On Causee in Sason Arabic

Abstract. This paper aims to understand the syntax of causative constructions in Sason Arabic. We show that in geminate causatives and ‘give’-causatives, the causee is introduced in CauseeP, unlike the embedded agent in ‘make’-causatives, which embed a thematic VoiceP. Despite differing from Voice$^0$ in several respects, Causee$^0$ also exhibits an active-passive-like alternation, providing independent evidence for Legate’s (2014) analysis of the passive. We further distinguish between geminates and ‘give’-causatives on the basis of the (in)compatibility of the causee with an applicative argument. In geminates, Causee and Appl are bundled, and the same argument bears two θ-roles, whereas in other causative constructions, Causee and Appl remain separate.

1. Introduction

Going back to at least Kayne (1975), causative constructions have provided significant insights into various issues, including case marking, mono-/bi-clausality, binding domains and voice alternations. This paper examines the syntax of several indirect causative constructions in Sason Arabic (Semitic, southeastern Turkey), focusing on the type of projection in which the embedded agent is introduced, thus contributing to the typology (cf. Zubizarreta 1985; Guasti 1996; Legate 2014; Harley 2013, 2017a; Key 2013), and voice alternations that this projection may exhibit, particularly in connection with Legate’s (2014) analysis of passives.

Legate (2014) investigates the limitations on the application of the passive based on the presence/absence of a thematic subject in Acehnese (an Austronesian language) and analyses the passive as a subtype of the Voice head itself (see also Chomsky 2000, Legate et al. To Appear). As stated in Legate (2014), one prediction of this analysis is that an active-passive-like alternation should be possible on another functional head other than Voice as long as the language in question allows the existential closure to apply to the head in question and has a PP with the right semantics.

Acknowledgments to be added.
She argues that in Acehnese, the causee is introduced in the specifier of ApplP or applicative Voice, which manifests an active-passive alternation. Moreover, similar to its Voice counterpart in certain circumstances, this passivization does not necessarily end up with a morphological reflex. In this paper, we argue that causative constructions in an unrelated language, Sason Arabic, follow from and in fact provide independent evidence for Legate’s (2014) prediction regarding the active-passive-like alternation on a functional head other than Voice.

One strategy to form causatives in Sason Arabic (SA) is via gemination, which allows the causee of an underlyingly transitive verb to be expressed either as a DP or a PP headed by mışa ‘for, to’, as in (1-b) and (1-c), respectively.\(^1\)

\((1)\) a. kemal ku i-qırı lala kitab kemal PROG.3M 3M-read this.M book ‘Kemal is reading this book.’

b. oratman ki tı-qarrı kemal lala kitab teacher PROG.3F 3F-read.CAUS Kemal this.M book ‘The teacher is making Kemal read this book.’ (Yakut, 2013, 33a)

c. oratman ki tı-qarrı lala kitab mışa kemal teacher PROG.3F 3F-read.CAUS this.M book to Kemal ‘The teacher is making Kemal read this book.’ (Yakut, 2013, 33b)

In contrast, a periphrastic causative construction, formed with the verb ‘give’, allows the causee to be introduced only as a PP headed by mışa ‘for, to’. Consider (2).

\((2)\) ad-o addil dolab-ad-en mışa tamirci gave-3PL fix.INF shelf-PL-their to repairman ‘They made the repairman fix their shelves.’

(Lit: They gave their shelves to the repairman to fixing)

We argue that the causee in (1) - (2) is not introduced in the embedded canonical VoiceP, but in a distinct projection, which we identify as CauseeP. We apply various syntactic and semantic

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\(^1\)Abbreviations: CAUS = causative, COP = copula, F = feminine, INCH = inchoative, INF = infinitive, IPFV = imperfective, M = masculine, NEG = negation, OBL = oblique, PASS = passive, PFV = perfective, PL = plural, PROG = progressive, SG = singular, 1 = first person, 2 = second person, 3 = third person.
diagnostics, such as secondary predicate licensing, sluicing, nonpassivizable idioms, passivization facts and the type of \( \theta \)-role the causee is assigned. The Causee head may undergo an active-passive alternation, whereby in the passive the causee \( \theta \)-role may be expressed in a PP adjunct or be existentially closed. The two constructions, however, differ in (at least) one important aspect. Geminates disallow the introduction of an applied argument in the embedded structure, whereas this is permitted in ‘give’-causatives. We capture this via the bundling of Causee\(^0\) and Appl\(^0\) in the gemination strategy. As such, the same argument bears two \( \theta \)-roles, whereas these heads are separate in the latter (in the sense of Pylkkänen 2008; Harley 2017a).

The paper is organized as follows: §2 introduces the causative constructions in Sason Arabic and briefly discusses their properties. §3 provides a variety of diagnostics demonstrating that geminates manifest an active-passive-like alternation, whereas “give” causatives exhibit a passive structure. §4 argues that both embed a distinct projection, which assigns a Causee \( \theta \)-role as opposed to the canonical Initiator role of VoiceP. This explains the distinct behavior of these causative strategies as opposed to another causative construction embedded under “make”. §5 provides the available configurations, and discusses the differences between the two constructions in terms of co-occurrence with an applied argument. §6 summarizes and concludes the paper.

2. Causatives in Sason Arabic

This section introduces the causativization strategies in SA, which will be examined in a comparative manner in the rest of the paper.

Two morphological processes form causatives in Arabic, including SA: ablaut and gemination. For the ablaut process, causative verbs may be formed from unaccusatives by changing the stem vowel in most cases (Kurylowicz 1957, Saad 1982, Hallman 2006, Fassi Fehri 1987). This property, which is found primarily in Classical Arabic or to a very limited extent in colloquial varieties, also holds in SA although it is not as prevalent.\(^2\) Consider (3) and (4).

\(^2\)Saad (1982, 66) states that 90 or so verbs belong to this category in which FaMaLa pattern is derived from FaMila, FaMuLa or FaMaLa patterns.
The second operation to form causatives in Arabic is gemination (Saad 1982, ch. 3, Benmamoun 1991, Hallman 2006). In this strategy, the causative affix is realized by geminating the second cardinal of the stem. Note that geminate causative forms are found for many of the same roots that form ablaut causatives. (5) are examples from Modern Standard Arabic from Hallman 2006 (see also (13) for an SA example).

(5)  
   a. xalā (be vacant) → xallā (to vacate, *cause sb to vacate sth)  
   b. xariba (be destroyed) → xarraba (destroy, *cause sb to destroy sth)

Gemination is less restricted than ablaut. Transitive verbs may also show a geminate causative counterpart, and the causee of an underlyingly transitive verb may be expressed either as a DP or a PP headed by mı¸sa ‘for, to’, as in (6-b) and (6-c), respectively.³

(6)  
   a. fatma qad-e ras-a  
      Fatma cut.PFV-3F hair-her  
      ‘Fatma cut her hair.’  
   b. fatma qatt-e kuafor ras-a  
      Fatma cut.CAUS.PFV-3F hairdresser hair-her  
      ‘Fatma had the hairdresser cut her hair.’

³As in other Semitic languages, not all instances of gemination in SA result in a causative reading, thus the fa ‘al template is used both for causative verbs as well as for basic entries in the lexicon, e.g. mawwal ‘finance’, zayyaf ‘forge’, although few non-causativized verbs in SA seem to have this pattern. It is worth pointing out that the possibility of non-causative interpretation for certain entries does not mean that causativization is not derived in syntax. See Benmamoun (1991) for a syntactic approach to geminates in Moroccan Arabic. One approach would be to assume (with Arad (2003, 2005) for Hebrew, Tucker (2011) for Arabic) that within the Distributed Morphology framework, an acategorial Root is the consonantal root, and the categorizing head it adjoins to is the phonological instantiation of the template. What could be differentiating the geminate causatives from other geminated non-causative lexical items is that in the former the categorizing v is dominated by another v, which we can call vCAUS (in line with the suggestion of an anonymous reviewer). Although how the morphophonology of gemination works is a significant question, the discussion falls outside the scope of this paper since the focus here is on the embedded structures in various periphrastic or morphological causatives.
Unergative verbs may also show a geminate causative counterpart. Consider (7), in which the causee is realized as a morphologically-bound pronoun.4

(7)  

a. i-zak  
   3M-laugh  
   ‘He laughs.’

b. a-zakk-iy-u  
   1SG-laugh.CAUS-him  
   ‘I make him laugh.’

In addition to the root and pattern strategies, SA exhibits two periphrastic causative
constructions. The causative formed with the verb ‘give’ (henceforth GiveC) allows the causee to be introduced only as a PP headed by mısa ‘for, to’, and the embedded verb appears in infinitival form, as illustrated in (10).

(10) a. ado addil dolab-ad-en mısa tamirci gave.3PL fix.INF shelf-PL-their to repairman ‘They had their shelves fixed.’

(Lit: They gave their shelves to the repairman to fixing)

b. imm-a mısa fatma şi ad-id-u addil mother-her to Fatma food gave-3f-it.M fix.INF ‘Her mother had Fatma cook.’

(Lit: The food, her mother gave it to Fatma to fixing) (Erguvanlı-Taylan, 2017, 221:30)

This construction is calqued on the Kurdish periphrastic causative (Akkuş, 2017; Akkuş and Benmamoun, 2018), which uses the verb budn ‘give’, shown in (11).

(11) mı piskilet do çekir-in-e
    I.OBL bicycle gave repair-INF-OBL
    ‘I had the bicycle repaired’

    (Lit: I gave the bicycle to repairing) (Kurdish; Atlamaz, 2012, 62)

The other indirect causative construction is embedded under the verb ‘make’ (henceforth MC). As illustrated in (12-a), it is a construction with an overt embedded theme argument, but no overt causee. The verb appears in infinitival form. It maintains an agentive reading where the causee is interpreted as indefinite, non-specific ‘someone’ or ‘some people’. The causee can also be expressed as a PP headed by the preposition mı ‘by, from’, as in (12-b).

Note that the causee and the theme in this example are preposed, which is not the basic word order in this construction. We discuss the derivation of this example in footnote 13 after we investigate the basic order.

Arabic also has the so-called X theme ‘istaf’ala, where the causative theme starts with ş and t is used to express the reflexive idea. For instance, the root KTB ‘write’ has the X pattern of the form (?i)staktaba. This is lost in Sason Arabic. Arabic also has analytical causatives formed with verbs such as ja’ala ‘to make’ or taraka ‘to let’ (e.g. Saad 1982, 82; Alrashed 2012, 209-216). However these verbs embed a finite structure in which the embedded verb carries agreement. We also leave their discussion aside since it would take us too far afield.
This paper focuses on the properties of geminate causatives and the GiveC, mainly in comparison with the MCs, which are discussed in detail in AUTHOR(S) (To Appear). We argue that unlike the MCs which embed a canonical VoiceP, geminate causatives and the GiveC contain a different projection with distinct properties, which we label as CauseeP.

Before proceeding with the discussion of indirect causative constructions, we briefly touch upon the structure of the geminate causatives built on unaccusative predicates. Geminates formed from unaccusative bases may not express an indirect causative reading (just like the ablaut strategy), similar to their counterparts in other Arabic varieties. This is illustrated in (13), where the interpretation is direct causation.  

Overall, the sequence of morphemes found in this causative construction in SA directly supports the broad structure of causatives arrived at by other researchers working within the type of

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(12) a. aya sa addil beyt-ma
village.lord made.3SG build.INF house-a
‘The village lord made someone build a house.’

b. kemal sa xassil potad mı mara-ma pir-e.
kemal made.3M wash.INF clothes by woman-a old-F
‘Kemal had the clothes washed by some old woman.’

(13) a. xaser xirb
yoghurt spoiled.3M
‘The yoghurt spoiled.’

b. leyla xarrb-e xaser
Leyla spoiled.CAUS-3F yoghurt
‘Leyla spoiled the yoghurt.’

NOT: ‘Leyla caused someone to spoil the yoghurt.’

Overall, the sequence of morphemes found in this causative construction in SA directly supports the broad structure of causatives arrived at by other researchers working within the type of

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7Various characterizations of ‘indirect’ vs ‘direct’ causatives have been suggested, which focus on the semantics or morphological aspects. For the purposes of this paper, we take ‘indirect causative’ to refer to the presence of two events in the clause, as opposed to ‘direct causatives’, rather than a periphrastic versus morphological causative distinction.
framework assumed here (see, e.g., Alexiadou et al. 2006; Marantz 2008; Pylkkänen 2008; Harley 2013; Legate 2014). As shown in (14), the whole is a simple transitive verb phrase, consisting of a VoiceP, the causative vP, which is specified as ablaut or geminate, and the phrase headed by the root. (14) is the structure for the active clause in (13-b), and (15) is the configuration for the passive (13-c), in which the theme raises to the grammatical subject when the Voice is passive.8

(14) 

(15) 

3. Active-passive alternation in geminates and ‘give’-causatives

This section investigates the properties of geminate causatives and give-causatives (GiveC) that apply to transitive bases. A variety of diagnostics demonstrate that geminates exhibit an active-passive alternation, similar to the MC (see AUTHOR(S) To Appear for details of the MC), and that the GiveC behaves as passive, in that the embedded verb does not license the object, and instead behaves as licensed by the matrix Voice.

An initial clue with regard to the structure of geminate-causatives comes from passivization asymmetries. Recall that gemination allows the causee to be expressed either as a DP or a PP. This is exemplified again in (16) (see also (6)).

(16) a. kemal ku i-qāri lala kitab kemal PROG.3M 3M-read.IPFV this.M book

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8In SA, passivization is expressed via the prefixation of a passive morpheme to predicates. The passive prefix shows an aspect-based allomorphy, realized as in- with imperfectives and as in- with perfectives.
‘Kemal is reading this book.’

b. oratman ki ti-qarrı kemal lala kitab teacher PROG.3F 3F-read.CAUS.IPFV Kemal this.M book  
   ‘The teacher is making Kemal read this book.’  
   
   (Yakut, 2013, 33a)

c. oratman ki ti-qarrı lala kitab mı¸ sa kemal  
   teacher PROG.3F 3F-read.CAUS.IPFV this.M book to Kemal  
   ‘The teacher is making Kemal read this book.’  
   
   (Yakut, 2013, 33b)

Examples in (17) illustrate the behavior in cases where the causee is realized as a DP. As seen in (17-c), the DP causee raises to become the grammatical subject, and raising the theme leads to ungrammaticality, as in (17-d).

(17)  
   a. leyla qar-e alu kitabad
      Leyla read.PFV-3F these.M books
      ‘Leyla read these books.’
   
   b. qarrı-tu leyla alu kitabad
      read.CAUS.PFV-1SG Leyla these.M books
      ‘I made Leyla read these books.’
   
   c. leyla in-qarr-e _ alu kitabad (mı oratman)
      Leyla PASS-read.CAUS.PFV-3F these.M books (by teacher)
      ‘Leyla was made to read these books by the teacher.’
   
   d. *alu kitabad in-qarr-o leyla _ (mı oratman)
      these.M books PASS-read.CAUS.PFV-3PL Leyla (by teacher)
      Intended: ‘The books were made (by the teacher) to be read by Leyla.’

On the other hand, when the causee is a PP as in (18), it is the theme argument that ends up as the grammatical subject, and as such shows verbal agreement.

(18)  
   a. leyla qar-e alu kitabad
      Leyla read.PFV-3F these.M books
      ‘Leyla read these books.’
   
   b. qarrı-tu alu kitabad mı¸ sa leyla
      read.CAUS.PFV-1SG these.M books to Leyla
      ‘I made Leyla read these books.’

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9Erguvanlı-Taylan (2017) mistakenly suggests that passives in SA do not allow ‘by’-phrases. See Yakut (2013) for several examples of passives with ‘by’-phrases, including (59-a), in addition to the examples in this paper.
c. alu kitabād in-qarr-o mı¸ sa leyla (mi oratman) these.M books PASS-read.CAUS.PFV-3PL to Leyla (by teacher) ‘These books were made (by the teacher) to be read by Leyla.’

Example (19) demonstrates that the GiveC patterns like geminates with a PP causee.

(19) a. ım-mu ade xassil alu potad mı¸ sa kemal mother-his gave.3F wash.INF these clothes to Kemal ‘His mother made Kemal wash these clothes.’

b. alu potad ım-mu ad-id-en xassil mı¸ sa kemal these clothes mother-his gave-3F-them wash.INF to Kemal ‘These clothes, his mother made Kemal wash them.’

c. *mı¸ sa kemal, ım-mu ad-id-u xassil alu potad to Kemal mother-his gave-3F-it.M wash.INF these clothes Intended: ‘To Kemal, his mother made him wash these clothes.’

The contrast between (17) and (18) shows that the higher embedded DP argument raises to become the promoted subject. The GiveC, which only allows a PP causee, patterns as its geminate counterpart with a PP causee, in that it is only the theme argument that can be raised to become the grammatical subject, as in (20).

(20) a. ams adi-tu dolab-ad-i mı¸ sa tamirci addil yesterday gave.1SG shelf-PL-my to repairman fix.INF ‘Yesterday, I had my shelves fixed.’

b. ams dolab-ad-i mı-ado mı¸ sa tamirci addil (mı-nni) yesterday shelf-PL-my PASS-gave.3PL to repairman fix.INF by-me ‘Yesterday I made the repairman fix my shelves.’

(‘Yesterday, my shelves were made fixed by the repairman by me’)

c. *ams (mı¸ sa) tamirci mı-ada dolab-ad-i addil (mı-nni) yesterday (to) repairman PASS-gave.3M shelf-PL-my fix.INF by-me ‘I made the repairman fix my shelves yesterday.’

(\textit{Intended: ‘Yesterday, the repairman was made fix my shelves by me’})

\footnote{The same restriction regarding passivization is observed in ditransitives which show dative alternation in Arabic varieties (including SA, see below). Also see e.g. Camilleri et al. 2014 for discussion of ditransitives in Egyptian Arabic, Hijazi Arabic and Maltese.}
To summarize, the theme of the embedded verb can raise in the context of PP causee headed by the preposition mıṣa ‘for, to’, and become the grammatical subject. It is possible for the causee to raise as well. Crucially, the causee must be a DP, and not a PP.

Note that this contrast is informative, but does not necessarily indicate an active-passive alternation. Many languages with double-object versus dative-shift for ditransitives, including English, exhibit the same asymmetry. Sason Arabic also has the same hierarchy effect in ditransitives. In a ditransitive DP-DP configuration, as in (21), only the higher DP can be passivized. (DP_{IO} > DP_{DO} is the base order based on the classic diagnostics such as binding, etc)

(21) ditransitives DP-DP

a. kemal qal leyla alu şīyād
   Kemal told.3M Leyla these.M gossips
   ‘Kemal told Leyla these gossips.’

b. leyla in-qal-e (mı kemal) _ alu şīyād
   Leyla PASS-told-3F by Kemal these.M gossips
   ‘Leyla was told (by Kemal) these gossips.’

c. *alu şīyād in-qal-o (mı kemal) leyla _
   these.M gossips PASS-told-3PL by Kemal Leyla
   ‘These gossips were told (by Kemal) Leyla.’

On the other hand, in a ditransitive DP-PP configuration, only the DP theme can be passivized, (22-b), and raising the indirect object leads to ungrammaticality, (22-c).

(22) ditransitives DP-PP

a. kemal qal alu şīyād mıṣa leyla
   Kemal told.3M these.M gossips to Leyla
   ‘Kemal told these gossips to Leyla.’

b. alu şīyād in-qal-o (mı kemal) _ mıṣa leyla
   these.M gossips PASS-told-3PL by Kemal to Leyla
   ‘These gossips were told (by Kemal) to Leyla.’
Against this backdrop, we employ other diagnostics for the active-passive alternation in the
geminates and the passive structure for the GiveC, and the adjunct status of the PP. The evidence
comes from (i) the interpretation in the absence of the causee, (ii) sluicing, (iii) nonpassivizable
idioms, and (iv) secondary predicates.

3.1 The interpretation of the null causee
The causee is optional, and the null causee is interpreted as existential (like a missing ‘by’-phrase)
rather than pronominal (like a pro-dropped argument). Consider (23).

(23) leyla qarr-e alu kitabad
Leyla read.CAUS.PFV-3F these.M books
YES: ‘Leyla made someone read these books.’
NO: ‘Leyla made him/her/them read the books.’

The interpretation of the null causee as existential also explains the grammaticality of (24-a) only
in the absence of a DP causee. This is because the absence of a DP causee indicates that it is not
projected, which in turn allows the theme argument to be raised. On the other hand, raising of the
theme is possible regardless of whether a PP causee is realized or not, as seen in (24-b), in line
with the adjuncthood status of the PP.

(24) a. alu kitabad in-qarr-o (*Leyla) _ (mi oratman)
these.M books PASS-read.CAUS.PFV-3PL (*Leyla) (by teacher)
‘The books were made (by the teacher) to be read by Leyla.’

b. alu kitabad in-qarr-o _ (mişa leyla) (mi oratman)
these.M books PASS-read.CAUS.PFV-3PL (to Leyla) (by teacher)
‘The books were made (by the teacher) to be read (by Leyla).’

The adjuncthood status of the PP is also supported by clefting: similar to e.g. Uzbek (Gribanova
2013), Turkish (AUTHOR(S) 2020), Egyptian Arabic (Soltan 2019), only arguments can be
clefted, and adjuncts are not licit cleft pivots in SA. This is illustrated in (25) for a grammatical subject versus the ‘by’-phrase of a short passive, in which only the former can be clefted.

(25) a. ina kittu ande le adaş sabi-ma.
   I aux.PFV.1SG who that saw.3M boy-a
   ‘It was me who saw a boy.’

   b. *mi ina kan ande le in-adaş sabi-ma.
      by me aux.PFV.3M who that PASS.PFV-saw.3M boy-a
   ‘It was by me that a boy was seen.’

Examples in (26) demonstrate that while a DP causee can be clefted, a PP one cannot be.

(26) a. ina kittu ande le leyla qarr-e _ alu kitabad.
   I aux.PFV.1SG who that Leyla read.CAUS-3F these.M books
   ‘It was me that Leyla made read these books.’

   b. *muşa ina kan ande le leyla qarr-e alu kitabad _.
      to I aux.PFV.3M who that Leyla read.CAUS-3F these.M books
   ‘It was by me that Leyla made these books be read.’

The interpretation of a null causee as existential holds in the GiveC as well, in that the absence of the PP causee leads to an existential reading. Consider (27).11

(27) a. ams dolab-ad-i in-ado muşa tamirci addil mi-nni
   yesterday shelf-PL-my PASS-gave.3PL to repairman fix.INF by-me
   ‘Yesterday I made the repairman fix my shelves.’

   b. cf. ams dolab-ad-i in-ado addil mi-nni
      yesterday shelf-PL-my PASS-gave.3PL fix.INF by-me
   ‘Yesterday my shelves were made by me to be fixed (by someone /# by him).’

11Note that a null recipient in ditransitives is interpreted as a pronominal rather than existential, pointing to a structural difference between causatives and ditransitives.

(i) ams adi-tu potad-i.
    yesterday gave-1SG clothes-my
    ‘Yesterday I gave him/her/them my clothes.'
3.2 Sluicing

Another argument for active-passive alternation in geminates comes from ‘sluicing’. While VP ellipsis may in some cases allow voice mismatching, (28), sluicing does not, (29) (Merchant, 2013).

(28) VP ellipsis

a. You may want to install that now if it isn’t already installed.

b. This system can be used by anyone who wants to use it.

(29) Sluicing (adapted from Merchant 2013)

a. *Joe was murdered, but we don’t know who murdered him.

b. *Someone murdered Joe, but we don’t know by who he was murdered.

Sason Arabic is no exception to this generalization. VP ellipsis allows voice mismatch, as indicated in (30), whereas sluicing disallows voice mismatch, which is shown in (31).

(30) a. kemal kul çax i-xsel potad ta bad ma kınno. Kemal every time 3M-wash clothes if yet NEG are ‘Kemal washes the clothes every time if they are not already.’

b. ala bilgisayar itinx in-fıde mi ande le irıllu. this.M computer can PASS-open.3M by who that wants ‘This computer can be turned on by anyone who wants to.’

(31) sadqe le kitab in-qara, hama m-o-re *(mi) ande believed.3F that book PASS-read.3M but NEG-1SG-know *(by) who ‘She believes the book to have been read, but I don’t know *(by) who.’

Note also that an implicit agent can license sluicing, as indicated in (31), but a null pronoun (pro-dropped argument) cannot, (32-b).12

(32) a. fad-a babe wara mifta. opened-3M door with key ‘(He) opened the door with a key.’ ← requires established topic

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12Given that the null causee is interpreted as an existential (cf. Sect 3.1), the following arguments also follow from an active-passive alternation, and not two different argument structures. Thanks to Benjamin Bruening for this point.
# (Someone) opened the door with a key.

# The door was opened with a key.

b. fad-a babe wara mıfta, #hama mı-araf-e ande opened-3M door with key, but NEG-knew-3F who
‘(He) opened the door with a key, #but she didn’t know who.’

Turning to geminates, we observe that the embedded structure with a DP causee behaves like a canonical active for sluicing, as in (33), in that the remnant cannot be headed by a preposition.

(33) leyla qarr-e nes-ma alu kitabat, hama m-o-re (*mısa) ande Leyla read.CAUS-3F person-a these.M books, but NEG-1SG-know to who ‘Leyla made someone read these books, but I don’t know who.’

(Leyla caused a person to read these books, *but I don’t know by whom)

With a PP causee, the embedded clause behaves as passive for sluicing, as in (34).

(34) a. leyla xass-al-e alu potad, hama m-o-re *(mıṣa) ande Leyla wash.CAUS-3F these.M clothes, but NEG-1SG-know to who ‘Leyla had these clothes washed, but I don’t know by who.’

b. leyla qarr-e alu kitabat mıṣa nes-ma, hama m-o-re Leyla read.CAUS-3F these.M books to person-a, but NEG-1SG-know *(mıṣa) ande to who
‘Leyla had these books read by someone, but I don’t know by who.’

(Leyla caused these books to be read by a person, *but I don’t know who.)

Expectedly, in the GiveC, the embedded clause behaves as passive.

(35) leyla ad-e alu potad (mıṣa nes-ma) xassil, hama m-o-re Leyla gave-3F these.M clothes (to person-a) wash.INF, but NEG-1SG-know *(mıṣa) ande to who
‘Leyla had these clothes washed (by someone), but I don’t know by who.’

It is indeed possible to have different interpretations in the GiveC depending on whether sluicing
targets the main clause or the embedded clause, as shown in (36). In (36-a), the remnant *mi ande “by who” indicates that the sluice can only target the matrix clause, an impersonal passive, not the caused event “build”. In, (36-b), the remnant *mişa ande “to who” indicates that it can only target the caused event “build” in the complement of “give”. Note that in either interpretation, leaving out the preposition on the remnant results in ungrammaticality. Consider (36-c).

(36) a. īn-ada beyt mişa nes-ma addil, hama m-ore *mi ande
   PASS-gave.3M house to person-a build.INF but NEG-1SG.know by who
   ‘It was made someone build the house, but I don’t know by who’

   YES: who made somebody build the house
   NO: who built the house

b. īn-ada beyt mişa nes-ma addil, hama m-ore mişa ande
   PASS-gave.3M house to person-a build.INF but NEG-1SG.know to who
   ‘It was made someone build the house, but I don’t know by who’

   YES: who built the house
   NO: who made somebody build the house

c. īn-ada beyt mişa nes-ma addil, hama m-ore *(mişa / mi) ande
   PASS-gave house to person-a build.INF but NEG-1SG.know (to / by) who

The sluicing test demonstrates that geminates exhibit an active-passive alternation, whereas the GiveC behaves as passive for sluicing.

3.3 Nonpassivizable idioms

SA has a class of nonpassivizable idioms, as in (37), which serve as another test for the active-passive alternation (cf. Kayne 1975; Folli and Harley 2007).

(37) a. kemal qaraf faţz le şeytan
   Kemal broke.3M leg of devil
   ‘Kemal finally got lucky.’ (lit. broke the devil’s leg)

b. faţz le şeytan īn-qaraf mi kemal
   leg of devil PASS-broke.3M by Kemal
   ‘The devil’s leg was broken by Kemal.’

   ‘*Kemal finally got lucky.’
These idioms may occur in geminate causatives only in the case of a DP causee, as in (38-a), but not a PP causee, (38-b).

(38) a. nihayet qarrif-tu kemal faγz le şeytan
finally broke.CAUS-1SG Kemal leg of devil
‘I finally made Kemal get lucky.’ (lit. broke the devil’s leg)

b. nihayet qarrif-tu faγz le şeytan (miša kemal)
finally broke.CAUS-1SG leg of devil to Kemal
‘I finally had the devil’s leg broken by Kemal.’

NOT: Kemal finally got lucky.

These idioms are also not possible in the GiveC, as seen in (39).

(39) adi-tu faγz le şeytan (miša kemal) qarf
gave-1SG leg of devil to Kemal break.INF
‘I finally had the devil’s leg broken by Kemal.’

NOT: Kemal finally got lucky.

Idioms of this sort contrast with passivizable idioms, illustrated in (40).

(40) a. kemal hatarax ro-i
Kemal burned.3M heart-my
‘Kemal broke my heart.’

Lit: ‘Kemal burned my heart.’

b. ro-i in-hatarax mi kemal
heart-my PASS-burned.3M by Kemal
‘My heart was broken by Kemal.’

Unlike non-passivizable idioms, which require a DP causee, such idioms impose no restriction, as illustrated in (41) for geminates and in (42) for the GiveC.

(41) a. mm-u harray-e Leyla ro le Kemal
mother-his burned.CAUS-3F Leyla heart of Kemal
‘His mother made Leyla break Kemal’s heart.’
b. ımm-u harr-e ro le Kemal (mışa Leyla)  
mother-his burned.ÇAUS-3F heart of Kemal to Leyla  
‘His mother had Kemal’s heart be broken (by Leyla).’

(42) ımm-u ad-e harx ro le Kemal (mışa Leyla)  
mother-his gave-3F burn.INF heart of Kemal to Leyla  
‘His mother had Kemal’s heart be broken (by Leyla).’

The contrast between passivizable and non-passivizable idioms demonstrate that geminates with a DP causee behave as active, thus are compatible with nonpassivizable idioms, whereas those with a PP causee behave as passive, thus are not. The PP causee in the GiveC patterns like its geminate counterpart.

3.4 Secondary Predicate Licensing

Depictives further support the active-passive alternation in geminates. In SA, depictives require a binder to be licit: accordingly, they are not allowed in passives even when the agent is realized as a PP, as shown in (43) and (44).

(43) a. nes-ma₇ amal arabą (sarxoš).  
person-a drove car (drunk)  
‘Someone drove the car drunk.’

b. araba in-amal-e (??sarxoš) (mı nes-ma).  
car.F PASS-drove-F (??drunk) by someone  
‘The car was driven drunk by someone.’

(44) a. kemal₇ kar-a xanni (sarxoš).  
Kemal wrote-3M song (drunk)  
‘Kemal composed the song drunk.’

b. xanni in-kar-a (??sarxoš) (mı nes-ma).  
song.M PASS-wrote-3M (??drunk) by someone  
‘The song was composed drunk by someone.’

Secondary predicates are not licensed with the GiveC, (46), but are compatible with geminates only when the causee is an overt DP, as in (45). Note that in (45-b), Clitic Left Dislocation (CLLD) is used to control for how the causee is introduced.
Geminates

a. nana₃ qarri-na kemal₃ kitab-na (sarxošsilk).
   we read.CAUS-1PL Kemal book-our (drunk)
   ‘We made Kemal read our book drunk.’ Depictives Possible with DP causee

b. hasiş nana₃ hammül-na-u  e₃ (sarxošsil?k).
   grass we carried.CAUS-1PL-it.M (drunk)
   ‘The grass, we made someone carry it drunk.’ Depictives Impossible with null causee

c. nana₃ hammül-na hasiş mişa işçiyad (sarxošsil?k).
   we carried.CAUS-1PL grass to workers₃ (drunk)
   ‘We made the workers carry the grass drunk.’ Depictives Impossible with PP causee

GiveC: Depictives Impossible

a. nana₃ mi-na-di daq ziɣar-na e₃ (sarxošsil?k).
   we NEG-1PL-give beat.INF children-our (drunk)
   ‘We don’t let anyone beat our children drunk.’

b. beaqı̄l ye dar hamı̄l hasiş (??bitkin).
   unwise COP.3SG give carry.INF grass (??tired)
   ‘It would be unwise to make someone carry the grass tired.’

The diagnostics employed in this section demonstrate the existence of an active-passive-like alternation for geminate causatives, similar to “make” causatives (AUTHOR(S) To Appear), and a passive structure for the GiveC.¹³ The DP causee is an argument, whereas the PP causee in both geminates and the GiveC is an adjunct like a ‘by’-phrase.¹⁴

¹³ Similar to the MC, “give” causatives and the GiveC also lack the full CP layer in the embedded structure, illustrated, for example, by the unavailability of CLLD to the right of ‘give’, (i).

(i) *ams aya ada hasiş mişa işçiyad hazd-u.
   yesterday landlord gave.3M grass to employees cut.INF-it.M
   ‘Yesterday the landlord made the grass, the workers cut it.’

This contrasts with (10-b), in which the theme is CLLD-ed to the left of the causativizing verb, presumably somewhere in CP. Note also the scrambling of the causee.

¹⁴It is a non-trivial question why GiveC has only the passive ApplP, and not the active one. Note that same pattern is also observed in Austronesian languages (Rackowski and Richards 2005; Legate 2014); for instance, several cases of applicatives (Acehnese causees included) for which the active applicative is only possible if Voice is passive (or object voice), but the passive applicative is unrestricted. This asymmetry might be because an active phrase requires licensing of an additional argument, whereas the passive projection does not.

An anonymous reviewer raises the possibility of whether the morphological difference between geminates and the GiveC could be connected to the syntactic difference, with the latter only having the passive structure. Although it is an interesting hypothesis, it would not work when we take the MC into consideration. Although both the GiveC and the
4. The causee is not in VoiceP

In light of the active-passive-like alternation, a straightforward conclusion to draw would be the presence of VoiceP. However, this section contends that the causee is introduced in a separate category than the canonical Voice0, which we identify as CauseeP. Therefore, the geminates and GiveC differ from the MC, which does embed a VoiceP.

The CauseeP assigns a different θ-role (causee versus initiator); as such (i) instrument phrases, (ii) agent-oriented adverbs, or (iii) agent-oriented comitatives cannot be associated with the embedded causee. Moreover, (iv) the causee is introduced with a different preposition than canonical agents are introduced with. We compare the properties of geminates and the GiveC with those of the MC, which indeed embeds an agentive, thematic VoiceP.

4.1 Instrument phrases

Instrumentals are diagnostics for an external argument layer (i.e. a Voice layer). They tend to be banned from the same environments as ‘by’-phrases (Fillmore, 1968; Bruening, 2013; Alexiadou et al., 2015). For instance, in (47-b) the instrument reading for ‘with hammers’ is not available in the anticausative/unaccusative, whereas it is available in the passive, (47-a).

(47) a. bina in-faṣṣ-e mı işçiyad wara çakuçad
    apartment PASS-demolish-3F by employees with hammers
    ‘The apartment was demolished by the employees with hammers.’

b. *bina in-qalab-e mı rua wara çakuçad
    apartment INCH-fall.over-3F by itself with hammers
    ‘The apartment fell over by itself with hammers.’

As discussed in AUTHOR(S) To Appear, instrumentals can modify the action of the implicit agent in the MC, which points to the presence of the embedded agent, (48). Note that depending on the felicity of the context, instrument phrases are ambiguous with respect to whether they refer to the

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MC are periphrastic causatives, the MC patterns like the geminates in allowing active-passive alternation. It could be a selection issue, as such the causativizing verb may select for a specific type of voice. This predicts crosslinguistically the existence of causative constructions which embed only an active structure. However, causatives are not usually described in these terms, and future research might reveal that this is indeed possible. An investigation of this sort would take us too far afield.
agent of causation or the implicit embedded agent, as in (48-b).

(48) a. aya sa hazd haşış wara mazgun-ma.
   village.lord made.3M cut.INF grass with sickle-a
   ‘The village lord had the grass cut with sickles.’

   b. kemal sa buaş sir beyt wara sope
      Kemal made.3M paint do.INF house with stick
      ‘Kemal, with the stick, had [someone paint the house].’

      ‘Kemal had [someone paint the house with the stick].’

Instrumentals are also possible in the geminates and the GiveC. However, unlike the MC in which instrumentals may be associated with matrix or embedded structures, they only pick out the causer in these two constructions. Consider (49) and (50) for geminates and the GiveC, respectively.

(49) a. ım-mu xassle hasan potad wara furça gbir-e
       mother-his washed.CAUS.3F Hasan.M clothes with brush big-F
       ‘His mother made Hasan wash the clothes with a big brush.’

       YES: His mother used the brush [to force Hasan to do washing possibly with another instrument].

       NOT: Hasan used the brush.

   b. ım-mu xassle potad miṣa hasan wara furça gbir-e
      mother-his washed.CAUS.3F clothes to Hasan.M with brush big-F
      ‘His mother made Hasan wash the clothes with a big brush.’

      YES: His mother used the brush ...

      NOT: Hasan used the brush.

(50) ım-mu ad-e lalu potad miṣa hasan xassil wara furça gbir-e
      mother-his gave-3F these clothes to Hasan.M wash with brush big-F
      ‘His mother made Hasan wash the clothes with a big brush.’

      YES: His mother used the brush ...

      NOT: Hasan used the brush.

Instrumental phrases manifesting gender distinction are in line with the above generalization. In
(51-a), the instrument containing the feminine possessor refers to the matrix causer. In (51-b), however, the instrumental contains a phrase with masculine possessor, and cannot have a meaning in which Hasan used his own arms to do the washing, although this is logically possible.

(51)  

a. ım-mu xassle hasan potad wara hass-a saqqil mother-his washed.CAUS.3F Hasan.M clothes with voice-her heavy ‘His mother made Hasan wash the clothes with her imposing voice.’

b. ım-mu xassle hasanı potad wara kıttaf-u=ı/k zıym-in mother-his washed.CAUS.3F Hasan.M clothes with arms-his strong-PL ‘His mother made Hasanı wash the clothes with his=ı/k strong arms.’

YES: The mother used someone else’s strong arms (metaphorically) to force Hasan to do the washing.

NO: Hasan used his arms to do the washing.

4.2 Agent-oriented adverbs

Agent-oriented adverbs in SA provide another testing ground with respect to the θ-role the external argument of the embedded event bears (Ernst 2001; Matsuoka 2013, i.a.). In the MC, these adverbs can modify the action of the embedded agent, as seen in (52), and may also be ambiguous as to whether they modify the action of the matrix agent or the embedded agent, (52-b).

(52)  

a. bolum ti-si mez sınavad le qabul wara diqqat. department 3F-make look.INF tests of acceptance with care ‘The department makes someone check acceptance tests carefully.’

b. aya sa hazd hašiş bı sabır. village.lord made.3M cut.INF grass with patience ‘The village lord made [someone cut the grass patiently].’

‘The village lord, patiently, made [someone cut the grass].’

On the other hand, no agent-oriented adverbs can be associated with the causee in either geminates, as in (53), or the GiveC, as in (54); they exclusively target the causer.

(53)  

a. oratman ki ti-qarri kemal lala kitab bı sabır teacher PROG.3F 3F-read.CAUS Kemal this.M book with patience
‘The teacher is making Kemal read this book patiently.’

YES: The teacher is patient.

NOT: Kemal is patient.

b. oratman ki ti-qarri lala kitab mısa kemal bi sabır
   teacher PROG.3F 3F-read.CAUS this.M book to Kemal with patience
   ‘The teacher is making Kemal read this book patiently.’

YES: The teacher is patient.

NOT: Kemal is patient.

(54) ım-mu ad-e lalu potad mısa kemal xassil bi sabır
   mother-his gave-3F these clothes to Kemal wash.INF with patience
   ‘His mother made Kemal wash these clothes patiently.’

YES: His mother was patient.

NOT: Kemal was patient.

4.3 Agent-oriented comitatives

Agent-oriented comitatives indicate that the agent had help from the comitative in performing the event. They tend to pattern with instrument phrases and agent-oriented adverbs in picking out an external argument layer (Bruening, 2013; Alexiadou et al., 2015). As such, the comitative reading that is available in (55-a) is lost with unaccusatives, as in (55-b).

(55) a. bina in-faş-e wara sırray fi-ya
    apartment PASS-demolish-3F with burglar in-it.F
    ‘The apartment was demolished with the burglar inside.’

    (the burglar was helping with the demolishing from inside)

b. bina in-qalab-e wara sırray fi-ya
    apartment INCH-fall over-3F with burglar in-it.F
    ‘The apartment fell over with the burglar inside.’

    (the burglar was inside when the building fell over)

Turning to the MC, we see that the comitative reading is also available in this construction, (56), and the ambiguity of modification regarding the embedded or matrix clause is observed with
comitatives as well, as seen in (56-b).

(56)  

a. kemal sa hamıl mase wara hasan  
Kemal made carry.INF table with Hasan  
‘Kemal made someone carry the table with Hasan.’  
(Hasan helped carry the table)  

b. a ya sa hazd hašiş wara cinarad.  
village.lord made cut.INF grass with neighbors  
‘The village lord made [someone cut the grass with the neighbors].’  

‘The village lord, with the neighbors, made [someone cut the grass].’

In the case of geminates and the GiveC, however, the comitative reading is not available with the causee, but only with the matrix causer.

(57)  

a. leyla hammıl-e kemal mase wara hasan  
Leyla carried.CAUS-3F Kemal table with Hasan  
‘Leyla made Kemal carry the table with Hasan.’  
YES: Leyla and Hasan made Kemal carry the table.  
NO: Leyla made Kemal and Hasan carry the table

b. leyla hammıl-e mase mısha kemal wara hasan  
Leyla carried.CAUS-3F table to Kemal with Hasan  
‘Leyla made Kemal carry the table with Hasan.’  
YES: Leyla and Hasan made Kemal carry the table.  
NO: Kemal and Hasan carried the table

(58)  

leyla ad-e mase mısha kemal hamıl wara hasan  
Leyla gave-3F table to Kemal carry.INF with Hasan  
‘Leyla made Kemal carry the table with Hasan.’  
YES: Leyla and Hasan made Kemal carry the table.  
NO: Kemal and Hasan carried the table

Thus far, we have seen that instrumentals, agent-oriented adverbs and comitatives point to the presence of a thematic Voice layer in the embedded event for the MC, but to its absence for
geminates and the GiveC.

4.4 Choice of Preposition

Another aspect that distinguishes the causee from the canonical VoiceP Initiator relates to the choice of the preposition heading the PP adjunct. As shown in (59), the PP adjunct in both matrix passives and the MC are headed by the preposition mı ‘by, from’.

(59) a. ala cam mı kemal mı-qaraf mı-bi-l-qasti.
    this glass by Kemal PASS-broke.3M with-the-intention
    ‘This glass was broken by Kemal deliberately.’ (adapted from Yakut 2013: 7)

b. kemal sa xassil potad mı mara-ma pi-r-e.
    kemal made.3M wash.INF clothes by woman-a old-F
    ‘Kemal had the clothes washed by some old woman.’

However, as seen throughout the paper, the PP adjunct causee in both geminates and the GiveC is headed by preposition mışa ‘to, for’.

These diagnostics show that although the embedded event involves an active-passive alternation in the geminates, and a passive configuration in the GiveC, this embedded VoiceP assigns a different θ-role (causee versus initiator) than the canonical VoiceP. We propose the structures for the geminates and the GiveC in the next section, which are both argued to embed a CauseeP.

5. Proposal: CauseeP and bundling with ApplP

We argue that an analysis along the lines of Legate’s (2014) Acehnese proposal can be extended to the gemination and the GiveC strategies in SA. This hypothesis correctly predicts the properties of these two constructions and explains their contrast with the MC. As opposed to a generalized demotion head/operation, Legate (2014) proposes an alternative analysis of passive, in which the passive is a variant of a functional head that introduces a DP in its specifier, a configuration that could be attested in other functional heads, e.g. Appl0 (see e.g. Anagnostopoulou 2003, Alexiadou et al. 2006, Schäfer 2012 for the suggestion that an applicative head introduces the non-canonical external arguments, i.e. oblique causers. cf. Pylkkänen 2008).
One prediction of this analysis is that an active-passive-like alternation also should be possible on a functional head other than Voice as long as the language in question allows the existential closure to apply to that head and has a PP with the right semantics. Moreover, similar to its Voice counterpart in certain circumstances, this passivization does not necessarily end up with a morphological reflex (e.g. Harley 2017b; Pitteroff 2014, 2015). We have already seen that geminates and the GiveC in SA manifest an active-passive alternation. However, the relevant functional category exhibits properties that warrant identifying it as a distinct projection than canonical VoiceP. We identify this functional category as CauseeP. Let us illustrate structures with the active CauseeP and two possible configurations of passive CauseeP.

An illustration of the active CauseeP for the geminate causative is given in (60). The causee ‘Leyla’ is generated as a DP in Spec,CauseeP, and becomes the grammatical subject when passivized. It receives a causee θ-role from Causee⁰, as in (60-b) (we leave out v for space reasons).

(60) **Active CauseeP**

\[\begin{array}{l}
a. \quad \text{qarrtu leyla alu kitabad} \\
\quad \text{read.CAUS.PFV-1SG Leyla these.M books} \\
\quad \text{‘I made Leyla read these books.’} \\
b. \quad \begin{array}{c}
& \text{VoiceP} \\
& \text{DP} \\
& \text{Voice'} \\
& \text{Voice} \\
& \text{(Initiator)} \\
& \text{...} \\
& \text{CauseeP} \\
& \text{DP} \\
& \text{Causee'} \\
& \text{Causee} \\
& \text{VP} \\
& \text{θ} \\
& \text{V} \\
& \text{DP}
\end{array}
\end{array}\]

Alternatively, the causee may be introduced like the initiator in the canonical passive, which has two associated semantic denotations (see also Bruening 2013; Alexiadou et al. 2015; Legate 2014;
In the denotation with a PP adjunct, \( \text{Causee}_{\text{PASS}} \) leaves the causee position open, i.e. \( \lambda e.\lambda x.\text{CAUSEE}(x,e) \), to be accessed and saturated by the ‘to’-phrase, differing from the PP of the canonical passive (mı ‘from, by’ versus mışa ‘for, to’). P assigns a causee \( \theta \)-role to its DP complement, this causee being tied semantically to the causee \( \theta \)-role introduced by Causee\(^0\), as in (61) (see Bruening 2013 for the denotations).

(61)  **Passive CauseeP with ‘to’-phrase**

a. qarri-tu alu kitabad mışa leyla
   read.CAUS.PFV-1SG these.M books to Leyla
   ‘I made Leyla read these books.’

b. VoiceP
   DP Voice'
   Voice (Initiator) ...
   Causee\(_{\text{PASS}}\)P
   Causee\(_{\text{PASS}}\)P PP
   Causee\(_{\text{PASS}}\)P VP
   \( \theta \) V DP

The semantic denotation of the caused event, in which the causee position is saturated by the ‘to’-phrase’, is provided in (62).
In the second denotation, in which passive CauseeP does not combine with a ‘to’-phrase, the causee is existentially bound on the Causee\textsubscript{PASS} head, thus $\lambda e. \exists x. \text{CAUSEE}(x, e)$, as in (63).

(63) **Passive ApplP without ‘to’-phrase**

a. qarri-tu alu kitabad
   read.CAUS.PFV-1SG these.M books
   ‘I had these books read.’

b. VoiceP
   DP Voice’
   Voice (Initiator) ...
   Causee\textsubscript{PASS}P
   Causee\textsubscript{PASS} VP
   $\exists \theta$ V DP

The relevant semantic denotation is provided in (64).
Therefore, geminate causatives that apply to transitive bases have active and passive CauseeP structures, as in (60-b) through (63-b). The GiveC, on the other hand, exhibits only the passive CauseeP configurations in (61-b) and (63-b).

These constructions differ from the MC, which embeds a thematic Voice⁰. Consider the illustration in (65) for the active embedded Voice.

(65) **Active VoiceP in the MC** (from AUTHOR(S) To Appear)

a. aya  sa  addil  beyt-ma
village.lord made.3SG build.INF house-a
‘The village lord made someone build a house.’

b. VoiceP
   DP  Voice’
      Voice
         (Initiator)
   VoiceP
      DP  Voice’
         Voice  VP
            θ  V  DP

The discussion thus far demonstrates that geminates and the GiveC pattern alike in terms of embedding a CauseeP, and not a VoiceP. Further investigation reveals that geminates and the GiveC also differ regarding a significant aspect, i.e. co-occurrence with an applied argument. The next section demonstrates that whereas the GiveC and the MC permit the presence of an applicativized
argument as well as the causee, geminates disallow applicatives.

5.1 Co-occurrence with an applied argument

In this section, we examine the co-occurrence restrictions between the causee and applied arguments, and discuss its implications.

Let us start by looking at benefactive applicatives in root clauses in SA (though the same properties also hold in finite embedded clauses). The example in (66-a) demonstrates that the applicative may occur with an unergative verb. It is also possible to introduce the beneficiary embedded under a PP adjunct, as in (66-a).

(66)  

(a) kemal faqaz-la sari kıllu.  
Kemal ran.3M-her morning all  
‘Kemal ran for her the whole morning.’

(b) kemal faqaz mı̇şa-na / mı̇şa leyla.  
Kemal ran.3M for-her / for Leyla  
‘Kemal ran for her / Leyla.’

Examples in (67) and (68) illustrate the same pattern for the active and stative transitive predicates, ‘to read’ and ‘to hold’, respectively.

(67)  

(a) kemal ku i-qri lala kitab.  
Kemal PROG.3M 3M-read.IPfv this.M book  
‘Kemal is reading this book.’

(b) kemal ku i-qri lala kitab mı̇şa leyla.  
Kemal PROG.3M 3M-read.IPfv this.M book for Leyla  
‘Kemal is reading this book for Leyla.’

(c) kemal ku i-qri-Ila / i-qri leyla lala kitab.  
Kemal PROG.3M 3M-read.IPfv-her / 3M-read.IPfv Leyla this.M book  
‘Kemal is reading her / Leyla this book.’

---

15Note that some semantic factors are at play as to which arguments are most felicitous as applied arguments: clitics and full DPs that are large in phonological/syntactic size as well as related to the theme. A similar restriction is reported by Folli and Harley (2006) for Italian benefactives, whereby only certain arguments qualify as possible beneficiaries: clitics, and DPs closely related to the theme.
(68) a. kemal ku i-mseg ax-un istudi şamsiya.
   Kemal PROG.3M 3M-hold brother-his small umbrella
   ‘Kemal is holding his little brother the umbrella.’

   b. kemal ku i-mseg şamsiya mışə ax-un istudi.
   Kemal PROG.3M 3M-hold umbrella for brother-his small
   ‘Kemal is holding the umbrella for his little brother.’

Recipients or goals are also possible in SA, as shown in (69).

(69) kemal ada oranciyad zakk-in lala kitab.
   Kemal gave.3M students intelligent-PL this.M book
   ‘Kemal gave intelligent students this book.’

These examples confirm that the two types of applied arguments distinguished in Pylkkänen’s (2008) seminal work as ‘high applicatives’ and ‘low applicatives’ are found in SA.16 The point of interest for us is that geminate causatives contrast with root clauses and the other causative constructions in SA in not permitting applied arguments. We make sense of this state of affairs by proposing that in geminates, Causee0 and Appl0 are bundled (Pylkkänen 2008; Harley 2017a). As such, the same argument bears two θ-roles, whereas in other instances CauseeP and ApplP remain as separate projections, which permits different arguments to bear θ-roles associated with each projection.17

We start by investigating the MC, which will serve as another comparative basis with geminates

16Note that the position of Pylkkänen’s (2008) low applicatives as structurally below VP has been challenged by many researchers, and have been suggested to occupy the same position as high applicatives, i.e. between VoiceP and iP (Anagnostopoulou 2003; Bruening 2010; Larson 2010; Georgala 2011; Legate 2014). We also assume both to occupy the same position in this paper.

17Note that this is different from the question of whether a language allows the so-called applicative recursion, i.e. the possibility of more than one applied argument. It has been observed that in most languages with both high and low applicatives, only one applied argument is permitted in any given clause (Marantz 1993; McGinnis 1998; Nie 2020), and very few languages allow applicatives to combine (e.g. Kinyarwanda, Ngoboka 2005). SA also disallows applicative recursion, thus (i).

(i) *kemal ada mara oranciyad zakk-in lala kitab.
   Kemal gave.3M woman students intelligent-PL this.M book
   ‘Kemal gave intelligent students this book for the mother.’

Although applicative recursion in itself is a significant phenomenon (see Nie 2020 for discussion), the discussion here is about the contrast between matrix and embedded structures.
and the GiveC. Examples in (70), (71) and (72) demonstrate that applicatives can co-occur with the causee in unergatives, transitives and ditransitives respectively.

(70) a. kemal sa faqz-la sari killu.
Kemal made.3M run.INF-her morning all
‘Kemal made someone run for her the whole morning.’

b. kemal sa faqz mısa-na.
Kemal made.3M run.INF for-her
‘Kemal made someone run for her.’

(71) a. kemal sa tabx-la / ?leyla kek.
Kemal made.3M bake.INF-her / ?Leyla cake
‘Kemal made someone bake her / Leyla a cake.’

b. kemal sa tabx kek mısa-na / mısa leyla.
Kemal made.3M bake.INF cake for-her / for Leyla
‘Kemal made someone bake a cake for her / Leyla.’

(72) a. kemal sa tarx-la / leyla hadiya-ma.
Kemal made.3M send.INF-her / Leyla gift-a
‘Kemal made someone send her / Leyla a gift.’

b. kemal sa tarx hadiya-ma mısa-na / mısa leyla.
Kemal made.3M send.INF gift-a for-her / for Leyla
‘Kemal made someone send a gift to her/Leyla.’

Finally, (73) indicates that the same possibility is available when ‘make’ embeds a passive VoiceP, as indicated by the presence of a ‘by’-phrase (see AUTHOR(S) To Appear).

(73) a. kemal sa tabx-la kek mı asçi-ma gize muhim.
Kemal made.3M bake.INF-her cake by cook-a so important
‘Kemal had a cake baked for her by a very important cook.’

b. kemal sa tabx kek mısa-na mı asçi-ma gize muhim.
Kemal made.3M bake.INF cake for-her by cook-a so important
‘Kemal had a cake baked for her by a very important cook.’

Turning to geminates, (74) demonstrates that applicatives are disallowed with unergatives.
(74) a. faqqız-tu kemal. ran.CAUS-1SG Kemal
‘I made Kemal run.’

b. *faqqız-to-lla kemal. ran.CAUS-1SG-her Kemal
‘I made Kemal run for her.’

c. faqqız-tu kemal mı¸sa-na. ran.CAUS-1SG Kemal for-her
‘I made Kemal run for her.’

The same co-occurrence restriction also holds with transitive predicates in both the active and passive CauseeP, as shown in (75) and (76) respectively.\(^{18}\) (75-c) indicates that the order of the causee and the applicative is not the issue.\(^{19}\)

(75) a. oratman ku i-qarri kemal kitab-ma mı¸sa-na / mı¸sa leyla. teacher PROG.3M 3M-read.CAUS Kemal book-a for-her / for Leyla
‘The teacher is making Kemal read a book for her/Leyla.’

b. *oratman ku i-qarri-lla / leyla kemal kitab-ma. teacher PROG.3M 3M-read.CAUS-her / leyla Kemal book-a
‘The teacher is making Kemal read her / Leyla a book.’

c. *oratman ku i-qarri kemal leyla kitab-ma. teacher PROG.3M 3M-read.CAUS Kemal Leyla book-a
Intended: ‘The teacher is making Kemal read Leyla a book.’

(76) a. oratman ku i-qarri kitab-ma mı¸sa kemal. teacher PROG.3M 3M-read.CAUS book-a to Kemal

\(^{18}\)Note that a potential confound is available in this construction as to which structure the beneficiary is associated with. This sentence allows the following two interpretations: (i) ‘The teacher, for the benefit of Leyla, forced [Kemal to read the book]’, in which case the matrix subject ‘the teacher’ is associated with bringing out the beneficiary reading for Leyla; or (ii) ‘The teacher forced [Kemal to read the book for the benefit of Leyla]’ in which scenario, the teacher is not involved as to who benefits from the caused event, but the causee Kemal performs the action for the benefit of Leyla. It is also possible to construct scenarios which unambiguously allow the latter reading. This can be achieved by making the matrix subject inanimate, as such it would lack sentience. Consider (i).

(i) şim¸ sak ti-qarri kemal kitab-ma mı¸sa leyla. thunderstorm 3F-read.CAUS Kemal book-a for Leyla
‘The thunderstorm is making Kemal read a book for Leyla (instead of them going out and playing).’

\(^{19}\)Gemination does not apply to ditransitive bases in Arabic (e.g. give, send, donate, tell, see Hallman 2006), including in SA. Whether this restriction follows from a deep explanation must await future work. It is however worth noting that it is consistent with the idea of Causee and Appl head bundling in geminates.
‘The teacher is having a book read by Kemal.’

b. oratman ku i-qarri kitab-ma mi¸sa kemal mi¸sa leyla.
   teacher PROG.3M 3M-read.CAUS book-a to Kemal for Leyla
   ‘The teacher is having a book read by Kemal for Leyla.’

c. #oratman ku i-qarri-l[l]a kitab-ma mi¸sa kemal.
   teacher PROG.3M 3M-read.CAUS-her book-a to Kemal
   YES: ‘The teacher is making her read a book for Kemal.’
   NO: ‘The teacher is having a book read her by Kemal.’

The pattern reveals that gemination disallows the introduction of an applied argument. In this respect, geminates differ from root clauses as well as the MC. Let us now examine the GiveC, which only has a passive structure. They disallow unergatives (presumably because unergatives cannot form personal passives in SA). Examples in (77) and (78) demonstrate that with transitive predicates, the causee can co-occur with an applied argument.

(77) a. dade ād-e addil dolabad mi¸sa tamirci.
   mother gave-3F fix.INF shelves to repairman
   ‘Mom had the shelves fixed by the repairman.’

b. dade ād-e addil dolabad mi¸sa tamirci mi¸sa bİnt-a / mi¸sa-na.
   mother gave-3F fix.INF shelves to repairman for daughter-her / for-her
   ‘Mom had the shelves fixed by the repairman for her daughter / for her.’

c. dade ād-e addil-la / addil leyla dolabad mi¸sa tamirci.
   mother gave-3F fix.INF-her / fix.INF Leyla shelves to repairman
   ‘Mom had the shelves fixed by the repairman for her / Leyla.’

(78) a. dade ād-e qarу kitab mi¸sa kemal.
   mother gave-3F read.INF book to Kemal
   ‘Mom had the book read by Kemal.’

b. dade ād-e qarу kitab mi¸sa kemal mi¸sa bİnt-a / mi¸sa-na.
   mother gave-3F read.INF book to Kemal for daughter-her / for-her
   ‘Mom had the book read by Kemal for her daughter / for her.’

c. dade ād-e qarу-l[l]a / qarу leyla kitab mi¸sa kemal.
   mother gave-3F read.INF-her / read.INF Leyla book to Kemal
   ‘Mom had the book read by Kemal for her / Leyla.’
'Give’-causatives of ditransitive predicates also exhibit the same behavior in allowing a causee and an applicative argument to co-occur. Consider (79).\(^{20}\)

(79) a. dade ād-e tarx leyla kitab mı¸ sa kemal.
    mother gave-3F send.INF Leyla book to Kemal
    ‘Mom had Leyla sent the book by Kemal.’
    (i.e. Mom made Kemal send Leyla the book).

b. dade ād-e tarx-la kitab mı¸ sa kemal.
    mother gave-3F send.INF-her book to Kemal
    ‘Mom had her sent the book by Kemal.’ (i.e. Mom made Kemal send her the book).

The findings in this section can be summarized in Table 1. Various diagnostics indicate that geminates and the GiveC differ from the MC and root clauses. This motivated an analysis of CauseeP as opposed to VoiceP. However, the two differ from each other in terms of allowing an applied argument. Whereas the GiveC permits the co-occurrence (thus patterning like the MC in this respect), geminates do not.\(^{21}\)

<table>
<thead>
<tr>
<th></th>
<th>Root clause</th>
<th>MC</th>
<th>Geminates</th>
<th>GiveC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active-Passive?</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Passive</td>
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<tr>
<td>Agentive properties?</td>
<td>✓</td>
<td>✓</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Applied argument?</td>
<td>✓</td>
<td>✓</td>
<td>*</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 1: Properties of causatives in SA

\(^{20}\)The ungrammaticality of (i) indicates that the pattern in SA is different from Austronesian applicativized arguments which cannot remain in-situ, and thus either are realized as a PP or A-move to become the grammatical subject (e.g. Pearson 2001; Richards 2001; Rackowski and Richards 2005; Legate 2014).

(i) *kemal in-ada qaru kitab.
    Kemal PASS-gave.3M read.INF book
    ‘Kemal was made to read the book.’

The possibility of unergatives with the MC as well as the difference from the Austronesian languages suggest that it is not a Case problem.

\(^{21}\)In Pylkkänen’s (2008) causative typology based complement selection, if a causee cannot be modified by agent-oriented modifiers, the complement cannot contain a high applicative (and vice versa). This type of causative was argued to contain vP as opposed to VoiceP. Table 1 demonstrates that this cannot be true, since the causee in the GiveC lacks agentive properties, but the embedded structure does allow a high applicative.
We capture this point of difference between the causative constructions by proposing that in geminates, Causee\(^0\) and Appl\(^0\) bundle (following Pylkkänen 2008; Harley 2017a). As such, a single argument bears both Causee and benefactive \(\theta\)-roles, and this indeed is reflected in the interpretation of these causatives. The causee is also interpreted as the beneficiary/maleficiary of the caused event.\(^{22}\) The bundling structure can be schematized as in (80).

![Diagram](attachment:80.png)

On the other hand, with the MC and the GiveC, the projections introducing the embedded agent and the causee respectively are not bundled with the Appl that they dominate. (81) represents the structure of the MC in which both the embedded agent and the applicative argument are generated in VoiceP and ApplP respectively.

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\(^{22}\)This analysis is reminiscent of Guasti’s (1996) analysis of the Italian *faire infinitive* (FI) construction, in which the agent of the embedded verb is also suggested to receive a benefactive theta role from the causative verb. See also Ippolito 2000 (similar to Zubizarreta 1985) for the argument that the causee in FIs is introduced by Appl and is comparable to benefactives. See also Nash (2017) for a similar point about Georgian causatives.

We use the label CauseeP to differentiate it from CausP used by e.g., Key (2013); Harley (2017a) in which CausP roughly corresponds to (and is explicitly likened to) ApplP.
A similar non-bundling structure is observed in the GiveC, as illustrated in (82), where the causee, whose θ-role is saturated by the DP inside the PP, and the applicative are introduced in different projections.

Note that when the matrix verb is passivized in (82), the applied argument raises to become the
grammatical subject. This is illustrated in (83).

(83) leyla in-ād-e tarx kitab mışa kemal (mı dade).
    Leyla PASS-gave-3F send.1INF book to Kemal (by mother)
    ‘Leyla was made (by mother) to be sent the book by Kemal.’

This section has demonstrated that in geminates, Causee⁰ and Appl⁰ bundle (Pylkkänen 2008; Harley 2017a), as such a single argument carries Causee and benefactive θ-roles. On the other hand, with the GiveC and the MC, no bundling takes place, and as a result, different arguments bear distinct θ-roles.

Before we conclude, we briefly touch upon the contrast between the causee of unergative and transitive bases of geminates. As mentioned above, the causee of a transitive can be introduced as a DP or PP (cf. (16)), whereas the causee of an unergative may only be a DP, as in (84).

(84) kemal ku i-faqqez (*mışa) kelb
    Kemal PROG.3M 3M-run.CAUS to dog
    ‘Kemal is making the dog run.’ (Yakut, 2013, 34b)

Given that with transitive bases, a DP versus PP causee reflects an active versus passive alternation, it follows that unergative bases would allow the causee to be expressed only as a DP since they cannot form personal passives in SA. We take this to be a low-level, language-particular syntactic fact, as languages may differ in this regard; other languages, such as Germanic languages, could have different properties. For instance, Legate et al. (To Appear) show that in Turkish, passive is limited in application to transitive predicates with a thematic subject and structurally case marked object, whereas unergative or unaccusative predicates are not passivizable. Sason Arabic appears to mark this distinction in the case of arguments in CauseeP. Therefore, the causee of embedded unergative predicate fails to meet the requirements for passivization, and as such cannot be expressed as a PP, whereas the causee of a transitive predicate can be realized either way. In the analysis of the passive developed in Legate et al. (To Appear), such restrictions can be encoded in the selectional properties of the passive Voice/Causee/Appl head.
6. Conclusions

This paper has investigated several causative constructions in Sason Arabic and discussed their theoretical implications. The paper has focused on the nature of the projection embedded under the causativizing verb, as well as the voice alternations that projection may exhibit.

We have demonstrated that unlike ‘make’-causatives, which embed a canonical VoiceP, both geminates and ‘give’-causatives embed a distinct projection, which we call CauseeP. This projection differs from VoiceP in various aspects. This investigation contributes to the typology of projections that may host the agent of the embedded event. Furthermore, we have shown that geminates exhibit an active-passive-like alternation, while the ‘give’-causatives manifest the behavior of a passive structure. The ability of CauseeP to show an active-passive alternation provides independent evidence for Legate’s (2014) analysis of the passive.

We have further investigated the (in)compatibility of the causee with an applicative argument, and demonstrated that causatives show variation in this respect. Whereas geminates disallow the occurrence of an applied argument, this is permitted in ‘make’ and ‘give’-causatives as well as root clauses. We have captured this asymmetry by proposing that in geminates, Causee0 and Appl0 are bundled together, and as such the same argument ends up bearing two θ-roles.

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