Aspectual Verbs in Modern Standard Arabic

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Abstract. The main aim of this paper is to discuss aspectual verbs in Modern Standard Arabic (MSA) and submit them to syntactic analysis within the lexical functional grammar (LFG) framework. This paper argues that the structure of aspectual verbs in MSA contains two clauses - a matrix clause and a subordinate clause - and suggests that the two clauses have a control relation. The control analysis is supported by evidence from tests such as dummy subjects, selectional restrictions, passivization and idiom chunks. The paper discusses two possible analyses of control structures in LFG: functional control, in which the subject is assumed to be shared between the two clauses, and anaphoric control, in which the subordinate clause is assumed to contain a pronoun that refers to the subject in the matrix clause. The evidence in this paper suggests that the anaphoric control is the optimal analysis for aspectual structures in MSA.

Keywords: Raising, control, functional control, anaphoric control.

1. Introduction

This paper discusses aspectual verbs in MSA. The term ‘aspectual verbs’ is used in this paper to refer to two types of verbs: inception verbs, or verbs of beginning, and proximity verbs. The former group of verbs denotes the meaning of begin or start in the English language, and the latter has the meaning of be.near or almost. Additionally, this paper presents a syntactic analysis of these verbs within the LFG framework. To the best of our knowledge, these verbs are discussed only by Haddad (2012), who argued that they should be analyzed as raising verbs rather than control verbs and provided a syntactic analysis within the minimalism program. The current paper is dif-
ferent in that it argues against analyzing these verbs as raising verbs and offers evidence suggesting that they are control verbs. Additionally, this work presents a syntactic analysis within the LFG framework. This paper is divided into six parts: the first part describes the two groups of verbs: verbs of beginning and proximity verbs. The second part argues that the structure of these verbs contains two clauses: a matrix clause and a subordinate clause, and this argument is supported by the use of tests such as modifiers, negation and coordination. The third part argues that these verbs are control verbs with evidence based on dummy subjects, selectional restrictions, passivization and idiom chunks. The fourth part provides an overview of the analysis of raising and control structures within generative grammar and LFG. The fifth part analyzes aspectual verbs in MSA within the LFG framework.

2. Data

2.1 Inception aspect

Some aspectual verbs in MSA are used to denote the inception of an event or state. These verbs are called verbs of beginning in traditional grammar and they are śćala, ʾahada, šaraʾa and badaʾa.

All of these verbs have the same semantic meaning which is equivalent to begin or start in the English language (see Badawi and Gully (2004)). The following examples illustrate the meaning of these verbs:

(1) a. al-ṭālib-u śćala/... yuḍākiru. 
   DEF-student-NOM begin.PFV.3SGM study.IPVF.3SGM
   ‘The student began to study’

   b. sālim-un śćala/... yalʿabu fi al-ḥadiqat-i. 
   Salem-NOM begin.PFV.3SGM play.IPVF.3SGM in DEF-garden-GEN
   ‘Salem began to play in the garden’

1Classical Arabic contains more verbs of beginning such as ṭaʃa and ʔanšaʔa, but they are not used in MSA.
Verbs of beginning require a subject and a verbal complement that contains a verb in the imperfective form. However, the verb bada?a is different because it can occur with either a verbal complement or a verbal noun. The following examples illustrate the two cases:

(2) a. al-ðayf-u bada?a ya?akulu.
   DEF-guest-NOM begin.PFV.3SGM eat.IPFV.3SGM
   ‘The guest began to eat’

   b. al-ðayf-u bada?a al?-akl-a.
   DEF-guest-NOM begin.PFV.3SGM DEF-eat-ACC
   ‘The guest began to eat’

The verb bada?a is used in example (2a) with a verbal complement which is ya?akulu ‘eat’ while it is used with a verbal noun in example (2b). In contrast, the remainder of these verbs must have a verbal complement and they cannot be used with a verbal noun. Therefore, the following examples are ungrammatical because the verbs of beginning are followed by verbal nouns:

   DEF-guest-NOM begin.PFV.3SGM DEF-eat-ACC
   ‘The guest began to eat’

   DEF-child-NOM begin.PFV.3SGM DEF-play-ACC
   ‘The child began to playing’

Another property of this class of verbs including bada?a is that the verbal complement that follows them cannot be introduced by a complementizer. Therefore, the following examples are ungrammatical:

   DEF-child-NOM begin.PFV.3SGM COMP walk.IPFV.3SGM
   ‘The child began to walk’

   DEF-child-NOM begin.PFV.3SGM COMP walk.IPFV.3SGM
   ‘The child began to walk’
As a further property of this class of verbs, both verbs (the aspectual verb and the verb in the complement) have the same subject, and both verbs show agreement with this subject. Additionally, the subject can appear in any position because MSA has free word order. The following examples illustrate the subject before the aspectual verb in (5a), after the aspectual verb in (5b) and after the lexical verbs in the complement in (5c):

(5) a. sālim-un ǧaʿala/... yadrusu fi al-ḡāmīʿat-i.
   Salem-NOM begin.PFV.3SGM study.IPV.3SGM at DEF-university-GEN
   ‘Salem began to study at the university’

   b. ǧaʿala/... sālim-un yadrusu fi al-ḡāmīʿat-i.
   begin.PFV.3SGM Salem-NOM study.IPV.3SGM at DEF-university-GEN
   ‘Salem began to study at the university’

   c. ǧaʿala/... yadrusu sālim-un fi al-ḡāmīʿat-i.
   begin.PFV.3SGM study.IPV.3SGM Salem-NOM at DEF-university-GEN
   ‘Salem began to study at the university’

2.2 Proximity aspect

The second group of verbs discussed in this paper includes two verbs: ʿawšaka and kāda. Known as proximity verbs, these verbs have the same semantic meaning, which is to be near/almost to doing in the English language. The two verbs are similar to verbs of beginning, which are discussed in the previous section, in that they require a subject and a verbal complement. However, the verbal complement in this construction can appear either with or without a complementizer. In the following illustrative examples, the complements in (6b) and (7b) are introduced by the complementizer ?an:

(6) a. al-ṭālib-u ʿawšaka yanḡaḥu.
   DEF-student-NOM be.near.PFV.3SGM succeed.IPV.3SGM
   ‘The student was near to succeeding’

   2Classical Arabic previously used the verb karaba with these two verbs, and the three verbs have the same semantic meaning (see Alaqili (nd)).
b. al-\-tālib-u  ?awšaka  ?an  yanğāha.
DEF-student-NOM be.near.PFV.3SGM COMP succeed.IPFV.3SGM
‘The student was near to succeeding’

(7) a. ?ahmad-u kāda  yuğādir-u.
Ahmad be.near.PFV.3SGM leave.IPFV.3SGM
‘Ahmad was near to leaving’

Ahmad be.near.PFV.3SGM COMP leave.IPFV.3SGM
‘Ahmad was near to leaving’

In addition, ?awšaka and kāda are similar to verbs of beginning in that they share the same subject with the verb in the complement, with both verbs in the matrix clause and the complement agreeing with this subject. Additionally, the verbal complement of both verbs must contain a verb in the imperfective form. Thus, both verbs in this section differ from a verb such as bada?a, which was discussed in the previous section, as they cannot be followed by a verbal noun and instead must be followed by the verbal complement. Therefore, the following examples are ungrammatical because both verbs precede verbal nouns:

DEF-student-NOM be.near.PFV.3SGM DEF-success-ACC
‘The student was near to succeeding’

DEF-student-NOM be.near.PFV.3SGM DEF-success-ACC
‘The student was near to succeeding’

Similar to the subject in the structure of verbs of beginning in the previous section, the subject here can appear in any position in this construction even if the verbal complement is introduced by a complementizer. This is because word order in MSA is free. The following sentences are illustrative:
3. Biclausal or monoclausal

Two possible analyses can be applied to the construction of aspectual verbs. In the first analysis, this construction is analyzed as a sentence that contains two clauses: the first clause is headed by the aspectual verb and the second by the lexical verb in the complement. In the second analysis, this construction is analyzed as a sentence containing one clause. If this construction is analyzed as monoclausal under the latter analysis, one should assume that it contains a complex predicate, or the aspectual verb will be analyzed as a feature introducing featural information. This paper argues in favor of the first analysis, which assumes that the construction of aspectual verbs is a biclausal construction.

A large amount of evidence supports analyzing aspectual verbs as heads requiring a verbal complement headed by a lexical verb. One argument supporting this analysis comes from the interaction of aspectual verbs with modifiers. A modifier can be used to modify the aspectual verb in this construction and to modify the lexical verb. This test shows that the two verbs occur in a construction that contains two clauses rather than a clause containing a complex predicate. The first group of these verbs, called verbs of beginning, illustrates that this construction has two clauses because modifiers can clearly modify the verb in the main clause as well as the verb in the embedded clause. The following examples illustrate the modification test with the verb bada’a, which is from the first group (the remainder of verbs in this group show the same result).
In (10a), the target of modification is the verb *badaʔa ‘began’* in the main clause, which means that *yawm-a al-ʔumuʕat-i ‘on Friday’* modifies the verb *badaʔa ‘began’*; hence, the event will start *on Friday*. In contrast, the modifier *kull-a yawm-in ‘every day’* in (10b) modifies the lexical verb *yaʔkulu ‘eat’* in the complement clause. In other words, the event of *eating fish* occurs *every day*. The test of modification is more obvious in example (10c), in which the two modifiers are used simultaneously.

In the second group under discussion in this paper, verbs interact with modifiers in the same way; modifiers can modify the verb in the matrix clause and the verb in the complement clause separately. The following examples illustrate the interaction of modifiers with the verbs *ʔawšaka ‘be.near’* and *kāda ‘be.near’*:

(11) a. ḥalid-un ?awšaka/kāda yawm-a al-ʔumuʕat-i yaʔkulu Khaled-NOM be.near.PFV.3SGM day-ACC DEF-Friday-GEN eat.IPV.3SGM samak-an. fish-ACC

‘Khaled was near (on Friday) to eating fish’
b. ḥālid-un ʔawšaka/kāda yaʔkulu samak-an kull-a yawm-in.
   Khaled-NOM be.near.PFV.3SGM eat.IPFW.3SGM fish-ACC every-ACC day-GEN
   ‘Khaled was near to eating fish every day’

c. ḥālid-un ʔawšaka/kāda yawm-a al-ḡumuʿat-i yaʔkulu
   Khaled-NOM be.near.PFV.3SGM day-ACC DEF-Friday-GEN eat.IPFW.3SGM
   fish-ACC every-ACC day-GEN
   ‘Khaled was near (on Friday) to eating fish every day’

In example (11a), the modifier yawm-a al-ḡumuʿat-i ‘on Friday’ modifies the verb ʔawšaka
‘be.near’ or kāda ‘be.near’ in the matrix clause. In example (11b), the modifier kull-a yawm-in
‘every day’ modifies the verb yaʔkulu ‘eat’ in the embedded clause. Example (11c) shows that the
two modifiers can modify the two verbs separately. Therefore, the modification test demonstrates
that this construction has two clauses headed by two verbs rather than a clause containing a com-
plex predicate.

The second test that can be used to demonstrate that this construction contains two clauses
is the negation test. The two clauses can be negated separately with different meanings. The
following examples show that the verb šaraʿa ‘began’, which is one of the verbs of beginning, can
be negated, and the lexical verb in its complement can also be negated:

(12) a. al-ṭālib-u mā šaraʿa yuḏākiru.
   DEF-student-NOM NEG began.PFV.3SGM study.IPFW.3SGM
   ‘The student did not begin to study’

b. al-ṭālib-u šaraʿa lā yuḏākiru.
   DEF-student-NOM began.PFV.3SGM NEG study.IPFW.3SGM
   ‘The student began to not study’

c. al-ṭālib-u mā šaraʿa lā yuḏākiru.
   DEF-student-NOM NEG began.PFV.3SGM NEG study.IPFW.3SGM
   ‘The student did not begin to not study’
In (12a), the verb in the matrix clause, šara‘a ‘began’, is negated, indicating that the negation targets the *beginning* of *studying*. In contrast, the negative particle negates the lexical verb yudākiru ‘study’ in example (12b). Example (12c) contains two negative particles negating the two verbs in the two clauses separately.

The two verbs in the second group, which are ?awšaka ‘be.near’ and kāda ‘be.near’, are similar with respect to negation. The verb ?awšaka ‘be.near’ is the same as the verbs of beginning in interacting with negation, while kāda ‘be.near’ is different because it has a special meaning when negated, as discussed later. The following examples show that the verb ?awšaka ‘be.near’ can be negated, and the lexical verbs in its complement can also be negated:

DEF-man-NOM DEF-sick-NOM NEG be.near.PFV.3SGM walk.IPV.3SGM  
‘The sick man was not near to walking’

DEF-man-NOM DEF-sick-NOM be.near.PFV.3SGM NEG walk.IPV.3SGM  
‘The sick man was near to not walking’

? DEF-man-NOM DEF-sick-NOM NEG be.near.PFV.3SGM NEG walk.IPV.3SGM  
‘The sick man was not near to not walking’

Example (13a) shows that the verb in the matrix clause can be negated, and example (13b) shows that the lexical verb in the embedded clause can also be negated. However, the question mark in front of example (13c) indicates that this example is odd, although this oddness is for semantic rather than syntactic reasons; thus, the syntax of this sentence is grammatical.

The verb kāda ‘be.near’ can be negated, but it has a special meaning with negation. When kāda ‘be.near’ is negated, it means *hardly*. The following examples illustrate the negation of the main and complement clauses (the negation of the two clauses simultaneously is also odd here):
(14) a. al-tālib-u mā kāda yanḡahu.
    DEF-student-NOM NEG be.near.PFV.succeed.IPVF.3SGM
    ‘The student hardly succeeded’

b. al-tālib-u kāda lā yanḡahu.
    DEF-student-NOM be.near.PFV.3SGM NEG succeed.IPVF.3SGM
    ‘The student was near to not succeeding’

The negative particle mā ‘does not’ precedes the verb kāda ‘be.near’ in the matrix clause in example (14a), but the meaning of the verb with negation is hardly. Thus, the event indicated by the lexical verb yanḡahu ‘succeed’ occurred, and the student hardly succeeded. This odd meaning is a deviation at the semantic level. The clause is syntactically negated, and the negation test shows that the verb kāda ‘be.near’ heads a clause in this construction. In (14b), the lexical verb yanḡahu ‘succeed’ is negated, indicating that it heads the complement clause in this construction.

Further evidence supporting biclausal analysis comes from a coordination test. The verbal complement that is required by aspectual verbs can be a conjunct in a coordinate structure; hence, the verbal complement and another verbal clause can be coordinated. In this case, the aspectual verb has scope over both verbs in the coordinate structure. The following examples illustrate this behavior, with badaʔa ‘began’ in example (15a) and ʔaḥaḍa ‘began’ in (15b), and both come from the first group containing verbs of beginning (the remainder of these verbs are the same):

(15) a. al-tifl-u al-marīḍ-u badaʔa yaʔkulu al-ṭaʕam-a
    DEF-child-NOM DEF-sick-NOM begin.IPVF.3SGM eat.IPVF.3SGM DEF-food-ACC
    wa yašrabu al-māʔ-a.
    CONJ drink.IPVF.3SGM DEF-water-ACC
    ‘The sick child began to eat food and drink water’

b. al-tālib-u ʔaḥaḍa yaqraʔu wa yaktubu.
    DEF-student-NOM begin.IPVF.3SGM read.IPVF.3SGM CONJ write.IPVF.3SGM
    ‘The student began to read and write’
In (15a), bada?a ‘began’ occurs in the matrix clause, and it has scope over the two events ya?kulu ‘eat’ and ya?rabu ‘drink’ in the coordinate structure. In other words, the sentence means that the sick child began to perform both actions: the first occurred in the complement clause, and the second is joined to the first by the conjunction. Therefore, the aspectual verb does not form complex predicates with the verb that follows it. When two verbs form complex predicates, their semantic meanings will be mixed (see Kroeger (2004)), and in this case, it will be impossible for any verb to indicate its meaning. The same behavior is shown by the verb ?ahada ‘began’ in example (15b). The meaning of this verb has scope over the two events in the coordinate structure, and the sentence means that the student began to read and began to write.

The coordination test can be used with the second group of verbs, and the result is the same. The verb in the main clause has scope over the two verbs in the coordinate structure. The following examples are illustrative:

    DEF-child-NOM DEF-sick-NOM be.near.PFV.3SGM eat.IPFV.3SGM DEF-food-ACC
    wa ya?rabu al-m?‘a.
    CONJ drink.IPFV.3SGM DEF-water-ACC
    ‘The sick child was near to eating food and drinking water’

    DEF-student-NOM be.near.PFV.3SGM read.IPFV.3SGM CONJ write.IPFV.3SGM
    ‘The student was near to reading and writing’

The verb in the main clause ?aw?aka ‘be.near’ in example (16a) has scope over the two verbs in the coordinate structure, ya?kulu ‘eat’ and ya?rabu ‘drink’. The sentence means that the sick child was near to eating and was near to drinking. In the same way, the verb k?da ‘be.near’ in (16b) has scope over the two verbs ya?ra?u ‘read’ and yaktubu ‘write’ in the coordinate structure. Thus, this test shows that ?aw?aka ‘be.near’ and k?da ‘be.near’ do not form complex predicates with the lexical verbs that follow them.
In summary, the construction of aspectual verbs in MSA under discussion in this paper contains two clauses, as demonstrated above by several tests, such as tests of *modifiers, negation* and *coordination*. All of these tests support analyzing this structure as having two clauses: a matrix clause and subordinate clause. The following section discusses the type of relation that should exist between these two clauses. Specifically, the section considers whether these verbs are raising or control verbs.

4. Raising vs. control

Given that aspectual verbs in MSA are biclauses, this section discusses the type of relation suggested to exist between the two clauses in this construction. Two verbs in this construction require two subject functions; however, only one subject should fulfill the two functions. Two possible types of relations can exist between the two clauses: raising or control.

The term raising is used in transformational grammar because of the analysis that is suggested for this type of verb. In this type of framework, the subject that appears in the matrix clause is assumed to have raised from the subordinate clause (see Kiparsky and Kiparsky (1970) and Postal (1974)). For example, the verb *seem* in the English language serves as a raising verb in the following example:

(17) Sue seems to love David

Example (17) consists of two clauses: the first clause is the matrix clause and is headed by the main verb *seem*, while the second clause is the complement clause headed by the verb *love*. The two verbs share the same subject, *Sue*, which is not a semantic argument of the main verb *seem* because raising verbs do not impose semantic restrictions on their subjects. In addition, the complement clause *love David* that is required by the raising verb in (17) lacks a subject, and the subject of the matrix clause controls the subject in the complement. Thus, *Sue*, which is the subject of the verb *seem* in example (17), is the subject of the verb *love* in the complement (see Dalrymple...
In contrast, a different control relation can be observed between control verbs (also called equi verbs in transformational frameworks; see Postal (1972)) and their complements. The main difference between raising and control structures is that the verb in the main clause assigns a semantic role to its subject in control structures. Hence, if the subject in the main clause functions as a subject for both clauses, it will receive two semantic roles from the two verbs in this structure. Therefore, some researchers argue that the relation between the two clauses in control structures is an anaphoric binding relation. In other words, the subordinate clause contains an omitted pronoun that functions as a subject, and the antecedent of this pronoun is the subject of the main clause (the analysis of raising and control is discussed later in greater detail). The following example illustrates control verb try in the English language:

(18) Sam tried to leave

Some tests in the literature can be used to distinguish between the raising and control verb classes. This paper applies these tests to the verbs under discussion and attempts to determine whether they are raising or control verbs. The remainder of this section discusses the following tests: dummy subjects, selectional restrictions, passivization and idiom chunks.

4.1 Dummy subjects

As stated above, raising and control verbs differ crucially in that control verbs assign semantic roles to their subjects, while raising verbs do not. This difference between the two verb classes allows a dummy subject, such as it or there in English, to function as the subject of a raising verb. In contrast, a dummy subject cannot occur with control verbs because dummy subjects have no semantic content (see Kroeger (2004), Davies and Dubinsky (2008) and Kim and Sells (2008) for more details about this test). The following examples illustrate the difference between the raising
verb *seem* and the control verb *try* in relation to dummy subjects. In (19a), the subject of the verb *seem* is the dummy subject *it*, and the sentence is acceptable; by contrast, the example in (19b) is not acceptable because the verb *try* is a control verb:

(19) a. It seems to be raining.

   b. *It tries to be raining.

Arabic has no clear dummy subjects that can be used to show whether aspectual verbs assign semantic roles to their subjects. Instead, some researchers cite agreement between the main verb and its subject as evidence that may support one analysis for this type of verb. Alotaibi et al. (2013) stated that aspectual verbs should take default 3SGM agreement, and the lexical verb that follows them may contain its own subject if they are raising verbs. Alotaibi et al. (2013) discussed some Arabic dialects (Hijazi, Egyptian and Maltese) and suggested that aspectual verbs in these dialects should be analyzed as raising verbs because some verbs in this class can take default 3SGM agreement. The same phenomenon of default agreement has been found in other dialects, including the Gulf dialects and Syrian dialect (see Holes (2004) and Firanescu (2010)).

However, the MSA case is different with respect to default agreement in both groups of verbs under discussion in this paper. The aspectual verb and the lexical verb must agree with the subject, and this suggests that both verbs assign semantic roles to their subjects. The following examples illustrate that the verb bada?a ‘began’ from the first group of verbs (the remainder are the same) must agree with the subject, as shown in (20a), and it cannot show default agreement, as shown in (20b):

   DEF-student-NOM begin.PFV.3SGF play.IPFV.3SGF in DEF-garden-GEN
   ‘The student began to play in the garden’

   DEF-student-NOM begin.PFV.3SGM play.IPFV.3SGF in DEF-garden-GEN
‘The student began to play in the garden’

Similarly, the second group of verbs under discussion in this paper shows that the aspectual verb must agree with the subject and cannot take default agreement. The following examples show this requirement, in which ?awšaka ‘be.near’ or kāda ‘be.near’ agrees with the subject, and the sentence is acceptable in (21a). However, without agreement, the sentence is not acceptable in (21b).

   DEF-student-NOM be.near.PFV.3SGF play.IPFV.3SGF in DEF-garden-GEN
   ‘The student was near to playing in the garden’

   DEF-student-NOM be.near.PFV.3SGM play.IPFV.3SGF in DEF-garden-GEN
   ‘The student was near to playing in the garden’

The obligatory agreement between aspectual verbs in MSA and the subject may show that the subject is a thematic argument of these verbs, indicating that aspectual verbs in MSA assign semantic roles to their subjects. However, the agreement between the two verbs and the subject does not provide strong evidence that supports analyzing these verbs as control verbs, as the agreement between verbs in all constructions that contain two verbs in MSA and their subjects is always obligatory; even auxiliaries in MSA, which should be analyzed as raising verbs, must agree with the subject. Kāna ‘to be’ is an example of an auxiliary in MSA, and when it precedes a lexical verb, both the auxiliary and lexical verbs must agree with the same subject. In example (22a), the sentence is grammatical because both the auxiliary and lexical verbs agree with the same subject. By contrast, the sentence in (22b) is not grammatical because the auxiliary verb does not agree with the subject.

(22) a. sārat-u kānat tamšī qurb-a al-bayt-i.
   Sarah-NOM be.PFV.3SGF walk.IPFV.3SGF near DEF-house-GEN
   ‘Sarah was walking near the house’
b. *sārat-u kāna tamšī qurb-a al-bayt-i.
   Sarah-NOM be.PFV.3SGM walk.IPFV.3SGF near DEF-house-GEN
   ‘Sarah was walking near the house’

4.2 Selectional restrictions

Another important difference between control and raising verbs is that control verbs impose selectional restrictions on their subjects. For example, the verb *seem* in the English language permits any type of subject (human or inanimate), whereas the *try* imposes certain restrictions on its subject. The following examples are illustrative:

(23) a. John/ the radio seems to work.
   
   b. John/*the radio tries to work.

When applied to aspectual verbs in MSA, this test shows that both groups of verbs impose selectional restrictions on their subjects in a real context (the real context is the opposite of the metaphoric context, which will be discussed later). For example, in the first group, containing the verbs of beginning in this paper, the verbs show that they impose selectional restrictions on their subjects. This paper suggests that the subjects of these verbs play the role of *agent*\(^3\). In this case, the subject should be animate, should have volition involvement in the event, should have control over the event and should have consciousness and perception (for more detail about the properties of *agent* arguments, see Kearns (2011)). These requirements mean that subjects such as *a car, water or fire* should not be acceptable with the first group of aspectual verbs, which is the case. The following examples show that a noun phrase such as *al-sayarat-u 'the car'* can be a subject of a verb such as *tuḡibu 'attract'* in MSA, as shown in (24a). However, when this verb is used as a complement of an aspectual verb from the first group with the same subject, the sentence becomes unacceptable, as shown in (24b) below:

\(^3\)A phrase that identifies the actor or causer of events (see Matthews (2007)).
    DEF-car-NOM attract.IPFV.3SGF DEF-customers-ACC
    'the car attracts customers’

    DEF-car-NOM begin.PFV.3SGF attract.IPFV.3SGF DEF-customers-ACC
    'the car began to attract customers’

The rest of the verbs in this group are the same in that they impose selectional restrictions on their subjects in the same context.

In the second group of verbs, which contains the verbs ʔawšaka ‘be.near’ and kāda ‘be.near’, both verbs also impose selectional restrictions on their subjects; hence, both verbs assign semantic roles to their subjects. This paper suggests that this role should be a theme. However, an inanimate subject such as al-ḥaḡar-u ‘the stone’ can fill this semantic role, meaning that the following example, which is used by (Haddad, 2012, 7) to support analyzing ʔawšaka ‘be.near’ as a raising verb, does not provide a strong evidence for this claim.

    DEF-stone-NOM be.near.PFV.3SGM COMP roll.IPFV.3SGM-SBJV
    'the stone was near to rolling down’

Control verbs usually do not allow an animate subject when the subject is agent or experiencer. For example, a verb such as qarrara ‘decided’ or ḥāwala ‘tried’, which are control verbs and assign an agent semantic role to their subjects, undoubtedly cannot occur with an inanimate subject such as al-sayarat-u ‘the car’ in the previous examples. The following examples are illustrative:

(26) a. *al-sayarat-u qarrarat ʔan tuʿgib-a
    DEF-car-NOM decide.PFV.3SGF COMP attract.IPFV.3SGF-SBJV
    DEF-customers-ACC
    'the car decided to attract customers’

4Theme is defined as an entity moved by an event or action (see Crystal (2011)).
   DEF-car-NOM try.PFV.3SGF COMP attract.IPFW.3SGF-SBJV DEF-customers-ACC
   ‘the car tried to attract customers’

However, this is not always the case. In some sentences, inanimate subjects may be acceptable
with aspectual verbs that assign agent role to their subjects. The verb badaʔa ‘began’ from the first
group can have an inanimate subject such as al-ḥaḡar-u ‘the stone’, as shown below:

(27) al-ḥaḡar-u badaʔa yatadahrاغu.
   DEF-stone-NOM begin.PFV.3SGM roll.IPFW.3SGM
   ‘the stone began to roll down’

The conflict between examples such as (24b) and (27) could support the claim of Perlmutter
aspectual verbs are ambiguous between raising and control verbs. They show some properties of
raising verbs such as allowing nonthematic subjects. This can be concluded from the fact that
an aspectual verb such as begin can have expletive subjects, as shown in (28), can have the same
meaning with passive and active complement, as shown in (29), and can keep the meaning of idiom
chunks, as shown in (30) (the passivization and idiom chunks will be discussed in MSA below in
this paper).

(28) a. ‘There began to be commotion’ (Perlmutter, 1970, 108).
          
   b. ‘It began to rain’ (Perlmutter, 1970, 109).

          
   b. ‘Joe began to be annoyed by the noise’ (Perlmutter, 1970, 109).
(30) a. ‘Heed began to be paid to urban problems’ (Perlmutter, 1970, 110).

b. ‘Heedway began to be made toward a solution’ (Perlmutter, 1970, 110).

On the other hand, Perlmutter (1970) observes that in some cases, aspectual verbs in English may have thematic subjects. In these cases, the aspectual verb begin can be embedded under a control verb, as shown in (31), or it can be imperative, as shown in (32)

(31) a. ‘I tried to begin to work’ (Perlmutter, 1970, 111).

b. ‘I forced Tom to begin to work’ (Perlmutter, 1970, 112).


However, in MSA, some control verbs, that assign an agent role to their subjects, can occur with inanimate subjects in certain contexts. For example, a verb such as ħāwala ‘tried’, which is a control verb, can occur with an inanimate subject, as shown below:

(33) al-sayarat-u ħāwalat ?an tataḡwaz-a nuqṭat-a al-taftūš-i.
DEF-car-NOM try.PFV.3SGF COMP pass.IPFV.3SGF-SBJV point-ACC DEF-check-GEN
‘the car tried to pass the checkpoint’

Example (33) shows that it is possible for a control verb such as ħāwala ‘tried’ to occur with an inanimate subject such as al-sayarat-u ‘the car’. However, this use of the verb is not typical. Clearly, the car cannot be assigned a semantic role such as agent by the verb ħāwala ‘tried’. In this example, the car is metaphorically the subject of the verb in the matrix clause. Accordingly, the speaker gives the car in this example some human properties, and thus, the car becomes like a human in its ability to try.
This paper suggests that the case in an example such as (27) is the same because it is a type of metaphor. The speaker makes the stone like a human in its ability to begin the action in (27). Aspectual verbs in the first group impose selectional restrictions on their subjects. Therefore, this test shows that they are control verbs rather than raising verbs.

4.3 Passivization

Passivization is another test that can be used to distinguish between raising and control verbs. When the verb in the complement of a raising verb is passivized, the meaning of the sentence remains the same. By contrast, the passivization of the complement of a control verb affects the meaning of the sentence (see Davies and Dubinsky (2008)). The following sentences explain this difference between raising and control verbs by using seem and try in the English language:

(34) a. David seems to like Monica.

b. Monica seems to be liked by David.

c. David tries to like Monica.

d. Monica tries to be liked by David.

In (34a), the complement of the verb seem is in an active form, whereas the complement is in a passive form in (34b). The passivization does not alter the meaning significantly because the verb seem is a raising verb. By contrast, the meaning in the sentence in (34c), which contains an active complement, differs from that in (34d), which contains a passive complement because the verb in the main clause, which is try, is a control verb.

The reason for this difference between raising and control verbs in relation to passivization is that passivization changes the map between grammatical relations and semantic roles. The verb
like in the complement clause in the examples in (34) requires two arguments, and their semantic roles are experiencer\(^5\) and stimulus\(^6\). In example (34a), which is the active form, the controlee (the subject of like), which refers to David, is the experiencer, and Monica is the stimulus. In the passive form in example (34b), the controlee refers to Monica, which is the stimulus, and David is the experiencer. However, the meanings of the active and passive examples are similar because the main verb, which is seem, does not assign any semantic role to the subject in either case. Therefore, David, as the subject of seem in (34a), has the experiencer semantic role assigned by the verb like in the complement. Likewise, the subject of seem, Monica, in (34b) is the stimulus, and this semantic role is required by the verb like in the complement (see Kroeger (2004) and Davies and Dubinsky (2008)).

With control verbs, the situation is different. Because the control verb try assigns a semantic role to its subject, the subject of try, which is the controller (controls the controlee), must play two semantic roles. For example, in example (34c), David is the agent of the verb try (the person who tries) and the experiencer of the verb like because the controlee refers to David. By contrast, the agent of the verb try is Monica in (34d), and Monica is the stimulus of like in the complement. The semantic role assigned by the control verb is responsible for the difference in meaning between the active and passive forms (see Kroeger (2004)).

In MSA, the passivization test shows that the two groups of verbs under discussion behave like controlverbs. The verb ?ahada ‘began’ from the first group shows that it assigns a semantic role to its subject. The following examples apply the passivization test to this verb:

\[(35)\] a. ḥāmid-un ?ahada yuḥibbu laylā.
   Hamed-NOM begin.PFV.3SGM love.IPFV.3SGM Layla.ACC
   ‘Hamed began to love Layla’
In example (35a), the verb "yuhbibbu ‘love’" in the complement clause is in an active form, whereas in example (35b), it is in a passive form. However, the two examples differ significantly. In ((35a), Hamed, which is the subject of the matrix clause and the controller, initiates the love. By contrast, the initiator in example (35b) is Layla, not Hamed, rendering the sentence unacceptable at the semantic level because Layla in this example started to be loved, which sounds unnatural. This difference between the active and passive forms shows that the aspectual verb "?ahada ‘began’" assigns the subject the semantic role agent, as stated above. If this is true, the subject in example (35a)) must have two semantic roles, agent and experiencer; the former is assigned by the aspectual verb, and the latter is assigned by the verb "love" in the complement clause. The object is a stimulus in this case. By contrast, the subject of the main clause in the passive form in (35b) is Layla, which must have two semantic roles: agent, which is assigned by the verb in the matrix clause, and stimulus, assigned by the verb in the complement clause. Therefore, the semantic role that is assumed to be assigned by the aspectual verb "?ahada ‘began’" results in this difference between the active and passive forms, suggesting that this verb is a control verb rather than a raising verb. The remaining verbs in the first group are similar in assigning the same semantic roles (agent) to their subjects, resulting in the passivization of the complement and rendering the sentence unacceptable.

The second group of verbs in this paper is the same in that the two verbs "?aw sakka ‘be.near’" and "kada ‘be.near’" assign semantic roles to their subjects. The semantic role in this case is theme. The following examples apply the the passivization test to both verbs.

(36) a. ?aw sakka/kada yuhbibbu laylā.
   Hamed-NOM be.near.PFV.3SGM love.IPFV.3SGM Layla.ACC
   ‘Hamed was near to loving Layla’

   b. ?aw sakkat/kadat tuhabbu min hāmid-in.
   Layla-NOM be.near.PFV.3SGF love.PASS.IPFV.3SGM from Hamed-GEN
'Layla was near to being loved by Hamed'

In example (36a), the verb in the complement clause is in an active form. The subject of the matrix clause is Hamed, and it has two semantic roles: theme, which is assigned by the verb in the matrix clause, and experiencer, which is assigned by the verb in the complement clause. Notably, the passivization of the verb in the complement clause tuhabbu 'be loved' in example (36b) renders it unacceptable because Layla in this case must fulfill two semantic roles, theme and stimulus. This test shows that the two verbs ?awšaka 'be.near' and kāda 'be.near' are control verbs.

This behavior by aspectual verbs in relation to passivization can be found in a control verb such as qarrara 'decided' in MSA. The following examples show that example (37b) is not acceptable because the verb in the main clause qarrara 'decided' is a control verb.

(37) a. qarrara ʰālid-un ᵃn yuqābila sālim-an.
    decide.PFV.3SGM Khaled-NOM COMP meet.IPVF.3SGM Salem.ACC
    ‘Khaled decided to meet Salem’

    b. ḥqarrara sālim-un ᵃn yuqābala min ᵃn yuqābala
    decide.PFV.3SGM Salem.NOM COMP meet.PASS.IPVF.3SGM from Khaled.GEN
    ‘Salem decided to be met by Khaled’

Haddad (2012) used passivization to support his analysis for the two groups of verbs. He ignored the first group and applied this test to the verb kāda 'be.near' from the second group. As he argued, this test shows the verb to be a raising verb. The following examples are quoted from Haddad (2012, 9):

(38) a. kāda  liverpül ᵃn yuḥaqqqa  al-ta²ādul-a.
    be.near.PFV.3SGF Liverpool COMP achieve.IPVF.3SGM DEF-draw-ACC
    ‘Liverpool was near to achieving a draw’

    b. kāda  al-ta²ādul-u  ᵃn yuḥaqqqa  ᵇalā yadd
    be.near.PFV.3SGF DEF-draw-NOM COMP achieve.PASS.IPVF.3SGM on hand
    Liverpool
    ‘a draw was near to being achieved by Liverpool’
Haddad (2012) argued that example (38b) is acceptable, indicating that the verb kāda ‘be.near’ is a raising verb. This paper suggests that example (38b) is acceptable in some Arabic dialects other than MSA, and this claim is supported by the use of some words in both examples in (38) without case marking, such as liverpūl ‘Liverpool’ and yadd ‘hand’. Therefore, example (38b) is not acceptable in MSA⁷ and this result suggests that the verb is a control verb rather than a raising verb.

4.4 Idiom chunks

An idiom functions as a lexical unit; hence, the meaning of an idiom cannot be understood from the meaning of its individual words. This type of construction has the normal grammatical relations between individual words, but it does not correspond to normal semantic roles. For example, in an idiom such as the cat is out of the bag (which means the secret is out), the cat functions as the grammatical subject in this sentence but does not function as a theme, which is the semantic role. As a result, the meaning of an idiom will be retained when its subject appears as a subject of a raising verb. By contrast, the meaning of an idiom will be lost if its subject appears as a subject of a control verb. This difference arises because raising verbs assign semantic roles to their subjects, while control verbs do not (see Davies and Dubinsky (2008) and Kim and Sells (2008)). The following examples illustrate this test with the English raising verb seem and the control verb try. The meaning of the idiom is retained in (39a) with seem, but it is lost with try in (39b) because try assigns a semantic role to the cat, and it must be doing the trying:

(39) a. The cat seems to be out of the bag (the secret is out).

b. The cat tries to be out of the bag.

The aspectual verbs under discussion in this paper show that they assign semantic roles to subjects, which means that idioms lose their meanings with these verbs. The idiom al-šinab-u

⁷This paper consulted some MSA experts in Arabic linguistics departments in Saudi Arabia to learn more about these types of sentences.
lā yuḏnā min ṣaḡr-i al-šawk-i ‘grapes cannot be reaped from thorns trees’ in MSA means that you cannot gain any benefit from bad people, and the literal meaning is *grapes cannot be reaped from thorns trees*. When this idiom is used with aspectual verbs, it loses its idiomatic meaning. The following examples illustrate the use of this idiom with the verbs badaʔa ‘began’ in (40a) and šaraʔa ‘began’ in (40b), which are from the first group, and the remainder of the verbs in this group are the same:

(40) a. ?al-<![CDATA[.inab-u]]> badaʔa lā yuḏnā min ṣaḡr-i  
 DEF-grapes-NOM begin.PFV.3SGM NEG gain.IPFV.3SGM from trees.GEN al-šawk-i.  
 DEF-thorns.GEN  
 ‘the grapes began not to be reaped from thorns trees’

          b. ?al-<![CDATA[.inab-u]]> šaraʔa lā yuḏnā min ṣaḡr-i  
 DEF-grapes-NOM begin.PFV.3SGM NEG gain.IPFV.3SGM from trees.GEN al-šawk-i.  
 DEF-thorns.GEN  
 ‘the grapes began not to be reaped from thorns trees’

The question marks at the beginning of both examples indicate that both are unacceptable at the semantic level. The aspectual verbs cause the idiom ‘*grapes cannot be reaped from thorns trees*’ to be used to indicate its literal meaning, which is not possible with aspectual verbs because it entails that *grapes can be reaped from thorns trees*.

The second group of verbs, which contains the two verbs ḥawšaka ‘be.near’ and ḥāda ‘be.near’, is the same because the idiom cannot retain its meaning when used with both verbs in this group. The following examples illustrate the use of both verbs with the previous idiom:

(41) a. ?al-<![CDATA[.inab-u]]> ḥawšaka lā yuḏnā min ṣaḡr-i  
 DEF-grapes-NOM be.near.PFV.3SGM NEG gain.IPFV.3SGM from trees.GEN al-šawk-i.  
 DEF-thorns.GEN  
 ‘the grapes were near not to being reaped from thorns trees’
b. ʔal-ʔinab-u kāda lā yuğnā min šağar-i
   DEF-grapes-NOM be.near.PFV.3SGM NEG gain.IPV.3SGM from trees.GEN
   al-şawk-i.
   DEF-thorns.GEN
   'the grapes were near not to being reaped from thorns trees'

As in the verbs in the first group, the two verbs in both examples above have changed the idiom to its literal meaning. Both examples are semantically unacceptable because the literal meaning of the idiom with both verbs entails that grapes can be reaped from thorns trees, which is not true. The results thus indicate that this test supports analyzing aspectual verbs in MSA as control verbs, and this paper thus supports such analysis.

This conclusion can be supported through the use of the same idiom with a raising verb, such as the auxiliary kān in (42a), and a control verb, such as ʔistaṭā‘a ‘be.able’ in (42b). In (42a), the idiomatic meaning is still preserved, but it is lost in (42b), rendering the sentence unacceptable:

(42) a. ʔal-ʔinab-u kān lā yuğnā min šağar-i
   DEF-grapes-NOM be.PFV.3SGM NEG gain.IPV.3SGM from trees.GEN
   al-ʃawk-i.
   DEF-thorns.GEN
   'the grapes were to be not reaped from thorns trees’

b. ʔal-ʔinab-u ʔistaṭā‘aʔan lā yuğnā min šağar-i
   DEF-grapes-NOM be.able.PFV.3SGM COMP NEG gain.IPV.3SGM from trees.GEN
   al-ʃawk-i.
   DEF-thorns.GEN
   'the grapes were to be not able to reap from thorns trees’

Haddad (2012, 8) used idiom chunks to support his analysis of these verbs. He argued that the idiom chunks test supports the analysis of aspectual verbs as raising verbs. He provided the following examples, in which the idiom chunk is provided in (43a) and is used with the verb kāda ‘be.near’ in (43b):

(43) a. ʔirṭabata lisān-u-hu.
    got.tied.PFV.3SGM tongue-NOM-his
Literal meaning: ‘his tongue was tied’
Idiomatic meaning: ‘he became speechless’

b. kāda lisān-u-hu ?an yartabiṭa.
be.near.PFV3SGM tongue-NOM-his COMP got.tied.IPV3SGM
‘he was near to being speechless’

This paper maintains that the idiom chunk in (43a) is not acceptable in MSA, although it is possible in some Arabic dialects. In MSA, the idiom should be ʔinʔaqaḍa lisān-u-hu, and it means that he became speechless. In addition, when this idiom is used with the aspectual verbs under discussion in this paper, it loses its idiomatic meaning; the sentence sounds odd because the tongue cannot be tied. Consider the following examples:

(44) a. ʔaḥada lisān-u-hu yanʕaqidū.
begin.PFV3SGM tongue-NOM-his got.tied.IPV3SGM
‘his tongue began to be tied’

b. ʔkāda lisān-u-hu ?an yanʕaqida.
be.near.PFV3SGM tongue-NOM-his COMP got.tied.IPV3SGM
‘he was near to being tied’

The following section assumes that aspectual verbs in MSA are control verbs, and it discusses possible analyses for them and provides the appropriate f-structures within the LFG framework.

5. The analysis of raising and control

This section discusses the analysis of raising and control structures. This discussion begins with generative syntax and explains the difference between raising and control structures in this framework. The section then considers the LFG framework and discusses two different analyses that are suggested for raising and control: functional control and anaphoric control. In functional control, the two clauses are assumed to share a single subject. By contrast, two subjects appear in anaphoric control.
5.1 Raising and control in generative grammar

The term raising is used in generative grammar because of the analysis that is suggested for this type of verb. In this framework, the subject that appears in the matrix clause is assumed to have raised from the subordinate clause (see Rosenbaum (1967), Kiparsky and Kiparsky (1970) and Postal (1974)). Thus, this type of structure consists of two clauses: the main clause and the subordinate clause, which is an infinitival clause (TP). The subject of the embedded clause is assumed to be moved from its position, where it has a semantic role, to a non-theta position. The movement in this case is required by the EPP\(^8\). Thus, the verb in the matrix clause does not select its subject, which is moved from the complement clause.

A control structure is like raising because it consists of two clauses. However, the complement clause in control structures is larger than that in raising. The complement of a raising verb is a TP, whereas the complement is a CP with control verbs. The main idea underlying this assumption is the Theta Criterion, which states that each argument fills only one theta-role (semantic role) and that each theta-role must be filled by one argument (Chomsky, 1981). With respect to a control verb such as try in English, it must assign a theta-role to its subject in a sentence such as John tries to love Monica. In this case, John receives two theta-roles: an agent from the verb try and an experiencer from the verb in the embedded clause, which is love. This violates the Theta Criterion, and the solution for this problem lies in suggesting that each theta-role in this structure is assigned to a different argument. This solution is possible given the assumption of an argument in the embedded clause called PRO that receives the experiencer role, and this assumption entails that the embedded clause is a CP rather than TP. PRO appears in the subject position of infinitive clauses and cannot be replaced by a noun phrase because this position is caseless, as suggested in early analyses, or it has a special case called null case, as suggested by Chomsky and Lasnik (1993). Additionally, PRO must have an antecedent that c-commands it (see Polinsky (2013)).

\(^8\)The Extended Projection Principle states that every T must be extended to TP by including a specifier. In recent work, it was assumed that T carries an EPP feature that requires a specifier (see Radford (2009)).
Notably, there is no consensus about the size of the complement in control structures in generative syntax. Some researchers, such as Wurmbrand (1998) Ghomeshi (2001) and Landau (2001), believe that the complement in this type of structure is smaller than a CP. However, one of the main aims of the minimalist program is to evaluate the tenets of principles and parameters theory and keep the necessary ones. This development has changed the analysis of raising and control structures. Three changes in this program alter the analysis of both structures: first, the movement has been changed to copying and deletion; second, the Theta Criterion has been revised, and the new version allows any argument to be assigned more than one theta-role; and third, the null case has been abandoned. These changes allow the minimalist program to dispense with the concept of PRO (see Hornstein (1999)). Thus, the analysis of control becomes similar to raising analysis in that both structures are derived from the movement of the argument from the embedded clause to the matrix clause. The only difference between the two structures is that the moved argument is assigned semantic roles by the verb in the matrix clause in control structures (see Hornstein (1999) and Manzini and Roussou (2000)). The following section discusses the analysis of raising and control structures within the Lexical-Functional Grammar (LFG) framework.

5.2 LFG

LFG is a nontransformational theory that assumes that language should be described and modeled by two related structures representing different facets of linguistic information. The analysis of raising and control verbs should be represented at level of the functional structure (f-structure) in LFG. Similar to generative syntax, LFG has more than one analysis for raising and control structures.

Dalrymple (2001) followed generative grammar in using PRO in her analysis of control structures. She noted a syntactic difference between raising and control structures. In her analysis, a raising verb requires an XCOMP as an argument, while a control verb requires a COMP as an argument, and the COMP in this case contains PRO as a subject. Raising verbs in Dalrymple (2001)
are examples of functional control because the subject of raising verbs functionally controls the subject of the embedded clause XCOMP. For example, the verb *seem* in the English language illustrates raising verbs in the following example. The subject in the matrix clause *Sue* controls the subject of the verb *love* in the embedded clause.

(45) Sue seems to love David

The lexical entry for the verb *seem* in the previous example is shown in (46), in which the f-structure of the V node has an attribute PRED, whose value is the semantic form ‘*seem* < XCOMP > SUBJ’. The semantic form shows that the subject appears outside the angled brackets, indicating that this argument is not a semantic argument for the verb. Additionally, the lexical entry has an attribute SUBJ, whose value is XCOMP SUBJ, and this equation ensures that the subject of the matrix clause, *Sue* in (45), controls the subject of the embedded clause XCOMP.

(46) *seem* V  \((\uparrow \text{PRED}) = \text{‘seem} < \text{XCOMP} > \text{SUBJ}’\)
\[(\uparrow \text{SUBJ}) = (\uparrow \text{XCOMP SUBJ})\]

The following f-structure shows the analysis of the example in (45), repeated in (47a):

(47) a. *Sue seems to love David*

\[
\begin{align*}
\text{PRED} & \quad \text{‘SEEM} < \text{XCOMP} > \text{SUBJ}’ \\
\text{SUBJ} & \quad \text{[PRED ‘Sue’]} \\
\text{XCOMP} & \quad \text{[PRED ‘LOVE} < \text{SUBJ, OBJ} >’] \\
\text{OBJ} & \quad \text{[PRED ‘David’]} 
\end{align*}
\]
The f-structure in (47b) shows that the main verb in the sentence in (47a) is the verb *seem*, and it requires a subject and XCOMP. This requirement is represented by the value of the attribute\(^9\) PRED in the main f-structure. This value is ‘SEEM < XCOMP > SUBJ’, showing that the verb requires two arguments: a subject and XCOMP. Notably, the subject appears outside the angled brackets, which means that it is not a semantic argument of the verb *seem*. The requirement for the subject is fulfilled by the value of the attribute SUBJ, which contains an f-structure with the subject *Sue*. The XCOMP requirement is fulfilled by the value of the attribute XCOMP, and it has an f-structure containing the attribute PRED with the value ‘LOVE < SUBJ, OBJ >’. Thus, the predicate of this clause, which is the verb *love*, requires a subject and object; however, both arguments in this f-structure appear inside the angled brackets, which means that the subject in this clause is a semantic argument of the verb *love*. The f-structure that is the value of the attribute SUBJ is empty, and it is linked by a line to the f-structure of SUBJ of the main f-structure; therefore, the subject of the XCOMP is controlled by the subject of the matrix clause.

The control structure has been called *obligatory anaphoric control* by Bresnan (1982), Zec (1987) and Dalrymple (2001). The English control or equi verb *try* in (48) is an example of *obligatory anaphoric control*.

(48) Sue tried to love David

The syntax of this structure differs from the raising structures in this analysis. The subject of the verb *tried* in example (48) anaphorically controls the subject of the verb *love* in the embedded clause. Therefore, the complement clause in this analysis is a complete COMP rather than XCOMP. Similar to early analysis in generative grammar, this analysis in LFG uses PRO, which functions as the subject of the COMP. This subject in the subordinate clause is syntactically independent from the subject in the main clause. However, an anaphoric binding relation exists between the two subjects in the main and subordinate clauses. This analysis differs from functional control, which

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\(^9\)F-structures display a function from attributes to values or contain a set of pairs containing two members: the first member is an attribute, and the second is its value (see Dalrymple (2001)).
involves a unified f-structure shared between the two clauses. Thus, an equation such as $(\uparrow \text{SUBJ}) = (\uparrow \text{XCOMP SUBJ})$ is unnecessary (see Dalrymple (2001)). The following f-structure shows the analysis of example (48).

(49) a. Sam tried to leave

\[ \begin{align*}
\text{SUBJ} &\quad \text{PRED} \quad \text{‘Sam’} \\
\text{COMP} &\quad \text{PRED} \quad \text{‘leave (SUBJ)’} \\
\text{SUBJ} &\quad \text{PRED} \quad \text{‘PRO’} \\
\end{align*} \]

The f-structure in (49b) shows that the main predicate in the sentence is the control verb try, and it requires a subject and COMP. The subject and COMP appear inside the angled brackets, they are therefore semantic arguments of the verb try. The noun phrase Sam fulfills the requirement of the subject, while the requirement of the COMP is fulfilled by the clause headed by the verb leave. The f-structure that is the value of COMP represents this clause. The verb leave in this f-structure requires a subject. The subject is represented as PRO, indicating that the subject is an anaphor. The antecedent of the anaphor is the subject of the matrix clause, which is Sam.

LFG offers another view of the analysis of control structures in Falk (2001), but the analysis of raising structures remains the same. The raising structure is analyzed as a structure that contains a shared subject between the matrix clause and the subordinate clause, which is assumed to be an XCOMP. The shared subject is assigned a semantic role from the verb in the subordinate clause. The previous f-structure in (47b) is also suggested for raising structures in Falk (2001). However, the analysis of control structures is different in Falk (2001). He stated that the architecture of LFG differs from transformational theory in that a control structure can be analyzed as a structure that contains two subjects (using PRO) or a shared subject. Therefore, a control structure can be analyzed as functional control; in this case, it will be the same as a raising structure in that both...
clauses have a shared subject, and the subordinate clause is an XCOMP. By contrast, it can be analyzed as anaphoric control, in which case the analysis uses PRO, and the subordinate clause is a COMP. Nothing precludes the functional control analysis of control structures in the LFG framework; hence, any argument can fill more than one semantic role. Therefore, the following two f-structures can be suggested for a sentence such as Sue tried to love David, which is analyzed as functional control in (50a) and anaphoric control in (50b).

(50) a. 

```
(50) a. [PRED 'TRY < SUBJ, XCOMP >' [SUBJ [PRED 'Sue'] [XCOMP [SUBJ [PRED 'LOVE < SUBJ, OBJ >'] [OBJ [PRED 'David']]]]]]
```

b. 

```
(50) b. [PRED 'TRY < SUBJ, COMP >' [SUBJ [PRED 'Sam'] [COMP [SUBJ [PRED 'LEAVE < SUBJ >'] [PRED 'PRO']]]]]
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However, Falk (2001) argued that some syntactic properties can be used to distinguish functional control from anaphoric control. In other words, each control verb should be examined separately, and it can then be analyzed as functional control or anaphoric control based on the evidence shown. Falk (2001) stated that functional control differs from anaphoric control in that the controller in functional control must be present and be a core function, but fulfilling both conditions is not obligatory in anaphoric control. Additionally, functional control does not permit split controllers, whereas anaphoric control allows them because a pronoun can take a split controller.

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10The two types of functions are governable grammatical functions (SUBJ, OBJ, XCOMP, COMP, OBJq, OBLq) and modifiers (ADJ, XADJ). Governable grammatical functions are divided into two types: cores or terms (SUBJ, OBJ, OBJq) and nonterms or noncores, which are the remainder of the governable grammatical functions (see Dalrymple (2001)).
Considering these properties, Falk (2001) suggested different analyses for control verbs such as agree and try in the English language. The verb agree should be analyzed as anaphoric control because the controller can be absent, can be noncore and can be split, as shown in (51a), (52a) and (53a), respectively (all examples are quoted from Falk (2001, 143)). By contrast, the verb try is analyzed as a type of functional control because the controller must appear, must be a core and cannot be split, as shown in (51b), (52b) and (53b), respectively.

(51) a. ‘It was agreed to clone dinosaurs’.

   b. ‘*It was tried to clone dinosaurs’.

(52) a. ‘It was agreed by the geneticists to clone dinosaurs’.

   b. ‘*It was tried by the geneticists to clone dinosaurs’.

(53) a. ‘The geneticists said that the paleontologist agreed to clone dinosaurs’ (the controllers are the geneticists and the paleontologist).

   b. ‘The geneticists said that the paleontologist tried to clone dinosaurs’ (the controller is the paleontologist).

The following section discusses the analysis of the aspectual verbs under discussion in this paper. As stated above, these verbs should be analyzed as control verbs.
6. The analysis of aspectual verbs in MSA

As stated above, this paper suggests that the aspectual verbs under discussion are control verbs rather than raising verbs. In both groups of verbs discussed above, the subject of the matrix clause controls the subject of the subordinate clause. These verbs do not require an object; therefore, a control relation must exist between the subject of the matrix clause and the subject of the subordinate clause. The following repeated examples show this relation in both groups of verbs:

(54) a. sālim-un ɣaːala/... yadrusu ɦ al-ɣāmiːat-i.
    Salem-NOM begin.PFV.3SGM study.IPFV.3SGM at DEF-university-GEN
    ‘Salem began to study at the university’

    b. al-tālib-u ʔawšaka/kāda ʔan yanḡaːha.
    DEF-student-NOM be.near.PFV.3SGM COMP succeed.IPFV.3SGM
    ‘The student was near to succeeding’

This paper suggests that the anaphoric control analysis discussed in previous sections is the appropriate type of analysis for control structures in MSA despite these verbs showing some properties of functional control listed by Falk (2001) and discussed in the previous section. The properties of functional control shown by these verbs are the following: the controller must be a core (term) and cannot be split. The former is shown by the fact that the noun phrase Zayd, which is the object of the preposition maːra ‘with’ in both examples below, cannot be the controller. Thus, the controller must be a core (term).

(55) a. sālim-un ɣaːala maːra zayd-in yadrusu ɦ
    Salem-NOM begin.PFV.3SGM with Zayd-GEN study.IPFV.3SGM at
    al-ɣāmiːat-i.
    DEF-university-GEN
    ‘Salem began to study with Zayd at the university’

    b. al-tālib-u ʔawšaka/kāda maːra zayd-in ʔan yanḡaːha.
    DEF-student-NOM be.near.PFV.3SGM with Zayd-GEN COMP succeed.IPFV.3SGM
    ‘The student was near to succeeding with Zayd’
The latter property indicating that the controller cannot be split is shown by the ungrammaticality of the following examples. The sentences are ungrammatical because both verbs in the matrix and subordinate clauses in both examples agree with the two noun phrases, but this is impossible because the controller cannot be split.

(56) a. *sālim-un qāla zayd-un ɣaˤalā yadrusā fī
dsay.PFV.3SGM Zayd-NOM begin.PFV.3PLM at
al-ɣāmiˤat-i.
def-DEF-university-GEN
‘Salem said that Zayd began to study at the university’

b. *sālim-un qāla zayd-un _PWR awšakā/kādā yanğahā.
dsay.PFV.3SGM Zayd-NOM be.near.PFV.3PLM succeed.IPVF.3PLM
‘Salem said that Zayd was near to succeeding’

By contrast, the aspectual verbs in this paper allow PRO subjects, which suggests that they should be analyzed as anaphoric control, as MSA is considered a pro-drop language. This means that the controller can be a PRO in some contexts, as shown in the following examples:

(57) a. ɣaˤala yadrusu fī al-ɣāmiˤat-i.
begin.PFV.3SGM study.IPV.3SGM at DEF-university-GEN
‘(Salem) began to study at the university’

b. _PWR awšaka/kāda _PWR an yanğahā.
be.near.PFV.3SGM COMP succeed.IPV.3SGM
‘(The student) was near to succeeding ’

In addition, because MSA allows free word order, the subject of aspectual verbs in MSA can appear in the matrix or subordinate clause. The following examples show the possible word orders in both groups of verbs under discussion:

(58) a. sālim-un ɣaˤala/... yadrusu fī al-ɣāmiˤat-i.
say.PFV.3SGM begin.PFV.3SGM study.IPV.3SGM at DEF-university-GEN
‘Salem began to study at the university’
b. ُعَالَاء/... السَّلْيمُ-عِن يَاذِرِعُ يَفُ لِلْقَامِرِ-عِن-تَيِ.  
begin.PFV.3SGM Salem-NOM study.IPFW.3SGM at DEF-university-GEN  
‘Salem began to study at the university’

c. ُعَالَاء/... يَاذِرِعُ السَّلْيمُ-عِن يَفُ لِلْقَامِرِ-عِن-تَيِ.  
begin.PFV.3SGM study.IPFW.3SGM Salem-NOM at DEF-university-GEN  
‘Salem began to study at the university’

(59) a. الْتَّلِيْبُ-عِن تَّفَكَّرُ-عِن-يَنْغَأَهُ.  
DEF-student-NOM be.near.PFW.3SGM COMP succeed.IPFW.3SGM  
‘The student was near to succeeding’

b. تَفَكَّرُ-عِن الْتَّلِيْبُ-عِن تَّفَكَّرُ-عِن-يَنْغَأَهُ.  
be.near.PFW.3SGM DEF-student-NOM COMP succeed.IPFW.3SGM  
‘The student was near to succeeding’

c. تَفَكَّرُ-عِن يَنْغَأَهُ الْتَّلِيْبُ-عِن.  
be.near.PFW.3SGM COMP succeed.IPFW.3SGM DEF-student-NOM  
‘The student was near to succeeding’

Haddad (2012) argued that examples such as (58c) and (59c) constitute a type of backward raising. He suggested that the subject has moved from the subordinate clause to the matrix clause; then, it returned to the subordinate clause, where it is pronounced. Haddad (2012) used the partial agreement on the verb in the matrix clause in examples such as (58c) and (59c) as evidence that the subject occupied a post-verbal position in the main clause.

LFG involves no movement; therefore, such assumptions are unnecessary. Simply, this paper argues that if the subject appears in the matrix clause, PRO appears in the subordinate clause, and vice versa. As suggested by Falk (2001), control verbs can be analyzed in LFG as anaphoric control by assuming that the structure contains two subjects (using PRO), or as functional control by assuming that the structure contains a shared subject. This paper argues in support of using the anaphoric control analysis because MSA is considered a pro-drop language and the analysis of aspectual verbs must use a PRO as a controller in examples, such as (57) and it is plausible to
assume that the controlee is another PRO, rather than assuming that the PRO in the main clause is shared between the two clauses. The following section provides the lexical entries and f-structures for examples (54a), (57a) and (58c).

6.1 Lexical entries and f-structures

This section presents the lexical entries and f-structures of three types of structures containing the aspectual verb ˘ga'ala ‘began’ from the first group in this paper, while the remaining verbs are the same.

(60) a. sālim-un ˘ga'ala yadrusu fī al-ğāmi'at-i.
Salem-NOM begin.PFV.3SGM study(IPFV.3SGM at DEF-university-GEN
‘Salem began to study at the university’

b. ˘ga'ala yadrusu fī al-ğāmi'at-i.
begin.PFV.3SGM study.IPFW.3SGM at DEF-university-GEN
‘(Salem) began to study at the university’

c. ˘ga'ala yadrusu sālim-un fī al-ğāmi'at-i.
begin.PFV.3SGM study.IPFW.3SGM Salem-NOM at DEF-university-GEN
‘Salem began to study at the university’

The lexical entry of the verb ˘ga'ala ‘began’ is displayed below:

(61) ˘ga'ala I (↑ PRED) = ‘begin < SUBJ, COMP >’
(↑ COMP VFORM) = IPFW
(↑ VFORM) = PFV
((↑ SUBJ PRED) = ‘PRO’)
((↑ COMP SUBJ PRED) = ‘PRO’)

This lexical entry provides information about the f-structure that corresponds to node I in the c-structure because MSA verbs are assumed to appear in node I. The first equation in this lexical entry contains the attribute PRED and its value, which is the semantic form ‘begin < SUBJ, COMP >’. The single quotation marks indicate that the semantic form is unique. The semantic form
shows what is called an *argument list*, and it contains a list of grammatical functions required by the verb. The verb here requires a SUBJ and COMP. Notably, the second equation indicates that the COMP must contain a verb in the imperfective form. The third equation shows that the verb is in the perfective form. The fourth equation specifies the PRED value of the subject which comes from the verb’s specification. This equation is optional and it is necessary for examples such as (60b) and (60c), where the subject of this verb is a PRO. The last equation indicates that the subject of the verb in the complement is a PRO and it is optional because the subject of the verb in the complement may appear in an example such as (60c). This lexical entry is suitable for the verb ˘ga‘ala ‘began’ in the three examples in (60).

The lexical entry for the verb *yadrusu* ‘study’ in the subordinate clauses in the three examples in (60) is shown in (62) below. The *argument list* here contains a SUBJ only because the verb is intransitive.

\[
\begin{align*}
(62) & \quad \text{yadrusu } I \quad (\uparrow \text{PRED}) = \text{‘study } < \text{SUBJ } > ' \\
& \quad (\uparrow \text{VFORM}) = \text{IPFV}
\end{align*}
\]

In addition, the lexical entry of the noun phrase *Salem* is shown below:

\[
\begin{align*}
(63) & \quad \text{‘sālem’ } N \quad (\uparrow \text{PRED}) = \text{‘Salem’} \\
& \quad (\uparrow \text{GEND}) = \text{M} \\
& \quad (\uparrow \text{PERS}) = 3 \\
& \quad (\uparrow \text{NUM}) = \text{SG}
\end{align*}
\]

Finally, the lexical entries of the preposition ˘fī ‘at’ and its complement al-˘gāmi‘at-i ‘the university’ are represented below:

\[
\begin{align*}
(64) & \quad \text{‘fī’ } P \quad (\uparrow \text{PRED}) = \text{‘at } < \text{OBJ } > ' 
\end{align*}
\]
The f-structure that is suggested for the example in (60a) (repeated in (66a)) and that satisfies all the constraints above is the following:

(66) a. sālim-un ǧāʾala yadrusu fī al-ǧāmiʿat-i.
Salem-NOM begin.PFV.3SGM study.IPFV.3SGM at DEF-university-GEN
‘Salem began to study at the university’
The superordinate clause is represented in the f-structure above as a COMP, which means that it is a closed function. The subject of this clause is the PRO referring to the subject in the matrix clause. The prepositional phrase *fi al-ḡāmiʿat-i ‘at the university’* is assumed to function as an adjunct and is represented inside the f-structure of the COMP.

The third example (60c) has a different f-structure. In this example, the PRO appears in the f-structure of the matrix clause, and the COMP contains its own subject. The following f-structure shows the analysis of (60c) (repeated as (67a))
(67) a. ﬂa·ala yadrusu sâlim-un ﬁ al-ﬂâmi·at-i.
begin.PFV study.IPFV sâlem-NOM at DEF-university-GEN
’Salem began to study at the university’

The second example in (60b) has no subject in either clause. In this case, the PRO appears in both clauses and takes its antecedent from the context. The following f-structure represents the analysis of this example, which is repeated as (68a).

(68) a. ﬂa·ala yadrusu ﬁ al-ﬂâmi·at-i.
begin.PFV study.IPFV at DEF-university-GEN
’Salem began to study at the university’
The advantage of suggesting the use of anaphoric control analysis for control structures in MSA is that this approach is the easiest way to cover the variety of control structures in MSA.
7. Conclusion

This paper has discussed aspectual verbs in MSA and has argued that structures of this verb type contain two clauses: a main clause and a subordinate clause. The relation between the two clauses has been suggested to be a control relation rather than raising relation, indicating that aspectual verbs in the matrix clause assign semantic roles to their subjects. To support this analysis, the paper has provided evidence such as the agreement between the two verbs and the shared subject. Additionally, aspectual verbs in MSA impose selectional restrictions on their subjects, which suggests that they are control verbs. Another argument in support of this analysis is passivization, which results in a difference in meaning from the active form. Further evidence comes from idiom chunks; an idiom clearly loses its idiomatic meaning with these verbs. This paper has also discussed the analysis of control verbs within the LFG framework and has shown that both functional control and anaphoric control can be used for analyzing control verbs. However, this paper has argued in favor of anaphoric control because it serves as a uniform analysis for all types of aspectual sentences in MSA. In this analysis, the PRO functions as a subject in any clause that has no overt subject.
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