When Arabs talk to each other about themselves

a study of *nafs* and *baᶜ* in Modern Standard Arabic

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Introduction

This thesis deals with the use of reflexives and reciprocals in Modern Standard Arabic. The theoretic framework that I will use is the Government & Binding theory, although the data is presented without referring to any generative theories, and is therefore accessible to any interested linguist.

In generative theory, the standard method for research is to be a native speaker and research one's own language by making up examples and 'stretching' them, to see what is still allowed and what is not. This method usually yields interesting results and can give one a more thorough insight into one's own language. But it is impossible to use and analyze such examples, which are generally on or even beyond the edge of what is generally used by speakers of a certain language, if one does not have an exact picture of more current uses of what one is testing.

Not being a native speaker of Arabic, I cannot use this research method. Instead, I have decided to query a corpus and analyze the occurrences of reflexives and reciprocals, at times with the help of a native speaker. This method gives an interesting picture of the actual use of reflexives and reciprocals in Arabic today, on which a proper analysis can be based. This analysis can then serve as the starting point for further research, to be carried out by native speakers.

This thesis is set up as follows:

Chapter one and two are introductory chapters. Chapter one contains a general introduction to the binding theory, that part of the Government & Binding theory that has been developed to describe and explain the use of reflexives and reciprocals. Furthermore, I discuss some problems concerning the binding theory. No previous knowledge of generative grammar is assumed in this chapter, and it should be accessible to anyone with a linguistic background. It should be noted, however, that it is not an introduction to generative grammar. I explain in general terms the way that generative grammar looks at language, and I will introduce the necessary formalisms. It should be kept in mind, however, that formalisms in generative grammar usually have a theoretic background: formalisms are developed for a theoretic reason and are not introduced because 'it looks neat' (though it may often seem so). More often than not, I will not go into the theoretic reasons behind certain formalisms. Those who know, need not be informed, and those who do not know, would probably prefer not to be bothered.

Chapter two introduces some features of the Arabic language and gives a survey of pronouns, reflexives and reciprocals in Classical and Modern Standard Arabic based on traditional grammars of the Arabic language. No reference will be made in this chapter to generative theory. In it, much is discussed that will not be dealt with in the actual research, but I have included it to give a full picture of the pronominal system of Arabic. It contains some interesting phenomena that would deserve further research.

Chapters three and four present the results of the research. In chapter three, I give a description of the use of the reflexive *nafs* and the reciprocal *ba*^{c} in Arabic based on examples found in the corpus. Just like chapter two, chapter three does not contain any references to generative theory. The generative analysis of the data is presented in chapter four. The question I will try to answer in chapter four is whether Arabic reflexives obey the binding theory as developed by generative grammar. At the end of chapter one, after introducing the binding theory, I will phrase this question more precisely.

I would like to thank Everhart Ditters and Jan Hoogland of the institute of Languages and Cultures of the Middle East (TCMO) at the university of Nijmegen for providing the corpus and for their further assistance. I would also like to thank the informants who gave valuable information on the grammaticality of specific sentences. Without their help, this thesis would not have been written.

Transcription

There are several conventional ways for transcribing the Arabic script into the Latin alphabet. The following table lists the characters I use for each letter of the Arabic alphabet and for the vowels. For convenience, I also give the pronunciation using IPA characters. Naturally, letters will have allophones (e.g. [ ] for [h], or [] for [l]). For an elaborate description of the pronunciation of Arabic, see Mitchell (1990).

Arabic	transcription	IPA	Arabic	transcription	IPA
ء			ك	k	k
ب	b	b	ل	l	l
ت	t	t	م	m	m
ث		θ	ن	n	n
ج	j		ه	h	h
ح		ħ	و	w	w
خ		χ	ي	y	j
د	d	d			
ذ		ð	ة	t	t/Ø
ر	r	r	ا	-	
ز	z	z			
س	s	s		a	a/
ش	š		ا	ā	a:/:
ص		s		u	
ض		d	و	ū	u:
ط		t		i	
ظ		z	ي	ī	i:
ع	ᶜ		و	aw	au/ u
غ	ġ		ي	ay	ai/i
ف	f	f	ﷲ	allāh	:: (h)
ق	q	q			

The alif (ا) was originally the character used for the glottal stop () . In the Arabic script as employed today, however, it usually indicates the long a (ā), whereas the glottal stop is indicated by the hamzah (ء). Only at the beginning of a word can the alif still represent the glottal stop. Such an initial glottal stop can be 'connective' (hamzat al-wal) or 'disjunctive' (hamzat al-qaᶜ). A disjunctive glottal stop is always retained. A connective glottal stop is dropped, together with its following vowel, if the preceding word ends in a vowel. I do not transcribe the connective glottal stop, I only transcribe the following vowel (which is a certain indication of its existence). When the glottal stop is dropped, I will replace the vowel with a hyphen. Thus: ibn-ī 'my son', but: li -bn-ī 'to my son'.

In the rare cases that the alif is used to indicate short /a/, as in انا a na 'I', I will transcribe it with 'a'.

The letter ā' (ظ) is officially pronounced [ð], but in not too formal contexts, it is often [z], hence the

convention of transcribing it with .

Arabic has a number of particles that consist of one consonant plus a short vowel. Although they are clitics, and are always attached to the following word in Arabic, I will detach them in the transcription to avoid confusion between these particles and affixes. Thus: wa huwa ‘and he’, rather than wa-huwa.

The letter ة, called ‘tā’ marbūa’, is the feminine ending. It is pronounced [t] when a vowel follows, it is dropped in pause.

In Arabic, final short vowels are dropped when a word appears in pause (e.g. at the end of a sentence). In spite of this, I will indicate those short vowels in the transcription, since they are often case endings and are therefore important for the structure of the sentence. However, when quoting Arabic words in the text, I will generally omit all case endings, and also the feminine ending -t.

Consonants can be lengthened in Arabic. I will indicate this by doubling them in the transcription. Thus: kataba [kataba] ‘he wrote’, and kattaba [kat:aba] ‘he made s.o. write’.

The Gloss

Arabic is an inflecting language, that can comprise much information in single word forms. When giving examples from Arabic, I will give a word-to-word, or rather a morph-to-morph, translation, combined with a description of the word form in a so-called gloss. For this gloss, I will use a series of abbreviations.

The nominal system distinguishes between three cases: nominative (N) for the subject, genitive (G) to express possession and after prepositions, and accusative (A) for the object and for adjuncts. Most nouns have an indefinite marker, a suffix *-n* which I will indicate, if necessary, with IN. I will use the same abbreviation between parentheses for an indefinite noun that has no indefinite marker.

Nouns can be masculine or feminine. Masculine nouns have no specific ending, but most (though not all) feminine nouns have the ending *-t*, that precedes the case endings. I will indicate this with f, if necessary.

Arabic verbs have three persons, that I indicate with numerals (1,2,3). There are three numbers, singular (s), dual (d) and plural (p), and two genders, masculine (m) and feminine (f). Some forms can be both masculine and feminine, which I describe as having common gender (c).

There are two tenses, or aspects: perfect (P) to express the completion of an action, and imperfect to express duration or repetition. The latter tense has three moods: indicative (I), subjunctive (S) and jussive (J). I do not indicate the imperfect, since any imperfect verb is either in the indicative, the subjunctive or the jussive. A verb has two participles, one active (AP) and one passive (PP). I indicate the imperative with Impt, followed by number and gender.

In the gloss, I will describe pronouns with their features, not with an English counterpart, since Arabic pronouns cannot be described accurately with the English pronouns. Pronominal suffixes are attached to the word they are suffixed to by means of a hyphen, both in the Arabic text and in the gloss.

Verb forms indicate aspect, mood, person, number and gender, and agree with the agent. It should be noted, however, that agreement in Arabic is not always as straightforward as one might expect. In the gloss, I will translate the verbs with the English infinitive (omitting ‘to’), and I will add the features of the verb form between parentheses, attached to the infinitive without a blank.

Case is (mostly) expressed with suffixes that appear before the indefinite marker, if any. In the Arabic examples I will separate them from the noun with a hyphen (-), and similarly I will attach the case indication (N, G or A) to the English translation with a hyphen. I usually do not indicate number on nouns, singular nouns being translated with the English singular, plural nouns with the English plural. Dual nouns, however, will be translated with the English plural (if necessary, 'two' will be added), to which I will add a description between parentheses, indicating dual (d) and case, since in the dual, number and case are expressed in one ending.

Arabic has only a definite article, which is *al* (or *-l* when the preceding word ends in a vowel), prefixed to the noun or adjective. I will indicate it with 'the', which I will attach to the noun with a hyphen. When a noun is modified by a genitive, it never has the definite article, but it is still definite. I usually do not indicate this, but should it be necessary, I will use D.

Some Arabic particles will be described with multi-letter abbreviations, when they have no direct English equivalent, such as topicalizers (TOP), interrogatives (INT) and complementizers (COMP).

E.g.:

Arabic word	description	translation
ana	1cs	'I'
anti	2fs	'you'
humā	3cd	'the two of them', 'they'
nanu	1cp	'we'
yaktubu	write(I3ms)	'he writes', 'he is writing'
taktuba	write(S2ms)	'that you write'
naktub	write(J1cp)	'that we write'
katabatā	write(P3fd)	'they write'
kitāb-un	book-N	'a book'
	or: book-N-IN	
kutub-in	books-G	'of (some) books'
	or: books-G-IN	
al-kutub-u	the-books-N	'the books'
kitāb-u ...	book-N	'the book (of) ...'
	or: book(D)-N	
kitāb-a-hu	book-A-3ms	'his book'
kitābāni	books(dN)	'two books'
al-kitābayni	the-books(dA)	'the two books'
arabū-hu	hit(P3mp)-3ms	'they hit him'
yarayāni-nī	see(I3dm)-1cs	'the two of them see me', 'they see me'

In general, features that are expressed in a word, are between parentheses in the description. Features that are expressed by pre- or suffixes, do not appear between parentheses, but are attached to the translation with a hyphen.

I should point out that my only reason for using these particular abbreviations is to give a short description of the Arabic word forms, based on traditional grammar. I have no scientific objective with them.

A table of the abbreviations I use:

1,2,3	1st, 2nd or 3rd person
s,d,p	singular, dual, plural
m,f,c	masculine, feminine, common (both masculine and feminine)
N,G,A	nominative, genitive, accusative
P,I,S,J	perfective, imperfective indicative, subjunctive, jussive
AP,PP	active participle, passive participle
IN,D	indefinite, definite
TOP	topicalizer
INT	interrogative
COMP	complementizer

1 Binding theory

The binding theory is one of the more important elements of Chomsky's Government and Binding Theory (henceforth GB). In this chapter, I will introduce this theory, beginning in section 1.1 with a general view of the phenomena that led to the development of the binding theory.

In section 1.2 I will give a fuller explanation of the standard version of the binding theory, partially based on Chomsky's most recent book, *The Minimalist Program* (1995). Section 1.3 introduces some issues that are generally noted in the literature to be problematic for the binding theory. Two alternative theories will be discussed in short, which will give a better insight into the phenomena described by the binding theory. Section 1.4 describes the analysis of reciprocals, and section 1.5 contains some discussion of reflexives.

1.1 General introduction

GB is based on the idea of Universal Grammar (UG). This idea says that every person is born with a so-called language module, which is part of the brain. This language module defines the basic structure of language. Since every person from any language community is born with this language module, all languages on earth will share some basic structure.

The reason for assuming such a universal language module is that some principles of language are thought to be impossible to be deduced from the language facts a child hears. When beginning to learn a language, a child has to be equipped with certain knowledge about language in general, otherwise it would not be able to make any sense of what it hears.

The object of GB is to determine which features of language are common to all languages. If such a universal principle is considered unlearnable, it is thought to be part of UG. For example, all (known) languages distinguish between verbs and nouns. Because a child could not begin to understand even the simplest utterances if it did not know at least that (or so it is assumed), this distinction is seen as part of UG.

Features that are particular to one or several languages are generally seen as variations of some underlying principle. Such a principle is thought to be universal, if unlearnable. Some languages put adjectives before the noun, others after it, but all allow modification of a noun with an adjective in some way. The possibility to modify a noun would be seen as a universal principle, part of UG. The way in which this is done, can vary from one language to another.

The binding theory explains why the italicized words in (1) are interpreted as they are. The binding theory is thought to be part of UG, which means that the distribution and interpretation of the italicized words in (1), and their counterparts in any other language, is determined by one or more universal principles. Knowing what these principles are, would enable us to explain why certain constructions are allowed and others are not, and it would give us a better insight into UG. The binding theory is an attempt to formulate these principles. Consider (1):

1 a John says that Peter saw *John.*

b John says that Peter saw *him*.

c John says that Peter saw *himself.*

In (1a), the italicized *John* will not be understood as referring to the first *John*. Except perhaps for certain very specific contexts, the two *John*s cannot have the same referent. Two persons named John have to be involved.

In (1b), *him* can be understood to refer to the *John* mentioned in the sentence. It can also refer to a third male person, present in the context, but not in the sentence. It cannot, however, under any interpretation, refer to the *Peter* mentioned in the sentence.

In (1c), *himself* has only one possible interpretation. It must refer to *Peter*. It cannot refer to *John*, nor to any person not mentioned in the sentence.

Reference is usually indicated using indices. Two elements having the same referent, receive an identical index. An asterisk (*) is used to indicate that something, in this case a certain coreference, is not possible, or ungrammatical. E.g.:

2 a John_{i} says that Peter_{j} saw $\text{John}_{*i/k}$

b John_{i} says that Peter_{j} saw $\text{him}_{i/*j/k}$

c John_{i} says that Peter_{j} saw $\text{himself}_{*i/j/*k}$

In (1) and (2), the elements *John*, *him* and *himself* are elements that refer to persons or objects in the world. Such elements, called Noun Phrases (NPs), occur in three different types. The first type refers directly to something or someone outside the linguistic context, e.g. *John*, *the house*, etc. These are called referential expressions, or R-expressions.

Other NPs do not refer directly, but obtain their reference from another linguistic element. That is, they refer to another NP in the same or a previous sentence, the antecedent. Only through this antecedent can such an element be interpreted.

Traditional grammar distinguishes between three such elements: pronouns (*him*), reflexives (*himself*) and reciprocals (*each other*). Because reflexives and reciprocals show identical syntactic behaviour, they are grouped together under the name *anaphors* in GB.

The term 'anaphor' in GB should not be confused with 'anaphor' in its traditional meaning. Traditionally, an anaphor is a pronominal element referring back to a noun, as opposed to a cataphor, which refers forward to a noun. This distinction does not exist in GB.

In short, GB distinguishes between three types of NPs: R-expressions, pronouns and anaphors. *John* in (2a) is an R-expression, *him* in (2b) is a pronoun and *himself* in (2c) is an anaphor. The binding theory has been developed to explain why these three types of NPs are interpreted as they are, and why they cannot be interpreted otherwise.

It should be noted that pronouns can also refer to someone or something in the non-linguistic context. Such a pronoun is deictic. The interpretation of a deictic pronoun depends on the (non-linguistic) context of the utterance. This differs from the interpretation of an R-expression, which will not depend on the context, but solely on the knowledge of the listener.

The standard (Chomskian) version of the binding theory is in fact based on the observation that anaphors always seem to find their antecedent in a certain 'local domain'. This is illustrated in (3):

3 a John$_i$ hurt himself$_i$.
b *John$_i$ says that Linda hurt himself$_i$.

In (3), the antecedent of *himself* is *John*. (3a) is a correct sentence, (3b) is not. Apparently this is due to the fact that in (3a) the antecedent and the anaphor are in the same clause, whereas in (3b), the antecedent is in the main clause, while the anaphor is in the subclause. It seems that the local domain in which the anaphor has to find its antecedent, is the clause in which it is contained. It will be seen later that this is not always the case, but for now, this approximation will do.

In GB terminology it is said that an anaphor has to be bound in its local domain. 'Binding' is a technical term of GB, that involves two NPs. One NP binds another NP when they have the same index and when the two NPs appear in a certain syntactic configuration. For this, the binder in general (but not necessarily) has to precede the bindee, and the binder has to be an independent argument of the sentence. In (3a) *John* binds *himself*, and in (5b) *John* binds *him*. But in (4), *John* cannot bind *himself*, because *John* is not an independent argument of the sentence, it is only part of the subject.

4 *John$_i$'s father hurt himself$_i$.

Contrary to anaphors, pronouns cannot look to their own clause for an antecedent:

5 a *John$_i$ hurt him$_i$.
b John$_i$ says that Linda hurt him$_i$.

In (5a), *John* cannot bind *him* (serve as antecedent for *him*), because both elements occur in the same clause. (5b), however, is a correct sentence, since antecedent and anaphor are in different clauses. It is said that *him* is bound outside its local domain. But observe (5c):

5 c John$_i$ says that Linda hurt him$_j$.

(5c) is also correct, even though *him* is not bound by *John*. In fact, the pronoun is not bound at all, since an anaphor or a pronoun can only be bound by an NP in the same sentence[1]. In GB, the term *binding* refers to a certain syntactic relation. There can be no syntactic relations between different sentences, and therefore an NP cannot be bound by an NP in a previous sentence.

An NP that is not bound, is said to be free. If a pronoun refers to an NP in another sentence, which is of course

1 I will take 'sentence' to mean a clause with all of its subclauses. In Arabic, several of such sentences are often connected with particles that translate as 'and' or other conjunctions. I will assume that binding across coordinating conjunctions is not possible. (This is the general assumption in GB, but cf. Kayne (1994) for a different analysis.)

very well possible, it is also said to be free, because it is not bound within its own sentence. A deictic pronoun is also free.

A pronoun can be bound outside its local domain, as in (5b), or it can be free altogether, as in (5c). It cannot be bound inside its local domain. Therefore it is said that a pronoun must be free in its local domain.

If we now look at R-expressions, it is soon clear that they must be free at all times. They cannot be bound, neither inside nor outside their local domain.

6 a *John$_i$ hurt John$_i$.
b *John$_i$ says that Linda hurt John$_i$.

The above observations about NPs form the binding theory. They are repeated in (7).

7 Binding theory
Condition A: an anaphor must be bound in its local domain.
Condition B: a pronoun must be free in its local domain.
Condition C: an R-expression must be free everywhere.

Conditions A and B clearly imply that anaphors and pronouns are 'opposites' of each other. That is to say, in a situation in which a pronoun is used, an anaphor cannot be used (without changing the meaning of the sentence) and vice versa. This is clearly illustrated by (3) and (5). (3a) is correct, but replacing the anaphor with a pronoun makes it ungrammatical, as (5a) shows. In the same way, the ungrammatical (3b) can be made correct by replacing the anaphor with a pronoun, as in (5b).

The theory thus predicts that anaphors are used where pronouns are not and vice versa. It is said that pronouns and anaphors occur in *complementary distribution.*

It should be noted that the local domain in (7) is not always the clause in which the anaphor or pronoun occurs. It can also be a (complex) NP or a higher clause, as shown in (8).

8 a John$_i$ likes [$_{NP}$ Bill$_j$'s stories about himself$_{*i/j}$]
b Mary$_i$ thinks [[pictures of herself$_i$] are on display]

The exact definition of the term local domain, or governing category (GC), as it is usually called, is the issue of much debate. Chomsky's own definition, which will be discussed in 1.2, seems to work well for English, but definitely raises problems when applied to other languages.

1.2 Chomskian binding theory

(7) is a simplified formulation of Chomsky's binding theory. Obviously, the terms *binding* and *local domain* have to be defined.

For one NP to bind another, three conditions have to be met. First of all, the two NPs have to be coindexed. In GB, coindexation is seen as part of the interpretation process of a sentence. A listener has to give an index to each NP in order to understand the meaning of the sentence.

It is important to note that coindexation is sometimes 'forced'. A sentence can be tested by forcing a certain interpretation and seeing if the result is a correct sentence or not. (9), for example, is a perfectly good sentence.

9 John's father sees himself in the mirror.

Himself will be understood to refer to the NP *John's father.* But it is possible to test if *himself* could refer to *John* by coindexing the two, as in (10).

10 *John$_i$'s father sees himself$_i$ in the mirror.

This means that one forces oneself to interpret *himself* as referring to *John*. It turns out that this is not possible, as is indicated by the asterisk.

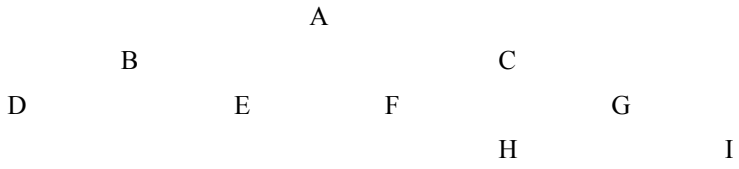
The ungrammaticality of (10) is not caused by lack of coindexation. *John* and *himself* are coindexed. (10) is incorrect for another reason. It illustrates the second condition which has to be met for binding to be possible. The binding NP has to *c-command* the bound NP.

The intuitive idea behind the term *c-command* is the following: the binding NP and the bound NP have to be co-arguments of the same head. Or rather, to be more precise, the bindee has to be an argument of, or contained inside an argument of the same head of which the binder is an argument. For a clause, the head is the main verb, and for an NP, the head is the noun around which the NP has been built.

This notion of co-argument status has been formalized as *c-command*. It should be noted that because c-command is formally defined in GB, an element can sometimes c-command another element that is strictly speaking not a co-argument or contained inside a co-argument of the first element. C-command applies when the formal definition is met.

The definition of C-command is best explained using a tree diagram. Consider (12).

12



The letters in (12) are called nodes, and they represent elements of a sentence, such as (sub)clauses, phrases or bare nouns, verbs etc. To determine which nodes are c-commanded by a certain node, one has to trace the tree structure, starting from the node, going up to the node directly above it, and then down again following the other branch. Every node that can be reached from there is c-commanded by the first node.

For example, to determine which nodes are c-commanded by D: go up one node, to B, and then down the other branch, to E. D c-commands E. And in the same way, E c-commands D. B c-commands (going up to A and down

again to C) C, F, G, H and I.

A node is said to *dominate* all the nodes that can be reached tracing the tree going downwards only. Thus, A dominates all other nodes of (12), B dominates only D and E, and F dominates no other nodes. Using this notion of dominance, c-command can be defined as follows:

13 C-command

Node A c-commands node B if and only if

(i) A does not dominate B;

(ii) B does not dominate A;

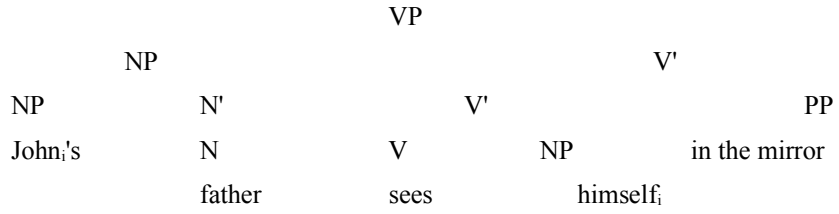
(iii) the first branching node dominating A also dominates B.

(from Haegeman, 1994)

It is obvious that in (10), *John*, the intended binder, is not an argument of the verb *sees*, the head of the sentence. Therefore it cannot bind any element in one of the other arguments of *sees*, and consequently, (10) is ungrammatical.

The tree diagram of (10) will illustrate this:[2]

14 *



V stands for verb, VP for Verb Phrase and PP for Prepositional Phrase. N' and V' (pronounced N-bar and V-bar) are additional nodes that combine with their heads (N and V) to form full phrases (NP and VP).

The NP *John* does not c-command *himself*, as one can determine for oneself by tracing the tree.

As a third condition, the binder has to be in an *argument position* (A-position). This means that the NP has to be an argument of the head of the phrase in which it is contained.[3] Left-dislocated elements, such as *John* in (15), are not in argument positions. Therefore, (15) is grammatical, even though *him* is coindexed with *John* and c-commanded by it. *John* cannot serve as a binder, since it is left-dislocated and not in an argument position.

15 John$_i$, I don't like him$_i$

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2 For convenience' sake, IP has been left out. According to the Minimalist Program, (14) is indeed a step in the derivation of (10), since the subject is base-generated in VP and verbs are inserted from the lexicon fully inflected.

3 A-positions are specifiers and complements of the lexical heads V, N, A, P and (arguably) of I. NPs in non-argument positions (A'-positions) can only serve as binders if they have been moved from an A-position, (e.g. through topicalization or wh-movement) and consequently left a trace, which will serve as the actual binder.

Because a binder has to be in an argument position, the notion *binding* as used in (7), is sometimes more accurately referred to as *argument binding* or *A-binding*. A-binding is defined as follows, using the conditions described above:

16 A-binding
Node A A-binds node B if and only if
(i) A is in an argument position
(ii) A c-commands B
(iii) A and B are coindexed
(from Haegeman, 1994)

Binding from non-argument positions is not relevant for this thesis, so I will use *binding* whenever I mean to say *A-binding*.

The local domain in which anaphors have to be bound, and pronouns have to be free, is not as easily defined as binding is. At first sight the local domain seems to be the clause containing the anaphor or pronoun. But this is not always the case. In his most recent book, *The Minimalist Program* (1995), Chomsky reaches a definition of the local domain that accounts for some of the problematic data. First, he remarks that an NP is sometimes bound outside its clause, as in (17).

17 a $John_i$ believes [$himself_i$ to be clever]
b *$John_i$ believes [him_i to be clever]

In (17), the bracketed phrases are considered to be infinitival subclauses. This means that in (17a), the anaphor *himself* is bound by an NP in the higher clause. One would expect a pronoun in such a position, but (17b) shows that a pronoun cannot be used. Apparently the anaphor is locally bound by *John.*

The sentences in (17) are analogous to (18).

18 I believe him to be the best.

(18) is an example of Exceptional Case Marking (ECM). The subject of an infinitival subclause (*him*) receives accusative case from the finite main verb (*believe*). Case is assigned under government, which means that the case assigner must govern the NP that it assigns case to.

Government is a formal notion describing the relation between a lexical element (verb, noun, adjective, preposition) and its arguments. One can say that a lexical element is governed by the lexical element to which it is an argument. However, as is the case with c-command, government has been formally defined. As a result, lexical elements can sometimes be governed by another element than the one to which they are arguments.

This is the case in (17) and (18). *Himself* in (17a) and *him* in (17b) are governed by the finite verb *believe*, because they receive their accusative case from that verb. However, they are considered to be arguments (in this

case subjects) of the infinitival verb.

Chomsky concludes from these sentences that the local domain must contain a governor for the anaphor or pronoun. Since in (17a) *himself* is governed by the verb in the main clause, the local domain in which it must be bound is the entire sentence.

At this point, Chomsky defines the local domain, which is usually called Governing Category (GC), as follows:

19 The GC of A is the minimal clause containing A and a governor of A.

Then Chomsky goes on to notice that sometimes the GC for an anaphor can be an NP only, as in (20).

20 John$_i$ likes [$_{NP}$ Bill$_j$'s stories about himself$_{*i/j}$]

The anaphor cannot be bound by *John*, but has to be bound by *Bill*. This seems to imply that (19) should be modified to "... the minimal clause *or NP*...". The NP in (20) contains both the anaphor and its governor (the preposition *about*). The NP is the GC of *himself*, the sentence is correct. The problem arises when (21) is considered.

21 John$_i$ likes [$_{NP}$ stories about himself$_i$]

Unexpectedly, *himself* in (21) can be bound by *John*, even though according to the extended version of (19), the NP is its GC. The difference with (20) is, however, that the NP in (20) contains a "potential" binder for the anaphor, whereas in (21), it does not. This leads Chomsky to reformulate (19) as (22):

22 The GC for A is the minimal CFC that contains A and a governor of A and in which A's binding condition could, in principle, be satisfied.

The notion CFC stands for Complete Functional Complex. It replaces the term *clause* in (19) and is defined as "a projection containing all grammatical functions compatible with its head" (Chomsky, 1995: 102). It can be either an IP (a clause) or an NP. (Other maximal projections seem not to be relevant, because binding of anaphors and pronouns occurs within an IP or an NP.)

With (22), the traditional view that pronouns and anaphors occur in complementary distribution, breaks down. Anaphors need to be bound in their GC and therefore their GC needs to contain a potential (and actual) binder. Pronouns, however, must be free in their GC. The GC of a pronoun may contain a potential binder, as long as it doesn't actually bind it. But of course the pronoun is also free when the GC does not contain a potential binder.

Thus, the GC of a pronoun can actually be different from the GC of an anaphor, enabling constructions that allow both a pronoun and an anaphor. This is illustrated in (23), according to Chomsky one of the limited cases in which English allows Long-Distance Anaphora (LDA). (For LDA see also 1.3.)

23 a Mary$_i$ thinks [$_{IP}$ [$_{NP}$ pictures of herself$_i$] are on display]

b Mary$_i$ thinks [$_{IP}$ [$_{NP}$ pictures of her$_i$] are on display]

In (23a) there is no potential binder for the anaphor, neither in the NP nor in the IP. Therefore *herself* will seek a binder in the upper clause, where it finds one.

Whether the NP in (23b) is a CFC or not (for discussion, see Chomsky, 1995: 105-6), the IP is certainly a CFC. Neither the NP nor the IP contains a potential binder for *her*, so in both, *her* will be free, satisfying the relevant condition of the binding theory, Condition B.

1.3 Problems with Chomskian binding theory

In the literature, several problems have been noted concerning the traditional binding theory as formulated in (7). Many examples are known in which some condition of the binding theory is violated. It is well known, for instance, that locally bound pronouns do occur in several Germanic and Romance languages:

25 *Dutch*
Ik$_i$ was *me*$_i$
I wash me
'I wash myself'

26 *Frisian*
Hy$_i$skammet *him*$_i$
He shames him
'He is ashamed'
(Everaert, 1991: 94)

27 *Italian*
a Io$_i$ *mi*$_i$ vedo
I me see
'I see myself'
b Tu$_i$ pensi solo a *te*$_i$
you think only to you
'You only think about yourself'
(Burzio, 1991: 83)

Obviously, the italicized elements in (25)-(27) are locally bound. In traditional grammar, they are called reflexives, because they refer back to their subjects. But classifying them as anaphors is not very satisfying, since morphologically they are identical to object pronouns.

Many languages that have anaphors, allow possessive pronouns, even when possessive anaphors are available. English is one of them:

28 a John$_i$ is reading his$_{i/j}$ book.

b John$_i$ is reading his own$_{i/*j}$ book.

In spite of the availability of *his own*, (28a) is a grammatical sentence in both readings, even though in one it contains a locally bound pronoun.

Another type of problem is known as Long-Distance Anaphora (LDA). Many languages allow binding of anaphors from a higher clause, not just when they are embedded in an NP, as we have seen in (23a) above for English. In some languages, long-distance anaphors are also allowed when they appear in argument position.

29 a *Icelandic*

Jón$_i$ sagði [að ég hefði svikið sig$_i$]
Jon said [that I had betrayed himself]
'John$_i$ said that I had betrayed him$_i$'

b *Latin*

Orat te pater$_i$ [ut ad se$_i$ venias]
asks you father that to self you-come(Subj)
Your father asks that you come to him
(Thráinsson, 1991: 54-5)

There are even cases of anaphors that are not bound at all. They refer to NPs in previous sentences, or they are deictic, referring to persons that are only present in the non-linguistic context:

30 *Icelandic*

a Sigvaldi$_i$ neitaði því, að þetta væri vilji þjóðarinnar. Að minnsta kosti væri það
Sigvaldi denied it that this was will the nation's at least was it
ekki sinn$_i$ vilji
not self's will
'Sigvaldi denied that this was the nation's will. At least it was not his [refl] will [he said]'

b María var alltaf svo andstyggileg. Þegar Ólafur$_j$ kæmi sagði hún sér$_{i/*j}$
Mary was always so nasty when Olaf came said she himself
áreiðanlega að fara...
certainly to leave
'Mary was always so nasty. When Olaf came, she would certainly tell himself [the person whose thoughts are being presented - not Olaf] to leave...'
(Thráinsson, 1991: 58)

31 a This paper was written by (Ann and) myself

b Physicists like yourself are a godsend

c Max and myself are having a great time in Lima

(quoted in Reinhart & Reuland, 1991: 311)

Chomsky's binding theory, as formulated in (7), is in fact based on the idea that an anaphor can be interpreted (i.e. that its antecedent can be found) on purely syntactic grounds. The syntactic structure of the sentence will tell you what the antecedent is. Pronouns, on the other hand, cannot be interpreted through the syntactic structure. Therefore, they have - features (features for person, number and gender), which help in selecting the referent from the context.

In this way, Chomsky correlates the morphological categories of pronoun and anaphor with the syntactic configurations locally free and locally bound. When an NP occurs that is locally bound, it has to be an anaphor, and an NP that is bound outside its GC, has to be a pronoun.

However, as Burzio (1991) notes, this view is problematic, because it is not clear what pronouns and anaphors actually are. In English, he says, it seems very obvious what is an anaphor and what is not, because anaphors contain an element -*self*. But in many other languages, this is not so clear.

Consider, for example, (32), in comparison to (25):

32 *Dutch*

Hij$_i$ wast zich$_i$

He washes self

'He washes (himself)'

Structurally, (32) is identical to (25). *Me* in (25) is, judging by its form, a pronoun. *Zich* is considered an anaphor. But *me* and *zich* occur in identical positions. Therefore, *me* has to be considered an anaphor as well. That would mean that an anaphor is an NP that occurs locally bound.

Such a, syntactic, definition of anaphors, however, would render the binding theory meaningless. Saying that an anaphor is an element that occurs locally bound, and then stating (in Condition A) that anaphors should occur locally bound, is, as Burzio (1991: 84) says, a "tautology".

Another solution to the problem raised by (25) and (32) is to state that, under certain conditions, pronouns can also occur locally bound. This is the position that Burzio takes. It requires that the term 'anaphor' be defined in another way. Burzio gives the following, "morphological", definition:

33 An NP with no features is an anaphor.

(Burzio, 1991: 87)

The term *features* refers either to - features (features for person, number and gender) such as pronouns have, or to a more specific referential character, such as R-expressions have.

(32) is based on the observation that anaphors can agree with impersonals, whereas pronouns cannot, as shown in (34):

34 a *French*

On$_i$a honte de soi$_i$/*lui$_i$

One has shame of self/*him

'One is ashamed of oneself'

(Burzio, 1991: 91)

b Victor$_i$ a honte de lui$_i$

Victor has shame of him

'Victor is ashamed of himself'

(quoted in Burzio, 1991: 85)

In (34a), *lui* cannot agree with the impersonal *on*. Since impersonals have no specific reference, Burzio assumes that they have no - features. That explains the ungrammaticality of (34a): *lui* is more specific than *on*, and therefore the former cannot agree with the latter.

The ungrammaticality of *lui* in (34a) is not caused by the fact that *lui* is locally bound. (34b) shows that *lui* can occur locally bound in this structure. The ungrammaticality can only be attributed to the impossibility of agreement.

The fact that (34a) is correct with the anaphor *soi*, means that *soi* has no features. Other languages also show data that suggest that 3rd person pronouns cannot agree with impersonals, whereas anaphors can (see Burzio, 1991). Burzio therefore assumes that anaphors in general have no features.[4]

English-type reflexives like *himself* are analyzed by Burzio as containing a true anaphoric element, *self*, without any features, and a pronominal element, *him*. The presence of the featureless anaphoric element makes *himself* an anaphor.

Furthermore, Burzio notes that the distribution of anaphors depends on three factors, which are:

1. subject orientation: in some languages, anaphors can only refer to the subject of the sentence, e.g. Romance anaphors, like Italian *sé/si*, French *soi/se*.

2. range of possible pseudo-agreement: pseudo-agreement is agreement of a referentially underspecified element (such as anaphors, which lack - features) with an element that is referentially more specified (such as pronouns, which do have - features). Not all languages allow pseudo-agreement to the same degree.

3. appropriate locality conditions: the binding conditions.

He remarks that it is possible for a language to ignore the first two factors. This is found in English, where the distribution of the anaphor *himself* is solely controlled by locality conditions. Other languages invoke all three

4 This would imply that the 3rd person singular verb form is also featureless, since impersonal subjects always require that form of the verb.

Furthermore, it should be noted that in Dutch, for example, a pronominal possessive can easily agree with an impersonal:

(i) Men$_i$ wordt verzocht zijn$_i$ paspoort klaar te houden

one becomes requested his passport ready to hold

'One is requested to have one's passport ready'

factors for the distribution of anaphors. Some, however, allow pseudo-agreement to a greater extent than others. In Russian and Czech, anaphors can agree with 1st, 2nd and 3rd person pronouns, as well as with impersonals. Many Romance languages allow agreement of anaphors only with 3rd person pronouns and impersonals. Danish possessive anaphors can only agree with 3rd person singular pronouns and with impersonals. The French stressed object anaphor *soi* can only agree with impersonals.

Burzio then proposes to replace the binding theory with a "principle of morphological economy", which says that "a bound NP should be maximally underspecified" (Burzio, 1991: 95). When a locally bound NP occurs, an element will be used with as little specification (as few features) as possible. This means that an anaphor should be used, unless that is prohibited by some independent principle of the language (e.g. not allowing pseudo-agreement in a specific context). If an anaphor cannot be used, a pronoun is required. Burzio also gives an example from Japanese, in which a bound possessive pronoun cannot be used. As a result, a bound R-expression is used, which totally contradicts Condition C of Chomsky's binding theory in (7).

Burzio also notes that languages often allow for some pragmatic variation. English, for example, allows possessive pronouns to be bound within their local domain. Because of this, 3rd person pronouns are sometimes ambiguous, as is *his* in (28a). When there is danger of interpreting such an ambiguous pronoun incorrectly, an anaphor can be used to indicate that the referent has to be found within the binding domain, as in (35a). When no such danger exists, using an anaphor is undesirable, as in (35b). (John is unlikely to loose someone else's cool.) When, for semantic reasons, a pronoun is unlikely to be interpreted as having a referent within the local domain (a person getting on his own nerves is very marked), an anaphor has to be used to make such reference possible, as in (35c):

35 a John$_i$ read his$_i$/his own$_i$ book.
b John$_i$ lost his$_i$/*his own$_i$ cool
c John$_i$ was getting on ??his$_i$/his own$_i$ nerves
(Burzio, 1991: 100)

Burzio makes a clear distinction between morphology and syntax. He distinguishes the morphological categories R-expression, pronoun (with - features) and anaphor (without - features). But he does not correlate these categories with the syntactic constructions, free, locally free and locally bound. This means that a locally bound NP is not necessarily an anaphor. It might just as well be a pronoun, or even an R-expression.

Reinhart & Reuland (1991) also give an alternative to Chomsky's binding theory. They base themselves on the analyses of LDA-phenomena in several languages that appeared in Koster & Reuland (1991). They argue that some LDA-phenomena cannot be captured by the binding theory. Instead, they will have to be described using some discourse or pragmatics theory.

First of all, it should be noted that Reinhart & Reuland only discuss reflexives (*himself*) and not reciprocals (*each other*), for which they assume the movement analysis of Heim, Lasnik & May (1991), which states that reciprocals are, essentially, independent of the binding theory.

Reinhart & Reuland distinguish between two types of reflexives. On the one hand there are simplex reflexives

that consist of a single reflexive element, like Latin *se*, Italian *sé*, Dutch *zich*, Norwegian *seg*, Finnish *itse*, etc. These, they call SE-reflexives.

On the other hand, there are complex reflexives, which consist of some reflexive element, usually meaning something like 'self', 'one's own', or 'body', 'soul', 'limbs' etc., combined with a pronominal element or an SE-reflexive, e.g. Dutch *mezelf, zichzelf*, Italian *sé stesso*, English *himself*, Arabic *nafs-ī, nafs-u-hu.* They call these SELF-reflexives.[5]

Reinhart & Reuland make the following observations about reflexives, which they state should be captured by the theory:

36 a There are two structural binding domains: the domain of the first subject (the local domain), and the domain of the first finite verb (the medium-distance or MD-domain). SELF-reflexives are bound within the local domain, SE-reflexives in the MD-domain.

b SE-reflexives are subject oriented: they always take a subject as their antecedent.

c Both SELF- and SE-reflexives also allow uses outside the domains specified in (a), so-called *logophoric uses*. (Logophoric uses include LDA as in (29) and unbound reflexives as in (30).)

d Complementarity effects obtain between non-logophoric SELF-reflexives and pronominals, and (generally) between SELF-reflexives and SE-reflexives, but not generally between SE-reflexives and pronouns. A logophoric SELF-reflexive is not in complementary distribution with pronouns.

(Reinhart & Reuland, 1991: 284, slightly modified)

For both types of reflexives, Reinhart & Reuland give structural descriptions. Their description of SE-reflexives is based on the structure of NPs as given by Higginbotham (1983) and Abney (1987). The description of SELF-reflexives is based on Pica (1987). It would go too far to discuss these descriptions in detail, but the following can be said.

Reflexives are "referentially defective NPs" (Reinhart & Reuland, 1991: 285), as they contain an element without - features. In order to be interpreted, they have to find a referent.

Because of its internal structure, an SE-reflexive can only find a referent by correlating itself, or adjoining, as it

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5 At first sight, Syriac seems to have another method of expressing reflexivity, apart from a standard SELF-reflexive. A personal pronoun is added to the object to render it reflexive:

i b-qindunus d-šunnāqā ᶜfīfā [$_i$ hu l-ēh] mšammar$_i$
in-danger of-punishment double 3ms OBJ-3ms send(APms)
'he sends himself in danger of double punishment'
(Barhebraeus, Ethicon, Ch. 9, sec. 2 in: Teule (1993), p124, ln 15)

The 3ms suffix *-ēh* is attached to the object marker *l-*. This object would normally be disjoint in reference from the subject. In order to indicate that it refers to the subject, the 3ms pronoun *hu* is added. (Note that this *hu* is *not* the subject of the verb *mšammar*.) In Reinhart & Reuland's analysis, this *hu* might be seen as a SELF-reflexive that does not occupy the position a SELF-reflexive usually occupies, that is, amalgamated with the personal pronoun.

Interestingly, the clitic form of this pronoun, *-(h)u* can be used as a copula:

ii a(n)t-(h)u ᶜabdā d-malkā
you-3ms servant of-king
'you are the servant of the king'

is called, to the verb inflection (which is abbreviated with Infl or I)[6]. Since Infl agrees with the subject, SE-reflexives will refer to the subject. When Infl is infinitive (which means it has no overt subject), the SE-reflexive will automatically search for the next higher Infl until it has found one that is finite. Take, for example, (37):

37 *Norwegian*
Jon$_i$ bad oss snakke om seg$_i$
Jon asked us to talk about SE
'Jon$_i$ asked us to talk about him$_i$'
(Reinhart & Reuland, 1991: 303)

In order to be interpreted, *seg* will adjoin to Infl. The first Infl, however, is infinitival (*snakke*). Therefore the Infl of the main clause (*bad*) will be chosen, which agrees with the subject *Jon*. Because *seg* adjoins to *bad*, it will refer to, and be bound by, *Jon*.[7]

SELF-reflexives are analyzed as "relational noun[s]" (Reinhart & Reuland, 1991: 286). This means that they correlate two NPs. The first of these two NPs is the pronominal element or the SE-reflexive contained in the SELF-reflexive. The second is one of the other arguments of the head of which the SELF-reflexive is an argument. This correlation means that the first NP (which is a pronominal element) is interpreted as referring to the second NP, or, in other words, that the second NP binds the first NP. Take, for example, (38):

38 Lucie$_i$ adores her$_i$self
(Reinhart & Reuland, 1991: 291)

The SELF-reflexive in (38) tries to correlate its pronominal element, *her*, with another argument of the head *to adore*. The NP *Lucie* is an appropriate candidate, since *her* can agree with it: both are feminine singular.

However, SELF-reflexives need not necessarily correlate their pronoun with the subject, as is illustrated in (39):

39 John$_i$ talks to Peter$_j$ about himself$_{i/j}$

When searching for a possible referent for *him*, the SELF-reflexive will find two possible candidates, *John* and *Peter*, either of which can be chosen.

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6 That is, assuming that an SE-reflexive needs to adjoin to another element to be interpreted. SE-reflexives are analyzed as D^0-elements. As heads, they can only adjoin to another head. The only available option is to adjoin to I. Adjoining to any other head is not possible, since the SE-reflexive will not c-command its trace from such a position.

7 In some languages the adjoining of SE-reflexives to the Infl of a higher clause is blocked by some element, necessitating a pronoun. For example, in Dutch, the infinitive marker *te* is thought to do this, as illustrated in (i), (for a full discussion, see Reinhart & Reuland, 305 ff):

i Jan$_i$ vroeg ons over hem$_i$/*zich$_i$ te spreken
Jan asked us about him/*SE to talk
'Jan$_i$ asked us to talk about him$_i$'

On SELF-reflexives that contain an SE-reflexive instead of a pronominal, both interpretational processes will operate:

40 *Dutch*
Jan$_i$ praat met Piet$_j$ over zichzelf$_{i/*j}$
Jan talks with Piet about SE-self
'Jan$_i$ talks to Piet about himself$_i$'

The SE-reflexive *zich* in (40) is bound by *Jan*. When searching for a correlate for *zich*, the SELF-reflexive has no alternative but to choose that same NP, which means that *zichzelf* cannot refer to *Piet*.

It should be noted that the interpretational processes as described above, only take place when a reflexive is structurally bound, as described in (36a). A reflexive is only structurally bound when it is used in a reflexive predicate. As Reinhart & Reuland say, "a predicate (verb, noun) denotes a reflexive relation if and only if two of its arguments are identical" (Reinhart & Reuland, 1991: 288).

There are two types of reflexive predicates. A predicate can be marked reflexive in the lexicon. Such a predicate is called intrinsically reflexive. A predicate that is not intrinsically reflexive, can be used as a reflexive predicate by marking it as such. Such a predicate is called extrinsically reflexive.

Although there are two types of reflexives, only SELF-reflexives can be used to mark a predicate as extrinsically reflexive. Because of their relational character, they have the ability to correlate two arguments of one predicate, which makes the predicate reflexive.

SE-reflexives do not have such a relational ability. They are merely defective NPs that need to be interpreted. Therefore, a structurally bound SE-reflexive (i.e. bound within the MD-domain) can only be used as an argument to an intrinsically reflexive predicate. If an SE-reflexive is MD-bound, the predicate to which it is an argument is reflexive, because two of its arguments are identical. But a reflexive predicate has to be marked. The SE-reflexive does not mark it extrinsically, so the predicate has to be intrinsically reflexive.

As explained above, SELF-reflexives function as reflexive markers. But they only mark a predicate reflexive when that predicate is "fully assigned", which means that all of its potential arguments have to be in the sentence.

A SELF-reflexive that is an argument of a predicate that is not fully assigned, or a SELF-reflexive that is not an obligatory argument at all, is used logophorically. A logophoric SELF-reflexive is not subject to any binding conditions. The different uses of SELF-reflexives are illustrated in (43) and (44):

43 a Lucie$_i$ adores herself$_i$/*her$_i$
b Lucie$_i$'s joke about herself$_i$/*her$_i$

44 a Lucie$_i$ saw [$_{NP}$ a picture of her$_i$/herself$_i$] in the newspaper
b Max$_i$ saw a snake [$_{PP}$ behind him$_i$/himself$_i$]

In (43), the reflexives are arguments of an extrinsically reflexive predicate. Both the predicates *to adore* and *joke* are fully assigned and two of their arguments are identical. A pronoun cannot be used because it would not mark the predicate reflexive.

The reflexives in (44), however, are used logophorically. In (44a) the predicate to which *herself* is an argument is not fully assigned, since the subject is lacking. (A subject would denote the possessor, or in this case possibly the one who took the picture, as in *Bill's picture of her*, where *Bill* is called the subject of the NP.)

In (44b), the reflexive *himself* is not an argument of the verb *to see*. The preposition *behind* does not introduce an obligatory argument (and it can not be reflexive itself). *Himself* is not used as a reflexive marker, and it is therefore logophoric.

As observed in (36d), logophoric SELF-reflexives do not occur in complementary distribution with pronouns. This, too, is illustrated by (44), since in both sentences, the (logophoric) reflexive can be replaced by a pronoun.

(31) above also illustrates logophoric uses of SELF-reflexives. *Myself* in (31a) and *yourself* in (31b) are not arguments of the predicates *to write* and *(to be) a godsend*. In (31c), *myself* is only part of the argument *Max and myself*. Since it is not an argument itself, it does not reflexivize *to have.*

SE-reflexives can also be used logophorically. A logophoric SE-reflexive is not required to adjoin to Infl, and is therefore totally free in finding its antecedent. It can be bound from a higher clause, as in (29), and it can even be free altogether, having deictic reference, as in (30).

Furthermore, whereas logophoric SELF-reflexives are restricted in that they cannot occur in an argument position of a fully assigned predicate, no such restriction exists on logophoric SE-reflexives, as is illustrated above in (29) and (30b).

As indicated before, the distribution and interpretation of logophoric reflexives is not subject to the binding theory. The reason for using them lies in discourse effects, not in syntax.

The distribution of non-logophoric SE-reflexives is controlled by the requirement that they adjoin to Infl. The binding theory therefore need not deal with them. The binding theory only controls the distribution and interpretation of non-logophoric SELF-reflexives. Reinhart & Reuland propose to formulate the binding theory with two binding conditions:

45 Binding theory

A. A SELF-reflexive on an argument position of a fully assigned predicate P reflexivizes P.

B. A predicate is reflexive only if it is reflexive marked.

(Reinhar & Reuland, 1991: 292)

(45) will pose a problem for ECM-constructions as in (46), (cf. (17) and (18)).

46 a $John_i$ thinks $himself_i$ to be a genius

b *$John_i$ thinks him_i to be a genius

The use of *himself* in (46a) implies, according to Condition A of (45), that the predicate *(to be) a genius* is reflexive, since *himself* is an argument to it. However, it is bound by an argument of the predicate *to think.* That

means there is no predicate of which two arguments are identical, which leads to the conclusion that there is no reflexive predicate, considering the definition of reflexivity by Reinhart & Reuland. This would mean that *himself* in (46a) is logophoric and that it can be replaced with a pronoun. (46b) shows, however, that that is not possible.

To solve this problem, Reinhart & Reuland propose to analyze (46) as containing a complex predicate, like in (47):

47 John [thinks a genius] himself

The bracketed phrase in (47) constitutes a complex predicate, which basically means that at some level, during the interpretation, the two predicates *to think* and *(to be) a genius* are amalgamated to form one single predicate *to think a genius*. In (47), this complex predicate contains two identical arguments, *John* and *himself*. Therefore it is reflexive, and it is so marked by the use of *himself*.[8]

Reinhart & Reuland do not give a full discussion of SE-reflexives. They admit there are several problems concerning them[9], but state that they should be resolved with a separate theory, based on discourse effects, not on syntax.

As for intrinsic reflexivity, Reinhart & Reuland state that this is a lexical property that can be, but is not necessarily, overtly marked. Some languages mark it in the verb morphology, as does Swedish, using the morpheme *s*, and Russian, that has a morpheme *s'/s'a*, as opposed to the extrinsic reflexive marker *s'eb'a*. They believe that clitics (Italian *si*, French *se*[10]) should also be viewed as morphological markers of intrinsic reflexivity.

Other languages allow an object pronoun with intrinsically reflexive verbs, as illustrated in (50):

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8 Reinhart & Reuland do not discuss this proposal in detail, but they do point out that it seems to comply with Chomsky's (1955/1975: 505-35) proposals on verb-complement analysis, in which what is now analyzed as IP is not interpreted as an independent proposition. Furthermore, they say this analysis captures contrasts as in (i):

i a Max saw the table collapse
b Max saw that the table collapsed

Reinhart & Reuland claim that (ia) can only be true if *Max* is witness to the actual event of the table collapsing, while (ib) can be true if he only saw the result. The latter, however, cannot be correct since the use of the past tense *collapsed* implies that the collapsing took place at the same time as the seeing. However, (ib) does leave the possibility open that *Max* did not witness the event itself but saw something from which he inferred that the table collapsed. Besides, it is possible to put the subclause of (ib) in the perfect tense, yielding (ii), which does have the effects that Reinhart & Reuland assume for (ib).

ii Max saw that the table had collapsed

In (ib), the collapsing is considered independent from the seeing. As such, the two events each occur at their own time (although the timing of *to collapse* can only be expressed in relation to the timing of *to see*, since the former event is subordinate to the latter). Two events, each with its own timing, necessitate two TPs. However, (ia) contains only one TP (only the verb *to see* is inflected for tense). This suggests that the two events have indeed been amalgamated to form one proposition.

9 The most pressing one being their sheer existence. (See also section 1.5.)

10 Reinhart & Reuland add Czech *se* to these examples. However, this is not a clitic, as it can be separated from the verb.

50 *Frisian*

a ik haatsje*my/mysels
I hate me/myself
'I hate myself'

b du waskest dy/dysels
you wash you/yourself
'you wash (yourself)'

c ik skamje my/??mysels
Ik shame me/myself
'I am ashamed (of myself)'
(Reinhart & Reuland, 1991: 299)

A verb like *skamje* in (50c) is "inherently reflexive, as witnessed by the fact that it cannot take any object distinct in reference from its subject" (Reinhart & Reuland, 1991: 299) I assume that with the phrase "inherently reflexive" they mean to imply that *skamje* is also intrinsically reflexive. The SELF-reflexive is not allowed for reasons of economy, since the reflexivity would be marked twice.

Reinhart & Reuland assume, with Everaert (1986 and 1991) who supplies the above examples, that verbs like 'wash' as in (50b) "are doubly listed in the lexicon, both as reflexive [allowing an SE-reflexive] and as non-reflexive [necessitating a SELF-reflexive]" (Reinhart & Reuland, 1991, 299).

Verbs like 'to hate' in (50a) are not listed in the lexicon as reflexives. They can only be extrinsically reflexive, requiring a SELF-reflexive.

Dutch patterns like Frisian in (50). But, unlike Frisian, it has an SE-reflexive (that is used with 3rd person only, cf. Burzio's theory above). Frisian allows the 3rd person object pronoun to be used in the 3rd person counterparts of (50). Dutch, however, does not. It requires the SE-reflexive *zich*:

51 a *Frisian*
hy skammet 'm
he shames him
'he is ashamed (of himself)'
(Reinhart & Reuland, 1991: 299)

b *Dutch*
ik schaam me; hij schaamt zich/*hem
I shame me; he shames SE/him
'I am ashamed; he is ashamed'

The ungrammaticality of *hem* in (51b) is problematic since there is no principle of grammar excluding it here. The predicate *zich schamen* 'to be ashamed' is reflexive because two of its arguments are identical. It has to be marked reflexive, and it is, intrinsically. Since the revised binding theory of (45) does not control pronouns, they are

not excluded in (51b). This is indeed the case in 1st and 2nd person, but not in 3rd person.

Reinhart & Reuland's theory does not predict complementary distribution to exist between pronouns and SE-reflexives. In a language like Dutch, this is indeed true in some cases, but certainly not in all. In Icelandic, complementarity of distribution between pronouns and SE-reflexives does exist in all contexts in which the SE-reflexive is syntactically bound. Reinhart & Reuland notice these problems, but offer no explanation.

1.4 Reciprocals

Reciprocals have not received much attention in generative theory. Their behaviour was considered to be identical to that of reflexives, and therefore no special attention needed be given them. However, studies (e.g. Higginbotham (1980/81), Lebeaux (1983) and Heim, Lasnik & May (1991)) show that this is not the case. Reciprocals are not identical to reflexives, and therefore a different analysis has been proposed.

Heim, Lasnik & May assume a movement analysis for reciprocals. They confine their study to the English reciprocal *each other* (assuming that *one another* behaves in the same way). I will supply examples from Dutch, which show that their analysis, though probably not unique for English, cannot be considered universal.

In their analysis, Heim, Lasnik & May assume that the first part of the reciprocal, *each*, is associated with, or moved to, as it is called, its antecedent during the interpretation[11]. Take, for example, (52):

52 the men saw each other

When (52) is interpreted, the element *each* presumably moves to its antecedent, in this case the subject *the men.* This is represented as in (53), where the *e* (for *empty*) indicates the position from which *each* has been moved. It should be noted that a phrase like (53) is not considered to be a grammatical sentence of the English language. It is a representation in English words of a structure that is thought to be created during the interpretation of (52).

53 $[_{NP}$ [the men] each$_1$] $[_{VP}$ saw [e_1 other]]
(Heim, Lasnik & May, 1991: 66)

(53) consists of two parts. The first part is an NP, which is called a *distributed NP*, because it contains the element *each*, which is a *distributor.* A distributed NP is interpreted differently from a 'normal' plural NP, like *the men*. A plural NP is usually interpreted as a single collective. Thus, the phrase *the men saw (something)*, is interpreted as a group of men performing one action together, as a collective.

A distributed NP, however, is not interpreted as a collective, but as a collection of different individuals. Thus, in (53), the NP *[the men] each* is seen as a collection of several men.

Let us assume that *the men* in (52) refers to two men, named John and Peter. The phrase *[[the men] each$_1$] saw* ... represents *two* instances of seeing, to wit 'John saw (something)' and 'Peter saw (something)', rather than one, as

11 That is, at LF.

'John and Peter saw (something)'.

The second part of (53) is a so-called *reciprocated VP* as it contains the reciprocator *other*. This element has two properties. One is anaphoric, as it is interpreted as referring to the element to which *each* has been moved (the antecedent). The other is reciprocal, which means that it refers to that part of the antecedent to which the distributor *each* does *not* refer.

In our example with John and Peter, the distributor *each* is the subject of the predicate *to see*, and the reciprocator *other* is the object. In each instance of seeing, the reciprocator will refer to that part of the distributed NP that is *not* taken as subject for that instance of seeing. Thus, when John is taken as subject, Peter is taken as object, and vice versa, resulting in the two instances 'John saw Peter' and 'Peter saw John'.

In this analysis, the ambiguities that have been noticed in the following sentences can be explained:

54 John and Mary think they like each other
(Heim, Lasnik & May, 1991: 65)

In (54), There are two possible antecedents for the distributor *each* to move to, as indicated in (55):

55 a [[John and Mary] each$_1$] think they like e_1 other
b John and Mary think [they each$_1$] like e_1 other

(55a) can be paraphrased as 'John thinks he likes Mary and Mary thinks she likes John', as the matrix subject is distributed. (55b) can be paraphrased as 'John and Mary (together) think that each of them likes the other'. Since the matrix subject is not distributed, there is only one instance of thinking, as opposed to (55a), where there are two instances of thinking.

(56) also has two readings, one of which is contradictory:

56 they said that they are taller than each other
(Chomsky, 1995: 105)

The distributor *each* can be associated with the matrix subject, but also with the subject of the subclause, as illustrated in (57):

57 a [they each$_1$] said that they are taller than e_1 other
b they said that [they each$_1$] are taller than e_1 other

(57a) means that two (or possibly more) people claimed on separate occasions that each of them is taller than the other. This is a possible statement if the two people are unaware of the facts. (57b), however, means that two (or more) people together, as a group, stated that 'they are taller than each other'. This is of course a contradiction.

The facts for Dutch are different, however[12]. The Dutch reciprocal is *elkaar*, which is a contraction of the by now archaic form *elkander*. The latter word literally means *each other*, (*elk* 'each' and *ander* 'other'). But the contracted form no longer shows its origin, and consequently the word has been reanalysed. In the Dutch translations of (54) and (56) the reciprocal *elkaar* cannot be associated with the matrix subject:[13]

58 a Jan en Marie denken dat ze elkaar mogen
John and Mary think that they each-other like
b *ze zeggen dat ze langer zijn dan elkaar
they say that they taller are than each-other

I have to disapprove of (58b) since the statement 'they are taller than each other' is obviously nonsensical. (58a) can only have the meaning of (55b), where there is only one instance of thinking, done by John and Mary together.

In order to obtain the interpretations of (55a) and (57a), one has to make the distributive effect explicit:

59 a Jan en Marie denken allebei dat ze de ander mogen
John and Mary think both that they the other like
'John and Mary both think that they like the other'
b ze zeggen allebei (*or:* allemaal) dat ze langer zijn dan de ander(en)
they say both (*or:* all) that they taller are than the other(s)
'they both (*or:* all) say that they are taller than the other(s)[14]

It seems that there are two ways of expressing reciprocity. Some languages, like English, use an analytic construction describing the reciprocity, whereas other languages, like Dutch, use a synthetic construction, in which a reciprocal predicate is formed, something like EACH-OTHER(see).

As might be expected, there are different ways of forming such a - synthetic - reflexive predicate. Some languages form it syntactically, using a lexical element, like Dutch *elkaar*, and also Arabic colloquials, which use *ba^{c}*. In other languages, reciprocity is expressed morphologically, like in Classical Arabic (see 2.4). Classical

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12 Native speakers of Dutch often have great difficulty understanding the ambiguities of (54) and (56), even when they speak English well. Apparently, speakers of Dutch interpret the English reciprocal (and undoubtedly much more than just the reciprocal) with their Dutch languade intuitions.

13 This effect does not seem to be caused by restrictions on movement, as illustrated in (i), (cf. Chomsky, 1995: 105), although in (ib) the wh-movement of just *wie* is impossible.

i a wie$_1$ denken Jan en Marie dat ze mogen e_1?
who think John and Mary that they like
'who do John and Mary think they like?'
b [$_1$ langer dan wie] zeggen ze dat ze e_1 zijn?
taller than who say they that they are
'who do they say that they are taller than?'

14 The interpretation of the subject of the subclause in both (59a) and (59b) is interesting. In both sentences, *ze* is interpreted as a distributed NP. Apparently, it inherits its distributed character from its antecedent, the distributed NP *Jan en Marie allebei.*

Arabic, by the way, can also express reciprocity analytically (see 2.3).

It seems logical that the reciprocal effect of a reciprocal predicate is confined to iself, and therefore to the clause in which it is contained. On the other hand, if analytic reciprocal elements are indeed interpreted through movement, the effects of such expressions are confined only by restrictions on movement, which is what Heim, Lasnik & May (1991) and also Chomsky (1995: 105) assume.

1.5 Discussion

In this section, I will give some facts that have not been considered by any of the theories discussed 1.2 and 1.3. This discussion will be purely descriptive, I will only point out some problems. Since very little is known about reciprocals, I will not include them in this discussion.

Most of the data in section 1.3 can be captured by Chomsky's latest version of the binding theory as discussed in section 1.2. (Earlier versions could not). However, there is a problem with anaphors that are not bound, as in (30) and (31), and with anaphors that have two possible antecedents, as in (60), (taken from Reinhart & Reuland, 1991: 297, though they fail to notice the possibility of *the BBC* to bind *itself*):

60 The city$_i$ watched [$_{NP}$ the BBC$_j$'s broadcast of the destruction of itself$_{i/j}$]

Both *the city* and *the BBC* can bind the anaphor. Chomsky's definition in (22) would predict that only *the BBC* can bind *itself*, since the NP is the first domain in which Condition A can be met by *itself*. The fact that *the city* is also a possible antecedent supports the distinction between syntactically bound and logophoric anaphors. The anaphor *itself* is used logophorically here, since its predicate (*destruction*) is not fully assigned: it has no subject.

However, Reinhart & Reuland's theory poses problems as well, not only with SE-reflexives, but even with SELF-reflexives. Take, for example, the following Dutch examples:

61 *Dutch*

a Jan$_i$ ziet Piets$_j$ foto's van hem$_{i/*j}$
  Jan sees Piet's pictures of him

b Jan$_i$ ziet Piets$_j$ foto's van hemzelf$_{i/j}$
  Jan sees Piet's pictures of himself

c Jan$_i$ ziet Piets$_j$ foto's van zichzelf$_{i/j}$
  Jan sees Piet's pictures of SE-self

d *Jan$_i$ ziet foto's van hem$_i$
  Jan sees pictures of him

I asked a few native speakers of Dutch for their opinions, and they agreed with these judgments on the sentences of (61), although they commented that their intuitions were very vague, and they would prefer to rephrase the

sentences to something equivalent to *John sees the pictures that Peter took of him*, or *John sees the pictures that Peter took of himself*, etc.

The sentences of (61) oppose Reinhart & Reuland's theory in several ways. (61a) is as expected, but in (61b) *hemzelf* should not be allowed to be bound by *Jan*, as the NP *Piets foto's van hemzelf* is a fully assigned predicate. The same can be said of (61c). If, however, one assumes that in certain contexts the pronoun *hem* and the SE-anaphor *zich* occur in complementary distribution, *hemzelf* in (61b) may be allowed to refer to *Jan* (if one ignores the fact that the NP is fully assigned), and *zichzelf* in (61c) to *Piet*. But obviously, more references are possible. Lastly, according to the theory, (61d) should be allowed, since the NP *foto's van hem* is not fully assigned, but it is not.

Pragmatic variation plays an important role in sentences like (61a-d). For example, in (61c) *zichzelf* allows *Jan* as its binder, but only when *Jan* is the focus of the sentence, something that cannot be indicated syntactically. As such, the sentence can be paraphrased as 'Jan sees himself in the pictures that Piet took of him'. When *Jan* is not the focus, and *zichzelf* refers to *Piet*, the paraphrase would be 'Jan sees the pictures that Piet took of himself'.

The facts above for Dutch may be due to the essence of the Dutch SELF-reflexive, which differs to some extent from that of the English reflexive. In Dutch, the element *zelf* is not only found in reflexives. It has another function, which may be more fundamental than its use to form reflexives. *Zelf* can be used to emphasize any noun or pronoun, as illustrated in (62):

62 *Dutch*

a ik$_i$ heb het boek$_j$ zelf$_{i/j}$ gelezen
I have the book SELF read
'I read the book myself/itself'

b ik$_i$ heb zelf$_i$ het boek gelezen
I have SELF the book read
'I read the book myself'

c het huis$_i$ zelf$_i$ is afgebrand, maar de garage is blijven staan
the house SELF is burnt down, but the garage is remain stand
'the house itself burnt down, but the garage remained (standing)'

In general, the element *zelf* refers to the noun or pronoun it follows, but when it refers to a subject that occupies the first position in the sentence[15], it can take several positions, as illustrated in (62). This can sometimes cause ambiguity, as in (62a), where *zelf* is in a position from which it can refer to the subject, but it also follows directly after the NP *het boek*, which then becomes a possible antecedent.

Dutch reflexives are indeed SELF-reflexives as defined by Reinhart & Reuland. SELF-reflexives consist of a pronominal element plus a relational noun, referred to as 'SELF'. However, they do not define the character of the pronominal element. Since there are at least two different types, it may be of importance. The (standard) Dutch

15 The first position of a Dutch main clause is [Spec,CP], the finite verb having moved to C^0. [Spec,CP] can be filled by any constituent of the sentence, but the subject is usually the unmarked option.

reflexive has an object pronoun. The Dutch SELF-reflexive, then, is in fact just an object pronoun. When this object pronoun is meant to refer to a co-argument, this is indicated by *zelf*.

There is another type of SELF-reflexive. In languages like Arabic, Hebrew, and also some Dutch dialects, the pronominal element is not an object pronoun, but a possessive. The SELF-element in these reflexives is originally a noun, meaning something like 'one's self', or 'soul', 'body', 'bones' etc. For example, some Dutch dialects use expressions like *m'n eige* 'my own'. The Arabic reflexive is *nafs-ī*, litt. 'my soul'. In Hebrew, *atsm-i* is used, litt. 'my bone(s)'

In English, things are a bit more complex. In 1st and 2nd person, English definitely has a POSS+SELF-reflexive (*myself, yourself, thyself, ourselves, yourselves*), but in 3rd person, it has OBJ+SELF-reflexives (*himself, herself, itself, oneself, themselves*). However, all the forms of the English reflexive seem to behave like POSS+SELF-reflexives, since the emphasizing use of just *self* is not grammatical (anymore). Furthermore, "(...) the regularization of the system by forming *hisself* and *theirselves* to replace the anomalous *himself* and *themselves* (...) is common in virtually all British dialects." (Edwards, Trudgill & Weltens, 1984: 27).

The two types of SELF-reflexives have obviously developed from different sources, and it does not seem unlikely that their uses may differ somewhat. POSS+SELF-reflexives will only be used when the original meaning 'my own body' makes sense. Dutch *zelf*, on the other hand, is an emphatic element, and consequently, it can be used as demonstrated in (61), where the emphatic use and the reflexive use interfere. Obviously, that will not always coincide with proper uses of POSS+SELF-reflexives.[16]

A few Dutch examples will illustrate this. In Dutch, the emphatic element *zelf* can be used with *zich*, which, as an SE-reflexive, already requires binding by a co-argument. When combined with *zich*, *zelf* regains its original function as an emphatic element:

63 *Dutch*

a Jan wast zich
Jan washes SE
'Jan washes'

b Jan wast zichzelf
Jan washes SE-SELF
'Jan washes himself (and not someone else)'

c Beethoven was verontwaardigd, toen hij hoorde dat Napoleon$_i$ zich$_i$ tot Keizer had gekroond

d Beethoven was verontwaardigd, toen hij hoorde dat Napoleon$_i$ zichzelf$_i$ tot Keizer had gekroond

e Beethoven was verontwaardigd, toen hij hoorde dat Napoleon$_i$ zich$_i$ zelf$_i$ tot Keizer had gekroond
Beethoven was indignant when he heard that Napoleon SE/SE-SELF/SE SELF as Emperor had crowned
'Beethoven was filled with indignation when he heard that Napoleon had crowned himself Emperor'

16 This view implies that reflexives have developed from a situation in which reflexives did not exist and were paraphrased when necessary. Though this may not be a traditional generative view, such a development is indeed known for ancient Egyptian, a language with a recorded history of over 3000 years. In the so-called Middle-Egyptian stage, it expressed reflexivity with personal pronouns (which resulted in ambiguity in 3rd person). In later times, the word *ʿw* 'members' was used, combined with appropriate possessive suffixes. (See Gardiner (1927) par. 36, p 40).

The first thing that these examples show is that SE- and SELF-reflexives are not always in complementary distribution, as Reinhart & Reuland claim in (36d). They propose to solve this problem by stating that verbs like 'to wash' are doubly listed in the lexicon (Reinhart & Reuland, 1991: 299, see also (50)), but in the cases of (64c-e), that seems unlikely. The predicate 'to crown emperor' is not likely to be intrinsically reflexive. It can take an object distinct in reference from its subject (see (50) and Reinhart & Reuland, 1991: 299, where this is taken as a sign of intrinsic reflexivity). Furthermore, 'to crown emperor' is not a very current predicate. Therefore, it seems unlikely that it has a special 'dual' status in the lexicon, as transitive and as reflexive predicate. (It is even doubtful if it has a place in the lexicon at all, since it is composed of two (in Dutch three) independent words.)

But even more striking is the opposition between (64c), (64d) and (64e). Out of context, the differences between (64c-e) seem trivial, but they all three have strong implications for any continuation that might follow. (64c) is a general remark that can be continued with, e.g. '... instead of retiring'. In (64d), *zelf* emphasizes the object, implying that Beethoven was indignant over the fact that Napoleon crowned himself emperor *and not someone else*. In (64e), on the other hand, *zelf* (which receives focal stress) emphasizes the subject, implying that Beethoven was indignant over the fact that Napoleon had performed the coronation himself, instead of, e.g., the pope.

Reinhart & Reuland's theory does not resolve all issues concerning SELF-reflexives satisfyingly. But a more pressing problem still is the existence of SE-reflexives. They are structurally identical to pronouns, and therefore there is no syntactic need for them. Any position that allows a pronoun, should also allow an SE-reflexive, since syntax cannot distinguish between the two. However, SE-reflexives do exist, and in some cases, they are even in complementary distribution with pronouns, as illustrated in (51).

The reason for the existence of SE-reflexives, of any reflexive, is obvious. They exist to avoid ambiguity. However, not every language will want to avoid ambiguity to the same extent. Furthermore, there are different types of reflexives. These two facts mean that languages can differ in the ways that they use reflexives.

It is not easy to see which version of the binding theory will describe the facts best. At first sight, Chomsky's version may seem best, because it is simple and will succeed in describing the GC for most reflexives accurately. However, it cannot deal with locally bound pronouns as in (25)-(27). It is based on the idea that anaphors are always locally bound and pronouns always locally free. Allowing for locally bound pronouns would require a definition of anaphors and pronouns, and of the contexts in which the latter can occur locally bound.

Burzio's theory fills these requirements, but he really only deals with SE-reflexives. Reinhart & Reuland mainly deal with SELF-reflexives. One of the more important merits of their theory is that it draws attention to the fact that reflexives can be used in 'non-reflexive' contexts, the so-called 'logophoric' use, something that the traditional binding theory ignores.

Reinhart & Reuland attempt to define the contexts in which reflexives are non-logophoric, and therefore locally bound. They state that only reflexives that are obligatory arguments to a predicate need to be locally bound. Underlying this definition is the assumption that the SELF-reflexive is an argument itself. This is indeed the case for POSS+SELF-reflexives, where SELF is originally a noun filling the object position. But OBJ+SELF-reflexives are different, in that SELF is not a noun (the object position being filled by the pronoun) but an emphatic appositive.

With the proviso that their theory does not give a full explanation of SE-reflexives and that even OBJ+SELF-reflexives may need a somewhat different analysis[17], I will use Reinhart & Reuland's theory for the analysis of the Arabic data. Since Arabic has no SE-reflexive, and its SELF-reflexive is of the POSS+SELF type, the restrictions of their theory will probably pose no problems. The main questions I will try to answer is whether or not the theory as proposed by Reinhart & Reuland holds for the Arabic reflexive, and how the Arabic reciprocal should be analyzed.

17 Perhaps reflexives can be analyzed along the lines of what I suggested in 1.4 for reciprocals. SELF-reflexives can be seen as analytic (though highly formalized) means of expressing reflexivity. SE-reflexives, and other markers of what Reinhart & Reuland call intrinsic reflexivity, may be synthetic reflexive markers that form a reflexive predicate. The subject orientation of SE-reflexives then follows easily. The subject is literally the 'subject' of the predicate, that is, the predicate is a statement about the subject. As such, a reflexive predicate is a reflexive statement about the subject. If the object of such a reflexive predicate is expressed lexically (with an SE-reflexive), it naturally refers to the subject.

This implies that in cases like (37), there is one complex predicate, something like SE(ask-talk about). This complies with the analysis proposed for (46) and the examples in footnote 8, where an infinitive is not seen as an independent predicate. It also sheds some light on the Dutch infinitive marker *te*, (see footnote 7). This *te* prohibits the formation of a complex predicate, which would imply that it is not an I^0-element, but rather a C^0-element (contrary to the English infinitive marker *to*).

SELF-reflexives, being analytic expressions, need another analysis. As Chomsky (1995: 105) suggests, a movement analysis seems very plausible (similar to the movement analysis for English-type reciprocals, see 1.4), preferably one that takes into account the different structures that SELF-reflexives can have. For example, an analysis of Dutch reflexives would probably have to comply with an analysis of the emphatic particle *zelf*.

In general, the facts above seem to imply that a completely syntactic analysis of reflexives, as Chomsky proposes, is impossible. His binding theory aims at a syntactic definition *pre*scribing when an anaphor should be used. It seems, however, that any syntactic binding theory can only *de*scribe the domain in which an anaphor, if used, must find its antecedent (and as such the domains in which an anaphor *can* be used). It cannot define contexts, at least not all contexts, in which anaphors must be used.

Pronominal reference, then, is not a syntactic issue. There are no strict, syntactic rules for the use of NPs, there are merely tendencies toward using certain types of NPs in certain ways. (Cf. also Jayaseelan, 1996, who supplies an example (ex. 25) from Malayalam of an R-expression which is made *anaphoric* by means of an element similar to the Dutch *zelf*. His article shows the validity of an independent analysis of such elements, but I disagree with his proposal to analyze English *himself* in the same way.) The traditional binding theory formulates these tendencies as rules, based on syntax.

2 Arabic

In this chapter, I will give a survey of pronouns, reflexives and reciprocals as described by traditional grammar. In section 2.1 I will first give a short description of the linguistic situation of Arabic today, and then I will describe the sentence structure and the pronominal system of Arabic in some detail. This information will be helpful in understanding the Arabic examples.

Section 2.2 contains the relevant data. I will base myself on grammars by Western authors of the Arabic language. Western works on Classical Arabic are usually based in part on the works of ancient Arab grammarians. Among these are Wright (1981) (two volumes) and Reckendorf (1921, 1967). Cantarino (1974-5) (three volumes) is an elaborate description of Modern Standard Arabic, based on a corpus. It should be kept in mind, though, that this corpus only contains literary texts, which tend to contain more 'typically classical' elements than other types of text (e.g. newspaper articles) and are therefore marked.

Because I will refer to these works extensively in this chapter, I will abbreviate the references as follows:
Wright (1981): W plus volume (i, ii) plus page number;
Reckendorf (1921): AS plus page number;
Reckendorf (1967): V plus page number;
Cantarino (1974-5): C plus volume (I, II, III) plus page number.

2.1 General introduction

2.1.1 The linguistic situation of Arabic

Arabic does not exist. That is, there is no one language that can be called 'Arabic'. Rather, there is a wide range of different, though closely related, languages that are considered to be one 'Arabic' language by those who use them.

Basically, there are two types of Arabic. There is the written language, called *al-fuā*, 'the eloquent', by the Arabs, and there is the spoken language, called *al-ᶜāmmiyya*, 'the common'.

Before the rise of Islam, Arabic was the language of the people that lived in the Arabian peninsula. It is the language of the Koran and of the classical Arabic poetry that dates from this period. It was this language, nowadays called Classical Arabic by Western scholars, that the Arabs spread over what is now known as the Arab World, that stretches from Iraq in the east to Morocco in the west, when they built their empire starting in the 7th century A.D.

Many of the conquered peoples adopted the language of the new rulers. Understandably, this process left its traces on the language. The 'original' Arabic language underwent drastic changes when so many non-native speakers began to use it. In time, even the Arabs themselves adopted these 'corrupted' versions of the language. This resulted in the colloquials as they are still spoken today.[1] Every region has its own colloquial, and people from different

1 This is the view that the Arabs hold themselves on the development of the colloquials. Many Western scholars dispute this and argue that the transition to colloquials was not drastic but gradual and took place through 'normal' language change.

regions often do not understand each other if they use their own colloquial.

In spite of the rise of the colloquials, Classical Arabic remained in use as the written language, and it is still so used today all over the Arab world. Naturally, the written Arabic from today differs a great deal from Classical Arabic. Though the basic structure and morphology remain unchanged, it contains many new words, some verb forms and structures have become rather archaic, some new structures have been adopted. This modern, written, variety of Classical Arabic is commonly known among Western scholars as Modern Standard Arabic (MSA) or similar names.

The Arabs themselves usually do not distinguish between Classical and Modern Standard Arabic. Both varieties are *al-fuā*. At times, they even deny the existence of the colloquials, arguing that people simply make mistakes when they speak.

The colloquials are often referred to as Arabic 'dialects'. But when using this term it should be kept in mind that it is rather misleading, since it implies that the differences between the colloquials and Classical or Standard Arabic are so small as to be ignored.

However, the dialects differ considerably from their classical predecessor. Structurally, they are completely different, and their vocabularies have undergone considerable changes as well. The difference between the dialects and Classical Arabic can well be compared to the difference between the Romance languages and their common ancestor Latin. Similarly, by the way, the difference between two colloquials can be as great as those between two Romance languages. (For a survey of the different theories on the development of the Arabic dialects, see Fischer & Jastrow, 1980: 15-19.)

In this thesis, I will concentrate on Modern Standard Arabic, the language used for books, newspapers, literature, the media, government etc.; in short, the cultural language of the Arab countries today. Texts in MSA can contain typically classical elements, since MSA is in fact a modern continuation of Classical Arabic: the two are not strictly separated.

On the other hand, many influences from the colloquial language can be detected in MSA texts. Since *al-fuā* has a high prestige and the colloquial a rather low prestige, typical dialect elements will be avoided, but in many cases the distinction between written and spoken language is not as clear as one might think. Some dialectical elements have crept into MSA, and are now fully accepted, especially in more informal use.

It should be noted that MSA is strictly speaking an artificial language. As every Arab learns a dialect as his native tongue, and starts learning MSA only at school age, there are no true native speakers of MSA. One should, therefore, be careful when asking native Arabic speakers about their intuitions. The intuitions of a native speaker are a complex mix of colloquial intuitions, a life-long experience with Modern Standard and Classical Arabic texts, and school education saying 'how it should be'. But then again, so are our intuitions about our native language, although the contrasts between the different varieties are much greater in the case of Arabic.

Since I will concentrate on MSA, I will generally use the term 'Arabic' rather than MSA to refer to this variety of Arabic.

2.1.2 Some remarks on Arabic Grammar

In order to understand the Arabic examples in this thesis, it will be useful to have some basic knowledge of Arabic sentence structure and the forms that Arabic pronouns have.

The Arab grammarians called the pronoun *al-amīr*, literally "that, by which something is hidden"[2]. The idea behind this name is that a pronoun 'hides' the noun it refers to. There are two types of linguistic elements that perform this function.

First, Arabic has a set of independent pronouns. This set is larger than the English set, since Arabic has three numbers (singular, dual and plural) and makes a gender distinction in the 2nd and 3rd person of the singular and plural. E.g.: *huwa* 'he' (3ms); *hiya* 'she' (3fs); *humā* 'the two of them' (3cd); *hum* 'they' (3mp); *hunna* 'they' (3fp); *'anta* 'you' (2ms); *'anti* 'you' (2fs); *'ana* 'I' (1cs).

The independent pronouns serve as nominative. It should be noted, however, that Arabic is a so-called pro-drop language, which means that the subject pronoun is usually dropped when a verb is present. It is only added for emphasis.

Second, Arabic has a set of pronominal suffixes. These can be suffixed to verbs to express the accusative, and to nouns and prepositions to express the genitive. E.g.: *-hu*, 3ms; *-hā*, 3fs; *-humā*, 3cd; *-hum*, 3mp; *-hunna*, 3fp; *-ka*, 2ms; *-ki*, 2fs. The first person singular has two different forms: *-nī* for the accusative and *-ī* for the genitive. Arab grammarians regard the *ī* of the accusative as the main element. The *n* has been added to keep final vowels of the verbal forms from being deleted (Wi,101). The genitive and the accusative sets can therefore be seen as one set of pronoun suffixes, serving either as genitive or as accusative.

Thus: *ra'ā* 'he saw'; *ra'ā-nī* 'he saw me'; *ra'ā-hum* 'he saw them'. And also: *kitāb* 'book'; *kitāb-ī* 'my book'; *kitāb-u-hu* his book. (The *-u-* denotes nominative case of *kitāb*).

The pronominal forms, both the independent ones and the suffixes, sometimes undergo slight changes for phonological reasons, e.g. *-ī* can become *-ya*, *-hu* can become *-hi*, *hum* can become *humu*, etc.

For a good understanding of the Arabic examples it is important to bear in mind that a pronoun suffix attached to a verb *always* expresses the object of that verb, whereas a pronoun suffix attached to a noun denotes the possessor.

When I use the term pronoun in relation to Arabic, I mean either an independent pronoun or a pronominal suffix. In general, no distinction need be made between them, since the independent pronouns can be considered the nominative, and the suffixes the oblique case, either genitive or accusative, of the Arabic personal pronoun.

The structure of the Arabic sentence is a much debated issue, both in traditional Western grammar and in generative grammar (see Bolotin, 1995 for a survey of the views proposed in the literature. She also offers an analysis based on Chomsky's Minimalist Program)[3]. Here, I will present the analysis that Arab grammarians

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2 In fact, *al-amīr* is an elliptical expression for *al-amīr bihi.*

3 The major issue in the discussion is the question whether Arabic allows SVO-sentences, or whether SVO should be seen as a topic-comment structure at all times. One could argue, however, that some SVO-sentences are indeed topic-comment structures, but that others are not. That would allow for a distinction between SVO-sentences with a focalized, stressed, subject and SVO-sentences with an unstressed, neutral, subject. (A similar distinction exists in Dutch, where the first sentence position is open for both stressed and unstressed subject pronouns, and for stressed object pronouns, but not for unstressed object pronouns.)

developed (see for instance Ayoub & Bohas, 1981 and Carter, 1981, who presents an accessible introduction to Arabic Linguistics using a Classical text), since it offers the clearest description of Arabic sentences. (The structural validity of this analysis is, of course, another issue.)

Arab grammarians distinguish between two types of sentences: nominal sentences, beginning with a noun, and verbal sentences, beginning with a verb.

Verbal sentences usually have a VSO word order, as in (1a), but VOS is not uncommon, especially when the subject is indefinite, as in (1b). The subject takes nominative case, the object takes accusative case.

1 a yaktubu -l-rajul-u -l-risāla-t-a
write(I3ms) the-man-N the-letter-f-N
'the man writes the letter'

b yaktubu -l-risāla-t-a rajul-u-n
write(I3ms) the-letter-f-A man-N-IN
'a man writes the letter'
or: 'the letter is written by a man'

As said above, nominal sentences begin with a noun, which is called the topic and takes nominative case. This topic is followed by a predicate (sometimes referred to as comment). This predicate can be another noun or an adjective, which then takes nominative case, as in (2a), but it can also be a verbal sentence. The topic is an argument of this verbal sentence, and its place in it is occupied by a personal pronoun, usually a pronoun suffix, as in (2b,c).

2 a al-bayt-u kabīr-u-n
the-house-N large-N-IN
'the house is large'

b al-bayt-u_i 'askunu fī-hi_i
the-house-N live(I1cs) in-3ms
'the house, I live in it'

c al-bayt-u_i 'arā-hu_i
the-house-N see(I1cs)-3ms
'the house, I see it'

The topic can also be subject of the verbal sentence that is its predicate. In that case, the pronoun is normally dropped, as would be expected, since Arabic is a pro-drop language:

3 al-rajul-u yaktubu -l-risālat-a
the-man-N write(I3ms) the-letter-A
'the man writes the letter'
or: 'it is the man that writes the letter'

Westerns scholars sometimes analyze (3) as an SVO sentence. It is true that in Modern Standard Arabic, structures like (3) are probably becoming more and more common. But in this analysis some descriptive accuracy is lost, since the similarities in structure between (2) and (3) cannot be explained. Instead of discerning between nominal and verbal sentences, one has to discern between four or five types of sentences: sentences without any verb (2a), topic-comment structures (2b,c), SVO-structures, VSO-structures and possibly VOS-structures.

One important argument for the traditional analysis is the following. Arabic verbs agree with the subject only in gender, never in number. When the subject is stated explicitly, the verb takes the singular form, irrespective of the number of the subject, as illustrated in (4a). Dual and plural verb forms are only used when the subject is not expressed in the sentence (for which English uses subject pronouns.)

However, when a plural topic is the subject of its verbal predicate, the verb takes plural form, as demonstrated in (4b). This suggests that the predicate should indeed be seen as an independent phrase, in which the subject is expressed implicitly, by means of the verb inflection.

4 a yaktubu -l-rijāl-u -l-risālat-a
write(I3ms) the-men-N the-letter-A
'the men write the letter'

b al-rijāl-u yaktubūna -l-risālat-a
the-men-N write(I3mp) the-letter-A
'the men write the letter'

As can be seen, the nominative case is used for both subjects and topics. However, some particles, such as the topicalizer *'inna*, take as complement a sentence in which the subject is topicalized. This topic follows immediately after the particle and takes accusative case:

5 'inna -l-rajul-a yaktubu -l-risālat-a
TOP the-man-A write(P3ms) the-letter-a
'the man writes the letter'

The accusative is also used for the object and for adjuncts of time and place. The genitive expresses possession, but is also used after all prepositions.

2.2 Pronominal reference in Arabic

2.2.1 Reflexives

In Classical Arabic, as Wright (ii, 271ff) states, a pronominal suffix attached to a noun (i.e. used as a genitive) "may refer to the agent of the verb, and consequently have a *reflexive* meaning". (ii, 271), as in (6):

6 a 'anfaqa$_i$ māl-a-hu$_i$
spend(P3ms) money-A-3ms
'he spent his (own) money'
b qālū$_i$ li 'iwān-i-him$_i$
say(P3mp) to brothers-G-3mp
'they said to their (own) brothers'
(Wii,272)

A suffix that is attached to a verb, denoting an accusative, cannot have such a reflexive meaning, as demonstrated in (7a). To obtain a reflexive meaning, the word *nafs*, 'soul' is used as the object, combined with an appropriate genitive suffix, as demonstrated in (7b).

7 a qatala$_i$-hu$_{*i/j}$
kill(P3ms)-3ms
'he killed him' / *'he killed himself'
b qatala$_i$ nafs-a-hu$_{i/*j}$
kill(P3ms)soul-A-3ms
'he killed himself'

Occasionally, other words besides *nafs* are used, such as *ᶜayn*, 'eye', *wajh*, 'face', *rū*, 'spirit', *ḏāt*, 'essence' or *āl*, 'state', (Wii,272).

There is an exception. In constructions like (8)-(9), the so-called *'afᶜāl al-qulūb* or 'verbs of the heart', a normal object suffix can refer to the subject, and thus have a reflexive meaning. These verbs of the heart "signify an act that takes place in the mind" (Wii,48), such as *ra'ā*, 'to see, think, know', *wajada*, 'to find, perceive', *anna*, 'to think', etc. They take two objects, the first a noun and the second either a noun, an adjective or a verbal sentence. Both objects, when nominal, receive accusative case. When the first object is a pronoun, it takes the form of a pronoun suffix attached to the main verb.

The two objects actually form a small clause in which the first object is the subject and the second the predicate. This small clause can be considered a subclause to the main verb. E.g.:

8 a anantu [zayd-an karīm-an]
think(P1cs) Zeid-A noble-A
'I thought Zeid noble'
b wajadtu-hu$_i$ [$_i$ rajul-an alīm-an]
find(P1cs)-3ms man-A gentle-A
'I found him a gentle man'
c anna$_i$ zayd-un$_i$ [ᶜamr-an$_j$ yalᶜabu$_j$]
think(P3ms) Zeid-N Amr-A play(I3ms)

'Zeid thought Amr to be playing'

When the subject of the small clause (the first object) is identical to the subject of the main verb, it is expressed with an object pronoun suffix attached to the main verb. This results in a situation in which an object pronoun, which cannot be reflexive, refers to the subject of the verb it is an argument to. This appears to be a reflexive construction. However, *nafs* is not used:

9 a ālaᵢ-huᵢ muāb-anᵢ
imagine(P3ms)-3ms strike(PPms)-A
'he imagined himself struck'
b ra'āᵢ-huᵢ yaᶜiruᵢ amr-an
see(P3ms)-3ms press(I3ms) wine-A
'he saw himself (e.g. in a dream) pressing out wine'
(Wii,272)

These examples are interesting, since they bear a striking resemblance to the ECM-constructions in English (ch. 1, ex. (18)). The subject of a subclause (which cannot be infinitive in Arabic, since Arabic has no verbal infinitive) receives accusative case from the main verb. But, contrary to English, reflexivity is not expressed using the reflexive, *nafs*.

Reckendorf states that in the case of verbs of the heart, accusative suffixes are allowed to refer to the subject, because "(...) bei ihnen ist die Verbindung zwischen Verbum und Suffix zwar nicht formal aber syntaktisch gelockert; der Akk., auch wenn er ein Suffix ist, stellt das Subj. eines von dem Verbum des Herzens abhängigen nominalen Nebensatz dar, das Suffix bezieht sich also strenggenommen nicht mehr auf das Subj. desselben Satzes, sondern ist selbst Subj. und bezieht sich auf das Subj. des Hauptsatzes." (V396)

Reckendorf himself, however, only gives examples in which the subject of both the main clause and the subclause is first person. (See V397.) Reflexive markers are generally less used in 1st and 2nd person, since there is hardly any danger of misinterpretation. Furthermore, from the examples Ayoub (1980) gives, it is clear that in Modern Standard Arabic, the use of *nafs* in such constructions is possible (cf. ex. (53a) and (55a) in her article).

The pronominal suffixes can also be attached to prepositions. Used as such, the suffixes can have a reflexive meaning, as in (10):

10 a 'arajaᵢ maᶜa-huᵢ māl-an kaṯīr-an
take out(P3ms) with-3ms money-A much-A
'heᵢ took a large amount of money with himᵢ'
b amamtuᵢ -bn-īᵢ 'ilay-yaᵢ
draw close(P1cs) son(A)-1cs to-1cs
'Iᵢ drew my son to myselfᵢ'

(Wii,272)

However, Wright (ii,272) notes that "[t]his (...) is allowed only when no doubt can arise as to the meaning of the suffix - which (...) happens oftener with the suffixes of the 1st and 2d person, than with that of the 3d pers. - and even then the interposition of *nafs* (...) takes place frequently". In other words, *nafs* is often used after prepositions.

Wright (ii,281) notes that when the suffix attached to *nafs* is either dual or plural, the plural form of *nafs* is used, which is *'anfus*, although the use of the singular, or the dual with dual suffixes, is also attested.

Cantarino gives a description similar to the one above for Modern Standard Arabic. He notes, however, that for the dual and plural suffixes, the dual and plural of *nafs* are generally used. He also mentions the *afʿāl al-qulūb*-type constructions (although he does not use the term), but, as with Reckendorf, his examples all have 1st person subjects, like (11):

11 ʿala 'anna-nī$_i$ ra'aytu$_i$-nī$_i$ muarr-an$_i$
on COMP-1cs see(P1cs)-1cs force(PPms)-A
'but I saw myself forced'
CII,424

He also draws attention to expressions like the one in (12). This type of construction is very literary, though.

12 'anša'a$_i$ yaqūlu$_i$ bayna-hu$_i$ wa bayna nafs-i-hi$_i$
begin(P3ms) say(I3ms) between-3ms and between SELF-G-3ms
litt: 'he began talking between him and himself'
'he began talking to himself'
(CIII,141)

It should be noted that *nafs* is basically just a feminine noun meaning 'soul' and is often used as such, without any reflexive meaning whatsoever, as is illustrated in (13a). As with any noun, it can be replaced by a pronoun, in this case a 3fs pronoun. Cantarino notes (III,142) that this occasionally happens when *nafs* is used as a reflexive expression, as is illustrated in (13b):

13 a laʿalla-ka tajidu bayna-hā šifā'-an li nafs-i-ka -l-ā'ira
perhaps-2ms find(I2ms) between-3fs remedy-A for soul-G-2ms the-troubled
'you might find a remedy for your troubled soul among them'
(CIII,138)

b (ʿāša$_i$) bayna -l-lawm-i li [$_j$ nafs-i-hi$_i$] wa -l-iʿti<u>d</u>ār-i ʿan-hā$_j$
live(P3ms) between the-blaming-G to SELF-G-3ms and the-excusing from-3fs
litt. '(he lived) between the blaming of his "self$_i$" and the excusing of it$_i$'

'(he lived) half blaming and half excusing himself'
(CIII,142)

Nafs in the meaning of 'soul' can sometimes be used to paraphrase a personal pronoun (CIII,138 and III,424):

14 'in-nī 'aᶜaytu-ka mā taštahī nafs-u-ka
TOP-1cs give(P1cs)-2ms what wish(3fs) soul-N-2ms
litt. 'I will give you anything your soul wants'
'I will give you anything you want'
(CIII,138)

There are other uses of *nafs* that resemble the use of the English reflexive *himself*. It can be used to emphasize a noun, meaning 'itself' or 'same'. There are two ways of doing this, which do not differ in meaning. (Note that the two possible translations of these constructions in English do differ in meaning.)

15 a fī nafs-i_i -l-yawm-i_i
in SELF-G the-day-G
'on the same day'
or: 'on the day itself'
b fī -l-yawm-i_i nafs-i-hi_i
in the-day-G SELF-G-3ms
'on the same day'
or: 'on the day itself'

In (15a), the noun to be emphasized, *yawm* 'day', is attached to *nafs* with the genitive. (*Nafs* is also in the genitive, but for an independent reason: it is the argument of the preposition *fī* 'in'.) In (15b), *nafs* is an appositive to the noun to be emphasized. A suffix is attached to it that refers to *yawm* 'day'. The genitive of *yawm* is controlled by the preposition. As an appositive, *nafs* receives the same case.

Cantarino supplies some examples:

16 a fī nafs-i_i bayt-i_i-hā
in SELF-G house-G-3fs
litt. 'in the SELF of her house'
'in her house itself'
b tadullu fī -l-waqt-i_i nafs-i-hi_i ᶜalā...
lead(I3fs) in the-time-G SELF-G-3ms on
'at the same time it proves...'
(CIII,139)

With the preposition *bi* 'by, with', *nafs* can mean 'by himself' or 'in person'. In this construction, it also receives a suffix, similar to (16b), as is illustrated in (17):

17 (...) 'anya'tū$_i$ bi 'anfus-i-him$_i$ li yuhanni'ū-ka
COMP come(S3mp) by SELF-G-3mp to congratulate(S3mp)-2ms
'(...) that they come by themselves (in person) to congratulate you'
(CIII,141)

2.2.2 Reciprocals

Just as Arabic has no special reflexive, it has no reciprocal. Reciprocal expressions are built using the word *ba^c*, which means 'part' or 'portion'. When followed by the genitive of a plural, it signifies "*some one* or *more, a certain one, some one, one*" (Wii,207):

18 a āaba ba^c-u -l-talāmīd-i muammad-an
address(P3ms) one-N the-pupils-G Mohammed-A
'one of the [his] pupils addressed Mohammed'
b fī ba^c-i -l-'ayyām-i
in one-G the-days-G
'one day'
(Wii,207)

Ba^c can also mean 'some', 'several':

19 ba^c-u -l-rijāl-i
some-N the-men-G
'some men'
(AS159)

When *ba^c* is used as a correlative, meaning 'one... the other' or 'some... others', the second *ba^c* receives no pronominal suffix:

20 ba^c-u -l-šarr-i 'ahwan-u min ba^c-in
some-N the-evils-G easier-N than some-G
'some evils are easier to be borne than others'
(Wii,207)

It is this use of *ba^c* that can express reciprocity:

21 danā ba^{c}-u-hum min ba^{c}-in
approach(3ms) some-N-3mp from some-G
litt. 'some of them approached others'
'they approached each other'
(AS161)

In Modern Standard Arabic, reciprocity is expressed in the same way, as Cantarino describes:

22 a qāla ba^{c}-u-hum li ba^{c}-in
say(P3ms) some-N-3mp to some-G
litt. 'some of them said to others'
'they said to each other'

b nanu nuwaddi^{c}u ba^{c}-u-na ba^{c}-an
1cp say farewell(P1cp) some-N-1cp some-A
litt. 'we said farewell some of us to others'
'we bade farewell to each other'
(CIII,137)

The repetition of *ba^{c}* is, however, not necessary to express reciprocity in Modern Standard Arabic. This occurs quite frequently with the phrase *ma^{c}a ba^{c}*, literally 'with some', meaning 'with each other' or simply 'together', but it can also be found in other cases:

23 muraddidīna ^{c}alāmasāmi^{c}-i ba^{c}-i-him ikāyāt-i -l-'ayyām-i wa -l-layālī
repeat(APmpA) on ears-G some-G-3mp stories-A the-days-G and the-nights(G)
litt. 'repeating to the ears of some the stories of the days and of the nights'
'retelling to one another stories of the days and nights'
(CIII,137)

2.2.3 Pronouns

Cantarino (II,423-36) also treats the use of pronouns as far as it differs from English. Most of his remarks deal with instances of agreement in Arabic and are irrelevant here. But some uses of the personal pronoun in Arabic have unusual syntactic consequences and have to be discussed.

First is the so-called *amīr al-ša'n*, or 'pronoun of fact'. As I said before in section 2.1, some Arabic particles, such as the complementizer *'anna*, 'that', require as complement a sentence of which the subject is topicalized. As such, the subject follows immediately after *'anna* and takes accusative case.

However, in some cases it is undesirable to topicalize the subject, e.g. when it is indefinite. The subject then

retains its normal position, and a pronoun takes the place of the topic. Sometimes, this pronoun agrees with the subject, but usually it is as unmarked as possible, to wit the 3ms pronoun. Since *'anna* requires an accusative, this pronoun takes the form of a pronoun suffix, *-hu*. This is called the *amīr al-ša'n*. (In this section, I will italicize the relevant pronouns for convenience.)

24 a aī-un 'anna-*hu* naša'a bayna-nā šuᶜarā'-u
correct-N COMP-3ms rise(P3ms) among-1cp poets(IN)-N
'it is true that poets have arisen among us'

b allāh-u yaᶜlamu 'anna-*hu* mā min aad-in min-hum yaᶜlamu min
the-god-N know(I3ms) COMP-3ms not from one-G from-3mp know(I3ms) from
nafs-i-hi 'anna ...
SELF-G-3ms COMP ...
'God knows that not a single one of them realizes of his own accord that...'
(CII,431)

In a main clause, the particle *'inna* can be used to topicalize the subject, in the same way that *'anna* topicalizes the subject of a subclause. At times, *'inna* is used without topicalization of the subject. The pronoun suffix *-hu* then takes its place:

25 a 'inna-*hu* la[4] šaraf-un ᶜaīm-un 'anna ...
TOP-3ms EMPH honour-N great-N that
'It is a great honour that...'

b 'inna-*hu* yu'sifu-nā 'an nubira-kum bi ...
TOP-3ms make regret(I3ms)-1cp COMP inform(S1cs)-2mp with
'we are sorry to inform you (that)...'

Similarly, the 3ms pronoun is sometimes used as an expletive pronoun (as in English "*It* is good to know that..."):

26 a 'a *huwa* mustaīl-un 'an nattafiqa yawm-a-n
INT 3ms impossible-N COMP agree(S1cp) day-A-IN
'is it impossible for us ever (litt. some day) to agree?'

b *huwa* maᶜlūm-un 'anna ...
3ms know(PPms)-N COMP
'it is known that...'

It should be noted that Arabic does not require such an expletive pronoun to be used, as can be seen from (24a)

4 The element *la* emphasizes the following word.

above.

The independent pronoun can also be used as what is called the *amīr al-fal*, 'the pronoun of separation'. In the present tense of a nominal equational sentence (of the form *X is Y*) Arabic does not use any copula, like the English *to be*. Subject and predicate are simply juxtaposed, as illustrated in (27a,b). To express past tense, the perfect of the verb *kāna* 'to be' is used. Note that this verb assigns its complement (the predicate) accusative case, as in (27c):

27 a hiya mulqāt-un ᶜalafirāš-i-hā
3fs throw(PPfs)-N on bed-G-3fs
litt. 'she lying on her bed'
meaning: 'she is lying on her bed'
(CII,423)

b al-rajul-u karīm-u-n
the-man-N noble-N-IN
'the man is noble'

c kāna -l-rajul-u karīm-a-n
be(P3ms) the-man-N noble-A-IN
'the man was noble'

Sometimes, however, such structures can be problematic. It is not always obvious that two juxtaposed elements are subject and predicate. They could be seen as forming one element. In order to avoid ambiguity in such cases, a 3rd person pronoun is interposed between subject and predicate to separate them, serving as a copula (which is a use of pronouns that is not uncommon in Semitic languages):

28 a hā'ulā'i*humu* -l-ᶜulamā'-u
these 3mp the-ulemas-N
'these are the ulemas'

b wa kānat hāḏihi *hiya* -l-daᶜwa-t-u 'ilā -l-ᶜašā'-i
and be(P3fs) this(f) 3fs the-invitation-f-N to the-dinner-G
'and this was the dinner invitation'
(CII,433)

In (28a), the interposition of a pronoun is necessary. When a demonstrative pronoun such as *hā'ulā'i* is followed by a noun with the definite article, it modifies the noun. The phrase *hā'ulā'i -l-ᶜulamā'* means 'these ulemas' and cannot be understood to mean 'these are the ulemas'. (28b) is an identical case. Without *hiya*, it would mean 'and this dinner invitation was...'

Sometimes a pronoun is used as a copula even when there is no danger of incorrect interpretation:

29 a hāḏihi *hiya* ikāya-t-ī

this(f) 3fs story-f-1cs
'this is my story'

b 'ana *huwa* -l-mujrim-u 'ana *huwa* -l-kāfir-u
1cs 3ms the-culprit-N 1cs 3ms the-heretic-N
'I am the culprit, I am the heretic'
(CII,433)

In (29a), the interposition of *hiya* is not necessary. The phrase *hāḏihi ikāya-t-ī* cannot mean 'this story of mine'. A demonstrative cannot modify a following noun if that noun does not have the definite article. Therefore, *hāḏihi ikāya-t-ī* can only be understood as 'this is my story'.

(29b) is perhaps rather surprising. It would normally be phrased as *'ana -l-mujrim-u, 'ana -l-kāfir-u*. The interposition of *huwa*, and of *hiya* in (29a), has the same, somewhat dramatic, effect as a slight pause after the subject has in English.

Furthermore, an independent pronoun can be used to emphasize a pronoun suffix. For this, the pronoun suffix is immediately followed by the corresponding independent pronoun, as illustrated in (30):

30 a layta-nī[5] *'ana* 'ayan kuntu masīiyya-t-an
IRR-1cs 1cs too be(P1cs) Christian-f-A
'I wish that *I*, too, were Christian'

b ᶜalay-ka *'anta* -l-itiyār-u
on-2ms 2ms the-selection-N
'the selection is up to *you*'

c (kānat)tantairu-hu *huwa* lā -l-masī-a
be(P3fs) expect(I3fs)-3ms 3ms not the-Christ-A
'she was expecting *him*, not Christ'
(CII,432)

Cantarino states that 3rd person pronouns can be used in the same way as an appositive to emphasize a noun (CII,431-2):

31 a li-'anna -l-maabba-t-a *hiya* quwwa-t-un ...
because the-love-f-A 3fs force-f-N ...
'for love is a force which ...'

b 'anna -l-nafs-a -l-šiᶜriyya-t-a *hiya* 'ajmal-u šay'-in fī -l-ᶜālam-i
COMP the-soul(f)-A the-poetic-f-A 3fs most-beautiful-N thing-G in the-world-G
'that a poetic soul is the most beautiful thing on earth'

5 The particle *layta* expresses an unreal wish or desire. It is followed by the subject of the sentence in the accusative.

(CII,432)

Cantarino also states that "[t]his emphatic apposition of the personal pronoun of the third person is quite frequently used with a resumptive function, e.g., in nominal sentences" (CII,434). He then gives examples from a number of different contexts in which such a pronoun is used:

32 a "when the subject is modified by long specifications:"
al-mujrim-u -l-'akbar-u fī hāḏihi -l-qaiyyat-i *huwa* 'a-ī salīm-u
the-criminal-N the-biggest-N in this the-case-G 3ms brother(N)-1cs Selim-N
'the biggest criminal in this case is my brother Selim'

b "when the subject is a pronominal relative clause:"
kull-u mā 'astaīᶜu-(...) *huwa* 'an ...
all-N what be-able(1cs) 3ms COMP
'all I can do is ...'

c "to give an adjectival relative sentence a function equivalent to that of a pronominal one:"
al-ᶜarab-u$_i$ *humu$_i$* -llaḏīna$_i$ amalū$_i$ luġat-a-hum$_i$ aytu yaskunūna$_i$
the-Arabs-N 3mp REL(mp) carry(P3mp) language-A-3mp wherever settle(I3mp)
'the Arabs were the ones who brought their language with them wherever they settled'

d "to give an interrogative and a relative pronoun the possibility of expressing the gender or the number of the noun to which they refer, otherwise not possible in Arabic:"

1 mā *hiya$_i$* -l-šarīᶜa-t-u$_i$
what 3fs the-law-f-N
'what is law'

2 man *hum* fī miṯl-i urūf-ī
who 3ms in equivalence-G circumstances(G)-1cs
'(those) who are in the same circumstances as I'

e "when the predicate is a noun clause:"
hāḏihi -l-aqīqa-t-u *hiya* 'anna ...
this(f) the-fact-f-N 3fs COMP
'the fact is that...'

In (32c), the pronoun is required, since without it, the relative clause would modify the noun *al-ᶜarab* and the listener would interpret it as 'the Arabs, who brought their language with them wherever they settled, ...'.

In cases like (32d), the pronoun strengthens the interrogative. It obtains its gender and number from either the subject or the predicate, whichever position the interrogative does not fill. (32d2) is interesting. The word *man*,

which can be an interrogative 'who?' and a relative pronoun 'he/she who', would usually be interpreted as singular. In (32d2) a plural reading is desired, which is obtained by adding the plural pronoun *hum*.

The personal pronoun has several functions in Arabic that have no direct equivalent in European languages. First, there is the 'pronoun of fact', as in (24)-(26). Second, a pronoun can be used as an emphatic element, as in (30)-(32). Lastly, a 3rd person pronoun can be used to separate two constituents, as in (28) and (29), the so-called pronoun of separation.

Since GB is a purely structural theory, some of the occurrences of pronouns above will be analyzed differently. The 'pronoun of fact' is equivalent to the expletive pronoun that occurs in some European languages[6], although it is used in different situations. The cases of (30) are emphatic appositives to pronouns that fill an object position. The pronouns as used in (28), (29) and (32), function as copula. They are interposed between subject and object of a nominal sentence. There are several different reasons for using such a copulative pronoun. Sometimes it is required to clarify the syntactic structure of the sentence, as in (28) and (32c). Sometimes this is not required but still useful, as in (32a,b,e). At times it has an emphasizing strength, as in (29).

In (31), the pronouns can be considered resumptive. The subject is topicalized, and in the predicate, which has the form of a nominal sentence, its place is occupied by a resumptive pronoun.

The use of pronouns as copula is interesting in light of the binding theory. Such a pronoun seems locally bound, although examples like (28b) (where the predicate has nominative case, in spite of the use of *kāna*) and (29b) may offer clues to another analysis.[7]

One issue that received considerable attention from Arab grammarians is forward reference, or cataphora. In Arabic, this is called *al-'imār qabla -l-ḏikr*, literally 'the hiding before the mentioning', in other words, pronominal reference to a noun before it has been mentioned. In Arabic grammatical theory, a pronoun was supposed to be anaphoric, that is, referring back to a noun. Cataphoric pronouns do occur, which posed problems that were not all solvable within the framework the Arab grammarians had developed. (See for example Peled (1992)).

The classic example of cataphora in Arabic is (33):

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6 It satiates an argument position that cannot remain empty in the S-structure. After *'anna* and *'inna* (as in (24) and (25)) such a *amīr al-ša'n* is required if no element is topicalized. In contexts like (26) it is optional (cf. also (24a))

7 In Arabic, a pronoun serving as a copula is always a 3rd person pronoun, but this is not a universal requirement. Syriac has a set of clitic pronouns that can be used as copula (i), but also as subject (ii):

i enā-nā malkā da-mdi(n)tā hāde
1cs-1cs king of-city this
'I am the king of this city'

Enā is the full form of the 1cs pronoun, *-nā* is the clitic form, serving as copula (cf. ch. 1, note 5). It should be noted that in (i) the 3ms clitic pronoun *-u* can also be used.

ii āzē-nā l-āk 'a(i)k bar šnayyātartaᶜesrē
see(APms)-1cs OBJ-3ms as possessor-of years twelve
'I see you as a boy of twelve'
(Jacob of Sarug, The Youths of Ephesis, in: Gismondi (1910), p52, ln 2)

Here, the clitic form *-nā* serves as the subject of the verb *āzē*.

33 araba ġulām-a-hu$_i$ zayd-un$_i$
hit(P3ms) slave-A-3ms Zeid-N
'Zayd$_i$ hit his$_i$ slave'
(Peled, 1992: 97)

This sentence exhibits two unusual phenomena: it has VOS word order, and it has a cataphoric pronoun. The Arab grammarians considered (33) a derivation of (34), which has neither of the abnormalities:

34 araba zayd-un$_i$ ġulām-a-hu$_i$
hit(P3ms) Zeid-N slave-A-3ms
'Zayd$_i$ hit his$_i$ slave'

There is no restriction on forward reference in GB, and therefore, the Arabic examples of *al-'imār qabla -l-dikr* will pose no problems in this theoretic framework. However, the examples given in the literature concerning this issue, do offer clues as to how certain Arabic sentence structures should be analyzed in GB.

2.3 Reflexive verb forms

Reckendorf (V47-52) explains that there is another way to express reflexivity and reciprocity in Arabic. In Arabic, a three-consonantal root can yield not one, but a series of verbs[8]. E.g. the root KTB yields, as the simplest verb, *KaTaBa*, 'to write'. Through several derivational processes, other verbs can (theoretically) be obtained: *KaTTaBa*, *KāTaBa*, *'aKTaBa*, *taKaTTaBa*, *taKāTaBa*, *inKaTaBa*, *IKtaTaBa* and *istaKTaBa.* These verbs are all built around the three consonants KTB, but different affixes render different meanings.

The meaning of these derived verb forms is often derived from the meaning of the base verb form. E.g. verbs of the type of *kattaba* have an intensive or causative meaning, *kātaba*-verbs describe an effect on someone or something, and *'aktaba*-verbs are usually causative.

Reckendorf states that the verbs that have a *t*-affix are reflexive and reciprocal correlates of the 'non-*t*'-verbs. Thus, *takattaba* correlates to *kattaba*, *takātaba* to *kātaba*, *iktataba* (and also *inkataba*) to *kataba*, and *istaktaba* to *'aktaba* (which is *saktaba* in other Semitic languages).

Many examples can be given that attest to this. E.g.:

kataba 'to write' gives:
kattaba 'to make someone write' (causative)

8 In Arabic, just as in all Semitic languages, a root does not consist of a sequence of consonants and vowels, as in Indo-European languages. A root consists of - usually - three consonants. From such a root, word stems are formed by the insertion of vowels and consonantal affixes.

kātaba litt. 'to write to someone', meaning: 'to correspond with someone' (effective)
takātaba 'to correspond with each other' (reciprocal of *kātaba*)
iktataba litt. 'to write oneself', meaning: 'to enter one's name, to subscribe' (reflexive of *kataba*)

araba 'to hit' gives:
āraba 'to fight with someone' (effective)
taāraba 'to fight with each other' (reciprocal of *āraba*)

Reckendorf (V48) notes that the reflexive verbs express that the subject is either directly affected by the action, which he calls accusative-reflexivity, or indirectly affected by the "Nebenwirkungen", the 'side-effects' of the action, which he calls dative-reflexivity.

This system of verb formation was probably highly productive in a proto-Semitic stage. In Modern Standard Arabic, however, as well as in Classical Arabic, many derived verb forms have been lexicalized. Verbs exist whose meaning cannot be traced back to the basic *kataba*-form, such as *addaṯa*, which means 'to speak', whereas the basic form *adaṯa* means 'to happen'.

However, these verb forms should be taken into account. They are often used to express reflexivity and reciprocity. Furthermore, it is quite plausible that especially the reciprocal verb formation is still productive, since sometimes reciprocal *takātaba*-verb forms of modern loan words can be found.

Reckendorf also notes that at times a reciprocal *takātaba*-verb can be combined with a word that emphasizes the reciprocity:

35 a yatasāqawna$_i$ -l-maniyyat-a bayna-hum$_i$
give e.o. to drink(I3mp) fate-of-death-A among-3mp
litt. 'they give each other the fate of death to drink among themselves'
'they let each other drink the fate of death'

b yataaddaṯūna$_i$ bayna-hum$_i$
to converse(I3mp) among-3mp
'they talked to one another'
(AS287)

In (35a), *yatasāqawna* is a conjugated form of the verb *tasāqā*, which is the *takātaba*-form of *saqā* 'to give s.o. to drink', 'to irrigate'. In itself, it means 'to give each other to drink', but still *bayna-hum* 'among themselves' is added.

(35b) is a similar case. *Yataaddaṯūna* is the reflexive *takattaba*-form of *addaṯa* 'to speak'. It means 'to speak to one another', 'to converse'. Still, *bayna-hum* is added.

3 The data

In this chapter I will present the data that were obtained from the corpus. I give examples of the use of *nafs* and *baʿ* in all contexts found. The analysis of the data will not be given until chapter four, but at times I will add some remarks on the conclusions that the data suggest. Before I start, I will give some information about the corpus.

3.1 The corpus

The corpus used for this thesis consisted of approximately 17.5Mb of Arabic text, a little over 3 million words. The texts included range from newspaper articles from the international Arabic daily Al Hayat (*al-ayāt*) of the year 1995, modern literary texts (novels, short stories and plays) from different Arabic countries and a collection of popular scientific texts on various topics (science, psychology, biology) taken from recent magazines.

The articles from Al Hayat were added to the corpus from CD-ROM, the other texts were scanned from paper. The entire corpus is untagged. Therefore, the only possible operation was to search for the words *nafs* and *baʿ*. The search terms used for both words included a maximum of three letters preceding the search string (to allow for the article and one-letter particles which are attached to the following word) and an infinite number of letters following the search string (to allow for any suffixes). For both search strings, approximately 5000 occurrences were found. They were alphabetized and printed.

Since the corpus is not tagged, no distinction could be made between reflexive uses of *nafs* and the use of *nafs* as 'soul'. Furthermore, occurrences of the string *nafs* in other words were also listed (such as *banafsaj* 'violet' and even some lone-words, such as 'FinInvest', transcribed in Arabic as 'fīn infist', without the short vowels 'fīn -*nfs*t'). As for *baʿ*, it is mostly used as a quantifier, meaning 'some, several' (see 2.3). Only few of the occurrences were of use.

For both *nafs* and *baʿ*, relevant uses were selected and their structure analyzed.

3.2 *Nafs*

The Arabic verb occurs in several different forms. Most common is probably the finite verb, but apart from that, there exist (nominal) infinitives and participles. All three can take a reflexive object (although participles rarely do). Therefore, I will deal with each in a separate subsection. In the subsections that follow after those, I will deal with

other uses of *nafs*, e.g. with *'afʿāl al-qulūb* or 'verbs of the heart'.[1]

3.2.1 Finite verbs

Arabic verbs usually take their object in the accusative case. But, like in English, there are many verbs that select a specific preposition with which the object is expressed. E.g. the verb *raʾā* 'to see' assigns its object accusative case, but the verb *naara* 'to look at' requires the preposition *'ilā* 'to'. Interestingly enough, the English counterparts of both verbs pattern the same ('to see' assigns accusative, 'to look at' requires the preposition 'at'), but this is not always the case. Verbs that select a preposition in Arabic, may assign accusative in English, and vice versa. The verb *raaba* 'to welcome', for instance, requires the preposition *bi*, but 'to welcome' occurs with the accusative.

Both types of verbs can take a reflexive object, as illustrated in (1) and (2):

1 a ra'ā$_i$ nafs-a-hu$_i$ wa qad irtadā$_i$ ṯiyāb-an 'anīq-an
see(P3ms) SELF-A-3ms while dress(P3ms) clothes-A elegant-A
'he saw himself, (while he was) dressed in elegant clothes'

b yuaddiṯu$_i$ nafs-a-hu$_i$

---

1 *Nafs* has two other uses which are never discussed in relation to the binding theory. I will not deal with them in this thesis, since they seem to fall outside the scope of the binding theory. *Nafs* can be used as an appositive to a noun or a pronoun with the meaning 'the same' or 'himself', or as a predicate with the meaning 'the same'. (See ch. 2, ex. (15)-(17).)

(i) shows *nafs* as an appositive to a noun or a pronoun, meaning 'himself' (ia,b) or 'the same' (ic,d):

i a ʿadūw-u -l-ʿarab-i -l-aqīqiyy-u huwa -l-ʿarab-u$_i$ 'anfus-u-hum$_i$
enemy-N the-Arabs-G the-true-N 3ms the-Arabs-N SELVES-n-3mp
'the true enemy of the Arabs are the Arabs themselves'

b wa taḏakkara 'anna-hu huwa nafs-u-hu rajul-u -l-'aʿmāl-i
and remember(P3ms) COMP-3ms 3ms SELF-N-3ms man-N-the-affairs-G
-l-šahīr-u -llaḏī ...
the-famous-N REL
'and he remembered that he himself was the famous businessman that ...'

c wa 'ašāra -l-madar-u$_i$ nafs-u-hu$_i$ 'ilā 'anna ...
and point(P3ms) the-source-N SELF-N-3ms to COMP ...
'and the same source pointed out that ...'

d fī nihāyat-i -l-šahr-i$_i$ nafs-i-hi$_i$ ʿām-a 1994
in end-G the-month-G SELF-G-3ms year-A 1994
'at the end of the same month in 1994'

It should be noted, however, that Arabic does not distinguish between the cases of (ia,b) on the one hand and of (ic,d) on the other, in spite of the fact that there are two ways to translate them into English. Structurally, they are identical: in all cases *nafs* is an appositive to a noun.

(ii) gives an example of *nafs* as predicate in a nominative sentence:

ii yaḏkuru$_i$ 'anna -l-nafaq-a$_j$ huwa$_j$ nafs-u-hu$_j$ -lladī ʿaṯara$_j$ fī-hi$_i$
remember(P3ms) COMP the-tunnel-A 3ms SELF-N-3ms REL stumble(P3ms) in-3ms
ʿām-a 1983 ʿalākammiyyāt-in kabīrat-in mina -l-mutafajjirāt-i
year-A 1983 on quantities-G large-G from the-explosives-G
'he remembered that this was the same tunnel in which he stumbled upon large quantities of explosives in 1983'

speak to(I3ms) SELF-A-3ms
'he speaks to himself'

c li-'anna -l-mar'-a$_i$ lā yak<u>d</u>ibu$_i$ nafs-a-hu$_i$
for-that the-man-A not deceive(I3ms) SELF-A-3ms
'for one does not deceive oneself'

2 a 'ilā -l-wa^{c}d-i$_i$ -lla<u>d</u>ī[2] qaa^{c}a$_j$-hu$_i$ ^{c}alā nafs-i-hi$_j$
to the-promise-G REL cut(P3ms)-3ms on SELF-G-3ms
litt. 'to the promise that he took upon himself'
'to the vow that he took'

b silā-un$_i$ li yudāfi^{c}a$_j$ bi-hi$_i$ -l-ša^{c}b-u$_j$ ^{c}an nafs-i-hi$_j$ idda ...
weapon-N to defend(S3ms) with-3ms the-people-N from SELF-G-3ms against
'a weapon for the people to defend themselves with against ...'

c wa 'alaqa$_i$ -l-nār-a ^{c}alā nafs-i-hi$_i$ fa māta muntair-an
and release(P3ms) the-fire-A on SELF-G-3ms and die(P3ms) commit suicide(APms)-A
'he fired at himself and died committing suicide'

In (2a) the verb *qaa^{c}a* 'to cut' occurs in a collocation with the noun *wa^{c}d* 'promise' and a prepositional object introduced by *^{c}alā*. This prepositional object is usually reflexive, giving the meaning 'to take a vow'. It is marked reflexive.

(2b) contains the verb *dāfa^{c}a* 'to defend', which selects the preposition *^{c}an*. In (2c), the combination *'alaqa -l-nār* is a collocation meaning 'to open fire at, to shoot (at)'. The object is introduced by the preposition *^{c}alā*.

In the examples above, and indeed in most cases, the subject is the antecedent of the reflexive. But the few examples in which the object is the antecedent, show that this is not a requirement:

3 a attā takšifa$_i$-hu$_j$ -l-baala-t-u$_i$ 'amāma nafs-i-hi$_j$
so that reveal(S3fs)-3ms the-heroine-f-N before SELF-G-3ms
'so that the heroine reveals him before himself'

b da^{c}ī-hi$_i$ yā maryam-u ma^{c}a nafs-i-hi$_i$
leave(impt2fs)-3ms VOC Mary-N with SELF-G-3ms
'leave him to himself, Mary'

In (3a), *nafsihi* refers to the object of the governing verb *takšifa*, and similarly, in (3b), *nafsihi* refers to the object of the feminine imperative *da^{c}ī*.

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2 A relative clause in Arabic is introduced by a relative marker. Unlike a relative pronoun in English, however, this relative marker is *not* part of the subclause (it is rather a definite marker, since it is omitted when the antecedent is indefinite). In the subclause, a resumptive pronoun refers to the antecedent. In (2a), the object pronoun *-hu$_i$* performs this function.

In (2), the prepositions introduce obligatory arguments, and as such, the verbs and their prepositions form a fixed combination (similar to the English 'to look at'). Omitting such prepositional objects would result in ungrammaticality. But prepositions often introduce constituents that are not obligatory but optional arguments, as the preposition *'amāma* 'in front of, before' in (3). Such arguments specify the meaning of the verb, but omitting them would not result in ungrammaticality. The sentence would be less informative or even unclear, but not incorrect.[3]

When a preposition introduces such an optional argument, Arabic allows locally bound pronouns, as the italicized pronouns in (4) show:

4 a (...) law yatruk$_i$ warā'a-*hu*$_i$ nafs-a-hu$_i$ (...) 'iḏā amala$_i$ nafs-a-hu$_i$
(...) if leave(J3ms) behind-3ms SELF-A-3ms (...) when carry(P3ms) SELF-A-3ms
ma^{c}a-*hu*$_i$
with-3ms
'(...) if he would leave himself behind (himself) (...) when he carries himself with him'

b 'aī^{c}u$_i$ ^{c}an-*nī*$_i$ fiy-*ya*$_i$
disappear(I1cs) from-1cs in-1cs
'I disappear from myself into myself'

c yaznaqūna$_i$ -l-iġār-a$_j$ bayna-*hum*$_i$ (...) wa yadfa^{c}ūna$_i$-hum$_j$ 'amāma-*hum*$_i$
squeeze(I3mp) the-small(p)-A between-3mp (...) and push(I3mp)-3mp before-3mp
'they squeezed the small [kids] between them (...) and pushed them forward (before them)'

In (4a), both verbs have a reflexive object, properly expressed with a SELF-reflexive. Both verbs, however, also have a prepositional object, which is not obligatory. Furthermore, it is quite obvious that the pronouns in these objects refer to the subject of the verb.

The same can be said of (4b). The verb is 1st person, and the objects are, too. No danger exists of incorrect interpretation. As for (4c), although it is in 3rd person, The broader context of the phrase (which is not given here) leaves little room to interpret the prepositional objects as referring to anyone but the subject.

In cases like (3) and (4), the choice between a pronoun and a reflexive seems to be determined by pragmatic factors. When the antecedent is local, a pronoun is allowed if there is no danger of misinterpretation. (Cf. the English examples in ch. 1, ex. (35)). A reflexive is required when a pronoun is not likely to be interpreted as locally bound.

3.2.2 Infinitives

3 Optional arguments specify the meaning of the verb. Therefore, I would prefer to classify them as 'non-obligatory arguments' rather than as 'adjuncts'. The latter add information to the sentence, but do not specify the meaning of the verb. 'They squeezed the small kids' has a wider meaning than 'They squeezed the small kids between them', but the difference between the latter and 'they squeezed the small kids between them in the playground' consists merely in the amount of additional information.

Before treating the use of *nafs* with infinitives, I will have to make some remarks on Arabic infinitives. First of all, the Arabic infinitive is a nominal form, not a verbal form. As such, it is comparable to the English gerund. It can take the definite article, it is declined like a noun, and it can take all the positions a noun can take. E.g. in object position, it can replace an object subclause, as illustrated in (5):

5 a 'urīdu 'an 'adhaba
want(I1cs) COMP go(I1cs)
litt. 'I wish that I go', meaning 'I want to go'

b 'urīdu -l-ḏahāb-a
want(I1cs) the-going-A
litt. 'I want the [my] going', meaning 'I want to go'

In (5b), *ḏahāb* is the infinitive of the verb *ḏahaba*, used in (5a). The subject of the infinitive is not expressed, but in this particular case it is understood to be identical to the subject of the finite verb. However, it is possible to express a subject, by adding it to the infinitive in the genitive:

5 c 'urīdu ḏahāb-a-ka
want(I1cs) going-A-2ms
litt. 'I want your going', meaning 'I want you to go'

In (5c), the pronoun suffix *-ka* (which functions as genitive when suffixed to nouns), expresses the subject of the infinitive. This construction is similar to English, where the subject of a gerund can be expressed in the same way.

With transitive verbs, it is also possible to add the object to an infinitive. This, too, is done by modifying the infinitive with a genitive:

5 d 'urīdu arb-a-ka
want(I1cs) hitting-A-2ms
litt. 'I want the hitting of you', meaning 'I want to hit you'

Since both the subject and the object are expressed with a genitive modifying the infinitive, the suffix *-ka* in (5d) could also express the subject of the hitting. Then, the sentence would mean 'I want you to hit'.

In Arabic, a noun can be modified by only one genitive constituent. Therefore, if one wishes to express both the subject and the object of an infinitive, one has to resort to another option. In such cases, it is always the subject that is put in the genitive. The object is added in the accusative, or it is introduced by the preposition *li* 'to', which is generally an alternative for the genitive. E.g. when one wishes to express 'the hitting of Amr by Zeid', one might say either (6a) or (6b):

6 a arb-u zayd-in ᶜamr-an

hitting-N Zeid-G Amr-A
'Zeid's hitting Amr'

b arb-u zayd-in li ᶜamr-in
hitting-N Zeid-G to Amr-G
'Zeid's hitting of Amr'

Naturally, when a verb selects a preposition to express its object, like in (2), this prepositional object can be added to the infinitive of the verb. Non-obligatory prepositional objects, like the ones in (3) and (4) can also be added.

It should be noted that Arabic infinitives can not only be translated with a gerund or a verb, but often have another, more 'nominal', meaning. E.g. *ḏahāb* can mean not only '(the) going', but is also a common word for 'departure'. Other examples are *kiḏb*, '(the) lying' or 'a lie', and *tawīr* '(the) developing' or 'development'. I will translate the Arabic infinitives with the English gerund to indicate that it is an infinitive. When an infinitive in an example is not important to the structure, I will usually not indicate that it is an infinitive, and translate it with the appropriate noun. One should keep in mind, however, that this distinction between a 'nominal' and a 'verbal' meaning of infinitives is not as strong as the English translations suggest.

Infinitives allow reflexive use. In (7), the infinitives are verbs that assign accusative to their objects:

7 a nanu lā nurīdu$_i$ ar-a 'anfus-i-nā$_i$[4] ...
1cp not want(I1cp) restraining-A SELVES-G-1cp
litt. 'we do not wish the restraining of ourselves ...'
'we do not wish to restrain ourselves ...'

b lākinna-hu$_i$ rafaa$_i$ taslīm-a nafs-i-hi$_i$
but refuse(P3ms) surrendering-A SELF-G-3ms
'but he refused to surrender himself'

c qarrara$_i$ ᶜadam-a[5] taršī-i nafs-i-hi$_i$
decide(P3ms) not nominating-GSELF-G-3ms
'he decided not to nominate himself'

(8) gives examples of verbs that select a preposition for their objects. In these cases, the object is not added to the infinitive, it is placed after the preposition. If no subject is expressed, the infinitive is not modified by any noun in the genitive, and it often takes the definite article:

8 a lākinna-nā$_i$ nuirru$_i$ ᶜalā -l-naar-i 'ilā 'anfus-i-nā$_i$ ka aāyā

4 The form *'anfus* is the plural of *nafs*.

5 The word ᶜ*adam* is used to negate an infinitive. It literally means 'lack' or 'absence'. The negated infinitive follows in the genitive.

but-1cp persist(I1cp) on the-looking-G to SELVES-G-1cp as victims(G)
'but we persist in looking upon ourselves as victims'

b lam yajid$_i$ junūd-u$_i$ -l-ᶜadūw-i -l-furat-a li -l-difāᶜ-i ᶜan
not find(J3ms) soldiers-N the-enemy-G the-chance-A to the-defending-G from
'anfus-i-him$_i$
SELVES-G-3mp
'the enemy's soldiers did not find the chance to defend themselves'

c ayṯu yaqaᶜu$_i$ -l-iāfiyy-u$_i$ fī tanāqu-in maᶜa nafs-i-hi$_i$
where fall(I3ms) the-journalist-N in contradicting-G with SELF-G-3ms
'where the journalist starts contradicting himself'

However, the case of the infinitives is not as simple as it might look from the above examples, where the (unexpressed) subject of the infinitive is identical to the subject of the finite verb governing the infinitive. As (5c) and (5d) show, this need not be the case:

9 a (...) wa alabat min-hum$_i$ taslīm-a 'anfus-i-him$_i$
(...) and demand(P3fs) from-3mp surrendering-A SELVES-G-3mp
'and they (the security forces) demanded from them that they surrender (themselves)'

b (...) wa ālabati -l-mutaarrifīna$_i$ bi taslīm-i 'anfus-i-him$_i$
(...) and demand(P3fs) the-extremists(A) with surrendering-G SELVES-G-3mp
'and they (the security forces) demanded from the extremists that they surrender (themselves)'

(9a) and (9b) have the same meaning, but the verbs used are different. The verb *alaba* 'to ask, demand' in (9a) assigns accusative to that which is asked, in this example surrender. On the other hand, *ālaba* 'to demand' in (9b) assigns accusative to the person or persons from whom something is demanded, whereas that which is demanded is introduced with the preposition *bi* 'by, with'. In both cases, however, the reflexive object of the infinitive is not identical to the subject of the governing finite verb. Instead, they refer to other arguments of the finite main verbs: in (9a) to the prepositional object *min-hum*, in (9b) to the object *al-mutaarrifīna*.

Reflexive infinitives can also be arguments to another infinitive:

10 a li tawīr-i qudrat-i -l-jism-i$_i$ ᶜalā 'ilā-i nafs-i-hi$_i$ bi nafs-i-hi$_i$
to developing-G ability-G the-body-G on restoring-G SELF-G-3ms by SELF-G-3ms
'to the development of the ability of the body to heal itself on its own (by itself)'

Qudra 'ability' in (10) is also an infinitive (meaning 'the being able to'). Its subject is *al-jism*. The phrase introduced by the preposition *ᶜalā* is its prepositional object, which contains a reflexive infinitive (*'islā*).

Furthermore, the antecedent of a reflexive that is an argument to an infinitive can be in a higher clause, even when a distinct subject intervenes:

11 lākin lā yaulūna$_i$ ᶜalamā yakfī li 'inqāḏ-i 'anfus-i-him$_i$ (...) min
but not obtain(I3mp) on what suffice(I3ms) to saving-G SELVES-G-3mp (...) from
al-faqr-i
the-poverty-G
litt. 'but they do not obtain what would suffice to save themselves from poverty'
'but they do not earn enough to save themselves from poverty'

The reflexive *'anfusihim* refers to the subject of the main clause, whereas it is contained in an argument of the subclause, which has a different subject (the relative pronoun *mā*). At first sight, it might seem that the reflexive in (11) does not have an antecedent in its own clause. But consider the examples in (12):

12 a law 'anna-hum$_i$ taallaqū$_i$ awla-ka badalan min taalluq-i-him$_i$
if that-3mp form a circle(P3mp) around-2ms instead of forming a circle-G-3mp
awla 'anfus-i-him$_i$
around SELVES-G-3mp
'if they form a circle around you instead of (their) forming a circle around themselves'

b 'iḏā qarrū$_i$ fī bayrūt-a āfū$_i$ ᶜalā 'anfus-i-him$_i$ istibdād-a
if settle(P3mp) in Beirut-G fear(P3mp) on SELF-G-3mp overwhelming-A
bayrūt-a bi-him$_i$
Beirut-G with-3mp
litt. 'if they settle in Beirut, they fear for themselves the overwhelming of them by Beirut'
'if they settle in Beirut, they fear Beirut will overwhelm them'

c li tamkīn-i -l-šaᶜb-i -l-filasīniyy-i min istiᶜādat-i -tirām-i-hi$_i$
to enabling-G the-people-G the-Palestinian-G from regaining-G respecting-G-3ms
li nafs-i-hi$_i$
to SELF-G-3ms
'to enable the Palestinian people to regain its respect for itself'

d šadād-u$_i$ yuwāilu$_i$ -rtidā'-a-hu$_i$ li malābis-i-hi$_i$ wa tahyi'at-a nafs-i-hi$_i$
Shadad-N continue(I3ms) putting on-A-3ms of clothes-G-3ms and preparing-A SELF-G-3ms
litt. 'Shadad continued his putting on his clothes and preparing himself'
'Shadad continued putting on his clothes and preparing himself'

The infinitive *taalluq* 'forming a circle' in (12a) has a pronoun suffix *-hum*, which expresses its subject. It has another argument, *awla 'anfusihim* 'around themselves', which refers back to the subject of the infinitive.

In (12b), the infinitive *istibdād* 'overwhelming' has two arguments: *bayrūt*, which is its subject, and the prepositional object *bi-him*. The infinitive is itself an argument to the finite verb *āfū* 'they fear'. Although *bi-him* refers to the subject of this verb, it is not expressed with a reflexive.

(12c) is similar to (12a). Both the subject and the object of the infinitive *itiram* 'respecting' are expressed (*-hi* and

li nafsihi, respectively). The object is reflexive, which is properly marked.

(12d) is probably the most illustrative example. The finite verb *yuwāilu* 'he continues' governs two infinitives: *irtidā'* 'putting on clothes' and *tahyi'a* 'preparing'. Shadad, the subject of the finite verb, is also the subject of both infinitives. For *irtidā'*, the subject is expressed with the pronoun *-hu*, for *tahyi'a*, the subject remains covert. Both infinitives also have an object: *irtidā'* has *malābisihi* 'his clothes', introduced with the preposition *li* 'to', and the object of *tahyi'a* is Shadad, which is indicated with a reflexive.

The important thing to notice here is that the pronoun *-hu* and the reflexive *nafs-hi* seem to be in identical positions: they are both genitives modifying infinitives and they both refer to the subject of the finite verb to which those infinitives are accusative objects. In spite of this seemingly identical position, *-hu* is a pronoun, and *nafsihi* is a reflexive. The - apparently essential - difference between the two is their function: *-hu* is a subject, and *nafsihi* is an object.

(13) shows that reflexives in infinitives can also take the object as antecedent.

13 li tajīl-i -l-mujrimīna$_i$ min 'anfus-i-him$_i$
to shaming-G the-culprits(G) from SELVES-G-3mp
'to make the culprits feel ashamed of themselves'

The infinitive *tajīl* is derived from the verb *ajjala* 'to make s.o. feel ashamed'. That of which he is made to feel ashamed, is introduced by the preposition *min*. In (13), *al-mujrimīna* is the object of the infinitive. The reflexive *'anfusihim* refers back to this object, and not to the (covert) subject (which is impersonal).

The examples in (12) and (13) clearly suggest that reflexive arguments to infinitives find their antecedent within the domain of the infinitive.

The following examples are interesting uses of reflexives with infinitives:

14 a wa taᶜallamnā$_i$ mujaddadan 'anna -l-iᶜtimād-a$_j$ huwa$_j$ 'awwalan wa 'aīran
and learn(P1cp) renewed COMP the-depending 3ms first and last
ᶜalā 'anfus-i-nā$_i$
on SELVES-G-1cp
'again we have learnt that altogether, we have to depend on ourselves'

b li yataammal kull-u wāid-in$_i$ wizr-a nafs-i-hi$_i$
to carry(J3ms) every-N one-G sin-A SELF-G-3ms
'may everyone carry his own sin'

c wa 'akkada$_i$ -l-madar-u$_i$ -l-filasīniyy-u -lladī faala$_i$ ᶜadam-a
and confirm(P3ms) the-source-N the-Palestinian-NREL prefer(P3ms) not
dikr-i nafs-i-hi$_i$ ...
mentioning-GSELF-G-3ms

'the Palestinian source - which preferred not to mention itself - confirmed ...'

In (14a), the infinitive *al-ʔʿtimād* 'the depending' has the argument *ʿalā 'anfusinā* 'on ourselves'. But the infinitive is in topic position (after the complementizer *'anna* 'that'), whereas its argument is contained in the predicate of the sentence (see section 2.1.2), in which the resumptive pronoun *huwa* refers to *al-ʔʿtimād*.

In (14b), the word *wizr* 'sin' is actually the infinitive of the verb *wazara* 'to commit a sin'. The reflexive *nafsihi* expresses the subject of this action. The use of the reflexive strengthens the reference, similar to the English element *own*. The use of a pronoun here instead of the reflexive is also correct.

In (14c), the use of the reflexive *nafsihi* implies that it is the source who prefers not to mention himself. If it had said *allaḏī faala ʿadama ḏikrihi*, with a pronoun instead of the reflexive, it would have meant that the source preferred that, for instance, the journalist would not mention him.

3.2.3 Participles

Arabic verbs have two participles: one active and one passive. The distinction between present and past participle, as in English and other European languages, does not exist[6]. Participles have three main uses. First, they can be used as adjectives, either predicative or attributive. Especially when used as attributive adjectives, the participle sometimes has to be translated with a relative subclause in English, since Arabic allows constructions that are not possible in English.

Second, participles can be used as nouns. Indeed, many nouns in Arabic are lexicalized participles. For example, the *nomen agentis* as it exists in English (e.g. words in *-er* and *-or*: *reader, writer, singer, illustrator, editor* etc.) is expressed in Arabic with the active participle.

The third use of the participle is the so-called *āl*-accusative, or the accusative of state. A participle is adjoined to the sentence, expressing the state or condition in which the action expressed by the main verb is performed. As such, it is the equivalent of the predicative adjunct or secondary predicate. Such a *āl* can refer to both the object and the subject, but it should be noted that in both cases the participle takes accusative case.

At times, participles can be used to replace a finite verb. Such use is, however, very rare, and no instances were found with reflexive verbs.

Reflexive use of participles is quite rare. Only a handful of instances were found in the corpus. I will supply some examples to give an impression of the use of reflexive participles.

A few examples were found where a participle used as a noun has a reflexive:

15 a	fa	yakūnu$_i$	kull-u	qāri'-in$_i$	kāšif-a	nafs-i-hi$_i$
	so	be(I3ms)	every-N	reader-G	discover(APms)-A	SELF-G-3ms

6 The categorisation of participles is not as clear in English as I suggest here. Past participles of transitive verbs are necessarily interpreted as passives in certain constructions (e.g. *the stolen book*, *the abandoned child*). Similarly, in Arabic, active participles tend to be interpreted as present tense.

'so every reader is a discoverer of himself'

b wa lawi -l-mustatir-u$_i$ ᶜalā nafs-i-hi$_i$
and even the-be hidden(APms)-N on SELF-G-3ms
'and even he who is hidden from himself'

(16) offers examples of participles used as attributive adjectives:

16 a 'inna-hu$_i$ 'ijmālan ša-un$_i$ wāṯiq-un$_i$ min nafs-i-hi$_i$
TOP-3ms on the whole person-N trust(APms)-N from SELF-G-3ms
'on the whole, he is a self-confident person'

b wa fī hāḏā -l-ᶜālam-i$_i$ -l-ᶜarabiyy-i -l-munqasim-i ᶜalānafs-i-hi
and in this the world-G the-arab-G the-be divided(APms)-G on SELF-G-3ms
'and in this Arab World, [which is] internally divided (litt: divided among itself)'

In (16a), the active participle is *wāṯiq*, from the verb *waṯiqa* 'to trust'. It modifies the noun *ša* 'person'. The object of *waṯiqa* is introduced with the preposition *min* 'from'. In (16a), the participle is reflexive, which is indicated by the SELF-reflexive serving as argument to it.

In (16b), the participle *munqasim* is derived from the verb *inqasama* 'to be divided'. The preposition *ᶜalā* expresses among whom something is divided[7]. In (16b), this argument is identical to the subject, which is expressed with a reflexive.

(17) gives a few examples of a reflexive participle used predicatively:

17 a 'an yakūna$_i$ munsajim-an$_i$ maᶜa nafs-i-hi$_i$
COMP be(S3ms) be harmonious(APms)-A with SELF-G-3ms
litt. 'that he be harmonious with himself'
'that he be in harmony with himself'

b la qad[8] 'abatu$_i$ qā'id-an$_i$ li nafs-ī$_i$
PERF become(P1cs) guide(APms)-A to SELF(G)-1cs
'I had become a guide to myself'

Slightly more instances were found of reflexive *āl*-accusatives:

18 a fa qāla$_i$ muaddiṯ-an$_i$ nafs-a-hu$_i$ ...
and say(P3ms) talk(APms)-A SELF-A-3ms

7 Actually, the preposition seems adopted from the ground stem of the verb, *qasama šay'an ᶜalā* 'to divide s.th. among'.

8 The particle *qad* strengthens the completion of the action expressed by the following perfective. The particle *la* is sometimes added.

'and he said, talking to himself ...'

b yaqra'ūna$_i$ -l-fātiat-a, ālibīna$_i$ li 'anfus-i-him$_i$ min allāh-i ...
read(I3mp) the-fatiha-A ask(APmpA) for SELVES-G-3mp from the-god-G
'they read the fatiha (the opening sura of the Koran), asking for themselves from God ...'

c yusᶜidu-nī 'an 'arā-ki$_i$ (...) wāṯiqa-t-an$_i$ min nafs-i-ki$_i$
make happy(I3ms)-1cs COMP see(S1cs)-2fs (...) trust(APs)-f-A from SELF-G-2fs
'it makes me happy that I see you (...) confident of yourself'

In (18a), the participle *muaddiṯ* is derived from the verb *addaṯa* 'to speak to', which takes an object in the accusative. Here, the object refers back to the subject of the participle, which is also the subject of the finite verb *qāla* 'to say'. The participle *ālibīna* in (18b), from *alaba* 'to ask, request', also refers to the subject of the finite verb. In (18c) on the other hand, the *āl*-accusative refers to the object of the finite verb, the object pronoun *-ki*. However, this object is the (covert) subject of the participle *wāṯiqa*.

The following is an interesting example:

19 fa takallam$_i$ li tuallia$_i$ nafs-a-ka$_i$ min al-šubha-t-i -l-muīqat-i
so speak(Impt2ms) to clear(S2ms) SELF-A-2ms from the-suspicion-f-G the-surround(APfs)-G
bi-ka$_i$
with-2ms
'so speak, to clear yourself of the suspicion that surrounds you'

The verb of the subclause in (19), *tuallia*, has two arguments. The first is the object, which is reflexive, and the second is a prepositional object (introduced by *min* 'from'), stating that from which one clears something. This second object is modified by the participle *muīqa*, from the verb *'aāqa* 'to surround'. The object of this verb (that which is surrounded) is introduced with the preposition *bi* 'by, with': the phrase *al-šubhat-i -l-muīqat-i bi-ka* means literally 'the suspicion surrounding you'. The argument *bi-ka* refers back to the subject of the finite verb. However, it is not expressed with a reflexive but with a pronoun. It would seem then, that participles, like infinitives, are domains within which reflexives find their antecedent.

3.2.4 *'Afᶜāl al-qulūb*

In spite of what the grammarians say (see section 2.2.1), the verbs of the heart do not necessarily have pronouns when the object is reflexive. *Nafs* is quite common in these constructions, as is illustrated by the following examples:

20 a yaunnu$_i$ [nafs-a-hu$_i$ markaz-a -l-kawn-i]
think(I3ms) SELF-A-3ms centre-A the-existent-G

'he thinks himself the centre of the world'

b wajada$_i$ [nafs-a-hu$_i$ waīd-an]
find(P3ms) SELF-A-3ms alone-A
'he found himself alone'

c wa lā nuannifu$_i$ ['anfus-a-nā$_i$ mu^{c}āriīna]
and not classify(I1cp) SELVES-A-1cp rebels(A)
'we do not consider ourselves rebels'

d mu<u>t</u>aqqafū$_i$ 'āir-i zamān-in ya^{c}tabirūna$_i$ ['anfus-a-hum$_i$ 'ahamm-a min
intellectuals(N) last-G time-G consider(I3mp) SELVES-A-3mp more-important-A than
al-sayyid-i -l-masī-i wa min al-nabiyy-i muammad-in]
the-lord-Gthe-Christ-G and than the-prophet-G Mohammed-G
'the intellectuals of today consider themselves more important than Lord Jesus Christ and the Prophet Mohammed'

e lā 'aada$_i$ yarā$_i$ nafs-a-hu$_i$ mas'ūl-an ^{c}an 'ijhā-i hā<u>d</u>ā -l-nubūġ-i
no one see(I3ms) SELF-A-3ms responsible-Aabout aborting-G this the-genius-G
'no one thinks himself responsible for the curtailing of this genius'

The second object can also be a sentence:

21 a hum$_i$ ya^{c}tabirūna$_i$ ['anfus-a-hum$_i$ sabaqū$_i$]
3mp consider(I3mp) SELVES-A-3mp be ahead(P3mp)
'they consider themselves to be ahead'

b wa -l-murajūna$_i$ -l-^{c}arab-u (...) wajadū$_i$ ['anfus-a-hum$_i$ (...) šay'an fa šay'an
and the-expatriots(N) the-arab-N (...) find(P3mp) SELVES-A-3mp (...) bit by bit
ya^{c}malūna$_i$ li malaat-i tilifiziyūnāt-i -l-'ajnabiyyat-i]
work(I3mp) for interest-G televisions-G the-foreign-G
'bit by bit the Arab expatriots found themselves working for the interests of foreign television'

One occurrence of an infinitive of a verb of the heart with *nafs* was found:

22 yad^{c}ū$_i$ kātib-an$_j$ 'ilā taayyul-i [nafs-i-hi$_j$ mahjūr-an fī ^{c}ālam-in
call(I3ms) writer-A to imagining-G SELF-G-3ms abandon(PPms)-A in world-G
yaijju bi -l-ayāt-i]
be noisy(I3ms) with the-life-G
'he urges a writer to imagine himself abandoned in a world bristling with life'

As would be expected, *nafs* takes the object position of the infinitive: it follows in the genitive.

3.2.5 Other contexts

The uses of *nafs* dealt with so far are all contexts that are in a sense 'truly' reflexive. In the contexts above there is a verbal predicate of which two arguments are identical. However, *nafs* can be used in less clear contexts as well.

First of all, *nafs* can occur in the predicate of a nominal sentence. The reflexive can be bound by the subject of the sentence, as in (23a,b):

23 a 'antumu -l-ᶜirāqiyyūna$_i$qusāt-un idda 'anfus-i-kum$_i$ wa bilād-i-kum$_i$
2mp the-Iraqis(N) harsh(p)-N against SELVES-G-2mp and country-G-2mp
'you Iraqis are harsh against yourselves and your country'

b 'anna -l-ākimīna$_i$ fī ihrān-a hum$_i$ 'aswa'-u -l-'aᶜdā'-i li 'anfus-i-him$_i$
COMP the-rulers(A) in Teheran-G3mp worst-N the-enemies-G to SELVES-G-3mp
litt. 'that the rulers in Teheran are the worst (of the) enemies for themselves'
'that the rulers in Teheran are their own worst enemies'

c 'inna 'aġlab-a -l-ak-i huwa -l-ak-u ᶜalā'anfus-i-nā
TOP most-G the-laughing-G 3ms the-laughing-N on SELVES-G-1cp
litt. 'most of the laughter is laughter at ourselves'
'When we laugh, we mostly laugh at ourselves'

In nominal sentences, however, *nafs* is not always bound:

24 a ayr-un min rabb-i-nā wa šarr-un min 'anfus-i-nā
good-N from lord-G-1cp and evil-N from SELVES-G-1cp
'good comes from our lord, evil comes from ourselves'

b lā ayāt-a la-nā$_i$ bi ġayr-i[9] 'anfus-i-nā$_i$
no life-A to-1cp with other than-G SELVES-G-1cp
'there is no life for us with anyone but ourselves'

A very few occurrences were found in which *nafs* is an argument to a noun, either as a genitive or in a prepositional object:

25 a li'anna-hum$_i$ aāyā 'anfus-i-him$_i$ qabla 'an yakūnū$_i$ aāyā
because-3mp victims(N) SELVES-G-3mp before COMP be(S3mp) victims(A)
-l-mujtamaᶜ-i wa -l-'āarīna
the-society-G and the-others(G)
'because they are victims of themselves before they are victims of society and of others'

b wa min al-'ijrām-i bi aqq-i 'anfus-i-nā wa balad-i-nā 'an ...

9 The word *ġayr* is a noun that can be used to negate a following noun in the genitive. As such, it can be translated as 'no, not', or 'non-, un-', or as 'other than, different from'.

and from the-committing crimes-G by right-G SELVES-G-1cp and country-G-1cp COMP ...
'and it is a crime against our own rights and our country's that (we let this opportunity pass ...)'

c wa -l-yawma yajidu$_i$ nafs-a-hu$_i$ wajh-an li wajh-in 'amāma adīᶜat-i-hi$_i$
and today find(I3ms) SELF-A-3ms face-A to face-G before deceit-G-3ms
li nafs-i-hi$_i$
to SELF-G-3ms
'and today he finds himself face to face with the fact that he deceived himself (litt. his deceit of himself)'

d 'ana 'aᶜrifu tamāman mā hiya mašāᶜir-u-ki tujāh-ī wa tujāha nafs-i-ki
1cs know(I1cs) exactly what 3fs feelings-N-2fs towards-1cs and towards SELF-G-2fs
'I know exactly what your feelings are towards me and towards yourself'

e lā 'astaīᶜu 'an 'aᶜīša miṯlamā ᶜāša -bn-u lā 'aad-in. ibn-u lā
not be able(I1cs) COMP live(S1cs) as live(P3ms) son-N not one-G son-N not
šay'-in. ibn-u nafs-i-hi
thing-G son-N SELF-G-3ms
'I cannot live like no-one's son. Like the son of nothing. Like his$_i$ own son$_i$'

f fa -ttaaḏa baᶜ-u-hum$_i$ (...) munaliq-an li muhājamat-i kaṯīr-in (...) li ġara-in
and start(P3ms) some-N-3mp (...) rush(APms)-A to attacking-G many-G (...) to purpose-G
fī 'anfus-i-him$_i$
in SELVES-G-3mp
'and some of them (of the armed Islamic group abroad) started to attack many (of the scholars and propagandist in the Islamic world) for their own purpose (a purpose in themselves)'

In (25c), the noun *adīᶜa* is probably understood as an infinitive, meaning 'the deceiving', (although it is not). The subject is added by means of a genitive suffix pronoun (*-hi*), and the object is introduced by the preposition *li*. In (25d) the plural noun *mašāᶜir* 'feelings' (which has no singular in this meaning), is probably seen as a noun with a somewhat 'verbal' meaning: although it is not an infinitive, its meaning lies so close to the verb 'to feel' that it allows reflexive use. In (25f), *ġara* 'purpose' is probably understood in much the same way.

(25a) is interesting. The noun *aāyā*, plural of *aiyya* 'victim' is apparently interpreted as 'he who is victimized'. Just as in English, it then becomes possible to express by whom the victim is victimized, by means of a genitive that modifies the noun.

The following examples present interesting uses of *nafs*:

26 a zaᶜāmat-un ᶜālamiyyat-un min nawᶜ-in$_i$ farīd-in li nafs-i-hi$_i$
leadership-N world-N from kind-G unique-G to SELF-G-3ms
'a world-leadership unique of its kind (litt. unique to itself)'

b min al-adīq-i -l-ᶜazīz-i jiddan 'ilā nafs-i-ka
from the-friend-G the-dear-G very to SELF-G-2ms
'from the [your] very dear friend to yourself'

c fa sa'ala$_i$-hu$_j$ ᶜan 'aabb-i 'aġānī-hi$_j$ 'ilā nafs-i-hi$_j$
and ask(P3ms)-3ms about most beloved-G songs(G)-3ms to SELF-G-3ms
litt. 'and he asked him about the most beloved of his songs to himself'
'and he asked him which of his songs he liked most himself'

In (26a,c), the reflexive is an argument to an adjective, *farīd* 'unique' and *'aabb* 'most beloved' respectively. In (26b), *nafsika* has no antecedent in the clause.

3.2.6 Impersonal use

In the previous sections, the reflexive *nafs* was always modified by a pronoun suffix. However, it also occurs without such a suffix. In such cases, *nafs* receives the definite article. This, often impersonal, use is most frequent with infinitives:

27 a lākin lā jadwā min muādaᶜat-i -l-nafs-i
but no use from deceiving-G the-SELF-G
'but there is no use in deceiving oneself'
b wa li<u>d</u>ālika lā budda min tawīn-i -l-nafs-i ᶜalā -l-taiyat-i
and therefore no escape from preparing-G the-SELF-G on the-sacrificing-G
'and therefore it is inevitable that one prepares oneself to [make] a sacrifice'
c la qad kānat fusa-t-an li -l-taᶜarruf-i ᶜalā -l-nafs-i
PERF be(P3fs) opportunity-f-A to the-getting to know-G on the-SELF-G
'it was an opportunity to get to know oneself'
d āl-u mir-a -l-'āna, kamā naᶜtaqidu, huwa tamarrud-un ᶜalā -l-nafs-i
state-N Egypt-G now, as believe(I1cp), 3ms rebelling-N on the-SELF-G
'the state of Egypt now, we believe, is one of rebellion against itself (litt. oneself)'

Some combinations of an infinitive plus this impersonal *nafs* are so frequent that they can be considered lexical items:

28 a wa tanmiyat-i rū-i -l-jur'at-i wa -l-<u>t</u>iqat-i fī -l-nafs-i
and the-furtherance-G spirit-G the-courage-G and the-confidence-G in the-SELF-G
'and the furtherance of the spirit of courage and self-confidence'
b kamā yaᶜūdu 'ayan 'ilā arūrat-i -l-difāᶜ-i ᶜani -l-nafs-i
as return(I3ms) also to necessity-G the-defending-G from the-SELF-G
'as it is also related to the necessity of self-defence'
c 'i<u>d</u> 'anna-nā nadᶜū 'ilā ab-i -l-nafs-i
for TOP-1cp call(I1cp) to controlling-G the-SELF-G

'for we call for self-control'

The phrase *al-ṯiqa fī -l-nafs* in (28a), litt. 'the confidence in the [one's] self' simply means 'self-confidence'. Similarly, *al-difāᶜ ᶜani -l-nafs* in (28b) means 'self-defence', and *ab al-nafs* in (28c) means 'self-control'. As in English, the verbal counterparts of these collocations also exist:

29 fa -bu$_i$ nafs-a-ka$_i$
so control(impt2ms) SELF-A-2ms
'so control yourself'

3.3 *Baᶜ*

In Modern Standard Arabic, several ways of expressing reciprocity are employed. I will deal with each of them in a separate subsection. In each subsection, I will distinguish between finite verbs, infinitives and participles.

3.3.1 The Classical expression

In Classical Arabic, as explained in section 2.2.2, reciprocity is expressed by a correlative use of the word *baᶜ* 'some, several'. The first *baᶜ* receives a pronoun suffix and takes subject position. The second *baᶜ* remains indefinite and takes the position of the object, either an accusative object or a prepositional object. The verb agrees with *baᶜ* and takes the 3ms form, since *baᶜ* is a masculine singular noun.

This can be found in Modern Standard Arabic:

32 a wa yuāhiru baᶜ-u-hum baᶜ-a-n
and help(I3ms) SOME-N-3mp SOME-A-IN
'and they help each other'

b wa lā yattaiḏu baᶜ-u-nā baᶜ-a-n 'arbāb-an bidūna-llāh-i
and not take(I3ms) SOME-N-1cp SOME-A-IN masters-A without the-god-G
'we do not take each other [to be] masters without God'

c wa yajibu[10] 'an yastamiᶜa baᶜ-u-nā 'ilā baᶜ-i-n dā'iman
and must COMP listen(S3ms) SOME-N-1cp to SOME-G-IN always
'we must always listen to each other'

d wa lā yaᶜrifu baᶜ-u-hum ᶜan baᶜ-i-n māi yaᶜrifuj-hui -l-baᶜ-uj
and not know(I3ms) SOME-N-3mp about SOME-G-IN what know(I3ms)-3ms the-one-N
-l-wāid-u ᶜan nafs-i-hij wa ᶜan āl-i-hij
the-one-N about SELF-G-3ms and about state-G-3ms

10 The verb *yajibu* 'must' is impersonal: the following subclause, introduced by the complementizer *'an*, is its subject.

'they do not know about each other what every single one knows about himself and his position'

In some cases, the second *baᶜ* takes the definite article:

33 yulāqī baᶜ-u-hum al-baᶜ-a
meet(I3ms) SOME-N-3mp the-SOME-A
'they meet each other'

More often than not, however, the first *baᶜ* does not take subject position. In many cases, it is an appositive to the subject. This occurs when the subject is explicit, as in (34a), but also when it is not, as in (34b,c). The verb is conjugated, and *baᶜ* + suffix is adjoined to it:

34 a la'in inqasama$_i$ -l-nāširūna -l-lubnāniyyūna$_i$ baᶜ-u-hum$_i$ ᶜalā baᶜ-i-n
if be divided(P3ms) the-publishers(N) the-Lebanese(N) SOME-N-3mp on SOME-G-IN
'if the Lebanese publishers are divided among themselves (litt. each other)'

b 'inna-nā$_i$ lā naᶜīšu$_i$ baᶜ-u-nā$_i$ maᶜa baᶜ-i-n
TOP-1cp not live(I1cp) SOME-N-1cp with SOME-G-IN
'we do not live with each other'

c fa 'id̲ā bi-him$_i$ yataqātalūna$_i$ wa yantafiūna$_i$ baᶜ-u-hum$_i$ ᶜalā baᶜ-i-n ...
and behold-3mp fight(I3mp) and jump(I3mp) SOME-N-3mp on SOME-G-IN
'and look, here they are, fighting and attacking each other'

If the reciprocal argument is a prepositional object, and if there is an accusative object in the sentence, the appositive *baᶜ* can be placed after the object:

35 a 'an lā nusdiya$_i$ -l-'afāl-a baᶜ-u-nā$_i$ li baᶜ-i-n
COMP not confer(S1cp) the-benefits-A SOME-N-1cp to SOME-G-IN
'that we do not confer benefits on each other'

b wa hal kānū$_i$ yuliqūna$_i$ -l-nār-a baᶜ-u-hum$_i$ ᶜalā baᶜ-i-n
and INT be(P3mp) release(I3mp) the-fire-A SOME-N-3mp on SOME-G-IN
'and were they opening fire at each other?'

It is possible for *baᶜ* to take the object of the verb as antecedent:

36 a samiᶜtu sūzfī -l-maba-i (...) taribu -l-'awāniya$_i$ baᶜ-a-hā$_i$[11] bi
hear(P1cs) Suzy in the-kitchen-G (...) hit(I3fs) the-vessels-A SOME-A-3fs with
baᶜ-i-n wa tuġannī

11 Impersonal plurals (plurals of objects and abstract nouns) are treated as feminine singular in Arabic. Hence the 3fs pronoun referring to *al-'awānī* 'the vessels'.

SOME-G-IN and sing(I3fs)
'I heard Suzy in the kitchen (...) knocking the vessels against each other'

b wa alaba min 'aad-i-l-muāmīna 'allā yalia -l-'adawāt-i_i
and ask(P3ms) from one-G the-lawyers(G) COMP-not mix(S3ms) the-instruments-A
ba^c-a-hā$_i$ bi ba^c-i-n
SOME-A-3fs with SOME-G-IN
'he asked one of the lawyers that he not confuse the instruments (with each other)'

c wa -mtaddat al-uū-u$_i$ -l-tārīiyyat-u li tarbua$_i$ -l-^{c}ālam-a$_j$ -l-qadīm-a ('ifrīqiyā,
and extend(P3fs) the-lines-N the-historic-N to bind(S3fs) the-world-A the-old-A (Africa,
'āsiyā, 'urubbā) ba^c-a-hu$_j$ bi ba^c-i-n
Asia, Europe) SOME-A-3ms with SOME-G-IN
'the historic lines extended to bind the old world (Africa, Asia and Europe) (with each other)'

With reciprocal infinitives, the subject is almost always expressed, by means of a genitive noun or pronoun. The first *ba^c* is an appositive to this subject.

37 a wa -^{c}tidā'āt-u -l-^{c}arab-i_i ba^c-i-him$_i$ ^{c}alā ba^c-i-n
and attackings-N the-Arabs-G SOME-G-3mp on SOME-G-IN
'and the attacks of Arabs on each other'

b yusā^{c}idu ^{c}alā takāṯur-i -l-alāyā$_i$ wa -ltiāq-i-hā$_i$ ba^c-i-hā$_i$ bi ba^c-i-n
help(I3ms) on growth-G the-cells(G) and sticking-G-3fs SOME-G-3fs with SOME-G-IN
'it advances the growth of the cells and their sticking to each other'

c ... ^{c}an ma^{c}rifat-i-nā nanu -l-'arba^{c}at-aba^c-i-nā bi ba^c-i-n
about knowing-G-1cp 1cp the-four-A SOME-G-1cpwith SOME-G-IN
litt. 'about the acquaintance of us four with each other'
'on the fact that the four of us know each other'

Sometimes, when the subject can be deduced from the context, the infinitive can take the definite article:

38 kaffati$_i$ -l-ašarāt-u$_i$ ^{c}ani -l-qafz-i ba^c-u-hā$_i$ fawqa ba^c-i-n
cease-(P3fs) the-insects-N from the-jumping-G SOME-N-3fs above SOME-G-IN
'the insects ceased jumping over each other'

On rare occasions, *ba^c* can take the subject position with an infinitive, that is, the position of the genitive modifying the infinitive:

39 kalām-an$_i$ (...) laysat la-hu$_i$[12] 'ayy-u ^{c}alāqat-i ba^c-i-hi$_i$ bi ba^c-i-n

12 In Arabic, possession is not expressed with a verb meaning 'to have', but with a construction similar to the *dativus possessivus* found in e.g. Latin and Greek. The possessor is introduced by the preposition *li* 'to, for'. Literally,

talk-A (...) not be(3fs) to-3ms any-N relating-G SOME-G-3ms with SOME-G-IN
litt. 'talk to which there was no relation of some of it to other (elements) of it'
'talk that had no coherence in it'

(39) is also a good example of a reciprocal that has a singular noun as its antecedent. Arabic has this possibility when the noun expresses some sort of collective idea. For instance, *kalām* 'talk' can be seen as a collection of expressions. (40) is a similar case. Here, the antecedent is *al-ᶜālam al-qadīm* 'the old world', which consists of three continents (and many countries).

This Classical construction is rare with participles. The following is an example:

41 ašd-u -l-tiknulujiyāt-i_i -l-mutarākimat-i_i baᶜ-i-$hā_i$ fawqa baᶜ-i-n
accumulating-N the-technologies-G the-pile up(APfs)-G SOME-G-3fs on SOME-G-IN
'an accumulation of technologies that are piling up (on each other)'

An adjective can also be a reciprocal predicate:

42 humā qarībāni baᶜ-u-humā min baᶜ-i-n
3cd near(dN) SOME-N-3cd from SOME-G-IN
'the two of them are close to each other'

(43) presents an example of a noun with a reciprocal argument, although it is likely that the noun *āja* 'need' is felt as an infinitive here.

43 li ājat-i baᶜ-i-him 'ilā baᶜ-i-n
for need-G SOME-G-3mp to SOME-G-IN
litt. 'for the need of some of them for others'
'for their need for each other'

3.3.2 *Baᶜuhum al-baᶜ* as 'each other'

A more frequent method to express reciprocity appears at first sight to conform with the Classical construction, but when examined more closely, it turns out to be rather different. The phrase *baᶜuhum al-baᶜ* is used as a single reciprocal element, taking the position of the reciprocal argument. The first *baᶜ* is modified by the appropriate pronoun suffix and receives the appropriate case. The case of the second element, *al-baᶜ*, remains a mystery, since

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one says 'there is a car to me', meaning 'I have a car'. In (37), *la-hu* (*la* being an alternative form of *li*) performs this function.

the short vowels that indicate case endings are not written.[13] For example:

44 a wa hum$_i$ yulawwiūna$_i$ bi -l-'aydī li ba^c-i-him$_i$ al-ba^c
and 3mp wave(I3mp) with the-hands(G) to SOME-G-3ms the-SOME
'and they wave to each other'

b li'anna-nā lā nab^{c}udu kaṯīran^{c}an ba^c-i-nā -l-ba^c
because-1cp not be distant(I1cp) much from SOME-G-1cp the-SOME
'because we are not very far apart (from each other)'

c (...) sūriyā wa 'isrā'īl-u -qtarabā min ba^c-i-himā -l-ba^c ...
(...) Syria(N) and Israel-N approach(P3md) from SOME-G-3cd the-SOME
'Syria and Israel drew nearer to each other ...'

It seem likely that the same construction also occurs with verbs that select an accusative object. However, in these cases it is impossible to see whether the first *ba^c* is considered an object or an appositive to the subject. The main clue to deciding which it is, would be the case ending, which is a short vowel that is usually left unwritten.[14]

45 a wa tu^{c}azzizāni$_i$ ba^c-a-humā$_i$ -l-ba^c
and strengthen(I3fd) SOME-A-3cd the-SOME
'and they strengthen each other'

b kayfa sa[15] najidu$_i$ ba^c-a-nā$_i$ -l-ba^c
how FUT find(I1cp) SOME-A-1cp the-SOME
'how will we find each other?'

c kayfa lā tušbihu -l-'ayyām-u$_i$ ba^c-a-hā$_i$ al-ba^c
how not resemble(I3fs) the-days-N SOME-A-3fs the-SOME
litt. 'how could the days not resemble each other?'
'how could the days not all be the same?'

d yusakkinu -l-māī wa -l-mustaqbal-u ba^c-a-humā al-ba^c-a
silence(I3ms) the-past(N) and the-future-N SOME-A-3cd the-SOME-A
'the past and the future silence each other'

The examples of (45) are best analyzed as cases in which the phrase *ba^c-u-hum al-ba^c* is in object position (and therefore as having the accusative ending *-a-*). In this way, they are analogous to the examples of (45). The phrase *ba^{c}uhum al-ba^c* is a single, inseparable element, that is takes the position of the reciprocal object: in (45), it is the

13 The problem is that Classical Arabic has (overt) case, whereas the modern colloquials do not. Since MSA is basically (and ideally) Classical Arabic, it also has case. But the people using it are not accustomed to case endings, and therefore have limited intuitions about them.

14 Asking a native speaker about the proper case of the first *ba^c* is not very useful. He would probably analyze the structure of the sentence and then say it is nominative, since that is what it should be according to the grammar of Classical Arabic. What one would want to know, however, is what function the writer feels the first *ba^c* has.

15 The particle *sa*, a variant of *sawfa*, indicates future tense.

complement of a preposition, in (46), it takes object position. Consider in this respect also (46):

46 li tuᶜarrifa -l-nās-aᵢ ᶜalābaᶜ-i-hāᵢ -l-baᶜ wa tajᶜala-humᵢ
to make know(S3fs) the-people-A on SOME-G-3fs the-SOME and make(S3fs)-3mp
yafhamūnaᵢ baᶜ-a-humᵢ al-baᶜ 'akṯara fa akṯara
understand(I3mp) SOME-A-3mp the-SOME more and more
'to let the people get to know each other and make them understand each other more and more'

The first verb of (46) is reciprocal, which is expressed with *baᶜuhum al-baᶜ* in the prepositional object (*ᶜalā*). It seems likely then that the writer would choose the same construction for the other verb, which is also reciprocal.[16]

The phrase *baᶜuhum al-baᶜ* can also occur with the second *baᶜ* indefinite, as *baᶜuhum baᶜan*. These cases are interesting, since the accusative case of indefinite nouns is marked in writing, contrary to other case endings. It turns out that the second *baᶜ* usually (though not always) has accusative case, even when *baᶜuhum baᶜan* is governed by a preposition:

47 a wa huwa šabaka-t-un tarbuu -l-jāmiᶜāt-iᵢ -l-ra'īsiyyat-a bi baᶜ-i-hāᵢ
and 3ms network-f-N bind(I3fs) the-universities-A the-main-A with SOME-G-3fs
baᶜ-a-n
SOME-A-IN
'and it is a network which connects the main universities (with each other)'
b fa qaᶜadūᵢ yaštaġilūnaᵢ bi baᶜ-i-himᵢ baᶜ-a-n
and sit(P3mp)be occupied(I3mp) with SOME-G-3mp SOME-A-IN
'they sat there occupied with each other'
c ... 'anna-nā lā natafaalu ᶜalā baᶜ-i-nā baᶜ-a-n
... COMP-1cpnot oblige(I1cp) on SOME-G-1cp SOME-A-IN
'... that we do not oblige each other'

This *baᶜuhum baᶜan* can also occur in object position:

48 a wa 'adraka niyūtun 'anna -l-nujūm-aᵢtajḏibuᵢ baᶜ-a-hāᵢ baᶜ-an
and realize(P3ms) Newton that the-stars-A attract (I3fs) SOME-A-3fs SOME-A-IN
'and Newton realized that the celestial bodies attracted each other'
b wa yulaqqinūnaᵢ baᶜ-a-humᵢ baᶜ-a-n kayfa ...
and instruct(I3mp) SOME-A-3mp SOME-A-IN how ...

16 Of course, the writer might not have done so. The sentence shows that he was not very careful in writing his text: the word *al-nās* 'the people' can be referred to by either a 3mp or a 3fs pronoun. In the first reciprocal he chooses the latter option, but the rest of the pronouns referring to it are all 3mp pronouns (including the verb *yafhamūna*).

'and they instruct each other how (to) ...'

The same reservations that were made for the examples in (45) can be made here. It is possible that the first *baᶜ* in (48a,b) serves as an appositive to the subject (and has nominative case). But in such cases, the verb would agree with *baᶜ* in Classical Arabic.

Infinitives can also occur with *baᶜuhum al-baᶜ*:

49 a naran 'ilā -nfitā-i -l-ᶜālam-i$_i$ ᶜalā baᶜ-i-hi$_i$ -l-baᶜ ...
in view of opening-G the-world-G on SOME-G-3ms the-SOME
litt. 'in view of the opening of the world to each other [itself]'
'in view of the fact that the world is becoming more open'

b nanu$_i$ fī taᶜāmul-i-nā$_i$ maᶜa baᶜ-i-nā$_i$ -l-baᶜ
1cp in trading-G-1cp with SOME-G-1cp the-SOME
'we are doing business with ourselves'

c taᶜazzul-u -l-muslimīna$_i$ ᶜan baᶜ-i-him$_i$ al-baᶜ
being separated-N the-muslims(G) from SOME-G-3mp the-SOME
'the fact that muslims are separated from each other'

Baᶜuhum al-baᶜ can occur with participles, but mainly in prepositional objects:

50 a 'ilā qismayni$_i$ mustaqillayni$_i$ ᶜan baᶜ-i-himā$_i$ -l-baᶜ bi wuū-in
to parts(dG) be independent(APmdG) from SOME-G-3cd the-SOME with clarity-G
'[in]to two parts clearly independent from each other'

b al-šawāriᶜ-u$_i$ fī -l-layl-i munqaiᶜat-un$_i$ ᶜan baᶜ-i-hā$_i$ -l-baᶜ
the-streets-N in the-night-G be separated(APfs)-N from SOME-G-3fs the-SOME
'in the night, the streets are cut off from each other'

c wa kāna -l-'amīrāni$_i$ yaᶜīšāni$_i$ munfailayni ᶜan baᶜ-i-himā$_i$
and be(P3ms) the-princes(dN) live(I3md) be separated(AP3dA) from SOME-G-3cd
-l-baᶜ mundubiᶜ-i sanawāt-in
the-SOME since some-G years-G
'since a few years, the princes live apart (from each other)'

In (50), the participles perform different functions. (50a) is an example of a participle used as a attributive adjective to an indefinite noun (*qismayn*). In (50b), it serves as a predicate in a nominal sentence, and in (50c), it is a so-called *āl*-accusative, in this case a predicate to the subject of the sentence.

Baᶜuhum al-baᶜ, and its indefinite variant *baᶜuhum baᶜan*, can occur with some adjectives:

51 a al-'ašyā'-u$_i$kānat$_i$ 'aqrab-a 'ilā ba^c-i-hā$_i$ ba^c-a-n fī -l-'azminat-i -l-'ūlā
the-things-N be(P3fs) closer-A to SOME-G-3fs SOME-A-IN in the-times-G the-first(G)
'things were closer to each other in earlier times'

b fa 'awā'-u -l-masākin-i$_i$ -l-qarībat-i$_i$ jiddan min ba^c-i-hā$_i$ -l-ba^c
and lights-N -the-houses-G the-close-G very from SOME-G-3fs the-SOME
'and the lights of the houses that are standing very close to each other'

Ba^{c}uhum al-ba^c and *ba^{c}uhum ba^{c}an* are used quite frequently to modify a noun:

52 a hā'ulā'i$_i$ -llad̲īna$_i$ yanhišūna$_i$luūm-a ba^c-i-him$_i$ al-ba^c
those REL tear(I3mp) flesh-A SOME-G-3mp the-some
'those who tear each other's flesh to pieces'

b wa lākinna -l-nās-a$_i$ 'asā'ū$_i$ fahm-a aqīqat-i ba^c-i-him$_i$ al-ba^c
but the-people-A do badly(P3mp) understanding-A reality-G SOME-G-3mp the-SOME
'but people are bad at understanding each other's reality'

c lākinna-humā$_i$ (...) 'abaā$_i$ yatafāhamāni$_i$ alabāt-i ba^c-i-himā$_i$ al-ba^c
but-3cd (...) begin(P3md) understand each other(I3md) demands-A SOME-G-3cd the-SOME
'but they have begun understanding each others demands'

d li 'afāl-i -l-malā'ikat-i$_i$ -l-mašġūlīna bi natf-i rīš-i 'ajniat-i
to children-G the-angels-Gthe-occupied(G) with plucking-G feathers-Gwings-G
ba^c-i-him$_i$ ba^c-a-n
SOME-G-3mp SOME-A-IN
'to the children of the angels who are busy plucking the feathers of each other's wings'

e wa kayfa yama'innu -l-lubnāniyyūna$_i$ 'ilā usn-i niyyāt-i
and how be confident(I3ms) the-Lebanese(N) to good-G intentions-G
ba^c-i-him$_i$ ba^c-a-n
SOME-G-3mp SOME-A-IN
'and how can the people of Lebanon be confident of each other's good intentions?

f wa ^{c}alāqāt-u sukkān$_i$-i-hā ma^{c}a -l-jiwār-i
and relations-N inhabitants-G-3fswith the-neighbourhood-G
wa ma^{c}a ba^c-i-him$_i$ ba^c-a-n
and with SOME-G-3mp SOME-A-IN
'and the relations of its inhabitants with the neighbourhood and with each other'

The examples of (52d-f) clearly show that *ba^{c}uhum ba^{c}an* is considered a lexical item: the second element has accusative case (*-a-*) in spite of the fact that it modifies a noun.

3.3.3 *Ba^{c}uhum* as 'each other'

The third way to express reciprocity in Modern Standard Arabic also uses the word *baᶜ*, but not as a correlative: *baᶜ* is used only once. It takes the position of the reciprocal argument, and is modified by an appropriate genitive suffix:

53 a wa badā l-ī 'anna-nāᵢ fiᶜlan naᶜrifuᵢ baᶜ-a-nāᵢ jayyidan
and seem(P3ms) to-1cs COMP-1cp truly know(I1cp) SOME-A-1cpwell
'and it seemed to me that we really knew each other well'

b an-nās-uᵢ taqtuluᵢ baᶜ-a-hāᵢ -l-yawma wa tataālauᵢ ġadan
the-peoplekill(I3fs) SOME-A-3fs today and reconcile(I3fs) tomorrow
wa tatazāwajuᵢ baᶜda ġadin[17]
and marry(I3fs) after tomorrow
'people here kill each other today, they reconcile tomorrow and they marry [each other] the day after'

c yuaddiṯūnaᵢ baᶜ-a-humᵢ ᶜan 'abār-i -l-qurā wa -l-siyāsat-i
speak to(I3mp) SOME-A-3mp about news-G the-villages(G) and the-politics-G
'they talk to each other about the news of the villages and politics'

Baᶜuhum can also occur in a prepositional object:

54 a tamassaknāᵢ bi baᶜ-i-nāᵢ wa -qtarabnā
hold on(P1cp) with SOME-G-1cp and approach(P1cp)
'we held on to each other and came closer'

b 'anna duwal-aᵢ -l-alīj-i tusānieduᵢ baᶜ-a-hāᵢ 'amāma -l-maāir-i
COMP countries-A the-gulf-Gsupport(I3fs) SOME-A-3fs before the-perils-G
'that the Gulf states support each other when faced with danger'

c fa tabāᶜadūᵢ ᶜan baᶜ-i-himᵢ 'ālāf-a -l-sinīna -l-aw'iyyat-i
and be apart(P3mp) from SOME-G-3mp thousands-A the-years(G) the-light-G[18]
'and they are thousands of lightyears apart'

Baᶜuhum can also take the object as antecedent:

55 a affū-hāᵢ fawqa baᶜ-i-hāᵢ ...
align(P3mp)-3fs above SOME-G-3fs
'they put them [the barrels] on top of each other ...'

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17 The first verb in this sentence, *taqtulu,* has a reciprocal argument. The other two verbs are also reciprocal, but this is expressed with the verb form: *tataālau* is a conjugated form of the verb *taālaa.* This is the *takātaba*-form of *alaa* 'to be good' (see 2.3). It literally means 'to make good with one another', that is, 'to reconcile, become reconciled with each other'. The third verb, *tatazāwaju* is a conjugated form of *tazāwaja*, the *takātaba*-form of a verb meaning 'to marry'. It means 'to marry each other'.

18 The word *al-aw'iyya* is actually an adjective meaning 'of (the) light'. English uses a compound with the noun 'light-' as first element.

b 'adāra$_i$ 'ibhāmay$_j$ yaday-hi$_i$ awla baᶜ-i-himā$_j$
turn(P3ms) thumbs(dA) hands(dG)-3ms around SOME-G-3cd
'he circled his thumbs around each other'

Baᶜuhum is also used with infinitives:

56 a sawfa nastamirru$_i$ fī ru'yat-i baᶜ-i-nā$_i$ min īn-in li 'āar-a
FUT persist(I1cp) in seeing-G SOME-G-1cp from time-G to other-G
'we will keep seeing each other from time to time'
b yurīdūna arb-a-nā$_i$ bi baᶜ-i-nā$_i$, nanu -l-muraššaīna
want(I3mp) hitting-A-1cp with SOME-G-1cp 1cp the-candidates(A)
'they want us, candidates, to hit each other'
c hal tuaiūna$_i$ li -l-taᶜāwun-i 'akṯara maᶜa baᶜ-i-kum$_i$
INT plan(I2mp) to the-cooperating-G more with SOME-G-2mp
'are you planning to cooperate more with each other?'
d li ṯaqāfatayni$_i$tata ta'ṯīr-i baᶜ-i-himā$_i$
to cultures(dG) under influencing-G SOME-G-3cd
'to two cultures under influence from each other'

In (56a), *baᶜinā* is the object of the infinitive *ru'ya*. (56b) is interesting, since the subject of the infinitive is added: the pronoun suffix *-nā*. The reciprocal *baᶜinā* is part of a prepositional object. In (56c), the reciprocal is also contained inside a prepositional object. (56d) is also interesting. The reciprocal *baᶜihimā* is the subject of the infinitive *ta'ṯīr* 'influencing'. The object of this verb does not take accusative case, but is introduced with *ᶜalā* 'in' or with *fī* 'in'.[19]

Baᶜuhum can also be found with participles (57a,b) and adjectives (57c):

57 a wujūd-u farīq-i$_i$ ᶜamal-in kabīr-in munsajim-in$_i$ maᶜa baᶜ-i-hi$_i$
presence-N team-G work-G large-G be in harmony(APms)-G with SOME-G-3ms
'the presence of a large work team that is harmonious with itself (each other)'
b wa hum$_i$ lā yazālūna$_i$ mutaalliqīna$_i$ awla baᶜ-i-him$_i$
and 3mp not cease(I3mp) circle(APmpA) around SOME-G-3mp
'and they remain circling around each other'
c 'iḏākāna [$_i$ -l-kambūdiyyūna wa -l-lāwūsiyyūna wa -l-taylandiyyūna] qarībīna min
if be(P3ms) the-Cambodians(N) and the-Laotians(N) and the-Thai(N) close(mpA) from

19 Furthermore, if *baᶜihimā* were object, the preposition governing the infinitive would probably not be *tata* 'under'. If "a culture" is under the influence of something, it is of course the recipient of the influence. The genitive that modifies the infinitive, then, can only be the source of the influence, i.e. the subject of the infinitive.

ba^{c}-i-him$_{i}$

SOME-G-3mp

'if the Cambodians, the Laotians and the Thai are close together (litt. near each other)'

Ba^{c}uhum can also be used to modify a noun:

58 a wa mā<u>d</u>ā ^{c}an ilāt-i-him$_{i}$ bi ba^{c}-i-him$_{i}$

and what about ties-G-3mp with SOME-G-3mp

'and what about their ties with each other?'

b wa addaqnā$_{i}$ fī wujūh-iba^{c}-i-nā$_{i}$

and look(P1cp) in faces-G SOME-G-1cp

litt. 'and we looked in each other's faces'

'and we looked each other in the face'

c naarā$_{i}$ fī ^{c}uyūn-i ba^{c}-i-himā$_{i}$ wa kilā-himā$_{i}$ ra'ā -l-'asā -l-dafīn-a

look(P3md) in eyes-G SOME-G-3cd and both-3cd see(P3md) the-grief(A) the-buried-A

fī ^{c}aynayi -l-'āar-i

in eyes(dG) -the-other-G

'they looked each other in the eye and both of them saw the grief buried in the eyes of the other'

4. Analysis

In this chapter, I will give an analysis of the data presented in chapter 3. I will treat each category of chapter 3 separately, in the order in which I presented them. For *nafs*, I will base my analysis on Reinhart & Reuland's (1991) theory as presented in chapter 1. For *baᶜ*, Heim, Lasnik & May (1991) give some valuable insights, but as will be seen, their theory cannot explain all occurrences of *baᶜ*.

At times, I refer to examples from chapter three. I will indicate this by adding 3. to the number of the example (e.g. (3.12d) refers to example (12d) from chapter 3.).

4.1 *Nafs*

Reinhart & Reuland argue that a reflexive predicate (a predicate with two identical arguments) has to be marked reflexive. There are several ways of doing this, but Arabic has only one: the SELF-reflexive *nafs*. As I argued in section 1.5, a distinction between POSS+SELF-reflexives and OBJECT+SELF-reflexives is necessary. Arabic *nafs* is a POSS+SELF-reflexive.

The theory predicts that a (POSS+)SELF-reflexive will be bound by a co-argument of the predicate to which it is an argument. Furthermore, it states that such a reflexive will be bound in the local domain (the domain of the first subject).

4.1.1 Finite verbs

The reflexives found in the corpus that were arguments to finite verbs were all indeed bound by a co-argument of that verb. This does not seem surprising, since the purpose of reflexives is precisely to indicate that two arguments of a predicate are identical. When no two arguments are identical, there is no need for a reflexive:

1 a yuaddi̲tu$_{i}$ nafs-a-hu$_{i/*j}$ (= 3.1b)
speak to(I3ms) SELF-A-3ms
'he$_{i}$ speaks to himself$_{i/*j}$'

b yuaddi̲tu$_{i}$-hu$_{*i/j}$
speak(I3ms)-3ms
'he$_{i}$ speaks to him$_{*i/j}$'

Reflexives are also required with verbs that select a prepositional object instead of an accusative object, when they have two identical arguments:

2 a wa 'alaqa$_{i}$ -l-nār-a ᶜalā nafs-i-hi$_{i/*j}$ fa māta$_{i/*j}$ (= 3.2c)
and release(P3ms) the-fire-A on SELF-G-3ms and die(P3ms)

'he$_i$ fired at himself$_{i/*j}$ and died$_{i/*j}$ (committing suicide)'

b wa 'alaqa$_i$ -l-nār-a ᶜalāy-hi$_{*i/j}$ fa māta$_{*i/j}$
and release(P3ms) the-fire-A on-3ms and die(P3ms)
'he$_i$ fired at him$_{*i/j}$ and he$_{*i/j}$ died'

Reinhart & Reuland do not discuss optional arguments explicitly (see ch. 3, fn.3). The data shows that Arabic allows the use of locally bound pronouns in such arguments:

3 yaznaqūna$_i$ -l-iġār-a$_j$ bayna-hum$_i$ (...) wa yadfaᶜūna$_i$-hum$_j$
squeeze(I3mp) the-small(p)-A between-3mp (...) and push(I3mp)-3mp
'amāma-hum$_i$ (= 3.4c)
before-3mp
'they squeezed the small [kids] between them (...) and pushed them forward (before them)'

In (3), the arguments *bayna-hum* and *'amāma-hum* are not obligatory: the verbs *zanaqa* 'to squeeze' and *dafaᶜa* 'to push' can occur without them. It should be noted, however, that pronouns are only allowed when there is no danger of ambiguity. Given the meaning of (3), there is little danger of misinterpretation, but in certain contexts, the pronouns could indeed refer to other persons than the subject of the verb:

4 yaznaqūna$_i$ -l-iġār-a$_j$ bayna-hum$_k$ (...) wa yadfaᶜūna$_i$-hum$_j$ 'amāma-hum$_k$
squeeze(I3mp) the-small(p)-A between-3mp (...) and push(I3mp)-3mp before-3mp
'they squeezed the small [kids] between them (...) and pushed them forward (before them)'

In first and second person, ambiguity will not occur, and the use of *nafs* is not necessary, though still possible:

5 a 'aīᶜu$_i$ ᶜan-nī$_i$ fiy-ya$_i$ (= 3.b)
disappear(I1cs) from-1cs in-1cs
'I disappear from myself into myself'

b 'aīᶜu$_i$ ᶜan nafs-ī$_i$ fī nafs-ī$_i$
disappear(I1cs) from SELF(G)-1cs in SELF(G)-1cs

In Classical Arabic, bound pronouns are even allowed as obligatory arguments, if there is no danger of ambiguity, as illustrated in (6). In MSA, however, such sentences are not generally used.

6 a 'anuru$_i$ 'ilay-ya$_i$ fī -l-mir'āt-i
look(I1cs) to-1cs in the-mirror-G
'I look at myself in the mirror'

b 'arā$_i$-nī$_i$ fī -l-mir'āt-i
see(I1cs)-1cs in the-mirror-G

'I see myself in the mirror'

If a reflexive is used as argument to a finite verb, it is indeed bound within the domain predicted by the theory. But it appears that the theory cannot predict when a reflexive will be used.

4.1.2 Infinitives

In discussing the use of *nafs* with infinitives, Fassi Fehri (1982) gives the following examples:

7 a yurīdu zayd-un$_i$ insiāb-a-hu$_i$ min al-majlis-i
want(I3ms) Zeid-N withdrawing-A-3ms from the-council-G
'Zeid wants to withdraw from the council'

b * yurīdu zayd-un$_i$ insiāb-a nafs-i-hi$_i$ min al-majlis-i
want(I3ms) Zeid-N withdrawing-A SELF-G-3ms from the-council-G
'Zeid wants to withdraw himself from the council'

c āwala zayd-un$_i$ qatl-a-hu$_{*i/j}$
try(P3ms) Zeid-N killing-A-3ms
'Zeid tried to kill him/*himself'

d āwala zayd-un$_i$ qatl-a nafs-i-hi$_{i/*j}$
try(P3ms) Zeid-N killing-A SELF-G-3ms
'Zeid tried to kill *him/himself'
(Fassi Fehri, 1982: 264)

In (7a,b), Zeid is the subject of the infinitive *insiāb* 'withdrawing o.s.'[1]. If one wishes to express this, one can only use a pronoun, not a reflexive. In (7c,d), Zeid is the object of the infinitive *qatl* 'killing'. This can only be expressed with a reflexive, not with a pronoun. (8) also implies this:

8 a šadād-u$_i$ yuwāilu$_i$ -rtidā'-a-hu$_i$ li malābis-i-hi$_i$ wa tahyi'at-a
Shadad-N continue(I3ms) putting on-A-3ms of clothes-G-3ms and preparing-A
nafs-i-hi$_i$ (= 3.12d)
SELF-G-3ms
litt. 'Shadad continued his putting on his clothes and preparing himself'
'Shadad continued putting on his clothes and preparing himself'

b * šadād-u$_i$ yuwāilu$_i$ -rtidā'-a nafs-i-hi$_i$ li malābis-i-hi$_i$
Shadad-N continue(I3ms) putting on-A SELF-G-3ms of clothes-G-3ms
'Shadad continued putting on his clothes

1 The verb *insaaba*, of which *insiāb* is the infinitive, is intransitive/reflexive. It is the *inkataba*-form of *saaba* 'to pull, to withdraw s.th.'.

c * šadād-u$_i$ yuwāilu$_i$ tahyi'at-a-hu$_i$
Shadad-N continue(I3ms) preparing-A-3ms
'Shadad continued preparing himself'

In (8a), Shadad is the subject of *irtidā'* 'putting on (clothes)' and object of *tahyi'a* 'preparing'. The former is expressed with a pronoun, the latter with a reflexive. (8b,c) show that this cannot be the other way around[2]. However, the above examples do not present the full picture. (9) shows that the object of an infinitive that refers back to the subject of the governing finite verb is not necessarily expressed with a reflexive:

9 a 'i<u>d</u>ā qarrū$_i$ fī bayrūt-a āfū$_i$ ᶜalā 'anfus-i-him$_i$ istibdād-a
if settle(P3mp) in Beirut-G fear(P3mp) on SELF-G-3mp overwhelming-A
bayrūt-a bi-him$_i$/ * bi 'anfus-i-him$_i$ (= 3.12b)
Beirut-G with-3mp / with SELVES-G-3mp
litt. 'if they settle in Beirut, they fear for themselves the overwhelming of them by Beirut'
'if they settle in Beirut, they fear Beirut will overwhelm them'
b āfa zayd-un$_i$ qatl-a-hu$_i$
fear(P3ms) Zeid-N killing-A-3ms
litt. 'Zeid$_i$ feared the killing of him$_i$'
'Zeid feared that he would be killed'

The infinitive *istibdād* in (9a) is governed by the verb *āfū* 'they feared'. One of the arguments of the infinitive, *bi-him* 'with them', refers back to this subject, but can nonetheless not be a reflexive. In (9b), the covert subject of *qatl* 'killing' is not Zeid, but an anonymous person, whose identity is not important. If the pronoun *-hu* in (9b) would be replaced with a reflexive, the meaning of the sentence would change. It would then mean 'Zeid feared that he would kill himself', Zeid being both object and subject of the infinitive.

The examples of (7)-(9) show that infinitives always have a subject. If one is not expressed lexically, one is implied,[3] which will be PRO.[4] With this PRO-subject, infinitives are fully assigned predicates, which makes them binding domains for any reflexive argument:

10 a āwala zayd-un$_i$ [PRO$_i$ qatl-a-hu$_{*i/j}$][5]

---

2 (8c) is correct if the suffix *-hu* expresses the subject of the infinitive. But in that case, an object is expected.

3 This is exactly the assumption made by Classical Arabic grammarians.

4 *PRO* ('big PRO') and *pro* ('small pro') are 'silent' pronouns: in GB, it is assumed that the language module provides these implicit pronominal elements in the interpretation of a sentence to fill positions which need to be filled structurally, but remain empty in the surface structure. *pro* is identical to 'normal' pronouns, except of course for the fact that it is not pronounced. *PRO* is to some extent identical to pronouns, but it differs from them in that it cannot be governed.

5 The structural position of PRO is a question that deserves some attention, since an overt subject would take the position of a genitive modifying the infinitive. However, if the subject is covert, this position is taken by the object. Neither the subject nor the object then can be base-generated in this position. I will not go into this, here. For convenience, I will put PRO before the infinitive, though it seems unlikely that it really originates there.

try(P3ms) Zeid-N [PRO killing-A-3ms]
'Zeid tried to kill him'

b āwala zayd-un$_i$ [PRO$_i$ qatl-a nafs-i-hi$_i$]
try(P3ms) Zeid-N [PRO killing-A SELF-G-3ms]
'Zeid tried to kill himself'

c āfa zayd-un$_i$ [PRO$_j$ qatl-a-hu$_i$][6]
fear(P3ms) Zeid-N [PRO killing-A-3ms]
'Zeid feared that he would be killed'

d āfa zayd-un$_i$ [PRO$_i$ qatl-a nafs-i-hi$_i$]
fear(P3ms) Zeid-N [PRO killing-A SELF-G-3ms]
'Zeid feared that he would kill himself'

The interpretation of PRO is a complicated issue, and probably depends on pragmatic factors, not on syntax. A verb like *āwala* 'to try', as in (10a,b), forces PRO to be interpreted as referring to its subject. Because PRO and *zayd* in (10a) are co-indexed, the suffix *-hu* cannot refer to *zayd*. But when the main verb does not force this co-indexation, as *āfa* 'to fear' in (10c,d), a pronoun suffix that expresses the object of the infinitive can refer to the subject of the finite main verb, provided that PRO is not co-indexed with it. If it is, a reflexive is required.

4.1.3 Participles

Participles behave similarly to infinitives. When a participle has an object that refers to the (possibly covert) subject of the action expressed by the participle, this object has to be a reflexive:

11 a fa yakūnu$_i$ kull-u qāri'-in$_i$ [PRO$_i$ kāšif-a nafs-i-hi$_i$ (= 3.15a)
so be(I3ms) every-N reader-G [PRO discover(APms)-A SELF-G-3ms
'so every reader is a discoverer of himself'

b fa qāla$_i$ [PRO$_i$ muaddiṯ-an$_i$ nafs-a-hu$_i$] ... (= 3.18a)
and say(P3ms) [PRO talk(APms)-A SELF-A-3ms]
'and he said, talking to himself ...'

In (11a,b), the objects of the participles refer back to their subjects. This means that the participles are reflexive predicates, which is properly marked. The subject of the participle in (11c), however, is not 'you', but *al-šubha* 'the suspicion'. Therefore, *bi-ka* is bound outside its GC (the bracketed phrase, with the participle as its head):

11 c fa takallam$_i$ li tuallia$_i$ nafs-a-ka$_i$ min al-šubhat-i$_j$ [PRO$_j$
so speak(Impt2ms) to clear(S2ms) SELF-A-2ms from the-suspicion(f) [PRO

6 Of course, the pronoun suffix *-hu* can also express the subject of the infinitive. In that case, its antecedent can be Zeid, but also someone else. In this case, PRO will not be present, and one would expect an object to be added.

-l-muīqat-i bi-ka$_i$][7] (= 3.19)
the-surround(APfs)-G with-2ms]
'so speak, to clear yourself of the suspicion that surrounds you'

4.1.4 *'Afʿāl al-qulūb*

In Modern Standard Arabic, the use of *nafs* is preferred with *'afʿāl al-qulūb*:

12 a yaunnu$_i$ [nafs-a-hu$_i$ markaz-a -l-kawn-i] (= 3.20a)
think(I3ms) SELF-A-3ms centre-A the-existent-G
'he thinks himself the centre of the world'

b hum$_i$ yaʿtabirūna$_i$ ['anfus-a-hum$_i$ sabaqū$_i$] (= 3.21a)
3mp consider(I3mp) SELVES-A-3mp be ahead(P3mp)
'they consider themselves to be ahead'

Replacing the reflexives with pronouns yields sentences that native speakers accept, but they do consider them very Classical. In MSA, they will not be used:

13 a yaunnu$_i$-hu$_{ʔi/j}$ markaz-a -l-kawn-i
think(I3ms)-3ms centre-A the-existent-G
'he$_i$ thinks ?himself$_i$/him$_j$ the centre of the world'

b hum$_i$ yaʿtabirūna$_i$-hum$_{ʔi/j}$ sabaqū$_{ʔi/j}$
3mp consider(I3mp)-3mp be ahead(P3mp)
'they$_i$ consider ?themselves$_i$/them$_j$ to be ahead'

At first sight, these constructions seem to resemble the English ECM-constructions. There is one major difference, however. In English ECM-constructions, the subclause is infinitival, whereas with Arabic *'afʿāl al-qulūb*, the subclause is finite. This is an essential difference: the English infinitives are considered to be IPs, and as such, they are not independent propositions. The Arabic finite verbs, however, must be considered independent propositions, since they refer independently to a certain event (which is shown, for instance, by the fact that they have independent TPs).

The verbs of the heart then, require a different analysis. One could, of course, assume that the alternatives of (13) are equally acceptable, in which case the reflexives would be logophoric. But if one assumes that in cases like (12), *nafs* is obligatory, the examples of (12) must contain a reflexive predicate. This does not seem to be the case, since the reflexives are considered arguments to the subclause: neither the finite main verb nor the subclause then contains two identical arguments.

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7 The participle *muīqa* may not have a PRO-subject, since its subject is the noun which it modifies (*šubha*).

A closer look at the verbs of the heart reveals that the structure of these sentences is actually quite different from English ECM-constructions. Ayoub (1980) analyzes sentences like in (12) as illustrated in (14):

14 a anna$_i$ zayd-un$_i$ ᶜamr-an$_j$ yalᶜabu$_j$
think(P3ms) Zeid-N Amr-A play(I3ms)
'Zeid thought Amr playing'

b [$_S$ [$_V$ anna] [$_{NP}$ zaydun] [$_{S''}$ COMP [$_{S'}$ [^{TOP} ᶜamran] [$_S$ yalᶜabu]]]]

If COMP is empty, the topic (*ᶜamr* 'Amr' in (14b)) is case marked (and governed) by the finite verb. If COMP is filled, the topic is case marked by the lexical element filling COMP, or it takes nominative case if this element is not a case assigner. The structure of (12b) in this analysis, put in more recent terminology, is the following (where *e* indicates the empty C^0-position):

15 [$_{IP}$ hum$_i$ [$_{I'}$ yaᶜtabirūna$_i$ [$_{CP}$ 'anfusahum$_i$ *e* [$_{IP}$ sabaqū$_i$]]]]

In English ECM-constructions, the subject of the infinitival subclause moves to Spec,IP to receive case. Infinitival IP is assumed not to be a case assigner, which means that the subject has to receive case from the matrix verb. In Arabic, however, the embedded IP is finite and therefore it can assign case to its subject. Since *'anfusahum* does not receive case from *sabaqū* (if it did, it would be nominative), it is not its subject. The structure of (12b) then must be (16):

16 [$_{IP}$ hum$_i$ [$_{I'}$ yaᶜtabirūna$_i$ [$_{CP}$ 'anfusahum$_i$ *e* [$_{IP}$ *pro*$_i$ sabaqū$_i$]]]]

Ayoub (1980: 38) also allows sentences like (17), which supports this analysis:

17 anna$_i$ zayd-un$_i$ ᶜamr-an$_j$ al-rajul-u$_k$ yaribu$_k$-hu$_j$
think(P3ms) Zeid-N Amr-A the-man-N hit(I3ms)-3ms
litt. 'Zeid thought Amr$_j$, the man hit him$_j$'
'Zeid thought that Amr was hit by the man'

In (17), *al-rajul* 'the man' is the subject of the verb *yaribu* 'he hits'.[8] *ᶜamr* is not. The structure of (17) is given in (18):

18 [$_{IP}$ anna$_i$ [$_{VP}$ zayd-un$_j$ [$_{CP}$ ᶜamr-an$_j$ [$_{IP}$ al-rajul-u$_k$ yaribu$_k$-hu$_j$]]]]

In the analysis of (18), the first object of a verb of the heart is not an argument of the embedded clause, it is its

8 I will ignore questions concerning sentence structure in Arabic. Much can be said about this, but that would be beyond this thesis. (See Bolotin (1995) for a discussion of the different proposals for Arabic sentence structure.) For convenience, I will assume that *al-rajul* in (17) is in Spec,IP and *ᶜamr* in Spec,CP.

topic. That explains the resumptive pronoun *-hu*$_i$ that refers to *ᶜamr*.

Verbs of the heart apparently have a topic-comment structure[9] as their complement. The topic is governed by the main verb. If this topic refers to the subject of the main verb, it has to be expressed with a reflexive in MSA. Apparently, the topic, not being an argument to the embedded verb, is considered an argument to the main verb *yaᶜtabirūna*. This verb then, having two identical arguments, is reflexive, which is properly marked.[10]

4.1.5 Other contexts

The examples of (19) present examples in which *nafs* is part of the predicate of a nominal sentence.

19 a 'antumu -l-ᶜirāqiyyūna$_i$ [PRO$_i$ qusāt-un idda 'anfus-i-kum$_i$
2mp the-Iraqis(N) [PRO harsh(p)-N against SELVES-G-2mp
wa bilād-i-kum$_i$] (= 3.23a)
and country-G-2mp]
'you Iraqis are harsh against yourselves and your country'

b 'anna -l-ākimīna$_i$ fī ihrān-a hum$_i$ [PRO$_i$ 'aswa'-u -l-'aᶜdā'-i
COMP the-rulers(A) in Teheran-G3mp [PRO worst-N the-enemies-G
li 'anfus-i-him$_i$] (= 3.23b)
to SELVES-G-3mp]
litt. 'that the rulers in Teheran are the worst (of the) enemies for themselves'
'that the rulers in Teheran are their own worst enemies'

c 'inna 'aġlab-a -l-ak-i huwa [PRO$_i$ -l-ak-u ᶜalā 'anfus-i-nā$_i$] (= 3.23c)
TOP most-A the-laughing-G 3ms [PRO the-laughing-N on SELVES-G-1cp]
litt. 'most of the laughter is laughter at ourselves'
'When we laugh, we mostly laugh at ourselves'

For (19a,b), one can say that the reflexives are arguments to adjectives that refer back to the subjects of those adjectives. These subjects are the subjects of the sentences. In (19c), the reflexive is bound by the covert subject of the infinitive *al-dak* 'the laughing', as becomes clear when the reflexive is replaced by a pronoun:

20 'inna 'aġlab-a -l-ak-i huwa [PRO$_i$ -l-ak-u ᶜalāy-nā$_j$]
TOP most-A the-laughing-G 3ms [PRO the-laughing-N on-1cp]
litt. 'most of the laughter is laughter at us
'When people laugh, they mostly laugh at us'

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9 A 'nominal sentence' (*jumla ismiyya*), as Arab grammarians called it (see 2.1.2).

10 It is not clear how this argument status should be described structurally. Perhaps topic-comment structures are adjunctions, the comment being adjoined to the topic. The topic would then be a real argument to the main verb, and the comment a predicate adjoined to it.

The examples of (21) show that *nafs* can be used logophorically.

21 a ayr-un min rabb-i-nā wa šarr-un min 'anfus-i-nā (= 3.24a)
good-N from lord-G-1cp and evil-N from SELVES-G-1cp
'good comes from our lord, evil comes from ourselves'

b lā ayāt-a la-nā bi ġayr-i 'anfus-i-nā (= 3.24b)
no life-A to-1cp with other than-G SELVES-G-1cp
'there is no life for us with anyone but ourselves'

Both in (21a) and (21b), *'anfusinā* is unbound. Since the reflexive is not an argument to a predicate, the theory allows it here. Furthermore, the theory predicts that a logophoric reflexive is not in complementary distribution with pronouns. (22) shows that pronouns are indeed allowed here, although it should be noted that the expressiveness of the sentences is lost:

22 a ayr-un min rabb-i-nā wa šarr-un min-nā
good-N from lord-G-1cp and evil-N from-1cp
'good comes from our lord, evil comes from us'

b lā ayāt-a la-nā$_i$ bi ġayr-i-nā$_i$
no life-A to-1cp with other than-G-1cp
'there is no life for us with anyone but us'

The following examples of reflexives modifying a noun imply that a noun can serve as GC, and consequently have a subject:

23 a li'anna-hum$_i$ aāyā 'anfus-i-him$_i$ qabla 'an yakūnū$_i$ aāyā
because-3mp victims(N) SELVES-G-3mp before COMP be(S3mp) victims(A)
-l-mujtamaᶜ-i wa -l-'āarīna (= 3.25a)
the-society-G and the-others(G)
'because they are victims of themselves before they are victims of society and of others'

b lā 'astaīᶜu 'an 'aᶜīša miṯlamā ᶜāša -bn-u lā 'aad-in. ibn-u lā
not be able(I1cs) COMP live(S1cs) as live(P3ms) son-N not one-G son-N not
šay'-in. ibn-u nafs-i-hi (= 3.25e)
thing-G son-N SELF-G-3ms
'I cannot live like no-one's son. Like the son of nothing. Like his$_i$ own son$_i$'

In (23a), *'anfusihim* modifies the noun *aāyā* 'victims'. This noun has to be the GC of the reflexive. If it were not, it would be possible to replace the reflexive with a pronoun, since possessive pronouns can be locally bound. The same is true for (23b):

24 a li'anna-hum$_i$ aāyā$_i$-hum$_{*i/j}$ qabla 'an yakūnū$_i$ aāyā -l-mujtama^c-i
because-3mp victims(N)-3mp before COMP be(S3mp) victims(A) the-society-G
wa -l-'āarīna
and the-others(G)
* 'because they are victims$_i$ of them$_i$ before they are victims of society and of others'

b lā 'astaī^{c}u 'an 'a^{c}īša miṯlamā ^{c}āša -bn-u lā 'aad-in. ibn-u lā
not be able(I1cs) COMP live(S1cs) as live(P3ms) son-N not one-G son-N not
šay'-in. ibn$_i$-u-hu$_{*i/j}$
thing-G son-N-3ms
* 'I cannot live like no-one's son. Like the son of nothing. Like his$_i$ son$_i$'

(25) shows some 'out of the ordinary' uses of *nafs*, but considering the remarks above, they do not pose any problems:

25 a za^{c}āmat-un ^{c}ālamiyyat-un min naw^c-in$_i$ farīd-in li nafs-i-hi$_i$ (= 3.26a)
leadership-N world-N from kind-G unique-G to SELF-G-3ms
'a world-leadership unique of its kind (litt. unique to itself)'

b min al-adīq-i -l-^{c}azīz-i jiddan 'ilā nafs-i-ka (= 3.26b)
from the-friend-G the-dear-G very to SELF-G-2ms
'from the [your] very dear friend to yourself'

c fa sa'ala$_i$-hu$_j$ ^{c}an 'aabb-i 'aġānī-hi$_j$ 'ilā nafs-i-hi$_j$ (= 3.26c)
and ask(P3ms)-3ms about most beloved-G songs(G)-3ms to SELF-G-3ms
litt. 'and he asked him about the most beloved of his songs to himself'
'and he asked him which of his songs he liked most himself'

In (25a), the reflexive is an argument to an adjective (*farīd* 'singular, unique') that modifies the noun *naw^c*, 'kind'. This noun is the antecedent of the reflexive. By analogy with participles, one can consider this *naw^c* the subject of the adjective. The adjective, then, is a reflexive predicate, which is properly marked.

The reflexive *nafsika* in (25b) is definitely logophoric. This is corroborated by the fact that it is easily replaceable with a pronoun.

The reflexive in (25c) is logophoric: it can be replaced with a pronoun without changing the meaning of the sentence. The adjective *'aabb* 'most beloved' presumably has a subject, but that would be *'aġānī-hi* 'his songs'. The argument *'ilā nafsihi* is not a reflexive argument, which makes the reflexive *nafsihi* logophoric and enables the use of a pronoun.

4.1.6 Impersonal use

There is no reason to assume that the use of *al-nafs* as an impersonal reflexive obeys other rules than the personal reflexive *nafs-u-hu.* One can simply assume a PRO-subject for the infinitive to which *al-nafs* is an argument. This PRO has no definite referent:

26 lākin lā jadwā min [PRO_i muāda^{c}at-i -l-nafs-i_i] (= 3.27a)
but no use from [PRO deceiving-G the-SELF-G]
'but there is no use in deceiving oneself'

One interesting fact, though, is that *al-nafs* does not have an overt pronominal element. One could assume that it has a covert pronominal element (presumably pro), or one could argue that it does not have a pronominal element at all. That would render PRO superfluous as subject of the infinitive. The first option seems preferable, since in that way one can retain uniformity in the analysis of infinitives.

4.1.7 Conclusion

The use of the Arabic reflexive *nafs* generally complies with the predictions made by Reinhart & Reuland's theory. If *nafs* is used with a verb, either a finite verb, a nominal infinitive or a participle, it has to find its antecedent among its c-commanding co-arguments.

However, as has been seen, the fact that two co-arguments of the same head are identical does not mean a reflexive has to be used, although in MSA there is indeed a tendency to do so when the arguments are obligatory. This may indicate that Arabic has undergone a similar development as Ancient Egyptian (see ch. 1, fn. 16). There may have been a (pre-Classical or proto-Semitic) period in which reflexives did not exist. Through a period when reflexives were optional, used to avoid ambiguity (Classical Arabic), the language has now reached a stage in which reflexives are obligatory in certain contexts.

The data suggest that adjectives and at times even nouns must be considered to have subjects, since they can serve as binding domain for reflexives. Furthermore, it has been shown that *nafs* also allows logophoric use, outside the domain of the first subject.

4.2 *Ba^c*

4.2.1 The Classical expression

The Classical way to express reciprocity in Arabic seems to comply with Heim, Lasnik & May's (1991) theory (see section 1.4). They state that reciprocal expressions like English *each other* contain a distributor (*each*) that moves and adjoins to the antecedent at LF, and a reciprocator (*other*) that remains in object position. According to the Minimalist Program (Chomsky, 1995), movements are universal. Languages can differ, however, in the moment when movements take place. Movement can take place before SPELL-OUT (the actual uttering of a sentence),

which means it is visible in the sentence structure, or it can take place after SPELL-OUT, which means it is not visible in the sentence structure. In both cases however, movement does take place.

In the Classical reciprocal construction, the movement of the distributor of a reciprocal expression takes place before SPELL-OUT, as is illustrated by (27):[11]

27 a la'in [$_{IP}$ inqasama$_i$ [$_{VP}$ -l-nāširūna$_i$ -l-lubnāniyyūna [$_{VP}$ ba$^c{}_1$-u-hum$_i$]]
if [be divided(P3ms) [the-publishers(N) the-Lebanese(N) [SOME-N-3mp]]
^{c}alā[e_1 ba^c-i-n]] (= 3.34a)
on [SOME-G-IN]]
'if the Lebanese publishers are divided among themselves'[12]

b 'inna-nā$_i$ lā [$_{IP}$ na^{c}īšu$_i$ [$_{VP}$ *pro*$_i$ ba$^c{}_1$-u-nā$_i$] ma^{c}a [e_1 ba^c-i-n]]] (=3.34b)
TOP-1cp not [live(I1cp) [*pro* SOME-N-1cp] with [SOME-G-IN]]]
'we do not live with each other'

c taribu [$_{V'}$ -l-'awāniy-a$_i$ [$_{V'}$ ba$^c{}_1$-a-hā$_i$]] bi [e_1 ba^c-i-n] (=3.36a)
hit(I3fs) [the-vessels-A [SOME-A-3fs with [SOME-G-IN]
'(I heard Suzi in the kitchen ...) knocking the vessels against each other'

The antecedent can be subject or object: the distributor can adjoin to either: in (27a) it adjoins to the (explicit) subject *al-nāširūna -l-lubnāniyyūna* 'the Lebanese publishers'. In (27b) it also adjoins to the subject, but here it is a *pro*-subject. In (27c), the distributor adjoins to the object of the finite verb *al-'awānī* 'the vessels'.[13]

When pro is subject, however, the distributor does not necessarily adjoin to it. It can also take its place. This means that the verb agrees with *ba^c*, not with the logical subject, which can only be identified by the pronoun suffix of *ba^c*:

28 a wa [$_{IP}$ yuāhiru$_i$ [$_{VP}$ ba$^c{}_{i,1}$-u-hum [$_{V'}$ e_1 ba^c-a-n]]] (= 3.32a)
and [help(I3ms) [SOME-N-3mp [SOME-A-IN]]]
'and they help each other'

b wa yajibu'an [$_{IP}$ yastami^{c}a$_i$ [$_{VP}$ ba$^c{}_{i,1}$-u-nā [$_{V'}$ 'ilā e_1 ba^c-i-n]]]

11 For convenience, I indicate coreference and agreement with letters, and movement with numbers.

12 It should be noted that Classical Arabic has another way of phrasing (27a): the distributor *ba^c* takes subject position, and the logical subject *al-nāširūna -l-lubnāniyyūna* follows *ba^c* in the genitive. The verb agrees with *ba^c*:

i la'in [$_{IP}$ inqasama$_i$ [$_{VP}$ ba^c-u$_{i,1}$ -l-nāširīna -l-lubnāniyyīna] ^{c}alā[e_1 ba^c-i-n]]
if [be divided(P3ms) [SOME-N the-publishers(G) the-Lebanese(G)] on [SOME-G-IN]]
'if the Lebanese publishers are divided among themselves'

Structures like in (i) were not found in the corpus, but in Classical Arabic, they are not uncommon. Apparently, the reciprocator can take subject position not only when the subject is *pro*.

13 Another possible analysis might be to consider the phrase *al-'awāniya$_i$ ba^c-a-hā$_i$ bi ba^c-i-n* 'the vessels against each other' a small clause that serves as object to the verb *taribu* 'she hits'. In this way, the distributor would adjoin to the subject of the small clause.

and must COMP [listen(S3ms)[SOME-N-1cp [to SOME-G-IN]]]
dā'iman (= 3.32c)
always
'we must always listen to each other'

Infinitives pattern like finite verbs with *ba^{c}*. The distributor usually adjoins to the subject of the infinitive, which is of course a genitive modifying the infinitive, as in (29a). Sometimes, if the subject is implicit, the distributor can take subject position, as in (29b):

29 a wa -^{c}tidā'āt-u [$_{NP1}$ -l-^{c}arab-i$_{i}$ [$_{NP2}$ ba^{c}-i-him$_{i}$]] ^{c}alā ba^{c}-i-n (= 3.37a)
and attackings-N [[the-Arabs-G SOME-G-3mp]] on SOME-G-IN
'and the attacks of Arabs on each other'

b kalām-an$_{i}$ (...) laysat la-hu$_{i}$ 'ayy-u [$_{NP1}$ ^{c}alāqat-i [$_{NP2}$ ba^{c}-i-hi$_{i}$]]
talk-A (...) not be(3fs) to-3ms any-N [relating-G [SOME-G-3ms]]
bi ba^{c}-i-n (= 3.39)
with SOME-G-IN
litt. 'talk to which there was no relation of some of it to other (elements) of it'
'talk that had no coherence in it'

In (30), the distributor does not take subject position (the infinitive *qafz* 'jumping' has the definite article, and can therefore not be modified by any genitive). It is apparently adjoined to an implicit subject, presumably PRO (which may suggest that PRO follows the infinitive):

30 kaffati$_{i}$ -l-ašarāt-u$_{i}$ ^{c}ani -l-qafz-i ba^{c}-u-hā$_{i}$ fawqa ba^{c}-i-n (= 3.38)
cease-(P3fs) the-insects-N from the-jumping-G SOME-N-3fs above SOME-G-IN
'the insects ceased jumping over each other'

The following sentences, however, seem to contradict what has been said above:

31 a 'an lā nusdiya$_{i}$ -l-'afāl-a ba^{c}-u-nā$_{i}$ li ba^{c}-i-n (= 3.35a)
COMP not confer(S1cp) the-benefits-A SOME-N-1cp to SOME-G-IN
'that we do not confer benefits on each other'

b * 'an lā nusdiya$_{i}$ ba^{c}-u-nā$_{i}$ -l-'afāl-a li ba^{c}-i-n
COMP not confer(S1cp) SOME-N-1cp the-benefits-A to SOME-G-IN
'that we do not confer benefits on each other'

c wa hal kānū$_{i}$ yuliqūna$_{i}$ -l-nār-a ba^{c}-u-hum$_{i}$ ^{c}alā ba^{c}-i-n (= 3.35b)
and INT be(P3mp) release(I3mp) the-fire-A SOME-N-3mp on SOME-G-IN
'and were they opening fire at each other?'

d * wa hal kānū$_{i}$ ba^{c}-u-hum$_{i}$ yuliqūna$_{i}$ -l-nār-a ^{c}alā ba^{c}-i-n

and INT be(P3mp) SOME-N-3mp release(I3mp) the-fire-A on SOME-G-IN
'and were they opening fire at each other?'

If the distributor would really adjoin to the subject, (31b) and (31d) should be allowed. However, in MSA, they are not, because, as one informant put it "baᶜuhum ᶜalā baᶜin should be close together". This would suggest that Heim, Lasnik & May's analysis is not correct for Arabic.

But it should be kept in mind that the construction under discussion is classical. In the modern colloquial varieties of Arabic, it does not exist. Therefore, the use of this construction in MSA may be merely an attempt at copying the Classical Arabic construction, rather than creative use of it. The following quotations from the Koran show that Classical Arabic did not require the two *baᶜ*s to be "close together":

32 a wa 'ūlū$_i$ -l-'arām-i baᶜ-u-hum 'awlā bi baᶜ-i-n
and possessors(N) the-kinships-G SOME-N-3mp closer with SOME-G-IN
litt. 'and possessors of kinships, SOME of them are closer to SOME
'and those who are akin, are nearer to one another'
(8,75; translation: Khatib, 1984)

b wa taraknā baᶜ$_i$-a-hum yawma'i<u>d</u>in yamūju$_i$ fī baᶜ-i-n
and let(P1cp) SOME-A-3mp that-day surge(I3ms) in SOME-G-IN
litt. 'and We will leave SOME of them on that day surge in SOME'
'And We shall leave them that day to undulate one against the other'
(18,99; translation: Khatib, 1984)

Though the sentences of (32) are structurally different from those of (31), it is obvious that the distributor and the reciprocator are not near each other.[14] The fact that speakers of MSA prefer the two together, indicates that this construction is not really productive any more. One salient feature of the Classical construction is that when the reciprocal argument is a prepositional object, the first *baᶜ* precedes the preposition. A native speaker can simply apply this 'trick' to obtain a sentence that seems perfectly correct Classical Arabic, but in reality the true structure of the construction is not fully understood.

4.2.2 *Baᶜuhum al-baᶜ* and *baᶜuhum* as 'each other'

I will treat *baᶜuhum al-baᶜ* (or *baᶜuhum baᶜan*) and *baᶜuhum* together, since structurally, these two expressions are identical. They are both simplex lexical elements, combined with a pronoun suffix.[15] As such, they are similar to the

14 (32b) is actually quite interesting. Its structure is similar to the *'afᶜāl al-qulūb*: the distributor *baᶜahum* is governed and case-marked by the main verb *taraknā.*

15 The fact that *baᶜuhum al-baᶜ* consists of two independent words does not change this. The two words always appear together in a fixed order, with no intervening element, except for the suffix (or infix?). One could also argue that the reciprocal is *baᶜuhum*, which can, but does not have to be, followed by *al-baᶜ* or *baᶜan*. In this view, this second element would only be added to clarify the meaning of *baᶜuhum*, which, after all, can be 'some of them' as

Dutch reciprocal *elkaar* (see section 1.4) with the exception that the latter does not contain a pronominal element.

Ba^{c}uhum (al-ba^{c}), as has been illustrated in sections 3.3 and 3.4, occurs in argument positions to verbs (either finite verbs, infinitives or participles) and to adjectives. In section 1.4, I argued that simplex reciprocal elements could be analyzed as forming a reflexive predicate. If the reciprocal element is an independent lexical element, reciprocal predicates cannot be lexical, that is, contained in the lexicon. Rather, they are formed at LF. This would mean that, much like complex reciprocal expressions such as the English *each other*, simplex reciprocal elements move. Unlike *each other*, though, they will presumably adjoin not to their antecedent, but to their governing predicate. The LF of (33a) would then be (33b):

33 a wa tu^{c}azzizāni$_{i}$ ba^{c}-a-humā$_{i}$ -l-ba^{c} (= 3.45a)
and strengthen(I3fd) SOME-A-3cd the-SOME
'and they strengthen each other'

b wa [$_{IP}$ [$_{IP}$ tu^{c}azzizāni$_{i}$ ba^{c} al-ba$^{c}{}_{1}$] e_{1} -humā$_{i}$

The pronoun suffix of the first *ba^{c}* remains in object position, since *ba^{c} (al-ba^{c})* is moved through head-to-head movement.

This process is identical to the one proposed by Reinhart & Reuland for SELF-reflexives. If SELF-reflexives and *ba^{c}uhum (al-ba^{c})* are interpreted in identical ways, their distribution should be identical as well. The data obtained from the corpus suggest that this is indeed the case. Both *nafs* and *ba^{c}uhum (al-ba^{c})* are bound within the domain of the first subject, and neither *nafs* nor *ba^{c}uhum (al-ba^{c})* is subject oriented.

There are two uses in which the SELF-reflexive *nafs* and the reciprocal *ba^{c}uhum (al-ba^{c})* differ. These differences can probably be ascribed to pragmatic factors. First, *nafs* can be used logophorically. But the reasons for using logophoric SELF-reflexives lie in pragmatics. A logophoric SELF-reflexive is a *reflexive* lexical element (*nafsuhu* or *himself*) that is used to express a *non-reflexive* argument (an argument that does *not* refer to a c-commanding co-argument). As such, the function of a SELF-reflexive is extended beyond reflexive contexts, to express empathy or to stress an argument. With this extension, it loses its funciton as a reflexive marker.

Simplex reciprocal expressions are apparently not used in a similar way. Their function is not extendend to express non-reciprocal arguments. And indeed, it seems difficult to imagine what such a logophoric reciprocal could express.

Second, reciprocals are used quite frequently as genitives modifying nouns, as illustrated in (34):

34 a lākinna-humā$_{i}$ (...) 'abaā$_{i}$ yatafāhamāni$_{i}$ alabāt-i ba^{c}-i-himā$_{i}$
but-3cd (...) begin(P3md) understand each other(I3md) demands-A SOME-G-3cd
al-ba^{c} (= 3.52c)
the-SOME
'but they have begun understanding each others demands'

b wa kayfa yama'innu -l-lubnāniyyūna$_{i}$ 'ilā usn-i niyyāt-i (= 3.52e)
and how be confident(I3ms) the-Lebanese(N) to good-G intentions-G

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well as 'each other'.

ba^{c}-i-him$_{i}$ ba^{c}-a-n
SOME-G-3mp SOME-A-IN
'and how can the people of Lebanon be confident of each other's good intentions?

c hā'ulā'i$_{i}$ -llad̲īna$_{i}$ yanhišūna$_{i}$luūm-a ba^{c}-i-him$_{i}$ al-ba^{c} (= 3.52a)
those REL tear(I3mp) flesh-A SOME-G-3mp the-SOME
'those who tear each other's flesh to pieces'

d li 'afāl-i -l-malā'ikat-i$_{i}$ -l-mašġūlīna bi natf-i rīš-i 'ajniat-i
to children-G the-angels-Gthe-occupied(G) with plucking-G feathers-Gwings-G
ba^{c}-i-him$_{i}$ ba^{c}-a-n (= 3.52d)
SOME-G-3mp SOME-A-IN
'to the children of the angels who are busy plucking the feathers of each other's wings'

Presumably, *ba^{c}uhum (al-ba^{c})* can adjoin to the verb by moving through the empty Spec-position of the noun. There is no reason why this option should not be open to *nafs*, but nonetheless, *nafs* is not used in similar structures. Instead, the use of pronouns is allowed. The reason for this is probably to be found in pragmatic factors. To determine what these factors are exactly, is beyond this thesis.

4.2.3 Conclusion

Although MSA uses two fundamentally different ways to express reciprocity, it seems safe to say that *ba^{c}uhum (al-ba^{c})* is the 'normal' reciprocal in MSA. What has been called 'the Classical expression' above is probably nothing more than a copy of the Classical reciprocal. Further research into the nature of the Classical reciprocal is desirable, obviously on a corpus of Classical Arabic texts, to determine in how far it complies with Heim, Lasnik & May's theory and to see what mechanism allows the reciprocator to take subject position.

The modern reciprocal expression, *ba^{c}uhum (al-ba^{c})* resembles SELF-reflexives. SELF is a referential noun that has the function of relating its pronoun to a co-argument. *Ba^{c}uhum (al-ba^{c})* also performs this function, but in such a way that the antecedent is distributed. The differences in distribution that exist between *ba^{c}uhum (al-ba^{c})* and *nafs* are pragmatic, and they support the suggestion that any syntactic binding theory can only describe the domain in which an anaphor will be bound, not prescribe when an anaphor is to be used.

5 Conclusions

In this chapter, I will summarize the findings and the conclusions of this thesis and make some suggestions for further research.

In sections 1.1 and 1.2, I discussed the standard version of the binding theory as proposed by Chomsky. In section 1.3, some problems concerning this theory have been discussed, together with two alternative proposals for the binding theory. From these alternatives, it has become clear that several distinctions should be made that are not made in the standard binding theory.

First of all, there is a need for a distinction between a morphological identification or even definition of reflexive lexical elements on the one hand and a syntactic definition of reflexive arguments on the other. Burzio (1991) shows that a reflexive argument is not always expressed with a reflexive lexical element, and Reinhart & Reuland make it clear that reflexive lexical elements are not solely used to express reflexive arguments. They can also be used to express non-reflexive arguments, e.g. to stress these arguments or to convey empathy with them. Such uses are called logophoric.

Second, it seems desirable to distinguish between several types of reflexive elements, as Reinhart & Reuland (1991) make clear. They distinguish between SE-reflexives, like Italian *sé*, and SELF-reflexives, like English *himself*, and in section 1.5, I argue that SELF-reflexives should be further divided into POSS+SELF-reflexives, like Arabic *nafsī*, litt. 'my soul', which contains a possessive, and OBJ+SELF-reflexives, like Dutch *mijzelf* litt. 'me self', which contain an object pronoun.

On the whole, the issue of reflexives has not yet been resolved satisfyingly.

In section 1.4, I discuss the theory of Heim, Lasnik & May (1991) for the English reciprocal *each other*, who assume that the first element *each* (the distributor) moves and adjoins to the antecedent. Based on evidence from Dutch, that has a reciprocal that does not comply with this theory, I argued that there are two ways of expressing reciprocity: an analytical construction like English *each other*, and a synthetic construction, that uses a simplex reciprocal element, like Dutch *each other*. The latter may also take the form of a reciprocal verb derivation, like Classical Arabic has.

In chapter 2, I present the discussion of Arabic reflexives, reciprocals and pronouns as given by traditional grammar. Some interesting points are raised here that deserve further attention, such as pronouns used as copula, reference to a reflexive expression by means of a pronoun, reflexive and reciprocal verb derivations, etc.

Chapters 3 and 4 present and analyze the data found in the corpus. It has been found that in Modern Standard Arabic, reflexive *nafs* is used to express (obligatory and optional) reflexive arguments. Non-obligatory reflexive arguments can be expressed with pronouns. Furthermore, it has been shown that all verb forms, that is finite verbs, (nominal) infinitives and participles, have a subject, either explicit or implicit, that can serve as antecedent for reflexives. As such, verb forms are always binding domains for the reflexive *nafs*. The data shows that *nafs* can also be used logophorically, to express arguments that are not reflexive.

Furthermore, the judgments given by informants suggest that the use of *nafs* in Classical Arabic was somewhat less strict. It would seem that Classical Arabic allows reflexive arguments to be expressed with pronouns. This is a question that deserves some further research.

The reciprocal expression used in Modern Standard Arabic seems to be a simplex lexical reciprocal which is combined with a possessive pronoun suffix. I proposed that it should be analyzed in the same way that Reinhart & Reuland (1991) analyze SELF-reflexives. The data suggest that the two expressions have identical distributions, except for two contexts. First, the Arabic reciprocal is not used logophorically (that is, to express

arguments that are not reciprocal). The reasons for using reflexives in this way are pragmatic, and apparently, no such pragmatic use can be made of reciprocals. Second, reciprocals can be used as genitives modifying nouns, to express possession. *Nafs* is not used in this way: possessive pronouns can have a reflexive meaning. One obvious function of reflexives in this position would be to express 'one's *own*', but Arabic has another method for this. Nor is it necessary, apparently, to use *nafs* in this position for anything else.

Modern Standard Arabic also uses the Classical Arabic reciprocal expression. This has rather a different structure, and the data suggest that speakers of MSA do not fully master this structure. At first sight, it seems to comply with Heim, Lasnik & May's (1991) analysis of English *each other*, but some facts suggest that it requires a somewhat, though not fully, different approach. The main difference seems to be that the distributor does not adjoin to the antecedent, but takes the argument position of its antecedent. The antecedent modifies the distributor and takes genitive case. The Classical reciprocal, however, would deserve further research to determine its exact properties.

One important point emerges from thesis. It seems that the use of reflexives is not controlled by syntax. It is a fact that arguments of a predicate can be reflexive (that is, referring to a co-argument). Expressing such arguments with pronouns can lead to ambiguity. Reflexives can be used to avoid this ambiguity. But at times, other methods are used to avoid such ambiguity, which results in contexts in which reflexives are not used (and considered ungrammatical). One example of such contexts is the possessive pronoun. English nor Arabic allows reflexives as possessives. At times, too, the ambiguity is accepted, and nothing is done to avoid it. And in other cases, expressing reflexive arguments with pronouns does not result in ambiguity at all, making a reflexive undesirable or even ungrammatical. The use of reflexives to express reflexive arguments, then, is controlled by pragmatic factors. A syntactic theory cannot predict when a reflexive will be used. It can only describe its binding domain, if one is used.

Just as reflexive arguments are not always expressed with reflexives, not all reflexives express reflexive arguments. Such logophoric uses of reflexives are controlled by pragmatic factors, certainly not by syntax.

What is true of reflexives, is probably also true for reciprocals. It seems likely, then, that logophoric uses of reciprocals will occur in some languages (although it is hard to imagine what a logophoric reciprocal would express), and there may be languages that allow reciprocal arguments to be expressed with pronouns (although the danger of being misunderstood when doing so seems even greater than with reflexive arguments).

The issue of pragmatic factors influencing or determining the use of reflexives and reciprocals deserves a great deal more attention.

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