Numerical Construct States in Modern Hebrew, Arabic and colloquial Arabic of the Triangle area in Israel

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***Abstract*—** This paper attempts to outline the substantial amount of differences in the behavior of Construct States (CS) in Modern Hebrew, Standard Arabic and Colloquial Arabic; especially in definiteness, phonological manipulations, and coordination. It discusses the features of CS in relation to the issues of pragmatic ambiguities, adjective nesting, and construct state embedding within each other.

***Keywords*—** Construct states, Numerical Construct states, Definiteness, Phonological Manipulations, Coordination.

I. Introduction

THIS paper was written in order to provide answers for these three main questions:

- In what way Hebrew and Arabic Construct States are similar or different?
- What bits from the numerical constructions follow from the construct state forms, and what follows from the numbers behavior (in both of Hebrew and Arabic)?
- How definiteness is influenced by the above mentioned patterns?

This paper showed that there is a substantial amount of differences existent in the behavior of CS in Modern Hebrew, Standard Arabic and Colloquial Arabic; especially in definiteness, phonological manipulations and coordination. Below I will discuss these aspects and further add to the issues of pragmatic ambiguities, adjective nesting, and construct state embedding within each other.To begin with, Arabic doesn't have phonological manipulations carried on its CS in general and this can be attributed to the mopho-phonological structure of its letters or words perhaps [its orthography]. The second difference among Hebrew and Arabic CS appears when we have a CS with coordinated heads. Instead of having a CS head form we get a plural nominal lacking the morphological marking of CS in Arabic. In other words: instead of having 'mu`alli**mu'** (as a CS head); we have 'm`almin' (i.e. teachers (Noun Phrase)).This is because CS forms are used more frequently in the Standard Arabic form rather than the colloquial one. In the colloquial form they use the same Noun Phrase head (not a CS head) to also imply a CS semantically.

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In cases where we have an adjective interpreted as either modifying the head of a CS or the head of a genitive phrase we have semantic ambiguity in Standard Arabic. As it was previously mentioned; Bardeas, 2008, presented the example: *bab bait kabeer*. She argued that the adjective *kabeer* can be comprehended as modifying the *bab (i.e. door)* or *bait (i.e. house).* The problem here lies in that all of the components of this lexical expression carry the same gender category of a masculine singular. This raises the complexity of interpreting the phrase, in addition to the other feature of Arabic language which allows the sequencing or nesting of adjectives and nominals in some cases. However, colloquial Arabic of the Triangle area of Israel succeeds in cancelling this ambiguity because it has another word used for *bait* which is *dar* and this word is feminine in gender. Thus, the speaker of the last adjective in the phrase must determine the gender of the adjective to maintain grammaticality and consequently disambiguate the expression.

Bardeas, 2008 continues to present challenging cases where we have a modification of a CS head and the genitive as well. In this case; Arabic in both of its discussed forms permits nesting. However, I am not certain of the validity of nesting adjectives in Modern Hebrew.

When addressing the numerical CS it was clear that the Arabic grammatical system is highly complex on this matter. By reviewing the expression *šlošet ha yeladim* (i.e. the three children) in Hebrew we produced three different forms in Standard Arabic and Colloquial Arabic. Each of these forms has its own features in terms of word order, phonological manipulations, and definiteness; resulting from their syntactic semantic nature [i.e. behaving as number, adjectival phrases or CS forms].

Definiteness was among the prominent differences seen in numerical CS in Hebrew and Arabic. The adjectival structure of Standard Arabic (1.b) *al-awlad al-thalatha* (i.e. the three children) showed that definiteness is not present only on the annex as it is the case in Hebrew. And this is due to the adjectival nature of the expression which obligates agreement in the morphological marker of definiteness in this case. This behavior was seen also in the equivalent numerical expression in colloquial Arabic. Moreover, a question that remains to be answered is that: why do we get phonological reduction of the numerical in the numerical structure of colloquial Arabic; while the same structure lacks phonological reduction in the Standard Arabic?

Hebrew presents the preposition šel as an alternative used when attempting to disambiguate a CS semantically. For instance, 1)*tmunat ha nasi* (i.e. the president's picture) would become *ha tmuna šel ha nasi* (i.e. the picture of the president). However, even the preposition šel raises serious complexity when translating it to Arabic. Arabic doesn't have an exact translation for it, and instead; it has more than one option to be used. It can be replaced by: *li (to), al (of), taba`(of (m)), al-tabi`a (which belongs (m))*. All of which have the same meaning, yet, they are different in the syntactic and morphological changes they cause to the sentence once inserted.

When considering the possible interpretations of a CS in terms of definiteness we believe that there is a great need for the use of pragmatics for interpretation matters. This was especially evident in the interpretation which states that: *only the CS as a whole is interpreted definite* (e.g. *tmunat ha nasi*) and its Arabic equivalent *(e.g. surat al-ra`*is) which follow from this require the usage of pragmatics in order to correctly interpret it.

Finally, reviewing the literature about definiteness in Arabic revealed an interesting aspect of Arabic in having an indefinite article. The indefinite article in Arabic is only used in the Standard form and it is called "nunation" marked with the suffix *–n* (Shlonsky 2004; Wright 1896, among others). Nunation cannot appear on the head of a CS but rather on the genitive noun of an indefinite CS (Bardeas, 2008). See the example below:

Om (*on) taalib- *(in)

Mother (f-s-nom) student (m-s-gen)

"a mother of a student"

The above example has the semantic meaning of: a mother of a student which can be any student in the range of individuals having the properties of being students. Colloquial Arabic on the other hand signals indefiniteness by the absence of a definite article only because it lacks indefinite article. Therefore, the example below is interpreted indefinite both on the genitive phrase and the whole CS:

Bab bait

Door (m-s) house (m-s)

" a door of a house"

This example above semantically means that the reference is made to the door of any house. The word "bait" lacks nunation and any punctuation as opposed to the previous example presented in Standard Arabic. These features do not exist in Modern Hebrew and seek further investigation attempting to locate their alternatives or close equivalents.

SUMMARY OF COMPARISON BETWEEN GENERAL AND NUMERICAL PROPERTIES OF MODERN HEBREW CS AND STANDARD ARABIC AND COLLOQUIAL ARABIC:
*Key: * means 'yes', x means 'no'.*

General CS property	MH	SA	CA
nouns followed by an annex	*	*	*
Primary stress is found on the annex and the head undergoes various phonological manipulations	*	X	x
Constructs can combine with coordinate heads	*	*	x
The annex must be a noun phrase	*	*	*
Phonological reduction of the head	*	X	x
The definite article is attached only once to the annex	*	*	*
Head cannot be directly modified	*	*	*
The annex can be referred pronominally	*	*	*
Annex can be pluralized	*	*	*
Numerical CS property			
Phonological reduction of the numerical	*	(a) x	*
		(b) x	x
		(c) *	*
Definiteness only marked on the annex	*	(a) x	x
		(b) x	x
		(c) *	*
No material can intervene between the numerical head and the annex	*	(a) *	*
		(b) x	*
		(c) *	*

Reviewing the above table reflects on the differences and similarities in the behavior of CS in general and of CS numericals in specific. It is shown that the behavior of a CS in Modern Hebrew, Standard Arabic and Colloquial Arabic fluctuates especially in the areas of stress, coordination, phonological reduction and definiteness. Numerical construct state forms reflect greater discrepancies due to the three possible varieties semantically equivalent to the Hebrew CS numerical expression.

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