On null objects in Egyptian Arabic: Evidence for Argument Ellipsis

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Goals and Roadmap

(i) Describe the facts related to null objects in Egyptian Arabic.

(ii) Discuss three potential analyses and challenges to each.

(iii) Propose an analysis of null objects in terms of Argument Ellipsis, an operation that deletes objects at PF.

(iv) Provide an implementation of the analysis within a phase-based minimalist framework.

(v) Conclude
Null subjects are expectedly allowed

1) bi-yi-dris-ū yabānī
   ASP-IPFV-study-3PL Japanese
   ‘They are studying Japanese.’
Null objects are unexpectedly allowed

2)  [antecedent_clause  Mona  laʔ-it  [kitāb]i]
    Mona  found-3SGF  book  and

    [NO_clause  Huda  kamān  laʔ-it  △i]
    Huda  also  found-3SGF

‘Mona found a book, and Huda found [a book] too.’
But not always: An (in)definiteness restriction

3) *Mona la?-it [ʔil-kitāb]i wi Huda kamān la?-it $\triangle_i$
Mona found-3SGF the-book and Huda also found-3SGF
Intended: ‘Mona found the book, and Huda found [it] too.’

4) Mona la?-it [ʔil-kitāb]i wi Huda kamān la?-it-u$_i$
Mona found-3SGF the-book and Huda also found-3SGF-it
‘Mona found the book, and Huda found [it] too.’

And an (in)animacy restriction

5) a. *Mona šāḥ-it [rāgil]i wi Huda kamān šāḥ-it △i
   Mona saw-3SGF man and Huda also saw-3SGF
   Intended: ‘Mona saw a man, and Huda saw [a man] too.’

b. *Ahmad ṭābil [mumassil mašhūr]i wi Ali kamān ṭābil △i
   Ahmad met.3SGM actor famous and Ali also met.3SGM
   Intended: ‘Ahmad met a famous actor, and Ali met [a famous actor] too.’

For other languages, cf. Cyrino (2017) and references cited there for Brazilian Portuguese; Suñer and Yépez (1988) for Quiteño Spanish, and Goldberg (2005) for Hebrew, among many others.
The main descriptive fact:

• NOs are allowed in EA only if their antecedent is an indefinite inanimate nominal.
The two main questions:

• First, what is the nature of the null element in object position in such cases?
• Second, how do we account for the grammatical properties of this null element, e.g., the indefiniteness and inanimacy constraints on the occurrence of nominal NOs in the language?
Potential analysis #1: A NO is *pro*
Challenge #1 to the *pro*-analysis

• The definiteness and animacy restrictions are unexpected.
Challenge #2 to the pro-analysis

- The different-entity interpretation of NOs is unexpected, since pro is referential.

7) Mona laʔ-it [kitāb li-Chomsky], wi Huda kamān laʔ-it
   Mona found-3SGF book by-Chomsky and Huda also found-3SGF
   ‘Mona found a book by Chomsky, and Huda found [a book by Chomsky] too.’
Challenge #3 to the pro-analysis

• Perhaps this is a special kind of pro: An indefinite pro.
• But if so, why can’t it occur in subject position?

8)

Speaker A:

a. [talat ｔｕｌāḥ]: ?itkallim-ū maṣa ṭil-ʔustāẓ Ahmad
   three students talked.3PL with the-Mr. Ahmad
   ‘Three students talked with Mr. Ahmad.’

Speaker B:

b. ?aywa wi ?itkallim-ū ʤi maṣa ṭil-ʔustāẓa Mona kamān
   yes and talked.3PL with the-Ms. Mona too
   ‘Yes, and they talked with Ms. Mona too.’
Challenge #4 to the *pro*-analysis: PP arguments can be null, with strict vs. sloppy identity readings

9)

Eman baṣat-it filūs [PP li-ʔahla-hā]ₙ wi Huda baṣat-it hadāyā ∆ᵢ
Eman sent-3SGF money to-family-her and Huda sent-3SGF gifts
‘Eman sent money to her family, and Huda sent gifts.’
In sum,

• A *pro*-analysis of NOs in EA is empirically inadequate.
Potential analysis #2: A NO is a variable A'-bound by a discourse topic operator (Huang 1984)
Challenge #1 to the topic-variable analysis

- Topics have to be definite in Arabic (Aoun et al 2010).

11)  
   a. [؟il-kitāb]i  Mona la?-it-u_i
       the-book Mona found-3SGF-it
       ‘The book, Mona found it.’

   b. *[kitāb]i  Mona la?-it-u_i
       book Mona found-3SGF-it
       ‘A book, Mona found it.’
Challenge #1 to the topic-variable analysis

Mona found-3SGF book and
[NO_clause] Huda kamān la?-it \(\triangle_i\]
Huda also found-3SGF

Mona found a book, and Huda found [a book] too.

Mona found-3SGF book and
[NO_clause] [<TOPIC kitāb>] [Huda kamān la?-it [fi]]
book Huda also found-3SGF
Challenge #2 to the topic-variable analysis

• Under this analysis, NOs are expected to be disallowed within islands (as discussed by Raposo 1986 for European Portuguese), which is not the case in EA.

• I illustrate with two islands.
The relative clause island

13) [A car has just had a flat tire. The following exchange takes place between the driver and a fellow passenger.]

*Speaker A:*

a. lāzim ni-dawwar ʕalā hadd bi-y-ʕayyar
   necessary.PTCP.SGM IPFV-look.1PL for someone ASP-IPFV-change.3SGM
   [kawitšāt],
   tires
   ‘We have to look for someone who changes tires.’

*Speaker B:*

b. [island fī warša bi-t-ʕayyar △] ʕalā
   there repair-shop ASP-IPFV-change.3SGF on
   buʃd ʔitnēn kīlū
   distance two kilometers
   ‘There is a repair-shop that changes [tires] two kilometers away.’
The adjunct island

14) lāzim ni-gīb Ġēši la-ʔann Ahmad
necessary. PTCP. SGM IPFV-bring. 1PL bread for-COMP Ahmad
mā-gāb-š △_{i}
NEG-brought. 3SGM-NEG

‘We have to buy bread because Ahmad didn’t buy [bread].’
In sum,

• A topic-variable analysis of NOs in EA is empirically inadequate.
Potential analysis #3: NOs as the result of Verb-Stranding VP-Ellipsis (VSVPE)

(15) a. 

```
CP
   ├── Antecedent_clause
       │    └── VP_l
       └── NO_clause
            └── C
                └── TP
                    ├── Subj
                    │    └── T'
                    │        └── V_l+T
                    │           └── V_P
                    │                └── #
                    │                    └── Obj
                    └── T'
```

VP-deletion applies after V-to-T raising.

b. [CP [TP Mona [VP la?-it [kitāb]i]]] wi
   Mona found a book and
[CP [TP Huda kamān T+la?-it [VP t+kitāb]i]]
   Huda also found
Challenge #1 to the VSVPE analysis

• There is no evidence that EA has VPE to begin with.

16) *Ahmad kān bi-yilḥab koora wi Ali kamān kān
Ahmad was.3SGM ASP-play.3SGM soccer and Ali also was.3SGM
Intended: ‘Ahmad was playing soccer, and Ali was too.’

17) Ahmad kān bi-yilḥab koora wi Ali kamān
Ahmad was.3SGM ASP-play.3SGM soccer and Ali also
‘Ahmad was playing soccer, and Ali too.’
Challenge #2 to the VSVPE analysis

• There are instances of NO structures where the NO is followed by VP-internal material, e.g., an indirect object.
18) Speaker A:
      Q Mona gave-3SGF money to-Ali
      ‘Did Mona give money to Ali?’

Speaker B:
   b. ʔaywa wa anā simiʔ-t ʔišāfa ʔinn-hā ?idd-it ʔi
      yes and I heard-1SG rumor COMP-she gave-3SGF
      li-Hasan kamān
      to-Hasan also
      ‘Yes. And I heard a rumor that she gave [money] to Hasan as well.’
Challenge #3 to the VSVPE analysis

• For this analysis to work, we have to assume that VPE has to selectively apply only to VPs with indefinite inanimate nominals in object position.
In sum,

• A VSVPE analysis of NOs in EA is empirically inadequate.
Proposal: NOs are the result of Argument Ellipsis

• *Argument Ellipsis* (AE) is a syntactic operation whereby an argument is unpronounced at PF, but is interpreted at LF under association with an antecedent, thereby giving rise to the observed object gap effect.
LF-Copying vs. PF-Deletion

19) a. Overt syntax: [antecedent_clause ... [VP V Obj]] ... [ellipsis_clause ... [VP V e]]
   b. LF:
      [antecedent_clause ... [VP V Obj]] ... [ellipsis_clause ... [VP V Obj]]
      \[\text{LF-copying}\]

20) a. Overt syntax and LF: [antecedent_clause ... [VP V Obj]] ... [ellipsis_clause ... [VP V Obj]]
   b. PF:
      [antecedent_clause ... [VP V Obj]] ... [ellipsis_clause ... [VP V Obj]]
      \[\text{PF-deletion}\]
Empirical advantage #1: The different-entity interpretation follows

21) Mona laʔ-it [kitāb li-Chomsky], wi Huda kamān laʔ-it
Mona found-3SGF book by-Chomsky and Huda also found-3SGF
‘Mona found a book by Chomsky, and Huda found [a book by Chomsky] too.’

22) [antecedent_clause [TP Mona] [VP laʔ-it [kitāb li-Chomsky],]] wi
[ellipsis_clause [TP Huda kamān [VP laʔ-it [kitāb li-Chomsky],]]]
Empirical advantage #2: Stranding VP-internal materials follows

23)  

Speaker A:

   Q Mona gave-3SGF money to-Ali
   ‘Did Mona give money to Ali?’

Speaker B:

b. ?aywa wa anā simiš-t ?išā’a ?inn-hā ?idd-it △i
   yes and I heard-1SG rumor COMP-she gave-3SGF
   li-Hasan kamān
   to-Hasan also
   ‘Yes. And I heard a rumor that she gave [money] to Hasan as well.’

24)  

\[
\text{[antecedentclause} \ldots \text{[VP Obj]} \text{PPindirectobject]} \text{[ellipsisc clause} \ldots \text{[VP Obj]} \text{PPindirectobject]}\]
Empirical advantage #3: Null PP arguments are expected, as is their strict-sloppy reading ambiguity.

25) ḫamāṣat-it filūs [PP li-ʔahla-hā]i wi ḫumāṣat-it hadāyā Δ]
Eman sent-3SGF money to-family-her and Huda sent-3SGF gifts
‘Eman sent money to her family, and Huda sent gifts.’
In sum,

• An AE analysis accounts for
  - The different-entity interpretation of nominal NOs,
  - The availability of null PPs and their strict and sloppy identity readings, and
  - The fact that VP-internal material can be stranded inside the NO-clause.

• But two related questions remain:
  - How do we implement AE within our theory of grammar?
  - How do we account for the definiteness and animacy restrictions?
The Anti-Agreement Hypothesis

• Elision of arguments in radical pro-drop languages has been hypothesized to be tied to absence of agreement.

• Saito (2007) provides a minimalist implementation of this idea, which has come to be known the Anti-Agreement Hypothesis (AAH).

• Under this approach, arguments can be elided only if they do not engage in the structural case-agreement system. Possible in Japanese; not possible in English. Not easy to extend this analysis to EA, though.
Anti-Agreement+: The DP/NP distinction and relativized phasehood

- Cheng (2013), building on both Saito (2007) and Bošković (2008, 2012), argues that AE targets NPs, but not DPs.

26) a. XP is a phase iff the head X bears uninterpretable Case features and the features are checked off.
   b. Only the complement of a phase head may undergo PF-deletion.
   c. Structural Case must be checked by a functional head; inherent Case must be checked by a lexical head. (This is referred to as a parallelism condition on case feature checking.)
   d. Case features in English (and, more generally, DP-languages) are structural and are located in D. Case features in Japanese and Mandarin Chinese (and, more generally, NP-languages) are inherent/contextual and are located in N.
Anti-Agreement+: The DP/NP distinction and relativized phasehood

- Under this analysis, the availability of AE or lack thereof is explained as follows:
  - In English-type languages, arguments are always DPs and as a result have to engage in the structural case-agreement system, hence cannot be dropped.
  - In Japanese-type languages, arguments are bare NPs and do not engage in the structural case-agreement system, hence they can be dropped.
Anti-Agreement+: The DP/NP distinction, and relativized phasehood

• I propose that EA is a language where both types of behavior hold, given its article system:
  - Definite nominals are **DPs**, hence engage in the structural case-agreement system and therefore cannot be elided.
  - By contrast, indefinite nominals are **NPs**, hence do not engage in the structural case-agreement system and therefore can be elided.
The NP/DP distinction in Egyptian Arabic

27)

a. Definite Nominals
   DP
   \[\begin{array}{c}
   D \\
   NP \\
   N
   \end{array}\]

b. Indefinite Nominals
   NP
   \[\begin{array}{c}
   N
   \end{array}\]
Case licensing of DPs vs. NPs

28)

Not a complement of the phase head, hence non-elidable at PF.

Complement of the phase head, hence elidable at PF.
Elision of indefinite nominals is possible

29) a. [antecedent_clause [TP Mona [VP la?-it [kitāb]i]]] wi Mona found-3SGF book and

[ellipsis_clause [TP Huda kamān [VP la?-it △i]]]
Huda also found-3SGF

‘Mona found a book, and Huda found [a book] too.’

b. [antecedent_clause [TP Mona [VP v [VP Vla?-it [NP Nkitāb[Case]]]]]] wi
[Case

[ellipsis_clause [TP Huda kamān [VP v [VP Vla?-it [NP Nkitāb[Case]]]]]]
[Case

41
Elision of definite nominals is not possible

30) a. *[antecedent_clause [TP Mona [vP laʔ-it [?il-kitāb]i]]] wi
Mona found-3SGF book and
[ellipsis_clause [TP Huda kamān [vP laʔ-it \(\triangle i\)]]]
Huda also found-3SGF

Intended: ‘Mona found the book, and Huda found [it] too.’

b. *[antecedent_clause [TP Mona [vP v[\(\varnothing\)] [vP Vlaʔ-it [DP D?il[Case] [NP Nkitāb]]]]] wi
 Agree
[ellipsis_clause [TP Huda kamān [vP v[\(\varnothing\)] [vP Vlaʔ-it [DP D?il[\(\varnothing\)Case] [NP Nkitāb]]]]]
 Agree

42
Some empirical consequences
Empirical consequence #1: PP arguments can undergo AE

31)

Eman baʕat-it filūs [PP li-ʔahla-hā], wi Huda baʕat-it hadāyā \( \triangle_i \)
Eman sent-3SGF money to-family-her and Huda sent-3SGF gifts

‘Eman sent money to her family, and Huda sent gifts.’
Empirical consequence #2: Complements of want-type predicates can undergo AE

32) Ahmad ʕāyiz [yi-dris luyawiyyāt] wi Huda kamān
Ahmad want.PTCP.3SGM IPFV-study.3SGM linguistics and Huda also
ʕāyza \( \triangle_i \)
want.PTCP.3SGF
‘Ahmad wants to study linguistics, and Huda also wants [to study linguistics].’

33) Ahmad ʕāyiz [yi-zūr ʕilt-u] wi Huda kamān
Ahmad want.PTCP.3SGM IPFV-visit.3SGM family-his and Huda also
ʕāyza \( \triangle_i \)
want.PTCP.3SGF
‘Ahmad wants to visit his family, and Huda does too.’ \( \checkmark \) Strict \( \checkmark \) Sloppy
Empirical consequence #3: Subjects cannot undergo AE

34) Speaker A:
   a. [talat ṭulāb]i ʿitkallim-ū maša ʔil-ʔustāz Ahmad  
      three students talked.3PL with the-Mr. Ahmad  
      ‘Three students talked with Mr. Ahmad.’

Speaker B:
   b. ʔaywa wi ʿitkallim-ū ʔi/*j maša ʔil-ʔustāza Mona kamān  
      yes and talked.3PL with the-Ms. Mona too  
      ‘Yes, and they talked with Ms. Mona too.’
Empirical consequence #4: The inanimacy constraint on NOs

35)  
a. *Mona šāf-it [rāgil], wi Huda kamān šāf-it $\triangle_i$
Mona saw-3SGF man and Huda also saw-3SGF
Intended: ‘Mona saw a man, and Huda saw [a man] too.’

b. *Ahmad ʔābil [mumassil mašhūr], wi Ali kamān ʔābil $\triangle_i$
Ahmad met.3SGM actor famous and Ali also met.3SGM
Intended: ‘Ahmad met a famous actor, and Ali met [a famous actor] too.’
Empirical consequence #4: The inanimacy constraint on NOs

• [-animate] plurals, as opposed to [+animate] plurals, typically behave as syntactically singular, e.g., for the purpose of verbal and adjectival agreement.

37) a. ?il-kutub ḏāf-it
    the-books got.lost-3SG
    ‘The books were lost.’

   b. ?il-kutub yāly-a
    the-books expensive-SGF
    ‘The books are expensive.’

38) a. ?il-wilād waṣal-ū
    the-boys arrived-3PL
    ‘The boys arrived.’

   b. ?il-wilād mabsūṭ-īn
    the-boys happy-PL
    ‘The boys are happy.’
Empirical consequence #4: The inanimacy constraint on NOs

36)
Empirical consequence #4: The inanimacy constraint on NOs

• Num, a functional head with a case feature, can only have its case feature licensed by a functional head, $v$ in the verbal domain.

$39) \left[ V_P \, v_\phi \left[ V_P \, V \left[ N_u m_P \, N_u m[C_a s e] \, [N_P \, N] \right] \right] \right]$  

• A NumP in object position, just like a DP, is not the complement of a phase head, and therefore cannot undergo AE.
Conclusions

• NOs in EA are not instances of a null pro or variables bound by a null topic operator.
• A Verb-Stranding VP-Ellipsis account of NOs is also empirically inadequate.
• NOs in this language result from AE, an operation that targets arguments for deletion at PF.
Conclusions

• An AE analysis has several empirical advantages, including:
  - An account for the different-entity interpretation of NOs,
  - The fact that PP internal arguments can be null, with both strict identity and sloppy identity readings,
  - The indefiniteness and inanimacy restrictions on the antecedents of NOs, and
  - The fact that subjects, in contrast to objects, cannot undergo AE.
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Selected references


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Shukran gaziilan!

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