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Topicalization and object drop in Jordanian Arabic

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Abstract

This article investigates the observation that the object of obligatorily transitive verbs in Jordanian Arabic cannot drop in VSO clauses but can in SVO clauses as long as its referent is already mentioned in the previous discourse of an accompanying utterance. When object drop takes place, the subject of the accompanying clause should be a [+definite] or [+specific] element. This article provides an account of this generalization, based on the topic nature of the subject and the object, their structural positions in the high and low peripheries and the effect of relativized minimality in ruling out movement of one over the other.

Keywords: Object drop; word order; the low IP area; Jordanian Arabic; relativized minimality

Résumé

Cet article étudie le constat que l'objet des verbes obligatoirement transitifs en arabe jordanien ne peut pas tomber dans les phrases VSO mais le peut dans les phrases SVO à condition que son référent ait déjà été mentionné dans le discours précédent d'un énoncé d'accompagnement. Lorsque la chute d'objet a lieu, le sujet de la phrase d'accompagnement doit être un élément [+défini] ou [+spécifique]. Cet article rend compte de cette généralisation, en se basant sur la nature topicale du sujet et de l'objet, sur leurs positions structurelles dans les périphéries haute et basse et sur l'effet de la minimalité relativisée qui exclut le mouvement de l'un par rapport à l'autre.

Mots-clés: chute d'objet; ordre des mots; zone IP basse; arabe jordanien; minimalité relativisée

1. Introduction

This article addresses the observation from Jordanian Arabic (JA) that the object of an obligatorily transitive predicate can drop in SVO clauses without the use of an object nominal element on the verb as long as the referent of the dropped object is already men-

tioned or identified in the preceding discourse.¹ Object drop is, on the other hand, totally prohibited in VSO clauses, even if the referent of the object is already mentioned in the previous discourse. Consider the contrast between SVO clauses in (1) and VSO clauses in (2).

- (1) a. ?iz-zalameh yassal (?il-?awa:fi)
 DEF-man wash.PST.3SG.M (DEF-clothes)
 ‘The man washed (the clothes).’
 b. ?il-mudi:r waʔad (?il-muwaðʕʕafi:n)
 DEF-manager promise.PST.3SG.M (DEF-employees)
 ‘The manager promised (the employees).’
 c. ?umm-ij rabb-at (?uwla:d ?uxt-ij)
 mother-my raise.PST-3SG.F (children sister-my)
 ‘My mother raised (my sister’s children).’
 d. ?il-ʕami:deh na:qaf-at (mawðʕu:ʕ ?il-?idʒa:za:t)
 DEF-dean.F discuss.PST-3SG.F (subject DEF-vacations)
 maʕ ?il-dʒami:ʕ
 with DEF-all
 ‘The dean discussed (the subject of vacations) with all (of us).’
- (2) a. yassal ?iz-zalameh *(?il-?awa:fi)
 wash.PST.3SG.M DEF-man DEF-clothes
 ‘The man washed the clothes.’
 b. waʔad ?il-mudi:r *(?il-muwaðʕʕafi:n)
 promise.PST.3SG.M DEF-manager DEF-employees
 ‘The manager promised the employees.’
 c. rabb-at ?umm-ij *(?uwla:d ?uxt-ij)
 mother-my raise.PST-3SG.F children sister-my
 ‘My mother raised my sister’s children.’
 d. na:qaf-at ?il-ʕami:deh *(mawðʕu:ʕ ?il-?idʒa:za:t)
 discuss.PST-3SG.F DEF-dean.F subject DEF-vacations
 maʕ ?il-dʒami:ʕ
 with DEF-all
 ‘The dean discussed the subject of vacations with all (of us).’

This article argues that SVO sentences with an object gap contain an instance of a dropped argument (i.e., an elided object) rather than VP ellipsis. It also provides a syntactic analysis of SVO sentences with an object gap and accounts for the ban on object drop in VSO clauses.

We present the word order patterns of Jordanian Arabic in section 2. In section 3, we discuss in more detail the observation that the object in certain contexts can drop in SVO sentences but not in VSO sentences. We argue that the nature of the elided object

¹All examples provided in this article are from JA unless otherwise specified. Glosses: 1/2/3: 1st/2nd/3rd person; DEF: definite; F: feminine; IMPF: imperfective; M: masculine; PL: plural; PST: past; SG: singular.

can be identified as a familiar topic using Frascarelli and Hinterholz's (2007) terminology. Section 4 presents three pieces of evidence that SVO sentences with an object gap (OG) (SVΔ) contain an instance of a dropped argument rather than VP ellipsis. These tests include the modified Park-Oku test, the non-availability of sloppy interpretations, and the presence of the remnant VP material in their canonical positions. Section 5 introduces our argument that the subject in SVΔ sentences serves as a topical element, situated in the CP zone of the clause (see Rizzi 1997) rather than being located in Spec, TP/Spec,vP. In section 6, we attempt to identify the syntactic positions that are filled with the elided object as well as the thematic subject in SVΔ sentences, proposing that the subject is located in the CP as a topic. Section 7 concludes.

2. Sentence structure of Jordanian Arabic

In Jordanian Arabic (JA), SV(O) is the quantitatively predominant unmarked word order, followed directly by VS(O) (El-Yasin 1985, Al-Shawashreh 2016). Other word orders (VOS, OVS, OSV, and SOV) also occur; however, they are far less frequent (Al-Shawashreh 2016, Jarrah and Abusalim 2021). Consider the following examples representing all word order patterns used in JA (all translations are approximate):

- (3) a. ?iz-zalameh ?iftara: ?it^ʕ-tʕa:wleh (SVO)
 def-man buy.pst.3sg.m def-table
 'The man bought the table.'
- b. ?iftara: ?iz-zalameh ?it^ʕ-tʕa:wleh (VSO)
 buy.pst.3sg.m def-man def-table
 'The man bought the table.'
- c. ?iz-zalameh ?it^ʕ-tʕa:wleh ?iftara:-ha (SOV)
 DEF-man DEF-table buy.PST.3SG.M-it
 'The man, he bought the table.'
- d. ?iftara: ?it^ʕ-tʕa:wleh ?iz-zalameh (VOS)
 buy.PST.3SG.M DEF-table DEF-man
 'The man, he bought the table.'
- e. ?it^ʕ-tʕa:wleh ?iz-zalameh ?iftara:-ha (OSV)
 DEF-table DEF-man buy.PST.3SG.M-it
 'The table, the man bought it.'
- e. ?it^ʕ-tʕa:wleh ?iftara:-ha ?iz-zalameh (OVS)
 DEF-table buy.PST.3SG.M-it DEF-man
 'The table, the man bought it.'

One important feature of JA, as compared to Modern Standard Arabic (MSA), is that it does not display overt case or mood markings on nouns and verbs, respectively (Jarrah and Alshamari 2017, Jarrah 2023). Additionally, JA does not show subject-verb agreement asymmetries, unlike MSA. Verbs in JA express full agreement with their subjects (in person, number, and gender) irrespective of the word order used, as already shown by all examples in (3) above. Note here that JA, like other Arabic

varieties, is a pro-drop language, so an unexpressed pronoun can freely occur with all persons in all tenses (Al-Shawashreh 2016).

Another important feature of JA, as compared to MSA, is that JA freely allows SVO sentences with an indefinite, non-specific subject. For example, the following sentence is grammatical in JA, while its counterpart in MSA would be deemed ungrammatical.

- (4) *zalameh ?iftara: ?it^s-t^a:wleh*
 man buy.pst.3sg.m def-table
 ‘A man bought the table.’

Jarrah and Abusalim (2021) argue that in JA, SVO sentences (unlike VSO) place no restrictions on the form of the subject (along these lines, see also Al-Shawashreh 2016, Jarrah 2019b). Drawing on a two-million-word corpus of naturally occurring data from JA, Jarrah and Abusalim (2021) found that the subject in VSO clauses, unlike SVO clauses, should be either a definite entity or a modified, indefinite entity. Jarrah and Abusalim (2021) proposed that the subject in VSO clauses is a topic or a focus, located in the so-called low IP area (cf. Belletti 2004), while the subject in SVO clauses can be a true subject, located in Spec,TP.

3. Object drop in JA

In this section, we investigate important aspects of the observation that an object can drop in SVO clauses but not in VSO clauses in JA. We discuss the discourse restrictions on object drop, the fact that the object drop is insensitive to the type of the predicate, our assumption that the elided object is a familiar topic, the occurrence of this observation in Najdi Arabic, and the assumption that null objects can be of different species and hence are not amenable to the same syntactic analysis.

3.1. Discourse restrictions on object drop

Although, as we have seen in section 1, the object in SVO clauses in JA can drop, this object drop is restricted, in that the referent of the dropped object must be mentioned (or identified) in the previous discourse. For instance, in the following dialogue, the referent of the dropped object in Speaker A's second utterance (which appears in *italics*) can be identified as ‘our relatives and other people’, who were already mentioned in the previous discourse (i.e., in Speaker B's first utterance).

(5)

Speaker A: ʕurs-ij l-isbu:ʕ ʔil-dʒa:j wa yu:sef
 wedding-my DEF-week DEF-next and Yousef
 ʔistaʔdʒar-l-ij be:t muʔaqqat
 rent.PST.3SG.M-to-me house temporary
 'My wedding (party) is next week, and Yousef rented a temporary house for me.'

Speaker B: ʕazam-tu gara:jib-ku wa l-ʕa:lam
 invite-PST-3PL.M relatives-your and DEF-people
 'Have you invited your relatives and (other) people?'

Speaker A: ʔabu:-ij ʕazam (SV)
 father-my invite.PST.3SG.M
 Literally: 'My father invited.'
 Intended: 'My father invited them.'

Speaker B: tama:m , ʕala:-xe:r ʔinʕa:llah
 alright on-good if.God.willing
 'Alright! May it all be fine!'

By contrast, when the referent of the elided object is not mentioned or identified in the previous discourse, the sentence is ungrammatical. For instance, the understood object *tʕalaba:t* 'applications' in the following example should be mentioned, not elided:

(6)

Speaker A: ʔimba:rih ʔil-mudi:r ʔiftamaʕ fi:hum
 yesterday DEF-principal meet.PST.3SG.M with-them
 'Yesterday, the (school) principal met with them.'

Speaker B: ʔil-murʕid kam:an waqqaʕ $\text{*}(\text{tʕalaba:t})$ l-tʕ-ʕula:b
 DEF-counselor also sign.PST.3SG.M applications to-DEF-students
 'The counselor also signed applications for the students.'

Notice here that if the VSO word order is used in Speaker A's second utterance in the dialogue in (5) above, instead of the SVO word order, the sentence is ungrammatical, as shown in (7):

(7)

Speaker A: ʕurs-ij l-isbu:ʕ ʔil-dʒa:j wa yu:sef
 wedding-my DEF-week DEF-next and Yousef
 ʔistaʔdʒar-l-ij be:t muʔaqqat
 rent.PST.3SG.M-to-me house temporary
 'My wedding (party) is next week, and Yousef rented a temporary house for me.'

Speaker B: ʕazam-tu gara:jib-ku wa l-ʕa:lam
 invite-PST-3PL.M relatives-your and DEF-people
 'Have you invited your relatives and (other) people?'

- Speaker A: *ʕazam ʔabu:-ij (VS)
 invite.PST.3SG.M father-my
 Literally: ‘My father invited.’
 Intended: ‘My father invited them.’

The ungrammaticality of Speaker A’s second sentence in (7) can be taken as evidence that the object cannot drop in VSO sentences even if its referent is already established in the previous discourse.

It is important to mention here that an SVO clause with an elided object is judged as odd or deviant in out-of-the-blue neutral contexts. For example, SVO sentences with a dropped object can never occur as an appropriate response to ‘what’s-up’ questions which normally presuppose no previous discourse, whether the understood object is a definite or an indefinite element. Consider the following example:

- (8)
 A: ʃu: fi:
 what there
 ‘What is up?’
 B: *ʔabu:-ij ʕazam
 father-my invite.PST.3SG.M
 Intended: ‘My father invited the people/people.’

Against this background, we propose that the object in SVO clauses can only drop if its discourse antecedent is established in the preceding context. We propose that object drop in JA is an instance of what Hankamer and Sag call a *surface anaphor*, which requires “a *coherent syntactic antecedent* in surface structure and otherwise behaves as a purely superficial syntactic process” (1976: 392, emphasis added).

3.2. Object drop is insensitive to the type of the predicate

After surveying the syntactic behaviour of 150 transitive predicates in JA, we found that the object can drop in SVO clauses regardless of the type of predicate used (e.g., (a)telic predicates, experienced/psych predicates, etc.). By contrast, the object cannot drop in VSO clauses with any type of predicate. For instance, the examples in (9)–(10) clearly show that transitive telic and atelic predicates behave similarly with respect to the use of a dropped object in SVO but not VSO clauses. The relevant previous discourse in these examples appear in (9a) and (10a) respectively.

- (9)
 a. ʔimba:rih ʃuft ʔil-be:t wa-ʔana bi-s-sija:rah
 yesterday see.PST.3SG.M DEF-house and-I with-DEF-car
 ‘Yesterday, I saw the house while I was driving.’
 b. ʔiz-zalameh bana: (ʔil-be:t) bi-sbu:f (Telic)
 DEF-man build.PST.3SG.M (DEF-house) in-week
 ‘The man built the house in one week.’

- c. *bana: ?iz-zalameh (?il-be:t) bi-sbu:f
 build.PST.3SG.M DEF-man (DEF-house) in one week
 Intended: 'The man built (the house) in one week.'

(10)

- a. le:f ?in-na:s t'ilf-u:
 why DEF-people leave.PST-3PL.M
 'Why did the people leave?'
- b. ?is^s-s'o:t ?azfadʒ (?in-na:s) (Atelic)
 DEF-sound annoy.PST.3SG.M (people)
 'The sound annoyed (the people).'
- c. *?azfadʒ ?is^s-s'o:t (?in-na:s)
 annoy.PST.3SG.M DEF-sound (people)
 'The sound annoyed (the people).'

Likewise, the examples in (11)–(12) below indicate that the ban on the use of an OG in VSO clauses holds with (non-)experienced/(non-)psych predicates, with the relevant previous discourse appearing in (11a) and (12a) respectively.

(11) (Experienced/psych)

- a. ke:f ʔala:qat ra:ma ?ib-ha:fim
 how relation Rama with-Hashem
 'How is the relation between Rama and Hashem?'
- b. ra:ma bithibb (ha:fim) ?ikθi:r
 Ra:ma love.IPFV.3SG.F (Hashem) very much
 'Rama loves (Hashem) very much.'
- c. *bithibb ra:ma (ha:fim) ?ikθi:r
 love.IPFV.3SG.F Rama (Hashem) very much
 Intended: 'Rama loves (Hashem) very much.'

(12) (Non-experienced/non-psych)

- a. ke:f ʔala:qat ?abu:-k wa gara:jbu-h
 how relation father-your and relatives-his
 'How is the relation between your father and his relatives?'
- b. ?abu:-ij ʔazam (gara:jbu-h) ʔa-l-ʔurus
 father-my invite.PST.3SG.M (relatives-his) to-DEF-wedding
 'My father invited (his relatives) to the wedding.'
- c. *ʔazam ?abu:-ij (gara:jbu-h) ʔa-l-ʔurus
 invite.PST.3SG.M father-my (relatives-his) to-DEF-wedding
 Intended: 'My father invited (his relatives) to the wedding.'

The examples in (9)–(12) show that the ban on the use of an OG in VSO clauses is not related to the type of the predicate (e.g., telic vs. atelic; (non-)experienced/(non-)psych, etc.). Therefore, we propose that the ban on the use of an OG in VSO clauses

must be related not to the event structure of the predicate, but rather to the syntactic derivation of VSO and SVO clauses.²

3.3. The elided object is a familiar topic

We propose that the dropped object in SVO clauses, preceded by a previous mention of the referent of the elided object, functions as a familiar topic that refers back to given information in the discourse (Frascarelli 2007; see also Pierrehumbert and Hirschberg 1990). As discussed by Frascarelli and Hinterhölzl (2007), familiar topics are D(iscourse)-linked constituents that refer to background information or used for topic continuity (Givón 1983). This categorization of elided objects in SVO clauses as familiar (continuing) topics is consistent with the fact that these elided objects should refer to an already established Aboutness topic. According to Frascarelli and Hinterhölzl (2007), one major function of familiar topics is that they re-establish (through mentioning or referring to) the Aboutness topic of the relevant discourse. Consider the following example, where the whole discourse revolves around the wife of one of the interlocutors' friends.

(13)

Speaker A: *binnisbeh la-marat-uh, bafu:f ?il-?umu:r muʕaqqadeh*
 as for-wife-his see.IMPF.1SG DEF-matters complicated
 'As for his wife, I see that (their) matters are complicated (so their marriage may fail).'

Speaker B: *marat-uh badd-ha sija:seh*
 wife-his want-3SG.F politics
 Literally: 'His wife wants politics.'
 Idiomatically: 'His wife should be better treated with kindness and appeasement.'

Speaker A: *ja:zam ke:f!*
 man how
ja:ser ?ihtaram wu-waɖɖɖab
 Yasir respect.PST.3SG.M and-admire-.PST.3SG.M
wu-saffar
 and-travel.CAUS-PST.3SG.M
 'Man, how comes! Yasir respected and admired her and accompanied her on journeys (for leisure).'

The expression *binnisbeh la* 'as for' is used in JA to introduce Aboutness topics (Jarrah 2019b). Therefore, the Aboutness topic in the exchange above is *maratuh* 'his wife', which is an element that is referred to by the elided object in Speaker

²Reinhart and Siloni (2005) and Siloni (2012) argue that reflexive and reciprocal verbs are derived from their transitive alternants by an operation transforming two Θ -roles of the verb into one complex Θ -role that retains the semantic properties of both original roles. For instance, transitive *wash* (*John washed the dishes*) becomes intransitive *wash* (*John washed*) with one complex cluster "assigned to the sole argument of the intransitive, resulting in the interpretation of this argument as being in the relation Agent and Theme to the event" (Kim and Siloni 2020: 262). However, in JA the object can drop in both reflexive and reciprocal verbs, and this does not account for the correlation between object dropping and word order.

A's second utterance.³ According to Frascarelli and Hinterholz (2007), a topic, which is first shifted to in the conversation, appears as an Aboutness topic, while other references to this topic in the same discourse are regarded as familiar topics. The elided object in SVO clauses is another reference to the Aboutness topic.

3.4. Object drop in Najdi Arabic

Before we introduce our account of object drop in JA, it should be mentioned that Najdi Arabic also allows the object to be dropped in SVO clauses but not in VSO clauses, provided the referent has already been mentioned in the discourse. Note that both SVO and VSO are productively used in Najdi Arabic (Alshamari 2017), as the following examples demonstrate:

(14)

- a. ?ar-riɖʒa:l ʕazam (dʒama:ʕt-uh)
DEF-man invite.PST.3SG.M (relatives-his)
'The man invited (his relatives).'
- b. ?al-ħurmah yassal-at (?al-mala:bis)
DEF-woman wash.PST-3SG.F (DEF-clothes)
'The woman washed (the clothes).'
- c. ?al-mudi:r na:qaf ?al-xitʕa:ba:t
DEF-manager discuss.PST.3SG.M (DEF-reports)
'The manager discussed (the reports).'

(15)

- a. *ʕazam ?ar-riɖʒa:l (dʒama:ʕt-uh)
invite.PST.3SG.M DEF-man (relatives-his)
Intended: 'The man invited (his relatives).'
- d. *yassal-at ?al-ħurmah (?al-mala:bis)
wash.PST-3SG.F DEF-woman (DEF-clothes)
Intended: 'The woman washed (the clothes).'
- e. *na:qaf ?al-mudi:r ?al-xitʕa:ba:t
discuss.PST.3SG.M DEF-manager (DEF-reports)
Intended: 'The manager discussed (the reports).'

The restriction on object drop in SVO (but not in VSO) clauses is therefore not an idiosyncratic property of JA, as Najdi Arabic exhibits a similar phenomenon.

3.5. Object drop and the (in)definiteness status of the elided object

An anonymous reviewer points out that the object can drop in contexts where it is perceived as an indefinite element, challenging our account that the elided object is a topic. Consider the example in (16):

³The elided object in SVO clauses can thus be characterized as a *given constituent* in the sense of Schwarzschild (1999), in that it co-refers with a salient antecedent; it implements an already established (continuing) topic (see Bianchi and Frascarelli 2010).

- (16) ʔahmad bana: be:t wa kama:n
 Ahmad build.PST.3SG.M house and also
 ʔimhammad bana: (be:t)
 Mohammad build.PST.3SG.M house
 'Ahmad built a house, and Mohammad also built (one).'

In (16), the object *be:t* 'a house' can drop from the second clause, and the sentence remains grammatical. However, we propose that the identity of the elided object in sentence (16) is different from that of the elided object in the type of sentences discussed in this article (i.e., the object refers back to a referent in the preceding discourse). For example, in the following discourse the indefinite object *be:t* 'a house' used in Speaker A's first utterance is dropped in Speaker B's second utterance, even though it does not refer to the same house referred to by Speaker A:

- (17)
- Speaker A: dʒa:rna bana: be:t ʔib-ʕamma:n
 neighbour-our build.PST.3SG.M house in-Amman
 wa ʔastaqa:l min waðʕi:ft-uh
 and resign.ST.3SG.M from job-his
 'Our neighbour built a house in Amman and resigned from his job.'
- Speaker B: le:f bana: ʔib-ʕamma:n kawnuh
 why build.PST.3SG.M in-Amman being
 ʔistaqa:l min waðʕi:ftuh
 resign.ST.3SG.M from job-his
 'Why did he resign from the job since he built (a house) in Amman?'
- Speaker A: bihki ʔinnuh raħ jiftaħ biznis
 say.IMPF.3SG.M that will open.IMPF.3SG.M business
 'He is saying that he will start a business.'
- Speaker B: ʕala fikrah ʔamm-i bana: kama:n ʔib-ʕamma:n
 By the way uncle-my build.PST.3SG.M also in-Amman
 'By the way, my uncle also built (a house) in Amman.'

A point that bears mentioning here is that a VSO word order can be used in Speaker B's second utterance, while the sentence remains grammatical, as shown in (18):

- (18)
- Speaker B: ʕala fikrah bana: ʔamm-i kama:n ʔib-ʕamma:n
 by the way build.PST.3SG.M uncle-my also in-Amman
 'By the way, my uncle also built (a house) in Amman.'

On the other hand, a VSO sentence is not an option when the null object refers back to an entity that is mentioned in the discourse, as shown in the following example:

(19)

Speaker A: dʒa:rna ʕazam ʔal-mudi:r ʔib-ʕamma:n
 neighbour-our invite.PST.3SG.M DEF-manager in-Amman
 'Our neighbour invited the manager [to meet him] in Amman.'

Speaker B: le:f ʕazam ʔib-ʕamma:n kawn
 Why invite.PST.3SG.M in-Amman being
 ʔal-mudi:r b-irbid
 DEF-manager in-Irbid
 'Why did he invite (the manager) [to meet him] in Amman when the manager (is living) in Irbid?'

Speaker A: bihki ʔinn-uh ka:n ʕind-hum mawʕid ʔib-ʕamma:n
 say.IMPF.3SG.M that was with-them appointment in-Amman
 'He is saying that they had an appointment in Amman.'

Speaker B: *ʕala fikrah ʕazam ʕamm-i ʔib-ʕamma:n kama:n
 by the way invite.PST.3SG.M uncle-my in-Amman also
 Intended: 'By the way, my uncle invited (the manager) [to meet him] in Amman as well.'

The use of the SVO word order in Speaker B's second utterance makes the sentence grammatical, as shown in the following example:

(20)

Speaker B: ʕala fikrah ʕamm-i ʕazam ʔib-ʕamma:n kama:n
 By the way uncle-my invite.PST.3SG.M in-Amman also
 'By the way, my uncle invited (the manager) [to meet him] in Amman as well.'

When the null object refers back to an element that is mentioned in the previous discourse, only SVO order is allowed. Therefore, we propose that not all null objects belong to the same category, something that should be investigated further. In this article, we limit analysis to instances of object drop whose licensing rests on discourse and the type of word order used (see Soltan 2020 for a syntactic analysis of a null object which is restricted to [-animate] and [-definite] elements).⁴

We propose that the relation between the presence of an OG and the SVO vs. VSO word order pattern in JA grammar leans on the assumption that the subject and the object (in constructions with an OG, SVΔ) are located in discourse-related positions (Spec,Topic Phrase). The thematic subject is located in the CP zone, while the elided object is located in the so-called low IP area of the clause (cf. Belletti 2004, 2005). We argue that the ban on the use of an object gap (OG) in VSΔ clauses appears as

⁴Soltan (2020) discusses instances of object drop used in Egyptian Arabic, where the phonologically null object can refer to indefinite [-animate] nominals, PPs, and CPs, but not definite and [+animate] nominals. He shows that the null object in such cases should be treated as argument ellipsis, an operation taken to target arguments for deletion at PF. On the other hand, the object drop discussed here can refer to both definite and indefinite nominals, which can be [-animate] or [+animate]. Therefore, the elided element referred to by Soltan in Egyptian Arabic may be of a different nature than the elided element discussed here in JA.

a result of the movement of the topical object over the topical subject and its ensuing relativized-minimality effects (Rizzi 1997, 2004). The effects of these interactions on object drop are significant in two ways. Firstly, they show that object drop in JA is affected not only by its discourse status as a topic, but also by the discourse status of other arguments within the same clause (being topics or foci). We demonstrate that the object can drop in SVO clauses when the subject also functions as an (overt or covert) topic, situated in the CP zone of the clause. Additionally, the effects of the interactions between the subject and the object add credence to the proposal that natural languages subsume a discourse-related field between TP and vP (Belletti 2004, 2005; consider Jarrah and Abusalim 2021 for evidence that JA subsumes this area in its grammar). Object drop in JA grammar therefore results from the interaction of two discourse fields located in two different positions within the sentence structure, namely above IP (Rizzi 1997) and between TP and vP (Belletti 2004).

In the following section, we provide evidence that the object drop in SVO clauses is an instance of a dropped argument (i.e., an elided object) rather than VP ellipsis.

4. SVA are not derived by VP ellipsis

We propose that SVA in JA are not derived by VP ellipsis, which as Landau (2020) argues has been canonized in most studies of ellipsis (see Van Craenenbroeck and Lipták 2008, Van Craenenbroeck and Merchant 2013, Lipták 2015, Van Craenenbroeck 2017, Merchant 2019). In other words, the object gap (OG) in SVA constructions is not derived by the movement of the lexical verb to T^0 , through v^0 , followed by ellipsis of the VP layer, which contains a copy of the raising verb and the object. We propose instead that the OG in SVA constructions is derived by simple object dropping. We use three tests to argue this position: the modified Park-Oku test, the non-availability of sloppy interpretations, and the presence of the remnant VP material in their canonical positions.

4.1. The modified Park-Oku test

The Park-Oku test (Park 1997 and Oku 1998), as modified by Landau (2020), is argued to be one of the best tests to reveal whether a given construction involves a dropped argument or an elliptical VP projection is the inclusion/exclusion of adjuncts in the ellipsis site (Landau 2020). Consider the following example from Landau (2020: 3):⁵

- (21) a. He read the sign loudly, but I didn't read -----
 b. He didn't read the sign loudly, but I read -----

If the gap in (21a) corresponds to a full VP, it can permit the inclusion of the adjunct *loudly*, which is present in the antecedent VP. So, sentence (21a) can be interpreted as 'I read the sign but not loudly'. By contrast, if the gap in sentence (21a) corresponds

⁵Note that the examples in (21) are supposed to be ungrammatical in English. They may be allowed under very specific type of contextualized pragmatics, but such structures are typically ruled out in favour of a VP-ellipsis or do-so anaphora (e.g., 'I didn't' or 'I didn't do so'). However, equivalents to (21) are grammatical in some East Asian Languages (Landau 2020).

to a bare argument (where only the object is dropped, rather than the whole VP), the interpretation of the target clause should be ‘I didn’t read the sign’.

Landau argues that the Park-Oku test should be used with caution because the VP ellipsis-based account “does not have to produce a reading distinct from that of the AE [Argument Ellipsis] analysis” (2020: 4). He suggests that in order to sharpen the Park-Oku test, examples with creation verbs should be used as a diagnostic, arguing that the advantage in using such predicates in this test is that their object is subject to negation. Therefore, the subsequent reference to their object is perceived as anomalous. Landau (2020: 4) gives the following example:

(22) He baked a cake with baking powder, but I didn’t bake ----- . It came out flat.

Under the AE analysis, the gapped clause recovers as ‘I didn’t bake a cake’. Given that my cake was never baked, the continuation ‘It came out flat’ should be perceived as anomalous. On the other hand, under the VP-Ellipsis-based account, the gapped clause is recovered as ‘I didn’t bake a cake with baking powder’. Therefore, the continuation ‘It came out flat’ can be perceived as possible and natural.

Let us now apply the modified Park-Oku test (i.e., using creation verbs) on the relevant sentences in JA. The corresponding JA clause for (22) is given in (23).

(23) ha:ʃim tʰabax ke:k bi-l-be:kimk ba:wɗar
 Hashem cook.PST.3SG.M cake with-DEF-baking powder
 bas balqi:s ma: tʰabx-at
 but Balqi:s not cook.PST-3SG.F
 tʰiliʃ xarba:n
 turn out.PST.3SG.M ruined
 Intended: ‘Hashem cooked a cake with baking powder, but Balqees did not cook, so it came out ruined.’

One hundred native speakers of JA were asked to judge whether the continuation *tʰiliʃ xarba:n* ‘it came out ruined’ is perceived as anomalous or natural within the context of the sentence. All native speakers judged the continuation as anomalous, in that they did not interpret it to mean that Balqees had not used baking powder when cooking the cake. For many of them, Balqees did not even cook at all. This judgment supports our hypothesis that the OG in SVA constructions in JA is derived by argument dropping rather than VP ellipsis, which predicts that the continuation *tʰiliʃ xarba:n* ‘it came out ruined’ should be perceived as possible.

The modified Park-Oku test is used for other creation verbs such as *rasam* ‘painted’, *dʒammaʃ* ‘constructed’, and *bana* ‘built’ in JA, as shown in the following example:

(24) ?il-walad rasam/dʒammaʃ/bana: be:t zay:i:r ?ibʃina:jeh
 the-boy painted/constructed/built house small carefully
 bas ?il-binit ma: rasmat/dʒammaʃat/banat
 but DEF-girl not painted/constructed/built
 tʰiliʃ xarba:n
 turn out.PST.3SG.M ruined

‘The boy painted/constructed/built a small house, but the girl did not paint/construct/build, so it came out ruined.’

Once again, the continuation was judged as anomalous.

All native speakers who were asked to judge the felicity of the continuation *tʕiliʃ xarba:n* ‘it came out ruined’ were also asked to judge the second part of the sentence (with and without the continuation *tʕiliʃ xarba:n*) with VSA word order rather than SVA word order. See the sentence in (25):

- (25) *tʕabax* *ha:ʃim* *ke:k* *bi-l-be:kimk* *ba:wdar*
 cook.PST.3SG.M Hashem cake with-DEF-baking powder
bas *ma:* *tʕabx-at* *balqi:s*.
 but not cook.PST-3SG.F Balqees
 (*tʕiliʃ* *xarba:n*)
 (turn out.PST.3SG.M ruined)
 ‘Hashem cooked a cake with baking powder, but Balqees did not, so it was ruined.’

All native speakers found sentence (25) deviant despite the first part of the sentence also occurring with VSO word order. On the other hand, with an overt object, the sentence’s grammaticality improves considerably:

- (26) *tʕabax* *ha:ʃim* *ke:k* *bi-l-be:kimk* *ba:wdar*
 cook.PST.3SG.M Hashem cake with-DEF-baking powder
bas *ma:* *tʕabx-at* *balqi:s*
 but not cook.PST-3SG.F Balqees
ke:k *bi-l-be:kimk* *ba:wdar*
 cake with-DEF-baking powder
 ‘Hashem cooked a cake with baking powder, but Balqees did not cook the cake with baking powder.’

The contrast between sentences (25)–(26) shows that an OG is licensed in SVO clauses, but not in VSO.

4.2. The non-availability of sloppy interpretations

The second piece of evidence that the OG in SVA constructions is derived by object drop rather than VP ellipsis is given by the fact that the OG in SVA constructions can yield a “strict” rather than “sloppy” reading (Hoji 1998, Kim 1999, Johnson 2001). This conclusion is based on the fact that variable binding displays restrictions in elliptical constructions that do not hold for cases of co-reference (Anagnostopoulou and Everaert 1999, 2013). In fact, this test (particularly the unavailability of sloppy readings) is normally formulated in various syntactic analyses of the OG as a diagnostic for the availability of argument ellipsis in languages including Japanese (Hoji 1998, Oku 1998, Sakamoto 2015), Chinese (Takahashi 2007), and Egyptian Arabic (Soltan 2020). For instance, the following sentence includes an

example of OG in SVΔ constructions; the OG in the elided constituent must have the same reference as the first clause.

- (27) *ʔil-mudi:r* *sa:ʔad* *ʔamm-uh* *ʔimba:reh*
 DEF-manager help.PST.3SG.M uncle-his yesterday
wu-ʔali *sa:ʔad* *kama:n*
 and-Ali help.PST.3SG.M too
 'The manager helped his uncle yesterday, and Ali did too.'

The sentence in (27) can be felicitously interpreted only if the manager and Ali helped the same person, i.e., the manager's uncle. In other words, the referent of the elided object in the second clause must be the same as the referent of the object in the first clause. If (27) is derived by VP ellipsis, it would pass the usual sloppy identity test, whereby the object can be interpreted as having a different antecedent in the elided VP than it does in the overt VP. According to Hoji (1998), the unavailability of sloppy readings constitutes evidence against the VP analysis.

4.3. The presence of the remnant VP material in their canonical positions

The third piece of evidence that SVΔ constructions involve object drop comes from the fact that SVΔ constructions may contain VP adjuncts and/or an indirect object (in case of dative SVΔ constructions). To see this, consider the following sentence:

- (28)
 a. *ʔimħammad* *wadda* (*masʕa:ri*) *la-ʔumm-uh* *ʔibsurfa*
 Mohammad send.PST.3SG.M (money) to-mother-his quickly
 'Mohammad sent (the money) to his mother quickly.'
 b. *mudi:r* *ʔil-madrash* *ʔagnaʔ* (*ʔil-mawdʒu:di:n*)
 principal DEF-school persuade.PST.3SG.M (DEF-attendees)
 ʔib-sillam *ʔir-ra:tib* *ʔil-dʒdi:d*
 with-structure DEF-salary DEF-new
 'The school principal persuaded (the attendees) with the new salary structure.'

Under the VP-ellipsis analysis, the sentences in (28) must have a number of unmotivated movements of all VP materials, including the movement of the dative complement *laʔummuh* 'to his mother' and VP adverbial *ʔibsurfa* 'quickly' in (28a) and the movement of the PP *bisillam ʔirra:tib ʔilʒdi:d* 'with the new salary structure' in (28b). These elements must leave the VP in order to escape VP ellipsis. By contrast, under object drop, such movements are not needed. The direct object is dropped, while other VP material remains *in situ*, as there is no elided constituent.

Having shown evidence against a VP ellipsis-derived account of SVΔ constructions, we now discuss the ban of an OG in VSO clauses. We propose that object drop should be treated as an instance of topic deletion, a syntactic operation that targets elements located in Spec, Topic Phrase.

5. The position of the thematic subject in SVΔ constructions

As mentioned in section 1, an OG is permitted in SVΔ constructions but not in VSO clauses, as shown in the following examples:

- (29) a. ʔabu:-j ʕazam (ʔin-na:s) ʕala ʕuris ʔahmad
 father-my invite.PST.3SG.M (DEF-people) to wedding Ahmad
 ‘My father invited (the people) to Ahmad’s wedding.’
 b. *ʕazam ʔabu:-j (ʔin-na:s) ʕala ʕuris ʔahmad
 invite.PST.3SG.M father-my (DEF-people) to wedding Ahmad
 Intended: ‘My father invited (the people) to Ahmad’s wedding.’

Importantly, the existence of an OG in SVΔ constructions is conditional. The clause-mate subject should be a definite and/or specific entity, in the sense that it is already established in the previous discourse. The examples in (30)–(31) illustrate this phenomenon. The sentences in (30) are ungrammatical because the subject is an indefinite, non-specific element, whereas those in (31) are grammatical because the subject is a specific element. Note that (30a–b) remain degraded even if these sentences are changed to the present tense with a generic interpretation. This is important because it excludes the possibility that such sentences are ungrammatical due to the use of an indefinite, non-specific subject, which is incompatible with eventive clauses in general (Kratzer 1998).

- (30) a. *mudi:r ʕazam (ʔin-na:s) ʕala ʕuris ʔahmad
 manager invite.PST.3SG.M (DEF-people) to wedding Ahmad
 ‘A manager invited (the people) to Ahmad’s wedding.’
 b. *zalameh bana: (ʔil-be:t)
 man build.PST.3SG.M DEF-house
 Intended: ‘A man built (the house).’

- (31)
 c. mudi:r kbi:r ʕazam (ʔin-na:s) ʕala ʕuris ʔahmad
 manager senior invite.PST.3SG.M (DEF-people) to wedding Ahmad
 ‘A senior manager invited (people) to Ahmad’s wedding.’
 d. zalameh min ʔitʕ-tʕafi:leh bana: (ʔil-be:t)
 man from DEF-Tafila build.PST.3SG.M (DEF-house)
 ‘A man from Tafila built (the house).’

The two examples in (30)–(31) indicate that the existence of an OG in SVΔ clauses is associated with the presence of a definite/specific subject.

Before exploring the relationship between a specific/definite subject and OG in SVΔ clauses, it should be mentioned that JA freely allows SVO sentences with an indefinite, non-specific subject, as seen in section 2. For example, Jarrah and Abusalim (2021) show that SVO word order is the predominant word order in JA, and that, unlike VSO clauses, SVO clauses place no restrictions on the form of the subject. Therefore, the subject in SVO clauses can be an indefinite or non-specific

element (in the sense that it is not already introduced in the discourse or has no referent in the preceding discourse). The sentences in (32) are examples of SVO clauses with an indefinite or non-specific subject.

- (32) a. bint lag-at ʔil-wla:d ʔind ʔil-masdzid
 girl find.PST-3SG.F DEF-boy next to DEF-mosque
 'A girl found the boy next to the mosque.'
- b. t'a:lib ʔallaf qas'i:deh ʔimrattabih ʔann ʔil-ʔagabah
 student write.PST.3SG.M poem great about DEF-Aqaba
 'A student wrote a great poem about Aqaba.'
- c. mikani:ki: sʔallah ʔis-sajja:rah ʔala ʔitʔ-tʔari:g
 mechanic fix.PST.3SNG.M DEF-car on DEF-road
 'A mechanic fixed the car on the road.'

The examples in (32) show that the ban on the use of an indefinite, non-specific subject in SVΔ constructions is not a common property of JA clause structure (as the subject can be an indefinite, non-specific element in sentences without object drop).

Following the related literature (especially on Arabic clause structure) that the element that occupies Spec,TP should not be of a specific type (i.e., a specific entity, an (in)definite entity, etc.) (Fehri 1993, Mohammad 1999, Soltan 2007, Aoun et al. 2010, Jarrah 2019a; see also Alexiadou and Anagnostopoulou 1998 and Rizzi 2005), we propose that the preverbal subject in SVΔ constructions is not located in Spec,TP, unlike in SVO clauses. One significant piece of evidence that supports this view comes from the position of the subject relative to high IP adverbials. Cinque (1999) argues for the existence of a fixed universal hierarchy of clausal functional projections (see Jlassi 2013, Alshamari 2017, Tescari Neto 2022 for related discussion). For instance, evidential adverbials/adverbs are located in a functional projection, which is labelled as Mood_{evidential} Phrase. This functional projection dominates, e.g., Mod_{epistemic}, which is a projection that contains epistemic adverbs such as 'probably'. The universal hierarchy of clausal functional projections is introduced in (33) (adapted from Cinque 1999: 106).

- (33) MoodP_{speech act} > MoodP_{evaluative} > MoodP_{evidential} > ModP_{epistemic} > TP(Past) >
 TP(Future) > MoodP_{irrealis} > ModP_{alethic} > AspP_{habitual} > AspP_{repetitive(I)} >
 AspP_{frequentative(I)} > ModP_{volitional} > AspP_{celerative(I)} > TP(Anterior) > AspP_{terminative} >
 AspP_{continuative} > AspP_{retrospective} > AspP_{proximative} > AspP_{durative} > AspP_{generic/progressive}
 > AspP_{prospective} > ModP_{obligation} > ModP_{permission/ability} > AspP_{completive} > VoiceP >
 AspP_{celerative(II)} > AspP_{repetitive(II)} > AspP_{frequentative(II)}

According to Cinque's (1999) hierarchy in (33), MoodP_{speech act}, MoodP_{evaluative}, MoodP_{evidential}, and Mod_{epistemic} all dominate TP. We can use the position of the thematic subject relative to the respective adverbials of these four categories to determine whether or not the subject is located in Spec,TP (i.e., the thematic subject appears to the right of these adverbials) or in a higher position, in which case the thematic subject appears to the left of these adverbials.

Jarrah and Alshamari (2017) argue that the particle *ʔikil* in JA is an evidentiality particle that heads MoodP_{evidential}. They propose that *ʔikil* expresses the speaker's

reliance on indirect evidence as the information source for his/her proposition. They show that *fikil* should appear to the left of all IP-related elements, including the subject, the verb, and the past tense copula *ka:n* (34a–b) and at the same time projects below (appears to the right of) all CP-related elements such as interrogative *wh*-words (34c–d) and topical elements (34e).

(34)

- a. *fikil-uh* *?il-muwazʕaf* *?arsal* *?il-bari:d*
 PRT-3SG.M DEF-employee sent.3SG.M DEF-mail
 ‘Evidently, the employee sent the mail.’

(Jarrah and Alshamari 2017: 34)

- b. *fikil-uh* *?il-muwazʕaf* *ka:n* *jirsil* *?il-bari:d*
 PRT-3SG.M DEF-employee was sent.3SG.M DEF-mail
 ‘Evidently, the employee was sending the mail.’

(Jarrah and Alshamari 2017: 34)

- c. *mi:n* *fikil-uh* *sarag* *?is-sijja:rah?*
 Who PRT-3SG.M stole.3SG.M DEF-car
 ‘Who did evidently steal the car?’

(Jarrah and Alshamari 2017: 37)

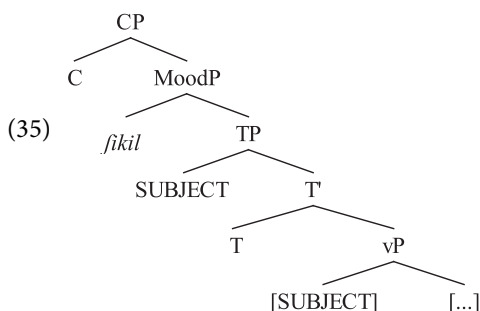
- d. **fikil-uh* *mi:n* *sarag* *?is-sijja:rah?*
 PRT-3SG.M who stole.3SG.M DEF-car
 Intended: ‘Who did evidently steal the car?’

(Jarrah and Alshamari 2017: 37)

- e. *?is-sijja:rah* *fikil-uh* *?iz-zalameh* *sarag-ha*
 DEF-car PRT-3SG.M DEF-man watched.3SG.M-it
 ‘The car, the man evidently stole it.’

(Jarrah and Alshamari 2017: 38)

The following tree structure shows the structural position of *fikil*, which is assumed to be an X^0 -element that projects $\text{MoodP}_{\text{EVIDENTIAL}}$ (MoodP).



We use the surface position of *fikil* relative to the position of the subject in $\text{SV}\Delta$ constructions to identify the structural position of the subject. In $\text{SV}\Delta$ sentences with

the particle *fikil*, the subject should appear to the left of *fikil*. Consider the example in (36), where the argument understood to be the object is given in square brackets.

- (36) a. (*fikil-uh) ʔiz-zalameh (fikil-uh) ʔazam
 (PRT-3SG.M) DEF-man (PRT-3SG.M) invite.PST.3SG.M
 ʔala ʔurs ʔibn-uh
 to wedding son-his
 ‘(*Evidently) the man (evidently) invited [the people] to his son’s wedding (party).’
 b. (*fikil-ha) ʔumm-ij (fikil-ha) ʔassl-at
 (PRT-3SG.F) mother-my (PRT-3SG.F) wash.PST-3SG.F
 bidu:n musa:ʔadih
 without help
 ‘(*Evidently) My mother (evidently) washed [the clothes] without help.’

The fact that the subject must appear to the left of the evidentiality particle *fikil* is evidence that the subject is not located in Spec,TP, but in a higher position that dominates MoodP_{evidential}.

Note here that when the object is mentioned (not elided), *fikil* can appear either to the left or to the right of the subject, as illustrated by the examples in (37):

- (37) a. (fikil-uh) ʔiz-zalameh (fikil-uh) ʔazam qara:jb-uh
 (PRT-3SG.M) DEF-man (PRT-3SG.M) invite.PST.3SG.M relatives-his
 ʔala ʔurs ʔibn-uh
 to wedding son-his
 ‘(Evidently) the man (evidently) invited his relatives to his son’s wedding.’
 b. (fikil-ha) ʔumm-ij (fikil-ha) ʔassl-at ʔis^s-s^hu:n
 (PRT-3SG.F) mother-my (PRT-3SG.F) wash.PST-3SG.F DEF-dishes
 bidu:n musa:ʔadeh
 without help
 ‘(Evidently) my mother (evidently) washed the dishes without help.’

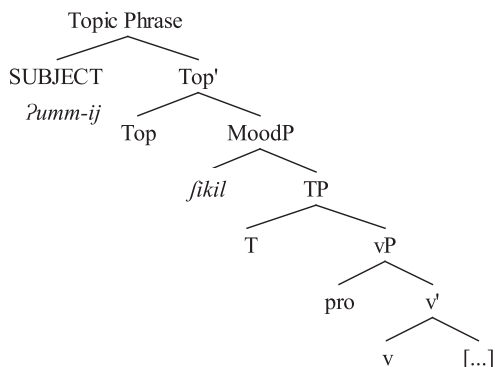
The contrast between (36) and (37) indicates that the subject occupies a different structural position in SVΔ constructions than in SVO clauses.

We propose that the subject in SVΔ constructions serves as a topic, located in CP. (We follow the assumption that when the subject is a topic in the left periphery, Spec,vP is to be filled with a non-expletive *pro* (Soltan 2007), referring to the same entity as the topical subject).⁶ The tree in (39) is a schematic representation of the sentence in (38).

- (38) ʔumm-ij fikil-ha ʔassl-at (ʔis^s-s^hu:n)
 mother-my PRT-3SG.F wash.PST-3SG.F DEF-dishes
 ‘My mother evidently washed (the dishes).’

⁶It is widely assumed in Arabic generative literature that high topical subjects (i.e., located in the CP area) are generated in their surface positions, while Spec,vP is filled with a non-expletive *pro* (see Soltan 2007, among others). One major line of evidence for this comes from the fact that the preverbal topical subject can be dropped from the sentence.

(39)



This proposal is consistent with the informational constraint that the subject should be a definite or specific entity, imposed on the form of the subject in SVΔ. In other words, what appears as the subject in SVΔ constructions is not a true subject occupying Spec,TP, but rather a topic located in the CP domain of the clause. According to Rizzi (2005), indefinite, non-specific entities cannot be used as topics because they do not refer to the entities around which the sentence revolves or the salient element of the sentence's accompanying discourse. Chafe (1987) argues that a topic is a given or accessible constituent, typically destressed and realized in a pronominal form (see also Reinhart 1981, Givón 1983, Pesetsky 1987, Lambrecht 1994). Following this line of analysis, we can now account for the structural position of the subject in SVΔ constructions relative to the marker *fikil*. As the head of MoodP_{evidential} (Jarrah and Alshamari 2017), *fikil* should appear to the left of all material, dominated by MoodP projecting above TP. On the other hand, *fikil* should appear to the right of all CP material (cf. Cinque 1999). The subject in SVΔ constructions is a topic; therefore, *fikil* should occur to the right of the subject. On the other hand, the thematic subject in non-SVΔ constructions stays in Spec,TP; hence it can appear to the left of *fikil*. Note here that when the subject of SVO clauses (without an OG) is a topic, it appears to the left of *fikil*. This proposal accounts for the linear positions of the subject to the left and to the right of *fikil* in non-SVΔ constructions.

An anonymous reviewer points out that if the dropped object is understood to be an indefinite entity, the sentence is fine both ways (the subject before the evidential marker or after it), as shown in the following sentence:

- (40) ʔiz-zalameh ʕazam na:s ʕala ʕurs ʔibn-uh,
 DEF-man invite.PST.3SG.M people to wedding son-his
 (w-fikil-uh) ʔil-mudi:r (fikil-uh) ʕazam
 and-PRT-3SG.M DEF-manager and-PRT-3SG.M invite.PST.3SG.M
 ʕurs bint-uh
 wedding daughter-his
 'The man invited people to his son's wedding and the manager invited [people]
 to his daughter's wedding.'

We agree that the subject in such cases can appear to the left and to the right of the evidentiality marker *ʃikil*. However, as mentioned, the dropped object in sentences like (40) may not be perceived as a topic, so there are no restrictions on the use of the evidentiality marker relative to the subject, which can also be either a topic or a true subject.

Given this evidence, we argue that the subject in SVΔ sentences is located in the CP zone of the clause (in Spec,TP). One important point to mention here relates to the widely held assumption that the topical subject is externally merged in its surface position in Arabic clause structure (Soltan 2007; see also Fehri 1993, Ouhalla 1997, Shlonsky 1997, Mohammad 2000, Soltan 2007, Aoun et al. 2010, Albuhayri 2019, Jarrah 2019b). The subject in SVΔ sentences is therefore not base-generated in Spec,vP, which is filled with a *pro* which shares the same φ -features of the dislocated subject. According to Soltan (2007), the *pro* in Spec,vP refers to the same referent of the topical subject. Evidence that supports this line of analysis comes from the fact that the subject in SVΔ constructions can be dropped:

(41)

- a. wadda (masʿa:ri) la-ʔumm-u ʔibsurfa
give-PST.3SG.M (money) to-mother-his quickly
'He gave his mother (the money) quickly.'
- b. ʔaḡnaʔit (ʔil-mawḏʒu:di:n) bi-sillam ʔir-ra:tib ʔil-dʒi:d
persuade.PST.3SG.M (DEF-attendees) with-structure salary DEF-new
'She persuaded (the attendees) with the new salary structure.'

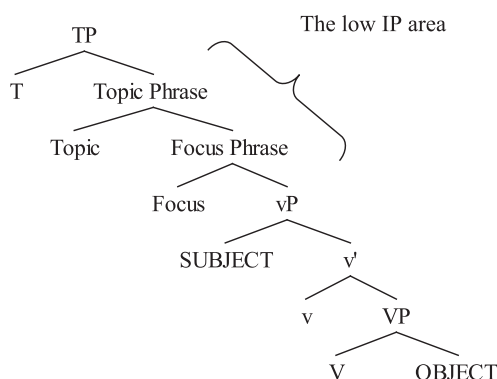
The φ -content of the dropped subject can be identified by virtue of the inflectional marker that is attached to lexical verb bears. For instance, in (41b), the subject is identified as a [3SG.F] entity by virtue of the inflectional marker borne by the lexical verb.

In the next section, we address the relation between the topicality of the subject and the presence of an OG in SVΔ constructions.

6. The object in SVΔ constructions

Our account of SVΔ constructions is primarily based on the assumption that the object in SVΔ constructions functions as a topic situated in the low IP area (Belletti 2004, 2005). According to Belletti (2004, 2005), the clause structure of natural languages subsumes a discourse-related area that projects between TP and vP. Belletti calls this area the low IP area, which is argued to be equivalent to, but distinct from, the left periphery of the clause (as proposed by Rizzi 1997). Therefore, the low IP area has functional layers of Topic Phrase and Focus Phrase. Consider the following tree diagram that shows the schematic of Belletti's (2004, 2005) proposal of the low IP area.

(42)



Evidence from languages whose low IP area has been examined indicates that the low IP projections are limited to a specific type of information, unlike the corresponding projections of CP. For instance, the low IP area is shown to be restricted to contrastive/corrective focus (but not information focus; cf. Kiss 1998) in English and Malayalam (Jayaseelan 2008). Jarrah and Abusalim (2021) propose that low topics in JA require a high degree of contextual anaphoricity, so they cannot function as Aboutness or Shifting Topics.⁷ The assumption that the dropped object in SVΔ is a low topic is plausible because speakers found the OG in SVΔ constructions grammatical when the relevant SVΔ constructions was accompanied by a felicitous context which included a mention of the referent of the elided object (see section 3.3).

Another important difference between low topics and high topics in JA rests on the assumption that the former are derived entities (a result of some movement), while the latter are base-generated in their surface position area (Jarrah and Abu Salem 2021). This view is supported by the fact that low topics are not associated with a resumptive clitic on the lexical verb. To illustrate, consider the following examples:

(43)

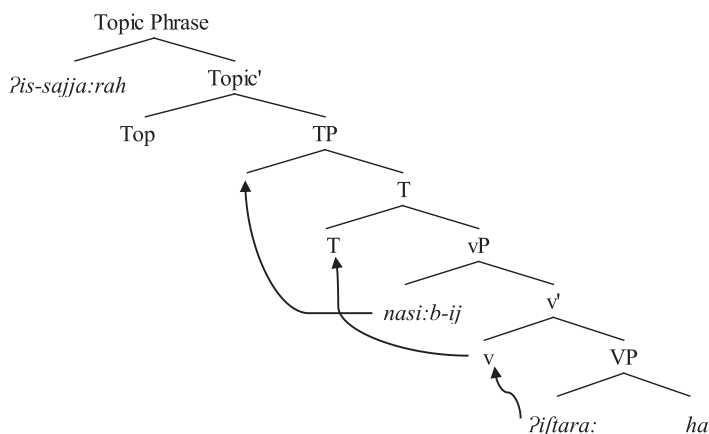
- a. *ʔis-sajja:rah* *nasi:b-ij* *ʔiftara:-ha:*
 DEF-car brother-in-law-my buy.PST.3SG.M-it
 ‘The car, my brother-in-law bought it.’
- b. *ʔiftara:* *ʔis-sajja:rah* *nasi:b-i j*
 buy.PST.3SG.M DEF-car brother-in-law-my
 ‘The car, my brother-in-law bought.’

The object in (43a) *ʔis-sajja:rah* ‘the car’ is analyzed as a dislocated element, which is base-generated in the CP zone of the clause. The structural position of the thematic object is filled with a resumptive clitic that absorbs the structural case on the verb

⁷According to Belletti (2005), languages may not all activate the VP periphery in the same way. Therefore, we maintain that one language may preserve the topic position of the low IP to elements with a particular discourse interpretation.

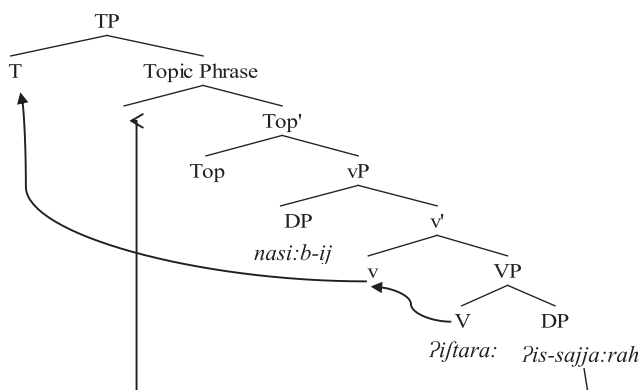
(Shlonsky 1997, Soltan 2007). Consider the schematic representation of sentence (43a) in (44).

(44)



On the other hand, the object *ʔis-sajja:rah* 'the car' in (44b) is analyzed as a low element, generated in the thematic position of the object, and then moved to the low IP area. This account explains why the low topic element in (44b) is associated with a gap rather than a resumptive clitic on the verb. Consider the schematic of sentence (43a) in (45).⁸

(45)



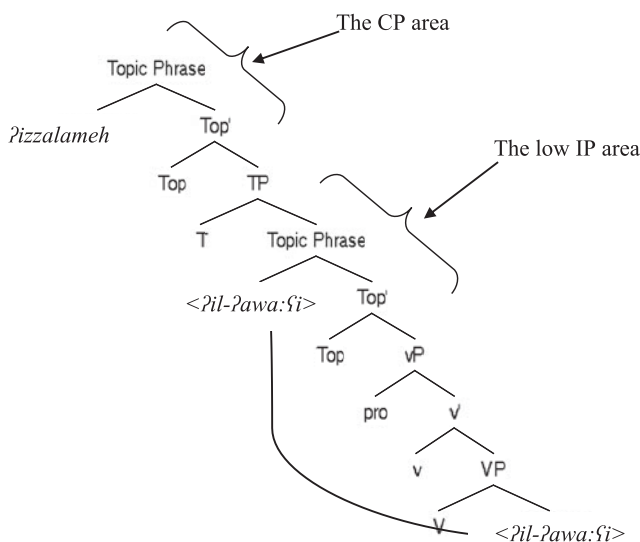
⁸Jarrah and Abusalim (2021: 145) analyze the object in the following sentence as a low topic, while the subject is a low focus:

- | | | | |
|-----------------|---------------|---------|-------------|
| i. dahan-at | ʔil-be:t | farikat | ʔil-xadda:f |
| paint.PST-3SG.F | DEF-house | company | Khadash |
| mu:f | ʔil-baladijeh | lisbo:f | ʔil-ma:zʔi |
| NEG | DEF-council | week | DEF-past |
- 'It is Khadash Company not the (local) council who painted the house.'

Following this line of analysis, we propose that the OG in SV Δ constructions is occupied by an object topic, which leaves its base-position (as a complement of VP) to Spec,Topic Phrase in the topic position of the low IP area. Being situated in Spec,Topic Phrase of the low IP area, the object can drop. Consider the proposed derivation of sentence (1a), which is reproduced here for convenience (the tree is set for the version of the sentence with a dropped object) (irrelevant details are skipped):

- (46) *?iz-zalameh* *yassal* (*?il-?awa:ʕi*)
 DEF-man wash.PST.3SG.M (DEF-clothes)
 ‘The man washed (the clothes).’

(47)



We propose that topic deletion in JA grammar is only licensed when the topical element is located in the specifier position of Topic Phrase. This is not surprising, because elements that target Topic Phrase express accessible and salient information, which can be retrieved from the previous context. These properties of topical elements make them subject to the ellipsis operation that targets accessible elements in the sentence. In other words, the existence of an OG in JA grammar is dependent on the information status of the object. If the object expresses old information, it can target Spec,Topic Phrase, where it can drop. Our assumption that topical elements can drop when they reach Spec,Topic Phrase is based on the notion that the [TOPIC] feature is a criterial feature that requires a configuration in which a head shares a major interpretable feature with its specifier for interpretation (Rizzi 2006). According to this approach, an element that carries the [TOPIC] feature should move to the specifier position of Topic Phrase in order to be interpreted at the interface. Given that elements carrying the [TOPIC] feature express salient information, we propose that they can be

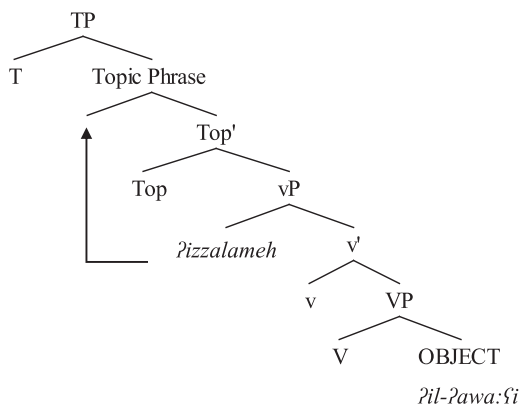
dropped at the interface once their interpretation is complete (see Frascarelli 2007 for more on the relation between the discourse properties of Topic constituents and their dropping at the interface).

Before addressing the question of the ban on the use of OG in VSO constructions, we explore the derivation of VSO clauses in JA. The syntactic derivation of these clauses in JA grammar is examined in depth by Jarrah and Abusalim (2021), who show that VSO clauses in JA are syntactically derived through the movement of the postverbal subject to the specifier position of Topic Phrase or Focus Phrase of the low IP area. The evidence for their account of SVO clauses comes from a two-million-word corpus of naturally occurring data from JA, supported by grammaticality judgments from 50 JA speakers. Jarrah and Abusalim (2021) found that the subjects in this corpus of JA are mostly a definite DP or a modified, indefinite DP, implying that a particular discourse-related interpretation (i.e., a topic or a focus) is associated with the post-verbal subject in VSO clauses. The presence of such an interpretation can account for the constraints on the form of the subject in VSO clauses (e.g., the subject cannot be an indefinite, non-specific entity). Additionally, Jarrah and Abusalim (2021) found that the subject in VSO clauses should occur to the right of the past tense copula *ka:n* 'was' (that fills T^0), but to the left of high vP adverbials. Such distributional properties of the subject in VSO clauses demonstrate that the subject does not stay in Spec,vP whose lexical filler should appear to the right of high vP adverbials. These pieces of evidence support the assumption that the subject in VSO clauses moves to a structural position higher than vP adverbials, yet lower than T^0 . Jarrah and Abusalim (2021) propose that the subject in VSO clauses targets a structural position in the VP periphery of the clause structure. This area contains a number of projections with a discourse-related nature, which can be topics or foci. As mentioned above, Belletti (2004, 2005) proposes that the VP shares a periphery resembling the clause-external CP left periphery. Following this, Jarrah and Abusalim (2021) propose that the subject in VSO clauses moves to the low IP area.⁹ The derivation of a VSO clause like that of the sentence in (48) is schematically represented in (49):

- (48) *yassal* *?iz-zalameh* *?il-?awa:ʕi*
 wash.PST.3SG.M DEF-man DEF-clothes
 'The man washed the clothes.'

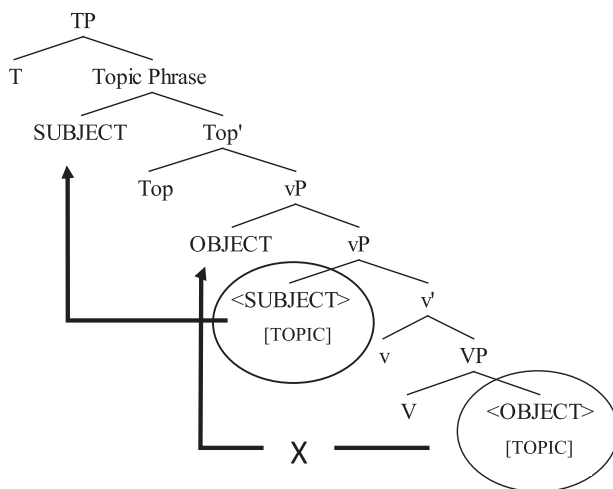
⁹According to Jarrah and Abusalim (2021), the subject in VSO clauses gets trapped in the low IP area due to the effects of the so-called criterial freezing, which enforces any element filling a criterial position to get frozen in place and cannot undergo any further movement (Rizzi 2005, 2014; Rizzi and Shlonsky 2007). Under Jarrah and Abusalim's (2021) proposal, Spec,TP is filled with an expletive *pro*.

(49)



With this framework in mind, we can propose an account of the reason for the lack of OG in VSO sentences: the subject fills the VP peripheral topic position and has a topic-like interpretation. When the object also has a topic-like interpretation (bearing the [TOPIC] feature), it cannot move to the low IP area because it is intercepted by the presence of the topical subject, due to relativized minimality (cf. Rizzi 1990, 2004). This proposal is schematically illustrated in (50):

(50)



Note that the object must first move to the edge of the v^*P phase due to the effects of the Phase Impenetrability Condition (Chomsky 2001), which disallows elements to escape from their containing phases unless they move first to the edge of the phase. However, the movement of the topical object to the edge of the vP phase and then to the low IP area does not take place because of the presence of the topical subject (or its silent copy) in Spec, vP . We propose that there is no OG in VSO clauses because the topical object cannot target Spec,Topic Phrase of the low IP area, which,

according to our proposal, is the place where elided elements can be licensed in JA grammar.

As for SVA constructions, we propose that the OG in such constructions is possible because the thematic (topical) subject is not base-originated in Spec,vP. As discussed in section 5, the standard analysis of SVO clauses where the subject is a topic in Arabic generative grammar is that the subject is base-generated in the CP, whereas its thematic position is filled with a pro. We suggest that the pro in Spec,vP does not trigger an intervention effect against the movement of the topical object to the low IP because the subject pro (in Spec,vP) does not necessarily have a topic feature. Evidence for this comes primarily from sentences including a pro that does not refer to an already-established element in the relevant discourse. Consider the following example, seen in a news headline:

- (51) *ḏabaḥ* *dʒa:r-uh* *ʔalafa:n* *masʕaf* *sijja:rah*
 kill.PST-3SG.M neighbour-his for parking car
 ‘(He) killed his neighbour for the parking spot.’

In sentence (51), the subject pro is used despite the fact that no previous discourse is mentioned. The pro subject is understood to refer to a [3SG.M] entity whose identity is not revealed.

The exchange in (52) also provides evidence that the subject pro may not be established in the previous discourse; it is used as an answer to a what’s-up question that presupposes no previous discourse:

- (52) *ʃu:* *sʕa:jir*
 what happening
 ‘What is happening?’
ma: *raḥ* *ʔizi:du* *ʔir-rawa:tib*
 not will raise-IPFV-3PL.M DEF-wages
 ‘They will not raise the wages.’

We take this as evidence that not every instance of a pro requires a topic feature.

An anonymous reviewer questions whether the object can drop in *ka:n*-topic-verb-object sentences. In fact, according to our judgment and that of our participants, an object cannot be dropped in *ka:n*-topic-verb-object, as shown in the following sentences:

- (53) *ka:n* *mudi:r* *ʔil-midraseh* *ʔiwaggiʕ*
 was principal DEF-school sign.IPFV.3SG.M
 **(ʔil-kufu:f)* *ʔisʕsubuḥ*
 DEF-reports morning
 ‘The school principal was signing the reports in the morning.’

The observation that the object cannot drop in this type of clause is expected, as the subject in such cases is assumed to be a topic (see Jarrah and Abusalim 2021); therefore, the subject prevents the topical object from going to the left periphery.

On the other hand, when the subject in *ka:n*-subject-verb-object sentences is a focus, the object can drop, as shown in the following sentence:

- (54) *ka:n* *mudi:r* *?il-midraseh* *muf* *?il-murfid*
 was principal DEF-school not DEF-counselor
 ?iwaggiʃ (*?il-kufu:f*) *?isʕsubuħ*
 sign.IPFV.3SG.M DEF-reports morning
 ‘The school principal, not the counselor, was signing (the reports) in the morning.’

Given the fact that the subject is a corrective focus in (54), the object can escape the effects of the subject, moving to the low IP area. This is because the subject bears a [FOCUS] feature, whereas the object bears the [TOPIC] feature. We take this as evidence that focus and topic are distinct and do not cause defective intervention effects in JA grammar.

7. Conclusion

We have provided a syntactic account of the observation that in JA, the object can drop without being resumed by a clitic on the verb in SVA clauses but not in VSO clauses. We have proposed that this observation can be explained in terms of the featural (and hence informational) content of the subject and the object as well as a proposed principle that elements can be elided once they reach Spec,Topic Phrase. In SVO clauses, the object can reach the Spec,Topic Phrase of the low IP area, non-intercepted by the *pro* that fills Spec,vP. The thematic subject in SVO clauses is a CP element that does not interfere in the movement of the topical object to the low IP area. On the other hand, the object cannot be dropped in VSO clauses because it cannot reach the low Topic position due to the interference of the topical subject, following relativized minimality. In other words, the object is forced to remain in situ because the subject has the [TOPIC] feature and is located in Spec,vP, causing an intervention effect against the movement of any element that bears a similar feature, and blocking ellipsis. On these grounds, we provide new evidence for the strength of intervention effects in JA grammar supporting an analysis for JA where low topics are derived, and CP peripheral topics are externally merged in their surface position.

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References

- Albuhayri, Salem. 2019. Information structure in standard Arabic verbal sentences. Doctoral dissertation, University of Wisconsin-Milwaukee.
- Alexiadou, Artemis, and Elena Anagnostopoulou. 1998. Parametrizing AGR: Word order, V-movement and EPP-checking. *Natural Language & Linguistic Theory* 16(3): 49–539.

- Al-Shawashreh, Ekab. 2016. Aspects of grammatical variation in Jordanian Arabic. Doctoral dissertation, University of Ottawa.
- Alshamari, Murdhya Radad D. 2017. Topic particles in the North Hail dialect of Najdi Arabic. Doctoral dissertation, Newcastle University.
- Anagnostopoulou, Elena, and Martin Everaert. 1999. Toward a more complete typology of anaphoric expressions. *Linguistic Inquiry* 30(1): 97–119.
- Anagnostopoulou, Elena, and Martin Everaert. 2013. Identifying anaphoric dependencies. In *Diagnosing Syntax*, ed. Lisa Cheng and Norbert Corver, 341–370. Oxford: Oxford University Press.
- Aoun, Joseph E., Elabbas Benmamoun, and Lina Choueiri. 2010. *The syntax of Arabic*. Cambridge: Cambridge University Press.
- Bianchi, Valentina, and Mara Frascarelli. 2010. Is topic a root phenomenon? *Iberia* 2(1): 43–88.
- Belletti, Adriana. 2004. Aspects of the low IP area. In *The structure of IP and CP: The cartography of syntactic structures*, ed. Luigi Rizzi, 16–51. Oxford: Oxford University Press.
- Belletti, Adriana. 2005. Extended doubling and the VP periphery. *Probus* 17: 1–35.
- Chafe, Wallace. 1987. Cognitive constraints on information flow. In *Coherence and grounding in discourse*, ed. R. Tomlin, 21–51. Amsterdam: John Benjamins.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. M. Kenstowicz, 1–52. Cambridge: MIT Press.
- Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. Oxford: Oxford University Press.
- Van Craenenbroeck, Jeroen. 2017. VP-ellipsis. In *The Blackwell companion to syntax*, ed. Martin Everaert and Henk van Riemsdijk, 1–35. Oxford: Wiley-Blackwell.
- Van Craenenbroeck, Jeroen, and Anikó Lipták. 2008. On the interaction between verb movement and ellipsis: New evidence from Hungarian. In *Proceedings of the 26th West Coast Conference on Formal Linguistics*, ed. Charles B. Chang and Hannah J. Haynie, 138–146. Somerville, MA: Cascadia Press.
- Van Craenenbroeck, Jeroen, and Jason Merchant. 2013. Ellipsis phenomena. In *The Cambridge handbook of generative syntax*, ed. Marcel den Dikken, 701–745. Cambridge: Cambridge University Press.
- El-Yasin, Mohammed Khalid. 1985. Basic word order in classical Arabic and Jordanian Arabic. *Lingua* 65(1–2): 107–122.
- Fehri, A. Fassi. 1993. *Issues in the structure of Arabic clauses and words*. Dordrecht: Kluwer.
- Frascarelli, Mara. 2007. Subjects, topics and the interpretation of referential pro: An interface approach to the linking of (null) pronouns. *Natural Language & Linguistic Theory* 25: 691–734.
- Frascarelli, Mara, and Roland Hinterhölzl. 2007. Types of topics in German and Italian. In *On information structure, meaning and form*, ed. Kerstin Schwabe and Susanne Winkler, 87–116. Amsterdam: John Benjamins Publishing Co.
- Givón, Talmy. 1983. *Topic continuity in discourse: A quantitative cross-language Study*, vol. 3. Amsterdam: John Benjamins Publishing.
- Hankamer, Jorge, and Ivan Sag. 1976. Deep and surface anaphora. *Linguistic Inquiry* 7(3): 391–428.
- Hoji, Hajime. 1998. Null object and sloppy identity in Japanese. *Linguistic Inquiry* 29: 127–152.
- Jarrah, Marwan. 2019a. Record your agree: A case study of the Arabic complementizer ?inn. *Journal of Linguistics* 55(1): 83–122.
- Jarrah, Marwan. 2019b. A cartographic approach to embedded word order in Jordanian Arabic. *Folia Linguistica* 53(2): 367–409.
- Jarrah, Marwan. 2023. Passive vs. unaccusative predicates: A phase-based account. *Natural Language & Linguistic Theory* 41: 1397–1424.
- Jarrah, Marwan, and Nimer Abusalim. 2021. In favour of the low IP area in the Arabic clause structure: Evidence from the VSO word order in Jordanian Arabic. *Natural Language & Linguistic Theory* 39(1): 123–156.
- Jarrah, Marwan, and Murdhya Alshamari. 2017. The syntax of the evidential particle jikil in Jordanian Arabic. *Italian Journal of Linguistics* 29(2): 29–56.
- Jayaseelan, Karattuparambil. 2008. Topic, focus and adverb positions in clause structure. *Nanzan Linguistics* 4: 43–6.
- Jlassi, Mohamed. 2013. The multiple subject construction in Arabic: Evidence from subject doubling in Tunisian Arabic. Doctoral dissertation, Newcastle University.

- Johnson, Kyle.** 2001. What VP-ellipsis can do, and what it can't, but not why. In *The handbook of contemporary syntactic theory*, ed. Mark Baltin and Chris Collins, 439–479. Oxford: Blackwell.
- Kim, Soowon.** 1999. Sloppy/strict identity, empty objects, and NP ellipsis. *Journal of East Asian Linguistics* 8(4): 255–284.
- Kim, Dganit Jenia, and Tal Siloni.** 2020. The dative dispositional construction in Russian. *Linguistic Inquiry* 51(2): 237–279.
- Kiss, Katalin É.** 1998. Identificational vs. information focus. *Language* 74(2): 245–273.
- Kratzer, Angelika.** 1998. Scope or pseudoscope? Are there wide-scope indefinites? In *Events and grammar*, ed. Susan Rothstein, 163–196. Dordrecht: Springer Netherlands.
- Lambrecht, Knud.** 1994. *Information structure and sentence form: Topic, focus and the mental representations of discourse referents*. Cambridge: Cambridge University Press.
- Landau, Idan.** 2020. On the nonexistence of verb-stranding VP-ellipsis. *Linguistic Inquiry* 51(2): 341–365.
- Lipták, Anikó.** 2015. Identity in ellipsis: An introduction. *Lingua* 166: 155–171.
- Merchant, Jason.** 2019. Ellipsis: A survey of analytical approaches. In *The Oxford handbook of ellipsis*, ed. Jeroen van Craenenbroeck and Tanja Temmerman, 19–45. Oxford: Oxford University Press.
- Mohammad, Mohammad.** 1999. The syntax of indefinite subjects in equative sentences in Palestinian Arabic. Ms., University of Florida.
- Mohammad, Mohammad A.** 2000. *Word order, agreement, and pronominalization in Standard and Palestinian Arabic*. Amsterdam: John Benjamins.
- Oku, Satoshi.** 1998. A theory of selection and reconstruction in the Minimalist perspective. Doctoral dissertation, University of Connecticut.
- Ouhalla, Jamal.** 1997. Remarks on focus in Standard Arabic. In *Perspectives on Arabic linguistics: Papers from the Tenth Annual Symposium on Arabic Linguistics*, ed. Mushira Eid and Robert R. Ratcliffe, 9–45. Amsterdam: John Benjamins.
- Park, Myung-Kwan.** 1997. The syntax of VP ellipsis in Korean. *Language Research* 33: 629–648.
- Pesetsky, David.** 1987. Wh-in-situ: movement and unselective binding. In *The representation of (in)definiteness*, ed. Eric J. Reuland and Alice G. B. Ter Meulen, 98–129. Cambridge: MIT Press.
- Pierrehumbert, Janet, and Julia Hirschberg.** 1990. The meaning of intonational contours in the interpretation of discourse. In *Intentions in communication*, ed. Philip R. Cohen, Jerry Morgan, and Martha E. Pollack, 271–311. Cambridge, MA: MIT Press.
- Reinhart, Tanya.** 1981. Pragmatics and linguistics: an analysis of sentence topics. *Philosophica* 27: 53–94.
- Reinhart, Tanya, and Tal Siloni.** 2005. The lexicon-syntax parameter: Reflexivization and other arity operations. *Linguistic Inquiry* 36(3): 389–436.
- Rizzi, Luigi.** 1990. *Relativized minimality*. Cambridge, MA: MIT Press.
- Rizzi, Luigi.** 1997. The fine structure of the left periphery. In *Elements of grammar: Handbook in generative syntax*, ed. Liliane Haegeman, 281–337. Dordrecht: Kluwer.
- Rizzi, Luigi.** 2004. Locality and left periphery. *Structures and beyond: The cartography of syntactic structures* Vol. 3: 223–251.
- Rizzi, Luigi.** 2005. On some properties of subjects and topics. In *Contribution to the thirtieth incontro di grammatica generativa*, ed. Laura Brugué, Giuliana Giusti, Nicola Munaro, Walter Schweikert, and Giuseppina Turano, 203–224. Venezia: Cafoscarina.
- Rizzi, Luigi.** 2006. On the form of chains: Criterial positions and ECP effects. In *Wh-movement: Moving on*, ed. Lisa Lai-Shen Cheng and Norbert Corver, 97–134. Cambridge, MA: MIT Press.
- Rizzi, Luigi, and Ur Shlonsky.** 2007. Strategies of subject extraction. In *Interfaces + recursion = language? Chomsky's minimalism and the view from syntax-semantics*, ed. Uli Sauerland and Hans-Martin Gärtner, 115–160. Berlin: de Gruyter.
- Rizzi, Luigi.** 2014. Some consequences of criterial freezing. In *Functional structure from top to toe: The cartography of syntactic structures*, ed. Peter Svenonius, 19–46. Oxford: Oxford University Press.
- Sakamoto, Yuta.** 2015. Disjunction as a new diagnostic for (argument) ellipsis. In *NELS 45*, ed. Thuy Bui and Deniz Özyıldız, 15–28. Amherst: University of Massachusetts Graduate Linguistic Student Association.
- Schwarzschild, Roger.** 1999. GIVENness, AvoidF and other constraints on the placement of accent. *Natural Language Semantics* 7: 141–177.
- Shlonsky, Ur.** 1997. *Clause structure and word order in Hebrew and Arabic: An essay in comparative Semitic syntax*. Oxford: Oxford University Press.

- Siloni, Tal.** 2012. Reciprocal verbs and symmetry. *Natural Language and Linguistic Theory* 30: 261–320.
- Soltan, Usama.** 2007. On formal feature licensing in minimalism: Aspects of Standard Arabic morphosyntax. Doctoral dissertation, University of Maryland, College Park.
- Soltan, Usama.** 2020. On null objects in Egyptian Arabic: An argument ellipsis analysis. *Brill's Journal of Afroasiatic Languages and Linguistics* 12(2): 204–259.
- Takahashi, Daiko.** 2007. Argument ellipsis from a cross-linguistic perspective. Paper presented at GLOW, Asia, VI.
- Tescari Neto, Aquiles.** 2022. “Adverbs and functional heads” twenty years later: Cartographic methodology, verb raising and macro/micro-variation. *The Linguistic Review* 39(2): 293–331.