

## **Cognate Objects as a diagnostics for unergatives: A Case Study of Sason Arabic<sup>1</sup>**

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### **1. Introduction**

- We investigate the patterns of cognate objects (COs) associated with unergatives and unaccusatives in Sason Arabic, an endangered Arabic dialect spoken in eastern Turkey (Jastrow 2005, Akkuş 2017).
- *Proposal*: COs of both unergatives and unaccusatives are not true arguments, but constitute rhematic complements in the sense of Ramchand (2008), therefore cannot be used as a diagnostics for unergative-unaccusative distinction in the language.

### **2. Previous Literature on Cognate Objects**

- COs are noun phrases containing a noun which is morphologically related to the verb.

- (1) a. John danced a (slow) *dance*.  
b. Mary sang a (beautiful) *song*.

- The two central questions that have been the focus of the previous research on COs are:
  - i. What can they tell us about the predicate-types?
  - ii. Are they arguments or adjuncts?

The widely held generalization about the occurrence of cognate objects is stated in Kuno and Takami (2004:107) as *the Unergative Restriction on the Cognate Object Construction*:

- (2) *Unergative Restriction on the Cognate Object Construction*:  
Only unergative verbs can appear in the cognate object construction. No unaccusative verbs can.

- This generalization has been used as a diagnostics to differentiate between unergatives and unaccusatives. It has been argued that intransitives which can take a cognate object are typically unergative verbs, i.e., verbs whose subjects are (non-)volitional initiators, but not unaccusatives with undergoer subjects. (See furthermore Keyser and Roeper 1984, Larson 1988, Massam 1992, Levin and Rappaport Hovav 1995, and Hale and Keyser 1993, among others.)

- (3) a. Malinda smiled her most enigmatic smile. (Levin and Rappaport Hovav, 1995: 40)  
b. The baby slept a sound sleep. (Nakajima 2006: 677)

- However, Kuno and Takami (2004:116, also in Nakajima 2006) observe that some unaccusative verbs can occur with cognate objects, (4).

- (4) a. The tree grew a century's growth within only ten years.  
b. The stock market dropped its largest drop in three year today.

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- The question that arises is: What are the implications of the possibility of unaccusative verbs allowing cognate objects for Perlmutter's (1978) *Unaccusative Hypothesis (UH)*?
- This is closely related to the property of cognates, that is whether they are argumental or adverbial (Pereltsvaig 1999, 2002). Crucially, if the COs occupy the object position, rather than the adjunct position, this would contradict the UH, since the object position of unaccusatives would be underlyingly occupied by the surface subject.

Previous studies on the nature of COs can be divided into two camps:

- i. COs are thematic and/or underlying arguments of their predicates (cf. Hale & Keyser (1993) for English, Macfarland (1995) for English and French, Massam (1990) for English, Matsumoto (1996) for English and Japanese)
  - ii. COs are adjuncts (cf. Jones (1988) for English, Moltmann (1989) for English and German, Zubizarreta (1987) for English).
- Studies like Pereltsvaig (1999, 2002), Nakajima (2006) argue for both types. For instance, Nakajima makes a distinction between argumental and adverbial COs and points out that argumental COs are only possible with unergatives, whereas the COs certain unaccusatives take are adverbial, still arguing for the role of COs in the unaccusative-unergative split.

### 3. Cognate Objects in Sason Arabic

- The first striking fact about COs in Sason Arabic is that they can occur with a wide range of predicates. In Sason, COs can occur not only with unergative verbs, as in (5), but also with transitive verbs that have an overt direct object (italicized in (6)). Moreover, in Sason unaccusative verbs can also productively take COs as in (7).

- (5) a. **zake-ma** kotti **zak.** b. sabi **bayu ibki**  
 laugh-a bad laughed.3m boy crying cry.3m  
 He laughed a bad laugh. The boy is crying a cry.
- (6) a. Ali ams *kitab* **qaru qara.** b. *axpeys* **akıl ayale.**  
 ali yesterday book reading read.3m. bread eating ate.3f  
 'Ali read book(s) yesterday.' 'She ate bread.'
- (7) a. badılcanad **pat-ma** gize kotti **patto.**  
 tomatoes rotting-a such bad rotted.3pl  
 'The tomatoes rotted such a bad rotting.'  
 b. çiçak **ubs-ma** boş kotti **ubes.**  
 flower fading-a very bad faded.3m  
 'The flower faded a bad fading.'  
 c. nahar **talı-ma** koys **tala** ala sari  
 sun appearing-a beautiful appeared.3m this morning  
 The sun appeared a beautiful appearance this morning.

Unaccusatives and unergatives exhibit certain differences in Sason Arabic:

- Resultatives which modify DPs originating from the object position are only compatible with unaccusatives, but not with unergatives, (8) (e.g. Simpson 1983, Levin and Rappaport Hovav 1995).

- (8) a. mayn cimed has (unaccusative)      b. \*Kemal faqaz raxu (unergative)  
 water froze.3m solid      kemal ran.3m sick  
 'The water froze solid'      *Intended: 'Kemal ran himself sick.'*

- Only unaccusatives are compatible with non-active morphology, as in (9) .

- (9) a. fistox in-faş (unaccusative)      b. Kemal (\*in)-faqaz (unergative)  
 roof Nact-collapse      kemal Nact-ran  
 'The roof collapsed.'      'Kemal ran.'

- Likewise, COs can appear with predicates from all aspectual classes: activities (10)a, accomplishments (10)b, and achievements (10)c:

- (10) a. **faqəz** le sari **faqaze**.  
 running of morning ran.3f  
 'She ran a morning run.'
- b. ene **addil**-ma imbala diqqat **adlo**.  
 room building-a without care made.3pl  
 'They built the room carelessly.'
- c. **mot**-ma xəfəf **mat**.  
 death-a quick died.3m  
 'He died a quick death.'

- COs are also possible with light verb constructions, as in (11).<sup>2</sup>

- (11) parke mahv say sare  
 parquet destroy occurring occur.past.3m  
 'The parquet got destroyed.'

➤ *Implication:* the fact that COs can occur with almost any type of predicate is problematic for the hypothesis that all COs are arguments of a verb. Thus it seems like at least some COs in Sason are not selected, and there is no restriction on the occurrence of COs in terms of the argument structures of the predicates.

- Kuno and Takami (2004) argue that COs are acceptable if they denote a resultant object/product of an activity/process that the verb denotes. If the verb denotes only the result without involving a process, as in the case of *break*, *occur*, *appear*, or only the manner of the process, then COs are not possible.
- However in Sason there is no such restriction, as not only the verbs denoting processes, but also the ones denoting only results (12), or manner (13) are compatible with COs:

- (12) a. şuşa **qarf** **mqaraf**  
 glass breaking broke.3m  
 'The glass broke a breaking.'
- b. nahar **talū**-ma koys **tala** ala sari  
 sun appearing-a beautiful appeared.3m this morning  
 'The sun appeared a beautiful appearance this morning.'

<sup>2</sup> Thanks to Julie Legate for bringing this point to our attention. This shows that the CO occurs in a position distinct from the non-verbal element in light verb constructions.

- c. dave      **say**      **sare**,      hama   boş   nes   ma-ca.  
wedding occurring occurred.3f   but   many   person neg.3m  
'The wedding occurred an occurring, but not many people came.'
- (13) a. babe   **fadu**-ma   hedi **mfada**      b. John **maju**-ma xıfef **ca**  
door opening-a   slow opened.3m      John coming-a quick came.3m  
'The door opened a slow opening.'      'John came a quick coming.'
- c.      şelç   **zabu**-ma   hedi **zab**  
snow melting-a   slow melt  
'The snow melted a slow melting.'

#### 4. Are SA cognate objects arguments or adverbials?

- In order to address the question of whether COs are arguments or adverbials in SA, we need to define the criteria that distinguish between the two kinds of phrases (see Pereltsvaig (2002)). Following Pereltsvaig (2002), we take the following properties to be characteristic of argument NPs:
  - compatibility with strong determiners,
  - pronominalization,
  - coordinations
- Moreover, we also suggest the following as further tests to determine the (non-)argument status of COs.
  - wh-formation,
  - word order,
  - ability to take possessives

##### 4.1. Compatibility with Determiners

- Pereltsvaig (2002) argues that there are two types of COs, i.e. argumental and adverbial COs in Biblical Hebrew and Modern Hebrew.
- Unlike arg-COs in (14), adv-COs cannot occur with strong determiners, as shown in (15).

- (14) a. Weak Determiner + Arg-CO  
**akadnu rikudim** rabim / šney **rikudim**. (Pereltsvaig 2002:112)  
(we) danced dances many / two dances  
'We danced many dances / two dances.'
- b. Strong Determiner + Arg-CO  
**rakadnu** 'et kol ha-**rikudim** / 'et ha-**rikud** ha-ze.  
(we) danced ACC all the-dances / ACC the-dance the-this  
'We danced all the dances / most of the dances / this dance.'
- (15) a. Weak Determiner + ADV-CO  
Tali **bikra** 'et Dani **bikurim** rabim / šney **bikurim**. (Pereltsvaig 2002:112)  
Tali visited ACC Danny visits many / two visits  
'Tali visited Danny many times / twice.'
- b. Strong Determiner + ADV-CO  
\*Tali **bikra** 'et Dani 'et kol ha-**bikurim** / 'et ha-**bikur** ha-ze.  
Tali visited ACC Danny ACC all the-visits / ACC the-visit the-this  
*Intended*: 'Tali visited Danny all the visits/most of the visits/this visit.'

- Sason Arabic differs from Hebrew in not allowing any type of determiner, weak or strong on COs, as seen in (16)a-b, which can typically occur on regular objects as illustrated in (16)c.

- (16) a. \*sabiyad      **zak**-ten      **zayo**.  
          boys            laugh-two      laughed.3pl  
          ‘The boys laughed two laughs.’  
       b. \*sabiyad      **zakad** kəllen **zayuy**-en.  
          boys            laughs all      laughed.3pl-them  
          ‘The boys laughed all the laughs.’<sup>3</sup>  
       c. sabiyad      *axpeys*-ten      ayalo.  
          boys            bread-two      ate.3pl  
          ‘The boys ate two loaves of bread.’

#### 4.2. Pronominalization

- Now consider pronominalization. As shown in (17)a, COs in Sason cannot be pronominalized, in line with Pereltsvaig’s (1999) hypothesis.
- This contrasts with the regular direct objects in the language, which can occur in the left peripheral domain of a clause and relate to a pronominal element inside the clause yielding a pattern of Clitic Left Dislocation (CLLD) as in (17)b.

- (17) a. \*ay **zake**      qəddam,      **zay-a**      bəlqasti  
          that laughing early      laughed.3m-it on purpose  
          ‘That early laugh, he laughed it on purpose.’  
       b. mase, cab-*a*      ali      ams.  
          table brought.3m-it ali      yesterday  
          ‘The table, Ali brought it yesterday.’

#### 4.3. The ability to take possessives

- COs in Sason are not compatible with possessive suffixes, as in (18).

- (18) a. \***faqzu**      fə xams daqqa      **faqaz**.  
          running-his      in five minutes      ran.3m  
          ‘He ran his run in five minutes.’  
       b. **faqəz**-ma      fə xams daqqa      **faqaz**.  
          running-a      in five minutes      ran.3m  
          ‘He ran a run in five minutes.’

- This property also contrasts with direct objects, which readily take possessives.

- (19) faqaz-na      tərēx-na fə xams daqqa  
       ran-1pl      road-our in five minutes  
       ‘We ran our road in five minutes.’

<sup>3</sup> The only possible weak determiner is the enclitic *-ma*, which however needs to be followed by an adjective, such as *zake-ma gbir* ‘a big laugh’ or be used in the sense of ‘such a ...’. These two contexts support an adverbial interpretation.

#### 4.4. Coordination

- Another test for the syntactic status of cognate objects is coordination. In order for a coordinate structure to be grammatical the two conjuncts have to be of the same syntactic category and/or have the same semantic function.

- (20) a. əbna [boş wa **hab**-ma gbir] **təhabb**-u  
her son a lot and love-a big loves.3f-him  
'She loves her son a lot and with big love.'
- b. \*[**faqəz** wa tərɛx] **faqaze**  
running and road ran.3f  
'She ran a run and the road.'

- Example (20)a shows that the phrase containing the cognate object can be coordinated with an adverb, while in (20)b the coordination of a regular object and a cognate object is ruled out.

#### 4.5. Distribution

- In languages such as English or French COs appear in postverbal position, as do non-cognate direct objects. However, COs and non-cognate direct objects exhibit a distributional asymmetry in Sason. True non-specific objects can occur postverbally in neutral word order (21)a (Akkuş 2017, Akkuş & Benmamoun 2016), while COs cannot (22), thus, they behave differently than true object arguments. As seen in (21)b, the distribution of manner adverbs show parallelism with COs as they also have to occur preverbally, but not postverbally.

- (21) a. zıxar ayalo dondurma b. xifef/hedi ca  
kids ate.3pl ice cream quick /slow came.3m  
'The kids ate ice cream.' 'He came quickly/slowly.'
- (22) a. \*faqəztu faqız b. \*şuşa inqaraf qarf  
ran.1sg running glass broke.3m breaking  
'I ran a running.' 'The glass broke a breaking.'

#### 4.6. Question Formation

- COs in SA can only be questioned with the wh-word *ıstaba* 'how' (23), but not with *şine* 'what' (24), which can be used to question true objects. This implies that they are adverbials:

- (23) A: Kemal **ıstaba** faqaz?  
Kemal how ran.3m  
'How did Kemal run?'  
B: **faqız** **faqaz**  
running ran.3m  
'He ran a run.'
- (24) A: Kemal **şine** faqaz?  
Kemal what ran.3m  
'What did Kemal run?'  
B: faqaz tırex-ma  
ran.3m road-a  
'He ran a track.'

## 5. COs as rhematic material

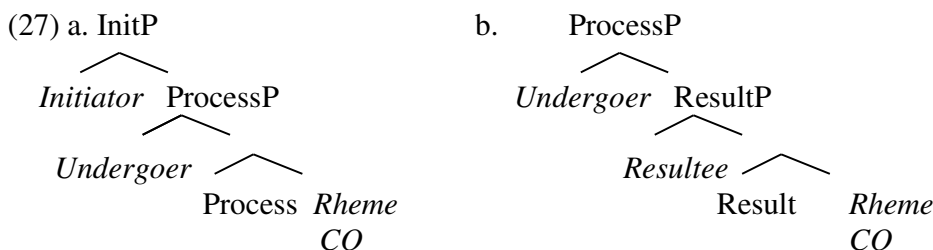
- The various tests applied in the previous section indicate that COs in Sason are adverbial in nature, hence are not part of the argument structure.
- However, they do not make immediate implications regarding the role of COs among predicate types. Nakajima (2006), who makes a distinction between argumental and adverbial COs, argues that only the COs of unergatives (25)a, but not those of unaccusatives (25)b can be passivized, as only COs of unergatives are argumental.

- (25) a. A sound sleep was slept by the baby.  
 b. \*A century's expansion was grown in only ten years by the tree trunk.

- In Sason, however, both COs of unergatives and unaccusatives behave as non-argumentals. First, unlike English, no COs in SA can be the target for passivization.

- (26) a. \*nom in-nam mi zixar                      b. \*pat in-pat  
 sleep pass-slept by children                      rotting pass-rottened  
 'Sleep was slept by the children.'                      'A rotting was rottened.'

- Second, the coordination test also speaks against an argumental approach to COs in Sason since coordination of a direct object and a cognate object is disallowed, which would otherwise be expected if the COs had an argumental status.
- The discussion so far leads to the conclusion that Sason allows non-argumental COs productively both in unergatives and unaccusatives, and COs cannot be a diagnostics for the predicate-type in Sason.
- As COs in SA are not argumental, but behave more like adjuncts, we argue that they constitute rhematic materials in the sense of Ramchand (2008). Ramchand decomposes events into three subevents, InitP, ProcP and ResP and introduces the arguments in the specifiers of the projections associated with these subevents.
- Ramchand classifies adjunct material which cannot act as the subjects of these subevents, but modify them, as Rhemes and introduces them in the complement position of these subevents.
- As COs are non-argumental in SA, they can only be introduced in the complement position of the relevant subevents as rhemes, i.e. as the material modifying the subevent, but never in the specifier position.
- We argue that COs that unergatives take are the rhemes of ProcessP (27)a, while the ones in unaccusatives are the complements of ResultP (27b), modifying these subevents:



- As a rhematic material, a cognate object does not introduce its own subevent.
- It only contributes to/modifies the description of the subevent head.
- Function-wise, COs are used to intensify or modify the degree of the event.

## 6. Conclusion

We conclude that the highly productive and unrestricted use of COs in SA is due to their non-argument status, and as such COs cannot be a testing ground for unergative-unaccusative distinction in the language.

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