The Syntax of Verb Phrase Ellipsis in English and Arabic:
A Phase Approach

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Keywords:	**Abstract**:
Syntax, VP, Ellipsis, English, Arabic, Licensing, Phase Approach	This study aims to analyze the syntax of Verb Phrase Ellipsis (VPE henceforth) in English and Arabic employing a phase approach which has attracted the interest of many linguists and researchers since 2000 up to now (Winkler, 2005; Gengel 2007, 2009; Aelbrecht, 2010, 2015, 2016; Rouveret, 2012; and Bošković, 2014, etc.). The descriptive-analytic research design is used. The data are qualitatively analyzed employing the phase approach. The phase head affects and controls VPE licensing in both languages, English and Arabic. The syntactic environments in which VPE is licensed lead to similarities and differences between the two languages. In English, *but* merges under & of the maximal projection &P, whereas in Arabic it merges under the head C of the maximal projection CP. This study would be a cornerstone of further studies on the syntactic study of VPE, specially employing the phase approach.

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الحذف النحوي للعبارة الفعلية في اللغتين الإنجليزية والعربية: مناهج الرحيلة

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النحوي، العبارة الفعلية، الحذف، الإنجليزية، العربية، مناهج الرحيلة،	يهدف هذا البحث إلى دراسة الحذف النحوي للعبارة الفعلية في اللغتين الانجليزية والعربية متبعاً منهاج الرحيلة الذي كان محل اهتمام العديد من علماء اللغة والباحثين منذ عام 2000 وحتى الآن (وينكلر، 2005؛ جينجل 2007، 2009؛ ألبرشــت، 2010)، 2015، 2016؛ روفيريت، 2012؛ وبوســكوفيتش، 2014؛ وآخرين). حيث أتبع هذا البحث المنهج الوصــفي التحليلي. وقد تم تحليل الجمل في اللغتين الانجليزية والعربية بطريقة نوعية بتطبيق منهاج الرحيلة وهو عبارة عن أحدث منهاج في النظرية الادنوية. رأس الرحيلـة يؤثر ويتحكم في ترخيص حـذف العبارة الفعليـة في اللغتين. بتطبيق منهاج الرحيلة وجد الباحث بعض أوجه التشــابه والاختلاف في البيئـات النحويـة التي يتم فيهـا ترخيص حـذف العبارة الفعليـة في اللغتين الانجليزية والعربية. في اللغة الإنجليزية، (لكن) تدخل مزجاً تحت الرأس (&) في الانشــطار الكلي P& بينما في اللغة العربية (لكن) تدخل مزجاً تحت الرأس C في الانشطار الكلي CP، ويوصي الباحث مواصلة البحث والتقصي لهذه الظاهرة النحوية حيث تعتبر أساس لدراسات قادمة وخاصةً بإتباع منهاج الرحيلة.

1. Introduction

Human language has many properties; one of them is ellipsis that distinguishes it from all other systems of communication. Particularly speaking, linguists see that language is a precise and concise system by which humans do multiple functions, one of such is communication. Humans always try their best to express themselves or explain things around them by different ways without saying much so that they avoid redundancy. This consolidates that the phenomenon of ellipsis is one of the properties of language. Moreover, ellipsis takes place in construction for the sake of good style, cohesion, economy, and rhetoric, so it is considered a significant phenomenon in written and spoken form. Ellipsis, in general, refers to the part of a phrase that is elided for some reasons with respect to particular rules.

VPE is the name given to instances of anaphora in which a missing predicate is able to find an antecedent in the surrounding discourse (Johnson, 2001). Gengel (2013, p. 2) states that "VP Ellipsis in English is characterized by the presence of a finite auxiliary in front of the elided part of the structure." According to van Craenenbroeck (2017, p. 1), "the term VPE refers to the phenomenon whereby the main predicate of a clause—typically in combination with its internal arguments—is missing." Most of the definitions in literature of VPE share the idea that the verb and its complement are elided. The following examples show how VPE works.

1) a. Ali met Sam at the airport and Husam did [e] too.

   b. Ali met Sam at the airport although Husam didn't [e].

The examples (1) show that the verb and everything following it, except the word too, are elided. It is determined that, from such examples, VPE in English is always preceded by an auxiliary or modal verb. In (1a), the ellipsis site is immediately preceded by the auxiliary *'did'* and end with the emphatic marker 'too' while in (1b) the emphatic marker 'too' is not there. Gengel (2013) proposes that VPE often is assumed to involve special marking, which is encoded with the emphatic marker 'too' or negation.

In Arabic, 'kaðalik' plays a special emphatic marker. Auxiliaries are not widely used in Arabic, because the verb carries the case of tense, gender, number, etc. most of the time. Thus, in Arabic, gapping and stripping appear more than VPE does, but that does not mean Arabic does not have VPE. Zabarah (2012, p. 115) states that "contemporary Arab Grammarians are in agreement that verbs known as ka:na and its sisters are considered to be أفعال ناقصة ʾafˁāl nāqiṣa 'incomplete verbs,' because they do not indicate all elements of أفعال تامة ʾafˁāl tāmma 'complete verbs'." Thus, *ka:na* and its sisters and *Ka:da* and its sisters play a crucial role in VPE licensing in Arabic. The following examples show how VPE takes place in Arabic. In example (2a), VPE does not require a special emphatic marker because negation is sufficient while in example (2b) VPE requires an emphatic marker 'kaðalik'.

2) a. ʕumar-un ka:na jaqraʔ-u ruwajat-an la:kina hind-an lam takun ~~taqraʔ-u ruwaja:t-an.~~

Omar-NOM was-3sg.mas reading-3sg.mas a novel-Acc, but Hind-Acc was3sgfem not-Neg ~~reading a novel~~.

"Omar was reading a novel, but Hind was not ~~reading a novel~~."

b. ʕumar-un ka:na jaqraʔ-u ruwajat-an wa hind-un ka:nat ~~taqrau ruwaja:t-an~~ kaðalik.

Omar-NOM was-3sg.mas reading-3sg.mas a novel Acc and hind-un-NOM was-3sgfem

"Omar was reading a novel, and Hind was ~~reading a novel~~ too."

2. Literature Review

The term Phase Theory refers to a set of theoretical innovations in post-2000 minimalism (Chomsky 2000, 2001, 2004, 2007, 2008, 2013). In Citko's (2014, p. 1) words "the term first appeared in Chomsky's (2000) 'Minimalist Inquiries', where phases

(to be more specific, lexical subarrays associated with phases) were introduced as a solution to a problem arising from the Merge over Move (MOM) principle." Chomsky (1995, 2000, 2001) introduces four syntactic operations, Select, Merge, Agree, and Move, that control the derivation. According to Chomsky (2000) a sentence is built up in phases and split up into different meaningful chunks and then sent to LF and PF where they become inaccessible to operations in narrow syntax. Chomsky (2000, 2001, 2008) proposes that a clause consists of several derivational domains, headed by certain heads, which are called phase heads. After a phase head is merged, it sends its complement –the phasal domain– off to PF. At that point, the domain becomes inaccessible for narrow syntax.

The absence of linguistic material in the pronunciation has made generative grammarians see ellipsis differently and a variety of accounts have been developed in order to explain this phenomenon. Winkler (2005) argues that the very dominant approaches and accounts are non-structural approaches, LF copying/null pro-form approaches, PF-deletion accounts. Recently, phasehood account is used by many linguists such as Gengel (2007), Gallego (2010), Rouveret (2012), Bošković, (2014), etc

There are many definitions for the phenomenon of ellipsis in literature, the majority, if not all, share the idea that something is missing from the context. Winkler (2005, p. 10) states that "the term ellipsis, from Greek elleipsis, most generally, refers to the omission of linguistic material, structure and sound." Aelbrecht (2010, p. 1) defines ellipsis as "the omission of elements that are inferable from the context and thus constitutes a mismatch between sound and meaning. When one utters an elliptical sentence, its interpretation is richer than what is actually pronounced. " According to Gengel (2007, p. 29), "VP Ellipsis in English is characterized by having a finite auxiliary in front of the elided part of the structure.

Moreover, it can be constructed backwards, with the ellipsis site in the first part of the sentence."

In this current study, VPE in English and Arabic is analyzed employing the phase approach.

Concerning the related previous studies of VPE in English and Arabic, several studies are conducted using other approaches such as non-structural approaches (Ginzburg & Sag 2000; Culicover & Jackendoff 2005), LF copying/null pro-form approaches (Fiengo & May 1994, Chung et al. 1995, Wilder 1997, Beavers & Sag 2004 and Fortin 2007), and PF-deletion accounts (Chomsky & Lasnik, 1993; Fox, 2000; Johnson, 2001; Merchant, 2002, etc.). To the best of the researcher knowledge, the studies that tackle VPE employing the phase approach are conducted in some languages such as English, Welsh, Portuguese, Polish, Serbo-Croatian, Japanese, Turkish, etc. but not in Arabic. Based on Winkler's (2005) arguments and many other linguists, such as Gengel (2007, 2009), Aelbrecht (2010), Rouveret (2012), and Bošković (2014), phases play a crucial role in accounting for the phenomena of ellipsis. Thus, the study at hand adopts the phase approach to investigate the syntax of VPE in Arabic in a comparison to what is done in English VPE.

3. The syntax of VPE: A Phase Approach

The descriptive-analytic research design is used. The collected data of the syntactic structure of VPE in English and Arabic are treated analytically employing the phase approach (Chomsky 2000, 2004, 2008, 2013). VPE in English and Arabic can be successfully linked with phases because phases and ellipsis affect the spell-out.

It is argued that VPE is applicable in English only when T is filled with an auxiliary, such as *be, is, are, was, were, or have*; and the dummy *'do'*, infinitive *'to'*, or a modal (Lobeck, 1995; Johnson, 2001, 2004; Agbayani & Zoerner, 2004). The example (3) shows that T is filled with the auxiliary (did) and that allows the VP to be elided. This

process is not simply as it looks rather it passes through many processes.

From the analyses discussed in the literature, the present study aims to investigate the syntax of VPE in English and Arabic employing the phase approach. Following Chomsky's (2008) 'On Phases', the researcher proposes that in Arabic the phase head v can agree with its complement VP since VP is not spelled-out until C is merged. According to Chomsky (2008), C is the phase head which is the source of all features that motivate the Agree relation to operate in the syntax. Since all features (i.e. ϕ-features and Edge feature) are trigger by C, T inherits these features from C, being the phase head.

3) Ali did not study syntax, but Ahmed did [~~study syntax~~].
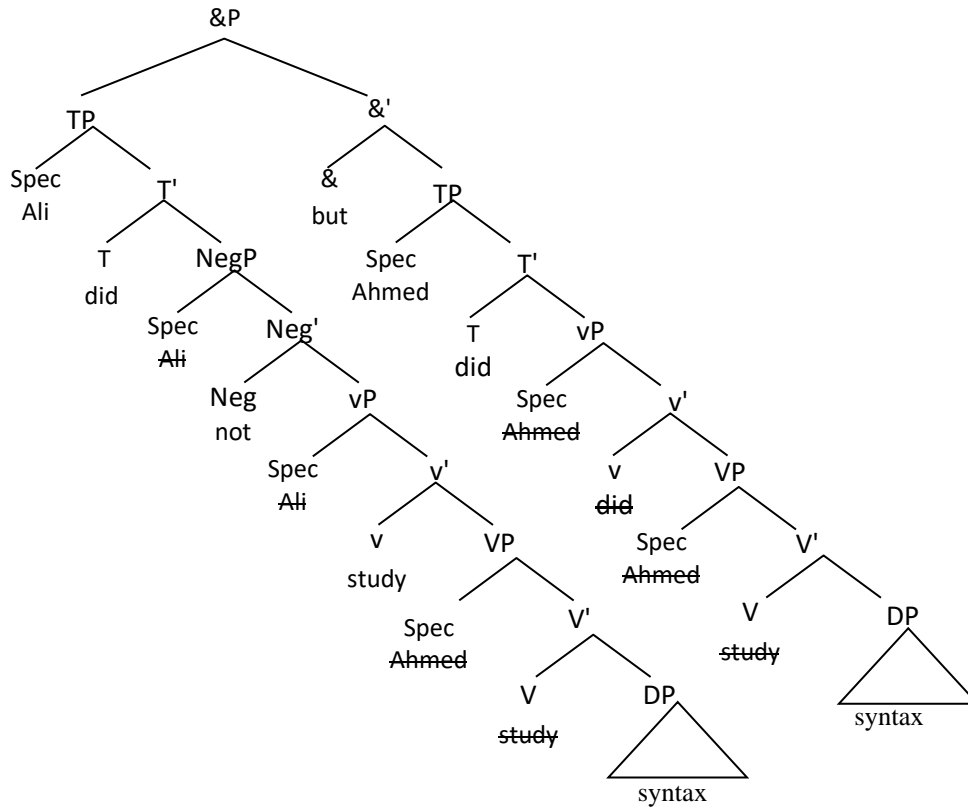
Moreover, Aelbrecht (2010) argues that each head is a feature bundle with categorial features, inflectional features and selectional features. The categorial features specify the category of a lexical entry. The inflectional features can be uninterpretable, in which case they have to be checked against the category features of another head. The selectional features encode what categories this head takes as its complement.

Aelbrecht (2010, p. 96) states that "there is an ellipsis feature (bundle) in the lexicon for each type of elliptical construction. This [E] is optional and is only compatible with certain heads, a property that is encoded by its selectional features." Moreover, she argues that [E] also has an uninterpretable inflectional feature that corresponds to the category feature of a certain head, the ellipsis licensor. Because of this, uninterpretable feature, [E]'s occurrence in a sentence – and hence the ellipsis it causes – is only allowed if it can establish a checking relation with the licensor. Consider the following Arabic example (4).

4) lam taʕud hind-un tadrus-u fji ʒa:miʕat-i ʔib la:kina zajid-an la:za:la ~~jadrus-u fji ʒa:miʕat-i ʔib~~

Not-Neg is-3sg.fem hind-Nom study-3sg.femat university Ibb-Gen but Zayd-Acc still studying-3sg.mas at university Ibb-Gen

"Hind is not studying at Ibb University, but Zayd is still studying at Ibb University."
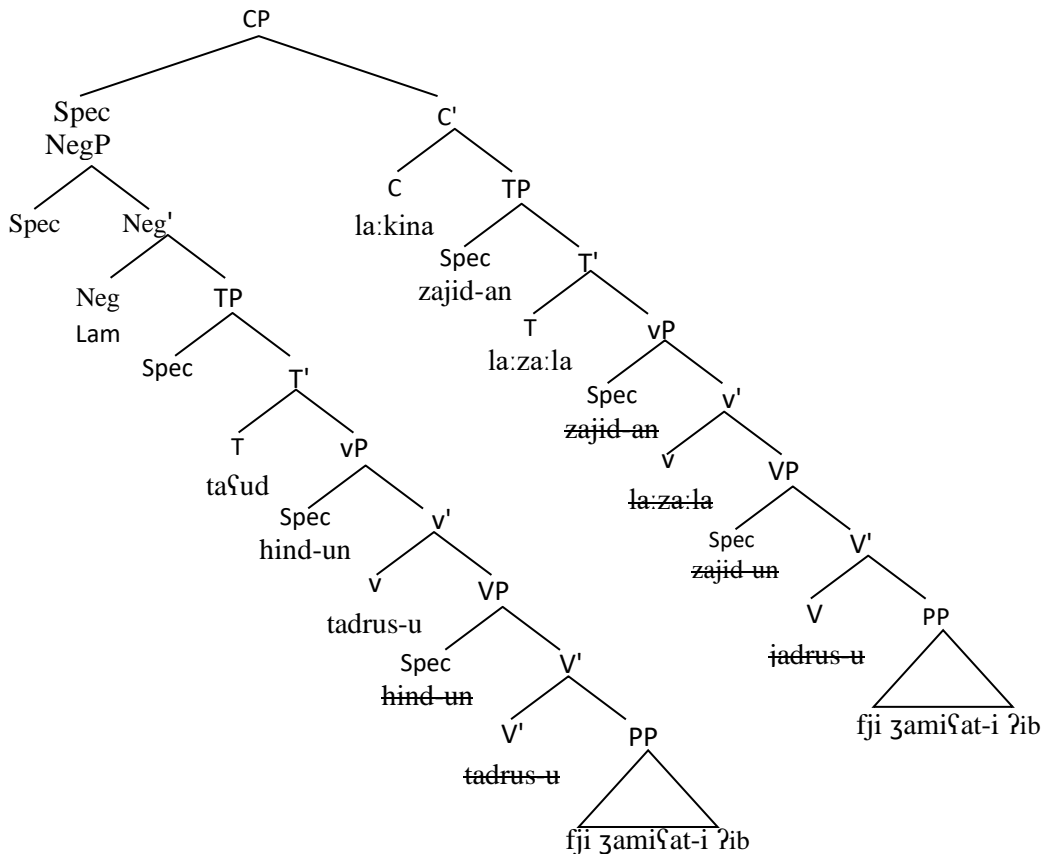
It can be noticed that the head C 'laːkina', in Arabic, establishes a checking relation with the head v 'laːzaːla', which is the licensor in example (4). The head v searches for a matching head it probes down and agrees with the object, the goal. The next step is that the 'laːzaːla' moves to the functional head T, which is the probe. T has already inherited the φ-features from the functional head C (the phase head) of CP since it is the matching goal it c-commands. As a result, T (the probe) agrees with the subject (the goal) in Spec-vP, and attracts it to raise to Spec-TP to get activated with all features valued.

It is known that in Arabic syntax 'kaːna' assigns nominative case to its subject, but in example (4) the spec-TP is assigned accusative case. This is due the head 'laːkina' which assigns accusative case to its subject.

Thus, T (the probe) agrees with the subject (the goal) in Spec-vP, and attracts it to raise to Spec-TP to get activated with all features valued. Thus, the incomplete verb 'laːzaːla', which denotes the continuity of the action, is the licensor of the elided VP. Particularly speaking, when the T 'laːzaːla' is merged and established an Agree relation between the licensing head and an [E]-feature, the [E]-feature is checked by the category feature on the licensor as soon as the licensing head occurs in 'T'. At that point, ellipsis occurs and the complement of phase 'VP' is inaccessible to operations in the narrow syntax.

3.1. Licensing of VPE in English
Over the years, various authors propose that ellipsis sites can be reduced to phasal complements (Gengel 2007, 2009, Rouveret 2012). Gengel (2007) proposes that ellipsis

licensing is nothing but a phase-based spell-out. She assumes that the syntactic derivation proceeds in phases and that at every phase level the complement of the phase head is sent to Spell-Out. Assuming that one of the possible outcomes of this transfer operation is the non-pronunciation of the phase head's complement, VPE can be analyzed as the spelling out of the complement of (the phase head) v. Under this approach, ellipsis licensors are nothing but phase heads (Cited in van Craenenbroeck, 2017, p. 21).

In the following examples (a & b) in (5), what is elided in each case is the complement of a phase head, the complement of C in sluicing, the complement of v in VPE and the complement of D in nominal ellipsis. The idea that ellipsis licensors are nothing but phase heads, as it is presented in the following examples, faces some arguments, restrictions, and modifications as it is in (Aelbrecht, 2010).

5)   a. A parrot flew somewhere but I don't know where [CP C [TP Δ]].

b. A macaw ate a nut and a cockatoo did [vP v [VP Δ]], too.

c. Parrots like Randy's biscuits but they prefer [DP Barbara's D [NP Δ]].

(Citko, 2014, p. 64)

Rouveret (2012) argues that in English VPE, all the functional/ semi-lexical verbal elements, including modals and auxiliaries, first merged at the finite v-level, and only those elements, raise to the inflectional domain. Then the licensing verbal head raises to Infl during the second phase. He starts out from a distinctly non-English perspective on VPE, focusing mainly on Welsh and Portuguese (or more generally, V-to-I-raising languages). He argues that in some languages, the tense feature is valued at the v level, whereas for others it is valued at the T level. Thus, he proposes the following licensing conditions on VPE to capture cross-linguistic variation with respect to VPE:

Licensing condition on VPE

VPE is available in a given structure if, and only if, v's uninterpretable [tense] feature is valued at the v-level.

(Rouveret, 2012, p. 899)

Licensing Condition on Ellipsis

Only phase heads can license PF-deletion of their complement.

(Rouveret, 2012, p. 913)

Ellipsis Domain

The domain of ellipsis coincides with the Spell-Out Domain of a phase head.

(Rouveret, 2012, p. 913)

According to Rouveret (2012), VPE is licensed by a phasal v-head. He argues that analyzing VPE with relation to phases makes precise prediction concerning the ellipsis behavior of complex verbal construction across languages. Rouveret (2012) tackles a complex VPE example in English and argues that only the complement of the phase head can be deleted. He assumes that the verbs, as in example (6) below, are combined with inflectional features derivationally, and the valuation of unvalued feature on functional heads can be achieved in one of two ways, either via merge or via Probe-Goal Agree relation. When the unvalued feature is valued, the verb or auxiliary is supplied with an affix (which can be a silent morpheme). In example (6), the functional head is inflectional v in each case: v can be [voice] v and be pronounced as -ed/ -en if its value is [passive]; v can be [aspect] v and be pronounced as -ed/ -en if its value is [perfect] and as -ing if its value is [progressive]. According to Rouveret (2012), the inflectional features [aspect], [voice], [tense] count as non-distinct from one another in the relevant sense and behave as if they all were instances of [tense]. In this case, VPE is available only when the verbal complex is finite (or infinitival). The complement of some inflectional v featurally non-distinct from [tense] v can be marked as a potential target for deletion if v's inflectional feature is valued.

6) John may have been arrested

a.* and Paul may ~~have been arrested too.~~

b. and Paul may have ~~been arrested too.~~

c. and Paul may have been ~~arrested too.~~

(Rouveret, 2012, p. 952)

In recent years, Bošković (2014) has brought an issue to the forefront of linguistic theorizing, by putting forward a very specific proposal in which both phasal complements and entire phases can undergo ellipsis, but no other constituents can. Bošković (2014) has sparked an interesting debate regarding the extent to which ellipsis can be used to detect phasehood: exactly how tight is the relationship between phases and ellipsis? He argues that ellipsis is phase-governed, i.e. that it is constrained by phases. More precisely, he argues that only phases and complements of phase heads can be elided, which gives us a rather constrained theory of ellipsis. As noted by Rouveret (2012), the theory of phases enables us to privilege only two domains for ellipsis: the phase itself and the complement of a phase head (i.e. the spell-out domain).

Bošković (2014) argues that the VPE constructions require that complements of phasal heads as well as phases themselves be in principle elidable. He tackles complex VPE in English to prove his viewpoint. Moreover, he gives a plausible answer for the data that had been noted by Sag (1976), presented here with the relevant elided part indicated.

7) a. *Betsy must have been being hassled by the police, and Peter must ~~have been being hassled by the police~~.

b. Betsy must have been being hassled by the police, and Peter must have ~~been being hassled by the police~~.

c. Betsy must have been being hassled by the police, and Peter must have been ~~being hassled by the police~~.

d. *Betsy must have been being hassled by the police, and Peter must have been being ~~hassled by the police~~.

(Bošković, 2014, p. 22)

Bošković's (2014) proposes that phases and phasal complements are indeed the only projections that can undergo ellipsis; phrases that are neither phases nor complements of phasal heads cannot undergo ellipsis. His arguments are tested with respect to ellipsis in the middle/aspectual field of English. Moreover, he argues that in this domain English avails itself of all the options for ellipsis that are in principle allowed by the grammar: ellipsis of both phases and phasal complements is always possible.

8) [TP Peter$_i$ must [VPf1 have [AspectP1 bej+en [VPf2 tj [AspectP2 ing [VPf3 be [VP hassled t$_i$ by the police]]]]]]].

(Bošković, 2014, p. 26)

Based on (8), Bošković (2014) argues that only phases and phasal complements can be elided and that proves the possibilities for ellipsis in the middle field. Since VPf1 is neither the complement of a phase head nor a phase itself VPf1 cannot be elided. This accounts for the unacceptability of (7a). AspectP1, on the other hand, can be elided since AspectP1 is a phase. This ellipsis option yields the sequence in (7b), accounting for the grammaticality of this construction. Since VPf2 is a complement of a phase head VPf2 can also be elided, which accounts for the grammaticality of (7c). It is obvious now that nothing below VPf2 can be elided. AspectP2, VPf3, and VP are neither phases nor complements of phasal heads, hence they cannot undergo ellipsis. Thus the justification for the ungrammaticality of the remaining example in (7d) is that neither [VP hassled] a phase nor a complement of phase, so it cannot undergo ellipsis.

In example (9) below, Bošković (2014) accounts for the impossibility of the verb being stranded under ellipsis by assuming that the verb does not move to *v* hence it cannot survive ellipsis of the VP complement of the phasal head v. Therefore, the example (9) can then involve VP ellipsis. According to Bošković (2014), V-to-v movement in English does not take place when ellipsis occurs.

9) John lives in London, and Peter does [VP live in London]

Moreover, Aelbrecht (2016, p.2) states that "the temptation of linking up ellipsis and phases lies in the fact that both ellipsis and phase theory affect the spell-out of certain domains and rely on the merger or presence of a specific trigger". She proposes further analyses for ellipsis with the basis of Phase Theory. Aelbrecht (2016) agrees that ellipsis and phases target the same chunk, but the

trigger can differ. She argues that it is not only the next phase head that sends off the lower phase to PF, but in some ellipsis it is a non-phase head that establishes the Agree relationship and marks the phase for non-pronunciation. She notes that the feature checked in ellipsis is not necessarily an [E]-feature specific for ellipsis.

10)

English VPE
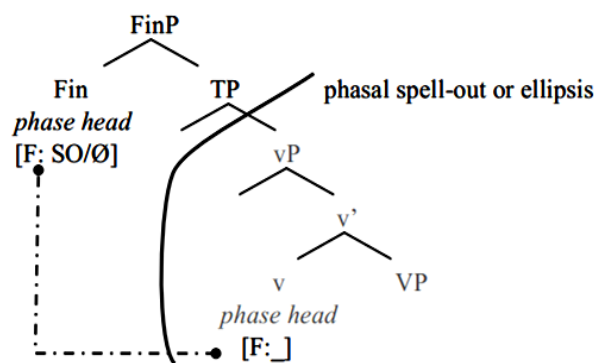
(Aelbrecht , 2016, p.13)

Aelbrecht (2016) applies her proposal to VPE in English and supposes that VPE is licensed by the Fin head, which is the phase head. The feature F on v is valued by Fin, as it is schematized above, but the value is 'non-spell-out/ellipsis'. The same chunk of structure is indeed sent off to PF by the same trigger in ellipsis and non-ellipsis, and it can either be pronounced or not pronounced (in the presence of a salient antecedent).

3.2. Licensing of VPE in Arabic

Ellipsis has often been considered a phenomenon that needs a certain type of licensing. For phrasal ellipses such as VPE, sluicing, and NP-ellipsis the licensor has often been identified in specific syntactic configurations, notably functional heads (Lobeck, 1995; Merchant, 2004; Winkler, 2005; Gengel, 2009; Bošković', 2014). According to Bošković's (2014) proposal, phases and phasal complements are indeed the only projections that can undergo ellipsis; phrases that are neither phases nor

complements of phasal heads cannot undergo ellipsis. He argues that VPE is phase-constrained; furthermore, these constructions require that complements of phasal heads as well as phases themselves be in principle elided. Thus, the researcher exams Arabic clauses employing the phase approach to find out the similarities and differences between their syntactic structure of English VPE.

The Arabic example (11) below passes through many processes. Starting with negation, which witnesses many arguments in Arabic, is it lower T' or higher TP? Negation is taken in consideration here, because it plays a role in the licensing of VPE. Soltan (2007) presents a plausible assumption, that is Neg in SA may enter the derivation with an uninterpretable Tense feature [uT] or uninterpretable φ-features [uφ], each of which requires licensing in the syntax under standard minimalist assumptions. He argues that tense appears on the negation particle as a reflex of the valuation of an uninterpretable feature on

Neg, and the verb has to appear in the imperfective non-tensed form since Neg realizes the tense feature. It is more reasonable that Neg takes place higher TP than lower TP, because in Arabic Neg occurs before the TP, as it is illustrated in the diagram below.

11) lam takun hind-un tadrus-u fji ʒamiʕat-i ʔib la:kina zajid-an ka:na ~~jadrusu fji~~ ʒamiʕat-i ʔib.

Not-Neg was-3sg.fem hind-Nom study-3sg.fem in University Ibb-Gen but Zayd-Nom was-3Sg.mas study-3sg.mas in University Ibb-GEN.

"Hind was not studying in Ibb University, but Zayd was studying in Ibb University."
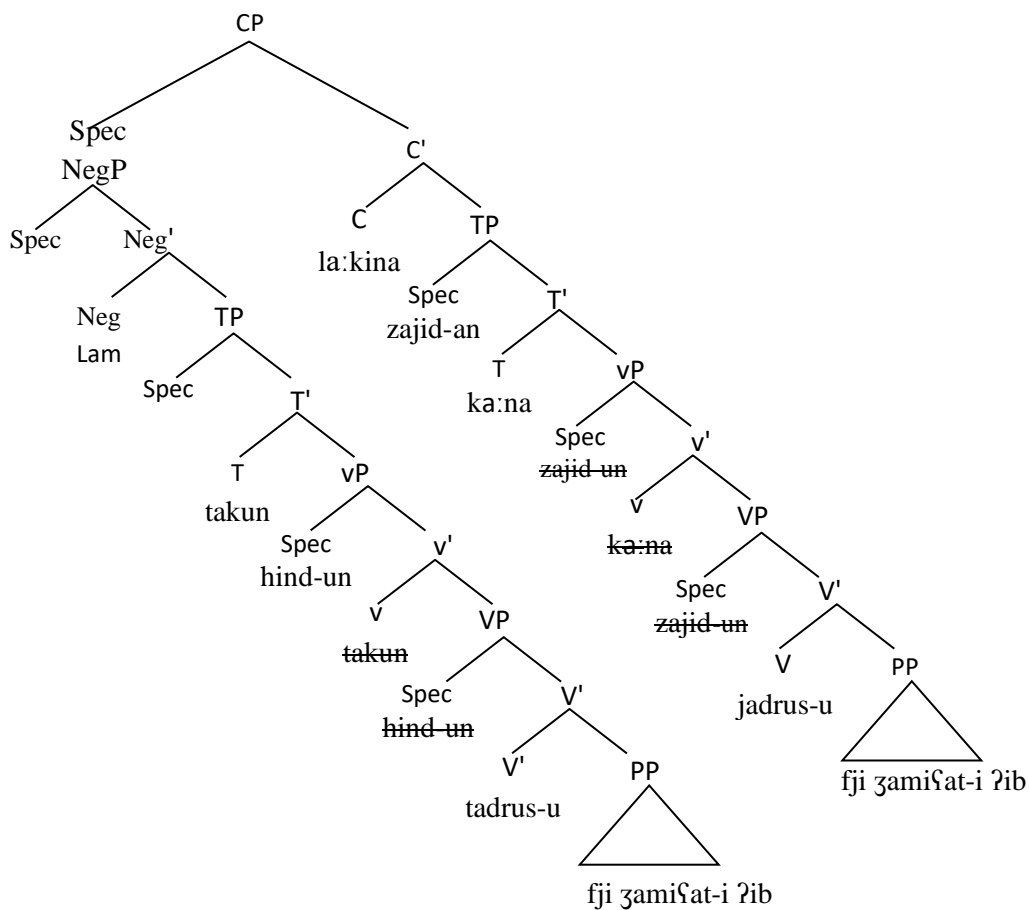
The above example (11) meets the two conditions of ellipsis: the content of the elided category must be recoverable, and language must license ellipsis in a given configuration. According to the former, there is no ambiguity or distortion, and the meaning is recovered from the context. Regarding the latter, Chomsky (2008) proposes that the phase head is responsible for initiating syntactic operations. He sees that uninterpretable features are valued and deleted at the phase level. Chomsky postulates that CP and vP are phases, whereas TP is not, because T lacks φ-features and tense feature in the lexicon. TP inherits features from the head C of CP. The relation between the v head and the V of its complements resembles the relation between the C head and T. Based on Chomsky's (2008) ʹOn Phasesʹ, C is the phase head which is the source of all features that motivate the Agree relation to operate in the syntax. Since C has all features (i.e. φ-features and Edge feature), T inherits these features from C,

being the phase head. Chomsky (2008, p. 144) states that "If C-T agrees with the goal DP, the latter can remain in-situ under long-distance Agree, with all uninterpretable features valued; or it can raise as far as SPEC-TP, at which point it is inactivated, with all features valued, and cannot raise further to SPEC-CP." Thus, it can be seen that the head v searches for a matching head it probes down and agrees with the object, the goal. The next step is that the verb moves to the functional head T, which is the probe. The T has already inherited ϕ-features from the functional head C (the phase head) of CP since it is the matching goal it c-commands. As a result, T (the probe) agrees with the subject (the goal) in Spec-vP, and attracts it to raise to Spec-TP to get activated with all features valued. For explaining the mechanism in a recognizable manner, Aelbrecht (2016, p. 11) states that

   a. Each phase head bears a phase-specific feature F. Once this feature is valued, the phase is sent to PF (following Svenonius 2004).

   b. F can be valued by the higher phase head, for "spell-out". However, phase heads can also act as ellipsis licensors, in which case the value they assign to F is "ellipsis".

   c. Only phase heads can assign value "spell-out", but some ellipses are not licensed by a phase head, but by a non-phase head: this head can value F as well, but only for "ellipsis".

In the above-mentioned example (11), the highest head has to establish a relationship with the highest head of the chunk below it. Chomsky (2008) argues that the phase heads C and v have two types of features: Agree features (ϕ-features) and the Edge features, beside a tense feature on C. Being the heads of complements, T and V inherit the Agree features from C and v. The lower phase v merges with the external argument VP. Thus the phase head v enters into an agree relation with the internal argument of V and transmits its features to it. v provides agentive semantics for agentive constructions and

escape hatch out of the vP (Chomsky, 2008). According to Phase Impenetrability Condition (PIC$_2$), merger of a phase head triggers the complement of a lower phase head to be sent to PF. Thus, the deletion of VP is achieved when a phasal (non-)spell-out is triggered by the valuation of a phase-specific feature by the higher phase head (which thus acts as the ellipsis licensor). Moreover, the example (11) agrees with Bošković's (2014) proposal, phases and phasal complements are indeed the only projections that can undergo ellipsis.

Again, in the above example (11), it is not easy to say that 'ka:na' alone plays a crucial role for VPE to take place, because 'la:kina', which is one of ʔinna sisters, does not function as 'but' functions in English. Moreover, in Arabic, 'la:kina' requires more than 'wa' requires. The head C 'la:kina' essentially requires a clause (NegP+TP or TP) whereas 'wa' may satisfy with FocP, which may include only a subject. The head C 'la:kina' dominates both, its subject and predicate. What is determined here is that the 'la:kina' may affect the structure of VPE. With the 'la:kina', the incomplete verbs ('ka:na' and its sisters) play a very important role for the licensing of VPE.

Moreover, in Arabic, the approximate verbs, such as ka:da, ʔawʃaka, badaʔa, ʃaraʕa, etc. play a crucial role in VPE. What the following example shows is that the approximate verbs function as the licensors of VPE. According to Sag (1976), Williams (1977b), Zagona (1982, 1988a, 1988b), Martin (1992, 1996), Lobeck (1993, 1995) and Johnson (2001), VPE is only allowed when there is a T head containing lexical material. What the following example denotes is that the T must be filled for VPE to take place.

12) zajid-un ʔanh-a waʒib-a-hu wa ʔawʃakat hind-un ~~tunhi waʒiba ha.~~

Zayd-Nom finished-3sg.mas his-homework-Acc and about to-3sg.fem Hind-Nom finish-3sg.fem her-homework-Acc

Zayd finished his homework and Hind is about
to ~~finish her homework.~~
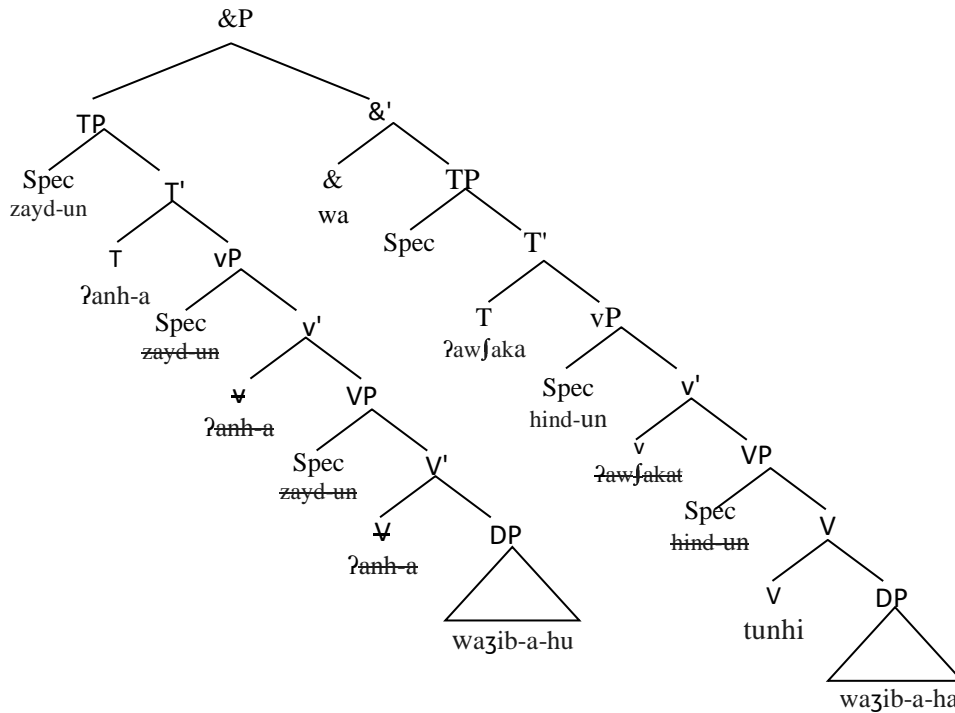
Aelbrecht (2010, p. 166) states that "English main verbs do not undergo verb movement to T, unlike French, German or Dutch main verbs … Consequently, VPE without a modal or aspectual auxiliary would leave the inflectional morphemes in T without a host." This proves that the approximate verb *ʔawʃakat*, in the above example (12), is compulsory for VPE to take place. If the approximate verb *ʔawʃakat* is not presented, the main verb moves to T to check the EPP. In this case, the main verb is out of the VPE site, so it cannot be elided.

Moreover, in the above example (12), the deletion takes place on VP, which is a complement of phase. Aelbrecht (2016) supports the idea that ellipsis and phases target the same chunk of structure, namely entire phase, and that the mechanism involved in both cases is an Agree relationship. According to Aelbrecht (2016), the phase head v acts as a licensor: the feature F in v is valued by the T head ʔawʃakat, but the value is non-spell-out. Thus, VP, the complement of the phase vP is left unpronounced. When the phase head v is merged, VP is sent to PF to be non-spell-out after it has met the recoverability requirement.

4. Conclusion

In comparison with the English VPE where phasehood plays an essential role, the syntactic analysis of the Arabic VPE structure comes out with the following findings:

1. The syntactic environments in which VPE is licensed have similarities and differences in English and Arabic employing the phase approach.
2. Both languages have licensors, which allow VPE to be elided.
3. Licensing condition is required in both languages.
4. T should be filled in both languages for VPE to take place.
5. Morphological changes on the verb forms do not affect VPE if syntactic rules and semantic recoverability are respected.

6. The different syntactic environments are affected by negation, auxiliary of tense, voice mismatch.
7. Licensors of VPE in Arabic are not fully similar to those in English.
8. Phases affect VPE in English and Arabic.
9. In English, 'but' is schematized under & of the maximal projection &P whereas in Arabic it is schematized under the head C of the maximal projection CP.
10. The licensor of VPE in English is phase head, a finite or nonfinite auxiliary of tense whereas in Arabic, nonfinite auxiliary of tense does not take place.

References:

1. Aelbrecht, L. (2010). The syntactic licensing of ellipsis (Vol. 149). Amsterdam. John Benjamins Publishing.
2. Aelbrecht, L. (2016). What ellipsis can do for phases and what it can't, but not how. The Linguistic Review, 33(4), 453-482.
3. Agbayani, B., & Zoerner, E. (2004). Gapping, pseudogapping and sideward movement. Studia Linguistica, 58(3), 185-211.
4. Al-Thneibat, A. (2014). Verb Ellipsis in Arabic and English: A Comparative Study. unpublished. http://search.mandumah.com/Record/784284
5. Beavers, J., & Sag, I. A. (2004). Coordinate ellipsis and apparent non-constituent coordination. In Proceedings of the HPSG04 Conference (pp. 48-69). Stanford: CSLI Publications.
6. Bošković, Ž. (2014). Now I'm a phase, now I'm not a phase: On the variability of phases with extraction and ellipsis. Linguistic Inquiry.
7. Chomsky, N. (2000). Minimalist inquiries: The framework. In Martin, R., Michaels, D., Uriagereka, J., & Keyser, S. J. (eds.), Step by step: Essays on minimalist syntax in honor of Howard Lasnik. Cambridge, MA: MIT Press. pp 89-155.
8. Chomsky, N. (2001a). Beyond explanatory adequacy. MIT Occasional Papers in Linguistics (20). pp 1-28.
9. Chomsky, N. (2001b). Derivation by phase. In Kenstowicz, M. (ed.), Ken Hale: A life in language. Cambridge, MA: MIT Press. pp 1-52.
10. Chomsky, N. (2004). Beyond explanatory adequacy. In Belletti, A. (ed.), Structures and beyond: The cartography of syntactic structures. Oxford: Oxford University Press. pp 104-131.
11. Chomsky, N. (2005). Three factors in language design. Linguistic inquiry, 36(1). pp 1-22.
12. Chomsky, N. (2007). Approaching UG from below. In: Sauerland, U. and Gärtner, H. (eds.), Interfaces + recursion = language? Chomsky's minimalism and the view from syntax semantics. Boston: Mouton De Gruyter. pp 1-30.
13. Chomsky, N. (2008). On phases. In: Freidin, R., Otero, C. P. & Zubizarreta, M. L. (eds.), Foundational issues in linguistic theory. Essays in honor of Jean-Roger Vergnaud. Cambridge, MA: MIT Press. pp 133-166.
14. Chomsky, N. (2013). Problems of projection. Lingua, 130. pp 33-49
15. Chomsky, N, & Lasnik, H., (1993). The Theory of Principles and Parameters. In J. Jacobs et al. (eds), Syntax: An International Handbook of Contemporary Research, vol. 1. Berlin: de Gruyter, 506–69.
16. Chung, S., Ladusaw, W. A., & McCloskey, J. (1995). Sluicing and logical form. Natural language semantics, 3, 239-282.
17. Citko, B. (2014). Phase Theory: An introduction. USA: Cambridge University Press.
18. Culicover, P., & Jackendoff, R (2005). Simpler syntax. Oxford: Oxford University Press,.

19. Culicover, P. W., & Winkler, S. (2008). English focus inversion1. Journal of Linguistics, 44(3), 625-658.

20. Fiengo, R., & May, R. (1994). Indices and identity. Cambridge, MA: MIT Press.

21. Gallego, A. (2010). Phase theory. Amsterdam/Philadelphia: John Benjamins.

22. Gengel, K. (2005). Phases and ellipsis. Linguistic Analysis, 35(1), 21-42.

23. Gengel, K. (2007). Focus and ellipsis: A generative analysis of pseudogapping and other elliptical structures.

24. Gengel, K. (2013). Pseudogapping and ellipsis (Vol. 47). OUP Oxford.

25. Ginzburg, J., & Sag, I. (2000). Interrogative investigations. Stanford: CSLI publications.

26. Johnson, K. (2001). What VP ellipsis can do, and what it can't, but not why. The handbook of contemporary syntactic theory, 439-479.

27. Johnson, K. (2004). How to be quiet. In proceedings from the annual meeting of the Chicago Linguistic Society (Vol. 40, No. 2, pp. 1-20). Chicago: Linguistic Society.

28. Lobeck, A. (1993). Strong agreement and identification: evidence from ellipsis in English. Linguistics 31, 777-811.

29. Lobeck, A. (1995). Ellipsis: Functional heads, licensing, and identification. New York: Oxford University Press.

30. Martin, R. (1992). On the distribution and case features of PRO. Ms, University of Connecticut.

31. Martin, R. A. (1996). A minimalist theory of PRO and control. University of Connecticut.

32. Merchant, J. (2002). Swiping in germanic. Studies in comparative Germanic syntax, 295-321. Amsterdam: John Benjamins

33. Merchant, J. (2004). Fragments and ellipsis. Linguistics and Philosophy 27: 661–738.

34. Potsdam, E. (1997). English verbal morphology and VP ellipsis. In North East Linguistics Society (Vol. 27, No. 1, p. 26).

35. Rouveret, A. (2012). VP ellipsis, phases and the syntax of morphology. Natural Language & Linguistic Theory 30, 897-963.

36. Sag, I. (1976). Deletion and logical form (Doctoral dissertation, Massachusetts Institute of Technology).

37. Sag, I. A., & Hankamer, J. (1984). Toward a theory of anaphoric processing. Linguistics and philosophy, 325-345.

38. Soltan, U. (2007). On formal feature licensing in minimalism: Aspects of Standard Arabic morphosyntax (Doctoral dissertation). University of Maryland, College Park.

39. Van Craenenbroeck , J. (2017). VP-ellipsis. The Blackwell companion to syntax. 2nd edition. Hoboken: Wiley-Blackwell. pp 1-35.

40. Wasow, T. (1972). Anaphoric relations in English (Doctoral dissertation). MIT.

41. Wilder, C. (1997). Some properties of ellipsis in coordination. Studies on universal grammar and typological variation, 59, 107.

42. Williams, E. S. (1977). Discourse and logical form. Linguistic inquiry, 101-139.

43. Winkler, S. (2005). Ellipsis and focus in Generative Grammar (Vol. 81). Walter de Gruyter.

44. Zabarah, H. (2012). The notion of Complete and incomplete verbs in early Arabic gramatical theory: ka:na and its sisters. Arabic language and linguistics, 115.

45. Zagona, K. (1982). Government and proper government of verbal projections. PhD dissertation, University of Washington.

46. Zagona, K. (1988a). Proper government of antecedentless VPs in English and

Spanish. Natural Language and Linguistic Theory 6: 95–128.

47. Zagona, K. (1988). Verb phrase syntax: A parametric study of English and Spanish: A parametric study of English and Spanish (Vol. 13). Springer Science & Business Media.