Aspects of the Argument Structure of Unaccusative Change-of-State Verbs in Standard Arabic

Abdellatif ED-DARRAJI

Language and Society Laboratory University of Ibn Tofail

Kenitra, Morocco.

Abstract This paper investigates the argument structure and argument realization of the subclass of unaccusative change-of-state verbs in Standard Arabic. The main claim put forward in this paper is that this subclass of unaccusative verbs is essentially morphologically derived from causative transitive change-of-state verbs and tends to uniformally project the single internal argument as subject of the clause. It is assumed that this single internal argument seems to be base-generated under the Verb Phrase node and moves, at some syntactic level, to subject position under the Specifier position of what is called in the literature an Inner Aspect Phrase immediately above VP where it is assigned Nominative Case. Moreover, it is proposed that the prefixes *n-* and *ta-* and the infix *-ta-* seem to be unaccusativizers or decausativizers in the language under consideration. Additionally, I propose that unaccusative change-of-state verbs tend to correlate with telicity in the same language. That is, unaccusative change-of-state verbs tend to denote events which seem to have a culminating point. Finally, I would suggest that the findings of the present study may turn out to have some implications for language learning and linguistic typology.

Keywords: Aspects, Arabic, argument structure, valency, unaccusative, change, state, prefix, infix.

1. Introduction

This study examines and seeks to capture the morphosyntactic behavioral patterns of a subclass of unaccusative verbs, namely unaccusative change-of-state verbs in Standard Arabic[1] (SA henceforth), [2], [3] in order to establish a portrayal of the characteristics of these verbs, as well as that of some affixes in the same language, as an instantiation of how morphology interacts with syntax as far as argument structure and argument realization are concerned.

The following reasons might justify why I have opted for carrying out this study: first and foremost and to my knowledge, scarce attention has been devoted to investigating the phenomenon of unaccusative change-of-state verbs in Standard Arabic. The present study might, therefore, draw attention to certain phenomena that have not, hitherto, been explored in this language which offers a rich and well-charted territory for the study of the phenomenon of unaccusativity as a manifestation of argument realization. Moreover, this study may contribute to bridge the research gap pinpointed in this domain.

The major argument defended in the present paper is that some affixes (viz., the prefixes *n-* and *ta-*, and the infix *-ta-*) can change the argument structure or valency and argument realization

[1] Before embarking on the study of these phenomena, it should be noted at this stage that SA (called in Arabic « Al Fuṣ͟ha » is distinguished from other spoken regional dialects in the Arabic world (known as *Al ʕammia*). SA is the native language of no speakers anywhere in the world (Ryding, 2005). It is also the media language of the most influential TV channels in the Arab world, the most read language of the newspapers and magazines.

[2] By 'unaccusative change-of-state verbs,' I mean, in the present investigation, verbs which denote the result state of the act of changing the physical shape or appearance of an entity, in the sense of Levin and Rappaport Hovav (1995:93). On the other hand, change-of-state verbs are standardly defined as those verbs which denote the action of the bringing about of a result state.

I would like to point out that I specifically examine unaccusative change-of-state verbs which denote an externally caused change of state; i.e., a change of state caused by something or someone external to the entity that undergoes the change of state. For more details and an insightful discussion of the distinction between internally and externally caused change-of-state verbs with examples, see McKoon & Macfarland (2000:833-837) and Wittek (2002:5ff.).

[3] I use the following abbreviations throughout this paper: NOM=Nominative. ACC=Accusative. GEN. = Genitive. OBL. = Oblique. M= Masculine. F=Feminine. S=Singular. PL. = Plural. PREF= Prefix. INF=Infix. Unac= Unaccusativizer. Moreover, the following symbols are used to refer to IPA symbols: ʔ= Glottal stop. ʕ= Voiced pharyngeal fricative. ɣ= Voiced velar fricative. z= Voiced alveolar fricative. x= Voiceless velar fricative. ž= Voiced postalveolar fricative. š= Voiced postalveolar fricative. S= Voiceless retroflex fricative. D= Voiced retroflex fricative. T= Retroflex plosive. In addition, morphemes are used between two slashes.

of the subclass of change-of-state verbs in the language under investigation. As will be demonstrated in this study, the above-mentioned affixes can be characterized as unaccusativizers or decausativizers in that they can derive unaccusative change-of-state verbs and reduce the valency of causative change-of-state verbs by suppressing the external argument, yielding the subclass of unaccusative change-of-state verbs.

Interestingly, the ability of some morphological entities to affect the argument structure of verbs is not limited to SA, but it has been attested in some other languages, such as Chichewa[4], Russian, Spanish, Eastern Armenian[5], West Greenlandic[6], Tzutujil[7], German, Hindi/Urdu, Turkish, Tagalog[8], Malagasy[9], Chukchi [10], [11], and Chamorro.[12], [13]

The data on the basis of which the present study is carried out are elicited from naturally produced SA texts and utterances taken from various sources, such as newspapers and magazines written in SA in 2013, 2014, 2015, and 2016; TV news broadcasts and Internet news broadcasts within the same span of time, insofar as they are current everyday Standard Arabic writing practice (daily reporting and editing as contemporary written usage).[14]

[4] Chichewa or Chewa is a language of the Bantu language family spoken in Zambia, Mozambique, Malawi, and Zimbabwe.

[5] Eastern Armenian is one of the standardized forms of Modern Armenian spoken in the Republic of Armenia, Nagorno-Karabakh Republic as well as Georgia, and by the Armenian community in Iran.

[6] West Greenlandic or Kalaallisut is an Eskimo-Aleut language spoken in Greenland.

[7] Tzutujil is a Mayan language spoken by the Tzutujil people in the region to the south of Lake Atitlán in Guatemala.

[8] Tagalog is an Austronesian language spoken as a first language by a quarter of the population of the Philippines and as a second language by the majority.

[9] Malagasy is an Austronesian and national language of Madagascar.

[10] Chukchi belongs to the Chukchi-Kamchatkan language family and is spoken by people living mainly on Chukotka and its adjacent areas in far northeast Siberia of the Russian Federation.

[11] See Kurebito (2012:177-178) for more details concerning this language.

[12] Chamorro is an Austronesian language spoken in the Territory of Guam and in the Northern Mariana Islands in the Northwestern Pacific Ocean.

[13] See Haspelmath & Sims (2010: 237-245) for discussion and examples of how morphology can change the argument structure of verbs in these languages.

[14] I would like to cite here some sources of the data used in this study: the Moroccan newspapers "ASSABAH", "AL AKHBAR", "AL AHDAT AL MAGHRIBIA", "AL HARAKA", "AL BAYANE", "ATTAJDID", "ANNAHAR", "AL ITTIHAD ICHTIRAKI", and the newspaper "ASHARQ AL AWSAT", among others; the magazines: "AL WATAN AL ANE", "ASSAHEEFA", "AL MICHAAL", the websites: "www.hespress.com", "www.hibapress.com", "www.telexpresse.com", "www.maghress.com", "www.kenitra36.com", "aljihawiya.com," "www.al3omk.com," "www.noonpresse.com," "www.goud.ma", and "www.directtv.com", among others; and the television channels: "2M", "AL OULA", "MEDI1 TV", "FRANCE 24" in Arabic, "Sky News" in Arabic, "AL JAZEERA", "DW-TV" in Arabic, "AL ARABIYA", and "RT" in Arabic, among others.

A descriptive-analytic method is essentially adopted for the purposes of the present study. An attempt is hence made to describe the subclass of unaccusative change-of-state verbs in SA by categorizing them on the basis of their properties, as well as some morphological processes that are involved in the derivation of this subset of unaccusative verbs. Furthermore, I try to provide an explanation for the interplay between morphology and syntax as far as the argument structure and argument realization of the previous subclass of unaccusative verbs are concerned, and account for the mechanisms and factors involved in this regard.

This paper is structured as follows: Section 2 provides a brief background of this study. Section 3 addresses the issue of how unaccusative change-of-state verbs are derived in SA. Section 4 examines the issue of whether or not affixes can affect the argument structure and argument realization of causative change-of-state verbs in the language under consideration. Section 5 looks at some aspectual properties of unaccusative change-of-state verbs in the same language. Section 6 introduces the morphosyntactic representation of this subclass of verbs. Section 7 concludes the paper.

Before starting to discuss the syntactic behavioral patterning of unaccusative change-of-state verbs in SA with the aim of unraveling its underpinnings, a brief overview of how these verbs are morphologically derived is offered in the next section.

2. Background

This study is roughly carried out within Chomsky's (1981) Principles and Parameters Theory and is essentially inspired by morphologically-oriented accounts of argument structure and argument realization. These accounts seek to explain how morphology contributes to account for the behavioral patterns of different types of verbs and the realization of their arguments in different languages.

In fact, various theories or models have been developed in the last four decades or so to explain the different relationships between verbal predicates and their arguments.[15]These theories are based on different theoretical views and assumptions.[16]

Essentially following Levin and Rappaport Hovav (1995), Chierchia (2004), & Reinhart and Siloni (2004), among others, I equally assume that unaccusative change-of-state verbs tend to be derived from their causative counterparts by a process of unaccusativization or decausativization.[17]

3. Deriving unaccusative change-of-state verbs in SA

This section discusses the issue of how unaccusative change-of-state verbs are derived. In contrast to Hallman's (2006) proposal that causative verbs are derived from unaccusatives in Arabic by two morphological processes, namely 'ablaut' and 'gemination,' claiming that the

[15] For an insightful survey of these theories, see Levin and Rappaport Hovav (1995, 2005) and Rappaport Hovav and Levin (2000), among many others.

[16] It seems worth noting here that argument realization is a rapidly evolving area of inquiry on which a great deal of research has been carried out.

[17] For more details on competing views concerning the directionality of derivation of the two variants of what is called in the literature 'the causative alternation,' see Ramchand (2013: 283-284) and Rappaport Hovav & Levin (2012:151). It should be noted here that the latter scholars argue, contrary to their earlier work published in1995 that in the English causative alternation the anticausative form of the verb is basic, suggesting that the causative variant is not derived from the anticausative variant via a lexical rule. According to them, an account of the causative alternation will have the widest possible coverage if all alternating verbs are lexically associated with only a single argument, and the causative variant is not derived uniformally by a rule which adds an argument with a certain thematic specification.

latter processes are valency increasing morphemes by considering them 'little-*v*,' specifically v_{AB} and $v_{GEM,}$ respectively, inspired by Chomsky (1995), there is strong evidence that supports the claim that unaccusative change-of-state verbs are likely to be derived from causative change-of-state verbs in the language under investigation.

Concretely, the following three derivational patterns which, in turn, yield three major categories of unaccusative change-of-state verbs in SA have been identified: (i) the subclass of verbs formed by the addition of the prefix *n-* at the beginning of the causative change-of-state verbal stem, (ii) the category of verbs formed by the addition of the prefix *ta-* at the beginning of the causative change-of-state verbal stem, and (iii) the subset of verbs formed by the insertion of the infix *-ta-* in the causative change-of-state verbal stem accompanied by some vocalic change. In the following subsections, I will try to explicate how the previous patterns are produced.

3.1 *Verbs beginning with the prefix n-: nkasara (break)-type verbs*

Evidence drawn from SA shows that unaccusative change-of-state verbs which begin with the prefix *n-* are likely to be derived from causative change-of-state verbs by the addition of this prefix at the beginning of the latter verbs.

The prefix at issue here tends to mark the subclass of unaccusative change-of-state verbs. Examples (1) through (3) may support this claim.

(1) a. kasara l-ʔiʕSa:r-u l-ba:b-a

broke.3MS the-tempest-NOM the-door-ACC

'The tempest broke the door.'

b. ʔi**n**kasara l-ba:b-u[18]

PART-Unac-broke.3MS the-door-NOM

'The door broke.'

(2) a. faẓẓara l-ʔintiħa:rijj-u l-ħa:filat-a

exploded.3MS the- suicide bomber- NOM the-coach–ACC

'The suicide bomber exploded the coach.'

b. ʔi**n**fažarati l- ħa:filat-u

PART-Unac-exploded.3MS the –coach– NOM

'The coach exploded.'

(3) a. qaTaʕa ɵ-ɵalž-u ʔaT-Tari:q-a

blocked.3MS the-snow-NOM the-road-ACC

'Snow blocked the road.'

b. ʔi**n**qaTaʕati ʔaT-Tari:q-u

PART-Unac-blocked.3FS the-road-NOM

'The road was blocked.'

As can clearly be seen in (1b), the unaccusative change-of-state verb *ʔinkasara* 'broke' is derived from the causative verb *kasara* 'to break' (literally 'broke') in (1a) by the addition of the prefix *n-* at the beginning of the latter verb.

[18] It is important to point out here that in translating some unaccusative change-of-state verbs from SA into English, I use the passive form of English verbs that have a close meaning to Arabic ones since I do not find their equivalent verbs in English.

Just as in (1b), the unaccusative change-of-state verb *ʔinfažara* 'exploded' in (2b) is straightforwardly derived from the causative verb *faššara* 'to explode' (literally 'exploded') in (2a) by the addition of the prefix *n-* at the beginning of the latter verb.

In (3b), the unaccusative change-of-state verb *ʔinqaTaʕa* 'was blocked' is equally derived from the causative change-of-state verb *qaTaʕa* 'to block' (literally 'blocked') in (3a) by adding the prefix *n-* at the beginning of the latter verb.[19]

On the basis of what has been discussed so far with regard to the derivation of unaccusative change-of-state verbs beginning with the prefix *n-*, it can be concluded that verbs belonging to the subclass of unaccusative change-of-state verbs beginning with the prefix *n-* and participating in the causative alternation (i.e., verbs which have causative variants), such as verbs listed in table 1 below, seem to be systematically derived by adding the prefix *n-* at the beginning of the causative change-of-state verbs from which they are derived and form, as a result, one derivational pattern.

[19] Note that the suffix *-ti* attached to the verb *ʔinqaTaʕa* in (3b) is assumed to indicate gender.

Table1.

List of unaccusative change-of-state verbs beginning with the prefix n- in SA[20]

Arabic derived unaccusative change-of-state verb	**Approximate meaning in English**	**Arabic causative change-of-state verb**	**Approximate meaning in English**
ʔi**n**šaqqa	To split, crack	šaqqa	To split, crack
ʔi**n**qalaba	To be turned, to be turned over or upside down, to be reversed	qalaba	To turn over or upside down, to reverse
ʔi**n**kašafa	To be unravelled, to be uncovered	kašafa	To unravel, to uncover
ʔi**n**qaSama	To be split	qaSama	To split
ʔi**n**qašara	To be skinned	qašara	To skin
ʔi**n**salaxa	To be skinned	salaxa	To skin
ʔi**n**hadama	To be demolished or destroyed	hadama	To demolish, or destroy
ʔi**n**fakka	To be untied or unfastened, undone, disconnected, detached	fakka	To untie or unfasten, undo, disconnect, detach

[20] It should be pointed out here that this list is by no means exhaustive.

ʔi**n**falaqa	To be split (apart), crack ; to burst, break open	falaqa	To split (apart), crack ; to burst, break open
ʔi**n**faSala	To be separated from, to be disunited or detached	faSala	To separate, to disunite or detach
ʔi**n**Tafa ʔa	To go out, be extinguished	ʔaTafa ʔa	To extinguish
ʔi**n**fataħa	To be opened	fataħa	To open
ʔi**n**ɣalaqa	To be closed	ɣalaqa	To close
ʔi**n**taʕaša	To revive	ʔanʕaša	To revive
ʔi**n**kamaša	To shrink, to wrinkle	kamaša	To shrink, wrinkle
ʔi**n**baθθa	To be scattered	baθθa	To scatter
ʔi**n**sadda	To be closed; to be obstructed	sadda	To close; to obstruct
ʔi**n**Sahara	To be fused, to be melt down	Sahara	To fuse, melt down
ʔi**n**ɣasala	To be cleaned	ɣasala	To clean
ʔi**n**haDama	To be digested	haDama	To digest
ʔi**n**hašama	To be smashed	hašama	To smash
ʔi**n**Tamasa	To be effaced; wiped out	Tamasa	To wipe out

ʔi**n**maħa :	To be effaced; wiped out	maħa :	To wipe out
ʔi**n**ʕazala	To be separated, secluded	ʕazala	To separate, seclude
ʔi**n**ʕakasa	To be reversed	ʕakasa	To reverse
ʔi**n**xalaʕa	To be dislocated, to be disjoined, to be disconnected	xalaʕa	To dislocate, to disjoin, to disconnect
ʔi**n**xadaša	To be scratched	xadaša	To scratch
ʔi**n**ħalla	To be untied, unfastened, loosened	ħalla	To untie, unfasten, loosen

An important point that should be made here is that this affix is derivative of a significant number of unaccusative change-of-state verbs in SA; some 28 verbs have been identified and listed, as table 1 above illustrates.

As far as the directionality of derivation is concerned, I would emphasize the claim that the unaccusative change-of-state verbs listed in table 1 are derived from their corresponding causative change-of-state verbs by the addition of the prefix *n-* at the beginning of the latter verbs.

3.2 *Verbs beginning with the prefix ta-: tahaddama (demolish)-type verbs*

Consider the following examples:

(4) a. haddama z-zilza:l-u l-manzil-a.
demolished.3MS the-earthquake-NOM the-house-ACC
'The earthquake demolished the house.'

b. **ta**haddama l-manzil-u.
Unac-demolished.3MS the – house – NOM
'The house was demolished.'

(5) a. ɣajjarati l-ħuku:mat-u l-qa:nu:n-a.
changed.3FS the-government-NOM the-law-ACC
'The Government changed the law.'

b. **ta**ɣajjara l-qa:nu:n-u.
Unac-changed.3MS the-law-NOM
'The law was changed.'

(6) a. maddada l-mažlis-u l-baladijj-u
extended.3MS the-council-NOM the-municipal-NOM
l-minTaqat-a S-Sina:ʕijjat-a
the-zone-ACC the-industrial-ACC
'The municipal council extended the industrial zone.'

b. **ta**maddadati l-minTaqat-u S-Sina:ʕijjat-u

Unac-extended.3FS the-zone-NOM the-industrial-NOM

'The industrial zone was extended.'

(7) a. l-ʕaTab-u t-tiqnijj-u ʕaTTala l-qiTa:r-a

The-damage-NOM the-technical-NOM broke down the-train-ACC

'The technical damage broke down the train.'

b. **ta**ʕaTTala l-qiTa:r-u

Unac- broke down.3MS the-train-NOM

'The train broke down.'

A closer examination of the constructions (4) through (7) reveals that unaccusative change-of-state verbs which begin with the prefix *ta-* in SA seem to be derived by the addition of this prefix at the beginning of their corresponding causative change-of-state verbs. Thus, the prefix *ta-* is added at the beginning of the causative change-of-state verb *haddama* 'to demolish' (literally 'demolished') in (4a) to derive the unaccusative change-of-state verb *tahaddama* 'was demolished' in (4b).

Just as in (4b), the unaccusative change-of-state verb *taɣajjara* 'was changed' in (5b) is derived by adding the prefix *ta-* at the beginning of the causative change-of-state verb ɣ*ajjara* 'to change' (literally 'changed') in (5a).

The unaccusative change-of-state verb *tamaddada* 'was extended' in (6b) is equally derived by adding the prefix *ta-* at the beginning of the causative change-of-state verb *maddada* 'to extend' (literally 'extended') in (6a).

In (7b), the unaccusative change-of-state verb *taʕaTTala* 'broke down' is straightforwardly derived by adding the prefix *ta-* at the beginning of the causative change-of-state verb *ʕaTTala* 'to break down' (literally 'broke down') in (7a).

Interestingly, and as noted previously with respect to the derivation of unaccusative change-of-state verbs beginning with the prefix *n-*, it could be inferred from the examples given above, with respect to the directionality of derivation, that verbs belonging to the subclass of unaccusative change-of-state verbs beginning with the prefix *ta-* and participating in the causative alternation (i.e., verbs which have causative alternants), such as verbs listed in table 2 below, are likely to be systematically derived by adding the prefix *ta-* at the beginning of the causative change-of-state verbs from which they are derived and form, as a result, one derivational pattern.

Crucially, the prefix *ta-* morphologically marks this subclass of unaccusative change-of-state verbs in SA.

Table2.

A list of unaccusative change-of-state verbs beginning with the prefix ta- in SA[21]

Arabic derived unaccusative change-of-state verb	**Approximate meaning in English**	**Arabic causative change-of-state verb**	**Approximate meaning in English**
tamazzaqa	To be torn	mazzaqa	To tear
tamaddana	To be civilized, urbanized	maddana	To civilize, to urbanize
taħaDDara	To be civilized, urbanized	ħaDDara	To civilize, to urbanize
taqallaSa	To be reduced	qallaSa	To reduce
taqaššara	To be peeled, skinned	qaššara	To peel, to skin
taqassama	To be divided	qassama	To divide
taħassana	To be improved, to become better	ħassana	To improve, to make better
tahaššama	To be smashed	haššama	To smash
taɣajjara	To be changed, modified	ɣajjara	To change, to modify
takawwana	To be formed	kawwana	To form
tahaddama	To be destroyed, to be demolished	haddama	To destroy, to demolish

[21] It should be noted that this list of verbs is not exhaustive.

tabaxxara	To evaporate	baxxara	To evaporate
taʔažžaža	To be heated	ʔažžaža	To heat
tabaʕθara	To be scattered, dispersed	baʕθara	To scatter, to disperse
tawallada	To result or proceed from; to be originated or produced from	wallada	To produce, to generate, to create
tafarraqa	To be separated	farraqa	To separate
tašattata	To dilate, expand, be extended	šattata	To dilate, to expand, to extend
tabaddada	To be scattered; to be dispersed, wasted	baddada	To scatter; to disperse, to waste
tabaddala	To be changed, altered	baddala	To change, to alter
taka:θara	To be multiplied	kaθθara	To multiply
taʔazzama	To come to a crisis	ʔazzama	To bring to a crisis
taħaTTama	To be crashed	ħaTTama	To crash
taʔaθθara	To be affected	ʔaθθara	To affect
tažammada	To be frozen	žammada	To freeze
tašaʕʕaba	To be ramified	šaʕʕaba	To ramify
talaTTafa	To become nice	laTTafa	To make nice
tašarrada	To wander, to be homeless, to be displaced, to be	šarrada	To displace, to make homeless, to drive away, to

	driven away, to be expelled		expel
takassara	To be broken to pieces	kassara	To break into pieces
tadannasa	To be defiled	dannasa	To defile
tawazzaʕa	To be distributed	wazzaʕa	To distribute
taħarrara	To be liberated	ħarrara	To liberate
ta-ʕaTTala	Not to be working, to have broken down	ʕaTTala	To break down
tasammama	To be poisoned	sammama	To poison
tafaħħama	To be carbonized	faħħama	To carbonize
taba:ʕada	To be seperated or set apart	ba:ʕada	To separate or set apart
taɣarbala	To be sieved or sifted	ɣarbala	To sieve or sift
tawassaʕa	To be widened, to be extended, expanded	wassaʕa	To widen, to extend, to expand

The prefix *ta-* is, therefore, morphosyntactically very active in SA. In other words, it allows the derivation of a significant number of unaccusative verbs from causative change-of-state verb stems.This is corroborated by the evidence listed in table 2 above. Some 37 verbs have thus been listed.

As has already been noted with respect to the unaccusative change-of-state verbs listed in table 1 above, one may equally point out that the unaccusative change-of-state verbs listed in

table 2 are derived from their corresponding causative change-of-state verbs by the addition of the prefix *ta-* at the beginning if the latter verbs.

3.3 *Verbs containing the infix -ta-: ʔiħtaraqa (burned)-and ʔixtanaqa (suffocated)-type verbs*

A close scrutiny of the examples (8) through (11) below reveals that there are two derivational patterns of unaccusative change-of-state verbs which contain the infix *-ta-* in SA: (i) the pattern of deriving this subclass of unaccusative change-of-state verbs from triliteral causative change-of-state verbal stems, and (ii) the pattern of deriving these verbs from quadriliteral causative change-of-state verbal stems. The first subset is derived by inserting the infix *-ta-* after the first consonant of the triliteral verbal stem and adding *ʔi-* before the first consonant of the triliteral verb. The second subset is derived by replacing the vowel */a/* after the first consonant */ʔ/* by the vowel */i/* and inserting the infix *-ta-* after the second consonant of the quadriliteral causative change-of-state verbal stem.

So, it may be noted here that the derivation of the subsets of unaccusative change-of-state verbs containing the infix *-ta-* is somewhat complex, and might cause some difficulty or confusion for learners of SA.

(8) a. ʔaħraqa l-ħari:q-u l-maʕmal-a

burned.3MS the-fire-NOM the-factory-ACC

'Fire burned the factory.'

b. ʔiħ**ta**raqa l-maʕmal-u.

was.burned.3MS the- factory-NOM

'The factory was burned.'

(9) a. ʔašʕala l-ʔaTfaːl-u n-naːr-a fiː l-ɣaːbat-i

lit.3MPL the-boys-NOM the-fire-ACC in the-forest-OBL

'The boys lit the fire in the forest.'

b. ʔišt**a**ʕalati n-naːr-u fiː l-ɣaːbat-i

lit.Unac.3FS the-fire-NOM in the-forest-OBL

'The fire was lit in the forest.'

(10) a. xanaqa l-ɣaːz-u r-ražul-a

suffocated.3MS the-gas-NOM the-man-ACC

'The gas suffocated the man.'

b. ʔixt**a**naqa r-ražul-u

suffocated.Unac.3MS the-man-NOM

'The man was suffocated.'

(11) a. laħama S-Saːniʕ-u ʔažzaːʔ-a s-sajjaːrat-i

welded.3MS the-manufacturer-NOM parts-ACC the-car-GEN

'The manufacturer welded the parts of the car.'

b. ʔilt**a**ħamati ʔažzaːʔ-u s-sajjaːrat-i

welded.Unac.3MPL parts-NOM the-car-GEN

'The parts of the car were welded.'

As can clearly be noticed in (8b), the infix *-ta-* is inserted between the second and the third consonants of the quadriliteral change-of-state verb *ʔaħraqa* 'burn' in (8a) with the replacement

of the vowel */a/* after the first consonant */ʔ/* by the vowel */i/*, yielding the unaccusative change-of-state verb *ʔiħ**ta**raqa* 'burned.'

The unaccusative change-of-state verb *ʔišta**ʕ**alati* 'was lit' in (9b) is equally derived by the insertion of the infix *-ta-* between the second and the third consonants of the quadriliteral change-of-state verb *ʔašʕala* 'light' in (9a) with the replacement of the vowel */a/* after the first consonant */ʔ/* by the vowel */i/*.

Notice that in (10b), the unaccusative change-of-state verb *ʔix**ta**naqa* 'was suffocated' is derived by inserting the infix *-ta-* after the first consonant of the triliteral verbal stem *xanaqa* 'suffocate' in (10a) and adding the *ʔi-* before the first consonant of the same triliteral verbal stem.

Just as in (10b), the unaccusative change-of-state verb *ʔil**ta**ħamati* 'were welded' in (11b) is derived by adding *ʔi-* before the first consonant of the triliteral verbal stem *laħama* 'weld,' in (11a) and the infix *-ta-* after the first consonant of the same triliteral verbal stem. Tables 3 and 4 below respectively show the two subsets of unaccusative change-of-state change-of-state verbs containing the infix *-ta-* in SA.[22]

[22] It should be pointed out here that this list of unaccusative change-of-state verbs is far from being exhaustive.

Table3.

A list of unaccusative change-of-state verbs containing the infix -ta- derived from triliteral verbal stems in SA

Arabic derived unaccusative change-of-state verb	**Approximate meaning in English**	**Arabic causative change-of-state verb**	**Approximate meaning in English**
ʔix**ta**naqa	To be choked, suffocated	xanaqa	To choke, suffocate
ʔil**ta**ħama	To be stuck together, to be welded, to be united	laħama	To stick together, to weld, to unite
ʔil**ta**ʔama	To be welded	laʔama	To weld, to put together
ʔik**ta**wa :	To be cauterized ; to be burned	kawa:	To cauterize ; to burn
ʔir**ta**wa :	To quench one's thirst	rawa:	To quench someone's thirst
ʔim**ta**laʔa	To become full	malaʔa	To make full
ʔis**ta**wa :	To become even, flat	sawwa:	To make even, flat
ʔil**ta**wa :	To be twisted, to be bent	lawa:	To twist, to bend
ʔix**ta**laTa	To be mixed	xalaTa	To mix

Table 4.

A list of unaccusative change-of-state verbs containing the infix -ta-derived from quadriliteral verbal stems in SA

Arabic derived unaccusative change-of-state verb	**Approximate meaning in English**	**Arabic causative change-of-state verb**	**Approximate meaning in English**
ʔiħ**ta**raqa	To be burned	ʔaħraqa	To burn
ʔiš**ta**ʕala	To be flamed	ʔšʕala	To burn, to light
ʔil**ta**haba	To be flamed, to be blazed	ʔlhaba	To flame, blaze
ʔix**ta**lla	To be disturbed, disordered, deranged, upset, unbalanced	ʔaxalla	To disturb, to disorder, to upset, to unbalance
ʔil**ta**Saqa	To be stuck	ʔalSaqa	To stick
ʔiɣ**ta**na :	To become rich	ʔaɣna:	To make rich
ʔif**ta**qara	To become poor	ʔafqara	To make poor

From what has been said so far, it clearly follows that the infix *-ta-* is also relatively active in SA. As tables 3 and 4 above show, some 16 verbs have been listed.

Importantly, and as noted previously with regard to the derivation of unaccusative change-of-state verbs beginning, respectively, with the prefixes *n-* and *ta-*, it could be inferred from the examples given above, with respect to the directionality of derivation, that all verbs belonging to the two subsets of unaccusative change-of-state verbs containing the infix *-ta-* and participating in the causative alternation (i.e., verbs which have causative alternants), such as verbs listed in tables 3 and 4 above, are likely to be systematically derived by inserting the infix *-ta-* within the verbal stems of the causative change-of-state verbs from which they are derived after applying some morphophonemic changes, depending on the type of verbal stem, and form, as a result, two derivational patterns.

3.4 *Some counterevidence*

An important point that should be clear at this juncture is that not all SA unaccusative change-of-state verbs are derived from causative change-of-state verbs. In other words, there is a subset of unaccusative change-of-state verbs which does not alternate with causative change-of-state verbs. In fact, SA contains some unaccusative change-of-state verbs which, mysteriously, resemble derived unaccusative change-of-state verbs in their forms, but which are lexicalized as such. These verbs can be exemplified by the following: *ʔinqaraDa* 'become extinct,' *ʔindaɵara* 'perish,' *ʔinha:ra* 'to be demolished', *ʔindalaʕa* 'break out, flare up, erupt,' *ʔinqabaDa* 'to shrink, to contract', *ʔinDabaTa* 'to be disciplined', *ʔinzalaqa* 'to slide, to glide, to skid, to slip,' *ʔinqašaʕa* 'to clear away, to clear up,' *taʔa:kala* 'lose some parts' or 'corrode,' *ʔinfaraža* 'to be wide, to spread apart, to be open,' *ʔindamala* 'to heal, scar over,' *ʔindaħara* 'to be defeated, conquered, routed,' *ʔinħadara* 'to go down, to fall, to decline,' *taDa:ʔala* 'become smaller,' *taSaħħara* 'become desertified,' and *ʔintaħara* 'to commit suicide.'[23] I would claim here that unaccusative change-of-state verbs which are derived from causative change-of-state verbs in SA may be characterized as core unaccusative change-of-state verbs; whereas unaccusative change-of-state verbs which are not derived from causative change-of-state verbs may be described as peripheral or lexicalized unaccusative change-of-state verbs.

[23] This list is merely indicative and is obviously far from exhaustive.

Of paramount importance, Chierchia (1989) (as cited in Levin & Rappaport Hovav 1995:87) points out that "an unaccusative verb that lacks a paired transitive causative use is exceptional on the causative analysis."

It is worth emphasizing here that these allegedly underived or lexicalized unaccusative change-of-state verbs need more research and deeper analysis to uncover and account for their characteristic properties and behavior in their crosslinguistic dimension.

In the preceding sections, a sketchy overview of the derivation of some unaccusative change-of-state verbs in SA has been provided. The next section addresses the interaction of some affixes with the argument structure and argument realization of some change-of-state verbs in the language under study.

4. Affixes and causative change-of-state verbs' argument structure in SA

This section examines the issue of whether or not affixes can affect the argument structure and argument realization of causative change-of-state verbs in SA.

SA is a Semitic language which has rich and complex morphology. In other words, it has a variety of affixes, be they inflectional or derivational, which have crucial semantic and syntactic effects, among others. Due to limitation of space and for present purposes, the discussion is focused here on the morphosyntactic effects of the derivational prefixes *n-* and *ta-* and the derivational infix *-ta-*.

Concretely, the issue of how the previous affixes interact and affect the argument structure and argument realization of the subclass of causative change-of-state verbs in SA is hereafter addressed.

4.1 *Causative change-of-state verbs' argument structure and argument realization*

As is generally established in the relevant literature, causative change-of-state verbs tend to be cross-linguistically associated with two arguments: An internal argument bearing the Patient/Theme theta role and an external one bearing the Agent theta role. For instance, in English we find verbs such as: *break*, *melt*, *crack*, *freeze*, *evaporate*, etc. In French, we find verbs like *casser* 'break,' *fondre* 'melt,' *liquéfier* 'liquefy,' *congeler* 'freeze,' *exploser* 'explode,' *démolir* 'demolish,' *fragmenter* 'split up,' etc.

Interestingly, SA constitutes no exception as far as causative change-of-state verbs are concerned. For expository clarity, a characteristic property of these verbs is that they tend to select two arguments, viz., an internal argument and an external one. The internal argument bears the Patient theta role (i.e., the entity undergoing the action denoted by the verbal predicate) and the external one bears the Agent theta role (i.e., the actor or doer of the action that brings about the change in the state of the internal argument). Consider the following examples which illustrate what has just been advanced:

(12) ʔaħraqa l-ħari:q-u l-maʕmal-a

burned.3MS the-fire-NOM the-factory-ACC

'Fire burned the factory.'

(13) ɣajjarati l-ħuku:mat-u l-qa:nu:n-a

changed.3FS the-government-NOM the-law-ACC

'The Government changed the law.'

(14) xanaqa l-ɣa:z-u r-ražul-a

suffocated.3MS the-gas-NOM the-man-ACC

'The gas suffocated the man.'

At first glance, we clearly notice that in (12) the causative change-of-state verb *ʔaħraqa* 'to burn' (literally 'burned') selects two arguments, namely an internal argument *l-maʕmal-a* 'the factory' and an external one *l-ħari:q-u* 'the fire.' The internal argument bears the Patient theta role (i.e., it is the undergoer of the action of burning denoted by the verbal predicate) and the external one bears the Agent theta role (i.e., it is the actor or doer of the action of burning that brings about the change in the state of the internal argument, viz., the burned factory).

Just as in (12), the causative change-of-state verb ɣ*ajjara* 'to change' (literally 'changed') in (13) equally selects two arguments, namely an internal argument *l-qa:nu:n-a* 'the law' and an external one *l-ħuku:mat-u* 'the government.' The internal argument bears the Theme theta role (i.e., it is the entity undergoing the action of changing denoted by the verbal predicate) and the external one bears the Agent theta role (i.e., it is the actor or doer of the action of changing that brings about the change in the state of the internal argument, namely the changed law).

The same pattern may be noticed in (14), where the causative change-of-state verb *xanaqa* 'to suffocate' (literally 'suffocated') is associated with two arguments, namely an internal argument *r-ražul-a* 'the man' and an external one *l-*ɣ*a:z-u* 'the gas.' The internal argument obviously bears the Patient theta role (i.e., it is the undergoer of the action of suffocating denoted by the verbal

predicate) and the external one bears the Agent theta role (i.e., it is the actor or doer of the action of suffocating that causes the change in the state of the internal argument, namely the suffocated man).

Viewed from a syntactic perspective, the internal arguments in (12) through (14), viz., *l-maʕmal-a, l-qa:nu:n-a,* and *r-ražul-a* are projected as direct objects in the respective constructions in which they appear. In contrast, the external arguments in the same constructions, namely *l-ħari:q-u, l-ħuku:mat-u,* and *l-ɣa:z-u* are realized as subjects.

Having examined, though briefly, the argument structure and argument realization of some causative change-of-state verbs in SA, I now turn to examine the argument structure and argument realization of some unaccusative change-of-state verbs in the language being studied.

4.2 *Unaccusative change-of-state verbs' argument structure and argument realization*

As is generally established cross-linguistically, the subclass of unaccusative verbs uniformly selects one argument, specifically an internal argument, and lacks an external one. On the basis of evidence culled from SA, I assume that unaccusative change-of-state verbs in SA constitute no exception. This subclass of verbs, more specifically those which are derived from causative change-of-state verbs, tends to be associated with one and only one internal argument.

For the sake of expository clarity and concreteness, consider the following illustrative examples:

(15) ʔi**n**fažara l-maTʕam-u

PART-Unac-exploded.3MS the – restaurant – NOM

'The restaurant exploded.'

(16) ʔi**n**kasara l-žisr-u

PART-Unac-broke.3MS the-bridge-ACC

'The bridge broke.'

(17) ʔi**n**qaTaʕati ʔal-kahraba:ʔ-u

PART-Unac-interrupted.3FS the-electricity-NOM

'Electricity was interrupted.'

(18) **ta**haddama l-manzil-u.

Unac-demolished.3MS the – house – NOM

'The house was demolished.'

(19) **ta**ɣajjara l-qa:nu:n-u

Unac-changed.3MS the-law-NOM

'The law was changed.'

(20) **ta**maddadati l-minTaqat-u S-Sina:ʕijjat-u

Unac-extended.3FS the-zone-NOM the-industrial-NOM

'The industrial zone was extended.'

(21) **ta**ʕaTTala l-qiTa:r-u

Unac-broke down.3MS the-train-NOM

'The train broke down.'

(22) ʔiħ**ta**raqa l-maʕmal-u.

burned.Unac.3MS the- factory-NOM

'The factory was burned.'

(23) ʔiš**ta**ʕalati n-na:r-u fi: l-ɣa:bat-i

lit.Unac.3FS the-fire-NOM in the-forest-OBL

'The fire was lit in the forest.'

(24) ʔil**ta**ħamati ʔažza:ʔ-u s-sajja:rat-i

welded.Unac.3MPL parts-NOM the-car-GEN

'The parts of the car were welded.'

Notice that in (15) the unaccusative change-of-state verb *ʔinfažara* 'exploded' selects one argument, namely the internal argument *l-maTʕam-u* 'the restaurant.' This internal argument obviously bears the Patient theta role (i.e., it is the undergoer of the action of exploding denoted by the verbal predicate).

In (16), one internal argument is equally selected by the unaccusative change-of-state verb *ʔinkasara* 'broke,' namely *l-žisr-u* 'the bridge.' This internal argument bears the Patient theta role (i.e., it is the undergoer of the action of breaking denoted by the verbal predicate).

Similarly, the unaccusative change-of-state verb *ʔinqaTaʕa* 'was interrupted' in (17) selects *ʔal-kahraba:ʔ-u* 'the electricity' as its unique internal argument which bears the Patient theta role.

The examples (18) through (24) above show that the unaccusative change-of-state verbs *tahaddama, taɣajjara, tamaddada, taʕaTTala, ʔiħtaraqa, ʔištaʕala,* and *ʔiltaħama,* uniformly take one and only one internal argument, respectively *l-manzil-u, l-qa:nu:n-u, l-minTaqat-u, l-qiTa:r-u, l-maʕmal-u, n-na:r-u, ʔažza:ʔ-u s-sajja:rat-i.* These internal arguments bear the Patient theta role.

Concretely, in the examples given above (viz., from (15) to (24)), the internal arguments *l-maTʕam, l-žisr, ʔal-kahraba:ʔ, l-manzil, l-qa:nu:n, l-minTaqat, l-qiTa:r, l-maʕmal, n-na:r,* and *ʔažza:ʔ s-sajja:ra,* supposedly, originate in the object position at D-structure (i.e., the position normally occupied by objects of transitive verbs) where they are assigned the relevant theta role (Patient).

On the basis of the above examples, it could be argued that one characterizing and outstanding property of unaccusative change-of-state verbs in SA is that the subject of the sentence in which they occur denotes the entity undergoing the change of state. For instance, in (15) through (24) the entities *l-maTʕam, l-žisr, ʔal-kahraba:ʔ, l-manzil, l-qa:nu:n, l-minTaqat, l-qiTa:r, l-maʕmal, n-na:r,* and *ʔažza:ʔ s-sajja:ra* are obviously changing state.

On the basis of the preceding discussion, I would propose that unaccusative change-of-state verbs form one valency pattern in SA which could be formalized as in (25).

(25) **The valency pattern of unaccusative change-of-state verbs in SA**

V (P/T $_{NOM}$).

The representation in (25) tells us that unaccusative change-of-state verbs tend to select one and only one argument which bears the Patient/Theme theta role, and which is assigned Nominative Case.

Essentially adopting Travis's (2010) and Nossalik's (2010) phrase structure model, and as far as the syntactic projection of unaccusative change-of-state verbs' argument structure is concerned, it might be proposed here that the internal arguments in the examples above are likely to move from their D-Structure position within VP to the Spec(ifier) position of InAspP directly above VP,[24] and, presumably, end up in [Spec, TP], where they are promoted to subject position of the clause and are, consequently, likely to fulfil the Extended Projection Principle[25] (EPP for short) requirements and be assigned Nominative Case.

To sum up, it has been shown in this section that the language under analysis tends to employ explicit morphological devices when an 'undergoer of change' is expressed as subject.[26] Moreover, it has been found out that unaccusative change-of-state verbs seem to form one uniform valency pattern in the same language.

[24] For notational reasons, I hereafter use the term InAsp and InAspP, respectively for Inner Aspect and Inner Aspect Phrase.

[25] In the generative grammar tradition, the EPP requires that each clause have a subject. See Carnie (2013:238) for more details and discussion of this principle.

[26] Ramchand (2013:288) notes that it is also significant that 'special morphology' is often required for 'undergoer of change' arguments to appear as SUBJECT of an underlyingly transitive relation.

5. Aspectual properties of unaccusative change-of-state verbs

A generally accepted assumption in the relevant literature is that unaccusative change-of-state verbs, which are generally considered as accomplishments in Vendler's (1957) sense[27], tend to correlate with telicity. Put differently, these verbs tend to denote a durative action or event which has a culminating endpoint, i.e., a point at which the Patient/Theme of the unaccusative change-of-state verb enters a result state, as Lyutikova and Tatevosov (2010:36) note. In contrast, unergative verbs tend to lack a culmination moment or endpoint, as far as the linguistic description of this eventuality is concerned, but which may still have a natural or potential endpoint.[28]

In an attempt to answer the question of whether or not unaccusative change-of-state verbs correlate with aspectuality, it might be claimed, on the basis of empirical evidence, that unaccusative change-of-state verbs tend to correlate with the aspectual phenomenon of telicity in SA. That is, they tend to be inherently telic predicates which describe actions or events that have a culminating point. This endpoint is attained when the Patient/Theme of unaccusative change-of-state verbs reaches a result state.

For the sake of concreteness and clarity, let us revisit examples (15) through (24) (repeated below as (26) through (35)), respectively.

[27] Cited in Tenny and Pustejovsky (2000:5) who note that "[I]n the Vendler classification, verbs may denote states, activities, achievements or accomplishments….Accomplishments are events with duration and an obligatory temporal endpoint." In this respect, van Hout (2000:241) points out that "[T]he culmination moment of the aspectual class of accomplishments comes as the culminating endpoint of a durative and dynamic eventuality."

[28] It is worth noting here that there is an ongoing debate on the criteria that a verb must meet in order for it to be telic or atelic.

(26) ʔi**n**fažara l-maTʕam-u

PART-Unac-exploded.3MS the – restaurant – NOM

'The restaurant exploded.'

(27) ʔi**n**kasara l-žisr-u

PART-Unac-broke.3MS the-bridge-ACC

'The bridge broke.'

(28) ʔi**n**qaTaʕati ʔal-kahraba:ʔ-u

PART-Unac-interrupted.3FS the-electricity-NOM

'Electricity was interrupted.'

(29) **ta**haddama l-manzil-u.

Unac-demolished.3MS the – house – NOM

'The house was demolished.'

(30) **ta**ɣajjara l-qa:nu:n-u

Unac-changed.3MS the-law-NOM

'The law was changed.'

(31) **ta**maddadati l-minTaqat-u S-Sina:ʕijjat-u

Unac-extended.3FS the- zone-NOM the-industrial-NOM

'The industrial zone was extended.'

(32) **ta**ʕaTTala l-qiTa:r-u

Unac-broke down.3MS the-train-NOM

'The train broke down.'

(33) ʔiħ**ta**raqa l-maʕmal-u.

burned.Unac.3MS the- factory-NOM

'The factory was burned.'

(34) ʔiš**ta**ʕalati n-na:r-u fi: l-ɣa:bat-i

lit.Unac.3FS the-fire-NOM in the-forest-OBL

'The fire was lit in the forest.'

(35) ʔil**ta**ħamati ʔažza:ʔ-u s-sajja:rat-i

welded.Unac.3MPL parts-NOM the-car-GEN

'The parts of the car were welded.'

As can clearly be noticed in (26), the unaccusative change-of-state verb *ʔinfažara* 'exploded' seems to denote a telic action or event which results in a change of the state of the undergoer of the action or Patient. In other words, the action of exploding the restaurant which is the undergoer of the action has a culminating moment: explosion, and the Theme *l-maTʕam-u* 'the restaurant' attains the result state of being exploded.

Similarly, the unaccusative change-of-state verb *ʔin**n**kasara* ‘broke’ in (27) seems to denote a telic action or event which results in a change of the state of the undergoer of the action or Patient. In other words, the action of breaking the bridge which is the undergoer of the action has a culminating moment: being broken, and the Patient *l-žisr-u* ‘the bridge’ attains the result state of being broken.

Just as in (27), the unaccusative change-of-state verb *ʔinqaTaʕa* ‘was interrupted’ in (28) seems to denote a telic event which results in a change of the state of the undergoer of the action or Patient, namely *ʔal-kahraba:ʔ-u* ‘electricity.’ The change of state is the interruption of electricity, i.e., there is no more electricity, as far as the linguistic description of the eventuality is concerned. But it should be noted here that in the real world the damage could be repared and electricity would come back.

Notice also that in (29), the unaccusative change-of-state verb *tahaddama* ‘was demolished’ seems equally to indicate a telic action or event which results in a change of the state of the undergoer of the action of demolishing, viz., *l-manzil-u* ‘the house.’ The change of state is, therefore, materialized by the falling down of the house.

The unaccusative change-of-state verb *ta-ɣajjara* ‘changed’ in (30) seems also to signify an action or event which changes the state of the undergoer of the action of changing, namely *l-qa:nu:n-u* ‘the law.’ Changing the state of the undergoer of the action is the culmination moment.

Likewise, in the examples (33) through (35) the unaccusative change-of-state verbs ***ʔiħta**raqa* ‘was burned’, ***ʔišta**ʕalati* ‘was lit’, and *ʔil**ta**ħama* ‘was welded,’ respectively, seem to denote actions or events with culminating moments or endpoints, in that they respectively change the state of the undergoers of the actions of burning, lighting, and welding.

It follows, then, that the actions or events denoted by the unaccusative change-of-state verbs in the previous examples are likely to have an endpoint in their temporal or aspectual spectrum which may render them telic. This fact leads me to claim that unaccusative change-of-state verbs are likely to correlate with telicity in SA and may be classified under the category of accomplishment verbs.

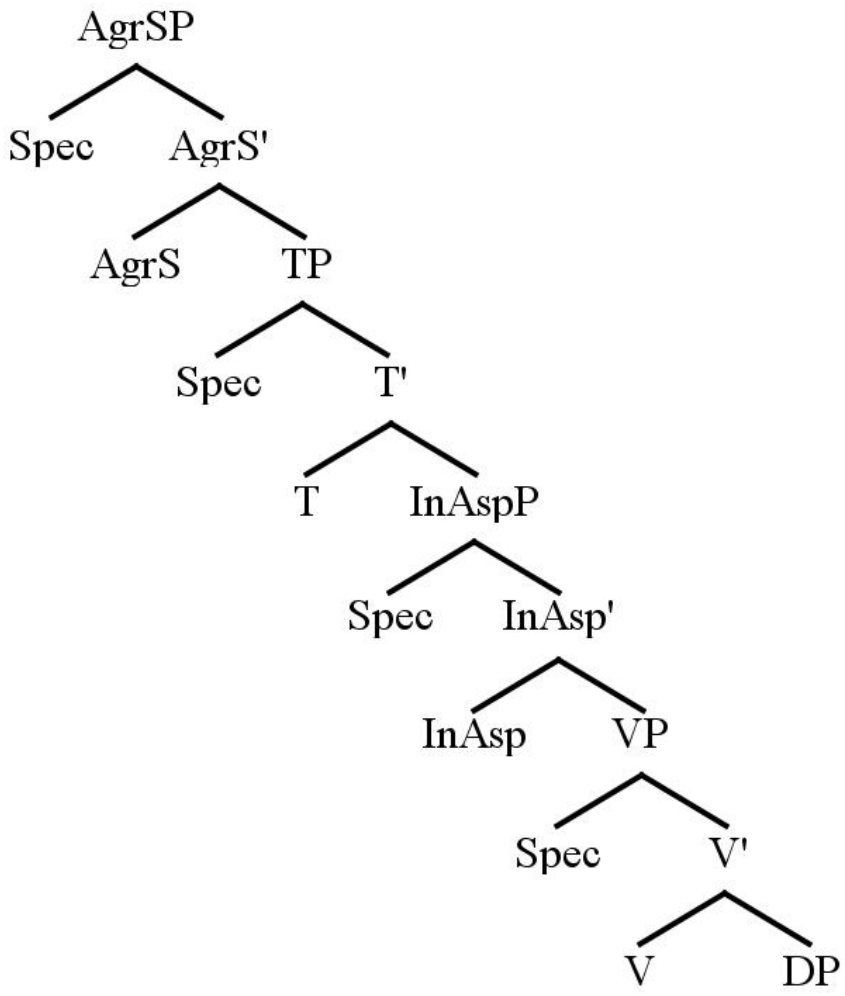
Having examined, though briefly, some aspectual properties of unaccusative change-of-state verbs in SA, the next section addresses the syntactic representation of the structures in which the latter verbs appear.

6. The syntactic representation of unaccusative change-of-state verbs

Syntactically, the following syntactic representation for the structures in which unaccusative change-of-state verbs appear might be proposed, essentially inspired by Travis's (2010) and Nossalik's (2010) structure of the verb phrase:[29]

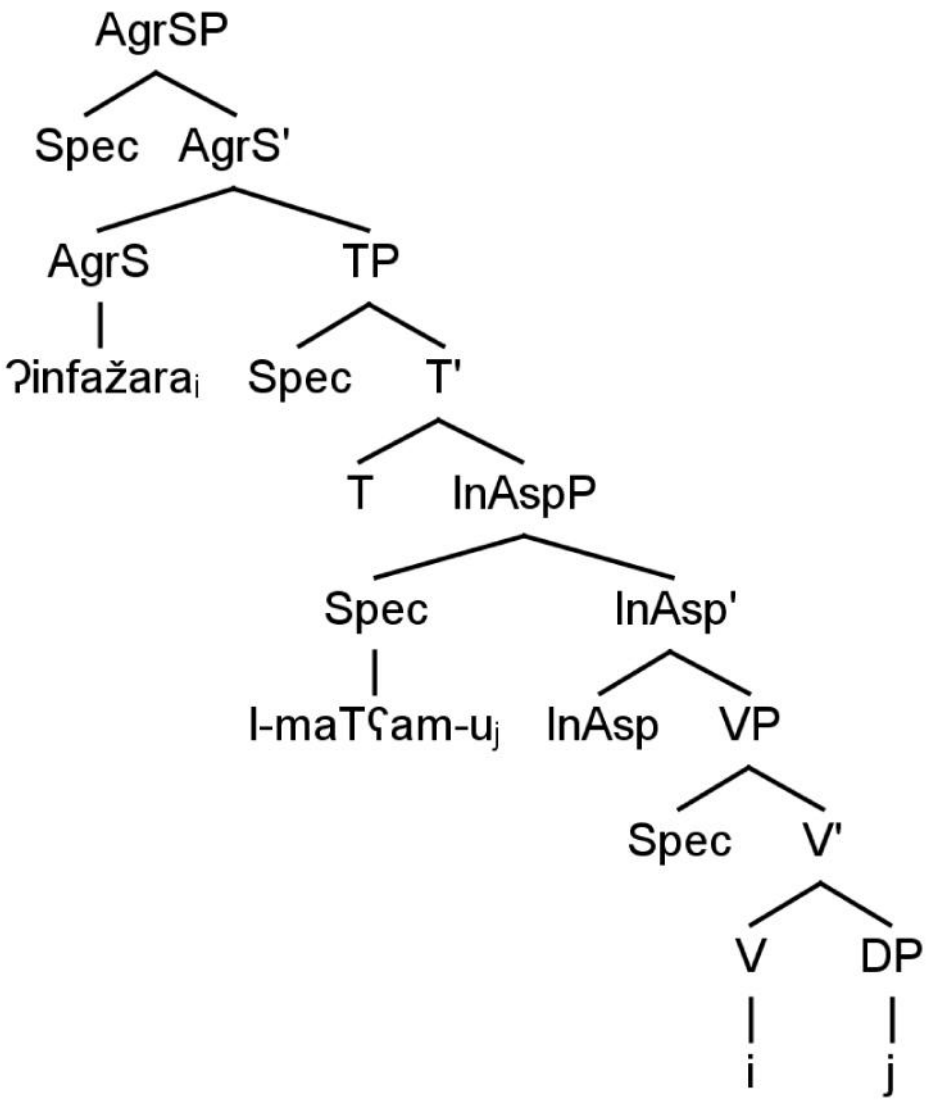
[29] I assume a split-INFL analysis. I will not go into more details here, since this does not constitute the main aim of the present study. For more insightful details and discussion, see Pollock (1989:365ff.).

(36)



Concretely, the examples (26) through (35) may, respectively, be syntactically represented as in (37) through (46) below.

(37)

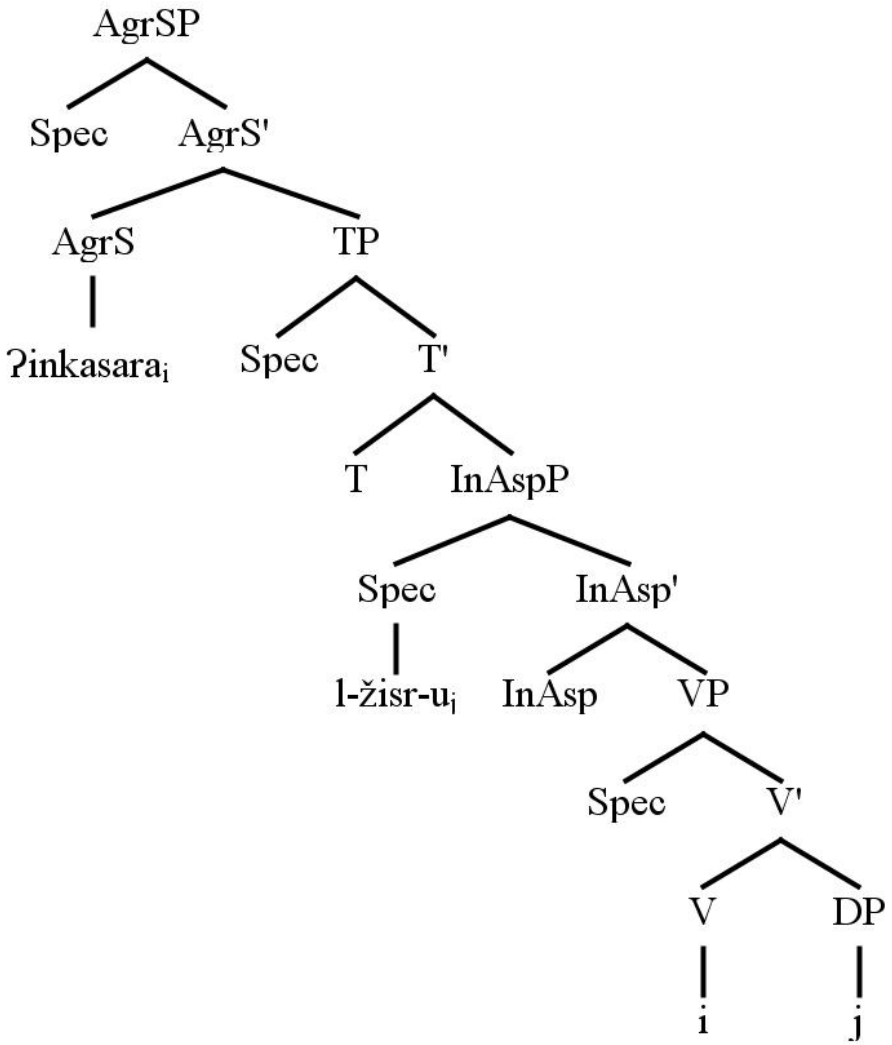


In (37), the causative change-of-state verb stem *fažžara* 'cause to explode' seems to be generated under the V node at D-Structure; it first adjoins to the InAsp node under which the

unaccusativizer head *n-* is generated, then the resulting verbal complex moves on to the T node and seems to end up under the AgrS node, where it surfaces as a full-fledged unaccusative change-of-state verb *ʔinfažara* 'exploded.'

As far as the DP *l-maTʕam* 'the restaurant' in the above tree diagram is concerned, it might be proposed that it seems to be generated in the direct object position within VP at D-Structure where it is assigned the Patient theta-role. It moves cyclically to [Spec, InAspP], then to [Spec, TP] where it surfaces as *l-maTʕam-u* assigned Nominative Case and, consequently, becoming the subject of the sentence in accordance with the EPP.

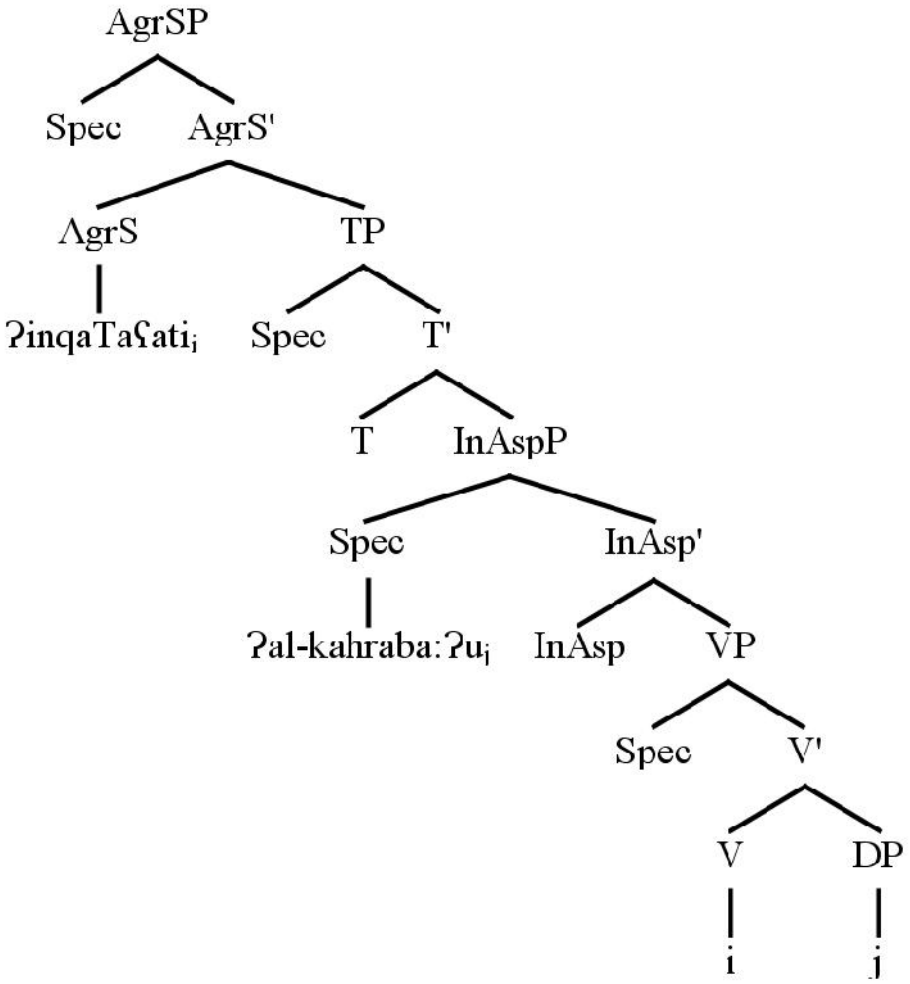
(38)


AgrSP
Spec
AgrS'
AgrS
TP
ʔinkasara$_i$
Spec
T'
T
InAspP
Spec
InAsp'
l-žisr-u$_i$
InAsp
VP
Spec
V'
V
DP
i
j

Similarly, in (38) the causative change-of-state verb stem *kasara* 'cause to break' seems to be generated under the V node at D-Structure; it first adjoins to the InAsp node under which the unaccusativizer head *n-* is generated, then the resulting verbal complex moves on to the T node and seems to end up under the AgrS node, where it surfaces as a full-fledged unaccusative change-of-state verb *ʔinkasara* 'broke.'

As far as the DP *l-žisr-u* 'the bridge' in the above tree diagram is concerned, it might be proposed that it is generated in the direct object position within VP at D-Structure where it is assigned the Patient theta-role. It moves cyclically to [Spec, InAspP], then to [Spec, TP] where it surfaces as *l-žisr-u* assigned Nominative Case and, consequently, becoming the subject of the sentence in conformity with the EPP.

(39)

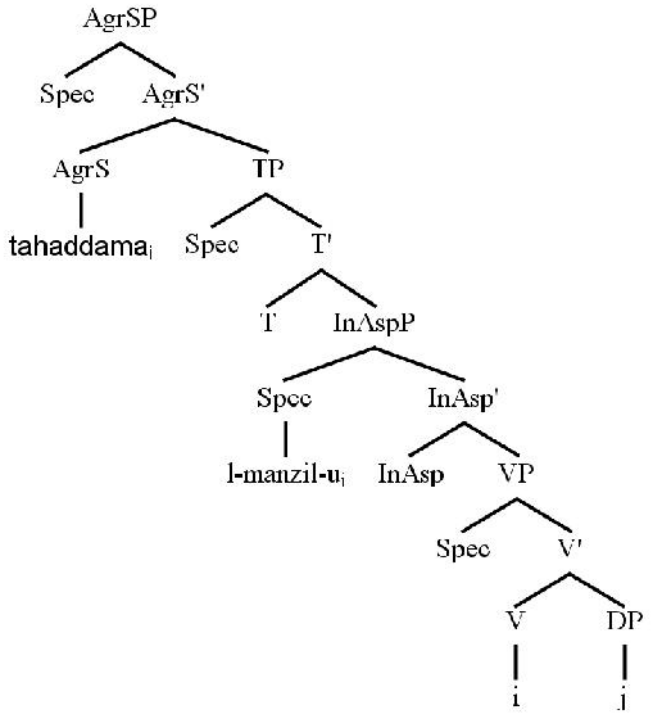


Just as in (37) and (38), the causative change-of-state verb stem *qaTaʕa* 'cause to be interrupted' in (39) seems to be generated under the V node at D-Structure; it first adjoins to the InAsp node under which the unaccusativizer head *n-* is generated, then the resulting verbal

complex moves on to the T node and seems to end up under the AgrS node, where it surfaces as a full-fledged unaccusative change-of-state verb *ʔi**n**qaTaʕati* 'was interrupted.'

Concerning the DP *ʔal-kahraba:ʔ* 'the electricity' in the above tree diagram, it might be proposed that it is generated in the direct object position within VP at D-Structure where it is assigned the Patient theta-role. It moves cyclically to [Spec, InAspP], then to [Spec, TP] where it surfaces as *ʔal-kahraba:ʔ-u* assigned Nominative Case and, consequently, becoming the subject of the sentence in satisfaction of the EPP.

(40)

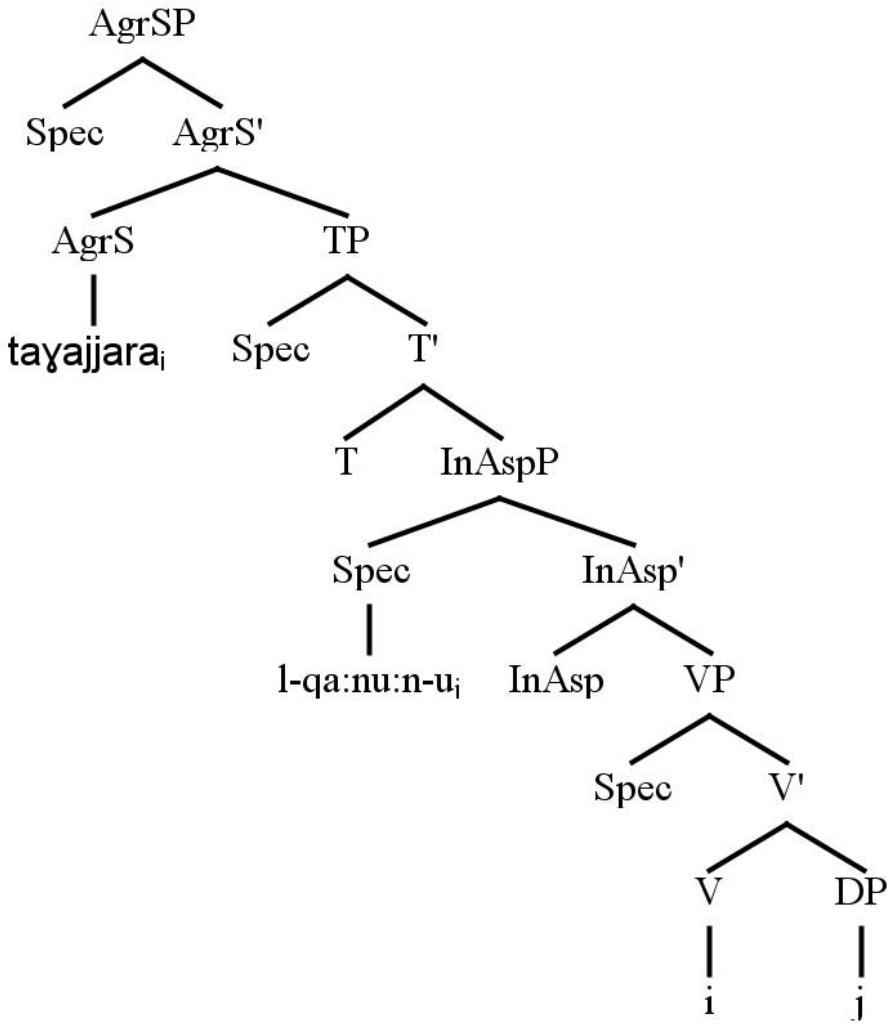


It might be suggested that in (40) the causative change-of-state verb stem *haddama* 'demolish or cause to collapse' seems to be generated under the V node at D-Structure; it first adjoins to the InAsp node under which the unaccusativizer head *ta-* is generated, then the resulting verbal complex moves on to the T node and seems to end up under the AgrS node, where it surfaces as a full-fledged unaccusative change-of-state verb *tahaddama* 'was demolished.'

Regarding the DP *l-manzil* 'the house' in the above tree diagram, it might be proposed that it is generated in the direct object position within VP at D-Structure where it is assigned the Patient theta-role. It moves cyclically to [Spec, InAspP], then to [Spec, TP] where it surfaces as

l-manzil-u assigned Nominative Case and, consequently, becoming the subject of the sentence in satisfaction of the EPP.

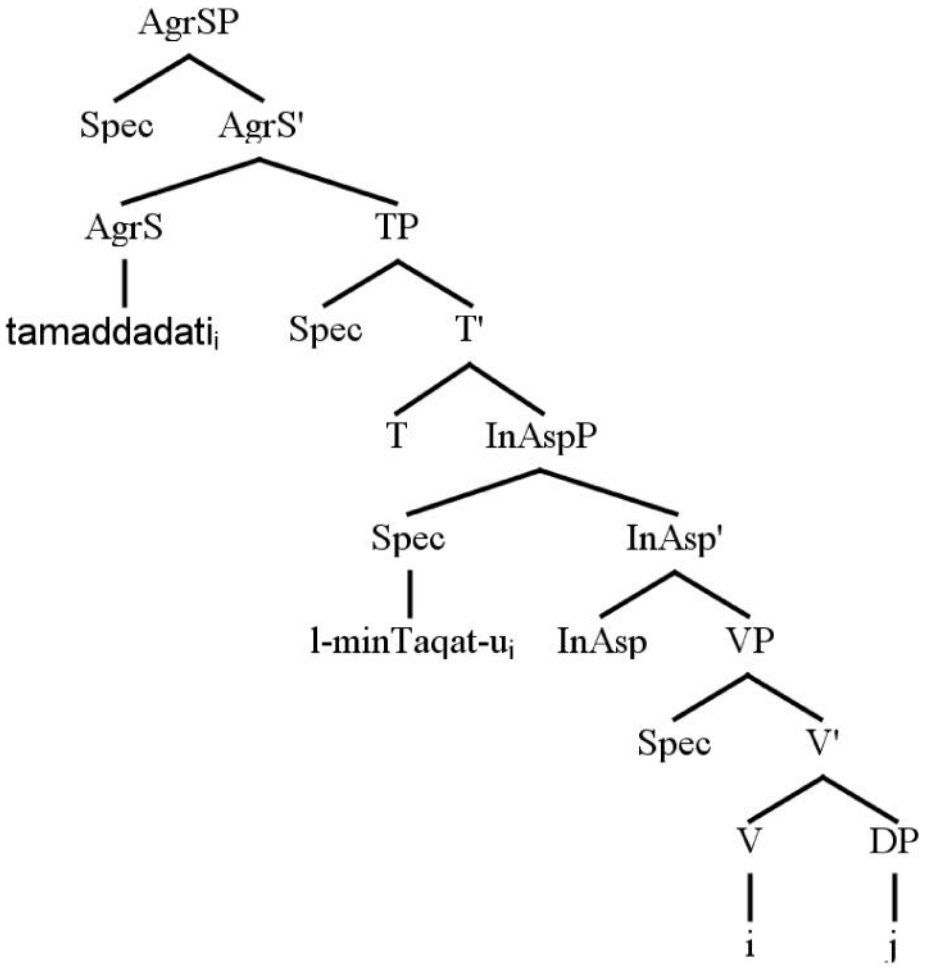
(41)


AgrSP
Spec
AgrS'
AgrS
TP
taɣajjara$_i$
Spec
T'
T
InAspP
Spec
InAsp'
l-qa:nu:n-u$_i$
InAsp
VP
Spec
V'
V
DP
i
j

Just as in (40), it might be suggested that in (41) the causative change-of-state verb stem *ɣajjara* 'cause to change' seems to be generated under the V node at D-Structure; it first adjoins to the InAsp node under which the unaccusativizer head *ta-* is generated, then the resulting verbal complex moves on to the T node and seems to end up under the AgrS node, where it surfaces as a full-fledged unaccusative change-of-state verb *taɣajjara* 'was changed.'

Regarding the DP *l-qa:nu:n* 'the house' in the above tree diagram, it might be proposed that it is generated in the direct object position within VP at D-Structure where it is assigned the Patient theta-role. It moves cyclically to [Spec, InAspP], then to [Spec, TP] where it surfaces as *l-qa:nu:n-u* assigned Nominative Case and, consequently, becoming the subject of the sentence in satisfaction of the EPP.

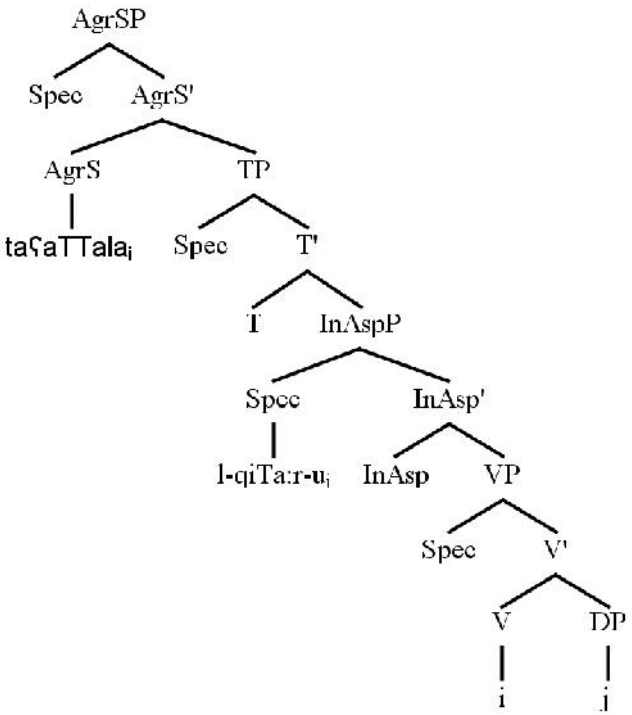
(42)



It might be suggested that in (42) the causative change-of-state verb stem *maddada* 'cause to extend' seems to be generated under the V node at D-Structure; it first adjoins to the InAsp node under which the unaccusativizer head *ta-* is generated, then the resulting verbal complex moves on to the T node and seems to end up under the AgrS node, where it surfaces as a full-fledged unaccusative change-of-state verb ***ta****maddada* 'was extended.'

Concerning the DP *l-minTaqat* 'the zone' in the above tree diagram is concerned, it might be proposed that it seems to be generated in the direct object position within VP at D-Structure where it is assigned the Patient theta-role. It moves cyclically to [Spec, InAspP], then to [Spec, TP] where it surfaces as *l-minTaqat-u* assigned Nominative Case and, consequently, becoming the subject of the sentence in accordance with the EPP.

(43)

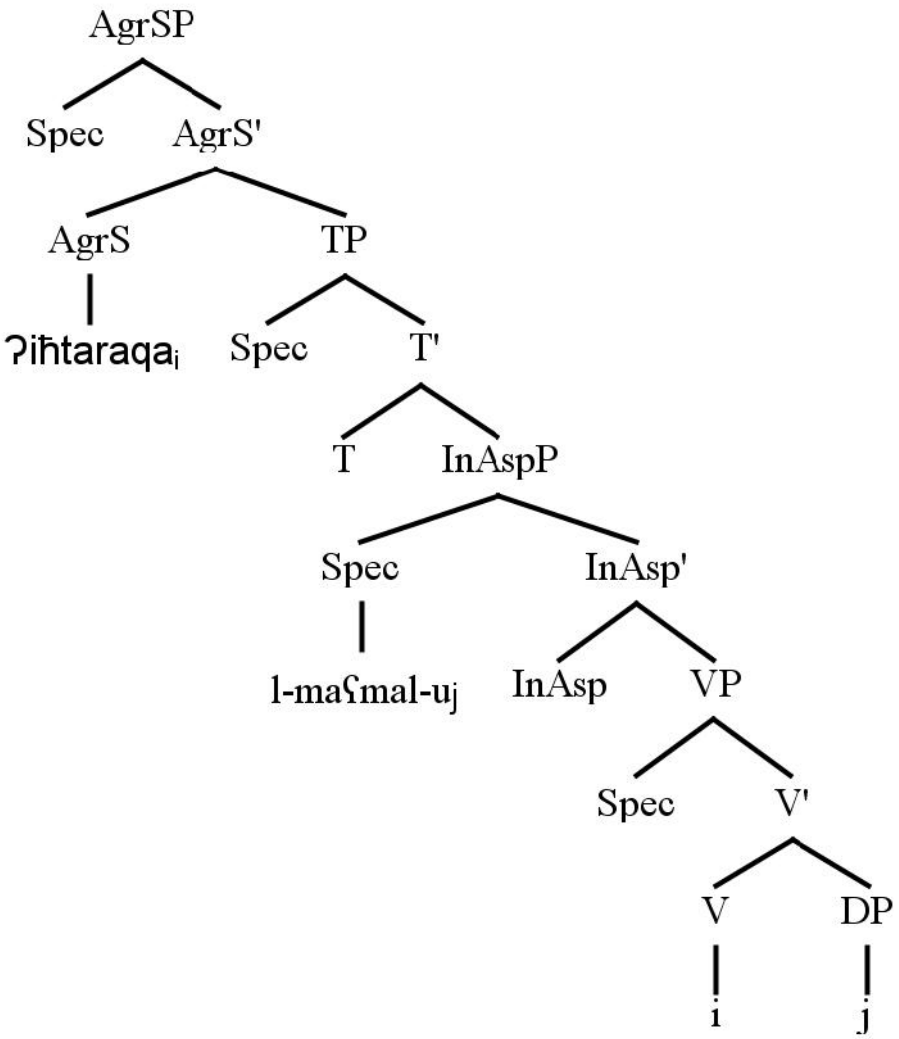


As far as the structure in (43) is concerned, it could equally be observed that the causative change-of-state verb stem *ʕaTTala* 'cause to break down' seems to be generated under the V node at D-Structure; it first adjoins to the InAsp node under which the unaccusativizer head *ta-* is

generated, then the resulting verbal complex moves on to the T node and seems to end up under the AgrS node, where it surfaces as a full-fledged unaccusative change-of-state verb ***ta****ʕaTTala* 'broke down.'

Regarding the DP *l-qiTa:r* 'the train' in the above tree diagram, it might be proposed that it seems to be generated in the direct object position within VP at D-Structure where it is assigned the Patient theta-role. It moves cyclically to [Spec, InAspP], then to [Spec, TP] where it surfaces as *l-qiTa:r-u* assigned Nominative Case and, consequently, becoming the subject of the sentence in conformity with the EPP.

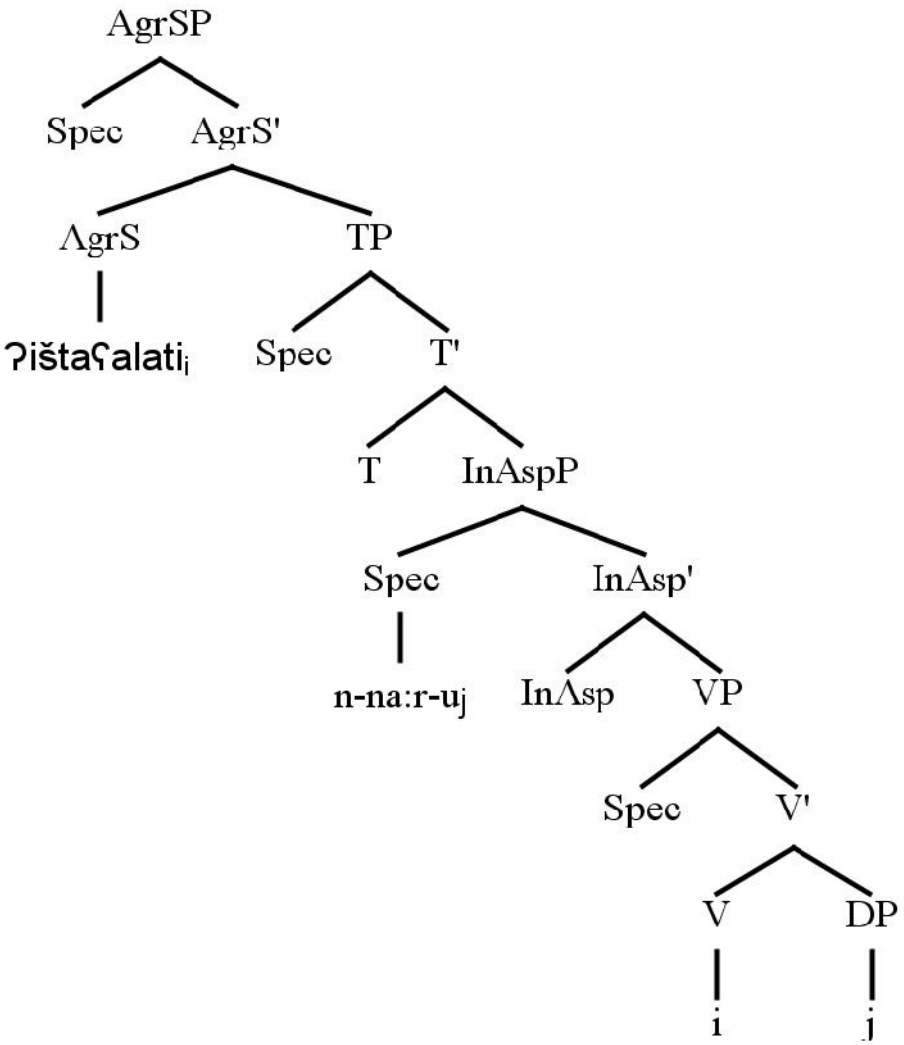
(44)



With respect to the structure in (44), it might be claimed that the causative change-of-state verb stem *ʔaħraqa* 'cause to burn' seems to be generated under the V node at D-Structure; it first adjoins to the InAsp node under which the unaccusativizer head *-ta-* is generated, then the resulting verbal complex moves on to the T node and seems to end up under the AgrS node, where it surfaces as a full-fledged unaccusative change-of-state verb *ʔiħ**ta**raqa* 'was burned.'

As far as the DP *l-maʕmal* ‘the factory’ in the above tree diagram is concerned, it might be proposed that it seems to be generated in the direct object position within VP at D-Structure where it is assigned the Patient theta-role. It moves cyclically to [Spec, InAspP], then to [Spec, TP] where it surfaces as *l-maʕmal-u* assigned Nominative Case and, consequently, becoming the subject of the sentence in compliance with the EPP.

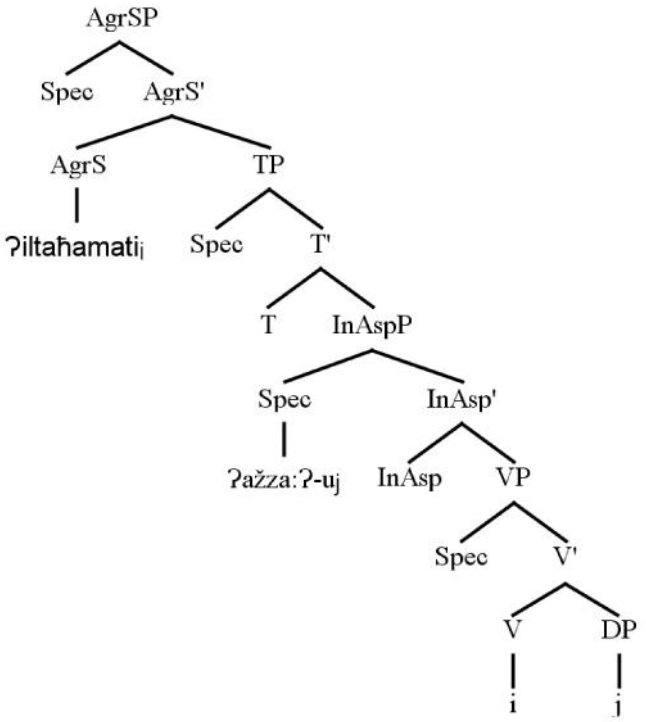
(45)


AgrSP
Spec
AgrS'
AgrS
TP
ʔištaʕalati$_i$
Spec
T'
T
InAspP
Spec
InAsp'
n-na:r-u$_j$
InAsp
VP
Spec
V'
V
DP
i
j

Just as in (44), it might equally be claimed that in (45) the causative change-of-state verb stem *ʔašʕala* 'cause to be lit' seems to be generated under the V node at D-Structure; it first adjoins to the InAsp node under which the unaccusativizer head *-ta-* is generated, then the resulting verbal complex moves on to the T node and seems to end up under the AgrS node, where it surfaces as a full-fledged unaccusative change-of-state verb *ʔišta**ʕ**alati* 'was lit.'

Regarding the DP *n-na:r* 'the fire' in the above tree diagram is concerned, it might be proposed that it seems to be generated in the direct object position within VP at D-Structure where it is assigned the Patient theta-role. It moves cyclically to [Spec, InAspP], then to [Spec, TP] where it surfaces as *n-na:r-u* assigned Nominative Case and, consequently, becoming the subject of the sentence in accordance with the EPP.

(46)



Just as in (44) and (45), it might equally be claimed that in (46) the causative change-of-state verb stem *laħama* 'cause to be welded' seems to be generated under the V node at D-Structure, it first moves to the InAsp node under which the unaccusativizer head *-ta-* is generated, then the resulting complex verbal form moves up to the T node and seems to end up under the AgrS node where it surfaces as a full-fledged unaccusative change-of-state verb *ʔil**ta**ħama* 'was welded.'

As far as the DP *ʔažza:ʔ* 'the parts' in the above tree diagram is concerned, it might be proposed that it seems to occupy the direct object position within VP at D-Structure where it it assigned the Patient theta-role, and it moves cyclically to [Spec, InAspP], then to [Spec, TP]

where it surfaces as the subject *ʔažza:ʔ-u* of the sentence, as is required by the EPP, and is consequently assigned Nominative Case.

7. Conclusion

To sum up, it has been demonstrated in this paper that unlike some previous accounts (notably Hallman's (2006) account), three subclasses of unaccusative change-of-state verbs seem to be systematically derived from causative change-of-state verbs in SA by the addition of some affixes, be they the prefixes *n-* and *ta-* or the infix *-ta-*. This study has equally shown that the category of unaccusative change-of-state verbs containing the latter infix encompasses two subsets, viz., one derived from triliteral verbal stems and the other derived from quadriliteral verbal stems. As has been supported with evidence, these two subsets of unaccusative change-of-state verbs exhibit a slight difference in the way they are derived.[30] So, it may be noted here that the derivation of the latter subsets is somewhat complex, and might cause some difficulty for learners of SA.[31] In-depth research is needed in this area.

It has also been shown that unaccusative change-of-state verbs tend to show a uniform and systematic argument realization pattern in SA. In other words, the Patient or undergoer of the actions denoted by these verbs is systematically realized in the syntactic structure as subject, which is generally assumed to occupy the direct object position at the level of D-Structure. It seems that this finding may have some implications for language typology. Again, more in-depth research is needed in this respect.

Of paramount importance, it has been found out that the above-mentioned bound morphemes may be considered unaccusativizers or decausativizers in SA, to the extent that they can alter the

[30] The particle /ʔi/ is added at the beginning of the derived verb because in Standard Arabic it is commonly unacceptable to begin a word with what is called *suku:n* 'absence of vowel.' See Al Ghalayini (2010:190) and Wright (1996:26) for more details on this issue.

[31] This observation may constitute an interesting issue for future research.

argument structure or valency of a subset of causative change-of-state verbs by decreasing it by one; i.e., when these affixes are attached to or inserted in causative change-of-state verbal stems, the external argument is consequently suppressed from the construction and the internal argument is promoted to subject, yielding unaccusative change-of-state verbs.

Finally, it has been proposed that the subclass of unaccusative change-of-state verbs in SA generally correlates with telicity, in that these verbs tend to denote durative eventualities which have culminating moments or endpoints.

References:

1. Al Ghalayini, M. (2010). *ʒa:miʕ d-duru:s ʔal ʕarabija* (*A Collection of Arabic Lessons*). A. S. Shabara (Ed.). Beirut: Resala Publishers.
2. Carnie, A. (2013). *Syntax: A Generative Introduction* (3rd ed.). Oxford : Wiley-Blackwell.
3. Chierchia, G. (2004). A Semantics for Unaccusatives and its Syntactic Consequences. In A. Alexiadou, E. Anagnostopoulou, & M. Everaert (Eds.), *The Unaccusativity Puzzle: Explorations of the Syntax-Lexicon Interface.* Oxford: Oxford University Press.
4. Chomsky, N. (1981). *Lectures on Government and Binding*. Dordrecht: Foris.
5. Chomsky, N. (1995). *The Minimalist Program*. Cambridge: The MIT Press.
6. Hallman, P. (2006). *Causativity and transitivity in Arabic*. (Unpublished Manuscript, University of Toronto, Canada). Retrieved on July 23rd, 2014 from http://www.peterhallman.com/Causativity.pdf
7. Haspelmath, M., & Sims, A.D. (2010). *Understanding Morphology*. (2nd ed.). London: Hodder Education. ISBN: 9780340950012.
8. Kurebito, T. (2012). An outline of Valency-reducing operations in Chutch. In *Senri Ethnological Studies*, 77, 177-189.
9. Levin, B. & Rappaport Hovav, M. (1995). *Unaccusativity : At the Syntax-Lexical Semantics Interface*. Cambridge: The MIT Press.
10. Levin, B., & Rappaport Hovav, M. (2005). *Argument Realization*. Cambridge: Cambridge University Press.
11. Lyutikova, E., & Tatevosov, S. (2010). Atelicity and anticausativization. In M. Duguine, S. Huidobro, & N. Madariaga (Eds.), *Argument Structure and Syntactic Relations: A Cross-linguistic Perspective* (pp.35-68). Amsterdam/Philadelphia: John Benjamins Publishing Company.
12. McKoon, G. & Macfarland, T. (2000). Externally and internally caused change of state verbs. *Language*, 76(4), 833-858.

13. Nossalik, L. (2010).What exactly does Outer Aspect encode? *Proceedings of the 2010 Annual Conference of the Canadian Linguistic Association*. Retrieved on July 10th, 2014 from: http://homes.chass.utoronto.ca/~cla-acl/actes2010/CLA2010_Nossalik.pdf.
14. Pollock, J. (1989). Verb movement, Universal Grammar, and the structure of IP. *Linguistic Inquiry*, 20(3), 365-424.
15. Ramchand, G.C. (2013). Argument structure and argument structure alternations. In M.D. Dikken (Ed.), *The Cambridge Handbook of Generative Syntax* (pp. 265-321). Cambridge: Cambridge University Press.
16. Rappaport Hovav, M., & Levin, B. (2000). Classifying single argument verbs. In P. Coopmans, M. Everaert, & J. Grimshaw (Eds.), *Lexical Specification and Insertion* (pp. 269-304), Amsterdam/Philadelphia: John Benjamins Publishing Company.
17. Rappaport Hovav, M., & Levin, B. (2012). Lexicon uniformity and the causative alternation. In M. Everaert, M. Marelj, & T. Siloni (Eds.), *The Theta System: Argument Structure at the Interface* (pp.150-176). Oxford: Oxford University Press.
18. Reinhart, T., & Siloni, T. (2004). Against an unaccusative analysis of reflexives. In A. Alexiadou, E. Anagnostopoulou, & M. Everaert (Eds.), *The Unaccusativity Puzzle: Explorations of the Syntax-Lexicon Interface.* Oxford: Oxford University Press.
19. Ryding, K.C. (2005). *A Reference Grammar of Modern Standard Arabic*. Cambridge: Cambridge University Press. ISBN: 9780511114809 (eBook). Retrieved on December 29th, 2013 from: http://ebooks.rahnuma.org/religion/Arabic/Moderʔin-Standard-Arabic-Reference-Grammar.pdf.
20. Tenny, C., & Pustejovsky, J. (2000). A history of events in linguistic theory. In C. Tenny, & J. Pustejovsky (Eds.), *Events as Grammatical Objects* (pp.3-37). Stanford: CSLI Publications. Retrieved on June 7th, 2014 from: http://www.linguist.org/History-of-Events.pdf
21. Travis, L. (2010). *Inner Aspect: The Articulation of VP*. Dordrecht: Springer Science + Business Media.
22. Van Hout, A. (2004). Unaccusativity as Telicity Checking. In A. Alexiadou, E. Anagnostopoulou, & M. Everaert (Eds.), *The Unaccusativity Puzzle: Explorations of the Syntax-Lexicon Interface*. Oxford: Oxford University Press.

23. Wittek, A. (2002). *Learning the Meaning of Change-of-state Verbs: A Case Study of German Child Language*. Berlin: Mouton de Gruyter.
24. Wright, W. (1996). *A Grammar of the Arabic Language*, Vol. 1. Beirut: Librairie du Liban.