Variable embedded agent in Sason Arabic[*]

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Abstract. The paper investigates the syntax of an indirect causative construction, 'make'-causatives in Sason Arabic (SA), with a focus on the syntactic status of the implicit embedded agent and the embedded structure. Differing from the analyses of other languages for similar constructions, the study demonstrates that this construction embeds both an active and passive VoiceP. It contends that the implicit embedded agent may be introduced (i) as a full DP in Spec,VoiceP, being subject to Romance ECM-type restrictions, and providing striking evidence of Ā-movement feeding licensing relationships, or (ii) as a free variable *à la* Heim (1982) generated in the Voice head itself. The latter possibility also raises implications regarding licensing, suggesting that licensing of a grammatical object is dissociated from the projection of a specifier.

Keywords. causative, implicit arguments, licensing, Ā-movement, Sason Arabic
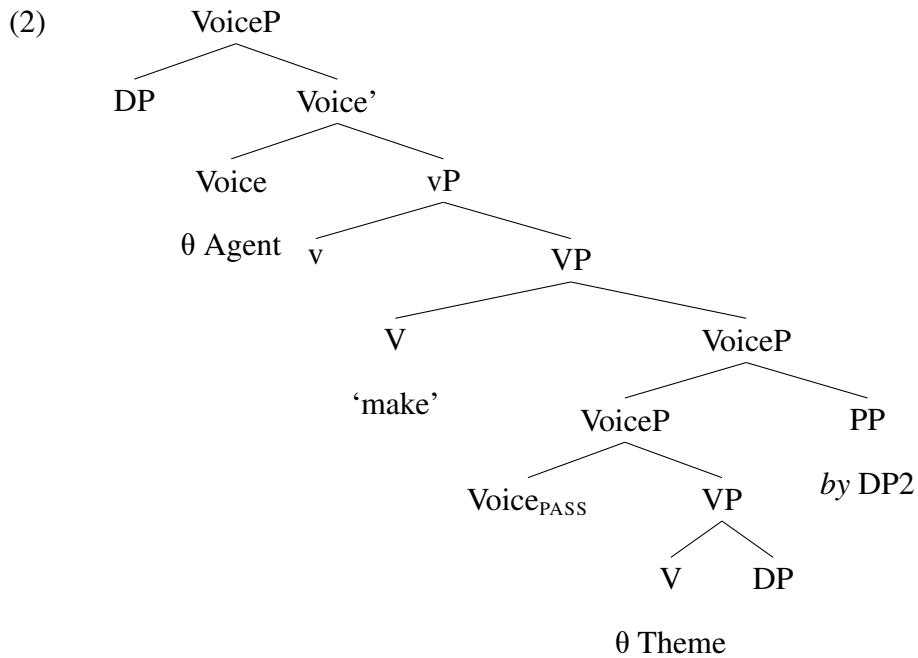
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1 Introduction

In this paper we investigate (i) the syntactic and semantic realization of implicit arguments, and (ii) the licensing of arguments through Ā-movement (similarly to Romance ECM), through an investigation of Sason Arabic "make" causatives, two illustrative examples of which are provided in (1).

(1)   a.   sa-tte   addil   beyt-ma
          made-3F build.INF house-a
          'She made (someone) build a house.'

      b.   kemal sa   xassil   potad   mı recel-ma pir wara kıttaf zıɣm-in.
          kemal made.3M wash.INF clothes by man-a   old with arms strong-PL
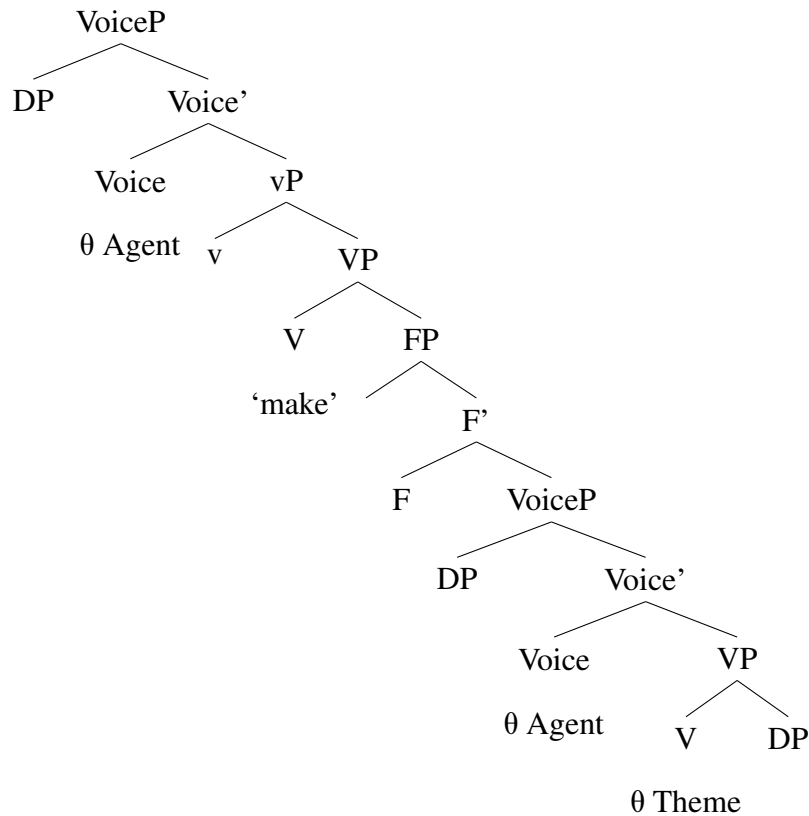   'Kemal had the clothes washed by some old man with strong arms.'

As indicated in the translation, (1a) means *She made someone build a house*, although this construction is marked by the absence of an overt argument/morpheme corresponding to the embedded agent. The implicit embedded agent is interpreted as indefinite, non-specific 'someone' or 'some people'. Descriptively, such implicit arguments refers to instances which involve a missing nominal element, or situations where there is a semantically understood argument that is not expressed overtly. On the other hand, in (1b) the embedded clause contains a 'by'-phrase through which the embedded agent is expressed.

    We demonstrate that Sason Arabic (SA) exhibits three distinct constructions embedded under the matrix verb "make", as illustrated in (2) - (4), each with important theoretical consequences.
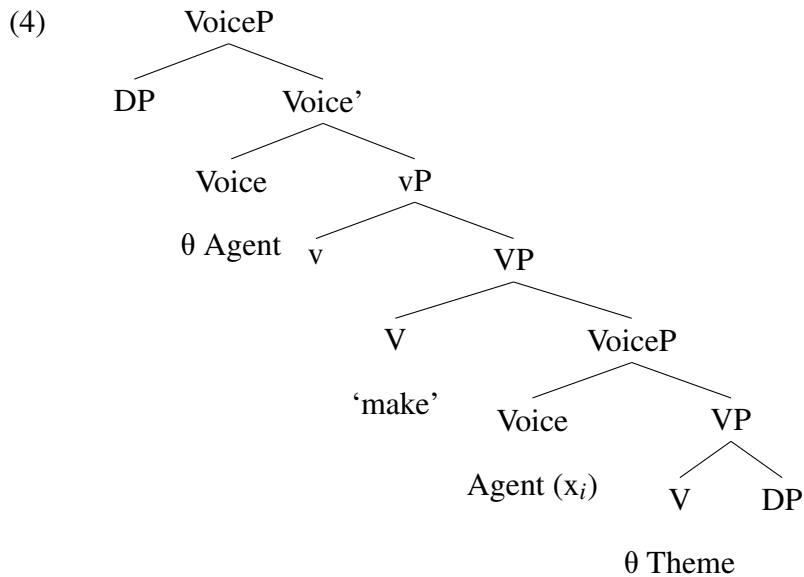
(2)

VoiceP
- DP
- Voice'
  - Voice
    - θ Agent
  - vP
    - v
    - VP
      - V
        - 'make'
      - VoiceP
        - VoiceP
          - Voice_PASS
          - VP
            - V
            - DP
              - θ Theme
        - PP
          - *by* DP2

The tree in (2) is the configuration in which "make" embeds a passive VoiceP with obligatory 'by'-phrase. When the embedded clause contains a 'by'-phrase, it behaves like a canonical passive, in that the embedded verb does not license the object, which behaves as licensed by the matrix "make". Further, the passive is unmarked morphologically (cf. footnote 13; *contra* Haspelmath's (1990) claim that the verbal morphology associated with a passive is an essential part of the construction).

(3)

```
                    VoiceP
                   /      \
                 DP       Voice'
                         /     \
                      Voice     vP
                    θ Agent    /  \
                              v    VP
                                  /   \
                                 V     FP
                              'make'  /   \
                                     F'
                                    /   \
                                   F    VoiceP
                                       /      \
                                      DP      Voice'
                                             /     \
                                          Voice     VP
                                        θ Agent    /  \
                                                  V    DP
                                              θ Theme
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The tree in (3) corresponds to the construction in which the matrix verb "make" embeds a thematic active VoiceP with a projected agent licensed through Ā-movement. The projected agent may not remain *in-situ* (similar to Romance ECM constructions, e.g. French or Italian infinitival complements), and can be rescued by a subset of the English *wager*-class rescuers. Adopting a phase-based account, we demonstrate that Ā-movement, but not A-movement, feeds licensing relationships. Previous research on the long-debated Romance ECM or *wager*-class verbs usually posits a mechanism that revolves around the locality restriction, more precisely the presence of a barrier (or extra projection) between the embedded subject and the matrix verb (e.g. Kayne 1984; Pesetsky 1991; Rochette 1988; Bošković 1997, 2002; Rezac 2013). SA provides striking evidence for this intuition in which the extra projection, call it FP, between the matrix verb and the embedded clause can host pronounced material under certain circumstances.

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(4)

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                    VoiceP
                   /      \
                 DP        Voice'
                          /      \
                       Voice      vP
                      θ Agent    /  \
                               v     VP
                                   /    \
                                  V      VoiceP
                               'make'   /      \
                                     Voice       VP
                                   Agent (xᵢ)   /  \
                                               V    DP
                                            θ Theme
```

The tree in (4) represents the third construction in which "make" embeds an active VoiceP, yet with the implicit embedded agent introduced as a free variable, *à la* Heim (1982), on Voice head itself with distinct behavior from the implicit agents of passives. The realization of the implicit argument as a variable on Voice also brings along licensing implications and the source of transitivity (i.e. active transitive clauses). The standard assumption is that transitivity arises through a Voice functional head (Kratzer 1996)[1], which (a) licenses a second Merge, introduces an external argument (in its specifier), and (b) forms an abstract Case (or Agree) relation with an object. As such these two properties form the so-called Burzio's (1986) generalization.[2] The SA facts demonstrate that licensing of a grammatical object is possible for VoiceP and not dependent on the projection of a specifier, be it in the form of a grammatical subject, e.g. Burzio's (1986) generalization, (also see Marantz 1991; Woolford 2003; McFadden 2004), or as ϕ-features, i.e., the weak implicit

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[1]or the projection of little *v* of Chomsky (1995), relying on work by Larson (1988) and Hale and Keyser (1993).

[2]Chomsky (1995:315-6) notes "... if a verb has several internal arguments, then we have to postulate a Larsonian shell [...], where *v* is a light verb to which V overtly raises." He then adds that "If intransitive (unergative) verbs are hidden transitives, as Hale & Keyser (= HK) suggest, then only unaccusatives lacking agents would be simple VP structures. [...] The external role is a property of the *v*-VP configuration, and a specifier bearing this role is therefore a necessary part of the configuration; a transitive verb assigns an external theta-role by definition".

argument, in Spec,VoiceP (Legate 2014).[3]

The study also partially addresses the question Landau (2010) raises regarding whether implicit arguments form a homogeneous category, demonstrating that the implicit agent introduced as a variable in 'make'-causatives differs from the implicit agent of the passive. Thus the paper contributes to the ontology of null categories, a topic of a long-running debate. Further, this construction adds to the typologies of Voice and of causatives (cf. Schäfer 2008, 2017; Alexiadou and Anagnostopoulou 2004; Harley 2013; Legate 2014).

The paper is organized as follows: §2 gives a brief overview of the causative constructions Sason Arabic, including the 'make'-causatives. §3 presents an analysis commonly adopted in the literature for the implicit embedded agent obversed in some other languages, i.e. the bare VP analysis, and discusses evidence for a Voice layer in the embedded event of Sason Arabic ICs on the basis of several diagnostics that target an external argument layer. After establishing the presence of a Voice layer, §4 argues that the embedded Voice is not exclusively passive (cf. Pitteroff (2015) for German), instead manifests an active-passive alternation despite the absence of a morphological reflex of this alternation. §5 demonstrates that the embedded theme behaves as the grammatical object in this construction. §6 deals with certain properties of the embedded agent, demonstrating that it cannot license anaphors and depictives. §7 looks at the behavior of pronouns, and their implications for the status of the implicit embedded agent. The section argues that the embedded agent may be introduced as a free variable even when the embedded Voice is active. §8 demonstrates that the embedded agent may also be projected in Spec,VoiceP, being subject to Romance ECM-type restrictions, as such can be rescued by Ā-movement. Adopting a phase-based account, it provides evidence for Ā-movement feeding licensing relations. §9 summarizes and concludes the paper.

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[3]See Šereikaitė (2018) for a similar claim that a thematic Voice head is sufficient for the assignment of accusative on the basis of Lithuanian root clauses, which she calls *active existential*.

2 Causatives in Sason Arabic

Sason Arabic (SA) has four ways of expressing causatives: in addition to ablaut and gemination strategies found in other varieties (e.g. Kurylowicz 1957; Fassi Fehri 1987; Benmamoun 1991; Hallman 2006), SA forms causatives through the light verbs *give* and *make*, which we can call 'give'-causative and 'make'-causative, respectively.

The two strategies of causative formation, i.e., ablaut and gemination, are identical to their counterparts in other Arabic varieties in terms of transitivity restrictions they are subject to. In SA as well, ablaut only applies to unaccusative predicates. Consider (5).

(5)   a.   şelç zaɣ
           snow melted
           'Snow melted.'

       b.   zaɣ-tu   şelç
           melted-1SG snow
           'I melted snow.'

In the case of gemination strategy, the causative affix is realized by geminating the second radical of the stem. Geminate causatives formed from the unaccusative bases may not express indirect causative reading (just like the ablaut strategy), similar to their counterparts in other Arabic varieties (e.g. Benmamoun 1991; Hallman 2006). This is illustrated in (6).

(6)   a.   xaser   xıreb
           yoghurt spoiled.3M
           'The yoghurt spoiled.'

       b.   leyla xar̲r̲ıb-e   xaser
           Leyla cause.spoil-3F yoghurt
           'Leyla spoiled the yoghurt.'

           NOT: 'Leyla caused someone to spoil the yoghurt.'

c. xaser   ın-xa<u>rr</u>eb   (mı leyla)
   yoghurt PASS-cause.spoil.3M by Leyla
   'The yoghurt was spoiled (by Leyla).'

Overall, the sequence of morphemes found in the causative construction in SA directly supports the broad structure of causatives arrived at by other researchers working within the type of framework assumed here (see, e.g., Alexiadou et al. 2006; Marantz 2008; Pylkkänen 2008; Harley 2013; Legate 2014). As shown in (7), 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. (7a) is the structure for the active clause in (6b), and (7b) is the configuration for the passive (6c).

(7) a.
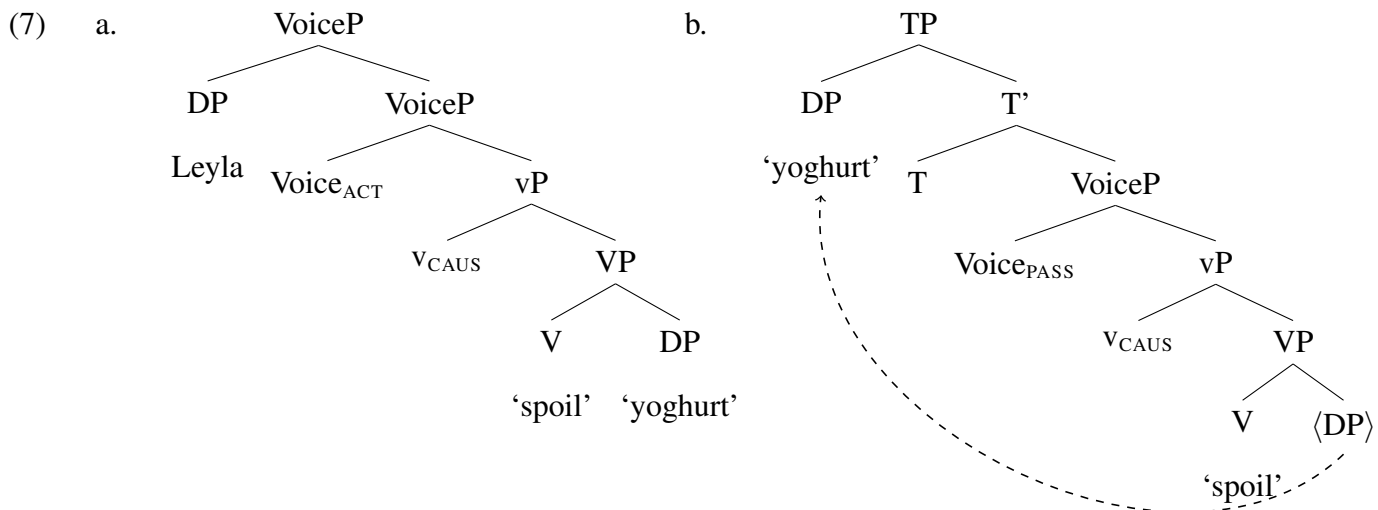
In addition to the root and pattern strategy, SA has calqued the peripherastic causative from Kurdish, which uses the light verb *bıdın* 'give' to form the causative.

(8) mı   piskilet do çekır-ın-e
     I.OBL bicycle gave repair-PART-OBL
     'I had the bicycle repaired'

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

SA has come to display this strategy for causative formation as a result of contact with

Kurdish (Akkuş 2017; Akkuş and Benmamoun 2018; E. Taylan 2017).

(9) a. ado   dolab-ad-en (şa tamirci)   addil
         gave.3PL shelf-PL-their (to repairman) make
         'They had their shelves done.'

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

     b. ımm-a   şa fatma şi adəd-u   addil
         mother-her to Fatma food gave.3F-it make
         'Her mother had Fatma cook.'

         (Lit: Her mother gave Fatma cooking) (E. Taylan 2017:221:(30))

The agent the causer acts upon is expressed in the form of a PP (i.e. *to NP*) both in periph-erastic causatives and morphological transitive causatives.[4]

Another way of constructing causatives is by means of the light verb 'make', which is the focus of the paper.[5]

(10) si-to   addil   beyt
      made-2PL build.INF house
      'You(.pl) made (someone) build the house.'

Note that there is no overt argument/morpheme corresponding to the embedded agent in (10) and the embedded verb appears in the gerundial/infinitival form. This construction differs from the previous strategies in generally not allowing the implicit embedded agent to be overtly expressed, be it as a DP or a PP.

(11) si-tu   (*usta-ma / *şa usta-ma)   addil   beyt
      made-1SG (*builder-a / *to builder-a) build.INF house
      'I had (some builder) built the house.'

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[4]See AUTHORS (in prep) for the discussion of these causatives.

[5]In most cases, we provide as literal a translation as possible for the sentences discussed. However, we do not assign a grammaticality judgment to those translations. Grammaticality judgments are assigned only to the Sason Arabic sentences.

In the next section, we review a potential analysis for the *make*-causatives, that has been discussed widely for other languages, which have a causativizing element of this sort.

3 'make'-causatives

Before proceeding with a careful examination of the properties of the 'make'-causative construction, we first look at an analysis proposed for various languages, i.e. the bare VP analysis, which we demonstrate cannot carry over to Sason Arabic 'make'-causatives. On the basis of Alexiadou et al. (2015),[6] we argue that there must at least be a thematic Voice layer in the embedded event. The thematic Voice accounts for (i) the availability of instrument phrases modifying the embedded agent, (ii) the agent-oriented adverbs associated with the embedded agent, (iii) comitatives, (iv) the requirement for the embedded event to have an external argument, (v) lack of stative verbs in the embedded complement and (vi) the acceptability of certain agentive *by*-phrases.

3.1 Bare VP analysis

Perhaps the simplest analysis would say that the projection responsible for the introduction of the embedded agent is not generated syntactically, and that *si* 'make' (SA), (or for that matter *láta* 'let/make' (Icelandic) or *lät* 'let/make' (Swedish)) simply takes a bare VP complement. In fact, this very analysis has been proposed for Swedish (Lundin 2003), Hiaki (Harley 2013), Hindi (Ramchand 2006), Italian (Folli and Harley 2007), and Icelandic (Wood 2011; Wood and Á. Sigurðsson 2014), among other languages.

For instance, Folli and Harley (2007) propose that the properties of the two causative classes in Italian, *faire infinitif* (FI) and *faire par* (FP) depend on the nature of the com-

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[6]Alexiadou et al. (2015) is actually a culmination of a long line of work, going back at least to Alexiadou and Anagnostopoulou (2004), and worked out in detail in Schäfer (2008) – and even then building off of earlier literature. We take Alexiadou et al. (2015) to be representative of this line of work.

plement of fare: FI embeds a *v*P, FP a nominalized VP. The syntactic and semantic characteristics of these complements account for well-known differences between FI and FP, including the previously untreated "obligation" requirement in FI, absent in FP. Despite the structural difference between the two classes, both lack the Voice layer in the embedded event.

Hiaki is another language which has been suggested to lack the relevant Voice projection. Harley (2013) notes that besides the *-tua* 'direct' causative, in which the embedded agent must be expressed, Hiaki also has a productive 'indirect' causative, *-tevo*, where the embedded agent is necessarily surpressed, as shown in (12).

(12) Inepo Santoh-ta   hitto-tevo-k
      I   Santos-ACC treat.medically-CAUS.INDIR-PRF
      'I had Santos treated.' (for a medical condition)   (Harley 2013:(33))

When suffixed with *-tevo*, an embedded verb receives a 'passive' or 'impersonal' reading, despite the absence of any passive or impersonal Voice morphology. Harley (2013) argues that the embedded subject is completely absent from the syntax, as evidenced by passivization facts. When a *-tevo* causative is passivized, the Causer is unexpressed and the object of the embedded verb becomes the derived subject.

(13) Santoh hitto-tevo-wa-k
      Santos treat.medically-CAUS.INDIR-PASS-PRF
      '(Somebody) had Santos treated.'

      (Lit: Santos was caused to be treated.)   (Harley 2013:(34))

Thus, the embedded agent - the embedded subject - is truly syntactically absent, as nothing intervenes between the embedded object and the matrix subject position (13). The morpheme *-tevo* selects as its complement a constituent which does not contain the external argument-selecting head, as in Folli and Harley's (2007) treatment of *faire par* causatives, or Ramchand (2006) on Hindi indirect causatives. If *-tevo* has such a selectional restriction,

the embedded agent argument will be absent, since the projection which introduces it will necessarily be absent.

This line of argument also extends to indirect causatives in other, unrelated languages such as Turkish, where the theme of the embedded verb is promoted to become the grammatical subject of the clause when passivized. As seen in (14), the derived subject receives nominative case and agrees with the verb of the main clause. The embedded agent is expressed as a DP bearing dative case and is not intervener for the raising of the embedded theme. In this respect, it patterns like indirect objects of double object constructions in standard Turkish.

(14) a. bütün çocuk-lar süt-ü   iç-ti-ler.
          all   child-PL   milk-ACC drink-PST-3PL
          'All children drank the milk.'

      b. bütün çocuk-lar-a   süt-ü   iç-ir-di.
          all   child-PL-DAT milk-ACC drink-CAUS-PST
          '(S/he) made all children drink the milk.'   (Çetinoğlu et al. 2008:4a)

      c. süt   bütün çocuk-lar-a   iç-ir-il-di.
          milk all   child-PL-DAT drink-CAUS-PASS-PST
          'The milk was made (by him/her) to be drunk by children.'

          (Çetinoğlu et al. 2008:4b)

Agent-oriented adverbs are a diagnostic that also point to the absence of an external argument in the embedded layer in the case of Turkish. Such adverbs pick out the causing agent *mother* in (15)), and not the embedded agent (*child*) in Turkish.

(15) anne   çocuğ-a   kitab-ı   isteksizce oku-t-tu.
      mother child-DAT book-ACC reluctantly read-CAUS-PST
      'The mother reluctantly made [the child read the book].'

      NOT: 'The mother made [the baby read the book reluctantly].'

These examples have been used to argue for a bare VP analysis or at least the absence of a Voice layer in the embedded event in many languages. In the next section, we provide evidence for the presence of the thematic Voice in Sason, and then for the syntactic projection of the implicit argument.

3.2 Evidence for a Voice layer

Despite (11) and other examples in Sason Arabic, we provide evidence that there is, in fact, more structure than the above analysis in §3.1 would suggest.

Drawing first on the line of work in Alexiadou et al. (2015), we argue that the embedded event contains a thematic Voice projection. The arguments for Voice are (i) the agent-oriented adverbs associated with the embedded agent, (ii) the availability of instrument phrases modifying the embedded agent, (iii) agent-oriented comitatives, (iv) the requirement for embedded external argument, (v) lack of stative verbs in the embedded complement and (vi) the acceptability of certain agentive *by*-phrases.

3.2.1 Agent-oriented Adverbs

Agent-oriented adverbs in Sason Arabic provide the first testing ground regarding the availability of an agent in the embedded verb phrase (Ernst 2001; Matsuoka 2013, i.a.). These adverbs can modify the action of the embedded agent, (16).

(16) a. bolum   tı-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. halq irıl-lu   le başbaqan   i-si   farg   eqonomi wara
          public want-him that prime minister 3M-make handle.INF economy with
          aqıl.
          mind
          'The public wants that the prime minister makes (someone) handle the ecomony

wisely.'

Depending on the context, these adverbs may be ambiguous in terms of whether they modify the action of the matrix agent or the embedded agent, as in (17).

(17) aɣa   sa   hazd   haşiş bı   sabır.
     landlord made cut.INF grass with patience
     'The landlord made [(someone) cut the grass patiently].'

     'The landlord, patiently, made [(someone) cut the grass].'

3.2.2   Instrument Phrases

As discussed by Bruening (2013); Alexiadou et al. (2015), instrumentals are also diagnostics for an external argument layer (i.e. a Voice layer). They tend, for example, to be banned from the same environments as *by*-phrases. For instance, in (18b) the instrument reading for 'with hammers' is not available in the anticausative/unaccusative, whereas it is available in the passive, (18a).

(18) a. bina   ın-faşşe   mı işçiyad   wara çakuçad
          apartment PASS-demolish.3F by employees with hammers
          'The apartment was demolished by the employees with hammers.'

      b. *bina   ın-faşşe   mı roa   wara çakuçad
          apartment NACT-demolish.3F by itself with hammers
          'The apartment collapsed on its own with hammers.'

It turns out the instrument phrases are also grammatical in SA ICs, and modify the embedded agent. Consider the examples in (19).

(19) a. kemal sa   buaɣ sir   beyt wara furça-d   gbar
          Kemal made.3M paint do.INF house with brush-PL big.PL
          'Kemal had someone paint the house with big paint brushes.'

    b.   si-tu   aɣet   şurvan wara ibre
         made-1SG sew.INF pants   with needles

         'I had the pants sewn with needles.'

These instrument phrases modify the actions of the implicit agent. This suggests a Voice layer representing such an agent. Note that depending on the felicity of the context, instrument phrases are more saliently ambiguous with respect to whether they refer to the agent of causation or the implicit embedded agent, as in (20).

(20)   kemal sa   buaɣ 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].'

The main point is that instrumental adverbs can modify the embedded, caused event.

3.2.3 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 a Voice layer (Bruening 2013; Alexiadou et al. 2015). As such, the comitative reading that is available in (21a) is lost with unaccusatives, as in (21b).

(21) a. bina   ın-faşşe   wara sırraɣ 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   ın-qalabe   wara sırraɣ fi-ya
          apartment NACT-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 'make'-causatives, we see that the comitative reading is also available in this construction.

(22) 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. kemal sa faş bina wara işçiyad
          Kemal made demolish.INF apartment with employees
          'Kemal made (someone) demolish the building with the employees.'

          (the employees helped demolish the building)

The ambiguity of modification regarding the embedded or matrix clause is observed with comitatives as well.

(23) aɣa sa hazd haşiş wara cinarad.
      landlord made cut.INF grass with neighbors
      'The landlord made [(someone) cut the grass with the neighbors].'

      'The landlord, with the neighbors, made [(someone) cut the grass].'

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.

3.2.4 The requirement for embedded external argument

Another diagnostic to demonstrate that the embedded verb phrase is a VoiceP, and not just a VP, involves a constraint on the embedded external argument: as seen thus far, the embedded verb phrase may be transitive or unergative, (24).

(24) a. ab-i sa patk fo com
          father-my made.3M jump.INF over fence
          'My father made (someone) jump over the fence.'

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b. ams   cinar-i   sa   faqz   ımbala sabap
   yesterday neighbor-my made run.INF without reason

'Yesterday my neighbor made (someone) run for no reason.'[7]

On the other hand, unaccusative verbs are disallowed.

(25) a. *kemal sa   var   mı mardivan-ad
       Kemal made.3M fall.INF from stair-PL

       Intended: 'Kemal made (someone) fall from the stairs.'

  b. *ab-i   sa   mēt mı bert
       father-my made.3M die.INF from cold

       Intended: 'My father made (someone) die from cold.'

We interpret this asymmetry as an argument that the complement of 'make' must contain a thematic voiceP.

3.2.5 Stative predicates

In addition to the impossibility of unaccusative predicates in the embedded verb phrase, the restriction on stative verbs is another indication of the presence of a Voice layer. Stative predicates are not embeddable under the 'make'-causative, as illustrated in (28).[8]

(28) a. *recel sa   bazu   kıleb
       man   made fear.INF dogs

       'The man made (someone) fear dogs.'

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[7]There might be a schwa between ə between the consonant sequence *qz* of *faqz* 'run'. We gloss over phonetic details throughout unless they matter to the discussion.

[8]Possession in SA is expressed with the existential particle *ifi* 'there, exist' and a clitic.

(26) ifı-nna araba-ma
      exist-us car-a
      'We have a car.'

The absence of the clitic leads to a purely existential reading.

(27) ifi   araba-ma
      exist car-a
      'There is a car.'

b.   *recel sa   ifı-llu   araba-ma
       man   made exist-him car-a

       'The man made (someone) have a car.'

Following Harley (1995); Folli and Harley (2007:215), we assume that stative verbs such as 'have', 'fear' do not take an external argument, similar to unaccusative predicates. We interpret this as the absence of a (thematic) Voice layer with such predicates, and hence their incompatibility with 'make'-causatives. Note that in Sason, such verbs are not passivizable.

(29)   a.   kemal ibze   kıleb
         Kemal fear.3M dogs

         'Kemal fears dogs.'[9]

    b.   *kıleb in-bızo   mı kemal
         dogs   PASS-fear.3PL by kemal

         'Dogs are feared by Kemal.'

3.2.6 Agentive by-phrases

By-phrases are also grammatical with some restrictions on its acceptability. Most felicitous examples are when the DP embedded under *by* is indefinite, as in (30a). Note that it is introduced in the same way external arguments are in canonical passives (cf. 6c), i.e. with the preposition *mı* 'by, from'. Definite *by*-phrases lead to ungrammaticality, repeated here as (30b).[10]

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[9]Some speakers use the form 'fear from dogs' with 'fear' selecting a PP, rather than 'fear dogs'. Such speakers also do not allow passivization.

[10]The definiteness restriction on *by*-phrases has been commonly noticed for a variety of constructions and languages. For instance, Sigurðsson and Wood (2018) report a very similar restriction for Icelandic 'let'-causatives to that of SA ICs. Kaiser and Vihman (2006:132) note that in Estonian, generalized, unspecific groups are possible as *by*-phrases whereas specific, identifiable individuals are not.

There are other constructions which have similar constraints on *by*-phrases. Pitteroff (2014) mentions that German impersonal passives have similar constraints. Ability adjectives in English also exhibit this restriction.

(i)   a.   *This is doable by the child.

    b.   This is doable even by a child.

(30) a. (?)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.'

    b. si-tu   addil   beyt (*mı usta)
       made-1SG build.INF house (*by the.builder)
       'I had the house built by the builder.'

Indefinite *by*-phrases further improve when they are "heavy" (heaviness reminiscent of 'heavy-NP shift'), as illustrated in (31).

(31) ırı-nni a-si   addil   beyt mı usta-ma ande (le) y-are   şıne
     want-me 1SG-make build.INF house by builder-a who (that) 3M-know what
     y-addel
     3SG-do
     'I want to have the house built by a builder who knows what they are doing.'

The best examples are with instances in which an impersonal or generic interpretation is available. Consider (32).

(32) beaqıl ye   isi addil   musluq mı tamirci-ma hēdi.
     unwise cop.3SG make repair.INF tap   by repairman-a slow
     'It would be unwise to make the tap repaired by a slow repairman.'

The possibility of *by*-phrases as in (30-32) suggests that there is a Voice layer, introducing an agent role that can be modified/identified by the *by*-phrases.

   Given the availability of certain agentive *by*-phrases, instruments, agent-oriented adverbs, the restriction on the embedded external argument and the lack of stative verbs in the embedded complement, it can be concluded that the 'make'-causative construction has a thematic VoiceP in Sason Arabic.

A similar constraint is observed even in English tough-construction, in that the more indefinite, generic the *by*-phrase is, the better it is.

   We leave aside why this restriction is widely available across constructions and languages, including SA ICs. Though see e.g. Oltra-Massuet 2013; Alexiadou 2018 for some discussion in the context of *-able* adjectives.

Next we investigate the size of the complement of 'make'-causative.

3.3   The size of the embedded clause

We can start by confirming that the clause is bi-eventive, as evinced by the possibility of independent manner adverbs, each modifying a different event given the right context, as in (33).

(33) aɣa   xɪfef sa   hazd   haşiş hēdi.
      landlord quickly made cut.INF grass slowly
      'The landlord quickly made (someone) cut the grass slowly.'

The next question that arises is whether the complement can be a full TP or CP. Clitic Left Dislocation (CLLD) and *wh*-phrases demonstrate that no full CP is available in embedded clause. Direct or indirect object arguments in Arabic may normally be CLLD-ed to a left-peripheral position in the CP domain (Benmamoun 2000; Aoun et al. 2010), as in (34) (The CLLD-ed DP and the resumptive pronoun related to it are italicized).

(34) *gaste*   ams   qari-tu-*a*
      newspaper yesterday read-1SG-3F
      'The newspaper, I read it yesterday.'

However, (35) shows that such objects may not be CLLD-ed to the right of the light verb 'make', which indicates that the complement is not a full CP.

(35) a. *ams   aɣa   sa   *haşiş* hazd-*u*.
          yesterday landlord made grass cut-3M
          'Yesterday the landlord made the grass (someone) cut it.'

      b. *ams   dāde sa-tte *gaste*   qaru-*a*.
          yesterday mom made-3F newspaper read-3F
          'Yesterday mom made the newspaper (someone) read it.'

Wh-phrases are also disallowed in the complement of 'make', corroborating the view that the embedded complement is not a CP.

(36) a. kemal sa   faqz.
      Kemal made run.INF
      'Kemal made (someone) run.'

    b. *kemal sa   ande faqz?
      Kemal made who run.INF
      'Who did Kemal make run?'

    c. ande kemal sa   faqz?
      who Kemal made run.INF
      'Who did Kemal make run?'

The examples in (37) show that the embedded clause cannot have distinct temporal modification, thus point to the absence of a TP layer.

(37) a. *ams   aɣa   sa   hazd haʂiʂ lome.
      yesterday landlord made cut.INF grass today
      'Yesterday the landlord made (someone) cut the grass today.'

    b. *ams   dāde sa-tte   qaru   gaste   lome.
      yesterday mom made-3F read.INF newspaper today
      'Yesterday mom made (someone) read the newspaper today.'

Moreover, negation is also disallowed on the infinitive, as shown in (38).

(38) a. nana mɪ-n-ɪsi   xanni
      we   NEG-1PL-make sing
      'We don't make anyone sing.'

    b. *nana n-ɪsi   mɪ-xanni
      we   1PL-make NEG-sing

The discussion so far gives the impression that no element is allowed between 'make'

and 'infinitive'.[11] This raises the question of whether a constraint of obligatory adjacency between 'make' and 'infinitive' is at work. Light verb constructions indicate at least that at the phonological level adjacency is not required. This is because a non-verbal element may precede the light verb in Sason Arabic due to contact with Turkish and Kurdish (Akkuş and Benmamoun 2018), thus resulting in the order "make - nonverbal element - light verb" in the 'make'-causative construction.

(39) kemal [sa   buaɣ sir   ] beyt wara furça-d gbar
      Kemal [made.3M paint do.INF] house with brush-PL big.PL
      'Kemal had someone paint the house with big paint brushes.'

The light verb construction still leaves the door open for a complex predicate analysis. Contrastive focussing provides a testing ground to this end. In SA and other Arabic varieties, the default mechanism to mark contrastive focus is to prepose the relevant element to sentence-initial position, as shown in (40) and (41).

(40) a. qari-tu   kitab le Hemingway.
          read-1SG book of Hemingway
          'I read Hemingway's book.'

      b. KITAB LE HEMINGWAY qari-tu   (ay   le Dostoyevski la).
          book   of Hemingway   read-1SG that.M of Dostoyevski no
          'I read Hemingway's book, not Dostoyevski's.'

(41) a. kınna   n-ıtbex   badıncan.
          be.PROG.1PL 1PL-cook tomato
          'We are cooking tomatoes.'

---

[11]With respect to the realization of aspect, Akkuş (2015:17) suggests that "aspect is morphologically encoded by the position and phonological realization of the agreement marking on the verb". Adopting this suggestion, we assume that aspect is not projected in the complement due to the absence of agreement marking on the infinitivals.

b.   BADINCAN kınna   n-ıtbex   (bibar la).
     tomato   be.PROG.1PL 1PL-cook pepper no
     'We are cooking tomatoes, not peppers.'

It is also possible for the focussed constituent to raise to a lower position in the clause. Therefore, (42a) is an alternative way for contrastively focussing the object in addition to (41b). Thus, the focussed element raises to a position between the auxiliary and the participle, which we can call FP for the purposes of this paper.[12] However, leaving the focus constituent *in-situ* is disallowed, as shown in (42b).

(42) a.   kınna   BADINCAN n-ıtbex   (bibar la).
         be.PROG.1PL tomato   1PL-cook pepper no
         'We are cooking tomatoes, not peppers.'

      b.   *kınna   n-ıtbex   BADINCAN (bibar la).
         be.PROG.1PL 1PL-cook tomato   pepper no

Turning to 'make'-causatives, the focussed constituent may be preposed to sentence initial poisition, as in (43b). Crucially, the contrastively-focussed embedded object may also be raised to a position between 'make' and 'infinitive', (43c), whereas this is not possible for CLLD-ed elements or *wh*-phrases, as illustrated in (35) and (36) respectively, which do not have a lower position. Similar to the situation in matrix clauses, the focus element may not remain *in-situ*, as in (43d).

(43) a.   dāde sa-tte   xassil   şurvan-i
         mom made-3F wash.INF pants-my
         'Mom made (someone) wash my pants.'

      b.   ŞURVAN-I dāde sa-tte   xassil   (qaway-i la).
         pants-my   mom made-3F wash.INF shirt-my no
         'Mom made (someone) wash my pants, (not my shirt).'

---

[12]This kind of focus is more commonly known as 'VP-internal focus' without necessarily implicating that the focussed constituent remains inside the VP per se. The term is aimed at drawing a contrast between focussing to CP-layer vs. some position around VP. For instance, Kiss (2006) suggests that the focus constituent in Hungarian appears in a Spec,PredP position above VP.

c.　dāde sa-tte　　ṢURVAN-I xassil　　(qaway-i la).
　　　　　mom made-3F pants-my　wash.INF shirt-my　no
　　　　　'Mom made (someone) wash my pants, (not my shirt).'

　　　d.　*dāde sa-tte　　xassil　　ṢURVAN-I (qaway-i la).
　　　　　mom　made-3F wash.INF pants-my　shirt-my　no

Another illustration of a focussed constituent raising to a low position under the causative

verb "make" is provided in (44).

(44)　a.　ams　　　aɣa　　　sa　　hazd haşiş.
　　　　　yesterday landlord made cut　　grass
　　　　　'Yesterday the landlord made (someone) cut the grass.'

　　　b.　HAŞIŞ ams　　　aɣa　　　sa　　hazd, (şijra la).
　　　　　grass　yesterday landlord made cut　　tree　no
　　　　　'Yesterday the landlord made (someone) cut the grass, not the tree.'

　　　c.　ams　　　aɣa　　　sa　　HAŞIŞ hazd, (şijra la).
　　　　　yesterday landlord made grass　cut　　tree　no
　　　　　'Yesterday the landlord made (someone) cut the grass, not the tree.'

　　　d.　*ams　　　aɣa　　　sa　　hazd HAŞIŞ, (şijra la).
　　　　　yesterday landlord made grass cut　　　tree　no

To summarize this section, we have seen that the complement of 'make'-causative lacks

TP or CP layers, but contains a thematic VoiceP layer. Further a projection, FP, is available

between 'make' and the infinitive to host contrastively-focussed constituents. Given this

background, let us turn to the discussion of the active-passive alternation.

4　An active Voice with passive alternation

This section deals with the status of the thematic Voice in the complement of the causative

"make". Given the discussion in the previous section, one possible approach is to consider

analyzing the embedded Voice head as passive, as in Pitteroff's (2015) analysis of *let-*

middles constructions (*sich-lassen*) in German. However, we argue that the embedded Voice is not exclusively passive, instead manifests an active-passive alternation despite the absence of a morphological reflex of this alternation.[13]
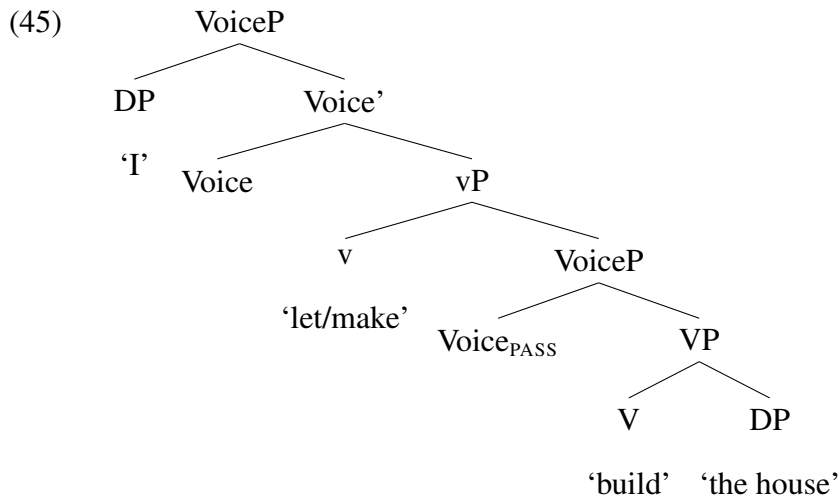
This section presents several arguments towards the active-passive alternation in the embedded Voice. The arguments come from (i) the (im)possibility of A-moving the embedded object when the matrix 'make' is passivized, (ii) sluicing, (iii) nonpassivizable idioms. These diagnostics reveal an interesting property of 'make'-causatives. It turns out that *by*-phrases are obligatory for a passive structure, and their absence indicates an active construction.

4.1 (Impersonal) Passive

One reason to think that the embedded construction shows an active-passive alternation comes from the passivization of the causative 'make'. Now that we have shown that the embedded complement contains a thematic Voice layer, the bare VP analysis cannot work. Another alternative could be to say that 'make'-causatives in Sason Arabic have a similar structure to what Pitteroff (2014, 2015) suggests for German *let*-middles, as in (45), in which *lassen* 'let' embeds a passive VoiceP.

---

[13] Harley (2017) notes that languages indeed have many constructions which have syntactic and semantic properties of passives, yet lack any overt morphological exponent of passivization, especially in embedded contexts. See Pitteroff (2014, 2015) for a very similar view.

(45)

```
                    VoiceP
                  /        \
                DP          Voice'
                |          /      \
               'I'      Voice      vP
                        |        /     \
                     'let/make' v       VoiceP
                               |       /      \
                            'let/make' Voice_PASS  VP
                                                  /    \
                                                 V      DP
                                                 |      |
                                             'build'  'the house'
```
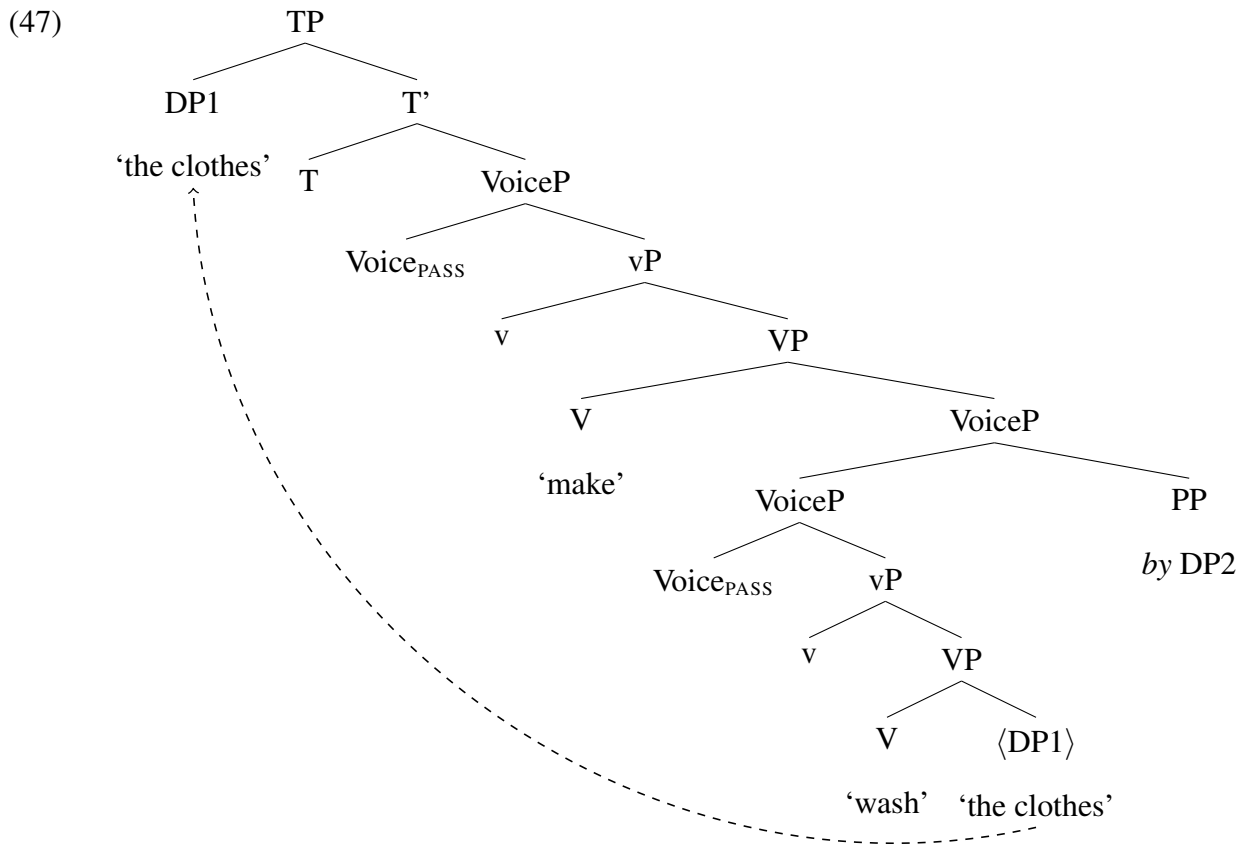
(adopted from Pitteroff 2015:120)

German *let*-middles and SA 'make'-causatives are similar in terms of not having a passive morphology, with the caveat that the latter requires a *by*-phrase for a passive structure. The difference is that German does not allow 'let' to passivize, whereas the passivization of 'make' is possible in SA. therefore being a lexical verb in SA, rather than a functional verb like in (45).

When the embedded clause contains a *by*-phrase, it behaves like a canonical passive, in that the embedded verb does not license the object, instead behaves as licensed by the matrix 'make'. Therefore, when 'make' is passivized, the embedded theme raises to grammatical subject position and shows verbal agreement. Consider (46a-46b). Raising is not possible without a *by*-phrase, as illustrated in (46c).

(46) a. 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.'

      b. potad ın-so   xassil   mı mara-ma pir-e
          clothes PASS-made.3PL wash.INF by woman-a old-F
          'Clothes were made to be washed by some old woman.'

c. *potad ɪn-so   xassil
    clothes PASS-made.3PL wash.INF
    Intended: 'Clothes were made to be washed.'

We can represent (46b) as (47), in which the embedded clause has a *by*-phrase, indicating its passive nature, and the embedded theme raises to grammatical subject (as such it manifests subject-verb agreement) when the matrix 'make' is also passivized.

(47)

```
                              TP
                   ┌──────────┴──────────┐
                  DP1                    T'
              'the clothes'      ┌───────┴───────┐
                                 T             VoiceP
                                        ┌────────┴────────┐
                                     Voice_PASS          vP
                                                    ┌─────┴─────┐
                                                    v           VP
                                                         ┌──────┴──────┐
                                                         V          VoiceP
                                                      'make'    ┌──────┴──────┐
                                                             VoiceP          PP
                                                        ┌──────┴──────┐    by DP2
                                                    Voice_PASS        vP
                                                              ┌───────┴───────┐
                                                              v              VP
                                                                        ┌─────┴─────┐
                                                                        V        ⟨DP1⟩
                                                                     'wash'   'the clothes'
```

The interesting aspect of the construction is that *by*-phrases, which are expected to be optional as an adjunct, are required for a passive structure. This contrasts with garden-variety clausal passives in which *by*-phrases are optional, (48).

27

(48)   ala   cam   (mɪ kemal)   ɪn-qaraf   bɪ-l-qasti.
        this glass   (by Kemal)   PASS-broke.3M   with-the-intention

        'This glass was broken (by Kemal) deliberately.'

        (Yakut 2013:7; with slight modifications)

To the best of our knowledge, the only other instance in which the obligatoriness of a *by*-phrase is reported comes from Ingason (2016), in which he points out that in the Icelandic caused experiencers, the causing event can be expressed as a *by*-phrase adjunct, but this adjunct cannot be omitted. This is illustrated in (49).

(49)   Stelpunum   var skemmtun   *(af dansinum).
        girls.the.DAT was entertainment.NOM *(by dance.the)
        'The girls were entertained by the dancing.' (Ingason 2016:(145))

Again in Icelandic, *by*-phrases in short passives are never obligatory, as seen in (50).

(50)   Stelpunum   var skemmt   (af Jóni).
        girls.the.DAT was entertained (by John)
        'The girls were entertained by John.' (Ingason 2016:(147))

Ingason (2016) speculates that the obligatory adjunct in (49) is explained by the causative semantics, yet does not elaborate on it. Lacking a definitive explanation for Sason Arabic, we simply assume that the embedded passive Voice syntactically selects for the adjunct, and focus on the syntactic properties associated with its presence and absence.

     However, this is not the only structure available in Sason Arabic, and in fact the embedded clause may lack a *by*-phrase (as seen in many examples thus far). Without a *by*-phrase, the embedded clause behaves like a canonical active (with the option of not projecting a specifier position (see section 7 for discussion), with the embedded object behaving as though licensed by embedded verb, and so remains a grammatical object even when 'make' is passivized (see section 5). An illustrative tree is given in (51).

(51)

```
                    VoiceP
                   /      \
                 DP        Voice'
                          /      \
                      Voice       vP
                        |        /   \
                    θ Agent     v     VP
                               /     /   \
                          'make'    V     VoiceP
                                        /        \
                                  Voice_ACT       VP
                                     |           /  \
                                 θ Agent        V    DP
                                                      |
                                                  θ Theme
```
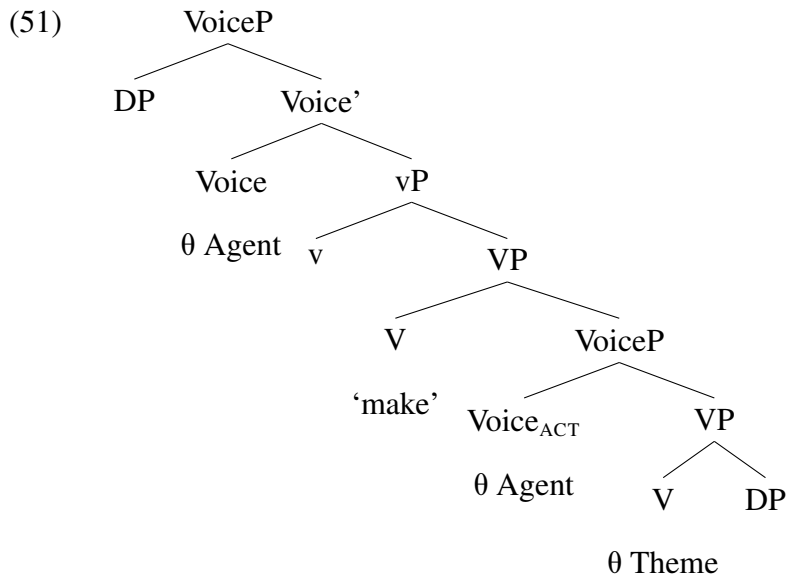
Examples (52) and (53) provide illustrations for when 'make' is passivized and the embedded clause lacks a *by*-phrase. This operation results in an impersonal passive, in which the embedded theme does not raise to the subject position and no argument is associated with the grammatical subject position, as such 'make' is realized with the default third masculine agreement.

(52) ın-sa   addil   beyt.
      PASS-made build.INF house
      'Someone made (someone) build the house.'

(53) a. kemal sa   xassil   potad-na.
          kemal made.3M wash.INF clothes-our
          'Kemal made (someone) wash our clothes.'

      b. lora acepma ın-sa   xassil   potad-na
          then somehow PASS-made wash.INF clothes-our
          'Then somehow someone made (someone) wash our clothes.'

Sason Arabic independently has impersonal passives, as illustrated in (54). In this respect, it patterns like German, (55).

(54) a.   lora ın-sa   dans (mı misafir-ad).
          then PASS-did dance (by guest-PL)
          'Then it was danced (by the guests).'

      b.   ın-zak   asriye   kull-u.
          PASS-laughed evening.M all-M
          'It was laughed the whole evening.'

(55)   Dann wurde (von den Kindern) getanzt.
       Then was   by   the children danced
       'Then there was dancing (by the children).'   (Kiparsky 2013:72b)

Crucially, under the active embedded analysis, this is expected. It turns out without a *by*-phrase, the embedded clause behaves as active, even when the matrix 'make' is passivized. A straightforward suggestion regarding the facts such as (52) is that there is an implicit argument which is syntactically projected, and thus acts as an intervener blocking the raising of the theme to the grammatical subject position. This is indeed the view Sigurðsson and Wood (2018) suggest for the indirect causatives embedded under 'let' in Icelandic. However, we argue that in SA these properties hold even when the embedded agent is not projected in the traditional sense, i.e. as an argument in the specifier (see section 7).

To summarize, the passivization of the matrix 'make' allows us to demonstrate the presence of two possible embedded structures, one active and one passive, despite the absence of a morphological reflex of this alternation. Without a *by*-phrase, the embedded structure behaves as active, as such the embedded theme is licensed by the embedded verb, and remains a grammatical object even when 'make' is passivized (see section 5). Yet, the presence of a *by*-phrase necessarily leads to a passive clause, in that the embedded verb cannot license the embedded theme, which seems to be licensed by the matrix 'make'. Accordingly, when 'make' is also passivized, the theme raises to become the grammatical subject.

Therefore, we suggest that 'make'-causatives in Sason Arabic can embed an active

VoiceP as well as a passive VoiceP.

4.2 Non-passivizable idioms

Another argument that suggests an active-passive alternation for the complement of 'make'-causative comes from non-passivizable idioms in Sason Arabic, an illustration of which is provided in (56).[14]

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

b. faxz 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 'make'-causatives only in the absence of *by*-phrases.

(57) a. kul çax tı-si   qarf   faxz le şeytan
every time 3F-make break.INF leg   of devil
'Every time she makes (someone) get lucky.'

b. *kul çax tı-si   qarf   faxz le şeytan mı oranci-ma azimli
every time 3F-make break.INF leg   of devil   by student-a determined
'Every time she has the devil's leg broken by a determined student.'

Idioms of this sort contrast with passivizable idioms, illustrated in (58).

(58) a. kemal hatarax ro-i
Kemal burned heart-my
'Kemal broke my heart.'

Lit: 'Kemal burned my heart.'

---

[14]This also demonstrates that the restriction against unaccusatives is not semantic. The predicate "getting lucky" is not agentive, but the verb "break" has an external argument.

b. ro-i   ın-hatarax   mı kemal
   heart-my PASS-burned by Kemal

   'My heart was broken by Kemal.'

Unlike non-passivizable idioms, which require the absence of *by*-phrases, such idioms impose no restriction, (59).

(59) a. si-tu   harx   ro   le kemal
          made-1SG burn.INF heart of Kemal

          'I made (someone) break Kemal's heart.'

      b. si-tu   harx   ro   le kemal mı nes-ma   gıze kotti
          made-1SG burn.INF heart of Kemal by person-a such bad

          'I had Kemal's heart broken by such a bad person.'

Following Harley (2017), we assume that non-passivizable idioms are impossible in (57b) since they require an active Voice to be present. On the other hand, the garden-variety idioms are possible with or without *by*-phrases, since the former option indicates an active Voice, whereas the latter a passive Voice.

4.3 Sluicing

Another reason to think that the embedded complement manifests an active-passive alternation comes from 'sluicing'. While VP ellipsis may in some cases allow voice mismatching, sluicing does not (Merchant 2013), as shown in (60).

(60) a. You may want to install that now if it isn't already.

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

      c. *Joe was murdered, but we don't know who.

      d. *Someone murdered Joe, but we don't know who by.

Sason Arabic is no exception to this generalization. VP ellipsis allows voice mismatch, as indicated in (61).

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

b. ala bilgisayar itıx in-fıde mı ande le irıllu.
this.M computer can PASS-open by who that wants
'This computer can be turned on by anyone who wants to.'

Now consider (62a) where we know the embedded clause is passive. The sentence becomes grammatical if the *wh*-phrase in the remnant is *mı ande* 'by whom', thus matches the antecedent in voice, as in (62b). This contrast establishes that sluicing doesn't allow voice mismatch.

(62) a. *sadqe le ın-qafal-o boş samaq, hama mı-arafe ande
believed.3F that PASS-caught-3PL many fish, but NEG-knew.3F who
'She believes many fish to have been caught, but she didn't know who (she believed to have caught many fish).'

b. sadqe le ın-qafal-o boş samaq, hama mı-arafe mı ande
believed.3F that PASS-caught-3PL many fish, but NEG-knew.3F by who
'She believes many fish to have been caught, but she didn't know by who (she believed many fish were caught).'

Let us turn to instances with 'make', e.g. (63), which provides striking evidence in favor of a syntactically active structure. (63b) shows that when the complement of 'make' lacks a *by*-phrase, and the *wh*-phrase in the remnant is realized as a PP, this leads to ungrammaticality, unlike its counterpart in (63a). Therefore, unlike (62a), the example in (63a) is grammatical, thus providing a strong argument in favor of an active structure.

(63) a. mafya sa   qadəl   mara-du, hama m-ore   ande
        mafia made murder.INF wife-his but   NEG-know.1SG who

    'The mafia leader made (someone) murder his wife, but I don't know who ~~he~~

    ~~made ⟨who⟩ murder his wife~~.'

    b. *mafya sa   qadəl   mara-du, hama m-ore   mı ande
        mafia   made murder.INF wife-his but   NEG-know.1SG by who

    'The mafia leader made (someone) murder his wife, but I don't know who by

    ~~⟨who by⟩ his wife was murdered~~.'

A similar contrast is provided in (64), in which the complement of "make" contains a *by*-phrase. The upshot is that when there is a *by*-phrase, the embedded acts as passive for sluicing; when there is not, it acts as active.

(64) a. *kemal sa   xassil potad   mı mara-ma pir-e, hama m-ore   tam
        Kemal made wash clothes by woman-a old-F, but   NEG-know.1SG exactly
        ande.
        who

    'Kemal made clothes washed by an old woman, but I don't know exactly who.'

    b. kemal sa   xassil potad   mı mara-ma pir-e, hama m-ore   tam
        Kemal made wash clothes by woman-a old-F, but   NEG-know.1SG exactly
        mı ande.
        by who

    'Kemal made clothes washed by an old woman, but I don't know exactly who

    by (he made clothes washed).'

Similarly when the antecedent is in the passive voice and the remnant in the active voice, the result is still ungrammatical.

(65) a. *potad (mı ımm-i)   ın-so   xassil   mı nes-ma, hama
        clothes (by mother-my) PASS-made.3PL wash.INF by person-a but
        m-ore   ande
        NEG-know.1SG who

    'Clothes were made (by my mother) washed by a person, but I don't know who.

34

b. potad (mɪ ɪmm-i) ɪn-so xassil mɪ nes-ma, hama
clothes (by mother-my) PASS-made.3PL wash.INF by person-a but

m-ore mɪ ande
NEG-know.1SG by who

'Clothes were made (by my mother) washed by a person, but I don't know who

by.'

Finally, we look at configurations in which the matrix clause is passive and the complement of 'make' is active, i.e. instances of *impersonal passives* discussed in section 4.1. An illustration is provided in (66).

(66) ɪn-sa addil beyt.
PASS-made build.INF house
'It was made (someone) build the house.'

When sluicing applies to the sentence in (66), we have different interpretations depending on whether sluicing is targeting the main clause or the embedded clause, as shown in (67) (which is true for above sentences too). In (67a), the remnant "who" indicates that the sluice is active and it can target the caused event "build" in the complement of "make", diagnosing "build" as active. In (67b), the remnant "by who" indicates that the sluice is passive, and it can only target the matrix clause, which is an impersonal passive, not the caused event "build", again diagnosing "build" as active.

(67) a. ɪn-sa addil beyt, hama m-ore ande
PASS-made build.INF house but NEG-know.1SG who
i. 'It was made (sb.) build the house, but I don't know by who (it was made sb. build the house).'

ii. *'It was made (sb.) build the house, but I don't know by who (it was built).'

b. ɪn-sa addil beyt, hama m-ore mɪ ande
PASS-made build.INF house but NEG-know.1SG by who
i. 'It was made (sb.) build the house, but I don't know who (built it).'

ii.*'It was made (sb.) build the house, but I don't know who (made sb. build the house).'

We interpret these facts as evidence that the complement clause exhibits an active-passive Voice, which is observable via their syntactic effects.

4.4   Interim Summary

All of the evidence combined supports the proposal that syntactically, the embedded construction exhibits an active-passive alternation in 'make' causatives of SA.

First, we find evidence that there is at least a thematic Voice layer (the existence of by-phrases, instrument phrases, agent-oriented adverbs, transitivity restrictions). Then we find a variety of indications that there is an active-passive Voice projection in the complement of 'make'. In addition to the passive being marked via obligatory *by*-phrases, several diagnostics converge on this alternation: (i) the fact that 'make' can be passivized, and that the object is not promoted unless the embedded clause itself is passivized (ii) nonpassivizable idioms, (iii) sluicing.

Next, we demonstrate that the embedded theme remains as the grammatical object in the active even when 'make' is passivized and the embedded verb is active (section 5). Afterwards, we provide evidence first for the realization of the embedded agent as a free variable on the embedded Voice head (sections 6-7), and for the projection of the embedded agent as a full DP, which is subject to Romance ECM-type restrictions (section 8).

5   Theme as the grammatical object

We have argued that in impersonal passives, the embedded clause is active, which would necessitate that the embedded theme remain as the grammatical object. This subsection provides arguments to that end.

5.1 Agreement asymmetry

The first argument prefigured above comes from the contrast between impersonal passives and canonical passives in terms of agreement. (68a) shows that 'make' shows default 3rd singular masculine agreement in impersonal passives although the embedded theme is plural. On the other hand, in canonical passives, in which the theme raises to the grammatical subject position, the surface subject shows verbal agreement, as in (68b).

(68) a.   lora   ın-sa   xassil   potad-na
          then   PASS-made wash.INF clothes-our
          'Then someone made someone wash our clothes.'

     b.   potad   ın-so   / *ın-sa   xassil   mı mara-ma pir-e
          clothes PASS-made.3PL / PASS-made.3M wash.INF by woman-a old-F
          'Clothes were made to be washed by some old woman.'

5.2 Definiteness effect

The second argument comes from the definiteness effect. In SA, indefinite subjects tend to occur postverbally with the possibility of appearing preverbally as well, as in (69). On the other hand, definite subjects are strongly preferred in preverbal position, to the extent that they are deemed ungrammatical in postverbal position by many speakers. Consider (70).[15]

(69) a.   ca   zıɣer-ma.
          came.3M child-a
          'A child came.'

     b.   zıɣer-ma ca.
          child-a   came.3M
          'A child came.'

---

[15]SA seems to drastically differ from other Arabic varieties in this respect. Aoun et al. (2010:62) says that while definite NP subjects in most Arabic dialects, including Standard Arabic, can occur in both preverbal and postverbal position, indefinite NP subjects in Arabic are not allowed in the preverbal position. In SA, the restriction is on the definite subject as opposed to other varieties in which indefinite subjects have a more limited distribution.

(70) a. zıɣer ca.
child came.3M
'The child came.'

b. ??ca   zıɣer.
came.3M child
'The child came.'

The word order asymmetry for subjects is also observed in passive clauses, which shows that the low theme exhibits the definiteness effects.[16]

(72) a. beyt   ın-addel.
house PASS-built.3M
'The house was built.'

b. */??ın-addel   beyt.
PASS-built.3M house
'The house was built.'

(73) a. ın-addel   beyt-ma.
PASS-built.3M house-a
'A house was built.'

b. beyt-ma ın-addel.
house-a PASS-built.3M
'A house was built.'

However, as seen thus far, the theme DPs following the infinitival form of the verb may be definite or indefinite. Moreover, an intonational break or pause is not at issue in instances like (74), in which the matrix verb is passivized but the embedded is not. They behave like grammatical objects, rather than exhibiting the properties of subjects.

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[16]Definite subjects are allowed postverbally with an intonational break, as an afterthought.

(71) *pro* ca,   zıɣer.
came.3M child
'(He) came, the child.'

(74) a. ın-sa   xassil   şurvan-i.
       PASS-made wash.INF pants-my
       'Someone made (someone) wash my pants.'

     b. ın-sa   addil   beyt-(ma).
       PASS-made build.INF house-(a)
       'Someone made (someone) build a/the house.'

Thus, the low embedded theme does not exhibit definiteness effects.

5.3 Clitic Left-Dislocation (CLLD)

A third argument that indicates that the embedded theme is the grammatical object comes from the fact that it can be CLLD-ed. As discussed above, direct or indirect object arguments in Arabic varieties may be CLLD-ed (Benmamoun 2000; Aoun et al. 2010), as in (75) (The CLLD-ed DP and the resumptive pronoun related to it are italicized).

(75) a. *gaste*   ams   qari-tu-*a*
       newspaper yesterday read-1SG-3F
       'The newspaper, I read it yesterday.'

     b. *haşiş* ams   aɣa   hazad-*u*.
       grass yesterday landlord cut-3M
       'The grass, yesterday the landlord cut it.'

On the other hand, the grammatical subject cannot be CLLD-ed. This holds both for the thematic subjects, (76a), as well as the underlying objects raised to become the subject via passivization, (76b).

(76) a. *kemal*   qara-(*u) gaste.
       Kemal.M read-3M   newspaper.F
       'Kemal, he read the newspaper.'

b. *kemal* ın-qadal-(**u*).
Kemal.M PASS-kill-3M
'Kemal, he was killed.'

Examples (77) and (78) show that the embedded theme also can be CLLD-ed to the left periphery of the matrix clause. This provides another strong argument for its status as the grammatical object.

(77) a. ams aɣa sa qaru gaste.
yesterday landlord made read.INF grass
'Yesterday the landlord made (someone) read the newspaper.'

b. *gaste* ams aɣa sa qaru-*a*.
newspaper yesterday landlord made read-3F
'The newspaper, yesterday the landlord made (someone) read it.'

(78) a. ams aɣa sa hazd haşiş.
yesterday landlord made cut.INF grass
'Yesterday the landlord made (someone) cut the grass.'

b. *haşiş* ams aɣa sa hazd-*u*.
grass yesterday landlord made cut-3M
'The grass, yesterday the landlord made (someone) cut it.'

This contrasts with cases in which the embedded theme raises to become the grammatical subject of the main clause, as in (79a), indicated by the subject agreement on the matrix verb. Expectedly, CLLD of the surface subject is ruled out, regardless of whether the resumptive clitic is attempted on 'make' or the infinitive.

(79) a. gaste ın-sa-tte-(**a*) qaru-(**a*) mı nes-ma tawwil.
newsaper.F PASS-make-3F-3F read.INF-3F by person-a tall
'The newspaper was made read by a tall person.'

b. kitab-ad ın-sa-o-(**en*) qaru-(**en*) mı oranci-ma
book-PL PASS-make-3PL-PL read.INF-PL by student-a
'The books were made read by a student'

    c.   pot-ad   (mɪ ɪmm-i)   ɪn-sa-o-(*en)   xassil-(*en) mɪ nes-ma
       clothes-PL (by mother-my) PASS-make-3PL-PL wash.INF-PL by person-a
       'Clothes were made (by my mother) washed by a person.'

In (80), the lack of agreement on the main verb indicates that it is an impersonal passive construction. The embedded clause is active, indicated by the lack of *by*-phrases. Given that no DP is linked to the grammatical subject position in impersonal passives, the embedded theme presumably raises to the CP domain. In other words, the embedded themes 'books' and 'newspaper' can be fronted to sentence-initial position, i.e. CLLD-ed.[17]

(80)   a. *kitabad* ɪn-sa   qaru-*en*.
        books   PASS-made read.INF-PL
        'The books, it was made (by someone) that someone read them.'

      b. *gaste*   ɪn-sa   qaru-*a*.
        newsaper.F PASS-made read.INF-3F
        'The newspaper, it was made that someone read it.'

The CLLD diagnostic reinforces the view that the embedded theme functions as the grammatical object.

5.4 Non-passivizable idioms

Section 4.2 employed nonpassivizable idioms as an argument towards an active-passive alternation in the embedded clause, and we observed that these idioms may occur in 'make'-causatives only in the absence of *by*-phrases. The examples are repeated here as (81).

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[17]Note that CLLD is possible in infinitives/gerundials as well.

   i. *potad*, xallɪs-tu   xasl-*en*
      clothes finished-1SG wash-PL
      'Clothes, I finished washing them.'

(81) a. kul çax tı-si   qarf   faxz le şeytan
          every time 3F-make break.INF leg   of devil

          'Every time she makes (someone) get lucky.'

     b. *kul çax tı-si   qarf   faxz le şeytan mı oranci-ma azimli
          every time 3F-make break.INF leg   of devil   by student-a determined

          'Every time she has the devil's leg broken by a determined student.'

Examples (81a) and (81b) both are active in the matrix clause, but differ in the voice of the embedded clause. Whereas (81a) has an active embedded clause, which in turn allows the possibility of certain idioms such as "break devil's leg"; (81b) has a passive embedded clause, and thus such idioms are disallowed.

To give a more complete picture, we provide instances where the matrix verb is passivized, but the embedded verb alternates. (82a) demostrates that when the matrix verb is passivized but the embedded is not, nonpassivizable idioms are still licit. (82a) indicates that the embedded theme of the idiomatic can even be CLLD-ed.[18]

(82) a. ın-sa   qarf   faxz le şeytan
          PASS-made break.INF leg   of devil

          'It was made (by someone) that someone finally got lucky.'

     b. *faxz le şeytan* ın-sa   qarf-*u*
          leg of devil   PASS-made break.INF-3M

          "It was made (by someone) that someone finally got lucky.'

          Lit: 'The devil's leg, it was made that someone broke it.'

On the other hand, when the embedded verb is also passivized along with the matrix verb, as in (83), the result is ungrammatical.

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[18]Under the assumption that the object idiom chunks appear as the complements of the verbs that license them, (82a) suggests that CLLD-ed elements in Sason are generated by movement. See Aoun and Benmamoun (1998) for a discussion of CLLD-ed elements in Lebanese Arabic, who on the basis of reconstruction, conclude that such elements in Lebanese Arabic can be generated by movement or not.

(83) *ın-sa   qarf   faxz le şeytan mı oranci-ma azimli
      PASS-made break.INF leg   of devil   by student-a   determined
      'It was made (by someone) that the devil's leg be broken by a determined student.'

To summarize, this section demonstrates that the embedded theme manifests the properties of a grammatical object in the structure embedded under "make".

6   The implicit embedded agent and licensing

This section deals with the question of whether implicit arguments are syntactically projected or not since the diagnostics in section 3.2 identify the presence of a thematic Voice, but do not necessarily entail the syntactic projection of such arguments. For instance, Bhatt and Pancheva (2006, 2017) conclude that in some cases implicit arguments seem to be syntactically active, but that there is no good evidence to suggest that they are syntactically projected (see also Williams 1985; Roeper 1987; Landau 2010; Legate 2014; Šereikaitė 2018 for the discussion of implicit arguments).

Recall that when 'make' in the matrix clause is passivized, we derive impersonal passives in Sason Arabic, an example repeated here as (84).

(84) ın-sa   addil   beyt.
      PASS-made build.INF house
      'It was made (by someone) (someone) build the house.'

The embedded clause functions as an active complement, in which the theme remains as the grammatical object. The next question concerns the status of the implicit embedded agent, particularly whether it is syntactically projected or not, given the above discussion. For a similar construction in Icelandic, illustrated in (85), Sigurðsson and Wood (2018) suggest that the reason the embedded theme does not raise to become the grammatical subject is because there is an implicit argument which is syntactically projected in Spec,VoiceP. This implicit embedded agent acts as an invervener blocking the raising of the theme to the

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grammatical subject position.

(85) það   var látið drepa   Maríu.
EXPL was let   kill.INF María.ACC
'It was made (by someone) (someone) kill María.'

This section investigates (i) anaphor binding, (ii) depictive licensing and (iii) scope in 'make'-causatives and discusses their implications for the status of the embedded agent.

6.1   Reflexives, reciprocals and depictives

Sason Arabic exhibits a contrast between active and passive clauses in terms of the binding of reflexives. (86) shows that reflexives need a projected binder, thus are not licensed in passives.

(86)   a.   zıɣar$_i$ adlo odav   (mışa roen$_i$).
children did   homework for   themselves
'The children did the homework (for themselves).'

  b.   odav   ın-addel (*mışa roen/rou).
homework PASS-do for   themselves/himself
'The homework was done for (*themselves/himself).'

Example (87) demonstrates that the reflexive is not licensed by the embedded agent in the active complement of "make"-causatives, either.

(87)   *iya$_i$ satte addil$_k$ odav   (mışa rou$_k$ / roen$_k$).
she   made do.INF homework for   himself / themselves
'She$_i$ made (some person$_k$ / people$_k$) do the homework for himself$_k$ / themselves$_k$.'

Reciprocals pattern like reflexives in needing a projected binder; therefore, they are also not licensed in passives. Consider (88).

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(88) a. calabma insan-ad$_i$ bas-o baz-en$_i$
       some human-PL kissed-3PL each other-3PL
       'Some people$_i$ kissed each other$_i$.'

   b. *baz-en ın-bas-(o).
       each other-3PL PASS-kissed-(3PL)
       'Each other was/were kissed.'

The reciprocal is also not licensed by the embedded agent in the active complement of "make"-causatives. This is illustrated in (89).

(89) *iya satte bās$_k$ baz-en$_k$.
     she made kiss.INF each other-3PL
     'She made (some people) kiss each other.'

Depictives also require projection of their licensors in Sason Arabic: accordingly, they are not allowed in passives, as shown in (90) and (91).

(90) a. nes-ma$_i$ amal araba (sarxoş$_i$).
       person-a drove car (drunk)
       'Someone$_i$ drove the car drunk$_i$.'

   b. araba ın-amal-e (??sarxoş)
       car.F PASS-drive-F (??drunk)
       'The car was driven drunk.'

(91) a. kemal$_i$ kar-a xanni (sarxoş$_i$).
       Kemal wrote-3M song (drunk)
       'Kemal composed the song drunk.'

   b. xanni ın-kara (??sarxoş).
       song.M PASS-write.M (??drunk)
       'The song was composed drunk.'

   Similar to reflexives and reciprocals, depictives also are not licensed by the embedded agent in the active complement of "make"-causatives.

(92) a. nana$_i$ mɪ-ni-si   aməl$_k$ araba (sarxoş$_{i/*k}$)
        we   NEG-1PL-make drive car   drunk
        'We$_i$ don't let (anyone$_k$) drive the car drunk$_{i/*k}$.'

    b. nana$_i$ si-nna   karu$_k$ xanni (sarxoş$_{i/*k}$).
        we   made-1PL write.INF song   drunk
        'We$_i$ made (someone$_k$) compose the song drunk$_{i/*k}$.'

As we will discuss in section 8, the embedded agent can be syntactically projected when it undergoes subsequent Ā-movement; as predicted, the licensing of anaphors and depictives then become possible.

6.2 Scope

The scopal interaction with negation provides another piece of evidence that the null embedded agent and overt embedded agent is not solely a PF-matter, but that it has interpretive results. We should note that this test is not perfect since the negation cannot be in the embedded clause and the overt embedded agents always have to undergo Ā-movement, as we will discuss in Section 8. Still, if there were a null projected agent we might expect it to be able to raise (e.g. QR at LF) above negation). Therefore, it is still worth discussing.

Example (93) demonstrates that in cases where the embedded agent is null, it necessarily takes scope under negation.

(93) nana mɪ-n-ɪsi   xanni
      we   NEG-1PL-make sing
      'We don't make sing.'

      YES: We don't make anyone sing.

      NO: We don't make a certain person sing.

      neg > some, *some > neg

On the other hand, in a configuration such as topicalization in which the embedded agent

can be overtly realized, the embedded agent takes scope over negation.

(94) sıma-tu   le nes-ma   mı-isi   xanni fı dawe,   hama
      heard-1SG that person-a NEG-make.3SG sing.INF in wedding but

      m-ore   ande.
      NEG-1SG.know who

      'I have heard that some person, he won't make sing at the wedding, but I don't know

      whom.'

      YES: He won't make a certain person sing.

      NO: He won't make anyone sing.   *neg > some, some > neg

The infelicitousness of the sentence in (95) confirms the scopal judgments in (93) and (94).
This is because whenever the first sentence is uttered truthfully, there is no person that
will sing in the wedding, thus the follow-up sentence conflicts with the meaning of the
antecedent discourse.

(95) #sıma-tu le mı-isi   xanni fı dawe,   hama m-ore   ande.
      heard-1SG that NEG-make.3SG sing.INF in wedding but   NEG-1SG.know who
      'I have heard that he won't make anyone sing in the wedding, but I don't know who.'

So far, the evidence in this section points towards a view that the embedded agent is not
projected despite the active VoiceP (cf. Šereikaitė 2018). However the next section exam-
ines the behavior of pronouns, which compels us to suggest that it is introduced as a free
variable on the Voice head.

7 A semantic analysis: embedded agent as a free variable

Similar to reflexives, reciprocals and depictives (cf. section 6.1), pronouns cannot be an-
chored to the implicit agent of passives. In other words, canonical passives do not allow
the pronoun to be bound by the implicit agent, thus force a disjoint-reference interpretation.
For instance, in (96), it may not be the villagers themselves giving their own lands to the

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landlord, which is a possibility in the active.

(96) aɣa   ın-ada   tırab-en.
    landlord pass-give land-their
    'The landlord was given their lands.'

The examples in (97) indicate that the implicit agents of passives (e.g. *by a builder* in (97a) or *by a mother* in (97c)) also cannot serve as antecedents for pronouns occurring subsequently in the clause or in a subsequent clause (see e.g. Koenig and Mauner 2000).[19]

(97) a. Every woman whose house was built e_j gave him_{*j} money.

   b. If a house is built quickly e_j, its owner gives him_{*j} money

   c. #If a baby boy is delivered in unsafe conditions e_j, the doctors help her_j heal quickly.

The counterparts of these sentences in Sason Arabic also yield the same results, as indicated in (98). This demonstrates that in both languages implicit arguments of passives cannot antecede a subsequent pronoun.

(98) a. kul   mara beyt le ande ın-addel e_j ad-ı-llu$_{*j}$ dırem.
       every woman house of who PASS-built gave-3F-him money
       'Every woman whose house was built e_j gave him_{*j} money.'

   b. ta beyt-ma in-addel   xıfef e_j, sahīb-u y-adi-llu$_{*j}$ dırem.
       if house-a PASS-built quickly   owner-its 3M-give-him money
       'If a house is built quickly e_j, its owner gives him_{*j} money.'

   c. #ta ıbın-ma   in-cib   fı dınye e_j fı şart-ad   kotti-yin, doxtor-ad
       if baby.boy-a PASS-brought in world   in condition-PL bad-PL   doctor-PL
       yardım is-o-ll-a$_j$ ta le baş tı-sir$_j$.
       help   do-3PL-her so that good 3F-become
       'If a baby boy is delivered in unsafe conditions e_j, the doctors help her_j heal

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[19]Unless this is achieved via the accommodation process through the use of the indefinite *they* (e.g. Lewis 1979; Koenig and Mauner 2000).

quickly’

Pronouns corresponding to the embedded agent, however, are possible in the ‘make’-causative construction, as illustrated in (99).

(99) a. ammo sa sen mazgun-u.
uncle made sharpen.INF sickle-his

‘Uncle made (someone) sharpen his sickle.’

b. gɪzbe-ye le kemal ma-sa xasɪl qamis-a fɪ saqe.
lie-3.COP that Kemal NEG-made wash.INF skirt-her in river

‘It is a lie that Kemal didn’t let anyone wash her skirt in the river.’

c. aɣa sa bayu tɪrab-u/-(?)a.
landlord made sell.INF land-his/-her

‘The landlord made (someone) sell his/her land.’

The patterns are summarized in (100): in the active anaphors (and depictives) and pronouns are licensed, whereas in the passive neither is. On the other hand, the ‘make’-causative exhibits a mixed behavior: while the anaphors are not licensed, pronouns are.

(100)

	anaphors & depictives	pronouns
active	✓	✓
***make*-causative**	∗	✓
passive	∗	∗

Examples in (99) suggest that a potential analysis along the lines of Šereikaitė (2018), in which the embedded agent is not projected, cannot carry over to SA since that analysis would rule out the licensing of pronouns as well. Accordingly, we posit that the embedded agent is present as a free variable, generated in the Voice head itself, and bound by text-level Existential Closure (Heim 1982).[20] This approach treats indefinites as non-quantificational,

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[20]Credits to Florian Schwarz for the idea, and to him and Julie Legate for the detailed discussion.

and as such the indefinite is like a free variable x_i, with no quantificational force of its own, which gets bound in one of two ways: either by being under the scope of an unselective quantifier in the sentence, e.g. *if*-clauses, adverbs, or in their absence by an operation of existential closure, which puts an implicit unselective $\exists$ on texts. This view, i.e. dynamic analysis of indefinites, has been suggested to account for instances of e.g. (101) as well as 'cross-sentential anaphora' and 'donkey sentences', illustrated in (107) and (103), respectively.

(101) boş   karrad, ta sınnor-ma i-vır   mı   fıstox, ırce saɣ i-bqa.
       most times   if cat-a   3M-fall from roof   still alive 3M-remain
       'Usually, if a cat falls from the roof, it still survives.'

       Paraphrase: 'Most cats survive if they fall from the roof.'   (adapted from Heim
       1982:123)

(102) mara-ma daxal-e   cua.   lora *pro* qad-e fo kursi-ma.
       woman-a entered-3F inside then   sat-3F on chair-a
       'A woman entered. She sat on a chair.'

(103) kul   çifçi   ande le   y-axez hamar-ma$_i$ i-dıqq-u$_i$
       every farmer who that 3M-buy donkey-a   3M-beat-M.CL
       'Every farmer who buys [a donkey]$_i$ beats it$_i$.'

Examples (104) - (106) demonstrate that the same considerations apply to 'make'-causatives. We see that the free variable in the 'make'-causative can antecede a following pronoun. This constitutes a contrast with the implicit passive agent in (97) and (98). We take this contrast as corroborating evidence that the implicit arguments in the causative construction differ from the implicit agents of passives. Whereas the latter requires an accommodation process in order to serve as an antecedent, the former does not.

This suggestion differs from the active existentials discussed in Šereikaitė (2018), which do not license pronouns either, unlike what is observed in SA 'make'-causatives. Šereikaitė (2018) proposes that the agent position in this construction is closed via the Existential Closure at the level of Voice.

(104) boş karrad, ta aγa   i-si   hazd   haşiş, i-hazed.
      most times   if landlord 3M-makes cut.INF grass 3M-cut

      'Usually, if the landlord makes (someone) cut the grass, he cuts it.'

      Paraphrase: 'Most people cut the grass if the landlord makes them (do so).'

(105) ta le aγa   i-si   addil beyt-ma, lazim-ye   le i-xals-u-n
      if that landlord 3M-make build house-a necessary-COP.3SG that 3-finish-PL-M.CL
      xıfef
      quickly

      'If the landlord makes (some people) build a house, it is necessary that they finish it

      quickly.'

(106) çax   le oratman başlamış i-si   sınıf-ma ıjdid, i-si   xanni   marş   le
      when that teacher   start   3M-make class-a   new   3M-make sing.INF anthem of
      dowle
      state

      'When the teacher starts a new class, he makes (someone) sing the national anthem.'

(107) si-tu   addil   beyt. Boş bacarikli kan,   şa gıze beyt koys
      made-1SG build.INF house. much talented   was.3M therefore house beautiful
      ye   sa
      be.3M now

      'I made build the house. He was very talented, thus the house is beautiful now.'
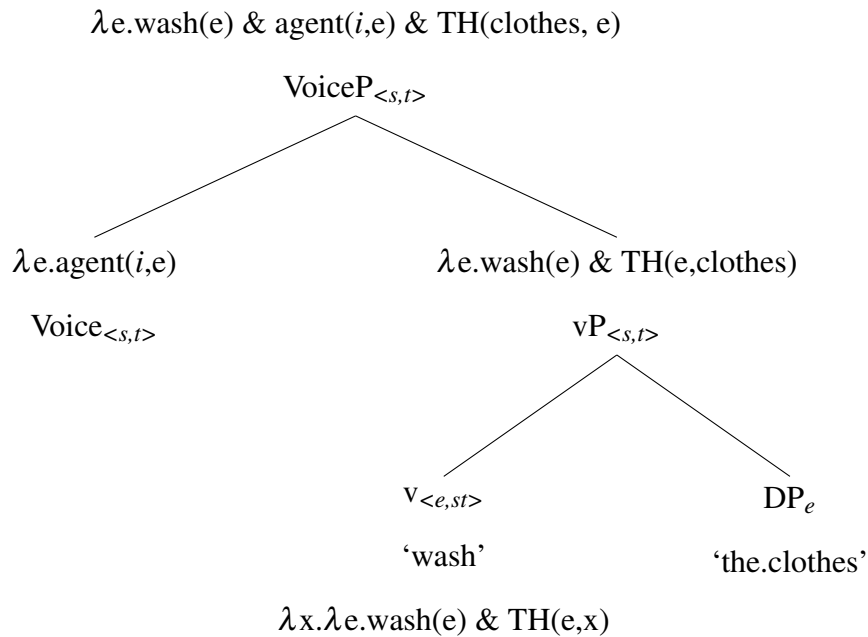

The embedded agent in 'make'-causatives patterns like an overt indefinite, thus semanti-

cally equivalent to it. They both can be under the scope of an unselective quantifier, behave

identically for discourse anaphora and 'donkey sentences'. The two, however, differ in

terms of anaphor licensing: whereas an overt indefinite can bind an anaphor (or license a

secondary predicate), the embedded agent of 'make'-causatives may not. Consider (108).

(108) a. recel-ma$_i$ qadal rou$_i$
          man-a   killed himself
          'A/some man killed himself.'

b. aɣa$_i$ sa$_k$ qadıl rou$_{i/*k}$
   landlord made kill   himself

   'The landlord made someone kill himself.'

In light of such examples, we treat the agent position in the Voice head, as in (109), as a variable bound by an operator if available or at the text-level.[21]

(109)

λe.wash(e) & agent(i,e) & TH(clothes, e)

VoiceP$_{<s,t>}$

λe.agent(i,e)

Voice$_{<s,t>}$

λe.wash(e) & TH(e,clothes)

vP$_{<s,t>}$

v$_{<e,st>}$

'wash'

DP$_e$

'the.clothes'

λx.λe.wash(e) & TH(e,x)

The core idea then is that pronouns (more precisely the variable they introduce) can be licensed by virtue of being co-indexed with another variable (in this case, the agent variable on Voice head) and being bound by the same operator.[22] This can be roughly sketched as
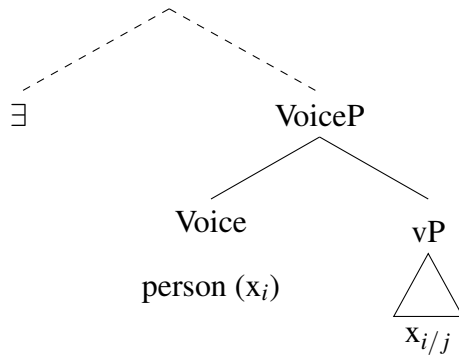
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[21]Note that the denotation is not strictly identical to that of Heim (1982) who takes an indefinite to be a proposition with a variable free in it. Also, Heim uses the subscript notation e.g. $\exists_1$. See Heim (1982:166-167) for its interpretation.

[22]Note that the facts in this section demonstrate that the implicit arguments do not form a uniform class, thus reinforces the view in Landau (2010). A point of departure from Landau's (2010:359, 378) model is that Landau treats the implicit agents of passives as Weak implicit arguments (WIA), which lack a [D] feature, thus should presumably have referential "flexibility". As such, his model would equate the implicit agents of 'make'-causatives and those of passives, both under the category of WIA.

However, it turns out that the properties Landau attributes to implicit agents of passives are exhibited by the implicit agents of 'make'-causatives in SA, and not by the implicit agents of passives. Therefore, SA allows us to pinpoint two kinds of implicit arguments, yet indicating that the free variable property is associated with 'make'-causatives, and not passives.

(110), based on Heim (1982). Note that the pronoun variable that is not co-indexed gets reference from context.

(110)

```
              ⌢
         ⟋ ⟍
       ⟋      ⟍
      ∃        VoiceP
               ⟋  ⟍
          Voice      vP
                     △
        person (x_i)
                    x_{i/j}
```

In the case of anaphors, although they are also semantically variables, they are subject to a further restriction. They are not licensed by ∃ (same restriction applies to depictives as well), and require a fully projected licensor.

On the other hand, short passive clauses involve saturation by the 'by'-phrase or existential quantification over the unexpressed initiator (e.g. Bach 1980; Keenan 1985; Williams 1987; Parsons 1990; Bruening 2013; Reed 2018),[23] as represented in (111). In such a configuration, ∃ is necessarily internal to Voice^0, thus cannot bind elements outside Voice. In the passive complements of "make" in SA, on the other hand, the initiator is saturated by the 'by'-phrase (see Bruening 2013).

Moreover, as noted above, semantically overt indefinite and the free variable of 'make'-causatives are equivalent. They can introduce new discourse markers to which, for instance, a pronoun in the following sentence can refer. They also satisfy one of a main predicate's arguments, it specifically being the embedded agent for 'make'-causatives. Thus, there is not a difference of referential flexibility between the two as Landau draws between Strong implicit arguments and Weak implicit arguments. Accordingly, given the lack of evidence for the bare free variable being projected into a syntactic position, we place it on Voice head.

Note also that placing it in Spec,VoiceP would raise some implications with respect to Ā-movement. As will be demonstrated in section 8, a projected embedded argument needs to Ā-move in order to be licensed. Thus, having the variable syntactically projected, we still expect licensing as a nominal element, but it appears that there is no licensing restriction for it. As such, it seems unappealing to posit it as a projected element which itself does not need licensing, but makes it possible for the licensing of another argument of the verb, i.e. the theme.

[23]See Landau 2010, 2013; Van Urk 2013 for a different view.

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(111) $\lambda e.\exists x.\text{AGENT}(x,e)$

This section has demonstrated that the implicit agent in passive clauses and 'make'-causatives have different status: whereas the former is not projected, the latter is more like a free-variable introduced in the active Voice. The next section argues that 'make' can also embed active VoiceP with a projected agent, which is subject to certain restrictions (similar to Romance-ECM), as such needs to Ā-move to be licensed.

8 A syntactic analysis: embedded agent as a full DP

The embedded agent in the 'make'-causative is obligatorily null, unless Ā-moved. In (112) and (113), this is illustrated for *wh*-movement. (112a) and (113a) show that pronouncing the agent even when it is indefinite/nonspecific leads to ungrammaticality. (130a) and (113b) indicate the same property with the agent targeted with an *in*-situ *wh*-phrase, which is still ungrammatical. However, when the agent is Ā-moved, the sentence becomes grammatical, as in (112c) and (113c).

(112) a. *kemal sa   nesma   faqz.
          Kemal made someone run.INF
          'Kemal made someone run.'

      b. *kemal sa   ande faqz?
          Kemal made who run.INF
          'Who did Kemal make run?'

      c. ande kemal sa   faqz?
          who Kemal made run.INF
          'Who did Kemal make run?'

(113) a. *nana mı-ni-si   nesma   daq   zıxar-na.
          we   NEG-1PL-make someone beat.INF children-our
          'We don't make/let someone beat our children.'

b.   *nana mɪ-ni-si   ande daq   zɪxar-na?
      we   NEG-1PL-make who beat.INF children-our

      'Who do we not make/let beat our children.'

c.   ande nana mɪ-ni-si   daq   zɪxar-na?
      who we   NEG-1PL-make beat.INF children-our

      'Who do we not make/let beat our children.'

Relative clauses and (contrastive) focussing are the other Ā-operations that allow the agent to be expressed, as shown in (114b) and (114c), respectively.

(114) a.   *mafya sa   nes-ma gbir qadəl   mara-du
          mafia   made person-a big murder.INF wife-his

          'The mafia leader made a big person murder his wife.'

     b.   sɪma-tu   le nes-ma gbir ye   le mafya sa   qadəl   mara-du
          heard-1SG that person-a big COP.3 that mafia made murder.INF wife-his

          'I've heard that it is a big person that the mafia leader made murder his wife.'

     c.   nes-ma   gbir, mafya sa   qadəl   mara-du (nes-ma   ɪstudi lā)
          person-a big   mafia made murder.INF wife-his (person-a small no)

          'A big person, the mafia leader made murder his wife (not a small one).'[24]

This property resembles the well-known *wager*-class verbs (e.g. Postal 1974, 1993; Pesetsky 1991, 2016; Bošković 1997, 2002; Ito 2014), which require certain 'rescuers', as in (114).

(114) a.   *We wagered Jane to win the race.

     b.   Who did we wager to win the race?

---

[24]Note that the definiteness restriction discussed in section 3.2.6 holds even when the agent is overt as in these cases. Consider (i) below.

(i)   *nes   gbir, mafya sa   qadəl   mara-du (nes   ɪstudi lā)
    person big mafia made murder.INF wife-his (person small no)

    'The big person, the mafia leader made murder his wife (not the small one).'

c. the woman that we wagered to win the race.

d. Jane, who we wagered to win the race.

As we discussed in section 6, the embedded agent cannot license anaphors or depictives. Notably, when the embedded agent is Ā-moved, reflexive binding, reciprocal binding, and depictives become possible in Sason Arabic:

(115) a. ande_k iya_i satte addil odav (mışa roen_k)?
who she made do.INF homework for themselves
'Who_i did she_k make do the homework for themselves_i?'

b. ande_k sa-tte_i bās baz-en_k?
who made-3F kiss each other-3PL
'Who_k did she_i make kiss each other_k?'

c. ande_k si-t karu xanni (sarxoş_k)?
who made-2SG write song (drunk)
'Who_k did you make compose the song drunk_k?'

The contrast clearly shows that it cannot be a pure PF constraint, as Ito (2014) argues for English *wager*-class verbs. Moreover, Sason Arabic is a pro-drop language. If it was just a PF issue, we would expect binding etc. to be possible in the complements of 'make', contrary to fact.

In fact, Sason Arabic resembles more the embedded infinitives in French (or Italian). In these languages, raising-to-object (R-to-O) from infinitives can be rescued by a subset of the English *wager*-class rescuers (Moulton 2009). This is illustrated in (116) for French (examples taken from (Moulton 2009), with original sources also included).

(116) a. *Je croyais le garçon être arrivé.
I believe the boy (to) have arrived.
*R-to-O, (Rochette 1988:332:5a)

b. Qui croyais-tu aimer Anne?
   Who believe-you to-love Anne

   Q-operator, (Bošković 1997:129:103a)

c. Le garçon que je croyais être   arrivé.
   The boy   that I believed (to) have arrived.

   Rel-operator, (Rochette 1988:332:5a)   (Moulton 2009)

Similar to the embedded agent in French (or Italian) infinitives, (117), SA embedded agents

are only licensed by Ā-movement, thus the ungrammaticality of (118) .[25]

(117) *Pierre était cru   aimer   Anne.
       Pierre   was believed to-love Anne.

       *Passive Raising, (Bošković 1997:130:105)

(118) *calabma rıcel ın-so   xassil   potad.
       some   men PASS-made.3PL wash.INF clothes

       'Some men were made wash the clothes.'

Previous analyses of *wager*-class and Romance ECM verbs revolve around locality restric-

tions, which mainly concerns the presence of an extra layer or projection (e.g. Kayne 1984;

Pesetsky 1991; Rochette 1988; Bošković 1997, 2002; Rezac 2013). For instance, Bošković

(1997, 2002) argues that the generalization that agentive verbs cannot exceptionally case-

mark lexical NPs can be captured from the proposal that such verbs have an additional VP

shell. He argues that due to the presence of the additional VP layer, matrix [Spec, AgrOP],

the accusative-checking position, is too far from the embedded clause-subject.

(119) *John$_i$ wagered [$_{AgrOP}$ the woman$_j$ [$_{VP}$ t_i [$_{VP}$ t_i [$_{IP}$ t_j to t_j know French]]]].

      (Bošković 2002:(53))

He argues that the agentive shell, which is responsible for the ungrammaticality of (119),

is not present in passives, which accounts for the contrast between (119) and (120).

---

[25]Moulton (2009) suggests that even English passive raising cases may not be verbal passives.

(120) The woman was wagered to know French. (Bošković 2002:ia)

Rezac (2013:313-315) suggests that in *wager* but not *believe* ECM, a silent N^0 in $[v/V_{Acc}$ $[N^0\ Inf]]$ intervenes in v/V_{Acc} ϕ-Agree but becomes invisible by the time of T_{Nom} ϕ-Agree. The guiding intuition behind Rezac's (2013) proposal is similar to that of Pesetsky (1991), Bošković (2002) in that *wager* has a structure richer than *believe* in such a way that a Case problem arises and is obviated by Ā-movement.

Rochette (1988:335), following Kayne (1984), assumes the French (and Italian) 'propositional' infinitives in (116) and (117) to be CPs, as such "CP will act as a barrier with respect to government of the embedded subject position by the matrix verb, therefore precluding the possibility for Case assignment of the subject by the matrix verb". In modern terms, the barrier corresponds to phases, and Moulton (2009) adopts this approach for French *wager*-class verbs.[26]

We pursue the spirit of previous analyses and identify the extra projection as the FP
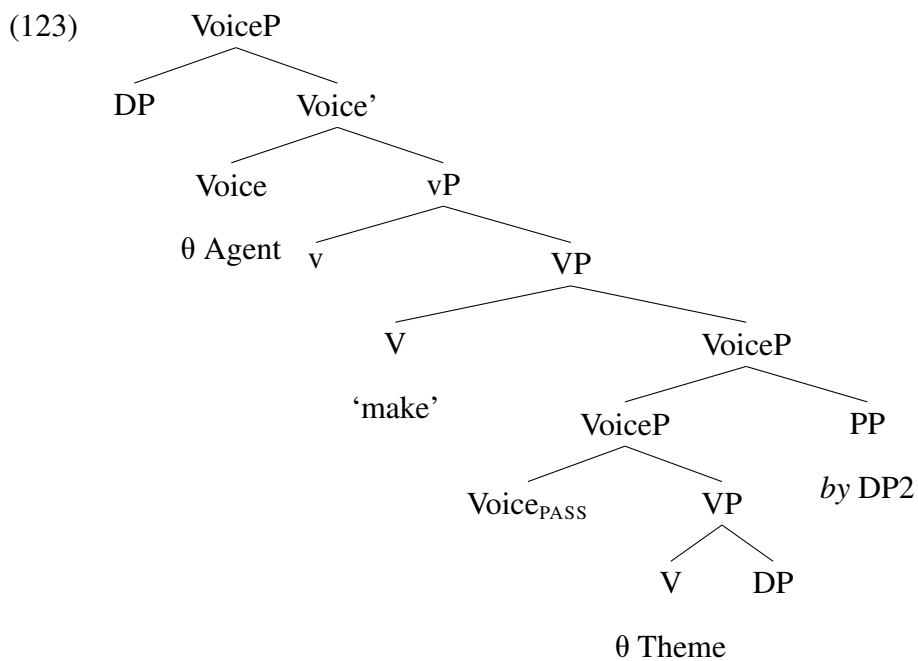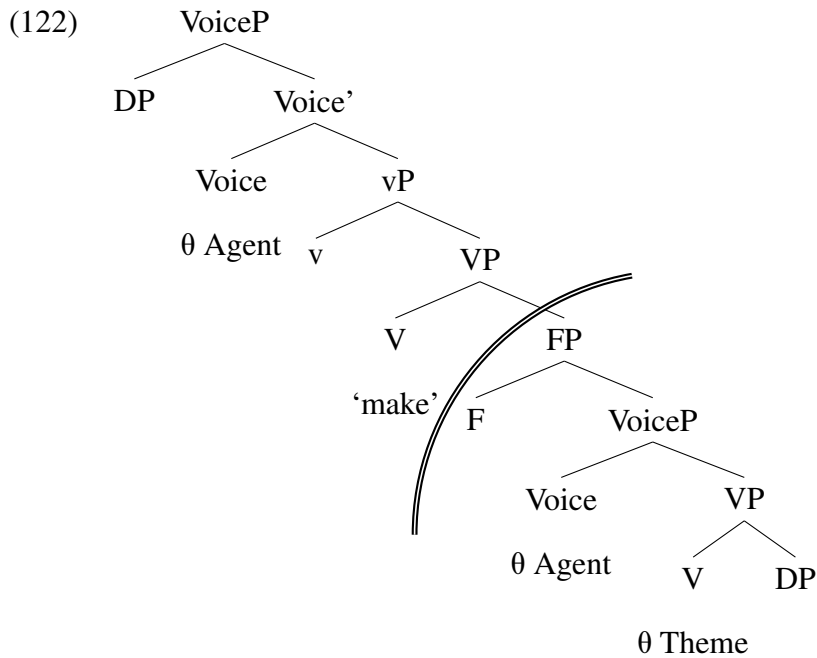
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[26]See also Richards (2001); Rackowski and Richards (2005) for some discussion.

Pesetsky's (2016) *Exfoliation* hypothesis is built on the view that infinitives are built by reducing/deleting the C and T layers of the clause, and only when movement has taken place from an embedded subject or subject-like position is infinitivization possible. This hypothesis requires a transformation from an underlying full clause to an infinitive. Sason Arabic indeed has another type of causative construction which makes use of 'make' and an embedded finite clause, as illustrated in (121).

(121) a. büşra (məʃa) kemal sa-tte   f-iyu le ya-ɣez hadiya
           Büşra (to)   Kemal made-3F in-him that 3M-buy present
           'Büşra made Kemal buy a present.'   (Yakut 2013:7)

       b. doxtor məʃa ali ku   i-si   f-iyu (le y-addel) sipor
           doctor to   Ali AUX.3M 3M-make in-him (that 3M-make) sports
           'The doctor is making Ali do sports.'   (E. Taylan 2017:221)

       c. ams   aɣa   məʃa sabiyad sa f-innen le ixsil-o potad lome.
           yesterday landlord to   boys   made in-them that wash-3PL clothes today
           'Yesterday the landlord made the boys wash the clothes today.'

However, this causative construction differs from the 'make'-causative in this paper in many respects: it lacks the indefiniteness condition on the embedded agent; the embedded agent itself can be overtly realized, in the form of a PP, and is connected to the resumptive pronoun, which itself contained inside a PP. Given these reasons, it is safe to suggest that SA lacks a full clause of the relevant sort that could be the deep version of the 'make'-causative.

discussed in section 4, whose head F is as a phase-head and hosts Ā-features. Specifically we argue that the embedded active, but not passive, VoiceP is dominated by this projection. This is illustrated in (122) and (123). This contrast will be crucial in explaining why the embedded VoiceP cannot have an embedded DP in its specifier.

(122)

```
              VoiceP
            /        \
         DP          Voice'
                    /      \
                Voice       vP
                           /  \
            θ Agent    v       VP
                             /     \
                           V         FP
                                    /    \
                   'make'      F       VoiceP
                                      /       \
                                  Voice        VP
                                              /    \
                      θ Agent             V        DP

                                              θ Theme
```

(123)

```
              VoiceP
            /        \
         DP          Voice'
                    /      \
                Voice       vP
                           /  \
            θ Agent    v       VP
                             /       \
                           V           VoiceP
                                      /        \
                   'make'        VoiceP          PP
                                /      \
                        Voice_PASS     VP       by DP2
                                      /  \
                                     V    DP

                                          θ Theme
```

59

Logically and empirically, we have four possible configurations depending on the active-passive status of the matrix and embedded clauses, and the proposed analysis makes predictions for each of these configurations.

Let us start with the two structures in which the embedded Voice is passive, and thus FP is not projected, as illustrated in (123). Assuming that passive VoiceP lacks FP, and thus is not phasal, when the matrix verb is active, the matrix verb can license the embedded object, e.g. (124a). The licensing is shown in (124b) via an arrow.

(124) a. kemal sa   [xassil   potad   mɪ mara-ma pir-e].
          kemal made.3M [wash.INF clothes by woman-a old-F]
          'Kemal had the clothes washed by some old woman.'

b.
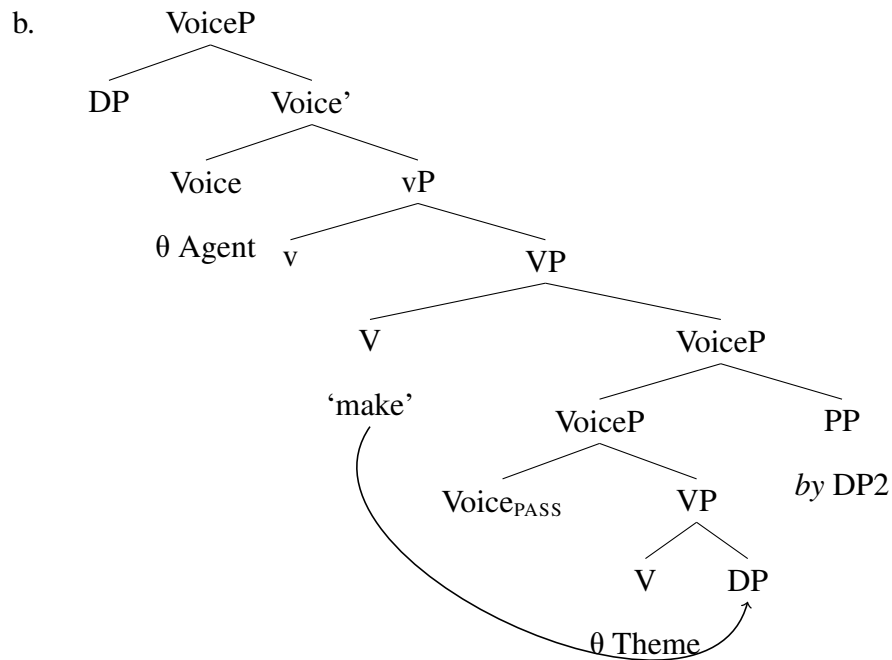
On the other hand, when both clauses are passive, the embedded object is licensed by matrix NOM, as in (125a), as such it raises to grammatical subject and manifests subject-verb agreement. The corresponding tree structure is repeated here as (125b) from (47).

(125) a. potad ın-so [xassil mı mara-ma pir-e].
clothes PASS-made.3PL [wash.INF by woman-a old-F]

'Clothes were made to be washed by some old woman.'

b.
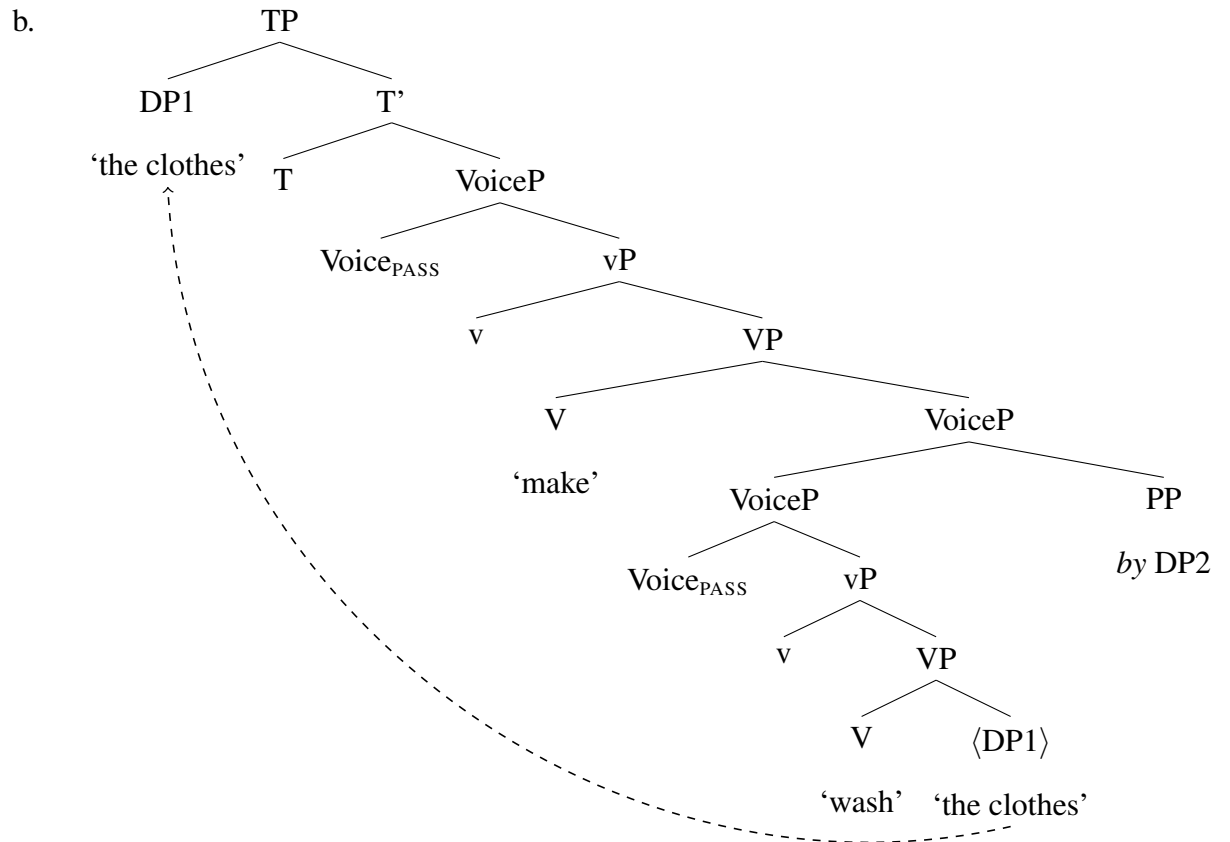
In section 3.3, we saw that Sason Arabic has a low-focus position, FP, between 'make' and the embedded VoiceP, to which a focus constituent may raise. Given that FP is not projected with an embedded passive Voice, we predict that this position should be unavailable. This is correct, as shown in (126).

(126) a. *kemal sa POTAD xassil mı mara-ma pir-e, (balgife la).
Kemal made.3M clothes wash.INF by woman-a old-F pillow no

'Kemal had the clothes (not the pillow) washed by some old woman.'

b. *ın-sa   BINT-MA bas   mı mara-ma pir-e, (sabi-ma la)
   PASS-made girl-a   kiss.INF by woman-a old-F boy-a   no
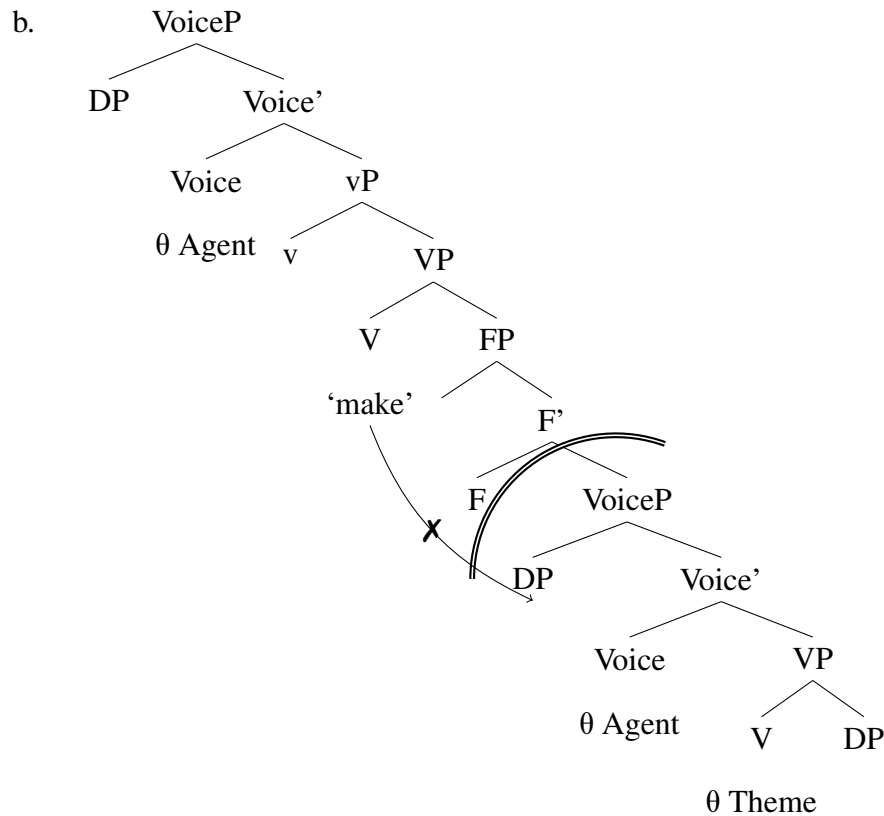   'It was made a girl (not a boy) kissed by some old woman.'

Next we turn to the other two configurations: the embedded Voice is active, and the matrix verb can be either passive, (127a), or active, (127b).

(127) a. *ande ın-sa   [F xassil   potad-na   ]?
       who PASS-made [wash.INF clothes-our]
       'Who is it made wash our clothes?'

     b. ande nana mı-ni-si   [F lope   wara zıxar-na   ]?
       who we   NEG-1PL-make [play.INF with children-our]
       'Who do we not make/let play with our children.'

In such instances, FP is projected on top of the embedded Voice. The ungrammaticality of (127a) is still predicted; this is because despite the presence of FP, the matrix Voice is passive, thus the embedded agent is still not licensed. FP serves to explain why there cannot be a DP in embedded Spec,VoiceP, as in (128a). This is because, being a phasal domain, FP intervenes in the licensing of the embedded agent by the matrix 'make', as illustrated in (128b).

(128) a. *mafya sa   nes-ma gbir qadəl   mara-du
       mafia   made person-a big murder.INF wife-his
       'The mafia leader made a big person murder his wife.'

b.

```
                    VoiceP
                   /      \
                 DP      Voice'
                        /      \
                   Voice        vP
                  θ Agent      /   \
                              v    VP
                                  /    \
                                 V      FP
                              'make'   /   \
                                      F'
                                    /    \
                                   F     VoiceP
                                        /       \
                                      DP       Voice'
                                              /      \
                                          Voice       VP
                                         θ Agent     /   \
                                                    V     DP
                                                        θ Theme
```

On the other hand, Ā-movement makes the licensing possible (cf. Kayne 1984; Ura 1993; Bošković 1997; Rezac 2013).[27] We suggest that this is because F can host Ā-features, and the embedded agent can raise to its edge. As such, the agent can be licensed by 'make' in a local configuration, in the spirit of e.g. Rezac (2013).

The specifier of the extra projection, FP, in Sason Arabic can also host pronounced material: it is the landing site for the focus constituent, the relevant example repeated here as (129c).

(129) a. ams   aɣa   sa   hazd haşiş.
          yesterday landlord made cut grass
          'Yesterday the landlord made (someone) cut the grass.'

---

[27]The 'saving' effect of Ā-movement has been discussed more widely in the literature. For instance, Kayne (1984) and Pesetsky (1991) propose that Ā-movement allows Case licensing by establishing new Case relations. See e.g. Dikken (2009), Lipták (1998) for the same idea implemented for Hungarian. Similar arguments for object case/agreement through Ā-movement have been made on the basis of topicalization in Norwegian (Taraldsen 1984) and Ā-movement in Passamaquoddy (Bruening 2001).
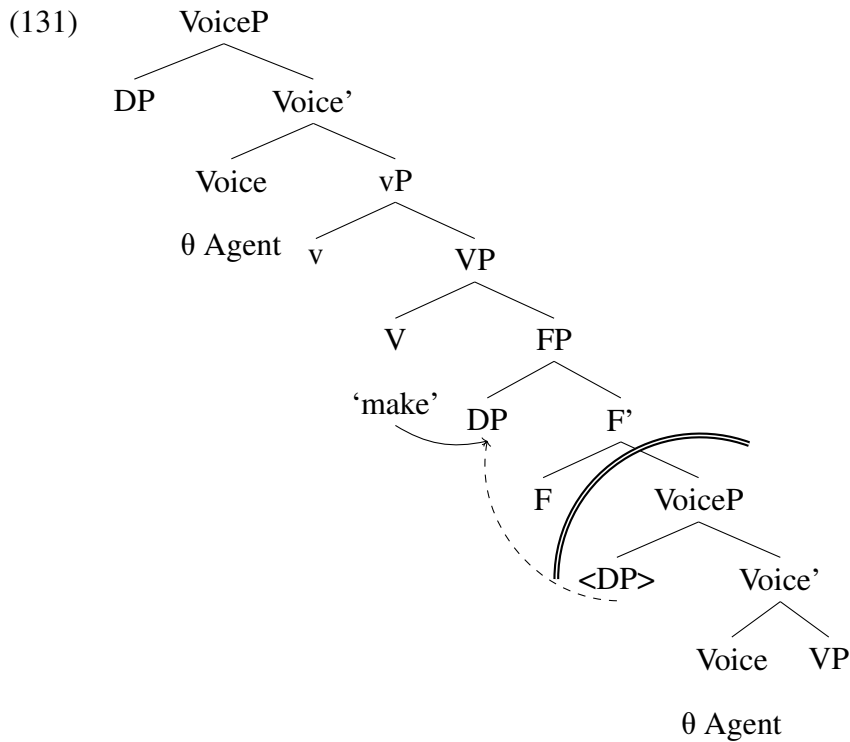
b. HAŞIŞ ams aɣa sa hazd, (şijra la).
   grass yesterday landlord made cut tree no
   'Yesterday the landlord made (someone) cut the grass, not the tree.'

c. ams aɣa sa HAŞIŞ hazd, (şijra la).
   yesterday landlord made grass cut tree no
   'Yesterday the landlord made (someone) cut the grass, not the tree.'

As predicted, Spec,FP can also host the embedded agent when it is contrastively-focussed. Consider (130), which provides strong evidence for the phase-based account in that FP acts as a barrier for 'make' to license the embedded agent, unless the agent raises to the edge of the phase head.

(130) a. *kemal sa cinar-ma faqz
       Kemal made neighbor-a run.INF
       'Kemal made a neighbor run.'

   b. CINAR-MA kemal sa faqz, (mara-ma pir-e la)
      neighbor-a Kemal made run.INF (woman-a old-F no)
      'Kemal made A NEIGHBOR run (not an old woman).'

   c. kemal sa CINAR-MA faqz, (mara-ma pir-e la)
      Kemal made neighbor-a run.INF (woman-a old-F no)
      'Kemal made A NEIGHBOR run (not an old woman).'

The tree in (131) is an illustration of the example in (130c), as such the embedded agent Ā-moves to Spec,FP, i.e. to the phase edge, which places it in a local configuration to be licensed by the matrix verb "make".

(131)

```
                    VoiceP
                   /      \
                 DP       Voice'
                        /       \
                    Voice        vP
                                /    \
              θ Agent     v          VP
                                    /    \
                                  V       FP
                                 /       /   \
                           'make'  DP       F'
                                          /    \
                                        F        VoiceP
                                              /         \
                                        <DP>            Voice'
                                                       /      \
                                                   Voice      VP
                                              θ Agent
```

The discussion in this section has demonstrated that Sason Arabic 'make'-causatives re-
semble Romance ECM, and argued for a phase-theoretic account to explain the patterns.

9 Conclusions

This study has investigated the so-called 'make'-causatives in Sason Arabic, focusing on
the status of the implicit embedded agent and the properties of the embedded structure.

First, we have suggested that the indirect causative in Sason Arabic contains an em-
bedded thematic Voice layer. Based on the passivization of the matrix 'make' and other
diagnostics, we have demonstrated that the embedded structure shows an active-passive
alternation. We have also contended that the implicit embedded agent can be introduced in
two ways: (i) as a full DP, with the caveat that it is subject to restrictions similar to Romance
ECM constructions, or (ii) as a free variable *à la* Heim (1982), introduced in the Voice head
itself. This construction thus adds to the typologies of Voice and of causatives (cf. Schäfer

2008, 2017; Alexiadou and Anagnostopoulou 2004; Harley 2013; Legate 2014). We have provided an analysis for Romance ECM-type restrictions: when the agent is introduced as a full DP, it cannot be licensed by the matrix 'make' since a phase head intervenes, unless the agent is Ā-moved and ends up in a local configuration with its licensor.

The realization of the implicit embedded agent as a free variable on the Voice head itself also brings along licensing implications from a different angle. It turns out that licensing of a grammatical object is possible for VoiceP and not dependent on the projection of a specifier, be it in the form of a grammatical subject, e.g. Burzio's (1986) generalization, (also see Marantz 1991; Woolford 2003; McFadden 2004), or as ϕ-features, i.e., the weak implicit argument, in Spec,VoiceP (Legate 2014). The study provides further support to the view that implicit arguments do not form a homogeneous category (cf. Landau (2010)). More precisely, it indicates that the implicit agent of 'make'-causatives and the implicit agent of passives cannot be subsumed under the label WIA, and a finer-grained distinction is called for.

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