

2022

Defining Unaccusatives in Sudanese Arabic

Mohammed Taha and Fazal Mohammed Mohammed Sultan

Date received: February 2, 2021

Revision accepted: March 7, 2022

Similarity index: 1%

Abstract

This article explores the properties of unaccusatives in spoken Sudanese Arabic within the minimalist program. The overall aim is to testify the Unaccusative Hypothesis, in particular, the thematic and argument structure, locative inversion, there-insertion and passivization against the data from Sudanese Arabic. Grammatical judgment questionnaires were given to 10 native Sudanese speakers to test their intuition about unaccusatives. Parallel to the available literature, unaccusatives in Sudanese Arabic are defined by their semantic properties reflected syntactically in their thematic and argument structure. Unaccusatives can appear in locative inversion construction and in there-insertion structures but cannot undergo passivization. This class of predicates takes a single argument, assigning the thematic role as Theme. Structurally, the single argument of unaccusative verbs moves from its canonical object position within VP to non-canonical surface subject position in [Spec, TP], making the structural derivation of unaccusative similar to that of passives, in that both lack external argument as well as both involve argument raising from lower position to higher position. The findings of this study manifest that languages of the world share some common properties even though they belong to different families. This in turn, provides rich information to comparative syntax, linguistic theories, and language typology.

Authors Information:

Mohammed Taha
tahaderbat@yahoo.com
<https://orcid.org/0000-0002-7234-4422>

Faculty,
School of Language Studies and
Linguistics,
University Kebangsaan Malaysia,
Bangi, Selangor, Malaysia

-
Fazal Mohammed Mohammed Sultan
fazal@ukm.edu.my
orcid.org/0000-0002-2910-014x

Associate Professor,
Center for Research in Language and
Linguistics,
University Kebangsaan Malaysia,
Bangi, Selangor, Malaysia

Keywords: Sudanese Arabic, unaccusatives, locative inversion, there-insertion, passivization

In the light of Unaccusative Hypothesis, proposed by Perlmutter (1978), intransitive verbs are classified into unaccusatives and unergatives. This hypothesis is essentially grounded on a number of linguistic tests, collectively known as unaccusative diagnostics, which distinguish between the two classes of intransitive verbs. In some languages, like an Italian for example, among the other diagnostics, the distinction between these two classes is morphologically expressed, in which unaccusative verbs select the auxiliary verb *essere* whereas unergative verbs select *avere* (Burzio, 1986; Perlmutter, 1989). These differences were then reflected in their underlying syntactic configuration (Perlmutter, 1978). In generative syntax, unaccusative verbs are defined as those group of verbs, which have an internal argument functioning as the object to its verb but no subject, while unergative verbs are those classes of verbs, that have an external argument functioning as the subject to its verb but no object (Levin & Rappaport Hovav, 1995, p. 3). This contrast between unaccusatives and unergatives is related to variances in their semantic properties in some other languages, for example, zero overt morphology distinction, like in English and other languages, including Arabic.

Because syntax is the central part of grammar in generative theories of syntax, the structural derivation is built up through syntax, where the outcome structure is sent to the interface levels: the logical form (LF), where the meaning of the sentence is represented and the phonetic form (PF) where the sentence is pronounced. Cross-linguistically, unaccusative structures are contrasted with unergative structure because both structures involve only one argument, although the syntactic behavior of this single argument is different. The sole argument of unaccusative predicate merges internally with the verb, while it merges externally in unergative predicate. This distinction is contrasted with the following English examples as in (1), whereby the argument is written in bold in each case.

- (1) a. Unaccusative sentence
Mary arrived yesterday
 [vP [v came] [VP *Mary* [V **came**]]]
- b. Unergative sentence
John danced yesterday
 [vP [DP *John*] [v danced [VP **danced**]]]

Generative syntax presupposes that the successive Conceptual Structure (CS) projects from the lexical entries of each item in the structure. Therefore, in the standard formulation of government and binding theory, theta theory is a distinct system of principles, which describe the semantic relation, exists between arguments and predicates. More specifically, this semantic relation is attributed as the syntactic implementation of the lexical properties of the heads, in the sense that the lexicon determines the theta-marking properties of the predicate, hence – theta theory concerns with the assignment of the semantic roles to the arguments of the predicate.

This assumption incorporates the principle of VP-Internal Subject Hypothesis (VPISH), which is adopted universally, and specifies that all subjects internally originate within the projection of VP. Under VPISH, we can go further and hypothesize that all arguments of predicate originate from the projection of VP shell. This hypothesis allows us to maintain the concept that there is a uniform mapping between the syntactic structure and the semantic of the argument structure. Consequently, any proposition is a composition of a predicate and a set of arguments, wherein a predicate denotes an activity or an event, and the argument denotes participants in the related activity or event. In other words, the arguments of the predicate are typically its subject and complements, wherein the status of the complement depends on the

predicates type – hence its C-selection property.

As mentioned earlier, it is commonly noted that intransitive verbs cross-linguistically fall into unaccusatives and unergatives, depending on the behavior on the argument. In the unergative structures, the argument demonstrates agent properties and structurally behaves similar to the subject in transitive verb structures. However, in unaccusative structures, the argument ends up in the subject position, and behaves syntactically like an object of transitive predicates. In terms of its semantics, the sole argument of unaccusative verb exhibits theme-like/patient-like properties. This paper aims to examine the characteristics of unaccusative predicates that make them a distinct class in spoken Sudanese Arabic. The overall paper is based on the minimalist program by Chomsky (1995 and subsequent works).

Literature review

Starting from Perlmutter (1978), in particular, his influential Unaccusative Hypothesis (UH), monadic verbs (single argument verbs) are categorized into unergatives and unaccusatives (Mitrovic, 2016). Unaccusative and unaccusativity have been the subject of research interest for many decades, particularly the causation alternation (Hernández, 2019). This is much reflected in the literature of Romance languages, especially, the nature of the clitic *se* (be auxiliary) (cf. Alexiadou, Anagnostopoulou, and Schäfer, 2015; Basílico, 2010; Schäfer, 2008) and many others. This auxiliary selection is proposed as a common morphological diagnostic of unaccusatives in many Romance languages but not all. In Spanish, however, Hernández (2019) outlined a uniform account to describe the distribution of the obligatory PP in unaccusative verbs and the clitic that exist in unaccusative verbs. The underlying structure of unaccusatives of all type in Spanish is presented as follows.

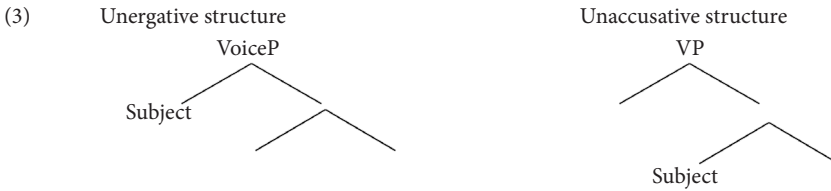
(2) $[_{VP} DP [V [PP]]]$

The author postulates that the obligatory PP complement in (2) is complex in nature, in the sense that it dominates two prepositions, the higher preposition, which exhibits directionality and the lower, which entails location. In terms of clitic, it is claimed that this clitic is actually the spell-out of these prepositions, which generally expresses the meaning of status or location change. Unlike other Romance languages such as Dutch and Italian, which morphologically make different between unergatives and unaccusatives by using different auxiliaries, Spanish has no overt morphological distinction between these two types of intransitive verbs. This makes the distinction more complicated, hence looking at the lexical properties of the verb and perhaps at semantic-syntax interfaces.

In German language, although the long outstanding debate has established that unaccusative verbs are not able to undergo passive construction; Müller (2018) found that the single argument of unaccusative verbs could be passivized. When unaccusative undergoes passivization, the outcome structure is reinterpreted as unergative verb, where the single argument of passivized unaccusative shows the characteristics of an external argument rather than its initial status as an internal argument. This new empirical finding suggests that further syntactic tests are required to account for the ability of unaccusative verbs to undergo passivization cross-linguistically. In this contrast, Ilc and Marvin (2016) argued that unaccusative and unergative status of the verb is not applicable in Slovenian language. Among others, the authors examined the reduced relatives (cf. Pesetsky, 1996; Embick, 2004; Iatridou, Anagnostopoulou & Izvorski, 2001; Marvin, 2003; & Ahmed, 2010) passivization and imperfectionization syntactic tests, which are universally assumed to be the determinants of the unaccusative and unergative verbs. Based on these common unaccusativity diagnostics, unaccusatives in Slovenian are identified through an (active)

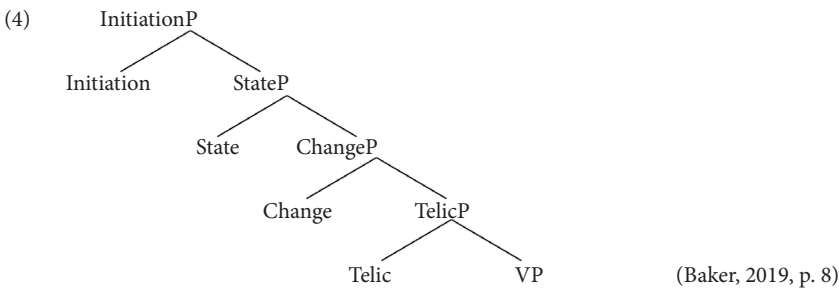
l-participle in a reduced relative clause and their appearance in impersonal *se* construction, similar to that of Dutch. These new findings of unaccusativity diagnostics in Slovenian imply that the inability of unaccusative to undergo passivization is no more cross-linguistic generalization.

Assuming event configuration¹, in which the meaning of the verb is encoded from its syntactic structure, Berro (2019) argued that the unaccusative and unergative contrast in Basque is built from their syntactic configuration. Unaccusative verb selects the auxiliary **izan** (BE) and the subject is licensed as a covert absolutive Case, whereas unergative verb selects the auxiliary **edun** (HAVE) with an ergative subject. Structurally, the subject of unergative verb is positioned in the [Spec, VoiceP] outside the verb phrase VP, while the subject of unaccusative verb is positioned within VP, as follows.



Interestingly, this structural differentiation between unergative and unaccusative verbs in Basque clearly identifies the behavior of the sole argument of intransitive verbs proposed in the literature. Thus, in (3), the argument of unergative merges externally and behaves like a subject of an active transitive clause, while in unaccusative, it merges internally towards the verb and behaves like a direct object of a transitive predicate. Similarly, the morphological distinction between unaccusative/ergative and unergative is also made in some Austronesian languages, particularly the Philippine languages, including Cebuano, Isamal, and Filipino. The main verb takes the agentive affixes **mag-**, **mu-** and **ma-** in Cebuano, while in both Isamal and Filipino the verb takes **mag-**, **-um**, **ma-** to denote unaccusative, which then assigns only one argument (Jubilado, 2021). This single argument has the Theme theta role, and it is structurally placed in the complement of the main verb, despite, this Theme functions as the surface subject of the sentence.

In addition to the behavior of the argument, the ability of the verb to appear in cognate object construction is also proposed to distinguish between the two classes of intransitive verbs in English. Baker (2019) argued that split intransitivity² in English and thematic roles are best accounted for by adopting the following hierarchical structure as in (4).



¹Event configuration is extensively discussed in (Cuervo, 2003; Folli & Harley, 2005; Hale & Keyser, 1993, 2002, 2005; Harley, 1995, 2005; Mateu, 2002; Ramchand, 2008) and others. The main point of event configuration is that the semantic property of verbs can be derived from their underlying syntactic structure.

²Split intransitivity is used over the literature to refer to the distinction between two types of intransitive unaccusativity vs. unergativity in some languages, and to distinguish also between causation vs. unaccusative alternation in some other languages.

The functional heads, State, Change and Telic, according to Baker (2019), correspond to whether the predicate expresses the meaning of state, change, or telic event, while the functional head Initiation is an optional head, which exists when the predicates express the causational relation. Contrary to unaccusative hypothesis proposed by Perlmutter (1978) where intransitives are classified into two, based on their argument position, the sketch in (4) distinguishes between multiple types of intransitive but not only two, through this multiple head proposal (Baker, 2018, 2019). In addition to the hierarchy proposed by Baker in (4), there are three major unaccusativity diagnostics in English: the causative/inchoative alternation, the resultative construction, and there-insertion (Irwin, 2012; Zhang, 2018; Baker, 2019; & Daniel, 2019) as follows:

- (5) Unaccusative diagnostics in English
- | | | |
|----|------------------------------------|---------------------------------|
| a. | The wind <i>broke</i> the window | <i>Causative</i> |
| b. | The window <i>broke</i> | <i>Inchoative</i> |
| c. | The meat <i>froze</i> solid | <i>Resultative construction</i> |
| d. | There <i>arrived</i> four students | <i>There-insertion</i> |

There are many unaccusativity diagnostics in Arabic that distinguish between the two classes of intransitive verbs. These include causative alternation (Al-Qadi, 2015), cognate object (Al-Sammak, 2012) and passivization (Ayeche, 2018). The first two diagnostics are restricted to certain types of verbs, while passivization is common unaccusative verbs property across Arabic. Thus, unergative structures can undergo passivization while unaccusatives cannot (Ayeche, 2018) as follows:

- (6) a. *ʒaaʔ-a* Ahmed (Active unaccusative)
 came-3SM ahmed
 'Ahmed came.'
- b. *ʒiʔ-a* Ahmed (Passive unaccusative)
 came-3SM Ahmed
 '*Ahmed was come.'

The inability of unaccusatives to undergo passivization in Arabic makes unaccusatives and passive structures similar, in the sense that both involve a single argument and DP raising as well as they both lack external argument. Overall, aside from morphological distinction, the semantic properties, locative inversion, there-insertion, causative/inchoative alternations, resultative construction, and telicity are the common cross linguistic unaccusativity diagnostics although the variances exist from language to another. Therefore, Unaccusative Hypothesis is not a universal hypothesis; rather it is a parametric hypothesis regulated by the language-specific properties.

Methodology

This paper describes the derivation of unaccusative predicates in Spoken Sudanese Arabic. A questionnaire on grammaticality judgments is given to 10 native Sudanese Arabic speakers to attest their intuition about predicates using open-ended questions. As argued by Culicover (1997), the close examination of selected sentences and phrases that native speakers of a language judge to be possible, impossible, or marginal has proven to be the most productive methodology in the development of linguistic theory. This observational method provides the respondents the option of furnishing a wide range of answers as stated by Brown (2009), thus, reflecting their own understanding in relation to sentences

structure of unaccusative predicates in Sudanese Arabic. Their intuition about sentential structure may also reflect the structural configuration in terms of the thematic/argument structure of this class of predicates. Because this current study emphasize on only one aspect of the syntax of unaccusative verbs in Sudanese Arabic, the corpus of verbal syntax data collected via observation or recording may not provide trustworthy data than the use of a questionnaire due to the following reasons: (I) a large corpus of informal speech is not possible to provide sufficient data for verbal syntax; and (II) corpora always trace and record the correct and the most common structures that native speakers use. Therefore, this kind of data is insufficient because grammatical/ungrammatical structures are not captured.

Theoretical Assumptions

The recent literature on generative syntax assumes the structural derivation of any clause or sentence to be the result of a continuous application of the syntactic operations Merge and Agree (cf. Chomsky, 1995, 2000, 2001, 2004, 2007, 2008). The syntactic operation Merge combines two or more items to form a larger projection till the derivation converges at the logical form (LF) and phonetic form (PF); which are the interface levels. The underlying derivation is attracted by feature-checking requirements whereby unvalued features are deleted or else the derivation crashes (Chomsky, 1995; & Keine, 2010). Feature-checking or feature valuation is established through the syntactic operation Agree, whereby the operation Agree duplicates a feature value from one head to another (cf. Chomsky, 2001, 2008; Radford, 2009a, 2009b). In other words, the operation Agree establishes the relationship between Probe and Goal. A probe, which is the head of the functional category and carries uninterpretable and unvalued formal features reaches down for a proper goal in its c-command domain that carries similar interpretable and valued formal feature (Chomsky, 2000, 2001, 2008; & Zeijlstra, 2010). In this way, the goal checks and values the uninterpretable feature of the probe. This results in both T and the DP the subject carrying DP's ϕ -features. The ϕ -features on the head T in some languages may be defined morphologically yielding to subject-verb agreement. Accordingly, the nominal Case and verbal ϕ -features act symmetrically. They are both unvalued on their relevant head, thus must undergo Agree with their valued matching part to prevent derivation crashing (cf. Keine, 2010). In this respect, Case is assumed to be a valued feature on heads within the verbal domain and unvalued on DPs. This entails that formal features and Case proceed in parallel ways. Therefore, formal features are valued on DPs with their values copied onto verbal heads within vP; while Case features are valued on functional verbal heads and copied onto nominals (Keine, 2010).

The syntactic operation Agree, in general, is responsible for eliminating unvalued features noted above. However, Chomsky (2001, 2008) argued that the derivation is computed through phases, where the phases are CP and vP. In this respect, he maintained that CP provides information about the clause type, hence, declarative, interrogative, exclamative, or imperative, whereas vP provides information on thematic/argument structure. Once the phase is built, the formed structure undergoes *Transfer* to Phonological Form (PF) and Logical Form (LF) or semantic form, making the phase impenetrable to other syntactic operations. The unvalued feature is a *Probe* looking for a valued *Goal*. For example, a DP, the Spec of vP which has ϕ -features enters into an Agree relation with T, the head of TP which has unvalued ϕ -features, wherein DP's ϕ -features are copied and valued onto T. This valuation of features deletes uninterpretable features blocking the crash of derivation (Sigurdsson, 2000).

Sudanese Arabic

Arabic, in general, is a member of the Semitic group, which itself belongs to Afro-Asiatic languages family. The ancient Arabic inscription started in the fourth century AD, and was established well

into the seventh century, during the Islamic era. Nowadays, Modern Arabic has numerous varieties that are not mutually intelligible. Significant differences also exist between Maltese Arabic and the rest of the Arabic dialects. In addition to Maltese, regional varieties constitute two different groups. First, the eastern Arabic, including those varieties spoken in Mesopotamia, Syria, Lebanon, Israel, the Arabian peninsula, Egypt, Sudan, and Zanzibar in Tanzania. Second, the western Arabic, including varieties spoken mostly in North Africa, such as Libya, Morocco, Algeria, Tunisia, and Mauritania. Nevertheless, dichotomies are also found within the region itself between speakers of cities and the speakers of rural areas or deserts (Lyovin, Kessler & Leben, 2017).

However, Modern Standard Arabic (MSA henceforth), which is separate from Classical Arabic (the language written and spoken in Koranic era), is a common formal standardized variety that coexists with these local varieties. MSA is the language of communication between speakers of different Arabic dialects, and it is used across Arabic-speaking states for formal speeches, education, and media. In contrast, the regional or local varieties are used for ordinary oral communication and for folk literature. This diglossia situation where the same language is used separately in the same community for two different purposes makes it important to investigate MSA and local varieties separately (Lyovin, Kessler & Leben, 2017; Pereltsvaig, 2017).

Sudanese Arabic refers to that form of Arabic spoken in the greater capital city, including Khartoum, Khartoum Bahri (or Khartoum North), and Omdurman. It is also spoken in other urban cities in the central parts of the country, up to the city of Atbara in the north, extending to the city of Senar in the Blue Nile region to Kosti in the White Nile region (Dickins, 2007; Taha, 2016; & Sultan et al., 2018). Similar to all other speaking varieties of Arabic, where there is no formal script of Sudanese Arabic, Modern Standard Arabic is the official language of the state. It is the medium of instruction in all educational contexts; it is also used to deliver formal speeches, and religious ceremonies and sermons. However, Sudanese Arabic is sometimes used in media, announcements, informal correspondence, and in written folk literature such as novels and short stories. There are two-word order alternations in Sudanese Arabic: SV and VS. Our discussion on unaccusatives in Sudanese Arabic focuses on the applicability of the common unaccusativity diagnostics to Sudanese Arabic, in particular the semantic-syntax interface; reflected in the argument structure, locative inversion, and there-insertion.

Diagnosing Unaccusativity in Sudanese Arabic

Unaccusative verbs in Sudanese Arabic are characterized by certain range of unaccusativity diagnostics. These diagnostics include their semantic properties, which are represented in the thematic and argument structure. They are also characterized by their ability to appear in certain constructions, such as locative inversion and there-insertion constructions. Moreover, unaccusatives in Sudanese Arabic are unable to undergo passivization. All these diagnostics are discussed below with examples.

The Thematic and Argument Structure

Like all Arabic languages³ and many other languages, including English, there is no morphological distinction between all types of predicates in Sudanese Arabic. Thus, unaccusativity in Sudanese Arabic is defined by the lexical information of the predicates, which is reflected in the structural position of theta argument, thus the behavior of this argument. Unaccusative verbs in Sudanese Arabic are the simplest

³ The term Arabic languages in its plural form is used to refer to the fact that Arabic is no more a single or monolithic language, rather its multiple dialects spoken differently from one country to another.

verbal group according to their lexical aspects. This class of verbs looks like simple intransitive verbs, though they are simpler than intransitive verbs. In the light of theta theory, defended in the government and binding theory, unaccusative verbs take one nominal argument in their thematic/argument structure. This nominal argument receives theta role as Theme, as in the following⁴:

- (7) Seham *waSala-t*
 Seham arrived.Past-Fem⁵
 'Seham arrived or has arrived.'
waSalat: V: <DP>
 <Theme>
- (8) al-as?aar *istagarra-t*
 the-prices settle.Past-Fem
 'The prices settled.'
istagarrat: V: <DP>
 <Theme>
- (9) al-talij *zaab*
 the-ice metl.Past
 The ice melted
zaab: V: <DP>
 <Theme>

The lexical information of the unaccusative verbs in (7-9) specifies that such class of verbs requires a single argument to complete its meaning. This single argument has the grammatical function of a subject and the thematic role of the Theme, as indicated in their theta grid. Therefore, this class of unaccusative verbs has the partial features as proposed in the following, whereby the category, the number of the arguments and the theta roles they assign to their arguments are specified.

- (10) Unaccusatives in Sudanese Arabic



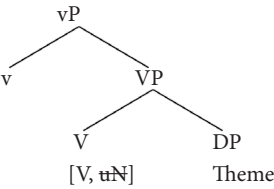
The schema in (10) typically specifies that unaccusatives are classes of predicate that take a mono argument, this single argument; assigns theta role as Theme and merges internally with the verb. Mentioning internal merge implies that the vP shell of unaccusative verb lacks a DP in the specifier position which always merges externally to the verb. However, the structure building of a sentence with unaccusative

⁴ The transcription of Sudanese Arabic examples in this paper follows the International Phonetic Alphabet or standard equivalent unless otherwise specified.

⁵ The abbreviations used as follows: Fem (Feminine) Past (past tense) and PL (Plural).

verb involves a series of syntactic operations, such as Numeration, Merge, Move and Copy. If we assume the Uniformity of Theta Assignment Hypothesis (UTAH), which posits that specific thematic roles are licensed to a certain position in all structures, the predicates that assign only argument *Theme* would realize that this

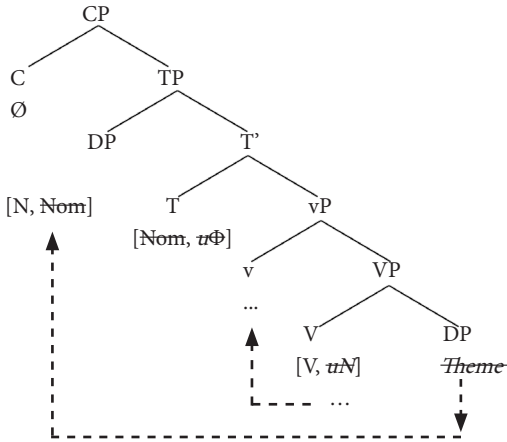
argument is essentially originated in the post-verbal position (object position) with the complete vP shell of unaccusatives as follows:

- (11) a. 
- b. $[_{vP} [_v] [_{VP} \text{unaccusative verb } [DP_{\text{Theme}}]]]$

The structure in (11a) proposes that unaccusatives are syntactically distinct from other predicates, which take a base subject in that they associate with a small *v* projection, which lacks of a specifier. The schema in (11) also successfully distinguishes between the vP shell of two intransitive verbs in Sudanese Arabic: unergatives and unaccusatives, in the sense that unergatives associate with a small *v* projection with a specifier in its left edge, while in unaccusatives the specifier of small *v* is null. This structural asymmetry is one of the defining characteristics of split intransitivity cross linguistically. Having mentioned these distinctions, the differences between the subject of unaccusative and the subjects of other predicates is clearly shown in that the subject of unaccusative originates within the inner VP, in particular, as the complement/internal argument of a lexical verb, while the subjects of other predicates originate in the outer [Spec, vP], specifically, as the specifier/external argument of a light verb. In line with Larsonian (1988) VP-shell hypothesis, where the hierarchy structure of verb phrase has two projections of the verb; the lower VP shell and the higher vP shell whose head is a strong light verb which provides a landing site to lower verb that raises from *V* to *v*, whereas the lower VP is headed by a lexical verb. If we hypothesize, then the position of the Theme subject in unaccusative structures is argued for by suggesting that this Theme argument remains in situ in such configurations.

In the subsequent computation, and since there are no intervening nodes between the EPP feature of the head *T* and *N*-feature of the Theme argument, the Theme would be able to undergo movement to the specifier position of Tense Phrase, [Spec, TP] to check Extended Projection Principle (EPP) feature on the head *T*. *T* which has nominative Case feature, triggers the theme to agree with it and check its Case features. In line with Chomsky (2001, 2008) in which the derivation of any clause or sentence is built phase by phase, where phases include CP and vP, the resulting TP is then merged with the head complementizer (*C*) to form CP. And since *T* and theme carry compatible Case features, the small *v* in the structure of unaccusative verbs lacks accusative Case features and *uN*-features – and hence a specifier in their [Spec, vP]. And because they lack accusative Case, the name unaccusative is given to them Adger (2003). The complete cartographic structure of unaccusatives is given in the following (12):

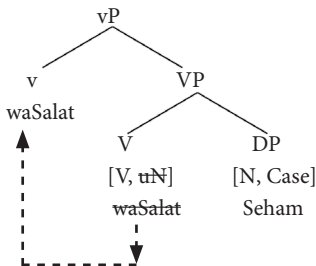
(12)



Having given that, one might ask such natural question about how the structure building proceeds. The derivation of unaccusative is built upon a successive application of the syntactic process – Merge. The verb selects the Theme argument, which merges with it internally to project VP, as in the following, whereby numeration selects the lexical items [waSalat, Seham] separately from the lexicon and the syntactic operation Merge combines the selected items, building a new syntactic object. The resulting VP then merges with a strong (affixal) light verb *v*, which lacks of specifier and accusative Case, whereby “waSalat” moves to *v* to project the vP shell in the manner shown in (14) for the structure of (7) repeated here as (13).

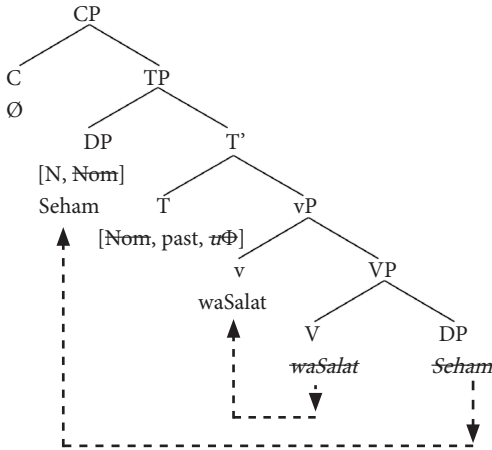
- (13) Seham *waSala-t*
 Seham arrive.Past-Fem
 ‘Seham arrived/has arrived.’

(14)



Mentioning the lack of [Spec, vP] position in the vP shell of unaccusative arises a question of how feature checking, in particular, Case checking takes place. To answer these questions, let us see how the derivation proceeds to the next step. The established vP phase in turn merges with T which carries [*uN*, Nom, Past, *uPhi*-features], whereby T values its nominative feature on the Theme – hence, the Theme receives its nominative Case from T, although this Theme is merged originally in the object position. The uninterpretable Φ -features on T are checked and valued by the Φ -features on the Theme. The EPP features on T are checked with the N-features of the Theme wherein the *uN*-features on T trigger the theme to move to its specifier. The [Past Tense] features on T are checked off and valued with small *v* features to form the overall projection of TP. The resulting TP then merged with null complementizer C that is declarative in force to form CP, as in the following (15).

(15)



The derivation in (15) involved several syntactic processes and different steps summarized in the following: Step 1: Numeration which selects [waSalat, Seham] from the lexicon. Step 2: the syntactic operation Merge: merges the selected lexical items together to form a VP. Step 3: the output of step 2 then merges with the light verb *v* which lacks specifier forming vP. Step 4: the lexical verbs *waSalat* 'arrived' moves to adjoin *v* as the result of checking features' requirement leaving its trace behind. Step 5: the output of step 3 then merges with the functional category T forming T'. Step 6: the output of step 5 then merges with Seham which is initially moved from the complement position under VP leaving its trace, to form TP. Step 7: the output of step 6 then merges with the null complementizer which is a declarative in force forming the clausal complex *Seham waSalat* 'Seham arrived/has arrived'.

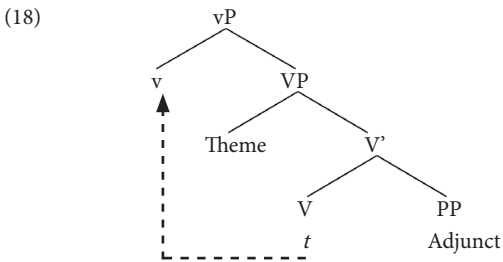
Generally speaking, regarding the computation of the entire structure of (15), the process *Numeration* draws lexical items [Seham, waSalat] from the lexicon. The process *Select* applies to the selected lexical items in the numeration to enter into the computational system with fully inflected for all necessary syntactic features, where the syntactic processes *Merge*, *Copy*, and *Move* apply to construct syntactic objects, wherein all features are checked off and valued. *Merge* is the syntactic operation, that combines lexical items to form a larger syntactic entity. Combining the syntactic operations *Copy* and *Merge* results in the syntactic operation *Move*. *Move* is the syntactic operation, which copies a syntactic entity, which in turn merges with other entities in the structure. The syntactic operation *Move* leaves a trace behind as shown in (15). This way, the distinction is made between the two classes of intransitive verb in terms of the position in which the sole argument of each type occupies and the thematic role they assign. In unaccusatives, the underlying object moves to a surface subject position, whereas in unergatives, the underlying subject moves to a surface subject position. In the next section, we discuss another unaccusativity diagnostics known as locative inversion.

Locative Inversion

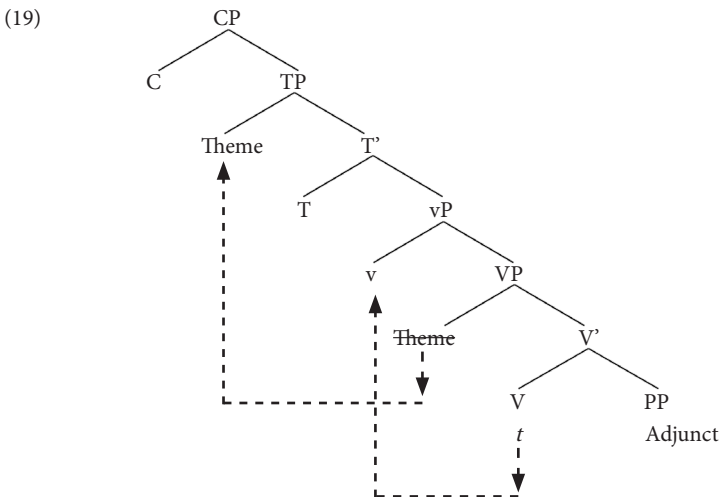
Locative inversion in Sudanese Arabic is the construction in which unaccusative predicates optionally take preposition phase (PP) complement. This PP complement in locative inversion structure appears to occupy the specifier of inflectional head [Spec, TP] position, which is the default (canonical) subject position (Nishihara, 1999, 2005). Before discussing the locative inversion, it important to mention here that unaccusative verbs in Sudanese Arabic may take also an optional location or path argument, as in the following, whereby the argument between the brackets is optional or adjunct.

- (16) at-tayyarah *gaama-t* (min mataar al-khurtoum)
 the-flight depart.Past-Fem (from airport the-khartoum)
 'The flight departed (from Khartoum airport).'
gaamat-t: V: <DP, (PP)>
 <Theme, (Locative)>
- (17) al-matara *Sabba-t* (fi ash-shamaal)
 the-rain rain.Past-Fem in the-north
 'Literally: The rain rained in the north.'
kabba-t: V: <DP, (PP)>
 <Theme, (Locative)>

The vP shell structure of unaccusatives with an optional PP complement is slightly different from bare unaccusatives vP shell. The adjunct is dominated within the bar projection of the lexical verb V and the Theme, which is the core argument, occupies the [Spec, VP]. This way the difference between the core argument and adjunct is met as in the following.



The overall vP phase in (18) then merges with T to check and value all related features, whereby the Theme raises to [Spec TP] for the same reasons to form TP. TP in turn merges with the null declarative complementiser C to form CP, as in the following.



Unaccusatives are typically verbs of movement, location or path. Unaccusative verbs in Sudanese Arabic have a certain range of property by which they can be identified. Unaccusative verbs can appear in locative inversion construction whereas its counterpart unergative cannot, as in the following, whereby the optional PPs or adjuncts are accorded to the arguments:

(20) Locative inversion with unaccusatives

- a. *min mataar al-khartoum at-tayyara gaama-t*
 from airport the-khartoum the-flight depart.Past-Fem
 'From Khartoum airport the flight departed.'
qaama-t: V: <PP, DP>
 < Locative, Theme>

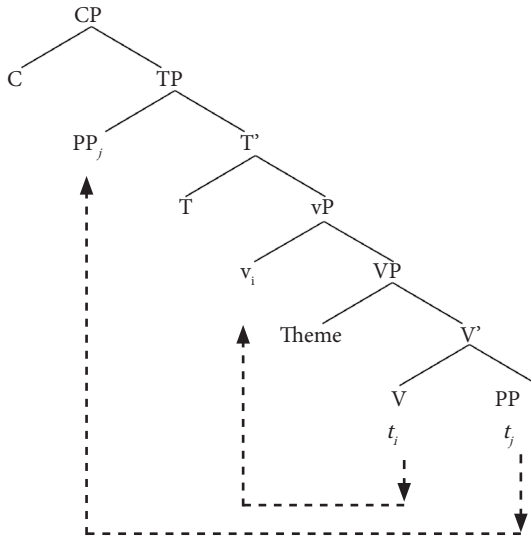
- b. *fi ash-shamaal al-matara Sabha-t*
 in the-north the-rain rain.Past-Fem
 'Literally: In the north the rain rained.'
kabba-t: V: <PP, DP>
 < Locative, Theme>

(21) Locative inversion with unergatives

- a. **min al-fasher jaa-t*
 from the-fasher come.Past-Fem
 'From al-fasher she came.'
- b. **fi as-shamaal raqaS*
 in the-north dance.Past.Mas
 'In the north he danced.'

Locative inversion differs from topicalization in that the verb in locative inversion must be intransitive (Levin & Rappaport, 1995) and that the fronted PP must be core argument rather than adjunct. Interestingly, PP fronting in the preverbal position is only restricted to unaccusatives in Sudanese Arabic, wherein PP moves from its lower canonical position, in the domain of VP to higher non-canonical position – [Spec, TP]. However, in Sudanese Arabic PP fronting corresponds to a different syntactic derivation the interaction between language specific properties (pragmatics) and the universal requirements, in particular EPP. The structure of locative inversion or PP fronting is as follows:

(22)



Structurally speaking, the overall computation of unaccusative verbs holds the assumption that this category of verbs has no subject; therefore, the object moved obligatory from its canonical position to a higher position of the subject. But what motivates this movement? This type of movement is motivated by the principles of checking theory. The object which assigns the theta role as Theme, moves from the complement position to the subject position for two reasons: One of which is to check its uninterpretable Case feature, and second, to get its nominative Case. This concept is primarily derived from Luigi Burzio's proposal, in which he noted the correlation between verbs assigning thematic roles for subject and being able to assign Case to the object. This proposal is then universally adopted and standardly referred to as Burzio's Generalization, which is formally defined as follows:

(23) Burzio's Generalization

Verbs, which assign theta-role to the subject, can assign Case to the object Burzio (1988, p. 46).

As noted above, unaccusative predicates in Sudanese Arabic can appear in locative inversion in which that path or location argument becomes a core argument. In the next subsection, we discuss unaccusative predicates with there-insertion.

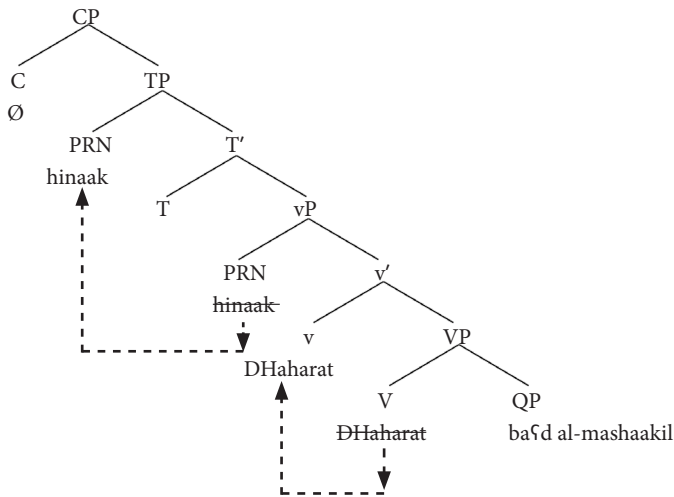
There-insertion

Another unaccusativity diagnostics discussed in the literature is the ability of unaccusative verb to appear in there-insertion construction. There-insertion is posited as one of the defining characteristics of unaccusativity in languages like English (cf. Radford, 2009a, 2009b; Irwin, 2012) and Icelandic. Similarly, in Sudanese Arabic unaccusative predicate can appear with the expletive there-construction as in the following:

(24) *hinaak* DHaharat baʕd al-mashaakil
 there appear.past some the-problems
 'There appeared some problems.'

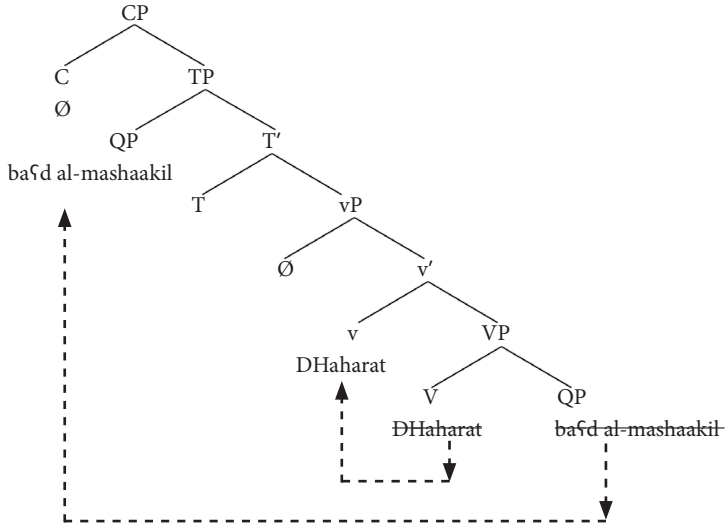
The structure building of (24) may pose an interesting theoretical question, such as which candidate is the structural subject of the sentence; it could be the expletive *hinaak* 'there' or the quantifier *baʕd al-mashaakil* 'some problems.' To answer this question, let us assume that the derivation of (24) is formed as follows: The verb *DHaharat* 'appeared' is merged with its Quantifier Phrase (QP) complement *baʕd al-mashaakil* 'some problems' which in itself is formed by merging the quantifier *baʕd* 'some' with its complement *al-mashaakil* 'problems' to form VP. This VP is then merged with the small light *v*, which is a strong affix that attracts the lexical verb to move, and adjoins it forming the vP shell *DHaharat baʕd al-mashaakil* 'appeared some problems.' This vP shell is then merged with T to form T'. At this point, the EPP features on T require to have structural subject merged in [Spec, TP]; therefore, T is merged with the expletive *hinaak* 'there' to form TP *hinaak DHaharat baʕd al-mashaakil* 'there appeared some problems' to satisfy EPP requirement through Expletive Condition (EC), which requires the expletive to merge as external argument in unaccusative verbs which have no canonical subject (Radford, 2009b, p. 363). The derivation is given in the following:

(25)



Alternatively, the EPP features on T can be satisfied through Attract Closest Condition (ACC) of Richards (1997), which requires the constituent T to attract the closest nominal expression in its domain. Since the QP *baʕd al-mashaakil* 'some problems' is the closest nominal category, T will attract it, in which the QP moves to [Spec, TP], satisfying the EPP requirements as follows:

(26)



The structure in (26) involves A-movement (argument movement), in which the QP is moved from a lower position (the canonical position) to a higher position (non-canonical position) to become a structural subject. This process generated the structure linked to *baʕd al-mashaakil DHaharat* 'some problems appeared.' The conclusion that should be arrived at here is that the arguments of unaccusatives with expletive remain in situ as complements of their verbs but raise to become the subject of their underlying verbs in non-expletive constructions.

Passive Voice

Similar to Standard Arabic and other languages, including English, unaccusatives in Sudanese Arabic cannot undergo passivization as contrasted in below sentences pairs:

(27) al-amraadh *intashara-t* (Active unaccusative)
 the-disease.Pl spread.Past-Fem
 The disease spread

(28) **untushira-t* al-amraadh (Passive unaccusative)
 spread.Past-Fem the-disease.Pl
 The disease were spread

The inability of unaccusatives to undergo passivization in Sudanese Arabic manifests that the influential Unaccusativity Hypothesis formulated by Perlmutter (1978) further developed by Burzio (1986) correctly predicted the characteristics of unaccusatives, although the hypothesis was based on data from the Italian language.

Conclusion

The long outstanding debate in generative syntax about the predicates and their properties, in particular, split intransitivity or the properties of monadic verbs, has enriched the field with numerous research and publications. The debate revolves around whether the syntax of verbs is determined by their semantics or the opposite; hence, the syntax-semantics interface. Cross linguistically, the literature has shown the two alternations where the different classes of predicates are distinguished syntactically through affixation (Bantu languages and Romance Languages) and where the distinction is semantically motivated. This is shown in the argument and thematic structure of the verbs (English and Arabic). Regarding unaccusatives in Sudanese Arabic, the semantics of the verb determines the syntactic behavior of the argument. This class of predicates appears in certain constructions such as locative inversion, there-insertion and cannot undergo passivization, which make it different from its counterpart unergatives. This new finding provides valuable information to comparative syntax, linguistic theories and language typology.

References

- Adger, D. (2003). *Core syntax: A minimalist approach*. Oxford University Press.
- Ahmed, T. (2010). The unaccusativity/unergativity distinction in Urdu. *Journal of South Asian Linguistics* 3(1), 3–22.
- Alexiadou, A., Anagnostopoulou, E., & Schäfer, F. (2015). *External arguments in transitivity alternations: A layering approach*, 55. Oxford Studies in Theoretical Linguistics.
- Al-Qadi, M. (2015). *Intransitivity and the Causative Alternation Phenomenon in Arabic*. Doctoral dissertation. Arizona State University.
- Al-Sammak, M. (2012). *Cognate objects with unaccusative and unergative verbs in Arabic*. Doctoral dissertation. California State University, Fresno.
- Ayche, R. B. (2018). Phase-based Analysis of Verbal Passive in Standard Arabic. *International Journal of Arabic Linguistics*, 4(2), 271–292.
- Baker, J. S. (2018). *Split intransitivity: Thematic roles, case and agreement*. Doctoral dissertation. University of Cambridge.
- Baker, J. (2019). *Split intransitivity in English*. *English Language & Linguistics*, 23(3), 557–589.
- Basilico, D. (2010). The se clitic and its relationship to paths. Probus: *International Journal of Latin and Romance Linguistics*, 22(2), 271–302.
- Berro, A. (2019). (In)transitive Verbs: Unergatives and Unaccusatives. In A. Berro, F. Beatriz, & J. O. de Urbina (Eds.), *Basque and Romance*, 139–175. Brill.
- Brown, J. (2009). Open response items in questionnaires. In I. Heigham, & R. Croker (Eds.), *Qualitative research in applied linguistics: An introduction*, 200–219. Macmillan.
- Burzio, Luigi. (1986). *Italian Syntax*. Reidel.
- Chomsky, N. (1995). *The minimalist program*. Cambridge University Press.
- Chomsky, N. (2000). Minimalist inquiries: The framework. In R. Martin, D. Michaels, J. Uriagereka, & S. Keyser (Eds.), *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, 89–155. MIT Press.
- Chomsky, N. (2001). Derivation by phase. In M. Kenstowicz (Ed.), *Ken Hale: A life in language (Current Studies in Linguistics)*, 1–54. MIT Press.
- Chomsky, N. (2004). Beyond explanatory adequacy. In A. Belletti (Ed.), *Structures and beyond: The cartography of syntactic structures*, 3, 104–131. Oxford University Press.

- Chomsky, N. (2007). Approaching UG from below. In U. Sauerland, & H. Gärtner (Eds.). *Interfaces + recursion = Language?: Chomsky's minimalism and the View from syntax-semantics*, 1-31. Walter de Gruyter.
- Chomsky, N. (2008). On phases In R. Freidin, C. Otero, & M.L. Zubizarreta (Eds.). *Foundational issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud*, 133-166. MIT Press.
- Culicover, P. W. (1997). *Principles and parameters: An introduction to syntactic theory*. Oxford University Press.
- Daniel, P. (2019) *Boundaries of Unaccusativity*. Honors Theses, Bucknell University, 487.
- Dickins, J. (2007). *Sudanese Arabic: phonemetics and syllable structure*, 38. Otto Harrassowitz Verlag.
- Embick, D. (2004). Unaccusative syntax and verbal alternations. In A. Alexiadou, E. Anagnostopoulou, & M. Everaert (Eds.). *In The Unaccusativity Puzzle: Exploration of the Syntax-Lexicon Interface*, 137–158. Oxford University Press.
- Hernández, R. (2019). The Role of P in Spanish Unaccusative Constructions. In M. Cabrera, & J. Camacho (Eds.). *Exploring Interfaces*, 63-84. Cambridge University Press.
- Iatridou, S., Anagnostopoulou, E., & Izvorski, R. (2001). Observations about the form and meaning of the perfect. In M. Kenstowicz (Ed.). *Ken Hale: A Life in Language*, 189–238. The MIT Press.
- Ilc, G., & Marvin, T. (2016). Unaccusatives in Slovenian from a cross-linguistic perspective. *Formal Studies in Slovenian Syntax: In honor of Janez Orešnik*, 236, 145.
- Irwin, P. L. (2012). *Unaccusativity at the Interfaces*. Doctoral dissertation. New York University.
- Jubilado, R. (2021). A Morphosyntactic Analysis of Isamal Ergatives: Movement in Ergative Structures. *Southeastern Philippines Journal of Research and Development*, 26(2), 63-82. <https://doi.org/10.53899/spjrd.v26i2.154>
- Keine, S. (2010). *Case and agreement from Fringe to Core: a minimalist approach*, 536. Walter de Gruyter.
- Larson, R. K. (1988). On the double object construction. *Linguistic inquiry*, 19(3), 335-391.
- Levin, B. and Rappaport Hovav, M. (1995). *Unaccusativity: At the syntax-lexical semantics interface*, 26. MIT press.
- Lyovin, A., Kessler, B., & Leben, W. (2017). *An introduction to the languages of the world*. Oxford University Press.
- Marvin, T. (2003). Past participles in reduced relatives: a cross-linguistic perspective. *Linguistica*, 43(1), 141-160.
- Mitrovic, M. (2016). A relative syntax and semantics for Slovenian. *Formal studies in Slovenian syntax: In*

honor of Janez Orešnik, 221-252.

- Müller, G. (2018). Can unaccusative verbs undergo passivization in German? *Of Trees and Birds*, 135.
- Nishihara, T. (1999). *On Locative Inversion and There-Construction*, *English Linguistics*, 16, 381–404.
- Nishihara, T. (2005). DPs in Right Peripheral Positions in English, Doctoral dissertation. University of Tsukuba.
- Perlmutter, D. M. (1978, September). Impersonal passives and the unaccusative hypothesis. *In annual meeting of the Berkeley Linguistics Society*, 4, 157-190.
- Perlmutter, D. M. (1989). *Multiattachment and the unaccusative hypothesis: the perfect auxiliary in Italian*. *Probus*, 1(1), 63-120.
- Pesetsky, D. M. (1996). Zero syntax: Experiencers and cascades (No. 27). MIT Press.
- Pereltsvaig, A. (2017). *Languages of the world: An introduction*. Cambridge University Press.
- Radford, A. (2009a). *An introduction to English sentence structure*. Cambridge university press.
- Radford, A. (2009b). *Analysing English sentences: A minimalist approach*. Cambridge University Press.
- Richards, N.W., (1997). What moves where when in which languages? Ph.D dissertation. MIT.
- Schäfer, F. (2008). The syntax of (anti-) causatives: External arguments in change-of-state contexts, 126. John Benjamins Publishing.
- Sigurðsson, H. Á. (2000). The locus of case and agreement. *Working papers in Scandinavian syntax*, 65, 65-108.
- Sultan, F. M. M., Taha, M., & Al-Qumairi, S. (2018). The Syntax of Applicative Constructions in Spoken Sudanese Arabic. *3L: Southeast Asian Journal of English Language Studies*, 24(2), 143-153.
- Taha, M. (2016). *The Morphosyntax of Sudanese Arabic Verbs in the Minimalist Program*. Ph.D Dissertation. The National University of Malaysia.
- Zeijlstra, H. (2010). There is only one way to agree. Talk given at GLOW 33, Wroclaw, Poland.
- Zhang, X. (2018). A Contrastive Study of Resultative Constructions in English, Japanese and Chinese. *Journal of Language Teaching and Research*, 9(2), 287-294.