nouns when **ⲛ̀** is used, while at the same time keeping a fixed order when **ϵⲧ** is used. For this reason, I propose a Functionalist approach to this intra-linguistic variation in Section 3.3.

3.3 Intra-linguistic Variation

While a Mainstream Generative approach to grammar loses the lexical specification of the adjectives that either appear prenominally, postnominally, or in both positions, Categorial and Lexicalist approaches to grammar do not capture the fact that this variance in linear order is only possible within a specific construction, mainly that which uses the particle **ⲛ̀**. For this reason, I propose a Functional approach as the solution.

Within a Functional approach we are able to specify that it is only within a certain Construction that the ordering between the adjective and the noun it is modifying is variant,

while at the same time still giving power to the lexicon, where the ordering is then manifested based on the preference of the adjective.

I propose two macro-constructions for noun phrases with adjectival modifiers in Bohairic Coptic. The first construction, as seen in (42), utilizes the shuffle operator $\oplus$, as in HPSG. This states that ϕ, the noun being modified, may either precede or come after ψ, the adjective modifying it, when the particle ⲛ̀ is used to mark the attributive nature of the phrase.

(42) $$\begin{bmatrix} \text{PHON} & \phi_1 \oplus \text{ⲛ̀} \oplus \psi_2 \\ \text{SYN} & \begin{bmatrix} NP & \text{N}_1, \text{A}_2 \end{bmatrix} \\ \text{CS} & \text{x}_1 \begin{bmatrix} \text{MOD:} & \text{y}_2 \end{bmatrix} \end{bmatrix}$$

The construction in (42) allows for the micro-constructions found in (43), which are posited by the lexical preference of the adjectives modifying Bohairic Coptic nouns. If a prenominal adjective is used to modify the Bohairic Coptic noun, it will utilize the micro-construction found in (43a), while a postnominal adjective used to modify the Bohairic Coptic noun will utilize the micro-construction found in (43b).

(43) a. $$\begin{bmatrix} \text{PHON} & \phi_1 > \text{ⲛ̀} > \psi_2 \\ \text{SYN} & \begin{bmatrix} NP & \text{N}_1, \text{A}_2 \end{bmatrix} \\ \text{CS} & \text{x}_1 \begin{bmatrix} \text{MOD:} & \text{y}_2 \end{bmatrix} \end{bmatrix}$$

b. $$\begin{bmatrix} \text{PHON} & \psi_2 > \text{ⲛ̀} > \phi_1 \\ \text{SYN} & \begin{bmatrix} NP & \text{N}_1, \text{A}_2 \end{bmatrix} \\ \text{CS} & \text{x}_1 \begin{bmatrix} \text{MOD:} & \text{y}_2 \end{bmatrix} \end{bmatrix}$$

While the Construction in (42) allows for the adjective to appear either prenominally or postnominally, the two micro-constructions are lexically specific, where each adjective

entering the construction is either prenominal or postnominal. Because of this, a postnominal adjective, such as the noun being interpreted as an adjective, ⲛⲟⲩⲧ meaning 'god,' must enter the Construction in (43a), and is blocked from entering (43b), as seen by the ungrammaticality of (44a). Prenominal adjectives, such as ⲛⲓⲱ meaning 'great,' are blocked from entering the postnominal Construction in (43b), as seen by the ungrammaticality of (44b).

(44) a. *ⲧⲛⲟⲩⲧ ⲛ̀ⲛⲥⲱⲙ

ti-noti ɪm-əcmi
DEF.SG.F-god PRT-voice
'the divine voice'

b. *ⲡⲓⲁⲣⲭⲁⲅⲅⲉⲗⲟⲥ ⲛ̀ⲛⲓⲱ

pi-ərʃiʌŋlos m-nɪʃti
DEF.SG.M-archangel PRT-great
'the great Archangel'

On the other hand, the second macro-construction, as seen in (45), does not allow this flexibility in positioning. This is because in the second construction, which utilizes the relativizer, the ordering is fixed, as indicated by '>' which states that ϕ, correlated to the N being modified, must temporally precede ψ correlating to the A modifying N. This Construction allows (41a), and disallows (41b).

(45) $$\begin{bmatrix} \text{PHON} & \phi_1 > \text{ⲉⲑ} > \psi_2 \\ \text{SYN} & \left[_{NP}\ \text{N}_1,\ \text{A}_2\right] \\ \text{CS} & \text{x}_1\left[\text{MOD:}\ \text{y}_2\right] \end{bmatrix}$$

By having two Constructions, were are able to also rule out instances in which stative verbs enter the Constructions which utilize the particle ⲛ̀ found in (42), or adjectives and nouns enter the Constructions which utilize the relativizer ⲉⲑ found in (45). As seen in (46), a stative verb is blocked from entering into the Construction which utilize the particle ⲛ̀, as

seen by the ungrammaticality of (46a), while a nouns and adjectives are blocked from entering into the Construction which utilize the relativizer **ϵθ**, as seen by the ungrammaticality of (46b).

(46) a. ***ⲡⲓⲁⲣⲭⲏⲁⲅⲅⲉⲗⲟⲥ ⲛ̀ⲟⲩⲁⲃ**

pi-ərʃiʌŋlos ɪm-oab
DEF.SG.M-archangel PRT-holy
'the holy Archangel'

b. *****ⲡⲓⲁⲣⲭⲏⲁⲅⲅⲉⲗⲟⲥ ⲉⲑⲁⲡⲁⲥ**

pi-ərʃiʌŋlos eθ-ɑpɑs
DEF.SG.M-archangel REL-old
'the old Archangel'

3.4 Conclusion

In this Chapter I have shown that a Functionalist approach to grammar best accounts for the intra-linguistic variation found in the Bohairic Coptic noun phrase, particularly in the variant ordering of the adjectives with respect to the modified noun. I argue that the macro-construction where the particle **ⲛ̀** is used to mark adjectival modification allows this variant ordering. I then argue that the specific lexical properties of the adjectives entering the construction select for the micro-constructions that determine whether the adjective appears pronominally or postnominally. The variant word ordering is only available when the particle **ⲛ̀** is used to mark adjectival modification, and not when the relativizer **ϵθ** is used.

Chapter 4

Greek Adjectives – Contact-Induced Change

Because of the long standing contact between the Greeks and the Egyptians, stemming back from Alexander the Great's conquest in 332 BC up to 702 AD when Greek became replaced by Arabic as the official language of Egypt, many scholars have researched the effects of Greek-influenced contact-induced changes onto Coptic. In particular Reintges (2004), looking at the Sahidic dialect of Coptic, has called Coptic a bilingually mixed language, with two parent languages, Greek and Egyptian, because 40% of the Coptic lexicon is Greek. This idea is now rejected by other scholars, but was a strong enough claim to make people look at Greek-Coptic contact seriously. Haznos (2012), also looking at the Sahidic dialect of Coptic, looked at clausal patterns in translated texts, primarily the New Testament, and found Greek influence in final clausal patterns in Coptic. Other scholars have looked at the influence of Greek on the Coptic as well. In particular, Grossman (2015) investigated whether or not Greek influenced the prefixing, and found that it did not, while Zakgrzewska (2014) looked at the influence of Greek on Coptic case marking with respect to the accusative and dative, and instead credited the prepositional use to a typological tendency similar to that found in Romance languages. Following in their footsteps, I investigate whether or not there were Greek-influenced contact-induced changes in Bohairic Coptic, this time, however, within a specific domain investigating the agreement patterns of Greek adjectives with respect to Bohairic Coptic nouns. In doing so, I lead with the same disclaimer as these previous researchers, and advise readers that there is always a difficulty when looking at Greek-influenced changes in Coptic, since we do not have another variant of Coptic that was not exposed to Greek to compare it to. Coptic, when it was a living language, was only

ever spoken in Egypt, and was always side-by-side with Greek. Despite this disclaimer, I will show that the agreement patterns found when Greek adjectives modify Bohairic Coptic nouns must be a contact-induced change, since these same patterns are not found elsewhere in Bohairic Coptic where agreement is marked, and are also not found in earlier stages of Egyptian.

In this Chapter I will show that a Functionalist approach to grammar best accounts for contact induced changes, specifically when looking at the agreement patterns that arise when a Bohairic Coptic noun is modified by a borrowed Greek adjective. I first introduce the agreement patterns that are found when Greek adjectives modify Bohairic Coptic nouns in Section 4.1. I then show that this agreement, particularly a *humanity* feature, is not found elsewhere in Bohairic Coptic in Section 4.2, or in earlier stages of Egyptian in Section 4.3. I conclude the chapter by positing a Functionalist approach to this Greek-influenced contact-induced change in Section 4.4.

4.1 Agreement with Greek Adjectives

Because of the contact with Greek, there are many Greek adjectives that were borrowed into Bohairic Coptic. It was common practice to borrow the masculine form of the Greek adjectives, before incorporating them into the Coptic lexicon, however there are some Greek adjectives that were borrowed and remained in either their neuter or feminine forms. Because of this, we find that the form of the Greek adjective has an effect on the noun it is modifying.

Greek adjectives that are masculine can modify any Bohairic Coptic noun, of any number or gender, as seen in (47), where (47a) is a masculine Bohairic Coptic noun being modified by a masculine Greek adjective, and (47b) is a feminine Bohairic Coptic noun being modified by a masculine Greek adjective.

(47) a. ⲡⲓⲣⲱⲙⲓ ⲛ̀ⲁⲅⲁⲑⲟⲥ

pi-romi ɪm-ɔɣɑθos
DEF.SG.M-man PRT-M.good
'the good man'

b. ⲧⲥ̀ϩɪⲱɪ ⲛ̀ⲁϫⲁⲑⲟⲥ

ti-ɪshimi ɪm-ɔɣɑθos
DEF.SG.F-woman PRT-M.good
'the good woman'

(Mattar 326)

On the other hand, adjectives that have been borrowed from Greek retaining their feminine form can only modify a Bohairic Coptic noun that refers to a female person, as seen in (48a).

(48) a. ⲧⲥ̀ϩɪⲱɪ ⲛ̀ⲁϫⲁⲑⲏ

ti-ɪshimi ɪm-ɔɣɑθi
DEF.SG.F-woman PRT-F.good
'the good woman'

(Mattar 326)

b. *ⲡⲓⲣⲱⲙⲓ ⲛ̀ⲁϫⲁⲑⲏ

pi-romi ɪm-ɔɣɑθi
DEF.SG.M-man PRT-F.good
'the good man'

Lastly, adjectives that have been borrowed from Greek, retaining their neuter form can modify nouns of either gender only if the nouns being modified are non-human, as seen in (49) where ⲧⲉⲗⲓⲟⲛ the neuter adjective meaning 'perfect,' modifies the feminine noun ⲧⲯⲩⲭⲏ meaning 'soul' in (49a), and the masculine nouns ⲡⲓⲭⲱⲙ meaning 'book' in (49b).

(49) a. ⲧⲯⲩⲭⲏ ⲛ̀ⲧⲉⲗⲓⲟⲛ

ti-psuki ɪm-tɪlɪjon
DEF.SG.F-soul PRT-N.perfect

'the perfect soul'

(Mattar 326)

b. ⲡⲙⲥⲱⲙ ⲛ̀ⲧⲉⲗⲓⲟⲛ[1]

pi-gom ɪm-tɪlɪjon
DEF.SG.M-book PRT-N.perfect

'the perfect book'

As seen in the data presented above, when Greek adjectives modify Bohairic Coptic nouns, a *humanity* feature is relevant for the feminine or neuter form of a Greek adjective, in that feminine Greek adjectives can only modify semantically female nouns, while neuter Greek adjectives can only modify semantically non-human nouns.

4.2 Agreement in Bohairic Coptic

The agreement patterns when a Greek adjective modifies a Bohairic Coptic noun, mainly where a *humanity* feature is relevant, are not found elsewhere in Bohairic Coptic. In this section, I show that other adjectives which modify Bohairic Coptic nouns, and show inflection on the adjective itself, do not operate with the same *humanity* restrictions as the Greek adjectives do. Recall that adjectives modifying Bohairic Coptic nouns can do so in two constructions, one that utilizes the ⲛ̀ particle, as seen in examples (38)-(40), and another that utilizes the ⲉⲧ relativizer, as seen in (41). In both of these constructions we find instances of agreement.

I first begin with the construction that utilizes the ⲛ̀ particle. Some of the core adjectives that were retained in Bohairic Coptic, being passed down from older stages of Egyptian, were retained in forms that inflect for gender and number. In these cases the adjective agrees in gender and number with the noun it is modifying. This can be seen in (50) where (ⲥⲁⲃⲉ) is the masculine form of the adjective meaning 'wise', modifying a masculine noun

[1]This specific example is not found in the grammar books, but can be posited as a possible combination from studies of the grammar books.

(ⲡⲓⲣⲱⲙⲓ) in (50a), while its feminine form (ⲥⲁⲃⲏ) is used to modify the feminine noun (ϯⲥ̀ⲉⲓⲙⲓ) in (50b).

(50) a. ⲡⲓⲣⲱⲙⲓ ⲛ̀ⲥⲁⲃⲉ

pi-romi ⲓm-sɑveɪ
DEF.SG.M-man ATTR-M.wise
'the wise man'

b. ϯⲥ̀ⲉⲓⲙⲓ ⲛ̀ⲥⲁⲃⲏ

ti-ɪshimi ɪm-sɑvi
DEF.SG.F-woman ATTR-F.wise
'the wise woman'

(Younan 40)

When looking at the adjectives which utilize the ⲉⲧ relativizer we find agreement inflected on the adjective in two instances, when the modified noun is indefinite, or when the adjective modifying a noun is inflectable. First, if the modified noun is indefinite, the pronominal relativizer undergoes phonological reduction from its ⲉⲑ- form to ⲉ-. This phonologically reduced pronominal relativizer then enables a position for the obligatory personal pronoun, which agrees with the gender and number of the indefinite modified noun, as seen in (51), where ⲛ̀ⲡⲛⲉⲩⲙⲁ meaning 'spirit,' is is being modified by the stative verb ⲟⲩⲁⲃ meaning 'holy,' which uses the reduced relativizer ⲉ-, and the obligatory third person masculine singular personal pronoun ϥ, as seen in (51). In this construction marking attribution, the order is once again fixed, and shown through the following structure, where a noun phrase is formed from the noun ⲟⲩⲛ̀ⲡⲛⲉⲩⲙⲁ meaning 'spirit,' and the adjective ⲉϥⲟⲩⲁⲃ, meaning 'holy,' which is formed from the relativized ⲉ, the third person masculine pronoun ϥ, and the verb ⲟⲩⲁⲃ: [$_{NP}$ ⲟⲩⲛ̀ⲡⲛⲉⲩⲙⲁ [$_{A}$ ⲉ [$_{V}$ ϥ ⲟⲩⲁⲃ]]]. The modified noun must appear with the definiteness marker, the verb functioning as an adjective must appear with the phonologically reduced pronominal relativizer, and the pronoun agreeing with the modified noun in number and gender must come after the reduced relativizer ⲉ- and before the verb functioning as an adjective.

(51) **ⲟⲩⲛ̀ⲡⲛⲉⲩⲙⲁ ⲉⲫⲟⲩⲁⲃ**

u-‘pnɪvmɑ ɪ-f-owab
INDEF.SG-spirit ATTR-3.SG.M-holy

‘A holy spirit.’

(Mattar 448)

Second, there is subclass of inflectable adjectives that are native to Bohairic Coptic. These adjectives must agree in gender and number with the noun they are modifying, and gain their function as modifiers within the relativizer construction. They are inflected by suffixation, as seen in (52). Once again, the ordering is fixed. The noun must appear with the definiteness marker, the pronominally inflectable adjective must appear with the relativizer, and the pronoun agreeing in gender and number must be suffixed onto this adjective.

(52) **ⲡⲓⲣⲱⲙⲓ ⲉⲑⲛⲁⲛⲉⲫ**

pi-romi ɪθ-nɑnɪ-f
DEF.SG.M-man ATTR-good-3.SG.M

‘The good man.’

(Mattar 535)

If the noun being modified by an inflectable adjective is indefinite, the relativizer is once again phonetically reduced from **ⲉⲑ-** to **ⲉ-**. However, the personal pronoun that agrees in gender and number with the modified noun remains suffixed onto the pronominally inflectable adjective, as seen in (53). The ordering here is once again fixed.

(53) **ⲟⲩϩⲏⲧ ⲉ̀ⲛⲁⲛⲉⲫ**

u-hit ɪ-nɑnɪ-f
INDEF.SG-heart ATTR-good-3.SG.M

‘A good heart.’

(Mattar 536)

Despite the construction utilized, in both of these cases, we see that the adjectives show syntactic agreement with the noun they are modifying, and not semantic agreement as is exhibited by the feminine and neuter Greek adjectives.

4.3 Agreement in Earlier Stages of Egyptian

In this section, I now show that agreement in earlier stages of Egyptian, primarily Middle Egyptian, exhibits syntactic agreement, as was just demonstrated with Bohairic Coptic adjectives, and not semantic agreement, as is found with Greek adjectives. I show that neither native adjectives nor derived adjectives in Middle Egyptian show the *humanity* feature that is found when a feminine or neuter Greek adjective modifies a Bohairic Coptic noun, thereby strengthening the argument that this agreement is a Greek-influenced contact-induced change. All data provided here was adapted from James P. Allen's *Middle Egyptian: An Introduction to the Language and Culture of Hieroglyphs*, as well as the third edition of Sir Alan Gardiner's *Egyptian Grammar: Beginning an Introduction to the Study of Hieroglyphs.*

Nouns in Middle Egyptian[2] can be either masculine or feminine, as seen in (54). Masculine nouns have no special inflection to indicate them as such, as seen in (54a), while feminine nouns have a suffixed (-t), as seen in (54b)[3].

(54) a. sn
sibling
'brother'

b. sn-t
sibling-F

[2]Standard Middle Egyptian had no definite and indefinite articles. However, it sometimes appears in non-standard texts and later became productive and common in Late Egyptian. The focus of this part does not depend on the distribution of the articles.

[3]It is typical for transliterated texts of Egyptian to omit the vowels: I follow this practice.

'sister'

Middle Egyptian nouns are inflected for three numbers, singular as seen in the (54a) and (54b), plural as seen in (55a) and (55b), and dual as seen in (55c) and (55d).

(55) a. sn-w
sibling-PL
'brothers'

b. sn-w-t
sibling-PL-F
'sisters'

c. sn-wj
sibling-DU
'two brothers'

d. sn-tj
sibling-DU
'two sisters'

When looking at the nouns modified by adjectives we find that there are three kinds of adjectives in Middle Egyptian: primary, secondary, and derived.

First, I will begin with the primary and secondary adjectives. Primary and secondary adjectives are adjectives native to the Egyptian language, or adjectives that are natively nouns but are being used as modifiers, respectively. When a Middle Egyptian adjective modifies a Middle Egyptian noun, the adjective is inflected for the same gender and number as the noun that it is modifying.

There are three basic forms of agreement that a Middle Egyptian adjective can display. First, if a noun is masculine and singular, the adjective modifying that noun will appear in its *default* unmarked form, as demonstrated in (56). [nfr] meaning 'good' is not inflected when modifying the masculine singular noun [sn] meaning 'sibling,' which takes the meaning 'brother' since it is not inflected for gender.

(56) sn nfr
sibling good
'good brother'

Second, if a noun is masculine and non-singular, i.e plural or dual, the adjective modifying that noun is marked by the plural [-w], as seen in (57). Here the adjective [nfr] meaning 'good' is inflected with the plural marker [-w], just as the noun [sn-w] meaning 'siblings,' which takes the meaning 'brothers' since it is not inflected for gender.

(57) sn-w nfr-w
sibling-PL good-PL
'good brothers'

Lastly, if a noun is feminine, regardless of number, the adjective modifying it will be inflected for the feminine gender marked by [-t], as seen in (58). Here the adjective [nfr] meaning 'good' is inflected with the feminine marker [-t], just as the noun [sn-t] meaning *sister* is inflected for feminine gender[4].

(58) sn-t nfr-t
sibling-F good-(F)
'good sister'

In Middle Egyptian, adjectives are typically postnominal with respect to the nouns they modify.

[4]Originally, there was a separate feminine plural adjective ending, which was a concatenation of the plural [-w] and the feminine [-j], as introduced in (55b), where the noun [sn] meaning 'sibling' is inflected for plural number and gender, giving us [sn-w-t] meaning 'sisters.' In Middle Egyptian, there seemed to be a similar option, where the adjective would be inflected for both gender and number, as seen in (1a), where the adjective [nfr] meaning 'good' is inflected for plural number and feminine gender giving us [nfr-w-t] matching the gender and number of [sn-w-t], however, during the time of Middle Egyptian, only the feminine singular remained to modify nouns, as seen in (1b), where [nfr] is only inflected for feminine gender, giving us [nfr-t], as a modifier of [sn-w-t].

(1) a. sn-w-t nfr-w-t
sibling-PL-F good-PL-F
'good sisters'

b. sn-w-t nfr-t
sibling-PL-F good-F
'good sisters'

The data above demonstrates the agreement patterns that common adjectives of Middle Egyptian can manifest. I will now show that derived adjectives also portray similar agreement patterns.

Let us now consider derived adjectives. Derived adjectives are words that are inherently non-adjectival. Derived adjectives are also called *nisbeh* adjectives, following the Semitic tradition, by some scholars, and for this reason, when glossing *nisbeh* adjective morpheme, I use NIS. Derived adjectives are marked by the suffix [-j], as seen in (59), where [njwt] meaning 'local' gets the *nisbeh* marker and agrees in gender and number with the noun it modifyies.

(59) hjm njwt-j
man local-NIS
'local man'

The *nisbeh* marker is concatenated with the base of the element that is acting as the modifier, and occurs before number markers. This can be seen in (60), where the *nisbeh* marker [-j] precedes the plural marker [-w] on [njwt].

(60) hjm-w njwt-j-w
man-PL local-NIS-PL
'local men'

When a derived adjective modifyies a feminine noun, the *nisbeh* marker is not present. This can be seen in (61), where [njwt] meaning 'local' modify [hjm-t] woman. It does not have the *nisbeh* marker [-j], where [njwt] is modified by the feminine marker [-t].

(61) hjm-t njwt-t
man-F local-(F)
'local woman.'

This same principle applies irrespective of number, as seen in (62), where whether the plural marker [-w] is present, as in (62a), or not, as in (62b), the *nisbeh* marker is not present, since the modified noun is feminine.

(62) a. hjm-w-t njwt-w-t
man-PL-F local-PL-F
'local women'

b. hjm-w-t njwt-t
man-PL-F local-F
'local women'

In the data provided above, when agreement is inflected onto the adjective, it agrees syntactically with the noun that it is modifying. We do not see a split in semantic and syntactic agreement, in Earlier Stages of Egyptian, once again strengthening the fact that the agreement patterns observed when Greek adjectives modify Bohairic Coptic nouns are contact induced changes.

4.4 Contact-Induced Change

To date, the grammars that have been proposed in accounting for natural language syntax do not formally account for contact-induced changes, without proposing a *third grammar* serving as an intersection between the two, or more, languages that have entered into contact. Functional approaches to grammar, however, are equipped with enough flexibility to do so.

First, I assume the Construction proposed in Section 3.3, reiterated in (63), to account for the variant order of the adjectives with respect to the nouns they are modifying.

(63) $$\begin{bmatrix} \text{PHON} & \phi_1 \oplus \grave{\text{N}} \oplus \psi_2 \\ \text{SYN} & \begin{bmatrix} NP & \text{N}_1, \text{A}_2 \end{bmatrix} \\ \text{CS} & \text{x}_1 \begin{bmatrix} \text{MOD:} & \text{y}_2 \end{bmatrix} \end{bmatrix}$$

Because Greek adjectives modifying Bohairic Coptic nouns are able to appear either prenominally or postnominally, we are not required to consult the micro-constructions found

in (43) to ensure the correct ordering. However, I now propose a further micro-construction, that is specified for feminine and neuter Greek adjectives.

(64)
$$\begin{bmatrix} \textit{Greek} & \\ \text{PHON} & \phi_1 \oplus \grave{\text{ⲛ}} \oplus \psi_2 \\ \text{SYN} & \begin{bmatrix} \textit{NP}\ \text{N}_1,\ \text{A}_2 \end{bmatrix} \\ \text{MORPH} & [\alpha\text{-Human}]_1,\ [\alpha\text{-Feminine}]_2 \\ \text{CS} & \text{x}_1 \begin{bmatrix} \text{MOD:}\ \text{y}_2 \end{bmatrix} \end{bmatrix}$$

The Construction in (64) states that, in the morphology, when a Greek adjective is modifying a Bohairic Coptic noun, the Feminine feature on the adjective and Human feature on the noun being modified must agree. This means that if a Greek adjective is neuter it will have a -Feminine feature, and so the noun it is modifying must also be -Human, however, if a Greek adjective is feminine, it will have a +Feminine feature, and the noun it is modifying will also be +Feminine[5].

This Construction accounts for the data observed in examples (48a) and (49a), and also blocks neuter Greek adjectives from modifying human Bohairic Coptic nouns, as seen by the ungrammaticality of (65a), as well as also blocking feminine Greek adjectives from modifying nonhuman Bohairic Coptic nouns, as seen by the ungrammaticality of (65b).

(65) a. *ϯⲥ̀ϩⲓⲙⲓ ⲛ̀ⲧⲉⲗⲓⲟⲛ

ti-ɪshimi ɱ-tɪlɪjon
DEF.SG.F-woman PRT-N.perfect
'the perfect woman'

b. *ϯⲯⲩⲭⲏ ⲛ̀ⲁⲅⲁⲑⲏ

ti-psuki ɪn-ɔɣɑθi
DEF.SG.F-soul PRT-F.good

[5]I take for granted that through spec-head agreement, we get the right outcomes for syntactic agreement, where a feminine adjective modifies a grammatically feminine noun, etc.

'the good soul

A reader will notice that the Construction in (64) is only necessary with Greek adjectives that are borrowed in their feminine and neuter forms, and not the masculine forms. This is because, in Bohairic Coptic, the masculine Greek adjectives act similarly to the native Bohairic Coptic adjectives, and do not show contact induced changes in the agreement pattern of the Construction. It is only with the neuter and feminine adjectives that have been borrowed from Greek into Bohairic Coptic that we find contact induced changes manifesting a *humanity* feature that is foreign to Bohairic Coptic outside of this sub construction.

4.5 Conclusion

In this chapter I have shown that a Functionalist approach to grammar has the tools to account for contact induced changes. First, I illustrated the agreement patterns that are posited when a Greek adjective modifies a Bohairic Coptic noun. I then showed that this *humanity* feature that arises in the agreement is a contact induced change, since these agreement patterns are not found throughout Bohairic Coptic or in earlier stages of Egyptian. Lastly, I proposed a construction that inherits the variant ordering of the adjective with respect to the modified noun, and imposes the *humanity* feature when a neuter or feminine noun modifies a Bohairic Coptic noun.

Chapter 5

ⲛ̀

In this chapter I discuss the importance of studying the genitives and the adjectives together, and considerations a thoughtful researcher ought to have when investigating the status of ⲛ̀.

Throughout this thesis, I have focused my attention on the phrases that utilize the particle ⲛ̀, but have not attempted to formalize what role this ⲛ̀ is playing in the syntactic analysis of these phrases. This is because, while I state ⲛ̀ as a particle, I do not have an account as to what its function is in the syntax. There are, however, two traits about ⲛ̀ that should play a role in any future analysis of it. First, ⲛ̀ does not seem to function as case marker, as I will show in Section 5.1. Second, ⲛ̀ is present in phrases that were historically head initial, and remained head initial even after the move to synthetic to analytic morphology.

5.1 ⲛ̀ is not Case Marking

In this section, I will show that ⲛ̀ is not a case marker, by discussing the phrases in which it appears.

First, ⲛ̀ appears in various phrases marking (i) noun phrases with adjectival modifiers, as seen in Chapter 3, (ii) the Construct State like construction, as seen in Chapter 2, and (iii) direct and indirect objects, which I now illustrate.

There are two types of verbs in Coptic, active and stative. The active verbs can appear in three forms: bare, construct, and pronominal. Bohairic Coptic, like other Afro-Asiatic

languages, follows a consonant-vowel bi/trilateral root system, and so the difference between the bare, construct, and pronominal forms of verbs is apparent through the vowels.

If the Coptic verb is a transitive verb, and is in the bare form, then the verb will require the direct object to be marked by the particle ⲛ̀, as seen in (66), where ⲥⲟⲃϯ meaning 'to prepare', where the direct object, ⲡⲉⲕⲱⲱⲓⲧ meaning 'your way,' receives the particle ⲛ̀ before it.

(66) ⲁⲫⲥⲟⲃϯ ⲛ̀ⲱⲡⲉⲕⲱⲱⲓⲧ

ɑ-ɪv-covti	ɪm-pɪk-moit
PAST-3.SG.M-prepare	PRT-2.PL.POSS- way

'He prepared your way.'

If the Coptic verb is a transitive verb, and is in the construct form[1], as seen in (67) the particle ⲛ̀, is not needed. This can be seen in (67) where ⲥⲉⲃⲧⲉ meaning 'to prepare' is in the construct form, and does not manifest the particle ⲛ̀ before the direct object ⲡⲉⲕⲱⲱⲓⲧ.

(67) ⲁⲫⲥⲉⲃⲧⲉ ⲡⲉⲕⲱⲱⲓⲧ

ɑ-ɪv-covte	pɪk-moit
PAST-3.SG.M-prepare	2.PL.POSS- way

'He prepared your way.'

If the Coptic verb is a transitive verb, and is in the pronominal form, as seen in (68), once again the particle ⲛ̀ is not necessary.

(68) ⲁⲫⲥⲉⲃⲧⲱⲧⲫ

ɑ-ɪv-sɪvtot-f
PAST-3.SG.M-prepare-3.SG.M

[1]It is not clear whether or not the *construct form* that is discussed with respect to the verbs, is similar to the Construct State that was discussed in Chapter 2, however keeping in line with the traditional names used for the verbs in Bohairic Coptic, I refer to it as the construct form.

'He prepared it.'

Now, moving on to the indirect objects of ditransitive verbs. For the data on the indirect objects, I will mark it with the bare form of the verb ϯ meaning 'give.'

The indirect object marker can only be marked by the particle ⲛ̀.

In the default pattern the direct object comes before the indirect object. As seen in (69), and both the direct object and the indirect object are marked by the particle ⲛ̀.

(69) ⲁⲓϯ ⲙ̀ⲡⲭⲱⲙ ⲙ̀ⲡⲓⲣⲱⲙⲓ

ɑ-i-ti	ɪm-ɪp-gom	ɪm-pi-rɔmi
PAST-1.SG-give	PRT-DEF.DET.SG.M-book	PRT-DEF.DET.SG.M-man

'I gave the book to the man.'

Putting together the data found in Section 2.3, Section 3.1, and examples (66)-(69) of this chapter, we see that ⲛ̀ appears in all three of these constructions. Had we investigated these phrases independently, ⲛ̀ would then fall into the risk of being categorized as a case marker. This hypothesis would be difficult to defend, since we would then have to claim that ⲛ̀ marks all case forms; genitive case, in the Construct State, nominative case, with adjectival modifiers, and accusative and dative case, with the direct and indirect objects of bare verbs.

5.2 Historical Phrases

Second, ⲛ̀, within the nominal system in Bohairic Coptic, is restricted to the phrases, mainly the Construct State construction and Adjective phrases, that were historically head initial, and remained head initial even after the language moved from a synthetic morphological system to a more analytic one. These phrases in Middle Egyptian also possess no formal element marking it as a modifier, whether adjectival or genitival. In order to demonstrate this point, I will use the genitive and adjective data found in Middle Egyptian.

In Section 4.3, examples (56)-(62) show this head initial nature, where adjectives appeared postnominally to the nouns they are modifying, and agreed in gender and number via morphological suffixation; there is no formal element marking it as a modifier. In Bohairic Coptic, this phrase is then reflected in the construction that utilizes the ⲛ̀ particle. When the ⲛ̀ particle is used to mark the adjectival constructions, as seen in Section 3.1, there is a preference for adjectives to appear postnominally, but there is always variance in ordering with specific adjectives, that historically appeared pronominally as well.

I now demonstrate this with the genitives as well.

Middle Egyptian makes a distinction between the *direct gentiive* and the *indirect genitive*[2].

In a direct genitive construction, two nouns are put together in the pattern (ϕ ψ) where ϕ is always the possessum noun while ψ is always the possessor noun. Nothing can stand between the first two nouns in this direct genitive constructions. In the direct genitive construction, ϕ or ψ could be definite, indefinite, plural, dual, singular, masculine, or feminine, as seen in (70), (71), and (72).

[2]The indirect genitive in Middle Egyptian is shown through the pattern (ϕ GEN ψ). ϕ is always the possessum noun while ψ is always the possessor noun, and there is a genitival adjective in between ϕ and ψ.
This genitive adjective appears in three forms, according to Allen:

1. (n) which appears when ϕ is masculine and singular
2. (n-w) which appears when ϕ is masculine plural or masculine dual
3. (n-t) which appears when ϕ is feminine regardless of number

This genitive adjective appears in six forms, according to Gardiner:

1. (ny) which appears when ϕ is masculine and singular
2. (ny-t) which appears when ϕ is feminine and singular
3. (ny-w) which appears when ϕ is masculine and plural
4. (ny-w-t) which appears when ϕ is feminine and plural
5. (ny-w-y) which appears when ϕ is masculine and dual, however this is *very* rare
6. (ny-t-y) which appears when $\phi$is feminine and dual, however this is *very* rare

Gardiner however sates that the transliterations that he gives are those that are demanded by strict etymology, but these were were already much reduced by the time of the Middle Kingdom which gives ground to the forms given by Allen.

(70) r jz
mouth tomb
'the tomb's door'

(71) hr-wj sth
testicle-DU seth
'Seth's two testicles'

(72) nswt ntr-w
king god-PL
'king of the gods'

This is phrase in Middle Egyptian is analogous to the Construct State in Bohairic Coptic described in Section 2.3. Once again, when found in Bohairic Coptic, we see that it retains its head initial ordering, and in Middle Egyptian there is no formal element marking the genitive interpretation.

Because of the similarities in the historical structures, a study that investigates either one of the phrases found in Bohairic Coptic, whether it is the Construct State or adjectival modification, should take into account the other.

Chapter 6

Conclusion

In this thesis I have done four things. First, I have shown that a Functionalist approach to grammar best accounts for cross-linguistic difference in Chapter 2. In doing so, I first introduced the Construct State data found in Semitic languages and compared it with a Construct State like construction found in Bohairic Coptic. I showed how previous analyses of the Construct State, mainly Mainstream Generative, Categorial, and Lexicalist, are unable to account for the cross-linguistic differences present in Semitic Construct States and Bohairic Coptic Construct States, and then proposed a Functionalist approach to grammar in order to account for this observed variation. Second, I have shown that a Functionalist approach to grammar best accounts for intra-linguistic variation in Chapter 3. In doing so, I first show the variant ordering of adjectives with respect to the modified noun, and then propose a Functionalist approach that allows for this variant ordering within, only, the phrases that utilize the particle ⲛ̀. Third, I have shown that a Functionalist approach to grammar best accounts for contact induced changes in Chapter 4. In doing so, I demonstrated the agreement patterns that are posited when Greek adjectives modify Bohairic Coptic nouns, giving rise to a *humanity* feature, and then showed that this agreement pattern is not present in Bohairic Coptic or earlier stages of Egyptian. I then proposed a Functionalist approach to account for this contact induced change, that inherited the variant ordering construction found in Chapter 3, and accounted for the agreement pattern of Greek adjectives modifying Bohairic Coptic nouns. Finally, I have demonstrated the importance of studying these two phrases together in Chapter 5, by showing that ⲛ̀ is not a case marker,

and that it appears in phrases that were historically not marked with a functional element, and retain their head initial ordering in Bohairic Coptic.

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