Applicative Voice: Geminate Causatives in Sason Arabic

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1. Introduction

This paper examines geminate causatives 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; Harley 2013, 2017a; Key 2013; Legate 2014), and voice alternations that this projection may exhibit, particularly in connection with the 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. 2020). 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. 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. This paper argues that the GC in SA follows from and in fact provides independent evidence for this prediction.

One strategy to form causatives in Sason Arabic (SA) is via gemination, in which the causative affix is realized by geminating the the second cardinal of the stem. This strategy allows the causee of an underlyingly transitive verb to be expressed either as a DP, as in (1b), or a PP headed by *mışa* 'for, to', as in (1c).

(1)   a. kemal ku   i-qri   lala   kitab.
          kemal PROG.3M 3M-read this.M book

          'Kemal is reading this book.'

       b. oratman ki   tı-qarri   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-qarri   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)

I demonstrate that the GC contains a second, embedded VoiceP with active-passive alternation. However, this VoiceP assigns a causee θ-role as opposed to the canonical Initiator of VoiceP, and exhibits properties that warrant identifying it as a distinct type. I identify it as *applicative VoiceP* (Legate, 2014).

2. Active-passive alternation

The evidence for the active-passive alternation and the adjunct status of the PP comes from (i) the interpretation in the absence of the causee, (ii) sluicing, (iii) nonpassivizable idioms, and (iv) depictives.

2.1. 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 (2).

(2) leyla qaṟṟ-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 (3a) only in the absence of a DP causee. The absence of a DP causee indicates that it is not projected, which in turn allows the theme argument to be raised. The raising of the theme is possible regardless of whether a PP causee is realized or not, (3b), in line with the adjuncthood status of the PP.[1]

(3)   a.   alu kitabad ın-qaṟṟ-o (*Leyla) _ (mı 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 ın-qaṟṟ-o _ (mışa leyla) (mı 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).'

2.2. Sluicing

Another argument for active-passive alternation in geminates comes from 'sluicing'. While VP ellipsis may in some cases allow voice mismatching, sluicing does not (Merchant, 2013). This also holds in SA (Akkuş 2021b). Consider (4).

(4) sadqe le kitab ın-qara, hama m-o-re *(mı) 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.'

An implicit agent can license sluicing, as in (5a), but a *pro*-dropped argument cannot, (5b).[2]

(5)   a.   fad-a babe wara mıfta.
           opened-3M door with key

           '(He) opened the door with a key.'   ← *requires established topic*
           # (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.'

With a DP causee, the embedded structure behaves like a canonical active for sluicing, (6), such that the remnant cannot be headed by a preposition.

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[1]The adjuncthood status of the PP is also supported by clefting, in that similar to Uzbek (Gribanova 2013), Egyptian Arabic (Soltan 2019) and Turkish, only arguments can be clefted. Expectedly, the PP causee may not be.

[2]Given that the null causee is interpreted as an existential (cf. Sect 2.1), the following arguments also follow from an active-passive alternation, and not two different argument structures. Thanks to Benjamin Bruening for this point.

(6) leyla qa<u>rr</u>-e   nes-ma alu   kitabad, hama m-o-re   (*mışa) 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.'

With a PP causee, the embedded clause behaves as passive for sluicing, (7).

(7) a. leyla xa<u>ss</u>al-e   alu   potad, hama m-o-re   *(mışa) 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 qa<u>rr</u>-e   alu   kitabad mışa nes-ma, hama m-o-re   *(mışa) ande.
Leyla read.CAUS-3F these.M books to   person-a, but NEG-1SG-know to   who
'Leyla had these books read by someone, but I don't know by who.'

2.3. Nonpassivizable idioms

SA has a class of nonpassivizable idioms, as in (8). These idioms are another test for the active-passive alternation (cf. Kayne 1975; Folli & Harley 2007).

(8) a. kemal qaraf   faɣz le şeytan
Kemal broke.3M leg of devil.
'Kemal finally got lucky.' (lit. broke the devil's leg)

b. faɣz le şeytan ın-qaraf   mı 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 geminates with a DP causee, (9a), but not a PP causee, (9b).

(9) a. nihayet qa<u>rr</u>ıf-tu   kemal faɣz le şeytan.
finally broke.CAUS-1SG Kemal leg of devil
'I finally made Kemal get lucky.' (lit. broke the devil's leg)

b. nihayet qa<u>rr</u>ıf-tu   faɣz le şeytan (mışa 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.

Idioms of this sort contrast with passivizable idioms, illustrated in (10).

(10) a. kemal hatarax   ro-i.   b. ro-i   ın-hatarax   mı kemal.
Kemal burned.3M heart-my   heart-my PASS-burned.3M by Kemal
'Kemal broke my heart.'   'My heart was broken by Kemal.'
Lit: 'Kemal burned my heart.'

Unlike non-passivizable idioms, which require a DP causee, such idioms impose no restriction, as illustrated in (11).

(11) a. ımm-u ha<u>rr</u>aɣ-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   ha<u>rr</u>aɣ-e   ro   le Kemal (mışa Leyla).
       mother-his burned.CAUS-3F heart of Kemal to   Leyla

       'His mother had Kemal's heart be broken (by Leyla).'

2.4. Secondary Predicate Licensing

Depictives require projection in SA: they are not allowed in passives even when the agent is realized as a PP (Akkuş 2021b). Secondary predicates are compatible with geminates only when the causee is an overt DP, as in (12). In (12b), Clitic Left Dislocation is used to control for how the causee is introduced.

(12)   a. *Depictives Possible with DP causee*

        nana$_i$ qa<u>rr</u>i-na   kemal$_k$ kitab-na (sarxoş$_{i/k}$).
        we   read.CAUS-1PL Kemal book-our (drunk)

        'We made Kemal read our book drunk.'

     b. *Depictives Impossible with null causee*

        haşiş nana$_i$ ha<u>mm</u>ıl-na-*u*   e$_k$ (sarxoş$_{i/??k}$).
        grass we   carried.CAUS-1PL-3M   (drunk)

        'The grass, we made someone carry it drunk.'

     c. *Depictives Impossible with PP causee*

        nana$_i$ ha<u>mm</u>ıl-na   haşiş mışa işçiyad (sarxoş$_{i/??k}$).
        we   carried.CAUS-1PL grass to   workers$_k$ (drunk)

        'We made the workers carry the grass drunk.'

The diagnostics employed in this section demonstrate the existence of an active-passive-like alternation in the GC. Geminates with a DP causee behave as active, whereas those with a PP causee behave as passive. The DP causee is an argument, whereas the PP causee an adjunct like a 'by'-phrase, also supported by the existential interpretation of the null causee.

3. The causee is not in canonical 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 Voice^0, which I identify as *applicative Voice*. In this respect, the GC differs from the indirect causatives embedded under 'make' (MC) in SA, which embed a canonical VoiceP, and thus pass the following diagnostics (Akkuş 2021b).

The applicative Voice 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.

3.1. Instrument phrases

Instrumentals are diagnostics for an external argument layer (i.e. Voice) (Bruening 2013; Alexiadou et al. 2015, also Fillmore 1968). This is illustrated by contrasting anticausatives with passives in (13).

(13)   a. bina   ın-faşş-e   mı işçiyad   wara çakuçad.
        apartment PASS.PFV-demolished-3F by employees with hammers

        'The apartment was demolished by the employees with hammers.'

     b. *bina   ın-qalab-e   mı rua   wara çakuçad.
        apartment NACT-fell.over-3F by itself with hammers

        'The apartment fell over by itself with hammers.'

Instrumentals are possible in the GC, but they may only be associated with the caused event, and not the agent of the causing event.

(14)   a.   ım-mu   xa<u>ss</u>le   hasan potad wara furça gbir-e.
            mother-his washed.CAUS.3F Hasan 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   xa<u>ss</u>le   potad mışa 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.

3.2. Agent-oriented adverbs

Agent-oriented adverbs in SA provide another testing ground regarding the θ-role the external argument of the embedded event bears (Ernst 2001; Matsuoka 2013, i.a.). No agent-oriented adverbs can be associated with the causee in the GC; they exclusively target the causer.

(15)   a.   oratman ki   tı-qa<u>rr</u>i   kemal lala kitab bı   sabır.
            teacher be.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   tı-qa<u>rr</u>i   lala   kitab mışa kemal bı   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.

3.3. Choice of the preposition

Another aspect that distinguishes the causee from the canonical VoiceP Initiator relates to the choice of the preposition heading the PP adjunct.

The PP adjunct in both short passives and 'make'-causatives are headed by the preposition *mı* 'by, from', (16).

(16)   a.   ala cam mı kemal ın-qaraf   bı-l-qasti.
            this glass by Kemal PASS-broke.3M with-the-intention

   'This glass was broken by Kemal deliberately.'

   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.'

The PP adjunct causee in geminates is headed by preposition *mışa* 'to, for'.

(17)   oretman ki   tı-qa<u>rr</u>i   lala   kitab *mışa kemal*.
       teacher be.3F 3F-read.CAUS this.M book to   Kemal

    'The teacher is making Kemal read this book.'

These diagnostics show that although the embedded event involves an active-passive alternation in the geminates, this embedded VoiceP assigns a different θ-role (causee versus initiator) than the canonical VoiceP.
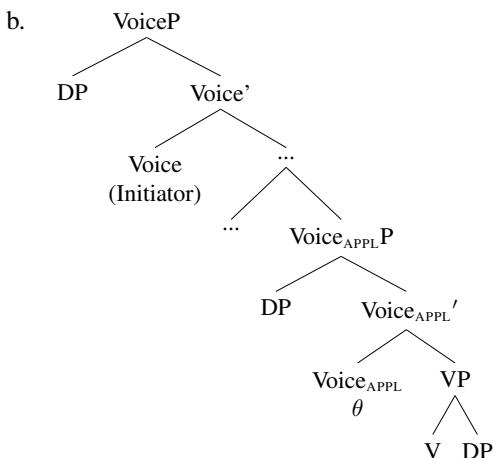
4. Structures for the GC

I argue that an analysis along the lines of Legate's (2014) Acehnese proposal can be extended to the GC strategy in SA. This hypothesis correctly predicts the properties of this construction and explains its contrast with the matrix clauses and 'make'-causatives. 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. $Appl^0$ (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 seen that the GC manifests an active-passive alternation. However, the relevant functional category exhibits properties that warrant identifying it as a distinct projection than canonical VoiceP. I identify this functional category as *applicative Voice*. Let us illustrate structures with the active CauseeP and two possible configurations of passive CauseeP.

(18b) is the illustration of an active applicative VoiceP, in which the causee 'Leyla' is generated as a DP in Voice$_{APPL}$P, and becomes the grammatical subject when passivized. It receives a causee θ-role.

(18) **Active applicative VoiceP**

    a. qa<u>rr</u>i-tu   leyla alu   kitabad.
       read.CAUS-1SG Leyla these.M books

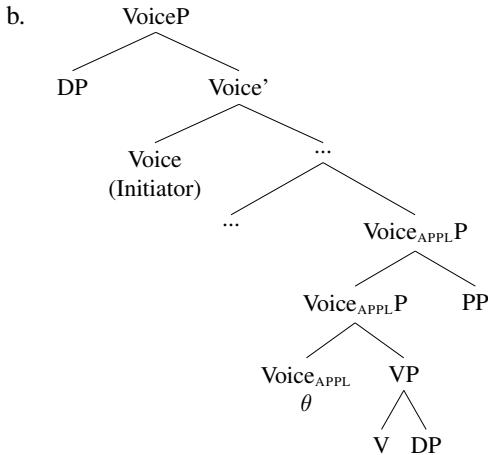   'I made Leyla read these books.'

    b.

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; Legate et al. 2020; Akkuş 2021a).

In the denotation with a PP adjunct, applicative Voice$_{PASS}$ leaves the causee position open, i.e. $\lambda e.\lambda x.$CAUSEE(x,e), to be accessed and saturated by the 'to'-phrase, differing from the PP of the canonical passive (*mɪ* 'from, by' versus *mɪṣa* 'for, to'). P assigns a causee θ-role to its DP complement,

this causee being tied semantically to the causee θ-role introduced by $\text{Voice}_{\text{APPL}}{}^0$, as in (19b) (see Bruening 2013 for the denotations).

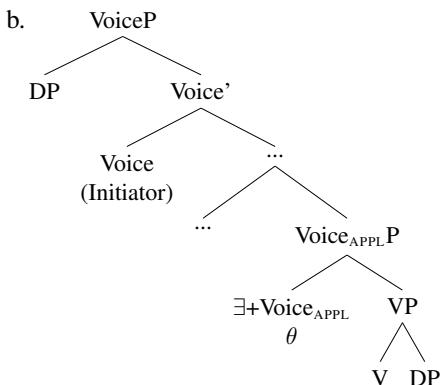(19) **Passive applicative VoiceP with 'to'-phrase**

    a. qa<u>rr</u>i-tu   alu   kitabad mışa leyla.
       read.CAUS-1SG these.M books   to   Leyla
       'I made Leyla read these books.'

    b.
```
              VoiceP
             /      \
          DP        Voice'
                   /      \
               Voice       ...
             (Initiator)   /    \
                         ...   Voice_APPL P
                              /          \
                       Voice_APPL P       PP
                       /        \
                 Voice_APPL      VP
                    θ           /  \
                               V    DP
```

In the second denotation, in which passive applicative VoiceP does not combine with a 'to'-phrase, the causee is existentially bound on the applicative $\text{Voice}_{\text{PASS}}$ head, thus $\lambda e.\exists x.\text{CAUSEE}(x,e)$, as in (20b).

(20) **Passive applicative VoiceP without 'to'-phrase**

    a. qa<u>rr</u>i-tu   alu   kitabad.
       read.CAUS-1SG these.M books
       'I had these books read.'

    b.
```
              VoiceP
             /      \
          DP        Voice'
                   /      \
               Voice       ...
             (Initiator)   /    \
                         ...   Voice_APPL P
                              /          \
                      ∃+Voice_APPL        VP
                          θ              /  \
                                        V    DP
```

5. Conclusions

This paper has shown that geminate causatives in Sason Arabic manifest an active-passive alternation, thus provide independent evidence for Legate's (2014) analysis of the passive. Legate (2014) treats passive as a variant of a functional head that introduces a DP in its specifier, a configuration that is also expected on a functional projection other than VoiceP. I demonstrate that this is indeed the case for

the GC. This construction embeds a second VoiceP with active-passive alternation; however, this VoiceP exhibits properties that warrant identifying it as a distinct type, which I identify as *applicative VoiceP*.

This analysis highlights the parallels between applicative head and the more canonical Voice, while providing for their distinct properties.

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