

The Periphrastic Passive Grammaticalization in Modern Standard Arabic

by

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ABSTRACT

Natural languages go through two major cycles in their diachronic change. A high synthetic marking characterizes the first cycle, and a high analytic marking characterizes the second. This thesis investigates an emerging analytic passive in Modern Standard Arabic (MSA), representing the analytic cycle. This construction is designated periphrastic passive since two grammatical morphemes mark the passiveness. The older morphological passive construction in Classical Arabic (CA) and MSA, representing the synthetic cycle, is juxtaposed with the periphrastic passive. Given the inconsistent passive characterization in the literature, the comparison between the two passive forms is couched in the prototypical passive analysis.

This thesis seeks to show that the periphrastic passive in MSA has grammaticalized to perform the passive function. It argues that the main verb in the periphrastic passive, i.e., *tamma/yatimmu*, has grammaticalized to a passive auxiliary. The corpus data of CA and MSA about *tamma/yatimmu* complementation, the subject-verb agreement, and the frequency of *tamma/yatimmu* show the grammaticalization of the periphrastic passive. The lexical source of the auxiliary *tamma/yatimmu*, i.e., ‘finish,’ is also attested to perform the passive function in Colloquial Icelandic (CI). The commonality between the lexical sources in the two passive constructions in MSA and CI suggests that the lexical source ‘finish’ could serve as a lexical source of passive constructions.

DEDICATION

To those who believed in me

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CHAPTER 1

INTRODUCTION

Overview

The morphological system in Arabic marks various constructions, such as anticausatives, reflexives, reciprocals, and passives. However, new constructions have emerged in Modern Standard Arabic, emphasizing the syntactic marking and replacing the older morphologically marked ones. The current construction that the thesis investigates, i.e., the periphrastic passive, follows this pattern (Abdelfattah, 1990). Furthermore, this is consistent with the general pattern in the evolution of languages, which is going from synthetic to analytic and back to synthetic again, as observed by Hodge (1970) in his analysis of old Egyptian, Late Egyptian, and Coptic.

The thesis argues that the main verb in the MSA periphrastic passive shows auxiliary properties, such as selecting a non-finite complement. The grammaticalization of the main verb *tamma/yatimmu* to an auxiliary provides new data to the documentation of the lexical sources of passives. It also widens our perspective on how natural languages perform passive in a syntactic structure.

In this chapter, I will provide a brief introduction to linguistic varieties and concepts. These sections may seem unrelated; however, they are crucial to understanding the concepts in the following chapters. Therefore, I will talk about Classical Arabic, Modern Standard Arabic, the case system in CA and MSA, and grammaticalization.

Classical Arabic (CA)

Classical Arabic (CA) refers to the form of Arabic that was predominant from the 7th century to the 18th century, at least in the written form (Ryding, 2005). CA is considered “the endpoint of a development within the complex of varieties of Old Arabic” (Owens, 2006, p. 5). According to Holes (2018), all the scholarly works in this era were written in Classical Arabic. However, the constancy of CA in the written form does not reflect the development of spoken varieties. Therefore, this form of Arabic continued to be the main form of written Arabic until the 18th century.

Modern Standard Arabic (MSA)

While Modern Standard Arabic (MSA) enjoys traditional continuity with CA, new expressions, constructions, and stylistic forms have emerged in MSA. Gully (1993) provides various formal and syntactic aspects that distinguish MSA from CA. Ryding (2005) holds that the spread of universal education and media has solidified MSA's status as the language of education and literature. Therefore, MSA is considered the *lingua franca* in the Arab world.

The Case System in CA and MSA

The following description of the case system in CA and MSA is mainly taken from Ryding (2005). The CA's and MSA's case systems are an inflectional short, sometimes long, vowels that appear word-finally on nouns, adjectives, adverbs, and participles. The case marking is divided into the nominative case --u and -uu, the accusative case -a and -aa, and the genitive case -i and -ii. The NOM case is assigned to

subjects and vocatives. The GEN case is typically assigned to prepositional objects and the second nouns in the construct state. The ACC is assigned to direct objects and locative adverbs.

(1) (Provided by the author)

Katab-a	l-katib-u	l-risala-t-a	bi-l-Galam-i
Wrote-3ms	the-writer-NOM	the-letter-FEM-ACC	with-the-pen-GEN
‘The writer wrote the letter with the pen’			

The case marking on the DPs shows the relationships and the roles of these words in the structure. The subject in the above sentence *l-katib-u* ‘the-writer-NOM’ is assigned the NOM case, while the direct object *l-risala-t-a* ‘the-letter-FEM-ACC’ is assigned the ACC case. The PP *bi-l-Galam-i* ‘with-the-pen-GEN’ is assigned the GEN case since it is preceded by a preposition.

Grammaticalization

According to Hopper (1991), the first attestation of the term grammaticalization was in Meillet (1912). Meillet defined grammaticalization as "the attribution of a grammatical character to a previously autonomous word" (1912:131, as cited by Hopper, 1991). This definition is very concise and seems to overlook some details in the grammaticalization process. A relatively recent and comprehensive definition is provided by (Van Gelderen, 2011), who defined grammaticalization as "a process whereby lexical items lose phonological weight and semantic specificity and gain grammatical functions" (p.5). This definition underscores mechanisms involved in the grammaticalization process. Such mechanisms change the lexical item from its original lexical sense, *source*, to a more grammatical element, *target*. Therefore, the investigation of grammaticalization

typically looks into the relationship between sources and targets and the mechanisms that modulate their diachronic and synchronic relationship (Kuteva et al., 2019). This relationship has been referred to in the literature as "cline," "continuum," "pathway," "channel," and "chain" (Hopper and Traugott, 2003, p.6). Hopper and Traugott (2003) sketched the cline of grammaticalization in the following way.

(2)

content item > grammatical word > clitic > inflectional affix

The cline shows that the grammaticalization starts with a lexical item that loses some of its lexical sense and gains a grammatical function. The grammatical word is phonologically reduced and cliticizes to the neighboring item. The last stage represents the change from a clitic to an affix.

Van Gelderen (2011) shows how the changes in argument status go in tandem with the morphosyntactic changes in the cline.

(3)

a. phrase > word/head > clitic > affix > 0
 b. adjunct > argument > (argument) > agreement > 0

The chain shows the phases that lexical items go through from a phrase to a total loss of the grammaticalized item. As a clausal element, the grammaticalized item typically starts as an adjunct and becomes an argument. Due to the phonetic reduction, the argument contracts and becomes an agreement marker which eventually disappears from the language. As evident from the above clines, grammaticalization is unidirectional because it moves from one side to the other in an irreversible process.

The chains of grammaticalization are typically documented from one point in the chain. The documentation can track the evolution of a *source*, be it lexical or not, to observe the possible *targets*. The other way is to start from a *target* and go back to see what *sources* brought about the current form. Kuteva et al. (2019) utilize methods in documenting grammaticalizations.

The thesis will be organized as follows: In Chapter two, I will discuss the typology of passive voice and how it is perceived in the literature. I will also introduce Shibatani's (1985) prototypical view of passiveness to help us identify passive constructions. I will also discuss the morphological passive in CA and MSA using the prototypical passive properties. The analysis of passive construction based on Chomsky (1984) is also presented and applied to CA and MSA morphological passive. Chapter three explores the periphrastic passive in MSA and sheds light on the constituents involved in the periphrastic passive. Chapter four discusses auxiliaries and their distinctive properties from full verbs. I will also introduce the grammaticalization process *auxiliation*, which is responsible for producing auxiliaries. Based on this, I will discuss the methodology for my corpus research. I will also introduce the corpora for CA and MSA data. Chapter five will introduce the results for both CA data and MSA data. The data prove that the main verb in the periphrastic passive has auxiliated. I will discuss the implication of the results to our overall understanding of passive grammaticalization. Chapter six provides a summary and a conclusion for the thesis.

CHAPTER 2

THE TYPOLOGY OF PASSIVES

Grammatical Voice

Voice is a mapping operation, realized mainly from its diathetic-alternations effect on the argument structure, e.g., the active-passive alternation, the active-middle alternation, hence the name diathesis (Vulchanova, 2012). Linguists differ as to what constructions can be subsumed under the *voice* category; therefore, some label causatives and antipassives *voice* phenomena while others exclude such constructions.

The *voice* category shifts the canonical unmarked basic syntactic structures to morphologically marked syntactic structures. Linguists often treat the formally unmarked construction as “a vantage point from which the other structures are characterized” (Zúñiga and Kittilä, 2019, p. 5). Thus, in English, for instance, the passive voice is syntactically and morphologically distinctive by an auxiliary and a participial inflection from the less-marked active voice. However, cross-linguistically, such a distinction does not hold as some languages do not show this markedness. For example, Palu’e, an Austronesian language from Indonesia, does not show any specific verbal morphology for the passive voice.

(1)

(Donohue 2005: 60)

a. Ia cube vavi va’a.

3sg shoot pig dem

‘He shot the pig.’ (active voice)

- b. Vavi va'a ia cube.
Pig dem 3sg shoot
'That pig was shot by him.' (Passive voice)

The two sentences above show no difference in terms of markedness. The only difference deduced from the sentences is the order of the arguments: 'ia' (3sg) and 'vavi va'a' (pig that).

This further problematizes the voice category and calls for non-formal criteria to be considered, such as "frequency of occurrence" (Donohue, 2005). The differences in what constructions are subsumed under *voice* and the criteria that define different diathetic operations are manifested in *voice* definitions. For example, Polinsky (2001) defines *voice* as the category that "relates the participant roles associated with arguments [to] the grammatical functions of the noun phrases (NPs) expressing these arguments" (p. 6348). On the other hand, Shibatani (2006) defines *voice*, as worded by Arka and Wouk (2014), as:

a language-specific system of grammatical opposition pertaining to stages of event realization and the conceptual-pragmatic relevance of the participants of the event. The opposition may be coded by at least one of the following strategies: different verbal marking [...], different argument marking [...], and different linear order [...]. Voice alternation often, but not necessarily always, involves a change of grammatical relations. (p. 314)

While Polinsky's (2001) definition specifies the function of the voice category to the mapping of semantic roles to grammatical positions, Shibatani (2006) provides a broader definition that includes "event realization," which is typically attributed to

internal and external aspects. Although there is a peripheral overlap between voice and aspects, be it internal or external (Vulchanova, 2012), the primary function of voice is to relate the semantic roles, i.e., agent, patient, etc., to the grammatical positions, i.e., subject, object, etc.

This chapter provides an overview of the passive voice and its perception in the literature. Given that the passive voice is still a debatable phenomenon and following Murgida (1993), I apply Shibatani (1985) prototypical passive modal since it offers an empirical ground upon which passiveness can be measured. I discuss five prototypical passive properties in the context of CA and MSA morphological passive. The passive morphological behaviors in CA and MSA reflect all the prototypical passive properties, as argued by Murgida (1993). The last section shows that the standard analysis of passive constructions in Generative Grammar applies neatly to the morphological passive in CA and MSA.

Passive Voice

The passive-active alternation is the typical way passive and active voices are conceptualized (Siewierska, 1988). The differences between active and passive morphology, syntax, and semantics define active and passive sentences (Wanner, 2019). According to Legate (2014), “the passive is a basic voice in perhaps 43% of the world’s languages” (p.10). What we call *passive voice* refers to cross-linguistically heterogeneous constructions (Chomsky, 1981), and providing a unitary analysis of those constructions is an elusive task, so much so that there is not “a single property which all these constructions have in common” (Siewierska, 1984: 1). Therefore, what is considered to be passive remains open to discussion.

Canonical and Non-Canonical Passives.

Non-canonical passive refers to constructions that perform the passive function but do not necessarily align with the formal properties of passive constructions (Alexiadou and Schäfer, 2013). The typical examples for canonical and non-canonical passives are *be*-passive and *get*-passive, respectively. The behaviors of *be*-passive and *get*-passive overlap in some aspects and diverge in others (Fox and Grodzinsky, 1998). Other languages have similar canonical and non-canonical constructions (Siewierska and Bakker, 2013). This raises a theoretical challenge to linguists because the sheer variety of passive resists a formal analysis. Such complexity of passive voice merits a prototypical analysis to identify passive constructions. This analysis should extract optimal/prototypical properties of passive construction across languages and show what properties canonical and non-canonical passives have in common.

The Prototypical Passive Treatment

A comprehensive prototypical view of the passive constructions is suggested by Shibatani (1985). He viewed passiveness as a set of properties that constitute passive constructions' prototype. Constructions might perform the passive function if they satisfy some of the prototypical properties. This prototypical approach to passiveness offers an explanatory framework for various passive constructions and enables us to identify passive constructions. Therefore, following Murgida (1993), I will adopt Shibatani's prototypical treatment of passiveness in this thesis and compare the morphological passive in Arabic with the periphrastic one. Let us now consider the prototypical properties of passives as proposed by Shibatani (1985).

a. Primary pragmatic function: Defocusing of agent.

b. Semantic properties:

(1) Semantic valence: Predicate (agent, patient).

(2) Subject is affected.

c. Syntactic properties:

(1) Syntactic encoding: agent -> (not encoded).

patient > subject.

(2) Valence of P[redicate]: Active = P/n;

Passive = P/n- 1.

d. Morphological property:

Active = P;

Passive = P[+passive] (P.837).

Although the defocusing pragmatic property of passive refers to various strategies employed to defocus the subject, such as "blurring of the identity of an agent by the use of plural forms" (Shibatani, 1985:832), it can be subsumed under agent demotion since the two properties seem to overlap in Arabic and thus, I will only use agent demotion for both properties.

I will also assume that the extant arguments reflect the semantic valence; thus, I will not consider the potential valence emanated by verbs' meaning as in, for example, "kill" and "die," which syntactically have two arguments and one argument, respectively. The semantic valence remains the same despite the valence-changing phenomena they undergo. Since nothing hinges on this difference between syntactic and semantic valence,

at least in Arabic, I will collapse the semantic property (b1) with the syntactic property (c2).

Therefore, the pragmatic function and the semantic valence will be collapsed with other properties as nothing hinges on these two properties in CA and MSA passives. We can then reduce the prototypical properties of the passive in MSA to the following properties.

- 1- Agent demotion, or external argument demotion
- 2- Theme promotion, or internal argument promotion
- 3- Valence-reduction
- 4- Special passive morphology
- 5- Subject affectedness

The top three properties are syntactic properties since their effect will be reflected in sentence arguments. The fourth property is a morphological one since it bears on whether a special morphology marks the passiveness. The last property is a semantic property because it emphasizes the subject affectedness in the passive construction as a distinctive property of the prototypical passive.

Shibatani (1985) views active-passive alternation as a continuum where prototypical passive is at one end and the unmarked active construction is at the other end. Such a concept of passive phenomena helps us make sense of various passive-like constructions that do not necessarily fall under prototypical passive cross-linguistically.

I will now turn to each of these five properties to provide a comprehensive account of how they are understood in the literature and then discuss the properties through the CA

and MSA morphological passive. I will use Murgida (1993) discussion of the prototypical passive properties in the context of Arabic as needed.

The External Argument Demotion

The external argument demotion is a process by which an external argument, typically the agent, is de-subjectivized by relegating it to the oblique position (Lyngfelt and Solstad, 2006; Perlmutter & Postal 1983; Siewierska, 1988). Demotion can also delete the external argument by passivization (Lyngfelt and Solstad, 2006).

While it is typical of passivization to demote agents, the subject position can be assigned non-agent roles. It follows then that by-phrases to which external arguments are demoted are not always restricted to a specific theta-role, e.g., agent (Wanner, 2009; Marantz and Netlibary, 1984). The following active-passive alternants illustrate this.

(2) (Wanner, 2009)

- a. The client admired the picture. / The picture was admired by the client.
- b. The sudden noise frightened the children. / The children were frightened by the sudden noise.
- c. They sent me a letter. / I was sent a letter by them.

The subject position in (2) a,b and c houses different theta-roles which are experiencer, causer and agent, respectively. The corresponding passive sentences reflect the same theta-roles in the by-phrases.

The External Argument Demotion in Arabic.

Passive constructions in Arabic are reported to be agentless in the sense that agents are demoted by deletion (Saad, 1982). The equivalent of English by-phrases are

reported as not grammatical in Arabic. However, such a conclusion is problematized by many instances in newspapers and various media outlets where passives occur with expressions that contain passive demoted agents (Maalej, 1999). Saad (1982) quotes Ahmed Kamal El-Din Abdel-Hamid, who states the following:

[I]n contemporary practice one frequently meets, especially in newspapers and translations from European languages with constructions such as *min qibali* ‘on the part of’, *ala yadi* ‘at the hand of’, *bi-wasitati* ‘by means of’ or *bi-* ‘by’ which are used to express the agent after a verb in the passive (p.36).

Holes (1995) confirms that such expressions with the demoted agents are “syntactic transfer from European languages” (p. 260).

The following sentences are examples of these expressions:

(3) (from Saad, 1982)¹

a. *dummir-at* *al-madinat-u* *bi* *n-nabalm*
 Destroyed.PASS-3fs the-city-Nom by the-napalm

‘The city was destroyed by napalm’

b. *qutil-a* *Zayd-un* *ʕala* *yadi* *ʕaduww-ih*
 Killed.PASS-3ms Zayd-Nom on hand enemy-his

‘Zayd was killed on the hand of his enemy’

The underlined expressions contain demoted external arguments which are the equivalent of agentive by-phrases in English.

¹ The glossing is provided by the author.

The Internal Argument Promotion

The internal argument promotion refers to a morphosyntactic transformational process by which objects of active transitive verbs are subjectivized (Siewierska 1988; Haspelmath 1990). In other words, when the direct object of the active verb is passivized, it raises to the vacant demoted subject position. From this perspective, passive is viewed as a promotional phenomenon (Shibatani, 1985). Pragmatically, such a syntactic process emphasizes the promoted argument (Wanner, 2009).

In English, the active object moves up to the external argument position and sits in the specifier of the TP, as we will discuss in the passive analysis below. Consider the following active-passive alternants.

(4)

- a. The dog chased the cat
- b. The cat was chased by the dog

It is clear from the corresponding passive sentence (4)b that the passivization process reconfigures the active sentence from a less-marked word order to a marked one, wherein the theme ‘the cat’ assumes a higher position in the structure.

While it is true that the promotion of the internal argument is one of the distinctive characteristics of passive constructions (Siewierska 1988), the passivization can take place without it. The movement of the complement is determined by its syntactic category. A movement to the subject position is obligatory for the nominal objects, while the clausal complements cannot undergo such a process (Wanner, 2009). Consider the following sentences:

(5)

(from Wanner, 2009)

- a. It was explained [why they had left early].
- b. *It was explained the reason for their early departure

In sentence (5)a, the complement of the verb did not undergo the movement to the subject position since clauses are not “subject to the Case Filter.” This means that clauses are not required to move to be assigned a case. Thus, the placeholder expletive ‘it’ can occupy the subject position. However, since “every noun with a phonetic matrix must have a Case” (Chomsky, 1984: 49), sentence (5)b is ungrammatical as the NP must move up to satisfy the Case Filter.

The Internal Argument Promotion in Arabic.

Unlike English, where the NP must move to the spec of the TP to satisfy its case requirement, the subject nominative case in CA and MSA is assigned to the closest nominal to the passivized verb (Saad, 1982). The following active-passive alternants illustrate this:

(6)

(From Saad, 1982)²

- a. dharab-a Zayd-un Amr-an
 beat.Pst-3ms Zayd-Nom Amr-Acc

 Zayd beat Amr

- b. dhurib-a Amr-un
 beat.Pst.PASS-3ms Amr-Nom

 ’Amr was beaten

² The glossing is provided by the author.

(7)

- a. aʕtay-tu Zayd-an Kitab-an
 gave-1sg Zayd-Nom Kitab-Acc
 ‘I gave Zayd a book’
- b. uʕtiy-a Zayd-un kitab-an
 gave.PASS-3ms Zayd-Nom Kitab-Acc
 ‘Zayd was given a book’
- c. uʕtiy-a kitdb-un Zayd-an
 gave.PASS-3ms kitab-Nom Zayd-Acc
 ‘A book was given to Zayd’

The nominative case ending -un is assigned to the agent subject, and the accusative case ending -an is assigned to the object as in (6)a. In the corresponding passive construction (6)b, the verb has the passive perfective vocalic pattern and agrees with the closest DP, i.e., ‘Amr,’ in the phi-features (Fassi Fehri, 1993). The object of the active sentence (6)a ‘Amr-an’ (Amr-Acc) is assigned the subject nominative case -un. In sentence (7)a, the verb ‘ʔaʕtay-tu’ (gave-3sg) is a ditransitive verb that takes two objects: a theme (kitab) and a goal (Zayd). The two objects are assigned the accusative case ending -an. In the two corresponding passive sentences (7) b and c, only one of the two objects is assigned the nominative case, namely, the closest NP to the passive verb. Thus, in (7)b, the goal ‘Zayd’ is promoted to the subject position and assigned the nominative case. The opposite is observed in (7) c, where the theme is marked with the nominative case.

However, when the object of the verb is a prepositional object, it cannot be assigned the nominative case, and thus it keeps its genitive case. The verb is passivized as an impersonal passive as it carries the default 3ms features (Saad, 1982: 61-64). Consider the following sentences.

(8) (From Saad, 1982)

a. jaʔ-a Zayd-un bi Hind-in
 brought-3ms Zayd-Nom prep Hind-Gen
 ‘Zayd brought Hind’

b. jiʔ-a bi Hind-in
 brough.PASS-3ms Prep Hind-Gen
 ‘Hind was brought’

(9)

a. ʔist-anjad-a Zayd-un bi Amr-in
 REQ-Helped-3MS Zayd-Nom Prep Amr-Gen
 Zayd asked for help from ‘Amr’

b. ʔust-unjid-a bi Amr-in
 REQ-helped.PASS-3ms Prep Amr-Gen
 Amr was asked for help’

In (8)a, the subject is assigned the nominative case -un, and the object is assigned the genitive case -in since it occurs after the preposition ‘bi’. In the corresponding passive

sentence, the prepositional object cannot have the subject case ending as the genitive case assigner ‘bi’ precedes the object ‘Hind-Gen.’ The verb has the default phi-features 3ms, which does not agree with the object phi-feature, i.e., 3fs.

The same observation applies to active-passive alternants (9) a and b, wherein the verb has 3ms features, and the object is assigned the genitive case.

Special Passive Morphology

While the “special passive morphology,” at its face, seems to refer to the verbal marking or synthetic aspects of passives, Shibatani (1985) uses this property to refer equally to passives marked by affixes and those which are marked by auxiliaries. According to Haspelmath (1990), the most common passive morphology is affixal passive. Haspelmath (1990) further provides seven “morphological expression types,” including stem affix, auxiliary, non-bound particle, etc. Passive constructions, marked by auxiliaries, the so-called periphrastic passives, are attested mainly in Indo-European languages and, not as many, in the languages of Africa and the Americas (Siewierska and Bakker, 2013). Examples of passive auxiliaries are *be*-passive in English, *werden* in German, and *blive* in Danish. Some passivization processes are less-attested cross-linguistically. For example, the stem modification is distinctive of Semitic passivization and rarely appears outside this language family (Siewierska and Bakker, 2013).

Special Passive Morphology in Arabic.

Arabic morphological system is distinguished by having consonantal roots of three and four consonants. These roots occur in different words with various vocalic Patterns, conveying meanings around a specific semantic field (McCarthy, 1981). For example, the root ktb is found in words such as ‘katab’ (wrote), kaatib(writer), kitab

(book), etc. it is clear from these words that the root ‘ktb’ denotes writing-related meanings. With this morphological system in mind, passivation in MSA utilizes a process called “melodic overwriting” (McCarthy and Prince, 1990; Bat-El, 1994), whereby active verbs vocalic patterns are substituted by *u-i* in perfective verbs and *u-a* in imperfective verbs. This morphological process of passivization is very productive because it applies to all transitive verbs with no exceptions (Laks, 2013:164). The following table shows how passivization productively transfers active transitive verbs with different vocalic patterns to the passive vocalic patterns.

Table 1

The passive vocalic melody with various verb forms in CA and MSA

	Perfective		Imperfective	
	Active	Passive	Active	Passive
a	Katab-a Wrote-3ms He wrote	Kutib-a wrote.PASS-3ms it was written	yaktub write.3ms he writes	Yuktab write PASS.3ms it is written
b	Kattab-a Wrote.CAUS-3ms He made _ write	Kuttib-a Wrote.CAUS.PASS-3ms he was made to write	Yukattib write.CAUS.3ms He makes _ write	Yukattab write CAUS.PASS.3ms he is made to write
c	Kaatab-a Wrote.ASS-3ms	Kuutib-a wrote.ASS.PASS-3ms	Yukaatib Write.ASS.3ms he corresponds	Yukaatab wrote. ASS.PASS.3ms

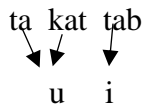
	He corresponded to	he was corresponded to		he is corresponded to
d	Takaatab-a Wrote.REC-3ms they corresponded (to each other)	Tukuutib-a Wrote.REC.PASS- 3ms they were corresponded (to each other)	Yatakaatab write. REC.3ms they correspond to each other	Yutakaatab write REC.PASS.3ms they are corresponded (to each other)
e	Takatab-a wrote.REFL-3ms It wrote himself	Tukuttib-a wrote REFL.PASS- 3ms It was written by himself	Yatakatab write. REFL.3ms It writes himself	Yutakatab write. REFL.PASS.3ms It is written by himself

Note. (Adapted from McCarthy, 1981:385)

The above table presents five different verb forms for the root *ktb*. The first form of verb is the base verb form, having only two vowels *a-a* in the perfective and *a-u* in the imperfective. Such vocalic patterns are substituted by *u-i* in the perfective and *u-a* imperfective. The same rule applies to the second form: the causative one, as it has two vowels that alternate to their corresponding passive vocalic patterns. The passivization in these forms applies in a one-to-one fashion (Laks, 2013, p. 163). The other three forms, associative, reciprocal, and reflexive, differ from the previous two because they contain more than two vowels in their active vocalic patterns. Therefore, after the melodic

overwriting occurs, the passive vowels spread to the leftmost vowels in the perfective passive and the rightmost vowels in the imperfective. Let us look at the reflexive form in (e). The active perfective verb is ‘takattab’, which contains three vowels. When passive vocalic pattern *u-i* applies to the perfective form, *takattab* becomes *tukuttib*. The vowel *u* replaces the initial two vowels, letting the last vowel be replaced by *i* vowel. Thus, the passive vocalic pattern is *u-u-i* since the vowel *u* spreads to substitute the two initial vowels in the following manner.

(10)



The direction of the vowel spread is to the opposite side in the imperfective form. The reflexive imperfective active verb ‘yatakattab’ alternates to the corresponding passive form ‘yutakattab’. The imperfective passive vocalic pattern is *u-a*. The initial vowel *u* substitutes the initial vowel in the active vocalic pattern and the vowel spreads to the right³, replacing the following vowels.

(11)

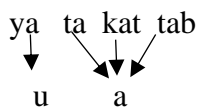


Table 1 shows how the melodic overwriting applies productively to various verbs regardless of the vocalic patterns.

³ It should be noted that the directionality of the Arabic writing system is written from right to left; therefore, the description of the passivisation process applies to the transliterations here.

Valency Reduction

According to Crystal (2011), the term valency is first introduced by Lucien Tesnière (1893– 1954). It refers to the number of arguments that a verb can take. In active constructions, a verb has a predetermined number of arguments. On the other hand, in the marked constructions, the verb’s valency undergoes alternation due to various valency-changing operations such as causativization and passivization, which result from adding and reducing arguments, respectively (Laks, 2013). The voice phenomenon, under which passive falls, “denotes a particular alternation in a verb’s argument structure” (Alexiadou, 2014, p. 20). The passive morphology, instantiated in English by participle inflection and in Arabic by melodic overwriting, reduces valency as the external arguments are demoted or deleted. The following pair of sentences shed light on this property of passives:

- (13) (From Roberts, 1988)
- a. John Kissed Mary
 - b. *Mary was Kissed John

The verb in (13)a takes two arguments: the agent ‘John’ and the theme ‘Mary’. When the passive morphology applies to the verb as in (14)b, the verb cannot support two arguments; hence the ungrammaticality of (13)b.

Valency Reduction in Arabic.

The same valency-reduction affect is manifested in Arabic passive morphology. Consider the following sentences.

(14)

- a. akal-a Amr-un a-ttufaħa-t-a
 ate-3ms Amr -NOM the-apple-Fem-ACC
 ‘Amr ate the apple’
- b. *ukil-at Amr-un a-ttufaħa-t-a
 ate.PASS-3fs Amr-NOM the-apple-Fem-Nom

The verb ‘akal-3ms’ has two arguments: the agent (Amr-Nom) and the theme *a-ttufaħa-t-a* (the-apple-Fem-Acc), as in (14)a. After the passive perfective pattern *u-i* is infixed in the verb, the verb cannot have two arguments any longer.

Subject Affectedness

The degree of affectedness of the passive subject has been invoked as an underlying semantic property of passive constructions. The property refers to the degree to which subjects of passive constructions undergo the action described by the predicate. In other words, this property refers to how patient-like the subject is (Thompson and Scheepers, 2013). The prototypical account of the active voice is that it typically involves an animate agent performing an action on a patient entity while the opposite is typically observed in passives (Lyngfelt and Solstad, 2006). The degree of subject affectedness in passive constructions can differ based on the passive type. For example, Orfitelli (2011) distinguishes the requirement of subject affectedness of *get*-passive and *be*-passive. The acceptability of the two following sentences is dependent on the degree of subject affectedness.

(15)

(From Orfitelli, 2011)

Freddie was kicked / seen by Flossie

Freddie got kicked / *seen by Flossie

The two verbs kick and see require different theta-roles, namely patient/theme, and experiencer, respectively. The be-passive seems to accept the low-affected experiencer role in the subject position. In contrast, the get-passive requires a higher degree of affectedness, and thus only theme/patient is allowed. It is worth mentioning that the acceptability judgment for both types of passives is not unanimous (Thompson and Scheepers, 2013).

Subject affectedness in Arabic.

Since the internal argument is overtly promoted to the subject position and assigned the NOM case (Saad, 1982), the passivization process suggests some affectedness for the promoted argument (Murgida, 1993). The productivity of the morphological passive is very high; thus, almost all transitive verbs are passivizable (Saad, 1982). Therefore, the theta-roles of promoted objects vary significantly. A verb such as *qatal-a* (killed-3ms) which requires [_____ Agent Patient] is equally passivizable as a verb such as *karih-a* (hated-3ms) [_____Experiencer Target]. The two verbs, *qatal-a* (killed-3ms) and *karih-a* (hated-3ms) do not have the same subject affectedness when passivized.

The Analysis of Passive Voice

The above properties of passives are viewed as a product of transformational processes which operate on a basic DP-V-DP structure. These syntactic operations are subject's de-themetization, case-assignment requirement, and extended projection principle (Chomsky, 1984). In the *be*-passive, the insertion of *be* preceding the main verb gives rise to the passive morphology represented by -en affixation (surfaces as -ed). The

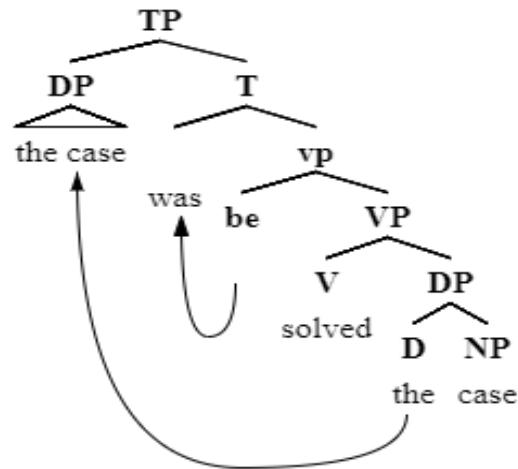
passive morphology suppresses both agent theta-marking and the accusative case assigning to the object. In Government and Binding model (henceforth GB), the passive morpheme -en is viewed as an argument that absorbs the accusative case and the agent role (Chomsky, 1984; Roberts, 1988; Jaeggli, 1986; Baker, Johnson, and Roberts, 1989). This account of passive constructions maintains Burzio's generalization, which states that "if a transitive verb assigns no Case to its object, then it assigns no theta-role to its subject" (Roberts, 1988:25). The absorption of the accusative case entails that the object is generated with a theta-role but without a case. Thus, for the object to satisfy its case requirement, it moves up to a vacant position that is viable for the case—which is the subject position. Jaeggli (1986) further supports the de-thematization of subject position by citing the following sentence with an expletive subject in a passive construction. Consider the following sentence.

(16) (From Jaeggli 1986, p. 590)

It was believed that the conclusion was false.

The expletive, being semantically empty, does not receive a theta-role (Thompson and Scheepers, 2013). Sentence (16) shows that the expletive can occur in the subject position proving that it is not assigned a theta-role. Therefore, when objects raise to the spec of the TP, it does not violate theta-criterion, which dictates that “each argument bears one and only one theta-role, and each theta-role is assigned to one and only one argument” (Chomsky, 1984, p. 36). Thus, the object moves to the spec of the TP with its theta-role and is assigned the Nominative case. Let us see how this treatment of passive constructions is represented in the syntactic structure.

(17)



The DP object in the above tree is selected and base-generated in the complement position. The verb with its participle inflection merges with its DP complement. The vp then introduced the be-auxiliary to the structure. In this functional category, light verbs, being semantically impoverished phrases, are combined with the following phrases to gain semantic content (Thompson and Scheepers, 2013). Both v and T check their uninterpretable phi-features with the closest nominal: the object (Chomsky, 1995). The internal argument position is void of the case, so it moves up to the spec of the TP to receive the Nominative case and satisfy EPP feature. The *be*-auxiliary moves up to the T position and values its tense feature.

The Analysis of Passive Voice in Arabic

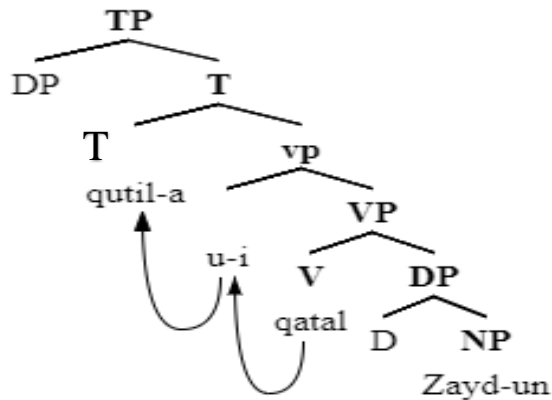
Let us see how the standard treatment of passive constructions applies to the morphological passive in CA and MSA.

(18)

- | | | |
|----|-----------------|----------|
| a. | qutil-a | Zayd-un |
| | Killed.PASS-3ms | Zayd-Nom |

Zayd was killed

b.



The VP merges with its object, which is base-generated in the complement position of the verb. It is also possible that the verb root is introduced in the head of the VP (AL-Shorafat, 2018). The vp is headed by the passive morphology, instantiated by passive vocalic pattern i-u. The verb, in this case, cannot assign theta-role to the external argument since there is no external argument to be assigned a theta-role. Thus, following Burzio's generalization, the verb does not assign an accusative case to its complement. The T checks its unvalued phi-features with the object. The verb moves up and picks up the passive morphology. The verb then moves to the T to satisfy its tense feature. Since the vp is not a phase head, in this case, T can assign the Nominative case to the existing nominal.

Conclusion

The discussion of passive voice in the chapter shows how the attested variety of passive and passive-like constructions resisted a uniform formal analysis. Shibatani (1985) prototypical passive treatment was used to discuss passive properties in the literature. The prototypical passive is then explored through the morphological passive in

CA and MSA. The chapter presents the syntactic analysis of passive voice and shows how it neatly applies to the morphological passive in CA and MSA.

The next chapter discusses the periphrastic passive in MSA. It further analyses the various components that make up the periphrastic passive in MSA, i.e., *tamma/yatimmu*, the verbal noun complement, and the construct state. The prototypical passive properties are also discussed in the context of the periphrastic passive in MSA.

CHAPTER 3

THE PERIPHRASTIC PASSIVE IN MSA

Periphrastic Passives

Periphrastic passives, as opposed to "strictly morphological passives," are constructions employing auxiliaries followed by a morphologically modified form of transitive verbs (Keenan and Dryer, 2007). In Arabic, the prototypical passive is the morphological one, whereas *tamma/yatimmu* construction is considered a periphrastic passive. English passive constructions, i.e., *be*-passive and *get*-passive, are good examples of the periphrastic passives.

The chapter discusses the periphrastic passive construction in MSA. In doing so, it shows what the periphrastic passive consists of, i.e., *tamma/yatimmu*, verbal noun and a construct state, and how these constituents behave in the periphrastic passive. The chapter also addresses the issue of verbal nouns and argues that they behave more like verbs when occurring in the periphrastic passive. The structure of construct states formed by verbal noun+ complement is laid out as they represent complement of *tamma/yatimmu* in the periphrastic passive. The last section of this chapter checks the properties of the periphrastic passive against the prototypical passive properties.

The Periphrastic Passive in MSA

In addition to the morphological or internal passive, which displays all the characteristics of the prototypical passive, a periphrastic construction with a passive function has emerged in MSA. According to Gully (1993), this construction can be found as far back as the beginning of the 20th century, as attested in the Palestinian newspaper

al-Karmil 1909. Since then, the periphrastic passive construction has gained momentum over the morphological passive in the Arabic press. Abdelfattah (1990) investigated the occurrences of both the morphological passive and the periphrastic passive in Al-Ahram newspaper samples from 1939 and 1989. He found that 94 percent of passive constructions in 1939 were morphological passives. However, the results of 1989 showed that about 53 percent of passive constructions are of the periphrastic type. This shows that this new construction is rapidly spreading in the Arabic press, thus replacing the morphological one.

Nonetheless, the scant number of studies investigating this construction is not informative on the widespread use and the rapid growth of its occurrences in MSA (Murgida, 1993; Guly, 1993). Apart from one textbook of MSA which incorporates this construction in its repertoire, namely Abdul-Raof (2001), no other textbooks recognize the periphrastic passive in MSA. The reason could be what Murgida (1993) reported that native speakers might find this construction inelegant. However, that does not prevent the periphrastic passive from spreading in the scientific and newspapers articles (Najjar, 1990).

The Periphrastic Passive Structure in MSA.

This construction consists of the perfective unaccusative form of verb *tamm-a* (be.finished-3ms) or its imperfective counterpart *ya-timmu* (3ms-be.finish), followed by Masdar (a verbal noun) (Murgida, 1993; Gully, 1993 and Esseesy, 2010). Unlike the morphological passive in Arabic, where the change of vocalic melody is indicative of its passivization, the verb *tamma/yatimmu* employ active vocalic melody in this construction. Thus, Murgida (1993) and Dror (2015) refer to the morphological passive in

Arabic as the internal passive, because of the passive vocalic pattern, as opposed to the periphrastic passive, which is a bipartite construction.

(1) (From the author)

- a. Kutib-a l-maqal-u amsi
 PASS.written-3ms the-article-NOM yesterday
 ‘The article was written yesterday’
- b. Tamm-at kitab-at-u l-maqal-i amsi
 be.finished-3FS writing-FEM-NOM the-article-GEN yesterday
 ‘The article was written yesterday’

What is peculiar about this construction is that the main verb in the morphological passive is equivalent to the verbal noun in the periphrastic passive. Comparing the morphological passive with the periphrastic one, we can see that the verb *Kutib-a* (PASS.written-3ms) bears the passive vocalic melody u-i, resulting in agent deletion, object promotion, and valency reduction. On the other hand, the only new lexical item that we added to the sentence (1)a to transform it to sentence (1)b is *tamm-at* (be.finished-3F). The verb *tamm-at* agrees with its complement's gender. The complement of *tamm-at* is assigned the nominative case. We can see that the passive verb in (1)a became *kitab-at-u* (writing-FEM-NOM) which is the verbal noun of the active verb *katab-a* (wrote.3ms). The verbal noun preserves the internal argument of its verb and holds a genitive relation with it. Such relation can be observed in possessed-possessor construction.

(2)

Kitab-u t-talib-i
Book-NOM the-student-GEN
'The student's book'

We can arrive at general observations from sentence (1)b. *tamma/yatimmu* take verbal nouns as their complements. The verbal nouns are assigned a nominative case and behave as the verb in that they take the same complement type. For instance, when the verb from which the verbal noun is derived takes a prepositional object, the verbal noun takes a prepositional object as well. Furthermore, the object complement of the verbal noun constitutes a genitive relation with the verbal noun. The most prominent part of the construction is the verbal noun representing the event or the action. Since the verb *tamma/yatimmu* are unaccusative verbs, the agent is not present in the construction. *Tamma/yatimmu* are marked with 3ms or 3fs depending on the gender of the following verbal noun (Najjar, 1990; Gully, 1993; Murgida, 1993).

It should be noted here that the grammatical gender of singular verbal nouns is quite arbitrary in Arabic (Ryding, 2005). When the feminine affix *-t-* is marked on the verbal nouns, the verbs must be marked also with *-at* '3fs' ending in agreement with the verbal nouns' gender. However, when there is no feminine marking on the verbal nouns, verbs bear the default 3ms features. This can be observed in both modal verbs and subjectless passives in Arabic (Mohammad, 2000).

(3) (Adapted from Mohammad, 2000, p. 100 & 106)

a. al-banat-u yadjibu an yadrus-na
The-girls-NOM must.3ms that study-3fp

‘And the sympathizers are not manipulated’

c-

(Najjar, 1990, p. 163)

tamm-at ziraʕa-t-u al-buthur-i
be.finished-Fem sowing-Fem-Nom the-seeds-Gen
‘the seeds were sown’

The sentence (4)a shows the verb *tamm-a* (finished-3ms) in its perfective form followed by the verbal noun *al-qabdu* (the arresting). Since the verbal noun is not suffixed with the feminine marker *-t*, *tamm-a* is marked with 3ms features. The verbal noun is marked with the nominative case ending *-u* since it is the subject of *tamm-a*. A prepositional object follows the verbal noun since the corresponding verb *qabad* (*arrested*) requires a prepositional object. The object (*al-wuzaraa-i*) appears at the end, following the quantifier.

Apart from the fact that the verb *ya-timmu* is in the imperfective form, the same description applies to sentence (4)b. The verbal noun *t-talāʕub-u* (the manipulation) is assigned the Nom case as the subject. The prepositional object *l-mutaʕāʕifina* (the-sympathizers) assumes the theme role and appears following the verbal noun.

The last sentence (4)c, *tamm-at* (finished-Fem) is marked with 3fs as it agrees with the verbal noun *ziraʕa-t-u* (sowing-Fem-Nom). The object *al-buthur-i* (the -seeds-Gen) is assigned the genitive case *-i* as the second noun in the construct state.

Although the corresponding verbs to the verbal nouns in (4)a,b and c are transitive, as they require two arguments, the verbal nouns are used with one argument, i.e., the genitive object. Mansouri (2016) refers to *tamm-a/ya-timmu* as a "valency-

reducing auxiliary" because they reduce the valency of the verbal nouns by one argument.

I will now discuss each part of the periphrastic passive, i.e., *tamma/yatimmu*, the verbal noun complement, and the genitivized complement of the verbal nouns.

***Tamma/yatimmu* in the Periphrastic Passive.**

The intransitive verbs *tamma/yatimmu* bear various meanings which revolve around 'to be finished or completed' and, a relatively recent meaning, 'to happen, and to be performed' (Baalbakki, 1995, p. 376). According to Lundin (2013), the root of consonants tmm is attested in other Semitic languages such as Phoenician, Biblical Hebrew, and Syriac, and they convey the same sense of completion.

However, the verb *tamma/yatimmu* are not used in their original sense in the periphrastic passive (Gully, 1993). Thus, in a few studies that have discussed this construction, *tamma/yatimmu* were referred to as a dummy verb (Rosenhouse, 1988) or an auxiliary (Murgida, 1993; Lundin, 2013; Dror, 2015; Mansouri, 2016). Mansouri (2016) states that *tamma/yatimmu* are "not appropriately glossed as be finished or completed" (p. 218). Therefore, When the periphrastic passive is translated to English, it is generally translated to be-passive (Murgida, 1993).

While the most common usage of *tamma/yatimmu* is in the periphrastic passive (Gully, 1993), they are occasionally used in their literal meaning when they occur as a main verb with a nonverbal noun complement (Murgida,1993), as in the following sentence.

(5)

(From Gully, 1993, p. 44)

wa hath-ihī l-khitta-t-u l-ʕaskariyya-t-u li l-sudan-i
 and this-Fem the-plan-Fem-Nom the-military-Fem-Nom prep the-sudan-Gen
 lan ta-timma
 Fut.Neg 3FS-occur

‘And this Sudanese military plan will not occur’

The underlined phrase is the preposed complement of the verb *ta-timma*. The sentence can be rearranged as follows: *lan ta-timma l-khitta-t-u l-ʕaskariyya-t-u* (Fut.Neg 3FS-occur the-plan-Fem-Nom the-military-Fem-Nom). The verb is marked with ‘3fs’ features in agreement with the complement’s phi-features. The complement *l-khitta-t-u l-ʕaskariyya-t-u* (the-plan-Fem-Nom the-military-Fem-Nom) is a nonverbal noun, and thus the verb is used in its literal sense.

As mentioned earlier, *tamm-a/ya-timmu* are the unaccusative forms of the verb, which is the only form used in the periphrastic passive. The other forms of the verb are used in their literal sense. The following table shows some of the *tamma/yatimmu* conjugations.

Table 2

The conjugations of *tamma/yatimmu* in Arabic

	Perfective	Imperfective
Unaccusative	Tamm-a Be.finished-3ms	ya-timmu 3ms-be.finish
Causative	a-tamm-a CAUS-finished-3ms	yu-timmu 3MS-CAUS.finish

Intensive	Tammam-a INTENS.finished-3ms	Yu-tammimu 3ms-INTENS.finish
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The Verbal Nouns as Complements in the Periphrastic Passive.

As I mentioned in Chapter two, the passive voice is primarily a valence-reducing phenomenon, and thus, transitive verbs are the prominent candidate for passivization. The same effect is observed in the periphrastic passive as the construction favors verbal nouns with corresponding transitive verbs (Gully, 1993). Mansouri (2016) analyzed the complement of *tamma/yatimmu* in a print data corpus of 400k words and a broadcast data of 80k words. He found that, apart from one sole instance of intransitive verbal noun, the complements of the periphrastic passive were invariably transitive verbal nouns. The verbal nouns that *tamma/yatimmu* select behave more verbally than other verbal nouns. To understand this better, I will briefly discuss verbal nouns in Arabic in the following section.

The verbal noun serves as the complement of the periphrastic passive construction. However, the term *verbal noun* is an ambiguous term covering elements that behave differently from each other. The Arabic grammarians' name for this form is *Masdar*, meaning '*the source*.' We can define *Masdar* as "a noun, conditioned in its combinatorial behavior at phrase and sentence level by the semantic value and argument structure of the corresponding verb" (Ditters, 2011: 166). However, I will continue to call *Masdar* a verbal noun throughout the paper after laying out the unique properties of the verbal nouns in Arabic. The following discussion of verbal nouns relies mainly on

Kremers (2003). Keeping the limitation of this paper in mind, I will discuss those which are relevant to the periphrastic passive.

The Nominal Properties of the Verbal Nouns. The verbal nouns are notorious for being hard to set apart from nouns and verbs, hence the name *verbal noun*. They behave as nouns in some instances and as verbs in others. According to Kremers (2003), Arabic verbal nouns share some defining characteristics with the nonevent nouns. First, nouns carry definite and indefinite inflections, and verbal nouns do. The two verbal nouns in (6) are inflected with indefinite and definite markers.

(6) (From Kremers, 2003, p. 122)

Wasf-u-n	al-wasf-u
Describing-Nom-indef	the-describing-Nom

Secondly, Nouns can be pluralized and Arabic verbal nouns can be too. The two verbal nouns in (7) allow the plural vocalic pattern to modify them.

(7) (From Kremers, 2003, p. 122)

Aws.af-u-n	al-aws.af-u
describing.PL-NOM-INDEF	the-describing.PL-NOM

Thirdly, the verbal nouns have the same distribution as nouns', in that they can occur as subjects, objects, and prepositional complements and can also carry case endings. The following examples illustrate this.

(8) (From Kremers, 2003, p. 122)

a.	tuqliqu	hathihi	l-tatawwur-at-u	l-khubara?-a
	worry.1sg	these	the-developing-PL-NOM	the-experts-ACC

‘These developments worry experts’

- b. qara-tu wasf-a l-hadith -i
read-I describing-ACC the-accident-GEN

‘I read the description of the accident’

- c. la a-khafu min fiʕal-i hath-a
NEG I-fear from doing-GEN this

‘I do not fear doing it’

The three verbal nouns in (8) a, b, and c serve various grammatical roles and are assigned different case endings. In (8) a, the verbal noun *l-tatawwur-at-u* (the-developing-PL-NOM) occupies the subject position; therefore, it is assigned the nominative case. In (8)b, *wasf-a* (describing-ACC) is the object of the preceding verb *qara-tu* (read-i), and it has the accusative case. In the last sentence (8)c, the verbal noun occurs following a preposition and, in this case, it is assigned the genitive case.

The fourth and last nominal property that verbal nouns display is taking a genitive complement as their object. In (8)b, the verbal noun *wasf-a* (describing-Acc') takes a genitive complement *l-hadith-i* (the-accident-Gen). This property arises in noun-noun relations, in which the head noun, typically a possessed noun, followed by a genitive noun complement, typically a possessor/modifier.

- (9) sayyara-t-u l-ragul-i
car-Fem-Nom the-man-Gen

‘the car of the man’

The head noun is the possessed noun, and the genitive complement is the possessor. What is special about this noun-noun relation is that the first noun cannot be marked for in/definiteness, and only inherits the in/definite markers of the second noun.

(10)

- | | | |
|----|----------------------|---------------|
| a- | sayyara-t-u | ragul-i-n |
| | car-Fem-Nom | man-Gen-indef |
| | 'a man's car' | |
| b- | *a-sayyara-t-u | r-ragul-i |
| | the-car-Fem-NOM | the-man-Gen |
| | 'the man's car' | |
| c- | *sayyara-t-u-n | ragul-i-n |
| | car-Fem-Nom-indef | man-Gen-indef |
| | 'a car of the man' | |
| d- | *a-sayyara-t-u | ragul-i-n |
| | the-car-Fem-Nom | man-Gen-indef |
| | 'the car of the man' | |
| e- | *sayyara-t-u-n | l-ragul-i |
| | car-Fem-Nom-indef | the-man-Gen |
| | the car of the man | |

Except for (10)a where the head noun is not marked for in/definiteness, all the other sentences are ungrammatical due to the in/definiteness inflection on the head noun. Thus, the head noun occurs in a unique form referred to in the literature as *construct state*

(Kremers, 2003). This form is unique in terms of zero definite/indefinite inflection on the head noun, as it is evident from the ungrammaticality of (10)b,c,d, and e. More on the construct state below.

The Verbal Properties of Verbal Nouns. On the other hand, the verbal nouns show some verbal properties which set them apart from other nouns.

Firstly, they can be complements for verbs which otherwise select clausal complements. Thus, in this case, the verbal nouns show a more verbal distribution. Kremers (2003) argues that verbal nouns can replace clausal complements occurring in the subjunctive mood after modals and control verbs, thus showing a verbal distribution.

(11) (From Kremers. 2003, p. 123)

a- lakinna-ka ta-faʕl ma la a-stateeʕ an a-faʕal-a-hu
 but-you you-do what neg I-am.able that I-SUBJ.do-Acc-it
 ‘but you do what I cannot do’

b- lakinna-ka ta-faʕl ma la a-stateeʕ faʕl-a-hu
 but-you you-do what neg I-am.able doing-Acc-it
 ‘but you do what I cannot do’

c- hawal-tu an a-sif-a al-hadith-a
 Tried-I that I-SUBJ.describe-Acc the-accident-Acc
 ‘I tried to describe the accident’

d- hawal-tu wasf-a al-hadth-i
 Tried-I describing-Acc the-accident-Gen
 ‘I tried to describe the accident’

The modal verb *a-stateeſ* 'I-am.able' takes a clausal complement introduced by *an* (that). The complement *a-fa3al-a-hu* 'that I-do-Acc-it' is in subjunctive mood and thus assigned accusative case. Alternatively, the modal can take a verbal noun as its complement, indicating a more verbal distribution, thus replacing its verbal counterpart. In the two sentences (11)c and d, the verb *hawal-tu* 'tried-I' requires a verbal complement. In (11)c, the verbal complement *a-sif-a* 'I-SUBJ.describe-Acc' in the subjunctive mood follows the verb, whereas the verbal noun *wasf-a* 'describe-Acc' substitutes the verb in (11)d and acts as the object of the main verb. Notice that the noun *al-hadith-a* 'the-accident-Acc' is assigned an accusative case *-a*, as in (11)c, while the same noun *al-hadth-i* 'the-accident-Gen' carries genitive case ending *-i* after the verbal noun.

The second property is that when the verbal nouns are used after a verb that semantically requires a verbal complement as (11)d, they cannot be pluralized.

(12) (Adapted from Fassi Fehri 1993, p. 236)

*tamm-at	iſtiraf-at-u-hu	bi	th-anb-i
Be.finished-3fs	confessing-PL.Fem-NOM-his	with	the-crime-GEN
‘His confessings of the crime took place’			

The verb **tamm-at* (be.finished-3fs) requires a verblike complement. So, when verbal nouns follow *tamma/yatimmu*, it acts like verbs and do not take plural inflection.

Thirdly, the verbal noun, in addition, allows for adverbs modification (Kremers. 2003).

(13) (From Kremers, 2003, p. 134)

- a- intiqad-u -l-ragul-i l-mashru3-a bi shidaa-t⁵
 criticizing-NOM the-man-GEN the-project-ACC with sharpness
 ‘The man’s sharply criticising the project’
- b- Intaqad-a l-ragul-u l-mashru᠙-a bi shidaa-t
 Criticized-3ms the-man-NOM the-project-ACC with sharpness
 ‘The man criticized the project sharply’

The two last properties in which verbal nouns resemble verbs is that they preserve the underlying argument structure of the verbs and can also assign the accusative case to its object. These two properties are attested in (13)a, where the transitive verbal noun *intiqad-u* 'criticizing-NOM' takes the agent subject *l-ragul-I* (the-man-GEN) and the theme object *l-mashru᠙-a* (the-project-ACC). When comparing (13) a to (13)b, we notice that both the verb *intaqad-a* (criticized-3ms) and the corresponding verbal noun take the same arguments, i.e., the subject and object. While the agent in (13)a does not carry the nominative case, as it typical does when used with a verb, the objects in both sentences carry the accusative ending *-a*. The agent in (13)a is not marked with the nominative case because the verbal noun *intiqad-u* (criticizing-NOM) and the agent *l-ragul-i* (the-man-GEN) constitute a construct state relation with its complement, requiring the genitive case assignment to the second noun (Kremers, 2003).

Kremers (2003) concluded that verbal nouns' properties can be equated to Grimshaw's (1990) complex event nominals. Therefore, we can conclude from this

⁵ It should be noted here that this structure only occurs when the agent is forced in. So, it occurs after the verbal noun and is assigned the genitive case. The object, which generally takes the verbal noun's complement position, is pushed to the side and assigned the accusative case.

exposition of verbal nouns that verbal nouns can behave nominally, such that they are inflected plural and definite/indefinite affixes. Conversely, they can also act verbally in that they cannot be pluralized or inflected for definiteness/indefiniteness. The following table represents this continuum.

Table 3

Verbal and nominal properties of verbal nouns

Number	The Verbal Properties	The Nominal Properties
1	Showing verbal distribution	Showing noun distribution
2	Not allowing pluralization	Allow pluralization
3	Not taking in/definite affixes	Can be inflected with in/definite affixes
4	Maintaining an argument structure	Constituting a construct state or noun-noun relation with their complements
5	Can be modified by adverbs	

Some of these properties are in complementary distribution in that the verbal noun cannot show them in one occurrence, so they are conditioned by what governs them.

Properties 1,2, and 3 are of this type. Properties 4 and 5 can overlap in one construction.

The construction is referred to the literature as *construct state*.

Construct State.

When the verbal nouns are used in the periphrastic passive, they behave as verbs. Kremers (2003) remarks that *tamm-a/ya-timmu* take "a complex event Masdar," evident in the ungrammaticality of plural verbal nouns after them, as shown above. The example is repeated here for convenience.

(14)⁶ (adapted Fassi Fehri, 1993, p. 236)

*Tamm-at	iṣtraf-at-u-hu	bi	a-thenb-i
Be.finished-3fs	confessing-PL.FEM-NOM-his	with	the-crime-GEN
‘His confessions of the crime finished/happened’			

In addition, in the periphrastic passive, the verbal noun takes a genitive object to form a construct state.

(15) (Najjar, 1990, p. 163)

tamm-at	ziraṣa-t-u	al-buthur-i
finished-Fem	sowing-FEM-NOM	the-seeds-GEN
‘The seeds were sown’		

The verbal noun *zira'a-t-u* (sowing-FEM-NOM) takes the object *al-buthur-i* (the-seeds-GEN). In the following sentence, the two properties of construct states are visible, first, absence of definite/indefinite inflections on the head noun, secondly, a genitive complement following the head noun (Kremers, 2003).

Inflecting the verbal noun in (16) with either the definite prefix or the indefinite suffix is ungrammatical.

⁶ The glossing and the translation are provided by the author.

(16)

a-	*tamm-at	a-zira'a-t-u	al-buthur-i
	finished-Fem	the-sowing-FEM-NOM	the-seeds-GEN
	'The seeds were sown'		
b-	*tamm-at	zira'a-t-u-n	buthur-i-n
	finished-Fem	sowing-FEM-NOM-indef	the-seeds-GEN-indef
	'The seeds were sown'		

The verbal noun occurs in both of these sentences in a construct state. Thus, it cannot be overtly inflected for definiteness/indefiniteness. The ungrammaticality of (16)a and b proves this constraint on this construction. However, the head noun is covertly marked for in/definiteness as evident by the agreement of attributive adjectives in in/definiteness with the head nouns (Fassi Fehri, 1993; Benmamoun, 2000; Kremers, 2003).

We have established that *tamma/yatimmu* select verbal nouns as their complements which, in turn, take pro/nominal items as their complements, constituting a construct state. This makes the verbal noun+complement construction similar to the noun-noun construction in that they both form a bipartite construction in which the first part cannot be inflected with in/definite markers and the second part is assigned the GEN case.

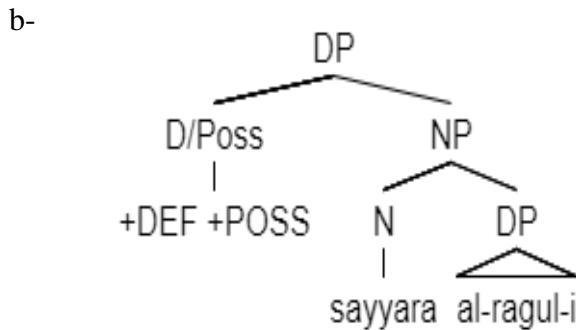
The Structure of Construct State. Various structures have been suggested for the construct states for both the verbal noun+complement constructions and the noun-noun/possessed-possessor constructions (Hazout, 1991; Fassi Fehri, 1993; Kremers, 2003). I will adopt in this paper Kremers' (2003) analysis for both non-event nominals

and event nominals/verbal nouns in construct states. Identifying the structure of both non-event nominals and event nominals in construct states lays the background for the shift of *tamma/yatimmu* complements from non-event nominal/noun in CA to event nominal/verbal noun in MSA, which I will discuss in Chapter five.

First, let's see how the construct state for the following non-event nominals is represented.

(17) (Adapted from Kremers, 200, p. 41)

a- Sayyyar-at-u r-rajul-i
 car-Fem-Nom the-man-GEN
 'The man's car'



Kremers (2003) assumes the existence of a functional head projecting two features: DEF and POSS. This syncretic head with two features was taken from Giorgi and Pianesi (1997), who argue that certain morphemes carry more than one feature. Such syncretic/hybrid category is illustrated by the Italian morphemes -a in *bella* 'beautiful,' which encodes both feminine and singular features. Kremers (2003) posits that Arabic expresses construct state features through the D/Poss functional head. The D/Poss head enters the derivation with [+Poss] because the head noun has a complement noun.

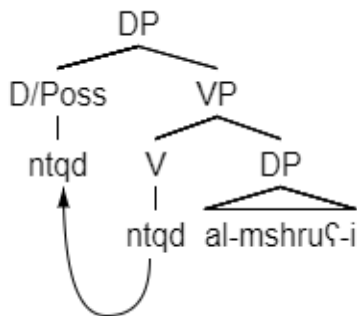
According to Kremers, the [+Poss] feature forces the [-DEF] to remain unvalued. Poss then probes for a valuation for its phi features. While the GEN case is mostly viewed as *an inherent case* (Chomsky, 1995), the GEN case in Arabic is *a structural one*. Kremers (2003) argues that "the case that a noun has in Arabic is always determined by its syntactic position" (p. 36). Therefore, the DEF feature gets checked automatically once the functional head, Poss, finds a match and assigns it the GEN case. This shows that the definiteness inheritance and the genitive assignment are intertwined in construct states. I will ignore the NOM on the head for now as I am only concerned with the construct state structure.

In the case of verbal nouns, the same functional structure takes place.

(18) (Adapted from Kremers, 2003)

a- intiqad-u al-mashruʕ-i
 criticizing-NOM the-project-GEN
 ‘Criticizing the project’

b-



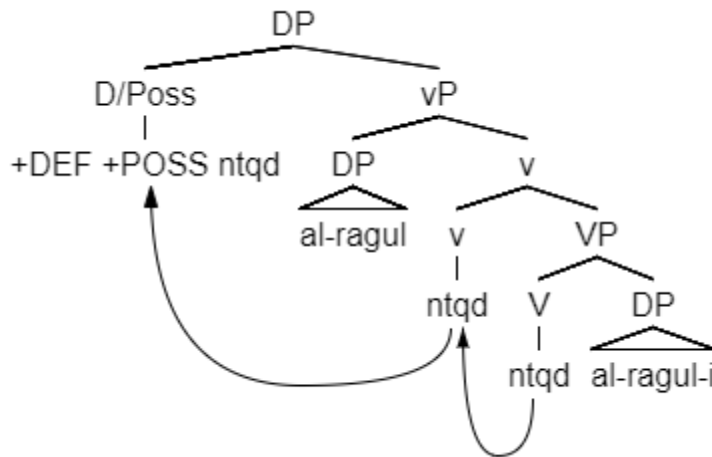
The hybrid D/Poss head adjoins the VP head, where the root of the verbal noun originates. The absence of the little v, which is typically seen as the transivizer

(Chomsky, 1995), means that the accusative is not licensed, hence the absence of the accusative case on the complement noun. As mentioned in the noun-noun structure, D/Poss is selected with the +Poss feature. The DEF and Phi-features get valued in the derivation as in the above (18) b structure. V, in this case, raises to the functional head. According to Kremers (2003), the evidence for this movement comes from constructions with subjects. Consider the following sentence.

(19) (Adapted from Kremers, 2003, p. 137)

a- intiqaḍ-u al-rajul-i al-mashruʕ-a
 criticizing-NOM the-man-GEN the-project-ACC
 ‘The man’s criticizing the project’

b-



Unlike the previous structure, the vP occurs and assigns the ACC case to the object: *al-mashruʕ-a* 'the-project-ACC.' The subject, occupying the spec of the vP, represents the reference point that shows that V raises to the functional head. Therefore, I

will adopt the structure (19)b above as the structure of the verbal noun+the complement construction.

Now, let us turn our attention to the periphrastic passive properties.

The Prototypical Passive Properties in MSA Periphrastic Passive.

The only study that discussed prototypical passive properties of the periphrastic passive is Murgida (1993). I will also discuss the prototypical passive properties in the context of the periphrastic passive and cite Murgida's (1993) analysis as needed.

The External Argument Demotion. When we observe the periphrastic passive sentences above, we notice that the external argument, typically an agent, is completely deleted. The two elements that the structure of the periphrastic passive preserves are the verbal noun and the object. The object, in turn, appears as the complement of the verbal noun. Let us compare the following sentences.

(20)

- a- katab-a Zayd-un al-risala-t-a
wrote-3ms Zayd-NOM the-letter-Fem-ACC
'Zayd wrote the letter'
- b- tamm-at kitab-at al-risal-at-i
be.finished-3fs writing-Fem the-letter-Fem-GEN
'The letter was written'
Lit: 'it was finished writing the letter'

When using sentence (20)a in the periphrastic passive, the agent 'Zayd-NOM' is obligatorily deleted. The object *al-risal-at-i* 'the-letter-Fem-GEN' surfaces as the complement in the construct state; thus, it is assigned the GEN case. The verb *katab-a* 'wrote-3ms', on the other hand, appears as the verbal noun carrying the NOM case ending. This means that the verbal noun is the most prominent constituent in the periphrastic passive. Murgida (1993) refers to the periphrastic passive as "super-passive" since both the agent and the theme are defocused.

The Internal Argument Promotion. While the internal argument is not promoted to the subject position in the periphrastic passive, as the case is in the morphological passive in MSA, it takes the GEN case as the complement noun in the construct state or as the prepositional complement of the verbal noun. As mentioned above, the complement type of the verbal noun depends on the verb from which the verbal noun is derived. In other words, if the verb requires a prepositional object, then the verbal noun will also require a prepositional object. However, if the verb requires a direct object, the verbal noun will take the object as a complement noun in a construct state. The object, in either case, is considered oblique.

Valence-Reduction. The periphrastic passive typically occurs with verbal nouns of transitive verbs (Gully, 1993). However, the valency of those transitive verbal nouns is reduced by one argument. The deleted argument is almost always the agent of the construction (Murgida, 1993).

The previous studies seem to agree that *tamma/yatimmu* have a valence-reducing effect on their transitive verbal nouns (Gully, 1993; Murgida, 1993; Lundin, 2013; Dror, 2015; Mansouri, 2016).

Special Passive Morphology. According to Murgida (1993), there is no special passive morphology marking for the periphrastic passive in that *tamma/yatimmu* are encoded with the active vocalic pattern. Nevertheless, the periphrastic passive structure looks unique to this construction. As I will show in Chapter five, *tamma/yatimmu*, the auxiliaries of the construction, select a nonfinite complement to form the periphrastic passive. This structure reminds us of English passive, where we have the auxiliary *be*+ the nonfinite participial form. While this structure is not strictly morphological, it is very marked compared to other active structures.

Subject Affectedness. The subject in this construction is the verbal noun, which is the complement of *tamma/yatimmu* (Murgida, 1993). The verbal noun takes an object pro/noun as the affected constituent of the periphrastic passive. Therefore, the verbal noun in this aspect seems to diverge from the prototypical passives.

Conclusion

In this chapter, I shed light on the periphrastic passive and the historicity of the construction. The chapter further explores the components of the construction such as *tamma/yatimmu*, the verbal noun, and the construct state. It also discusses the properties and structure of verbal nouns in the periphrastic passive. The chapter concludes with comparing the periphrastic passive properties with the prototypical passive properties.

In the next chapter, I will turn my attention to the grammaticalization process that produces auxiliaries: Auxiliation. The chapter will provide a definition of auxiliary category and the characteristics with which we can identify this category. In addition, I will discuss the methodology as to how to operationalize auxiliaries' characteristics using corpus data to assess *tamma/yatimmu* status.

CHAPTER 4
THE AUXILIATION AND THE METHODOLOGY FOR THE CORPUS
RESEARCH

The Grammaticalization of *tamma/yatimmu*

As I have shown in Chapter three, the nature of the main verb in the periphrastic passive is not settled since some studies refer to it as a dummy verb (Rosenhouse, 1988), while others view it as an auxiliary (Murgida, 1993; Lundin, 2013; Dror, 2015; and Mansouri, 2016). It should be mentioned here that none of the previous studies has provided empirical arguments showing that properties of this construction follow either analysis.

In addition, the previous studies did not discuss the language change that brought about the periphrastic construction. The only study that talked about the grammaticalization in this construction is Lundin (2013). She argued, based on Bybee, Perkins and Pagliuca (1994) analysis of the lexical source ‘finish,’ that the perfective form *tamma* grammaticalized to a completive marker, not to passive auxiliary. However, Lundin (2013) ignored the imperfective form *yatimmu* since it does not fit her analysis. She also did not talk about the passiveness of the periphrastic passive. While Lundin (2013) correctly argued that the perfective form *tamma* grammaticalized to an auxiliary, she only adduced frequency evidence to prove her analysis.

In this chapter, I will start with a brief discussion of auxiliaries and auxiliaries’ complements. This discussion provides a background to understand how auxiliaries behave cross-linguistically. The grammaticalization process *auxiliation* will be

introduced and defined. I will then specify three properties based on Harris and Ramat (1987), which I will use to determine the auxiliarity of *tamma/yatimmu* in CA and MSA data. I will then lay out the methodology of my corpus analysis and provide some information about the CA and MSA corpora which I will be using for the corpus investigation.

Auxiliaries

Auxiliary as a grammatical category has resisted a uniform treatment in the literature due to its observed cross-linguistic diversity (Kuteva, 2001). Heine (1993) holds that the confusion in the literature about auxiliaries might stem from the synchronic approaches, which treat auxiliaries as finished products of grammaticalization, not considering the dynamicity of the linguistic evolution. Consequently, such approaches do not account for the diversity and complexity of auxiliaries' behaviors.

Recognizing these challenges, Heine (1993) put forth "a process-oriented" approach to auxiliaries, viewing full verbs' transition to auxiliaries on a continuum since "the difference between them is gradual, and there is no clear-cut dividing line" (Lehmann, 2015:35). Further, this gradual view of auxiliiation aligns with the grammatical phases suggested by Lehmann (2015), as illustrated below.

(1) Collocation → syntacticization → morphologization

This view of auxiliaries offers a comprehensive scope that recognizes constructions considered problematic, such as periphrastic constructions involving two or more grammaticalized linguistic forms (Kuteva et al., 2019). The grammaticalization of

the linguistic forms in the periphrastic constructions might occur simultaneously (Kuteva et al., 2019), or in stages (Harris and Ramat, 1987).

Complements of Auxiliaries

The literature generally recognizes that auxiliaries select a non-finite verbal form as their complements (Harris and Ramat, 1987; Heine, 1993; and Kuteva, 2001). The non-finite verbal forms include infinitival, participial, or gerundival expressions (Kuteva et al., 2019). Examples of auxiliaries+ non-finite verb forms are the English progressive and passive.

(2)

- a. She is playing
- b. The car was driven

The complement of both auxiliaries is a non-finite verb form. The same observation applies cross-linguistically to other auxiliary-complement constructions.

Auxiliation as a Grammaticalization Process

The term “auxiliation” was first coined by Benveniste (1968) when discussing the rising of new syntagms due to the alliance of elements. Kuteva (2001, P. 1-2) provides the following definition of auxiliation:

a morphosyntactic change whereby the lexical structure (1) verb–complement turns into the grammatical structure (2) grammatical marker–main verb.... It is this process of complex lexical verb structures developing over time into auxiliary grammatical structures, with all its accompanying semantic, morphosyntactic and phonological changes.

This definition is a comprehensive one as it recognizes the graduality of auxiliiation process involving semantic change, such as “semantic bleaching” (Givón, 1975), “semantic depletion” (Lehmann, 1982), etc., morphosyntactic changes such as periphrasis, and phonological changes such as reduction.

Auxiliaries’ Properties

Drawing on previous studies, Krug (2011) maintains that auxiliaries are “elements that contribute to the grammatical expression of TAM: tense, aspect...and modality. Many accounts include in addition periphrastic expressions of diathesis (notably passives), negation, emphasis, and sentence type...” (p. 443). The functional aspects of auxiliaries seem to overlap with that of verbs, and consequently, auxiliaries are deemed verblike elements (Steele,1978).

However, the formal aspects set auxiliaries apart from full verbs. Harris and Ramat (1987) introduced three distinctive formal characteristics of auxiliaries.

- a) they select another non-finite verbal form.
- b) they are not able to select a NP of its own.
- c) they show particular paradigms and syntactic behaviors different from that of verbs.

Using these three properties and based on corpus data, I will determine whether *tamma/yatimmu* in the periphrastic passive behave verbally or auxiliarily.

Methodology

I will use corpus data from both CA and MSA. The CA data serve as the baseline for the MSA data. This will help me observe the syntactic environment of *tamma/yatimmu* in CA and how they would change later in MSA.

Assuming that both unaccusative forms, i.e., the perfective *tamm-a* (be.finished-3ms) and the imperfective *ya-timmu* (3ms-be.finish), behave syntactically the same in terms of subject-verb agreement and complementation, I will be using the perfective form *tamm-a(t)* (be.finished-3(m/f)s). The reason for this is that the CA and MSA corpora—namely the King Saud University Corpus of Classical Arabic (KSUCCA) and the Arabic Web Corpus (arTenTen), respectively – do not use vowelized forms of words. since Arabic orthography is a consonantal writing system, the unaccusative imperfective form *ya-timmu* (3ms-be.finish) and the imperfective transitive form *yu-timmu* (3ms-finish) are identical. Thus, the two previous forms are written in the following manner:

(3)

يتم /ytm/

In order to avoid any confusion that might result from such overlap, I will focus my attention to the perfective form *tam-a(t)* (be.finished.3m/fs).

Analyzing tamm-a(t) in the Corpora

Complements of *tamm-a(t)*.

To measure the above three formal properties of auxiliaries in the corpora, I will investigate *tamm-a(t)* complements in CA and MSA. In doing so, I can identify two things: the lexical or grammatical category that typically follows *tamm-a(t)* and the finiteness of the complement (if the complement is a verblike item). Identifying the complements of *tamm-a(t)* will determine whether *tamm-a(t)*

a) selects another non-finite verbal form; or

b) is not able to select a NP of its own.

Tam-a(t) Agreement with its Subject.

The last property addressing the difference between the syntactic behaviors of auxiliaries and full verbs will be operationalized using subject-verb agreement. As we will see in Chapter five, *tamm-a(t)*, as a full verb, agrees with subjects in the phi-features (i.e., person, number, and gender). In contrast, as an auxiliary, we will see an erosion of subject-auxiliary agreement, in that *tamm-a(t)* shows the default 3ms features.

As I have discussed in Chapter three, the choice between either *tamm-a* ‘be.finished-3m’ and *tamm-at* ‘be.finished-3fs’ depends on the gender feature encoded on the complements. Since verbal nouns that follow *tamm-a(t)* have strong verbal properties as they do not typically allow for the in/definite and plural inflections, the only agreement feature available is gender agreement. Therefore, when *tamm-a(t)* تم (be.finished.3ms) precedes a feminine verbal noun complement, we can say that the feminine agreement feature on *tamm-a* has eroded. *Tamm-a*’s agreement features, in this case, are equated to the 3ms on modal verbs and subjectless passives, as shown in Chapter three. This will suffice to show that *tamm-a(t)* meets the third property of auxiliaries by Harris and Ramat (1987).

Tools for Corpus Analysis

Sketch Engine Software.

Sketch Engine is software that enables users to utilize various features to manipulate and analyze multiple corpora. The website of Sketch Engine offers accessibility to numerous corpora for 97 languages (Sketch Engine Website). I will use two functions in this software to investigate *tamm-a(t)*.

Word Sketch. This function gives the user “a one-page summary of a word’s grammatical and collocational behavior” (Kilgarriff et al., 2014). I will use this function to investigate the *nextleft* word that follows *tamm-a(t)* in Arabic texts in CA and MSA. The term *nextleft*, as it appears on Word Sketch, refers to the word that immediately follows the investigated wordform in a given text. Software algorithms blindly collect all the wordforms that immediately follow *tamm-a(t)* and create a *nextleft* list of all these words. Arabic wordform of *tamm-a* (be.finished-3ms) تم and *tamm-at* (be.finished-3Fs) تمت will be used in the search box of Word Sketch in both corpora. I will select the *nextleft* column of words that collocate with *tamm-a(t)*. It should be noted here that Arabic is written from *right to left*, so the complement of *tamm-a(t)* will ideally be the immediate next-left word.

Since the VSO word order is the discourse neutral one (Mohammed, 2000), I will eliminate any words that occur in the complement position of *tamm-a(t)* due to extraposing or preposing. For example, having a preposition after *tamm-a(t)* must result from moving operations.

(4) Arabic Web 2012 (arTenTen12, Stanford tagger)

تم في العام 1977 التقاط بعض الصور

Tamm-a	fi	l-ʕam 1977	iltiqat-u	beʕd	s-suwari
Be.finished-3ms	in	the-year 1977	taking-NOM	some	the-pictures

‘The pictures were taken in the year of 1977’

The bolded prepositional phrase is extraposed to the complement position of *tamm-a*, thus intervening between *tamm-a* and the verbal noun

complement *iltiqat* (taking). Such sentences will not be considered when they appear in the *nextleft* column. Therefore, DPs/ NPs typically occupy the subject position *tamm-a(t)*.

Concordance. This function of Sketch Engine enables users to see the aggregate of collocate texts in stacked rows. For example, when having the summary page of collocations of a search word and the frequency number of each collocate, clicking on the frequency number will take you to a new page where all collocates' texts are ordered in rows. It also provides users with a search box to look up words, phrases, and lemmas in the available corpora. The results appear in rows and are hyperlinked to the wider co-text from which the displayed results are taken.

I utilize this feature to look up *tamm-a(t)* agreement with their complements. I will select 20 common feminine verbal nouns that appear on the *nextleft* list following *tamm-at* (be.finished.3fs) and compare their occurrences following تمت (be.finished-3Fs), which is their natural environment, to their occurrences following تم (be.finished.3ms).

The Corpora

I will use two corpora for *tamm-a(t)* analysis: King Saud University Corpus of Classical Arabic (KSUCCA) and arTenTen: Arabic Web Corpus (arTenTen). I will provide a description for each corpus below.

King Saud University Corpus of Classical Arabic (KSUCCA).

This corpus comprises Classical Arabic texts that date between the 7th and 11th centuries. It is created as a part of the Ph.D. project of Maha Alrabiah. It contains about 46 million words. The texts included in the corpus cover various genres, such as religion,

literature, linguistics, sociology. The corpus is made analyzable by the University of Columbia.

Arabic Web Corpus (arTenTen).

arTenTen corpus is a web corpus made up of texts from the internet. The corpus consists of about 7 billion words. The texts of the corpus are written in MSA. The internet-based corpora offer the advantage of escaping a conservative environment to a less-conservative one, thus “tracking very recent developments in usage” (Penke and Rosenbach, 2007, p. 11).

Conclusion

This chapter situates *tamma/yatimmu* in the broader context of auxiliaries. It begins by showing that the previous analyses of the periphrastic passive did not adequately argue for the auxiliaryity of *tamma/yatimmu*. A brief background of auxiliaries, auxiliaries complement, and auxiliiation is provided. The three properties of auxiliaries based on Harris and Ramat (1987) are provided. Following this theoretical basis for the corpus analysis, the methodology and corpus tools are presented and briefly discussed.

In the next chapter, I will provide the corpus results and discuss their implications on our understanding of the MSA periphrastic passive.

CHAPTER 5

RESULTS AND DISCUSSION

The Results of CA and MSA Data

In this chapter, I will present the results of my corpus search and discuss their bearing on the auxiliarity of *tamma/yatimmu* and the structure of the periphrastic passive. The chapter shows, based on the corpus data, that MSA *tamma(t)* exhibits the properties of auxiliaries. I will then discuss the periphrastic passive auxiliary in the context of grammaticalization and show the attested paths for both the lexical source ‘finish’ and the passive diachronic sources in the literature. The chapter shows that Colloquial Icelandic (CI) employs the lexical source ‘finish’ in a certain passive construction. The chapter concludes by suggesting that when the lexical source ‘finish’ has no external argument, as in MSA and CI, it can grammaticalize to passive.

CA Data

***Tamm-a(t)* (be.finished-3m/fs) Complements.**

I utilize Word Sketch function of Sketch Engine to investigate the *nextleft* word after *tamm-a(t)*. It should be noted here that the *nextleft* word list appear under ‘subject column’ because the complement of *tamm-a(t)* is typically the subject of the construction.

The wordforms تم *tamm-a* (be.finished-3ms) and تمت *tamm-at* (be.finished-3fs) appear 2.489 times in the KSUCCA corpus. 1.701 of the 2.489 hits are for the wordform تم *tamm-a* (be.finished-3ms) and the rest is for تمت *tamm-at* (be.finished-3fs). The frequency of both wordforms is very low compared to the MSA data.

Apart from a few ambiguous sentences, which I will address in the discussion section, all *tamm-a(t)*'s complements are non-event nouns. Consider the following sentences from the KSUCCA corpus.

(1) (KSUCCA)

- a. tamm-a l-kitab-u
be.finished-3ms the-book-NOM
'The book is complete'⁷
- b. tamm-a l-kalam-u
be.finished-3ms the-speech-NOM
'The speech is complete'
- c. Alan tamm-a s-sulh-u
Now be.finished-3ms the-truce-NOM
'Now, the truce is complete'
- d. tamm-at l-karama-t-u
be.finished-3fs the-blessing-Fem-NOM
'The blessing is complete'
- e. tamm-at as-sana-t-u
be.finished-3fs the-year-Fem-NOM
'The year is complete'

⁷ Due to the fact that English does not have a corresponding unaccusative verb that denotes a sense of completion, I use copula + complete to translate the sentences.

All the complements of *tamm-a(t)* in the above sentences are nouns which serve as subjects in these sentences.

***Tamm-a(t)* Agreement with its Complements.**

There seems to be no anomaly in the subject-verb agreement of *tamm-a(t)* in KSUCCA. In the CA data, *tamm-a(t)* agrees with its complement's grammatical gender marker, thus behaving on a par with other full verbs in terms of agreement.

MSA Data

***Tamm-a(t)* (be.finished-3m/fs) Complements.**

The frequency of both wordforms, *tamm-a* (be.finished-3ms) and *tamm-at* (be.finished-3fs), in the arTenTen corpus, is very high in that the total number of matches for both wordforms is approaching five million words. I will discuss the implications of *tamm-a(t)* frequency in the discussion section.

However, and most importantly, the Word Sketch summary page of the *nextleft* words list of both wordforms on the arTenTen corpus shows that a shift must have happened to the type of complements *tamm-a(t)* selects. Unlike *tamm-a(t)* in the CA data, the MSA data show that verbal nouns are the typical complements of *tamm-a(t)*.

The *nextleft* word list shows that all collocations of *tamm-a(t)* are verbal nouns. Here are some examples from *tamm-a(t)* concordance.

(2) (arTenTen)

a.	tamm-a	tashkeel-u	ladjna-t-in
	be.finished-3ms	forming-NOM	committee-Fem-GEN

'The committee was formed'

Lit: it is finished forming committee.

- b. tamm-a ikhtiyar-u l-faʔez-een
 be.finished-3ms choosing-NOM the-winner-PL.GEN
 ‘The winners were chosen’
 Lit: it is finished choosing the winners.
- c. tamm-a irsal-u nahwa 1300 musʕif
 be.finished-3ms sending-NOM about 1300 paramedics
 ‘About 1300 paramedics were sent’
 Lit: it is finished sending about 1300 paramedics.
- d. tamm-at munagasha-t-u itruḥa-t-i d-duktorah
 be.finished-3fs discussing-Fem-NOM dissertation-Fem-GEN the-doctorate
 ‘The dissertation of the doctorate was discussed’
 Lit: it is finished discussing the doctorate dissertation
- e. tamm-at iḥalat-u-hum ila l-mahkama-t-i
 be.finished-3fs referring-NOM-them to the-trial-Fem-GEN
 ‘They were referred to the trial’
 Lit: it is finished referring them to the trial
- f. tamm-at idafa-t-u l-ṣadeed min l-mawad-
 be.finished-3fs adding-Fem-NOM the-few from the-materials-GEN
 ‘Some of the materials were added’
 Lit: it is finished adding some materials

The complements of *tamm-a(t)* in all the above sentences are verbal nouns. The two complements of the wordform *tamm-a(t)* seem to have changed from non-event nouns in CA to verbal nouns in MSA.

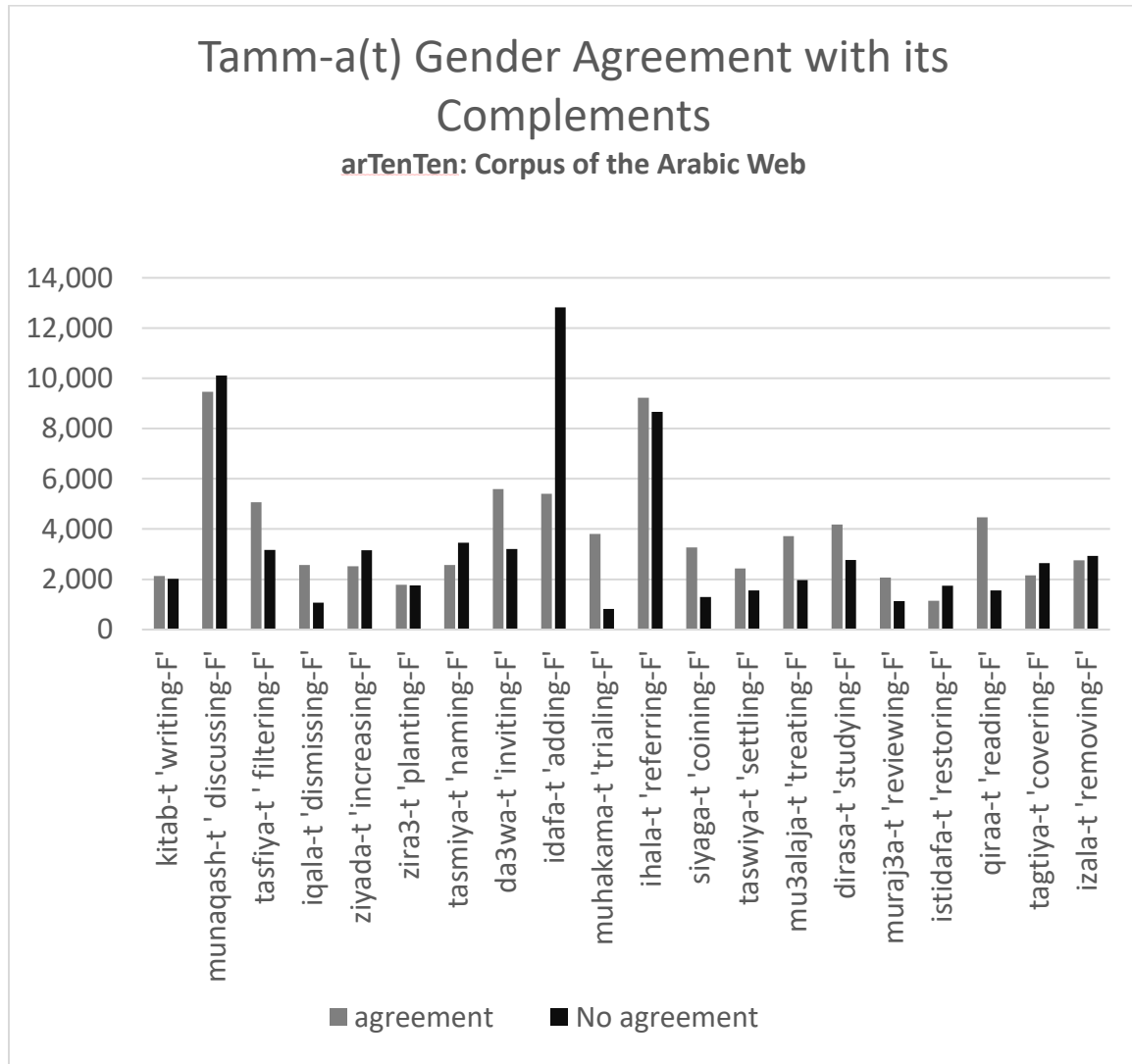
Nonetheless, there might be a few exceptions to this generalization in the MSA data.

***Tamm-a(t)* (be.finished-3m/fs) Agreement.**

The MSA data show that some of the *nextleft* words of the wordform *تم tamm-a* (be.finished-3ms) is feminine verbal nouns such as *idafa-t* (adding-Fem) and *iʕada-t* (returning-Fem). The collocation of *tamm-a* with both feminine nouns is about 12,800 times. This shows that *tamm-a(t)* feminine agreement marker might have started to return to the default phi-features irrespective of the grammatical gender of the following verbal nouns.

To test this closely, I selected 20 feminine verbal nouns which appear very high on the *nextleft* list of *tamm-at* (be.finished-3fs) and compared the collocation frequency of these 20 feminine verbal nouns with both wordforms *تم tamm-a* (be.finished-3ms) and *تمت tamm-at* (be.finished-3fs).

Figure 1



This bar chart shows how often these 20 feminine verbal nouns occur with both *tamm-at* (be.finished-3fs), represented by this legend ■ agreement, and *tamm-a* (be.finished-3ms), represented by this legend ■ No agreement. The bar chart shows that the 20 verbal nouns occurrences with both *tamm-a* (be.finished-3ms) and *tamm-at* (be.finished-3fs) are comparable. The bar chart also proves that the collocation of *tamm-a* (be.finished-3ms) with feminine verbal nouns are not mere exceptions. Rather, it is a

linguistic change in *tamm-a(t)*'s agreement with its complements. Therefore, *tamm-a* diverges from full verbs' behaviors and resembles MSA modal verbs.

The Frequency of Tamm-a(t) in CA and MSA

Comparing the frequency of *tamm-a(t)* in CA and MSA, we notice the huge gap between the frequency of *tamm-a(t)* in CA and MSA. To make the number of *tamm-a(t)* occurrences in the two corpora comparable, I must normalize the figure of *tamm-a(t)* frequency in each corpus. Thus, the frequency of the wordforms *تمّ tamm-a* (be.finished-3ms) and *تمت tamm-at* (be.finished-3fs) in each corpus must be divided by the total number of words in their corpus and then multiplied by 1000,000. For example, the frequency of the wordform *تمّ tamm-a* (be.finished-3ms) in KSUCCA corpus is 1,701. The frequency of the wordform is then divided by the total number of words that KSUCCA corpus contains, which is 46,705,577. The quotient is then multiplied by 1000,000, giving the product 36,41. The two tables below provide the frequency data for both CA and MSA.

Table 4

The Frequency of tamm-a(t) in KSUCCA Corpus (CA data)

Word Form	Frequency	Frequency Per Million
<i>تمّ tamm-a</i> (be.finished-3ms)	1,701	36,41
<i>تمت tamm-at</i> (be.finished-3fs)	788	16,87
<i>تمّ tamm-a(t)</i> (be.finished-3m/fs)	2,489	53.28

Table 5

The Frequency of tamm-a(t) in arTenTen Corpus (MSA data)

Word Form	Frequency	Frequency Per Million
تم <i>tamm-a</i> (be.finished-3ms)	4,517,777	604,33
تمت <i>tamm-at</i> (be.finished-3fs)	523,777	70,06
تم(ت) <i>tamm-a(t)</i> (be.finished-3m/fs)	5,041,554	674,39

The implication of such results will be discussed in the following section.

Discussion

This section discusses the implication that the corpus data carry on the auxiliarity of *tamma/yatimmu*. The three characteristics of auxiliaries as specified in Harris and Ramat (1987) will be used to determine based on the provided corpus data whether *tamm-a(t)* behaves as auxiliaries or full verbs.

a. Does *tamm-a(t)* select another non-finite verbal form?

The MSA data show that *tamm-a(t)* selects verbal nouns as their complements. Given what we discussed about the verbal properties of verbal nouns occurring after *tamma/yatimmu* in Chapter three, the MSA data confirm that *tamm-a(t)* selects a non-finite verbal form. Therefore, *tamma/yatimmu* in MSA show this characteristic of auxiliaries.

b. Can *tamm-a(t)* select a DP of its own?

The CA data show that *tamm-a(t)* would select nouns as their complements, which is not a characteristic of auxiliaries. The opposite is attested in the MSA data. A few exceptions in MSA are where *tamm-a(t)* collocates with nouns and do not perform a passive function.

c. Does *tamm-a(t)* show particular paradigms and syntactic behaviors different from those of verbs?

Observing how *tamm-a(t)* agrees with its complements in both CA and MSA, the CA data confirm that *tamm-a(t)* shows a typical verb-subject agreement. However, in MSA, *tamm-a(t)* seems to undergo an erosion of its 3fs agreement features and instead shows the default 3ms as shown above.

d. High frequency as evidence for *tamm-a(t)* grammaticalization:

The considerable frequency gap of the two wordforms between CA and MSA texts suggests that such a dramatic increase in frequency must have resulted from grammaticalization in the latter. According to Bybee (2007), grammatical morphemes are characterized by “extremely high frequency” compared to lexical morphemes. The high frequency of *tamm-a(t)+* verbal noun proves that the two constituents must have acquired grammatical periphrasis.

These pieces of evidence about the complements of *tamm-a(t)*, agreement features of *tamm-a(t)*, and the frequency of *tamm-a(t)* show that *tamma/yatimmu* are indeed auxiliaries in MSA.

The Ambiguous Data and the Source of Ambiguity

Some CA sentences seem to bear two equal readings. The ambiguity source of these sentences can be accounted for by *tamma/yatimmu* grammaticalization. The suggested syntactic structure for *tamma/yatimmu* auxiliatation explains neatly the ambiguity observed in such sentences.

Consider the following sentences.

(3) (From KSUCCA corpus)

a. tamm-a khalq-u-h

Be.finished-3ms form-NOM-his/ forming-NOM-him

CA reading ‘Lit: **his form** was complete’

MSA reading ‘Lit: it was finished **forming him**’⁸

b. tamm-a shurbu-h

Be.finished-3ms drink-NOM-his/drinking-NOM-it

CA reading ‘Lit: **his drink** was complete’

MSA reading ‘Lit: it was finished **drinking it**’

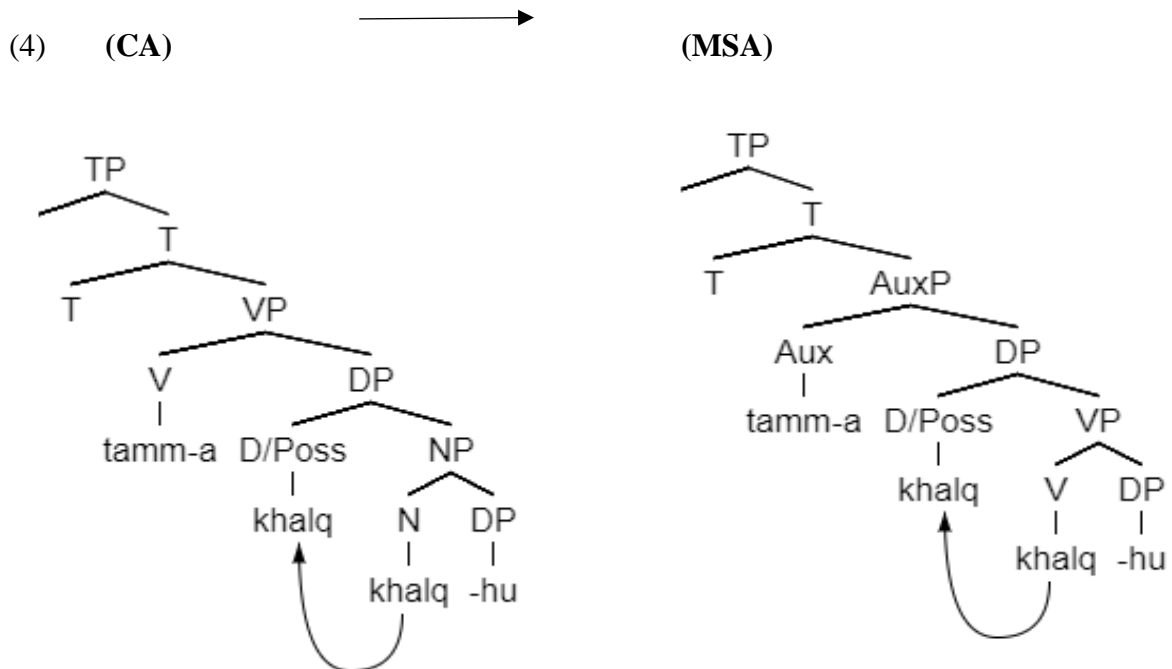
Since both possessive pronoun suffixes and object pronoun suffixes are alike (Ryding, 2005), except for the first person singular *-ii* (my) and *-nii* (me), we can see the dual function of these suffixes. However, the possessive pronouns are distributed differently from object pronouns in that the former attach to nouns, whereas the latter attach to verbs. *Khalq-u* (form-NOM) *shurb-u* (drink-NOM) assume a nominal role in

⁸ The MSA reading is typically translated to the English *be*-passive (Murqida, 1993), thus the second sentence can also be translated as ‘he was formed.’

CA reading and a verbal one in the MSA reading, thus allowing the two readings to occur.

As I have shown in Chapter three, verbal nouns can behave nominally or verbally. In CA, *khalq-u* (form-NOM) *shurb-u* (drink-NOM) above are verbal nouns that behave nominally in that the following pronouns are possessive ones. The reason for this comes from the fact that *tamma/yatimmu* are full verbs in CA, so a nominal complement is the proper complement.

On the other hand, in MSA, *tamma/yatimmu* are followed by verbal nouns, which show verbal properties. Thus, the pronouns attached to verbal nouns are realized as object pronouns. The second reading is strongly preferred in MSA because *tamma/yatimmu* are auxiliaries in MSA. Let us see how such diachronic changes reflect in the syntactic structure.



The two syntactic structures illustrate the difference between the two readings above. The CA structure shows that *khalq* (form) projects NP, so the attached pronoun suffix *-hu* (his) assumes a possessive pronoun distribution. The phrase *khalq-hu* (form-his) occurs in a construct state structure, hence the syncretic head D/Poss, as argued in Chapter three. *Tamm-a* (be.finished-3ms) is base-generated in V. the uninterpretable phi-features and NOM case of T are valued with the c-commanded DP. Since the verb *tamm-a* (be.finished-3ms) is unaccusative verb, having no external argument and assigning no ACC case, the vp is not projected. The *khalq* (form) movement in the construct state is justified for in Chapter three.

The periphrastic passive reading, i.e., the second reading, is distinguished by a VP projection of *khalq* (forming); thus, the pronoun *-hu* has an object distribution in MSA structure. It is also distinguished by AuxP, which hosts *tamm-a* auxiliary. When *tamma/yatimmu* grammaticalized, they moved from VP to AuxP, thus making space for the lower verbal noun to have the verbal properties.

The Lexical Source ‘Finish’ and Passive Diachronic Sources

Understanding *tamma/yatimmu* in the broader context of grammaticalization requires us to discuss two aspects of the MSA periphrastic passive. First is the lexical source ‘finish,’ which gave rise to the passive function in the periphrastic passive in MSA. Second are the attested diachronic sources for passive and passivelike constructions.

The Lexical Source ‘Finish’ Grammaticalization.

The concepts encoded in lexical sources play a major role in how they are grammaticalized (Heine, Claudi, and Hünemeyer, 1991). For instance, the lexical

sources that refer to body parts elicit certain grammatical expressions and concepts such as reflexive pronouns and reflexivity (Kuteva et al., 2019). The fact that such concepts “tend to be conceived in a similar way across linguistic and ethnic boundaries” (Heine et al., 1991: 152) explains why the lexical sources grammaticalize in similar pathways across languages.

The lexical source ‘finish’ has been reported by Bybee, Perkins, and Pagliuca (1994) as a lexical source for completives and anteriors in various languages. Kuteva et al. (2019) report seven pathways to the lexical source ‘finish’: completive, consecutive, perfective, etc. However, none of the pathways of ‘finish’ includes passive or passivelike markers.

Passive Diachronic Sources.

Kuteva et al. (2019) cite 14 diachronic sources which have evolved to passives. The diachronic sources include lexical sources such as 'fall,' 'come,' 'get,' 'give,' 'see,' 'suffer,' etc., and grammatical concepts and expressions such as anticausative, comitative, nominalizer, reflexive, etc. 'Fall' seems to be analogous to *tamma/yatimmu* (be.finish) since both are telic unaccusative verbs. Hespelmath (1990) discusses what he refers to as "intransitive inactive auxiliaries" as one of the diachronic sources of passive markers. He underscores non-agentive intransitives as a major diachronic source for auxiliaries of periphrastic passives. While the lexical source 'finish' was not cited as one of the examples of "intransitive inactive auxiliaries," unaccusative lexical sources such as 'fall' and *tamma/yatimmu* 'finish' fall under this category.

The fact that only the unaccusative form *tamma/yatimmu* have auxiliated in MSA, but not the other transitive forms such as *atamma/yutimmu*, suggests that unaccusativity plays a major role in grammaticalizing *tamma/yatimmu*, and not only the lexical source.

The Lexical Source ‘Finish’ in Colloquial Icelandic Passive.

According to Kress (1982, as cited by Berkov, 1988), Colloquial Icelandic (CI) expresses “objective-impersonal passive construction” (P.447), using the participial form *bú-ið* that has the meaning of “ready, having finished.” Consider the following active and passive sentences from Colloquial Icelandic.

(5) (From Berkov, 1988: 447-8)

a. Hann er bú-inn að byggja rétt-ina
 He is finished to build the fold
 'He has (just) built, has finished building the-fold'

b. að er bú-ið að byggja rétt-ina
 it is finished to build the fold
 'The fold is ready'

Hann (he) is the subject of the sentence with which the participial adjective *bú-inn* (finished) agrees in gender, number, and case. The passive sentence has the expletive *það* (it), unlike the active sentence. Thus, the participial adjective *bú-ið* (finished) appears with 3rd person singular neutral features. The verb *byggja* (build) takes the infinitive form as it is preceded by the particle *að* (to).

What concerned us here is the fact that this construction is analogous to the periphrastic passive in MSA since both perform the passive function using the same lexical source. This further suggests a connection between the lexical source ‘finish,’

which has no external argument, be it unaccusative ‘finish’ as in MSA or ‘finish’ with an expletive occupying the subject position as in CI, and passive grammaticalization.

Conclusion

I laid out the corpus data for CA and MSA *tamm-a(t)* and its complements. The data show that *tamm-a(t)* shows the three auxiliary properties of Harris and Ramat (1987). Also, the high frequency of *tamm-a(t)* in MSA suggests that they have indeed grammaticalized. In an attempt to place the periphrastic passive in the attested grammatical paths, the chapter investigated the lexical source ‘finish’ grammaticalization and the diachronic sources of passives. While the lexical source ‘finish’ was not documented in the literature as a diachronic source for passive construction, Hespelmath (1990) refers broadly to “intransitive inactive auxiliaries” as a category for passive auxiliary sources. This category of passive auxiliary sources can accommodate *tamma/yatimmu* since they are auxiliated unaccusative verbs. The chapter argued that ‘finish’ can be considered a lexical source for passives as attested in MSA and CI.

CHAPTER 6

SUMMARY AND CONCLUSION

Summary

Chapter one introduced the two primary varieties of Arabic, to which the periphrastic passive is relevant, i.e., Classical Arabic and Modern Standard Arabic. The chapter provided a brief background of the case system in CA and MSA and the process of grammaticalization.

Chapter two attempted to give a uniform account of passive voice. It showed that the concept of passiveness is not expressed similarly in languages; therefore, canonical and non-canonical passives exist. The prototypical passive properties, as in Shibatani (1985), were employed to investigate passive constructions. The prototypical analysis views passiveness as properties. Thus, the more prototypical properties a passive construction shows, the more passive it is. The morphological passive in CA and MSA manifests all the prototypical properties. It also aligns with the predominant analysis of passive voice.

Chapter three looked into the periphrastic passive and its components. It discussed the main verb in the periphrastic passive and its verbal noun complements. The chapter showed how verbal nouns and their complements form a construct state. The last section of the chapter discussed the prototypical passive properties in the MSA periphrastic passive.

Chapter four discussed auxiliaries and their distinctive properties. It also introduced the grammaticalization process responsible for changing full verbs to

auxiliaries: auxiliation. The chapter presented the methodology for the corpus search and the utilized corpora for CA and MSA.

Chapter five provided the corpus results for *tamm-a(t)* in CA and MSA. It concluded, based on the syntactic behaviors of *tamm-a(t)*, that the main verb in the periphrastic passive has auxiliated. Interestingly, the grammaticalization of *tamm-a(t)* explains the ambiguity observed in CA data. Moreover, the chapter discussed the implication of these results to our understanding of the lexical source ‘finish’ grammaticalization path. Thus, based on the periphrastic passive in MSA and the Colloquial Icelandic passive, the chapter argued that ‘finish’ is a possible source for passive grammaticalization.

Conclusion

To conclude, it is well known that CA and MSA employ a very synthetic process to passivize active constructions, as shown in Chapter two. However, a new analytic passive construction emerged in MSA. The thesis investigated this new construction, i.e., the periphrastic passive. In doing so, the thesis discussed the properties and behaviors of this construction. Furthermore, using corpus data from CA and MSA, the thesis showed that the main verb in the MSA periphrastic passive grammaticalized to an auxiliary. The auxiliation of the unaccusative main verb ‘finish’ to a passive auxiliary suggests that this might be a plausible source for passives. The CI data confirmed this relationship between the lexical source ‘finish’ and passive. The thesis calls for further investigation of this path of grammaticalization.

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