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Cyclic spell-out derived agreement in Arabic raising constructions

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Standard Arabic licenses raising structures with three types of verbs known collectively as verbs of appropinquation. Raising structures with these verbs are unique in that they permit different subject positions and an agreement pattern that is not found otherwise in the language. Matching the different word orders to positions that have been proposed for raising constructions in languages like English, we show that a striking similarity holds and that raising in Standard Arabic provides new support for the existence of opacity domains (phases) in raising contexts. The chapter analyzes these raising configurations, along with the different word orders and agreement patterns they allow, by proposing a cyclic spell-out approach in which a particular PF choice at an early cycle (phase) creates certain opacity effects for the agreement options at later cycles.

Keywords: raising, verbs of appropinquation, cyclic spell-out, opacity, agreement

1. Introduction

Standard Arabic [SA] is a verb-initial pro-drop language in which pre-verbal subjects are also allowed. Different word orders result in different agreement patterns. Pre-verbal and unpronounced subjects trigger full agreement [FA] on the verb, while post-verbal subjects trigger partial agreement [PA] (only gender; default singular), as (1) and (2) illustrate (Mohammad, 1990, 2000; Aoun et al., 1994; Ouhalla, 1994; Benmamoun, 2000; Soltan, 2007).

(1) F(ull)A(greement)
    a. (*l-fataja:t-u*)   *qaraʔ-na*   *l-dars-a*
        (the-girls-NOM) read-3.F.PL the-lesson-ACC
        'The girls/They read the lesson.'
    b. **l-fataja:t-u*   *qaraʔ-at*   *l-dars-a*
        the-girls-NOM read-3.F.SG the-lesson-ACC

(2) P(artial)A(greement)

a. *qaraʔ-at*   *l-fataja:t-u*   *l-dars-a*
   read-3.F.SG   the-girls-NOM   the-lesson-ACC
   'The girls read the lesson.'

b. **qaraʔ-na*   *l-fataja:t-u*   *l-dars-a*
   read-3.F.PL   the-girls-NOM   the-lesson-ACC

Agreement and word order in SA have been a topic of syntactic analysis for several decades. They become even more interesting in raising constructions with verbs known as verbs of appropinquation. Raising constructions with these verbs allow different positions of the subject and different, sometimes unexpected, agreement patterns. As shown in (3a–c), generally, the SUBJECT » V order triggers FA, whereas the V » SUBJECT order triggers PA. In (3a), the subject precedes both verbs and shows FA on both verbs. In (3b), the subject is between the matrix V (V1) and the embedded V (V2); V1 shows PA, while V2 shows FA. Interestingly, V1 shows agreement even when the subject is in the embedded clause. In (3c), both V1 and V2 show PA. The case that is particularly noteworthy since it diverts from the expected pattern is (3d), where V2 shows the expected PA, while V1 occurs with FA despite the subject following V2.

(3) a. SUBJECT » V1-FA » V2-FA
    l-tˤa:liba:t-u   *ʔawʃakna*   (*ʔan*) *janʒaħna*
    the-students.F-NOM   were.about.to.3.F.PL   (to) succeed.3.F.PL
    'The female students are/were about to succeed'

 b. V1-PA » SUBJECT » V2-FA
    ʔawʃakat   *l-tˤa:liba:t-u*   (*ʔan*) *janʒaħna*
    were.about.to.3.F.SG   the-students.F-NOM   (to) succeed.3.F.PL

 c. V1-PA » V2-PA » SUBJECT
    ʔawʃakat   (*ʔan*) *tanʒaħ(u/a)*   *l-tˤa:liba:t-u*
    were.about.to.3.F.SG   (to) succeed.3.F.SG   the-students.F-NOM

 d. V1-FA » V2-PA » SUBJECT
    ʔawʃakna   (*ʔan*) *tanʒaħ(u/a)*   *l-tˤa:liba:t-u*
    were.about.to.3.F.PL   (to) succeed.3.F.SG   the-students.F-NOM

The structures in (3) raise the following questions: (i) How is FA possible on V1 but not V2 in the V1 » V2 » SUBJECT order? (ii) Why is FA not possible on V1 in the V1 » SUBJECT » V2 order? The main purpose of this chapter is to provide an account of agreement in SA which answers these questions. The following section lays out the empirical landscape; it provides a descriptive overview of the raising verbs under examination, along with the word orders and agreement patterns that they allow and disallow. This is followed by an analysis of the structures

in (3). We propose a cyclic spell-out approach in which a particular PF choice at an early cycle (phase) creates certain opacity effects for the agreement options at later cycles. We conclude with a summary and broader implications.

2.   The data

SA raising verbs of appropinquation are divided into three types. These are verbs of proximity, verbs of hope, and verbs of inception (Badawi et al., 2004; Wright, 2007, p. 106–108).

There are three verbs of proximity in SA. These are *ka:da*, *ʔawʃaka*, and *karaba*, and they all mean 'to be on the verge of' or 'to be about to'. They all take as a complement a subordinate predicate headed by an imperfective verb. The subordinate clause may be headed by *ʔan* 'to', in which case the verb is subjunctive [SUB]; otherwise, the verb surfaces with indicative [IND] mood morphology. As we will see throughout this paper, the presence or absence of *ʔan* has no effect on the possible positions of the subject or the agreement patterns. Sentences (4) through (6) are examples from Al-Ghalayini (2003, p. 204–207).

(4)   *ka:da*   *l-faqr-u*   *ʔan   jaku:n-a*
      was.about.3.M.SG   the-poverty.M-NOM   to   be.3.M.SG-SUB
      kufr-an
      blasphemy-ACC
      'Poverty is almost blasphemous.'

(5)   *ʔawʃakat*   *l-sama:ʔ-u*   *tumtˤir-u*   /
      was.about.3.F.SG   the-sky.F-NOM   rain.3.F.SG.IND /
      ʔan   tumtˤir-a
      to   rain.3.F.SG-SUB
      'It is/was about to start raining.'

(6)   *karaba*   *l-sˤubħ-u*   *ʔan*
      was.about.3.M.SG   the-morning.M-NOM   to
      janbaliʒ-a
      emerge.3.M.SG-SUB
      'The morning was about to dawn.'

The verbs of hope are *ʕasa:*, *ħara:*, and *xlawlaqa*. They all denote a hope for the occurrence of the predicate. All subcategorize for a subordinate clause headed by *ʔan* 'to', although *ʔan* is optional with *ʕasa:* (Al-Ghalayini, 2003, p. 206). Sentences (7) through (9) are examples from Wright (2007, p. 108).

(7) ʕasa: rabb-u-kum   jarħam-u-kum   /
     may.3.M.SG lord.M-NOM-your have.mercy.on.3.M.SG-IND-you /
     ʔan jarħam-a-kum
     to   have.mercy.on.3.M.SG-SUB-you
     'May your Lord have mercy on you.'

(8) ħara   zajd-un   *(ʔan) jaqu:m-a
     may.3.M.SG Zaid- NOM *(to)   rise.3.M.SG-SUB
     'Perhaps Zaid will rise.'

(9) xlawlaqat l-sama:ʔ-u   *(ʔan) tumtˤir-a
     may.3.F.SG the-sky.F-NOM   *(to)   rain.3.F.SG-SUB
     'The sky is likely to rain.'

Finally, the verbs of inception are plenty. They mean 'to start' or 'to set about', and they include ʔanʃaʔa, habba, ʃaraʕa, and tˤafiqa. These verbs do not subcategorize for ʔan 'to', as sentences (10) and (11) illustrate (from Al-Ghalayini, 2003, p. 204).

(10) ʔanʃaʔa   xali:l-un   (*ʔan) jaktub-u
      started.3.M.SG Khalil-NOM   (*to)   write.3.M.SG-IND
      'Khalil started to write.'

(11) habba   l-qawm-u   (*ʔan)
      started.3.M.SG the-people-NOM   (*to)
      jatasa:baqu:-n
      race.each.other.3.M.PL-IND
      'The people started to race each other.'

Verbs of appropinquation are always perfective, except for ka:da and ʔawʃaka 'be about to'; these may be perfective, as in (4) and (5) above, or imperfective, as (12) and (13) demonstrate.

(12) jaka:du   l-matˤar-u   jahtˤil-u   /
      is.about.3.M.SG the-rain.M-NOM fall.3.M.SG-IND /
      ʔan jahtˤil-a
      to   fall.3.M.SG-SUB
      'The rain is about to fall.'

(13) juwʃiku   l-waqt-u   jantahi   /
      is.about.3.M.SG the-time.M-NOM end.3.M.SG.IND /
      ʔan jantahij-a
      to   end.3.M.SG-SUB
      'The time is about to end.'

Word order and agreement patterns

Verbs of appropinquation are licensed in structures with different word orders and agreement patterns, listed in (14) below. Pattern (14c) is only allowed with verbs of appropinquation; to our knowledge, it does not occur with any other raising or control verbs.

(14) a. V1-PA   »   SUBJECT   »   V2-FA
      b. SUBJECT   »   V1-FA   »   V2-FA
      c. V1-FA/PA   »   V2-PA   »   SUBJECT
      d. V1-DEFAULTA   »   V2-PA   »   SUBJECT

We discuss these separately.

V1-PA » SUBJECT » V2-FA

All the examples we have seen so far have the word order and agreement pattern in (14a): V1-PA » SUBJECT » V2-FA. Similar structures abound in SA texts. Sentences (15) through (17) are clear examples of this pattern; they contain dual or human plural subjects; these trigger dual or plural agreement – i.e., FA – on the embedded verb.[1] Here and below, we mostly avoid singular and non-human plural subjects because these trigger singular agreement on the verb regardless of

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1. In the rest of this section, all examples cited from newspapers (Al-Ghad; Al-Ahram; Al-Thawra; Al-Masri Al-Yawm; Shuruq Columns; Al-Hayat) have been collected from the arabicorpus at http://arabicorpus.byu.edu/index.php. These examples are from what is normally referred to as Modern Standard Arabic or MSA. MSA departs from the Classical Arabic mostly in style and neologisms. The syntax and morphology are virtually the same.

A reviewer asks why we chose to focus on written sources without any reference to oral texts. Our answer is that Standard Arabic is a prescriptive variety of Arabic. For most native speakers of Arabic varieties, accurate production of Standard Arabic requires planning. Planning is more readily available in the production of written material (in books and newspapers, but also in the notes to a lecture or speech). Extemporaneous speech often results either in grammatical errors or in diglossic codeswitching. See Walters 2003 for a discussion about the relation between modality (e.g., writing vs. speaking) and planning (e.g., planned vs. extemporaneous), on the one hand, and the choice of Arabic variety (e.g., Modern Standard Arabic vs. Educated Spoken Arabic), on the other hand. Since the focus in this paper is on Standard Arabic in its prescriptive form, we chose written sources because writing presumably gives the language user ample time for planning. And while different users may have different idiolects, as the reviewer points out, the effect of the idiolects is mitigated by two factors: (i) the prescriptive nature of Standard Arabic, the variety that the newspapers that we cite use, and the awareness of Arab authors in general that they must abide by the grammatical rules of the language, and (ii) the fact that the structures we are dealing with, even those that diverge from the prescriptive tradition in the strict sense, are attested not in one but in a variety of sources.

word order and thus are not informative regarding the difference between FA and PA. As shown in (15) vs. (17), the presence of *ʔan* does not affect the availability of PA with the higher verb.

(15) *ka:da*   *l-ʃuju:ʕijju:n*   *l-sˤi:nijju:n*
       was.about.3.M.SG   the-communists.M.NOM   the-Chinese.M.NOM
       janʒaħu:-n   *fi: l-qadˤaːʔi*   *ʕalaj-ha:*
       succeed.3.M.PL-IND   in the-eliminating   on-her
       'The Chinese communists almost succeeded in getting rid of it.' (Ghad 2001)

(16) *badaʔat*   *l-nisa:ʔ-u*   *jutˤaːlibna*
       started.3.F.SG   the-women-NOM   demand.3.F.PL.IND
       bi-masaːħaːtin musaːwijatin li-l-riʒaːli
       in-spaces   equal   to-the-men
       fi: l-masaːʒidi
       in   the-mosques
       'Women started to ask for spaces equal to the spaces men have in mosques.'
                                                                         (Ghad 2001)

(17) *ka:dat*   *riʒla:-h*   *ʔan*
       was.about.3.F.SG   leg.F.DUAL.NOM-his   to
       taxðula:-h
       fail.3.F.DUAL.SUB-him
       'His legs were about to let him down/give up on him.'   (Masri 2010)

SUBJECT » V1-FA » V2-FA

If the subject precedes both verbs, the outcome is the agreement pattern SUBJECT » V1-FA » V2-FA in (14b). Again, *ʔan* could be present or absent, depending on the selectional properties of the matrix verb with no effect on word order or agreement. Here are a few examples:

(18) *l-nisa:ʔ-u*   *tˤafiqna*   *jaʕtaqna*
       the-women-NOM   started.3.F.PL   free.3.F.PL
       ʕabida-hunna wa-jatazawwaʒna-hum
       slaves-their   and-marry.3.F.PL-them
       'The women started to free their slaves and marry them.'   (Ahram 1999)

(19) *rutˤuːbat-u*   *ʃahri   ju:njo wa-rtifaːʕ-u   daraʒati*
       humidity-NOM   month June   and-rise-NOM   degree
       l-ħara:ra   ʔawʃaka: *ʔan*
       the-temperature   were.about.3.M.DUAL   to
       juɣjima:-ha: *ʕala ...*
       force.3.M.DUAL.SUB-her   on   ...
       'The humidity of June and the rise in temperature were about to force her to ...'
                                                                         (Shuruq)

(20) *l-musa:fira:t-u   ʕasajna   ʔan jaħdˤurna*
      the-travellers.F-NOM may.3.F.PL to   arrive.3.F.PL.SUB
      'May the female travelers arrive.'   (Al-Ghalayini, 2003, p. 208)

(21) *l-musa:firu:n   ʕasaw   ʔan jaħdˤuru:*
      the-travellers.M-NOM may.3.M.PL to   arrive.3.M.PL.SUB
      'May the male travelers arrive.'   (Al-Ghalayini, 2003, p. 208)

V1-FA/PA » V2-PA » SUBJECT

The two patterns discussed so far are not surprising. They are licensed in SA in raising and control predicates in general, as (22) and (23) illustrate. (22a) and (23a) are examples of the pattern V1-PA » SUBJECT » V2-FA, while (22b) and (23b) are examples of its SUBJECT » V1-FA » V2-FA counterpart.

(22) a. *ʔasˤbaħat   l-tˤa:liba:t-u   la:*
          became.3.F.SG the-students.F-NOM NEG
          juhmilna   duru:sa-hinna
          neglect.3.F.PL.IND studies-their.F
          'The female students no longer neglect their studies.'
      b. *l-tˤa:liba:t-u   ʔasˤbaħna   la:*
          the-students.F-NOM became.3.F.PL NEG
          juhmilna   duru:sa-hinna
          neglect.2.F.PL.IND studies-their.F
          'The female students no longer neglect their studies.'

(23) a. *qarrarat   l-tˤa:liba:t-u   ʔal-la:[2]*
          decided.3.F.SG the-students.F-NOM to-NEG
          juhmilna   duru:sa-hinna
          neglect.2.F.PL.SUB studies-their.F
          'The female students decided not to neglect their studies.'
      b. *l-tˤa:liba:t-u   qarrarna   ʔal-la:*
          the-students.F-NOM decided.3.F.PL to-NEG
          juhmilna   duru:sa-hinna
          neglect.2.F.PL.SUB studies-their.F
          'The female students decided not to neglect their studies.'

What is unique about SA verbs of appropinquation is that they may be realized in V1-FA/PA » V2-PA » SUBJECT structures. We begin with V1-FA » V2-PA » SUBJECT. In (24) and (25), the subject occupies a post-verbal position in the embedded clause, while the embedded verb takes on PA (the subject can be followed by material from the embedded clause, as shown in (42) and (43) below).

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2. *ʔal-la:* is underlyingly /ʔan-la:/.

The matrix verb of appropinquation, on the other hand, takes on FA. As before, the presence/absence of *ʔan* does not affect the distribution of agreement.

(24) *ʕasaja:*   *ʔan jaxruʒ-a*   *l-zajd-a:n*
      may.3.M.DUAL to   go.out.3.M.SG-SUB the-Zaid-DUAL.NOM
      'May the two Zaids go out.'   (Al-Astrabathy, 1996, 217)

(25) *tˤafiqu:*   *jansˤarif-u*   *l-na:s-u*
      started.3.M.PL leave.3.M.SG-IND the-people-NOM
      'The people started to leave.'   (Al-Ghalayini, 2003, p. 205, fn. 2)

Al-Ghalayini (2003) and Al-Astrabathy (1996) extend their observations about (24) and (25) to all verbs of appropinquation, implying that structures like (26) are also possible. See also Hasan (1975, p. 628) and Rida (1962, p. 266).

(26) *ʔawʃakna*   *tataʔaxxar-u*   /
      were.about.3.F.PL be.late.3.F.SG-IND /
      ʔan tataʔaxxar-a   *l-tˤa:liba:t-u*
      to   be.late.3.F.SG-SUB the-students.F-NOM
      'The female students were about to be late.'

We were not able to find clear examples of V1-FA » V2-PA » SUBECT structures in other texts (e.g., contemporary newspapers). Examples of the same word order that we came across involved singular subjects, (27), or non-human plural subjects, (28). Both types of subjects trigger singular agreement on both verbs regardless of word order and thus are inconclusive. That is, V1 in these examples may be displaying PA or FA.

(27) *ka:dat*   *ʔan taku:n-a*
      was.about.3.F.SG to   be.3.F.SG-SUB
      ha:ðihi l-tˤiflat-u   *dˤaħijja*
      this   the-child.F-NOM   victim
      'This little girl was almost a victim.'   (Ghad 2001)

(28) *badaʔat*   *tatada:xal-u*   *l-huwijja:t-u*
      started.3.F.SG overlap. 3.F.SG-IND the-identities.F-NOM
      wa-l-tawaʒʒuha:t-u   *l-muxtalifa*
      and-the-trends.F-NOM   the-different
      'The different identities and trends started to get intertwined.'   (Ghad 2001)

Now we turn to V1-PA » V2-PA » SUBJECT structures. This pattern is considered ungrammatical from a traditional Arabic grammar perspective. To Arab grammarians, the overt subject may trigger PA on only one of the two verbs, the matrix or the subordinate verb, while the other verb must display FA. They maintain that FA on the verb is an incorporated pronoun that must be available when a lexical subject does not follow the verb clause-internally (e.g., Al-Ghalayini, 2003).

Despite the grammarians' rules and the strictly prescriptive nature of Arabic grammar, however, clearer evidence for V1-PA » V2-PA » SUBJECT structures exists in Modern Standard Arabic as used in today's newspapers and other media. Consider sentences (29) through (31).

(29)   *θumma badaʔa   jandˁamm-u   ʔilaj-him*
       then   started.3.M.SG join.3.M.SG-IND to-them
       ʔawla:d-u   l-ʒira:n
       children-NOM   the-neighbors
       'Then the neighbors' children started to join them.'   (Masri 2010)

(30)   *wa-lʔa:n   baʕda ʔan tasˁa:ʕadat   l-maðbaħat-u*
       and-now after to   aggravate.3.F.SG the-massacre.F-NOM
       badaʔa   jatasa:ʔalu   l-muslimu:n   …
       started.3.M.SG inquire.3.M.SG the-muslims.NOM …
       'And now after the massacre has aggravated, Muslims started to inquire/won-
       der …' http://www.ahewar.org/debat/show.art.asp?aid=241040 (Oct. 10, 2013)

(31)   *ka:dat   ʔan taqaʕ-a   fi: l-ʔusbu:ʕ-ajn*
       was.about.3.F.SG to   happen.3.F.SG-SUB in the-week-DUAL
       l-ma:dˁijajn   ka:riθat-a:n
       the-past-DUAL   catastrophe.F-DUAL.NOM
       ʔinsa:nijjat-a:n   fi: ʔalma:nja:
       humanitarian.F-DUAL.NOM in Germany
       'In the last two weeks, two humanitarian disasters almost took place / were
       about to take place in Germany.'   (Hayat 1997)

Sentences (29) and (30) contain a human plural subject, and sentence (31) contains a dual subject. From a traditional grammar perspective, the expectation is that at least one of the verbs in each sentence will be realized with FA: the matrix verb if the subject is parsed as part of the embedded clause, or the embedded verb if the subject is parsed as part of the matrix clause scrambled past the embedded clause. Yet, both verbs take on singular agreement. Note that *badaʔa* 'start' in (29) and (30) is not realized with DA (default 3.M.SG agreement). If the embedded subject is feminine, *badaʔa* shows feminine agreement, as (32) illustrates. As we will see in the next subsection, only three verbs of appropinquation may take on DA.

(32)   *badaʔat   tuma:risu-hu   baʕdˁ-u*
       started.3.F.SG practice.3.F.SG-him some-NOM
       l-fata:ja:t-i
       the-girls-GEN
       'Some girls started practicing it.'
                    http://h333h.com/vb/archive/index.php/t-4070.html (Oct. 10, 2013)

This is not to imply, however, that SA has two grammars, a traditional grammar and a contemporary one. While we were not able to find clear examples of V1-PA » V2-PA » SUBJECT structures in old texts (e.g., the Qur'an and Hadith), we came across several examples like the (33a–c) from the Hadith (http://library.islamweb.net/hadith/) that may be considered ambiguous . That is, they may be V1-PA » V2-PA » SUBJECT or V1-FA » V2-PA » SUBJECT structures.

(33) a. *ka:da*   *jaqtul-u-hu*   *l-ʕatˤʕaʃ-u*
          was.about.3.M.SG   kill.3.M.SG-IND-him   the-thirst-NOM
          'Thirst almost killed him.'

      b. *ka:da*   *ʔan jaku:n-a*   *bajna*
          was.about.3.M.SG   to   be.3.M.SG-SUB   between
          l-ʔaws-i   *w-al-xazraʒ-i*   *ʃarr-un*
          the-Aus-GEN   and-the-Khazraj-GEN   hostility-NOM
          fi: l-masʒid-i
          in   the-mosque-GEN
          'A fight almost broke in the mosque between the two tribes of Aus and Khazraj.'

      c. *ka:dat*   *ʔan taɣrub-a*   *l-ʃams-u*
          was.about.3.F.SG   to   set.3.F.SG-SUB the-sun-NOM
          'The sun was about to set.'

Since there is no conclusive evidence that two grammars of SA (traditional and contemporary SA) should be distinguished, we assume that both orders are available in SA in general. However, we offer a possible direction for the preference of the V1-FA » V2-PA » SUBJECT order in the traditional texts. It may be argued that SA as described and analyzed in traditional Arabic grammar involved pronominal incorporation rather than agreement when the subject is pre-verbal or dropped. SA as used in contemporary newspapers, on the other hand, may be partly influenced by modern colloquial varieties which involve agreement and in which verbs show FA with both pre- and post-verbal subjects, as well as dropped subjects. Research on agreement languages shows that language users have more tolerance for missing or erroneous number agreement than they do for missing or erroneous gender and person agreement (Mancini et al., 2014 and work within). This may explain why SA as described in traditional Arabic grammar involves an uneconomical instance of covert movement to a preverbal position in the matrix clause, namely, in order to trigger pronominal incorporation, or what we today call FA. In contemporary SA, however, covert movement to Spec,vP in the matrix clause, resulting in gender but not number agreement, is considered sufficient and more economical.

V1-DA » V2-PA » SUBJECT

Three verbs of appropinquation may take DA (3.M.SG) regardless of the gender and number of the subject of the subordinate clause. These are *ʕasa:* 'may' and *ʔawʃak-a* 'be about to', and less commonly *xlawlaq-a* 'may' (Al-Ghalayini, 2003, p. 207; Wright, 2007, p. 107–8). The sentences in (34) and (35) are examples. Notice that the raising verbs *ʕasa:* 'may' and *ʔawʃak-a* 'was about (to)' are masculine singular irrespective of the gender and number of the subordinate subject. Wright (2007, p. 107) calls these invariable verb forms *impersonal*; that is, they take the whole subordinate clause as their subject.

(34) a. *ʕasa:* *ʔan* *taqu:m-a* *l-nisa:ʔ-u*
          may.3.M.SG to rise.3.F.SG-SUB the-women-NOM
          'Perhaps the women will rise.'

      b. *ʕasa:* *ʔan* *jaqu:m-a* *ʔixwat-u-ka*
          may.3.M.SG to rise.3.M.SG-SUB brothers-NOM-your
          'Perhaps your brothers will rise.'

                                        (adapted from Jamal-El-Din, 1996, p. 290)

(35) a. *ʔawʃak-a* *ʔan* *tatʕab-a*
          was.about-3.M.SG to get.tired.3.F.SG-SUB
          l-qawijja:t-u
          the.strong.women-NOM
          'The strong women were about to get tired.'

      b. *ʔawʃak-a* *ʔan* *jatʕab-a*
          was.about-3.M.SG to get.tired.3.M.SG-SUB
          l-ʔaqwija:ʔ-u
          the.strong.men-NOM
          'The strong men were about to get tired.'

                                        (adapted from Hasan, 1975, p. 617)

DA is also possible with pre-verbal subjects in the matrix clause, as (36) and (37) show (from Al-Ghalayini, 2003, p. 208). Compare with (20) and (21) in which *ʕasa:* is realized with FA. Below we will show, however, that preverbal subjects in these cases correspond to broad subjects rather than regular agreeing subjects. Broad subjects are clause-initial DPs that behave like subjects rather than topics or foci (e.g., unlike topics, they may be embedded under ECM verbs), yet they are different from subjects in that they do not trigger subject-verb agreement (Doron and Heycock, 1999). In the presence of a real subject – or what Doron and Heycock call narrow subject – in Spec,TP, a broad subject occupies a second Spec,TP.

(36) *l-musa:fira:t-u* *ʕasa:* *ʔan jaħdˤurna*
      the-travellers.F-NOM may.3.M.SG to arrive.3.F.PL.SUB
      'May the female travelers arrive.'

(37) *l-musa:firu:n*   *ʕasa:*   *ʔan jaħdˤuru:*
      the-travellers.M.NOM   may.3.M.SG   to   arrive.3.M.PL.SUB
      'May the male travelers arrive.'

Of the three verbs of appropinquation that also may take on DA, *ʕasa:* is the only verb that may be immediately followed by the subject while still maintaining DA. As shown in (38), in this case the subject occurs with accusative, which we will propose below is lexically assigned by a small class of verbs.

(38) a. *ʕasa:*   *l-ʔawla:d-a*   *janʒaħu:n*
          may.3.M.SG   the-children-ACC   succeed.3.M.PL
          'May the children succeed.' OR
          'Perhaps the children will succeed.'
      b. *ʕasa:*   *l-fataja:t-a*   *janʒaħna*
          may.3.M.SG   the-girls-ACC   succeed.3.F.PL
          'May the girls succeed.'
          'Perhaps the girls will succeed.'

(39) a. *ʕasa:-hum*   *janʒaħu:n*
          may.3.M.SG-them.M   succeed.3.M.PL
          'May they.M succeed.' OR 'Perhaps they.M will succeed.'
      b. *ʕasa:-hunna*   *janʒaħna*
          may.3.M.SG-them.F   succeed.3.F.PL
          'May they.F succeed.' OR 'Perhaps they.F will succeed.'

Summary and theoretical issues

The distribution of agreement in raising constructions in (14) is summarized again in (40) to (43).

(40) *l-tˤa:liba:t-u*   *badaʔna*   *jarkudˤna fi l-malʕab*
      the-students.F-NOM   started.3.F.PL   run.3.F.PL   in-the-playground
      SUBJECT   »   V1-FA   »   V2-FA
      'The female students started to run in the playground.'

(41) *badaʔat*   *l-tˤa:liba:t-u*   *faʒʔatan jarkudˤna*
      started.3.F.SG   the-students.F-NOM   suddenly   run.3.F.PL
      V1-PA   »   SUBJECT   »   V2-FA
      'The female students suddenly started to run.'

(42) *badaʔat*   [*tarkudˤu*   *l-tˤa:liba:t-u*   *fi l-malʕab*]
      started.3.F.SG   [run.3.F.SG   the-students.F-NOM   in-the-playground]
      V1-PA   »   V2-PA   » SUBJECT
      'The female students started to run in the playground.'

(43) *badaʔna* [*tarkudˤu* *l-tˤaːliba:t-u* *fi l-malˤab*]
started.3.F.PL [run.3.F.SG the-students.F-NOM in the-playground]
V1-FA » V2-PA » SUBJECT
'The female students started to run in the playground.'

The distribution raises several theoretical questions which we address in this article. First, we will explore a new approach to how the difference between FA and PA in general is derived in SA. Second, we provide an account for why both PA and FA are possible on the higher verb in the V1 » V2 » SUBJECT order. As shown in (42) and (43), the subject occurs before other elements of the embedded clause ('in the playground'), which we take to show that the subject is indeed (pronounced) within the embedded clause. The interesting issue thus is how such a low subject nevertheless triggers agreement on the higher verb (note that even in the case of PA in (42), the feminine marking shows that agreement takes place). Given that FA is possible on V1 in (43) – i.e., in the V » SUBJECT order – an important question is why such FA only arises on V1 in contexts such as (43) but not on V2, as shown by the impossibility of (44) (note that FA is possible when the subject is extraposed, which, however, requires a different intonational pattern and a long pause before the subject). Lastly, an account of (40) to (43) also needs to cover the fact that, although FA on V1 is possible in the V1 » V2 » SUBJECT order, it is excluded in the V1 » SUBJECT » V2 order as shown in (45).

(44) *badaʔna [*jarkudˤna* *l-tˤaːliba:t-u*   ]
started.3.F.PL [run.3.F.PL the-students.F-NOM]
V1-FA »   *V2-FA » SUBJECT

(45) *badaʔna *l-tˤaːliba:t-u*   *jarkudˤna*
started.3.F.PL the-students.F-NOM run.3.F.PL
*V1-FA » SUBJECT » V2-FA

3. A backwards raising approach

Following Haddad (2012), we propose a (backward) movement account for raising constructions in SA. The fact that, independently of the overt position of the subject in (40) to (43), the matrix verb agrees (fully or partially) with the subject will be taken as evidence for movement. Before laying out our account of agreement in SA, we briefly compare the subject positions in SA raising to a recent approach to phases in raising structures in English.

Phases in raising constructions

Based on evidence from scope, binding and reconstruction (see, among others, Chomsky, 1973; Legate, 2003, 2012; Sauerland, 2003), Alexiadou et al. (2014) and Wurmbrand (2013a) propose that there are three phase boundaries between matrix T and the base position of the subject in raising constructions: the matrix vP, the top projection of the infinitive (given here as XP), and the embedded vP. Assuming that movement has to apply cyclically and pass through the edge of every phase on its way out of a phase, there then will be four positions of the subject in a raising configuration, as shown in (46). In English, the subject is always pronounced in position 1 in (46) (for *there* constructions see Alexiadou et al., 2014). This position is also available in SA in examples such as (40). Interestingly, SA raising constructions provide additional evidence for the other subject positions given in (46): position 2 corresponds to the subject position in (41), position 4 corresponds to the subject position in (42) and (43), and finally, evidence for position 3 will be given in (61).
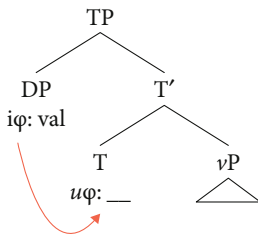
(46) $[_{TP}$ SUBJ 1 T $[_{vP=Phase}$ SUBJ 2 $[_{XP=Phase}$ SUBJ 3 $[_{vP=Phase}$ SUBJ 4 $]]]]$

While we are not able to reproduce detailed arguments for (46) in this article (the reader is referred to the articles cited), we will show that the phasal approach given in (46), together with a cyclic spell-out approach and a certain view of agreement, provides an account of the distribution of FA and PA in SA raising constructions as summarized above.
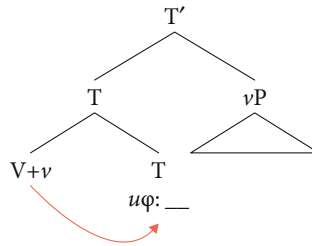
FA vs. PA – Ways to satisfy the EPP

To derive the two word orders SUBJECT » V and V » SUBJECT, we assume that SA is an optional VSO language in which the EPP property of T can be satisfied either by verb movement to T or subject movement to Spec,TP (see Alexiadou & Anagnostopoulou, 2001 for the former; this optionality is reminiscent of Pesetsky & Torrego's 2001 claim that both T and the subject in Spec,TP can move to check a feature on C in English). As for the EPP property itself, we assume that movement is triggered by unvalued ϕ-features on T, which need to get valued under c-command (see Zeijlstra, 2012; Wurmbrand, 2012a,b, 2014, among others, for such a *Reverse Agree* approach). (47a,b) illustrate the basic derivations of the SUBJECT » V and V » SUBJECT word orders. Although in our account there is no EPP or D-feature, we will continue to refer to T's need for ϕ-valuation as the 'EPP property'.

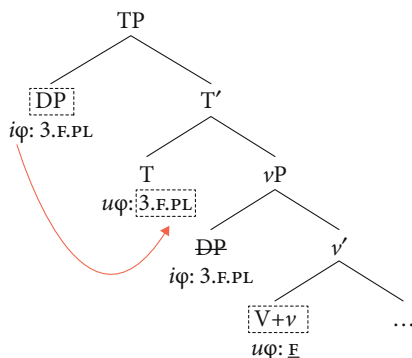(47) a.   SUBJECT » V   b.   V » SUBJECT

How then do the FA vs. PA patterns arise? To see how the EPP approach above allows us to achieve different agreement forms, we need to be more specific about the φ-features of v. We assume that in addition to T, v also comes equipped with unvalued φ-features. Merging v' with the subject then establishes an Agree(ment) configuration in which v acquires the features of the subject. Thus, in both FA and PA, T ends up agreeing with the subject, either via direct Agree with the subject (FA) or indirectly via Agree with the moved v (PA) which in turn Agrees with the subject. Agree between v and T (after V+v moves) is a relation between two uninterpretable features, which, we assume, following Pesetsky & Torrego (2007) and others, is possible. The last piece required to derive the difference between FA and PA is a special assumption we make regarding SA: v has only a gender feature, whereas T is inserted with a full set of φ-features (i.e., person, number, gender). The impoverished feature structure of v has no relevance for SUBJECT » V constructions, in which the EPP property of T is satisfied by the subject. Although v only ends up with a valued gender feature, since T is valued by the subject DP, T inherits all φ-values from the subject. This is shown in (48), now with all features specified.[3]

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3.   In the diagram in (48) and in what follows, we assume that there is no v/V-to-T movement in the SUBJECT » V order. A reviewer points out that this may not be correct, providing the examples in (i) and (ii). We are not sure about the judgments anchored to these examples; we were not able to find attested examples, and judgments by educated native speakers we consulted were different. But even if there are speakers who share these judgments, it is not clear that they provide evidence for v/V-to-T movement. If 'often' is adjoined to vP, the SUBJECT » V order in (i) (and the impossible SUBJECT » Adverb » V order in (ii)) could indicate v/V-to-T movement. However, it would then not be clear how the V » SUBJECT » Adverb order in (i) is derived, at least not without many further movements. Instead, we assume that 'often' is adjoined to VP, which derives the (im)possible word orders in these examples without v/V-to-T movement (V only moves to v).
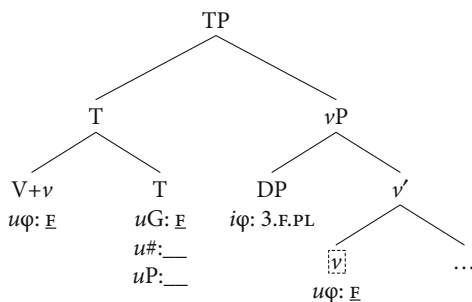
(i)   {zajd-un} janaamu {zajd-un} ġaaliban.
      Zayd-NOM sleeps   Zayd-NOM often
      'Zayd often sleeps.'

(ii) *{zajd-un} ġaaliban {zajd-un} janaamu.
      Zayd-NOM   often   Zayd-NOM sleeps

(48)   SUBJECT » V-FA

```
                    TP
           ┌─────────┴─────────┐
         ┌DP┐                  T′
         iφ: 3.F.PL      ┌──────┴──────┐
                         T            vP
                      uφ:┌3.F.PL┐  ┌───┴────┐
                                  DP         v′
                               iφ: 3.F.PL ┌──┴───┐
                                        ┌V+v┐    …
                                        uφ: F
```

A different scenario, however, arises in V » SUBJECT orders, in which the EPP property is satisfied by *v*. As shown in (49), when the subject merges with *v′*, the gender feature of *v* is valued. Movement of V+*v* then brings *v* in a proper (Reverse) Agree configuration with T, and thus T's gender feature is valued by *v*, thereby establishing indirect agreement with the subject. Since the remaining φ-features cannot be valued by *v*, they receive the default values 3.SG. We assume that default valuation occurs together with valuation under Agree; that is, at the stage in (49), all φ-features of T are valued and later movement of, for instance, the subject will not affect the values of T.

(49)   V-PA » SUBJECT

```
                         TP
              ┌───────────┴───────────┐
              T                       vP
        ┌─────┴─────┐          ┌───────┴───────┐
      V+v           T          DP              v′
      uφ: F       uG: F     iφ: 3.F.PL     ┌────┴────┐
                  u#:__                   ┌v┐        …
                  uP:__                   uφ: F
```

Although these data do not show that there must be *v*/V-to-T movement, our account could nevertheless be made compatible with such movement (thanks to J. Bobaljik, p.c., for this suggestion). As we will see below, the crucial property in our account is which element – the subject or *v* – combines with T (T′) first: if the subject is the first to merge with T, FA arises; if *v* is the first to merge with T, PA arises. If it is possible for *v*/V to undergo counter-cyclic movement (e.g., tucking in, à la Richards 1997), the order SUBJECT » V-FA could also involve *v*/V-to-T movement, as long as this movement is not the movement that satisfies the EPP property of T.

There are two configurations that need to be excluded: *V-FA » SUBJECT and *SUBJECT » V-PA. The former could arise if in a derivation such as (48) further movement of V (e.g. to C) takes place. We assume that this is not possible in SA. Furthermore, assuming a copy theory of movement, in (48), the higher copy of the subject must be chosen at PF (see below). A PA configuration with a pre-verbal subject could arise if in the derivation in (49) further movement of the subject to Spec,TP takes place. We assume that such a movement is in principle possible; however, certain PF linearization preferences have the effect that this movement becomes 'covert' – i.e., the lower copy is realized at PF. As stated in (50a), the universal default preference is to pronounce the higher copy in a movement chain (presumably to make movement overtly visible). However, as has been noted for several languages and constructions, this default choice is overwritten in (often language-specific) contexts in which the realization of the high copy creates a conflict with a PF property or in which pronunciation of the lower copy yields a more optimal PF output. Furthermore, a cross-linguistic property of agreement is that in languages which show an alternation between full and partial/deficient agreement, the latter is restricted to V » XP contexts. This is expressed in Greenberg's (1966) universal #33, for instance: "When number agreement between the noun and verb is suspended and the rule is based on order, the case is always one in which the verb precedes and the verb is in the singular." This is exactly what we find in SA. Although we suggest that the difference between FA and PA is derived syntactically, we assume that this cross-linguistic generalization between agreement and word order is also reflected in a PF filter on agreement. However, this PF condition is not a grammatical constraint but a preference condition, which only comes into action when the syntax provides two options for linearization.

(50)   a.   PF linearization: Pronounce the highest copy, unless this is in conflict with a PF property (Bobaljik, 1995, 2002; Bošković & Nunes, 2007).

   b.   Agreement-word order preference:
   $$*XP[\phi] \gg V[\phi:\varnothing]$$
   [where $\varnothing$ refers to the absence of a ϕ-value]

Copy choice then proceeds as follows. If the subject moves to T (first – see fn. 3) and values T's EPP feature, the verb realizes FA, and at PF the higher copy of the subject must be chosen since this is the default copy choice, and it also is not in violation of the agreement-word order preference as stated in (50b). If the subject moves to T after *v* has moved and valued the EPP-feature on T, leading to PA on T/V, the structure transferred will be: {subject} » V/T-PA » {subject}. In this situation, (50b) comes into play and the lower copy of the subject is chosen at transfer to PF in accordance with the agreement-word order preference. The agreement-word order preference thus acts as a filter, which blocks the default pronunciation

of the higher copy, but only in contexts where there is a choice and the lower copy leads to a more optimal PF output. We will therefore refer to (50b) as a PF filter excluding the order SUBJECT » V-PA and enforcing pronunciation of the lower copy of the subject in such cases.

In what follows we show that this system together with the PF filter in (50b) derives the distribution of agreement in SA raising constructions.

Back to raising constructions

We are now in a position to account for the possible and impossible agreement-word order combinations in SA raising contexts. Let us start with (40) and (41), repeated here for convenience.
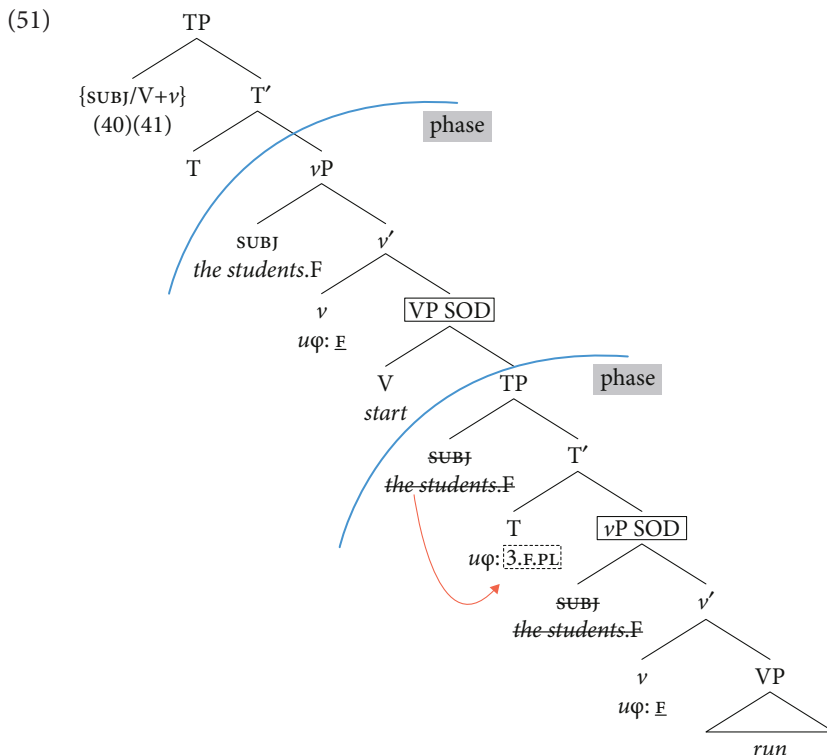
(40) *l-tˤaːliba:t-u*   *badaʔna*   *jarkudˤna*   *fi l-malˤab*
      the-students.F-NOM   started.3.F.PL   run.3.F.PL   in the-playground
      SUBJECT   »   V1-FA   »   V2-FA
      'The female students started to run in the playground.'

(41) *badaʔat*   *l-tˤaːliba:t-u*   *faʒʔatan*   *jarkudˤna*
      started.3.F.SG   the-students.F-NOM   suddenly   run.3.F.PL
      V1-PA   »   SUBJECT   »   V2-FA
      'The female students suddenly started to run.'

As shown in (51), the derivation proceeds as follows: The subject moves to the embedded Spec,TP, where it values the embedded T, resulting in FA on the lower verb. The embedded TP is a phase, hence at this point, transfer and spell-out takes place (TP being a phase, makes the *v*P the spell-out domain), during which copy choice and reduction of the subject chain is established.[4] Since there is no PF issue, the default high copy is chosen at this point. In the next step of the derivation, the subject moves to the matrix Spec,*v*P (recall that we assume that there is a phase in unaccusative VPs as well) where it values the gender feature of matrix *v*. Once again, transfer occurs and the lower copy of the subject is deleted. Lastly, at this

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4.   We assume that what is commonly referred to as transfer or spell-out are in fact two separate stages in the derivation (see Wurmbrand 2014 for a recent proposal making these stages explicit). Once a phase is complete, if movement had occurred within that phase (hence two copies of one syntactic object are present in the phase), copy reduction applies. We refer to this as transfer. This operation chooses one of the copies (potentially different copies at LF and PF transfer) and deletes the other copy. After copy reduction has taken place, spell-out applies, which submits the complement of the phase head to the LF and PF interfaces. Crucially, while spell-out only applies to parts of a phase (the spell-out domain), copy choice must see the entire phase. This is necessary in all cyclic spell-out approaches which involve edge movement and where the phase edge is not part of the spell-out domain.

point there are again two options: either the subject moves to Spec,TP, establishing FA with the matrix verb, or matrix v moves to T, yielding PA on the matrix verb, thus deriving the two orders in (40) and (41), respectively.

(51)

This system immediately accounts for some of the impossible configurations. The examples in (44) and (45) are repeated below. In order to derive FA, movement of the subject to Spec,TP must take place. If such movement occurs, the higher copy must be realized at PF (it is the default copy choice and it is in accordance with the agreement-word order filter we adopted), which, however, is not what we find in (44). FA in (44) is thus excluded in the same way it is excluded in simple V » SUBJECT orders. In (45), subject movement has taken place, correctly deriving FA on the embedded verb. However, in the matrix predicate, to derive FA on the higher verb, once again, the subject would have to move to matrix Spec,TP, and also be pronounced in that position.

(44) *badaʔna   [jarkudˤna   l-tˤa:liba:t-u   ]
     started.3.F.PL   [run.3.F.PL   the-students.F-NOM]
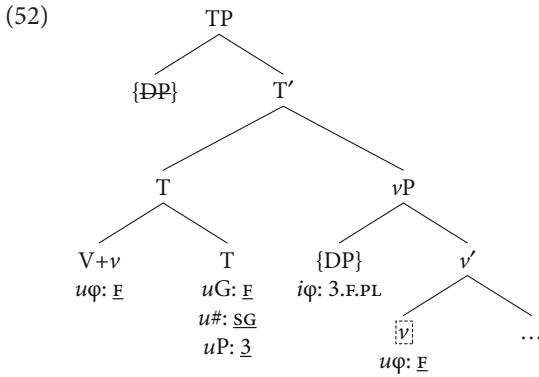   V1-FA   »   *V2-FA » SUBJECT

(45) *bada?na   l-t^ˤa:liba:t-u   jarkud^ˤna
     started.3.F.PL   the-students.F-NOM   run.3.F.PL
     *V1-FA   »   SUBJECT   »   V2-FA

Let us then turn to the most interesting cases, the V » V » subject orders and the two possible agreement options in these cases. The relevant examples in (42) and (43) are repeated.
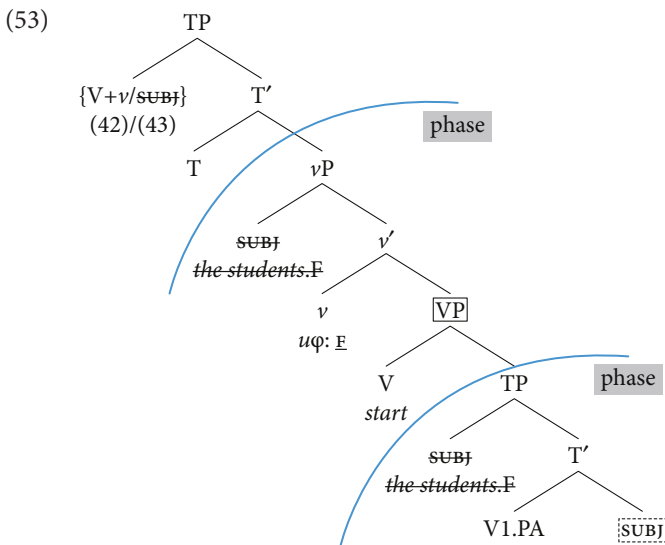
(42) *bada?at*   [*tarkud^ˤu*   *l-t^ˤa:liba:t-u*   *fi l-mal^ˤab*   ]
     started.3.F.SG   [run.3.F.SG   the-students.F-NOM   in the-playground]
     V1-PA   »   V2-PA   »   SUBJECT
     'The female students started to run in the playground.'

(43) *bada?na*   [*tarkud^ˤu*   *l-t^ˤa:liba:t-u*   *fi l-mal^ˤab*   ]
     started.3.F.PL   [run.3.F.SG   the-students.F-NOM   in the-playground]
     V1-FA   »   V2-PA   »   SUBJECT
     'The female students started to run in the playground.'

Since the lower verb occurs with PA, the only derivation possible is one where the embedded V + v moves to the embedded T first. Partial and default valuation then marks the embedded T as 3.F.SG. Suppose now that the subject also moves (see the next section for a discussion of the motivation of movement).[5] This yields the configuration in (52). Once again, TP is a phase, thus at this point transfer takes place. To resolve the subject movement chain, one copy must be deleted. In this case now crucially, the PF filter in (50b) comes into play, preventing the default choice of the higher copy. Instead, the lower copy is chosen at transfer to PF which yields the optimal agreement/word order linearization.

---

5.   As argued in Polinsky & Potsdam (2012) and Alexiadou et. al. (2014), languages allowing constructions in which the subject occurs within the embedded clause at PF fall into two groups: Agree languages (e.g., Greek, Romanian) and covert movement (backward raising) languages (e.g., Adyghe). In the former, the subject abstractly Agrees with matrix T/v and no movement takes place. In the latter, the subject undergoes backward raising. This paper suggest that under a movement account, the different positions of the subject and the distribution of agreement in raising constructions in SA can be derived, whereas it would remain puzzling under an Agree account why agreement differs the way it does. For instance, it would be difficult to account for the difference between V-FA » V-PA » SUBJECT and *V-FA » SUBJECT » PA or *V-FA » V-FA » SUBJECT (see Haddad 2012 for some discussion along these lines). If our approach is correct, it provides indirect evidence for a movement account and for SA being another backward raising language. Needless to say that we would like to support this with further evidence, for instance from scope properties, but we have to postpone this to future research.

(52)

```
                        TP
                  ┌──────┴──────┐
               {DP}            T′
                          ┌─────┴─────┐
                          T           vP
                    ┌─────┴─────┐ ┌────┴────┐
                  V+v         T  {DP}       v′
                  uφ: F    uG: F  iφ: 3.F.PL
                           u#: SG      ┌────┴────┐
                           uP: 3       v        …
                                      uφ: F
```

Since the higher copy of the subject is at the edge of the TP phase and hence not in the spell-out domain (recall that TP being a phase, makes the *v*P the spell-out domain, and anything in TP survives spell-out), it remains active in syntax. In other words, while the subject has lost its PF-features (as part of transfer of the TP phase, when the lower copy of the subject was chosen as the PF copy), all syntactic features are still accessible for the further computation, and the subject can undergo further covert movement. In the next step of the derivation, the subject moves to Spec,*v*P. Since the PF choice has already been made (linearization has been fixed in the lowest cycle, i.e., (52), similar to Fox & Pesetsky's 2005, *cyclic linearization*), any further movement of the subject will be 'covert'. This then correctly predicts that once the subject has reached the matrix Spec,*v*P, two possibilities arise again: to value the φ-features of the subject, V+*v* can move to T, resulting in PA as in (42), or the "PF-less" subject can move to Spec,TP, yielding FA on the matrix verb as in (43). This is illustrated in (53).

(53)

```
                        TP
                  ┌──────┴──────┐
          {V+v/SUBJ}          T′
           (42)/(43)      ┌────┴────┐          phase
                          T         vP
                               ┌────┴────┐
                             SUBJ       v′
                          the students.F
                                    ┌────┴────┐
                                    v         VP
                                  uφ: F   ┌────┴────┐
                                          V         TP        phase
                                        start  ┌────┴────┐
                                             SUBJ        T′
                                          the students.F ┌──┴──┐
                                                       V1.PA  SUBJ
```

The system proposed here thus allows the linearization V-FA » SUBJECT, however, only when the low pronunciation of the subject has been forced by PF linearization in an earlier stage of the derivation. This correctly excludes covert movement (i.e., pronunciation of a lower copy) of a subject in simple clauses, but does allow it in raising contexts in which the lower clause involves PA.

Subject movement vs. no movement constructions

According to the analysis presented in this article, subject agreement in raising constructions crucially involves movement of the subject, following Haddad (2012), even in cases where the subject occurs within the embedded clause at PF. For T to be valued, either the subject or the matrix *v* must move to Spec,TP/T. However, for the matrix *v* to be valued, the subject must move to Spec,*v*P. Thus, in our analysis, the lowest syntactic position the subject can occupy in an agreeing raising construction is the matrix Spec,*v*P. A question arising at this point is what motivates movement of the subject. Some cases could perhaps be seen as backward control configurations – that is constructions with a thematic matrix verb/*v*, which then requires the subject to merge with matrix *v* to establish an argument-of relation (see Hornstein, 1999, et seq.; Polinsky & Potsdam, 2002, 2006, 2012; Wurmbrand, 2013b). However, these are clearly raising configurations which involve a non-thematic matrix verb, yet nevertheless require agreement. As illustrated in (54), for instance, the verb *start* can occur with an inanimate subject and agreement is obligatory (note that inanimate plural subjects always trigger F.SG agreement).

(54) a. *badaʔat   l-ħiʒa:ratu   tatadaħraʒa*
         started.3.F.SG   the-stones.NOM   roll.3.F.SG
         'The stones started to roll down.'
      b. **badaʔa   l-ħiʒa:ratu   tatadaħraʒa*
         started.3.M.SG   the-stones.NOM   roll.3.F.SG
         'The stones started to roll down.'

Furthermore, constructions with 'start' involve equivalent interpretations in the active and passive construals. (55) is synonymous with (56); and (57) is synonymous with (58). This strongly argues for a non-thematic matrix subject interpretation in these contexts. Nevertheless agreement on the matrix verb is obligatory.

(55) *badaʔat   l-tˤabi:ba:t-u   juʕa:liʒna   l-mardˤa:*
      started.3.F.SG   the-doctors.F-NOM   treat.3.F.PL   the-patients.M.ACC
      'The doctors (F) started to treat the patients (M).'

(56) *badaʔa*   *l-mardˤa:*   *juʕa:laʒu:n*
     started.3.M.SG   the-patients.M.NOM   be.treat.3.M.PL
     ʕala jad   *l-tˤabi:ba:t-i*
     on hand   the-doctors.F-GEN
     'The patients (M) started to be treated by the doctors (F).'

(57) *badaʔa*   *l-ʔatˤibba:ʔ-u*   *juʕa:liʒu:n*   *l-mari:dˤa:t-i*
     started.3.M.SG   the-doctors.M-NOM   treat.3.M.PL   the-patients.F.ACC
     'The doctors (M) started to treat the patients (F).'

(58) *badaʔat*   *l-mari:dˤa:t-u*   *juʕa:laʒna*
     started.3.F.SG   the-patients.F-NOM   be.treat.3.F.PL
     ʕala jad   *l-ʔatˤibba:ʔ-i*
     on hand   the-doctors.M-GEN
     'The patients (F) started to be treated by the doctors (M).'

Subject movement in (55) through (58) can thus not be triggered by the need to establish a thematic relation.

Could the embedded subject move for case reasons? Since embedded clauses in SA raising/control are finite (morphologically imperfective + indicative or subjunctive), an assumption that these clauses lack nominative case is not obvious (but see footnote 6). Note also that embedded raising clauses are identical to non-control cases where the matrix and embedded subjects are different as in (59a). In such cases, no movement can take place (there is no agreement with matrix *v*, cf. (59b)), yet the embedded subjects are still licensed and occurring with nominative case (cf. (59c)).[6]

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6. A reviewer suggests that perhaps a case approach can be maintained if embedded clauses such as the ones in (59) and embedded clauses combining with impersonal verbs (verbs showing default agreement) are phasal CPs which license nominative case, whereas the raising constructions showing matrix agreement involve non-phasal complements which lack nominative case, and hence require the subject to move for case reasons. While this idea is certainly appealing since it would allow a structural motivation for movement of the subject, we do not see how it improves over our account. First, there are raising verbs that occur with an optional *ʔan* (e.g., *ka:da* 'be about') or an obligatory *ʔan* (e.g., *xlawlaqa* 'may'), but default agreement is never allowed with these verbs. Thus the assumption of whether an embedded clause is phasal or not is entirely independent of the presence/absence of *ʔan*, and it would have to be stipulated for both of these types of verbs that their CPs are obligatorily non-phasal. Second, there are verbs that occur with an embedded accusative subject (see (61)), which under the reviewer's suggestion presumably would mean that these verbs combine with a non-phasal complement lacking nominative. In these cases, however, the matrix verbs only occur with default agreement and cannot realize matrix agreement with an embedded subject (see (63a)). The phasal status of the complement cannot derive the difference between verbs allowing and those disallowing agreement – something else must be stipulated on the verbs that only allow default agreement. It seems to us that the number of assumptions needed to cover the whole paradigm are no different, if not worse, from our assumption of valued or unvalued agreement features on the matrix predicate.

(59) a. *qarrara*   *Sami:r ʔan tusa:fira   Lajla*
          decided.3.M.SG Samir   to   travel.3.F.SG Leila
          'Samir decided for Leila to travel.'

      b. **qarrarat*   *Sami:r ʔan tusa:fira   Lajla*
          decided.3.F.SG Samir   to   travel.3.F.SG Leila
          'Samir decided for Leila to travel.'

      c. *qarrara*   *Sami:r ʔan tusa:fira   l-tˤa:liba:t-u*
          decided.3.M.SG Samir   to   travel.3.F.SG the-students.F-NOM
          'Samir decided for the students to travel.'

We therefore conclude that subject movement in SA raising configurations is EPP/
agreement-driven – it is required to value the φ-features of matrix *v* and T. This
requires a notion of *Last Resort* as the one proposed in Bošković (2007, p. 610):
X undergoes movement iff without the movement, the structure will crash. Putting
the burden of motivating movement onto the matrix predicate has one imme-
diate advantage: it allows us to implement differences among different types of
matrix predicates as part of the lexical entries of those verbs. As we mentioned
above, certain matrix verbs appear with default agreement. In the approach here,
this amounts to the assumption that those predicates lack the EPP property –
that is, their *v*-head is either inserted without φ-features or with (default) valued
φ-features. Since the subject is licensed in the embedded clause, and there is noth-
ing in the matrix clause to be valued by the subject (no φ-valuation), the subject
remains in the embedded clause (see Haddad, 2012), and the matrix verb is real-
ized with default features at PF. This is illustrated in (60a,c) for two different verbs.
Importantly, the verb *jumkinu* 'be possible' is an obligatory default agreement verb
(cf. (60a,b)), whereas the verb *ʕasa:* 'may' allows either default agreement or agree-
ment with the embedded subject, as shown in (60c,d).

(60) a. *jumkinu*   *ʔan tanʒaha   l-tˤa:liba:t-u*
          possible.3.M.SG to   succeed.3.F.SG the-students.F-NOM
          'It is possible for the female students to succeed.'

      b. **tumkinu/jumkinna*   *ʔan tanʒaha   l-tˤa:liba:t-u*
          possible.3.F.SG/3.F.PL to   succeed.3.F.SG the-students.F-NOM

      c. *ʕasa:*   *ʔan tarbaħa   l-tˤa:liba:t-u*
          may.3.M.SG   to   win.3.F.SG the-students.F-NOM
          'May the female students win.'

      d. *ʕasat/ʕasajna*   *ʔan tarbaħa   l-tˤa:liba:t-u*
          may.3.F.SG/3.F.PL to   win.3.F.SG the-students.F-NOM
          'May the female students win.'

Default agreement on the matrix verb has no effect on agreement in the embedded
clause, which follows the by now well-known distribution of FA vs. PA. The order

V2 » SUBJECT in (60) triggers PA on the embedded verb, in our account, because the subject does not undergo movement, and the features of T are valued by the embedded *v*+V. In (61) it is shown that the order SUBJECT » V2 is possible as well with these two verbs, and, as expected, the embedded verb then occurs with FA.[7]

(61) a. *jumkinu*   *l-tˤaːliba:t-i*   *ʔan janʒaħna*
          be.possible.3.M.SG the-students.F-ACC to   succeed.3.F.PL
          'It is possible for the female students to succeed.'
      b. *ʕasa:*   *l-tˤaːliba:t-i*   *ʔan jarbaħna*
          may.3.M.SG   the-students.F-ACC to   win.3.F.PL
          'May the female students win.'

As illustrated in (61), however, an important difference arises between the V2 » SUBJECT and the SUBJECT » V2 orders: in the latter, the subject is realized with accusative, rather than nominative. Nominative is impossible for both verbs when the matrix verb occurs with default agreement, as shown in (62).

(62) a. **jumkinu*   *l-tˤaːliba:t-u*   *ʔan janʒaħna*
          be.possible.3.M.SG the-students.F-NOM to   succeed.3.F.PL
      b. **ʕasa:*   *l-tˤaːliba:t-u*   *ʔan jarbaħna*
          may.3.M.SG   the-students.F-NOM to   win.3.F.PL

Furthermore, as mentioned above, the verb *jumkinu* 'be possible' is an obligatory default agreement verb, and, as shown in (63a,b), agreement with the matrix verb is impossible, independently of the case of the moved embedded subject. The optional agreement verb *ʕasa:* 'may', on the other hand, shows an interesting difference. When the agreeing version of the matrix verb is chosen, the subject occurs with nominative case, rather than accusative.

(63) a. **tumkinu/jumkinna*   *l-tˤaːliba:t-i*   *ʔan janʒaħna*
          be.possible.3.F.SG/3.F.PL the-students.F-ACC to   succeed.3.F.PL
      b. **tumkinu/jumkinna*   *l-tˤaːliba:t-u*   *ʔan janʒaħna*
          be.possible.3.F.SG/3.F.PL the-students.F-NOM to succeed.3.F.PL
      c. *ʕasat*   *l-tˤaːliba:t-u*   *ʔan jarbaħna*
          may.3.F.SG   the-students.F-NOM to win.3.F.PL
          'May the female students win.'
      d. **ʕasat*   *l-tˤaːliba:t-i*   *ʔan jarbaħna*
          may.3.F.SG   the-students.F-ACC to win.3.F.PL

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7. Some default agreement verbs also allow the moved embedded subject to be preceded by a preposition. We ignore this option in this article.

The distribution of default agreement and case raises the following questions: Why is nominative on the subject only possible in the V1 » SUBJECT » V2 order when the subject agrees with the matrix predicate but impossible when the matrix predicate shows default agreement? And how is accusative licensed in the default agreement cases? In the remainder of this section we show that the structure of raising constructions, in particular, (46) repeated below, together with a case licensing condition for copies to be spelled out derives these properties. Furthermore, we argue that the difference between nominative and accusative provides support for position 3.

(64)   [$_{TP}$ SUBJ 1 T [$_{vP=Phase}$ SUBJ 2 [$_{XP=Phase}$ SUBJ 3 [$_{vP=Phase}$ SUBJ 4]]]]

The crucial examples are repeated in (65) (for obligatory default agreement verbs, only (65b) is possible). Note that constructions such as (65b) are not generally available, but restricted to constructions with a small set of matrix verbs (e.g., *jumkinu* 'be possible', *ʕasa:* 'may', *jastaħi:l* 'be impossible', *jaʒib* 'must'). Most of these verbs (e.g., *jastaħi:l* 'be impossible', *jaʒib* 'must') subcategorize for a preposition, which in turn marks the embedded subject genitive; as we mention in fn. 7, however, we do not deal with this type of verbs here. Given the limited availability of accusative, we suggest that the form of accusative in (65b) is not an ECM-type accusative, but these verbs are associated with lexical accusative case (see below for a proposal of how such lexical case is assigned).

(65)   a.   *ʕasat*   *l-tˤa:liba:t-u*   *ʔan jarbaħna*
           may.3.F.SG   the-students.F-NOM   to   win.3.F.PL
           'May the female students win.'
       b.   *ʕasa:*   *l-tˤa:liba:t-i*   *ʔan jarbaħna*
           may.3.M.SG   the-students.F-ACC   to   win.3.F.PL
           'May the female students win.'
       c.   **ʕasa:*   *l-tˤa:liba:t-u*   *ʔan jarbaħna*
           may.3.M.SG   the-students.F-NOM   to   win.3.F.PL

To account for the distribution in (65), recall first the main difference in our account regarding default agreement vs. agreeing verbs. In the former, the subject does not raise beyond the embedded clause (but, as in simple clauses, it has the option of raising to Spec,TP resulting in the SUBJECT » V2 order; but see below for a restriction). When the subject agrees with the matrix verb, on the other hand, it must move at least to the matrix Spec,vP. This is illustrated in (66b,c) ((66a) is the structure of raising we have adopted in this paper, repeated again from (46)).

(66)   a.   [$_{TP}$ SUBJ 1 T [$_{vP=Phase}$ SUBJ 2 [$_{XP=Phase}$ SUBJ 3 [$_{vP=Phase}$ SUBJ 4]]]]
       b.   [$_{TP}$ [$_{vP}$ V1-DA   [$_{TP}$ SUBJ 3 V2-FA   [$_{vP}$ …]]]]
       c.   [$_{TP}$ V1-PA   [$_{vP=}$ SUBJ 2   [$_{TP=}$ V2-FA   [$_{vP}$ …]]]]

We propose that the two different positions of the subject are essential for the determination of case. Consider the derivations in more detail. In (67a) (=(66b)), the embedded vP is pronounced when the embedded TP-phase (the top projection of the embedded clause) is transferred. The subject being in Spec,TP, however, is not pronounced at that point, but only when the next phase up, the matrix vP, is completed. The SOD in which the subject is pronounced in default agreement contexts is thus the matrix VP (the shaded part in (67a)). In agreeing constructions, on the other hand, the subject is spelled out even later. As shown in (67b) (=(66c)), since the subject is in the matrix Spec,vP, it is not transferred with the matrix VP but only with the matrix TP (the SOD of C).

(67) a. $[_{vP=Phase}\ v\ [_{VP}\ V1_{ACC}\ [_{TP=Phase}\ SUBJ\ T+V2\text{-}FA\ [_{vP}]]]]$
      b. $[_{CP=Phase}\ C\ [_{TP}\ T+v+V1\text{-}PA\ [_{vP\,=\,Phase}\ SUBJ\ [_{VP}]]]]$

Although we cannot give a detailed account of case in this paper, we suggest that in SA, case is determined under Agree by the closest head within the phase in which an NP is spelled out. Case could thus be seen as a syntactic licensing condition marking a copy for pronunciation. In (67b), the closest c-commanding head for the copy of the subject in the matrix Spec,vP is the matrix T, which, following standard assumptions, assigns nominative. In (67a), on the other hand, the closest c-commanding head for the subject in the embedded Spec,TP is the matrix verb, and if that verb assigns lexical case, the embedded subject is realized with that case. This licensing for spell-out mechanism then explains why nominative subjects in default agreement contexts as in (65c) are impossible. To spell out a subject with nominative case, it must Agree with T in the phase in which it is spelled out. In (67a), however, the embedded subject is spelled out before matrix T is merged, and hence T cannot license the subject. The embedded T, on the other hand, does not c-command the subject in Spec,TP (recall that our licensing condition must be met for the copy to be spelled out). This correctly predicts that verbs like ʔawʃaka 'be about to', which can occur with default agreement but do not license lexical accusative, only allow the V1-DA » V2-PA » SUBJECT order, as shown in (68). In both (68b,c), the subject is in the embedded Spec,TP since the matrix verb does not agree and hence the subject has no reason to move to the matrix clause. In this position, however, the subject is not licensed by a case assigning head – the matrix V is not a lexical case assigner, and neither is the matrix v since the structure is an unaccusative configuration. Since the subject is not licensed for spell-out in this position, the structure fails.

(68) a. ʔawʃaka   ʔan tarbaħ-a   l-tˤaːliba:t-u
          was.about.3.M.SG to   win.3.F.SG the-students.F-NOM
          'It is about to happen that the female students will win.'

(68) b. *ʔawʃaka   l-tˤaːliba:t-u   ʔan jarbaħna
         was.about.3.M.SG   the-students.F-NOM   to   win.3.F.PL

     c. *ʔawʃaka   l-tˤaːliba:t-i   ʔan jarbaħna
         was.about.3.M.SG   the-students.F-ACC   to   win.3.F.PL

An important feature of this analysis is that NPs can show different case marking depending on the position in which they are pronounced. A well-known fact about subjects in SA is that they occur with accusative when they are in preverbal position following the complementizer *ʔinna*, but they occur with nominative in the same position when they follow a null complementizer (see (69a,b)). Post-verb subjects, on the other hand, are always realized with nominative. Note that a verb-initial sentence may not be headed by the overt complementizer *ʔinna*, as *ʔinna* must strictly be followed by a noun or a pronominal clitic.

(69) a. *ʔinna*   l-tˤaːliba:t-i/*u   *jadrusna*
         COMP   the-students.F-ACC/*NOM   study.3.F.PL
         'The female students are studying.'

     b. Ø   l-tˤaːliba:t-u/*i   *jadrusna*
         COMP   the-students.F-NOM/*ACC   study.3.F.PL
         'The female students are studying.'

     c. Ø/*ʔinna   *tadrusu*   l-tˤaːliba:t-u/*i
         COMP   study.3.F.SG   the-students.F-NOM/*ACC
         'The female students are studying.'

The argument structure and tense properties are identical in (69a) and (69b,c), yet the case of the subject differs. In an account where T assigns structural nominative case, the question that needs to be addressed is why this nominative 'disappears' when the subject moves to Spec,TP and is preceded by *ʔinna*. In our account this follows from the fact that the closest head c-commanding the subject in the phase where it is spelled out determines the case of the subject. As shown in (70), if the subject is pronounced in a position visible for C – i.e., C is the closest c-commanding head – the case of the subject is determined by C itself. The overt C *ʔinna* assigns accusative, while a covert C assigns nominative. In a post-verbal position, however, the closest c-commanding head is T, which always marks the subject to be spelled out with nominative.

(70) a. $[_{CP=Phase}$ C$^{covert}_{ACC}$ $[_{TP}$ SUBJ T+v+V1-FA $[_{vP=Phase}$ ~~SUBJ~~]]]]

     b. $[_{CP=Phase}$ C$^{covert}_{NOM}$ $[_{TP}$ SUBJ T+v+V1-FA $[_{vP=Phase}$ ~~SUBJ~~]]]]

     c. $[_{CP=Phase}$ C $[_{TP}$ T+v+V1-PA $[_{vP= Phase}$ SUBJ $[_{VP}$]]]]

While a detailed account of the case options associated with different heads cannot be provided here, the case facts discussed in this section support the approach that case licensing is determined in the spell-out position of an NP, which in turn

provides evidence for different positions of accusative and nominative subjects in the V1 » SUBJECT » V2 order.

A final point to be addressed is how preverbal subjects such as (71a) are possible in non-agreeing constructions. In our account, movement to the matrix clause is not motivated in those cases, thus the question is how/why the subject can nevertheless appear before the matrix verb. We suggest that preverbal subjects in raising constructions with non-agreeing verbs do not have the same status as subjects in SUBJECT » V-FA. Note first that agreement is still excluded in these cases (see (71b)) – thus, the matrix verb shows DA independently of the position of the subject.

(71) a. *l-tˤaːlibaːt-u*   *jajibu*   *ʔan*   *janjaħna*
          the-students.F-NOM   must.3.M.SG   to   succeed.3.F.PL
          'The female students must win.'

      b. **l-tˤaːlibaːt-u*   *jajibna*   *ʔan*   *janjaħna*
          the-students.F-NOM   must.3.F.PL   to   succeed.3.F.PL

We propose that the word order in (71a) is not derived by movement of the subject, but rather by base-generation of the subject as a *broad subject* (Doron & Heycock, 1999; Alexopoulou et al., 2003). This is supported by the agreement properties of constructions with optionally agreeing verbs. As shown in (72), the verb *ʔawʃaka* 'be.about' can be used as an agreeing verb, (72a–b), or as a non-agreeing verb, (72c). In the agreeing case, as in the cases discussed above, the matrix verb can occur with either PA or FA in the order V1 » V2 » SUBJECT.[8]

(72) a. *ʔawʃakat*   *ʔan tanʒaħa*   *l-tˤaːlibaːt-u*
          were.about.to.3.F.SG   to   succeed.3.F.SG   the-students.F-NOM
          'The female students are about to win.'

      b. *ʔawʃakna*   *ʔan tanʒaħa*   *l-tˤaːlibaːt-u*
          were.about.to.3.F.PL   to   succeed.3.F.SG   the-students.F-NOM

      c. *ʔawʃaka*   *ʔan tanʒaħa*   *l-tˤaːlibaːt-u*
          was.about.to.3.M.SG   to   succeed.3.F.SG   the-students.F-NOM

Importantly, a preverbal subject position is possible both when the matrix verb is used as an agreeing verb, cf. (73a), and also when the matrix verb occurs with

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8.   As mentioned throughout this article, the presence/absence of *ʔan* is not predictable from the agreement or case properties, but the distribution is crucially determined by the matrix predicate. Generally, *ʔan* is obligatory with DA verbs, except when an accusative subject follows the matrix verb. However, with *jumkinu* 'be possible', *ʔan* is obligatory irrespective of what follows the matrix verb (i.e., even when there is an accusative subject). While there are certain sub-generalizations, it does not appear to be the case that *ʔan* is a relevant factor in the distribution of case and agreement in the constructions investigated here (see also fn. 6).

default agreement as in (73b). The lack of agreement in the latter (in particular with a verb that could, in principle, agree) shows that the initial position of a subject is not necessarily the position where agreement is established, in our case Spec,TP.

(73)　a.　*l-tˤaːliba:t-u*　　　*ʔawʃakna*　　　*ʔan janʒaħna*
　　　　　the-students.F-NOM　were.about.to.3.F.PL　to　succeed.3.F.PL
　　　　　'The female students are about to win.'
　　　b.　*l-tˤaːliba:t-u*　　　*ʔawʃaka*　　　*ʔan janʒaħna*
　　　　　the-students.F-NOM　was.about.to.3.M.SG　to　succeed.3.F.PL

The TP-external position of broad subjects and its lack of connection to the regular subject position is further supported by the fact that broad subjects (similar to hanging topics) can co-occur with a 'true' subject. This is shown in (74). Crucially, agreement can never apply between the verb and a broad subject – only the true subject agrees.

(74)　a.　*l-tˤaːliba:t-u*　　　*ʔawʃak-a / *na*
　　　　　the-students.F-NOM　was.about.to-3.M.SG / *3.F.PL
　　　　　ʔan　janʒaħa　　　*zumalaːʔ-u-hunna*
　　　　　to　succeed.3.M.SG　classmates.M-NOM-their.F
　　　　　'As for the students, their colleagues were about to succeed.'
　　　b.　*l-tˤaːliba:t-u*　　　*zumalaːʔ-u-hunna*
　　　　　the-students.F-NOM　classmates.M-NOM-their.F
　　　　　ʔawʃaku:　　　*ʔan　janʒaħu:*
　　　　　was.about.to-3.M.PL　to　succeed.3.M.PL

Thus, the existence of (non-agreeing) broad subjects seems to be well-established, and hence the subject-initial order in (71a) does not pose a challenge to our account in which there is no subject movement in such cases.

4.　Conclusion and broader implications

In this chapter, we have provided an account of agreement in SA which derives the difference between FA and PA from different ways of satisfying the EPP property. We have proposed a feature valuation approach which involves underspecification of the features of *v*, which, combined with the view that in VSO orders the EPP property is satisfied by verb (V+*v*) movement, yields PA. The mechanisms proposed carry over directly to raising constructions, deriving the three possible word orders and four agreement patterns, in particular the pattern V1-FA » V1-PA » SUBJECT, which is unexpected in other accounts.

The account proposed also has broader implications for the typology of backward raising.[9] A crucial consequence of the low subject orders (which we have analyzed as backward raising) in SA is the morphological effects this covert movement has: PA on the higher verb(s), vs. obligatory FA in cases where the subject moves overtly – i.e., undergoes forward raising. Importantly, morphological reflexes (beyond the position where the subject is pronounced) can also be observed in other backward raising languages. Among the languages allowing backward raising/backward control are Tsez, Adyghe (Polinsky & Potsdam, 2002, 2006, 2012), Malagasy (Potsdam, 2009), and Tagalog (Wurmbrand, 2013b). Forward vs. backward control/raising are illustrated in (75) for Tagalog, (76) for Adyghe (the examples have been simplified), and (77) for Malagasy. As shown, in all three languages, the choice of copy has a morphological effect. In Tagalog, the voice marking changes which is reflected on the different prominence markings (here glossed as NOM vs. GEN) on the subject. In Adyghe, the copy choice goes hand in hand with different case markings on the subject: absolutive on the higher, ergative on the lower copy. Finally, in Malagasy object control, the high copy of the (matrix) object is realized in the ACC form, whereas the low copy (the embedded subject) takes the bound NOM form.

(75) a. *Kaya   ni Manuel   na   bumili   ng bagong kotse*
          able   GEN Manuel   LNK   NOM.buy   DET new car
          'Manuel is able to buy a new car.'   (Kroeger 1993, p. 182)

      b. *Kaya   ng   bumili   si Manuel   ng bagong kotse*
          able   LNK   NOM.buy   NOM Manuel   DET new car
          'Manuel is able to buy a new car.'   (Kroeger, 1993, p. 182)

(76) a. *axe-r*   [~~*axe-me*~~   *pjəsme-r*   *a-txə-new*   ]
          they-ABS   [they-ERG   letter-ABS   3PL.ERG-write-INF]
          ø-fjeʒ'aʁe-x
          3ABS-began-3PL.ABS
          'They began to write a letter.'   Polinsky & Potsdam, 2012, p. 78)

      b. ~~*axe-r*~~   [*axe-me*   *pjəsme-r*   *a-txə-new*   ]
          they-ABS   [they-ERG   letter-ABS   3PL.ERG-write-INF]
          ø-fjeʒ'aʁe-x
          3ABS-began-3PL.ABS
          'They began to write a letter.'   (Polinsky & Potsdam, 2012, p. 78)

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9. As mentioned in fn. 5, not all languages which allow subjects to occur within an embedded raising complement involve backward raising. The hypothesis made here only applies to movement languages, and not to languages such as Greek or Romanian, which involve an Agree dependency between matrix T and the embedded subject and no movement, hence no copy choice (see Polinsky & Potsdam 2012, and Alexiadou et. al. 2014).

(77) a. *nampahatsiahivan' i Soa* **ahy**
          remind   Soa   me.ACC
          [*hohidiana* ~~*ko*~~   *ny varavaran-dakozy*]
          [lock   I.NOM the door-kitchen   ]
          'Soa reminded me to lock the kitchen door.'   (Potsdam, 2009, p. 755)
      b. *nampahatsiahivan' i Soa* ~~**ahy**~~
          remind   Soa   me.ACC
          [*hohidia-* **ko**   *ny varavaran-dakozy*]
          [lock   I.NOM door-kitchen]
          'Soa reminded me to lock the kitchen door.'   (Potsdam, 2009, p. 755)

The hypothesis that arises from the distribution above is given in (78), where PF effect refers to morphological (e.g., case or agreement) distinctions displayed on the different copies. Note that this is a typological hypothesis about languages (not specific constructions).

(78) *BR vs. FR Hypothesis:*
      PF linearization: Pronounce highest copy (unless…)
      [cf. Bobaljik, 1995, 2002; Bošković & Nunes, 2007]
      Only languages in which the choice of PF copy has an effect at PF
      (beyond which copy is pronounced) allow backward raising/control.

As pointed out in Polinsky & Potsdam (2012), cross-linguistically, backward raising is much rarer than forward raising. Given (78), this is expected. Overtly indicating a movement dependency is the universal default procedure, and only special properties and constellations allow the backward option. The study of SA raising and the PF linearization mechanism suggested in this chapter may thus shed further light on the distribution of backward raising in general.

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