Backward Raising

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ABSTRACT

The goal of this paper is to document and analyze an instance of covert A-movement, specifically subject-to-subject raising (SSR), in the North Caucasian language Adyghe. We argue that Adyghe has a subject-to-subject raising construction in which the subject of the complement clause undergoes covert A-movement into the matrix clause, and we refer to this phenomenon as BACKWARD RAISING. True Backward raising has to be distinguished from apparent cases of raising which resemble it in terms of agreement but do not have any other identifying characteristics found in the Adyghe construction. We illustrate the contrast between true and apparent Backward raising by comparing Adyghe and Greek. If our analysis of Backward raising is on the right track, it presents new support to the claim that linguistic theory should incorporate both movement and Agree.

Keywords: subject-to-subject raising, covert movement, backward raising, Adyghe (Circassian), Greek
Backward Raising*

1 Introduction

COVERT MOVEMENT (Huang 1982, May 1985, and numerous others) refers to displacement operations in the grammar that have syntactic and semantic consequences but no visible phonological reflex.¹ In the domain of A'-movement, there are covert analogues of most overt movement phenomena: covert wh-movement (Srivastav 1991, Pesetsky 2000, Simpson 2001, Richards 2001, among others), covert scrambling (Mahajan 1990, 1997, Saito 1992, Nemoto 1993, Kawamura 2004, Cable 2007, 2008), and covert topicalization (Bayer 1996, Polinsky and Potsdam 2001), to name a few. In the domain of A-movement however, the picture is rather different. Overt A-movement phenomena such as subject-to-subject raising, passive, and unaccusative advancement are robustly attested cross-linguistically; however, clear cases of covert A-movement are rare. The goal of this paper is to document and analyze an instance of covert A-movement, specifically subject-to-subject raising (SSR), in the North Caucasian language Adyghe. We will argue that the example in (1) is a subject-to-subject raising construction in which the subject of the complement clause undergoes covert A-movement into the matrix clause, as schematized with the crossed out copy of movement. We call this BACKWARD RAISING. It is the covert analogue to the overt subject-to-subject raising derivation in (2), which is also available.²

¹ As discussed in Richards 2001: 3, movement of phonologically null syntactic objects does not automatically qualify as covert movement. We exclude such operations from consideration here.
² We use the following abbreviations in glossing: 1/2/3—person, ABS—absolutive, APPL—applicative, CAUS—causative, CL—clitic, DECL—declarative, DIR—directional,
The paper is organized as follows. Section 2 introduces the basics of Adyghe grammar and the subject-to-subject raising construction. We then present our structural proposal for examples as in (1). The central properties of the construction are i) the relevant verbs are unaccusative, ii) the verbs select for a complement clause, making the construction bi-clausal, iii) the overt subject is in the complement clause, and iv) there is nevertheless a silent copy of the embedded subject in the matrix clause. Section 3 provides evidence for these claims and argues against plausible alternatives. We formalize an analysis of Backward Raising (BR) at the end of section 3 using movement to relate the two subject positions. Section 4 presents an account of the alternation in (1) and (2) and the claim of covert movement. It also discusses the implications of BR for the general modeling of covert movement. Section 5 considers BR in a larger cross-linguistic context. We look at an apparently similar case in Greek and conclude that it is not an instance of BR. We are left with the conclusion that covert A-movement is quite rare and, in our concluding remarks we offer some considerations as to why this may be the case.

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2 Raising in Adyghe

Adyghe is a North Caucasian language spoken by approximately 500,000 people in Russia, Turkey, Iraq, and Syria (Gordon 2005). It is most closely related to Kabardian; together the two languages are often called Circassian (Smeets 1984, Colarusso 1992). Typologically, Adyghe is head-final with SOV basic word order. In matrix clauses, constituent order is relatively free; however, embedded clauses are normally verb-final. Adyghe has extensive pro-drop for both subjects and objects.

The morphological case system is ergative-absolutive (Smeets 1984, Kumaxov et al. 1996), although, for pronouns, only third person forms show this distinction. In first and second persons, there is syncretism of the ergative and absolutive. Ergativity is solely morphological, however, in that the (ergative) subject is structurally superior to the (absolutive) object for purposes of binding, control, and coreference across clauses.

The verbal agreement paradigm is very complex. Verbs show agreement with the ergative and absolutive in person and number (Smeets 1984: ch. 5; see also Colarusso 1992 for Kabardian, and O’Herin 2002 for Abaza, where the agreement systems are similar). The ergative marker is adjacent to the root/stem, while the absolutive occurs on the left edge of the verb complex. There is also optional agreement in number with the absolutive, the plural agreement suffix -ex ‘3PL.ABS’ above and below. Examples illustrating these morphological patterns are in (3), with the agreement markers boldfaced. Postverbal markers are clearly suffixal (Smeets 1984: Ch. 5); the status of preverbal markers is less clear—they may either be prefixes or clitics. For our purposes, nothing hinges on their morphological category.
(3) a. axe-me se s-a-š’-e
   3PL-ERG 1SG 1SG.ABS-3PL.ERG-lead-PRS.DECL
   ‘They are leading me.’

b. thape-xe-r ø-pɔz-ek-(ex)
   leaf-PL-ABS 3ABS-fall-PAST-3PL.ABS
   ‘(The) leaves fell down.’

Most two place verbs take an ergative subject and an absolutive object, but there
is also an extensive class of middles which take an absolutive subject and an oblique
object (Arkadiev and Letuchy 2008). The form of the oblique is homophonous with the
ergative, but the two forms can be distinguished by their distribution and agreement
properties.

For our purposes, a number of Adyghe verbs behave like English SSR predicates:
χwən ‘become, turn out to’, qəčəq’ən ‘happen to’, fežen ‘begin’, wəhlen ‘begin, start’,
wəxən ‘stop, be over’ (Say 2004, Kumaxov and Vamling 1998). They are unaccusative
verbs, (4a), and have no transitive or middle uses (4b,c).³

³ Two verbs in this class, χwən and qəčəq’ən, are morphologically defective and do not
take applicative affixes, including the reflexive. We will avoid using them in crucial
argumentation.
The analysis of (5b) is straightforward. It has a subject-to-subject raising syntax in which the subject raises from the complement clause, as in English. The subject is absolutive because the raising verb is intransitive:
The analysis of (5a) is the challenge we address in this paper. It is unusual for the fact that the subject is ergative but the matrix verb shows agreement with it as though it were an absolutive matrix subject. We will defend an analysis of (5a) in which the ergative subject is still in the embedded complement clause and has a silent absolutive representation in the matrix clause. Since the verb is nevertheless unaccusative, the higher representation of the subject is non-thematic and we will maintain that the relationship between the two subjects is one of movement. The embedded subject raises covertly into the matrix clause—a state of affairs that we call BACKWARD RAISING (BR):

(7) a. axe-r; [axe-me; pjosme-r a-txɔ-new] o-feza-ŋ-ex
3PL-ABS 3PL-ERG letter-ABS 3PL.ERG-write-INF 3ABS-begin-PAST-3PL.ABS
‘They began to write a letter.’

Given the raising syntax, the agreement pattern and numerous other facts fall into place, as we will show below. The following section supports the main claims of our analysis, which are in (8).

(8) a. the relevant verbs are unaccusative
    b. the construction is biclausal
    c. the case of the subject reflects its clause membership
    d. both constructions have a syntactic representation of the raised DP in the matrix clause
First, the relevant verbs are unaccusative, (8a). They do not assign an external theta role, which allows them to participate in a raising syntax. Second, the construction is truly biclausal in that the relevant verbs select a complement clause, (8b). There is not clause union or complex predicate formation. Third, the position of the subject alternates between the matrix clause and the embedded clause and this is reflected in its case marking, (8c). When the subject is ergative, it is in the embedded clause. When the subject is absolutive, it is in the matrix clause. Fourth, regardless of the pronounced position of the subject, there is a syntactic representation of this subject in the matrix clause, (8d). This is a crucial component of the Backward Raising analysis. Given that the ergative DP is in the embedded clause, we are claiming that there is a second, silent representation of the subject in the higher clause as well.

3 Evidence for Backward Raising

3.1 Thematic structure

Evidence that the relevant verbs do not assign an external theta role comes from traditional sources: lack of selectional restrictions, idiom chunks, lack of imperative formation, and passive/active synonymy. Cumulatively, the data indicate that the verbs do not place any semantic restrictions on their surface subject, consistent with there being no theta role coming from these verbs.

The data in (9) and (10) show that the subject may bear a range of semantic roles determined by the embedded verb. In (9), the subject is an experiencer; in (10), the

4 If the embedded verb were intransitive the subject would always be marked absolutive, resulting in a structurally ambiguous string.
subject is a theme, and in (11), the subject is an expletive. The earlier examples in (5) show that the subject can also be an agent.

(9) se weredxer zexesxenx-ew s-Jež'e
1SG songs hear-INF 1SG.ABS-begin
‘I begin to hear (the) songs.’

(10) thape-xe-r pɔz-e-new je-wɔxe-ĸ-ex
leaf-PL-ABS fall-INF 3ABS-stop-PAST-3PL
‘(The) leaves stopped falling.’

(11) expl ᵣẽ’e-ŋ-e-new je-wɔble-ø
be_cold-INF 3ABS-start-PRES
‘It starts getting cold.’

Idiom chunks can also appear as the subject with these verbs. (12a) and (13a) illustrate idioms with an intransitive and a transitive verb, respectively. In the b examples, these idioms are embedded under the relevant predicates and retain the idiomatic reading.
(12) a. ə-pe  h₃ₑ₉₀-r  qorexₑ
3SG.POSS-nose  smoke-ABS  blows
lit. “Smoke is coming out of his/her nose.”
‘S/He is furious.’

b. ə-pe  h₃ₑ₉₀-r  qorexₑ-new  qocheon’ak/feżab
3SG.POSS-nose  smoke-ABS  blow-INF  happened/began
lit. “Smoke happened began to be coming out of his/her nose.”
‘S/He happened/began to be furious.’

(13) a. pchen-əm  şone  qołfər-ep
goat-ERG  lamb. ABS.NON_SPEC  give_birth-NEG.PRES
lit.: “A goat cannot give birth to a lamb.”
‘There are no miracles.’

b. pchen-əm  şone  qo-mo-łfər-ew  qocheon’ə
goat-ERG  lamb. ABS  DIR-NEG-give_birth-INF  happen.NEG.PRES
lit. “A goat happened to not give birth to a lamb.”
‘There happen to be no miracles.’

Perlmutter 1970 uses the inability to form imperatives as a diagnostic for the absence of an external theta role. Imperatives typically require that the external argument be assigned an agent semantic role by the imperative predicate. Verbs that do not assign an external theta role are incompatible with this requirement. As expected, the relevant Adyghe predicates do not form imperatives:
Lastly, Adyghe has an inverse construction somewhat similar to the passive\(^5\) which also supports our claim regarding the lack of an external theta role. A direct/inverse pair is given in (15). In the inverse variant, (15b), the external argument of the transitive verb is marked with absolutive and the internal argument becomes an oblique. The sentences are nevertheless truth-conditionally equivalent.

(15) a.  *mašjöne  pšaše-new  fež/æble/wexø!
car          fix-INF    begin/start/stop.IMP

(‘Begin/start/stop fixing the car!’)

b.  *qɔçeɛ’ø!
happen.IMP

(‘Happen!’)

(14) a.  mašjöne  pšaše-new  fež/æble/wexø!
car          fix-INF    begin/start/stop.IMP

(‘Begin/start/stop fixing the car!’)

b.  qɔçeɛ’ø!
happen.IMP

(‘Happen!’)

As in the English translations, embedding the direct and inverse clauses under a raising verb maintains the truth-conditional equivalence of the two sentences:

\(^5\) Unlike the passive, the inverse does not change the properties of anaphor binding.
(16) a. pšaše-m/pšaše-r č’ale-r jeλ.ακw-ew fež’aβ
    girl-ERG/girl-ABS boy-ABS see-INF began
    ‘The girl began to see the boy.’

b. č’ale-r pšaše-m q-jeλ.ακw-ew fež’aβ
    boy-ABS girl-OBL INV-see-INF began
    ‘The girl began to see the boy.’ (~‘The boy began to be seen by the girl.’)

This is a consequence of the matrix verb not introducing an additional theta role into the structure. We conclude that the relevant Adyghe verbs are raising predicates with no external argument.

3.2 Biclausality

The syntax of the relevant predicates that we are defending is repeated (17). It requires that the subject raise from one clausal domain to another, with a representation in both clauses.

(17) (axe-r) [(axe-me) se saš’e-new] ø-fež’aβ-ex
    3PL-ABS 3PL-ERG 1SG.ABS lead-INF 3ABS-began-3PL.ABS
    ‘They began to lead me.’

An alternative that one might propose, particularly for the ergative case-marked subject, is a clause union structure in which the raising verb and the embedded verb form a kind of complex predicate. The overt subject would have a single representation, serving as the subject of this complex predicate:
(18) axe-me se [saś’e-new ø-fežaš-ex]

3PL-ERG 1SG.ABS  lead-INF  3ABS-began-3PL.ABS

‘They began to lead me.’

We are led to reject this alternative in favor of the clausal organization in (17) given evidence that the embedded verb constitutes its own clausal domain and does not form a single clausal domain with the raising verb. Evidence for biclausality comes from negation and event structure modification, which we take to be properties of clauses. Complex predicates constitute a single negation and event domain (Butt 1995, Wurmbrand 2001, Müller 2002). Further evidence for biclausality comes from clause-bound NPI licensing.

The examples in (19) show that the two verbs may be independently negated.

(19) a. [axe-me ḥoř a-še-new] qoččeČ‘ok-ex

3PL-ERG work.ABS 3PL.ERG-do-INF happened-NEG

‘They did not happen to be working.’

b. [axe-me ḥoř a-mo-še-new] qoččeČ‘ok-ex

3PL-ERG work.ABS 3PL.ERG-NEG-do-INF happened-PL

‘They happened to not be working.’

(20) uses event quantification data to show that each verb represents a distinct event. The adverbial /we ‘twice’ can modify the matrix event or the embedded event yielding the two, distinct interpretations.
(20) a. [mašjone-r depq-əm je₃w-e-new] t₁we  χ₁wəke
car-ABS wall-OBL hit-INF twice turned_out
‘The car twice turned out to hit the wall.’
b. [mašjone-r depq-əm t₁we je₃w-e-new] χ₁wəke
car-ABS wall-OBL twice hit-INF turned_out
‘The car turned out to twice hit the wall.’

Clause-bound phenomena also support the existence of two clauses. NPI licensing is local in Adyghe, to the extent that we have been able to determine. For example, the NPI ‘no answer’ is licensed only by clausemate negation in the examples below:

(21) a. aš’ zje 3e₃ap rjerʒə-ᵣ-ep
   3SG.ERG one answer give-PAST-NEG
   ‘S/He did not give any answer.’
b. ar [zje 3e₃ap rje-mə-rəže-new] məš’one
   3SG.ABS one answer 3IO-NEG-give-INF be_afraid.PRES
   ‘S/He is afraid to not give any answer.’
c. */?ar məš’on-ep [zje 3e₃ap rjerʒə-new]
   3SG.ABS be_afraid.PRES-NEG one answer give-INF
   (*‘S/He is not afraid to give any answer.’)

With the raising construction under consideration, negation on each of the verbs licenses an NPI in that clause, (22)—in this case a locative NPI. The clause containing the NPI is transparently indicated by its predicate which bears the locative applicative marker (this marker licenses the locative argument).
(22) a. [axe-me ?wəf a-še-new] zjəmjə ṣ’ə-χwə-κ-ep
   3PL-ERG work.ABS 3PL.ERG-do-INF nowhere LOC_APPL-turn_out- PAST-NEG

   ‘They did not turn out to be working anywhere.’
   (‘There was no place where they turned out to be working.’)

b. [axe-me zjəmjə ?wəf ṣ’a-mə-še-new] χwə-κ-ex
   3PL-ERG nowhere work.ABS LOC_APPL-3PL.ERG-NEG-do-INF turn_out-
   PAST-PL

   ‘They turned out to not be working anywhere.’

Negation in the embedded clause does not license an NPI in the matrix clause, (23a), and
negation in the matrix clause does not license an NPI in the embedded clause, (23b),
because of the clause-boundedness of the licensing. The pattern follows if the
construction is biclausal, as indicated. If the construction instantiated restructuring
(clause union), the NPI should plausibly be licensed in the single clause regardless of the
position of negation.

(23) a. *[axe-me ?wəf a-mə-še-new] zjəmjə ṣ’ə-χwə-κ-ex
   3PL-ERG work.ABS 3PL.ERG-NEG-do-INF nowhere LOC_APPL-turn_out-
   PAST-PL

   b. *[axe-me zjəmjə ?wəf ṣ’a-a-še-new] χwə-κ-ep
   3PL-ERG nowhere work.ABS LOC_APPL-3PL.ERG-do-INF turn_out-
   PAST-NEG

   We conclude that relevant verbs should not be analyzed as involving complex
predicate formation. Instead, they select for a clausal complement.
3.3 Structural organization

In several of the structures shown above, we have assumed that the ergative and absolutive subjects in the raising construction occupy different structural positions, with the absolutive being in the matrix clause and the ergative being in the embedded clause:

(24) a. [axe-me pjøsme-r a-txø-new] ø-feža-_WS-ex
   3PL-ERG letter-ABS 3PL.ERG-write-INF 3ABS-begin-PAST-3PL.ABS
b. axe-r [pjøsme-r a-txø-new] ø-feža-WS-ex
   3PL-ABS letter-ABS 3PL.ERG-write-INF 3ABS-begin-PAST-3PL.ABS
   ‘They began to write a letter.’

This conclusion is supported by the case marking pattern as well as subject NPI licensing.

If the clause membership is as shown in (24), we can make sense of the case marking on the subject. It simply bears the case appropriate for the syntactic domain in which it appears. This is typical of A-movement and structural case. Case is largely a surface phenomenon and elements that undergo A-movement show case morphology compatible with their surface position (Woolford 2006 and references therein).

NPI licensing locality also supports the claimed clausal organization. We saw in (21) that NPI licensing is clause-bound: an NPI must be licensed by clause-mate negation. The facts concerning subject NPIs are that the case of the subject NPI correlates with the position of negation. When the subject NPI is ergative, and thus in the embedded clause, the negation that licenses it must also be in the embedded clause, (25). In contrast, when the subject is absolutive, and thus in the matrix clause, the licensing
negation must be on the matrix verb, (26). The pattern is accounted for with the clausal organization shown and the clause-boundedness of the licensing.\(^6\)

(25) a. \([\text{zeĉ'ëmjö } \text{kjōtajö-bze-r } \text{a-mō-šë-new}] \text{ qoĉeć'-ë(-ex)}\)
   all.ERG Chinese-language-ABS 3PL.ERG-NEG-know-INF happen-PAST-PL
   ‘Nobody happened to know Chinese.’

b. *\([\text{zeĉ'ëmjö } \text{kjōtajö-bze-r } \text{a-šë-new}] \text{ qoĉeć'-ë-ep}\)
   all.ERG Chinese-language-ABS 3PL.ERG-know-INF happen-PAST-NEG

(26) a. *\([\text{zeĉ'ërjö } \text{kjōtajö-bze-r } \text{a-mō-šë-new}] \text{ qoĉeć'-ë(-ex)}\)
   all.ABS Chinese-language-ABS 3PL.ERG-NEG-know-INF happen-PAST-PL

b. \([\text{zeĉ'ërjö } \text{kjōtajö-bze-r } \text{a-šë-new}] \text{ qoĉeć'-ë-ep}\)
   all.ABS Chinese-language-ABS 3PL.ERG-know-INF happen-PAST-NEG
   ‘Nobody happened to know Chinese.’

The syntactic evidence thus strongly supports our differing clausal organizations for the two case marking patterns.

3.4 Evidence for the raised DP

The final piece of the structural analysis is the dual representation of the subject, in both the matrix and embedded clauses:

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\(^6\) The data also require the assumption that NPIs are licensed in their surface positions. Trace positions due to movement are not sufficient to license an NPI.
This claim is unsurprising in the case of an absolutive subject, (27a), as the subject raises from its thematic domain, the lower clause. We will defend the claim that the embedded ergative subject in (27b) also has a representation in the matrix clause, albeit a silent one. This is the heart of the Backward Raising analysis and the claim of covert A-movement. The evidence again comes from phenomena that are clause-bound or those that require the ergative subject to c-command elements that are apparently structurally higher than it is.

The initial piece of evidence for the unpronounced subject comes from the agreement facts that we began with. The ergative subject in the embedded clause clearly triggers the ergative agreement in that clause. Positing an (absolutive) representation of this subject in the higher clause explains why the matrix verb agrees with the ergative subject, and does so as though the ergative were absolutive. The two agreement relations are highlighted below using underlining and boldfacing:

(28)  \[
\text{axe-ri [axe-me pjo\text{\textsuperscript{s}me-ri} a-tx\text{\textsuperscript{s}}-new]} \quad \text{o-fe\text{\textsuperscript{\textsc{za}}}\text{\textsuperscript{\textit{k}}}\text{-ex}}
\]
\[
\text{3PL-ABS} \quad \text{3PL-ERG} \quad \text{letter-ABS} \quad \text{3PL-ERG-write-INF} \quad \text{3ABS-begin-PAST-3PL.ABS}
\]

‘They began to write a letter.’

It would be entirely unprecedented in the language for the matrix verb to show absolutive agreement morphology triggered by an ergative DP that is not even in its clause. The silent absolutive solves this problem.
Scope facts further support the silent absolutive. In the usual case, scope is clausebound. An embedded ergative subject does not take scope out of an infinitival. (29) has only the meaning where the matrix subject ‘a student’ takes wide scope with respect to the quantified embedded subject ‘all the boys’. The available interpretation is indicated by the notation $A > \text{ALL}$. The unavailable reading is $\text{ALL} > A$.

(29) $[\text{č’ale-xe-m zeč’eme angliskō-bze-r a-še-new}]$

boy-PL-ERG all.ERG English-language-ABS 3PL.ERG-learn-INF

$[\text{že stWEdent-Er jEngWEje}]$

one student-ABS hope.PRES

‘A student hopes for all the boys to learn English.’ $(A > \text{ALL}; *\text{ALL} > A)$

In the putative backward raising case, the embedded subject may take wide scope, (30a), just as in the ordinary raising case, (30b). In both examples, the subject ‘only she’ preferably takes wide scope with respect to the matrix predicate ‘stop’ yielding the reading annotated as $\text{ONLY} > \text{STOP}$. The availability of the wide scope reading of the ergative subject is allowed under our account by the presence of the unpronounced absolutive subject in (30a).
Reflexive and reciprocal marking also supports our claim. Reflexive/reciprocal in Adyghe is a bound morpheme on the verb which indicates that two participants are coreferential. Reflexivization is a clause-bound phenomenon (Colorusso 1992: 195). In the raising construction under consideration, the matrix verbs can show reflexive morphology, (31) and (32). In (31), the embedded ergative subject is coindexed with a matrix benefactive; the latter triggers reflexivization on the matrix verb. In (32), the embedded ergative subject binds a locative argument in the matrix clause which is introduced by the locative applicative prefix on the raising verb.

(31)  
\[
\text{[axe-me pjősme-r a-txød-new] zœ-fež’a-ŋ-ex}
\]
\[
3\text{PL-ERG letter-ABS 3PL.ERG-write-INF REFL-begin-PAST-PL}
\]

‘They began to write a letter for themselves.’

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7 The exception is qœćeq’on ‘happen to’, which seems to be morphologically defective.
(32) [sabəjə-m-jə  ç’ale-m-jə  wəsə-xe-r  a-tə-xə-new]  
child-ERG-and  lad-ERG-and  poem-PL-ABS  3PL.ERG-write-INF  
ze-pe-rə-κ-κ-ex  
REFL-LOC-turn_out-PAST-PL  
‘The child and the young man turned out, sitting against each other, to 
write poetry.’

What is striking about these examples is that the two co-indexed participants are apparently not members of the same clause and, further, the ergative subject, the reflexive binder in each case, does not c-command the reflexive morpheme in the matrix clause. The existence of an absolutive representation of the ergative subject in the matrix clause solves both of these problems. The reflexive argument is bound by a clausemate antecedent:

(33) əxe-ɾi  [axe-me  pjəsmər  atxənew]  zə,feʒ’a-κ-ex  
3PL-ABS  3PL-ERG  letter  write  REFL-begin-PAST-PL

A similar argument comes from the emphatic depictive jeʒ’ə ‘by him/herself’. We take this to be a secondary predicate with a PRO subject which must be locally bound. It agrees in case with PRO’s binder. Not surprisingly, the depictive can appear in the same clause as the overt subject in the raising constructions. If the subject is ergative, the depictive is in embedded clause, (34a); if the subject is absolutive, the depictive is in the matrix clause, (34b).
(34) a. [aš’  jež’ɔ-m  ə-se-r  ə-txɔ-new]  fežaw

3SG.ERG by_self-ERG medication-ABS 3SG.ERG-drink-INF began

‘He began to take the medication himself.’

b. [wse-r  ə-txɔ-new]  a-r  jež’ɔ-r  fežaw

medication-ABS 3SG.ERG-drink-INF 3SG-ABS by_self-ABS began

‘He began to take the medication himself.’

For some speakers, the depictive may be in the matrix clause and be bound by the embedded ergative subject, (35). This is sanctioned if the ergative subject has a null absolutive representation in the matrix clause, as we have claimed.8

(35) %[aš’  wse-r  ə-txɔ-new]  jež’ɔ-r  fežaw

3SG.ERG poem-ABS 3SG.ERG-write-INF by_self-ABS began

‘He began to take the medication himself.’

In summary, we have shown that both raising constructions involve two syntactic representations of the overt subject, regardless of where it is pronounced. In particular, in the case where the ergative subject appears in the complement clause, it nevertheless has a covert representation in the matrix clause. In what follows, we turn to an analysis of this construction.

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8 The acceptability of (35) and similar examples varies by individual speakers. We hypothesize that those speakers who find these examples unacceptable require strict adjacency between the depictive and its host. This adjacency is preserved in the examples in (34), which are accepted by all speakers.
3.5 Analysis

The raising derivation that we propose for the raising verbs in Adyghe is shown in (36). For now we abstract away from the exact analysis of the covert movement. We return to this issue in detail in the following section.

(36) a. \[\text{axe-me pjosme-r a-txw-new} \] \text{feza-\textsc{k}-ex}  
\hspace{1cm} 3\text{PL-ABS} \hspace{1cm} 3\text{PL-ERG} \hspace{1cm} \text{letter-ABS} \hspace{1cm} 3\text{PL.ERG-write-INF} \hspace{1cm} \text{begin-PAST-PL}  
\hspace{1cm} \text{[ERG, EPP]} \hspace{1cm} \text{[AGR]}  

b. \[\text{axe-r} \text{axe-me pjosme-r a-txw-new} \] \text{feza-\textsc{k}-ex}  
\hspace{1cm} 3\text{PL-ABS} \hspace{1cm} 3\text{PL-ERG} \hspace{1cm} \text{letter-ABS} \hspace{1cm} 3\text{PL.ERG-write-INF} \hspace{1cm} \text{begin-PAST-PL}  
\hspace{1cm} \text{[ABS, EPP]} \hspace{1cm} \text{[AGR]}  

‘They happened to write a letter.’

The subject originates in the embedded clause where it checks ergative case as the subject of a transitive verb and satisfies the EPP in the embedded clause, (36a). Agreement also takes place between the subject and the embedded verb, yielding ergative agreement (see section 4.3 for analytical details). The matrix verb is unaccusative and does not have an external argument. This permits the embedded clause subject to raise into the matrix clause, satisfying the EPP in that clause as well. We represent the movement using copies. In the matrix clause subject position, the DP checks absolutive Case. We assume that the ability of a DP to check Case multiple times is an option available in (at least some) languages. The Case feature is revalued so that the DP only ever has one Case feature value at a time (see Bejar and Massam 1999, Bobaljik and Branigan 2006, Merchant to appear). Multiple case checking phenomena clearly exist cross-linguistically (Massam 1985, Belletti 1988, McCreight 1988, Harbert 1989, Yoon

In the matrix clause agreement takes place between the absolutive and the raising verb. Syntactically, the derivation is thus little different from its English counterpart. The main difference is that non-finite supine complement clauses in Adyghe are not syntactically deficient in the way that English infinitival clauses are, so that Case and agreement are checked and realized morphologically. The derivation accounts for the facts introduced above. The agreement patterns follow from the presence of two copies of the subject, one in the embedded clause that is ergative and one in the matrix clause which is absolutive. Agreement can take place between the verbs and their respective subjects in a local fashion, under spec-head feature matching. The constituency evidence follows since the ergative subject is in the complement clause. The evidence for a (silent) subject in the matrix clause follows because there is a copy of the subject in that clause.

The question that needs to be addressed to complete the analytical picture is, what determines whether the raising is overt or covert. If the higher copy is pronounced we have overt movement and if the lower copy is pronounced we have covert movement. What permits this alternation? We turn to this now.

4 Theoretical implications for the modeling of covert movement

The full formal analysis of the alternation depends upon one’s theory of covert movement. Section 4.1 first presents four existing theories of covert movement. Section 4.2 then shows that the covert A-movement in Backward Raising is compatible with only two of these theories. In the final subsection, 4.3, we present an analysis of Backward Raising within the context of the Phonological Theory of Covert Movement, in which covert movement results from selectively pronouncing lower copies of movement.
4.1 Theories of covert movement

Broadly speaking, there are two families of theories of covert movement. We will call them TIMING THEORIES and MORPHOLOGICAL THEORIES. We discuss instances of each in turn. Timing theories of the overt vs. covert movement distinction appeal to the idea that covert movement and overt movement are the same operation—movement. They differ in where and/or when in the derivation the syntactic phrases are pronounced. One instance of a timing theory is the original theory of covert movement, LF MOVEMENT (Huang 1982, Chomsky 1995, Richards 2001). It was developed within the Y-model of syntax of the 1980’s and 1990’s (Chomsky and Lasnik 1993, Chomsky 1995, and much other work). The architecture is illustrated in (37).

(37) Y-Model Architecture

```
SS/Spell Out
```

```
/\                        /\                        /\  
|  |                      |  |                      |  |  
| Phonological Form       Logical Form             
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The distinction between overt and covert movement is one of timing with respect to S-Structure (SS) or Spell Out. Overt movement takes place prior to SS/Spell Out and thus the phonological consequences can be seen. Covert, LF Movement takes place after SS/Spell Out, on the path of the derivation that branched towards Logical Form (LF). LF Movement is understood to be part of the syntax and is expected to be subject to the same principles and constraints as overt movement. It simply has no phonological consequences because the derivation has already branched to Phonological Form (PF).

More recently, the timing theory has been reconceptualized as the PHONOLOGICAL THEORY of covert movement (Bobaljik 1995, 2002, Brody 1995, Groat and O’Neil 1996,
Pesetsky 1998, Fox and Nissenbaum 1999, Bošković 2002, Fox 2002, Nunes 2004). This theory makes crucial use of the copy theory of movement (Chomsky 1993, 1995), which states that movement leaves behind full copies of the moved element. All copies are present in the syntactic derivation from the start through to LF. We do not generally see all copies pronounced however because of phonological restrictions. Copies need to be selectively deleted at the phonological interface, outside the syntax. Overt movement consists in pronouncing the higher copy (i.e. not deleting the higher copy). Covert movement entails pronouncing a lower copy. Because the choice of which copy to pronounce takes place at the phonological interface, there is no difference between overt and covert movement in the syntax-proper. At LF, all copies are present, as with LF Movement.

Morphological theories of covert movement differ from the above in positing (partially) distinct mechanisms to account for the overt vs. covert movement distinction. They arise from recent Minimalist attempts to eliminate LF movement entirely. In Chomsky 1995: 261ff, covert movement is replaced with overt movement of formal features only, an operation dubbed MOVE F. The Move F theory of covert movement (Chomsky 1995, Pesetsky 2000) models covert movement as overt movement of morphosyntactic features. Since formal features have no phonological exponent within the syntax, their movement has no phonological consequences. Overt movement, in contrast, consists of formal feature movement plus pied piping of the phonological material. The distinction between overt and covert movement then is in the amount of material that is moved, not in the timing of the movement.

Most recently, Chomsky 2000 has proposed what we call the AGREE THEORY of covert movement in which covert movement is modeled without movement of any kind. Overt movement is movement of syntactic material as before; however, covert movement
is non-movement. The relationship between the two positions that was created via movement is now created by the independently motivated feature matching/checking relation \textsc{agree} (Chomsky 2004). The Agree theory of covert movement proposes that any motivation for covert movement can be satisfied by an in-situ feature checking relation, essentially chain formation.

4.2 \textit{Implications of covert A-movement}

Timing theories of covert movement can be distinguished from morphological theories. In the former, a full representation of the moved element exists at the higher location even though it is not pronounced there. In the latter, only formal features are located at the higher position—either via feature movement or sharing/matching. Syntactic phenomena that are sensitive to more than formal features can distinguish between them. With timing theories, we expect that the moved element may display “high” behavior, as though it were syntactically in the higher position. With morphological theories, the moved element should show only “low” behavior because the only aspects of the moved element in the higher position are morphosyntactic features. We believe that scope and binding properties are two such phenomena. Movement of formal morphosyntactic features alone does not create new binding or scope relations and the absence of high scope/binding behavior is indicative of a lack of A-movement.\footnote{Bobaljik 2002 argues that covert A-movement can exist even the absence of scope and binding diagnostics. Long-distance agreement is sufficient evidence to posit movement. He labels such constructions \textsc{lower right corner} constructions (LRCs). Such a situation arises in his system if PF and LF both privilege the lower copy of the movement chain. Bobaljik’s example of an LRC is expletive insertion. Sobin 2004 questions his analysis based on agreement patterns with coordinated associates and argues that no movement can be involved. He suggests that economy considerations might rule out LRCs even if they are permitted by the theory.} This claim is clearly seen
with the English expletive insertion construction, for which a Move F or Agree analysis is widely accepted (Lasnik 1995, Chomsky 2000, but see Hazout 2004) and an LF Movement analysis (Chomsky 1991, 1993) has been persuasively argued against (den Dikken 1995, Hornstein 1999, Schütze 1999, Sobin 2004). Scope and binding diagnostics indicate that the associate is in its surface position. It does not have the scope and binding properties expected if it were in the higher position occupied by the expletive:

(38) a. Many students don’t seem to be here.
   \[\text{MANY} \succ \text{NOT}\]
   b. There don’t seem to be many students here.
   \[\text{NOT} \succ \text{MANY}, \ast \text{MANY} \succ \text{NOT}\]

(39) a. Some applicants seem to each other to be eligible for the job.
   b. *There seem to each other to be some applicants, eligible for the job.
   (den Dikken 1995: 348)

(40) a. Someone seems to his mother to be eligible for the job.
   b. *There seems to his mother to be someone eligible for the job.
   (den Dikken 1995: 349)

   Backward Raising rules out morphological theories of covert movement. Morphological theories incorrectly predict that the embedded subject will show uniformly “low” syntactic and semantic behavior, despite agreement between the raising verb and the embedded subject. Given the Adyghe data in section 3.4, in which the embedded ergative subject showed scope and binding properties as though it were in the matrix clause, it cannot be the case that the covert A-movement argued for here is
modeled with formal features only. Such behavior would be unexpected. We conclude that neither the Move F nor Agree theories of covert movement are adequate to account for covert A-movement. Such theories incorrectly predict that the embedded subject will show uniformly low binding and scope behavior despite the agreement between the raising verb and the embedded subject. Backward Raising requires a timing theory of covert movement in which the moved element has a full syntactic and semantic representation in the displaced position. Such theories give an LF representation to Backward Raising that does not differ from canonical SSR. This seems to be the correct result.

4.3 Backward Raising and the Phonological Theory of Covert Movement

Backward Raising does not distinguish the Phonological and LF Movement theories of covert movement because the derivation concludes with the same LF representation under each account. We complete our discussion of Backward Raising with an analysis within the context of the Phonological Theory. Covert movement under this approach amounts to pronouncing lower copies.

We adopt a Single Output Syntax model (Bobaljik 1995, 2002) shown in (41). The syntax generates a single representation, which is interpreted by the conceptual-intentional (PF) and articulatory-perceptual (LF) components.

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10 For covert A'-movement, a null operator is often posited near the higher syntactic position so that an Agree/Move F analysis can be maintained. A null operator for A-movement phenomena seems unmotivated. Assuming that a unified theory of covert movement is desirable, this conclusion could be extended to A'-movement in general (see Richards 2001).
The syntactic representation generated for Adyghe SSR is repeated below. Relevant for our concerns are the two copies of the subject.

(42) \( \text{axe-r} \ [\text{axe-me pjәsme-r a-txә-new}] \ qәچәеә-ә-ә-ә-ex \)
    \hline 3PL-ABS & 3PL-ERG & letter-ABS & 3PL.ERG-write-INF & happen-PAST-PL

When this representation is sent to PF, an algorithm determines which copy/copies is/are to be pronounced. It is clear that the desired outcome is that either copy can be pronounced. We adopt the Chain Reduction algorithm from Nunes 2004 to achieve this result.

Under the Single Output Syntax model, copies of movement are selectively deleted outside the syntax, at Phonological Form. The deletion is necessitated by a principle that permits only one copy to be pronounced. Such a principle is derivable in its simplest form in any architecture in which PF is required to transform a hierarchical structural representation into a linear ordering of the terminals (see for example Kayne 1994, Fox and Pesetsky 2005). Such an ordering cannot contain statements that require an element \( \alpha \) consisting of two or more non-distinct copies to both follow and precede some other element \( \beta \). Nor can \( \alpha \) be required to both precede and follow itself. To be linearized, a chain must be reduced to one phonological member. Economy considerations dictate that the “best” copy should survive, with the others being deleted.
Nunes 2004: 30-38 defends the idea that the optimal choice is to pronounce the copy with the fewest unchecked features. Given that movement is driven by feature checking and movement is upward, this will typically result in the topmost copy in a chain being pronounced. Movement does not always check a feature of the moving element however, which means that two copies can have the same number of unchecked features—perhaps none. In such cases, either copy should be pronounceable, resulting in apparent optionality. We will develop an analysis of Backward Raising that represents this scenario. The relevant principles are repeated below and we first show how they derive the pattern of English SSR.

(43) **Chain Reduction Principles** (Nunes 2004)

a. only one copy can be pronounced

b. pronounce the copy with the fewest unchecked features

An English SSR example is given in (44a) with the derivation in (44b). The relevant features in the derivation are the EPP features of the matrix and embedded T* and the Case features of the DP. We assume that the Case feature is valued by a Case-assigning head and that this constitutes it being checked as well. Case checking occurs in spec,T. Checked features are shown with strikethrough.11

(44) a. Kim seems [Kim to Kim like natto]]

---

11 Locality of movement issues do not arise here; we assume that unaccusative verbs do not have a vP shell.
Since only the highest copy of the subject has a checked Case feature, only it can be pronounced. The pronunciation of any of the other copies would be less economical. This explains why English does not have Backward Raising.

Chain Reduction in the Adyghe case proceeds similarly. The syntactic output is as in (45a) with the structure in (45b) (English words substituted).

(45) a. axe-r [axe-me pjəsme-r a-txə-new] feža-κ-ex
    3PL-ABS 3PL-ERG letter-ABS 3PL.ERG-write-INF begin-PAST-PL

   ‘They began to write a letter.’
We assume, following Aldridge (2004, 2008) and Legate (2008), that the checking of the absolutive case on the object depends on transitivity. In a transitive clause such as the one above, the object remains in its base position inside the VP and checks its case with \( v \). In an intransitive clause, not shown, the absolutive DP would have its case checked by \( T \), not \( v \). The ergative DP is merged in spec, \( v \), where ergative case is also checked.

Since neither of the two highest copies of the subject, either in the ergative or in the absolutive case, has any unchecked features, either one can be pronounced. Neither is less economical. This correctly captures the alternation between ordinary SSR and Backward Raising.\(^\text{12}\)

\(^{12}\) Under the Phonological Theory of covert movement, pronunciation of non-highest copies of A-movement occurs in Backward Raising. Such copies must clearly thus exist at PF. This is not compatible with Lasnik’s (1999) conclusion that there are no traces of A-movement. One could maintain the no-A-traces account within the LF movement theory as the lower subject is not a trace at the point at which it is pronounced. It is not until LF that the subject moves, leaving a putative trace.
The Chain Reduction mechanism correctly predicts that one cannot pronounce both copies simultaneously:

(46) *axe-r axe-me pjősme-r a-txɔ-new qɔ̄çaŝ-ø-ex

3PL-ABS 3PL-ERG letter-ABS 3PL.ERG-write-INF happen-PAST-PL

(‘They happened to write a letter.’)

5 Cross-linguistic observations

Covert A-movement has not appeared widely in the literature but other cases are claimed to exist. Space precludes us from considering them (see Potsdam and Polinsky 2009 for discussion of one instance); however, we would like to present one putative case of covert SSR, in Greek, which constitutes a minimal pair with the Adyghe construction. It does not involve covert A-movement; however, it raises interesting issues of cross-linguistic variation that we address here.

5.1 False Backward Raising

The salient diagnostic of covert A-movement in Adgyhe was agreement between a matrix SSR verb and the subject of its complement clause:

(47) a. [axe-me pjősme-r a-txɔ-new] ø-feža-ø-ex

3PL-ERG letter-ABS 3PL.ERG-write-INF 3ABS-begin-PAST-3PL.ABS

‘They began to write a letter.’

Such an agreement pattern exists in other languages, notably the Balkan languages (Alexiadou and Anagnostopoulou 1999, Rivero and Geber 2004, 2008, Alexiadou et al.)

(48) a. stamatisan [na malonun i dhaskali tus mathites]
   stopped.3PL SBJV scold.3PL the teachers.PL the students
   ‘The teachers stopped scolding the students.’
   
   b. Au incetat [să-i certe profesorii pe elevi]
   have.3PL stopped SBJV-CL scold teachers.PL the students
   ‘The teachers stopped scolding the students.’

Alexiadou and Anagnostopoulou 1999 and Alexiadou et al. to appear show that the Greek aspectual verbs *arxizo* ‘start’ and *stamatao* ‘stop’ are raising verbs and that they participate in a raising syntax.13 Ordinary subject-to-subject raising is observed, (49), and evidence from selectional restrictions, idiom chunks, nominative anaphors, and weak crossover supports an unaccusative argument structure.

(49) a. ta pedhia arxisan na trehun
   the children start.3PL SBJV run.3PL
   ‘The children started to run.’

   b. i dhaskali stamatisan na malonun tus mathites
   the teacher.PL stop.3PL SBJV scold.3PL the students
   ‘The teachers stopped scolding the students.’

Despite the agreement pattern in (48), there is good evidence that unlike Adyghe, the boldfaced embedded subjects in Greek do not covertly raise into the matrix clause

13 We will confine our discussion to Greek but believe that the facts also hold for Romanian.
(Alexiadou et al. 2008, to appear, Potsdam and Polinsky 2008). We repeat some of the arguments below to support this claim. They directly contrast with the Adyghe facts above.\textsuperscript{14}

In the Adyghe data in (35), we saw that the embedded subject licenses a secondary predicate in the matrix clause. In Greek however, the low subject does not license a secondary predicate in the matrix clause, (50a) (Alexiadou et al. 2008: (52)). The secondary predicate is licensed only in the embedded clause, (50b).

\begin{equation}
\text{(50) a. *stamatise aproetimasti pros to telos tis hronias}
\end{equation}

\begin{align*}
\text{stopped.3SG} & \text{ unprepared.FEM} \text{ toward the end the year} \\
\text{[na erhete i Maria sto mathima]} & \text{SBJV come.3SG the Maria to the lesson}
\end{align*}

\begin{align*}
\text{b. stamatise pros to telos tis hronias [na erhete}
\text{stopped.3SG toward the end the year SBJV come.3SG}
\text{i Maria aproetimasti sto mathima]}
\end{align*}

\begin{align*}
\text{the Maria unprepared.FEM to the lesson}
\end{align*}

‘It stopped towards the end of the year being the case that Maria came unprepared to class.’

Scope facts also support a low subject in Greek. (51) shows that subjects scopally interact with clausemate negation. In particular, they can be interpreted as taking wide scope with respect to clausemate negation.

\textsuperscript{14} Much of the data below shows that the low subject is in fact in the complement clause and does not reach its position as a result of a series of rightward scrambling operations in the matrix clause. Potsdam and Polinsky 2008 provide a further argument from case marking to support this position.
In SSR, the raised subject also scopally interacts with matrix negation:

(51) **oli i fitites dhen** dhiavasan afto to vivlio
    all the students.PL NEG read.3PL this the book
    ‘All the students didn’t read this book.’ ALL > NEG
    ‘Not all the students read this book.’ NEG > ALL

In contrast, the low subject can only take narrow scope with respect to matrix negation, (54). This fact is not predicted by the BR analysis. If the embedded subject were to raise into the matrix clause covertly, the LF would be identical to (52) and an ambiguity would still be expected.

(52) **oli i fitites dhen** arxisan [na dhiavazun afto to vivlio]
    all the students.PL NEG begin.3PL SUBJ read.3PL this the book
    ‘All the students didn’t begin to read this book.’ ALL > NEG
    ‘Not all the students began to read this book.’ NEG > ALL

A similar scope contrast arises with a scope ambiguity between the raising verb and a focused subject, (54). When the subject raises, it can take scope over the raising verb, (54a). When the subject is low, this is not possible, (54b).
(54) a. **mono i Maria** stamatise [na perni kakus vathmus]
    only the Maria stopped.3SG SBJV get.3SG bad grades
    ‘It is only Maria who stopped getting bad grades.’        ONLY > STOP
b. stamatise [na perni **mono i Maria** kakus vathmus]
    stopped.3SG SBJV get.3SG only the Maria bad grades
    ‘It stopped being the case that only Maria got bad grades.’   STOP > ONLY

Finally, floating quantifiers complete the picture for a low subject. Like English, Greek has a floating quantifier ‘all’ that can float away from its associate:

(55) a. **ola ta pedhia** irthan
    all the children came
    ‘All the children came.’

b. **ta pedhia** irthan **ola**
    the children came all
    ‘The children all came.’ ‘The children have all come.’

The raised subject can license a floated quantifier in the matrix clause, (56); however, an embedded subject does not license a matrix floated quantifier, (57).

(56) a. **oli i dhaskali** stamatisan [na malonun tus mathites]
    all the teachers stop.3PL SBJV scold.3PL the students
    ‘All the teachers stopped scolding the students.’

b. **i dhaskali** stamatisan **oli** [na malonun tus mathites]
    the teachers stop.3PL all SBJV scold.3PL the students
    ‘The teachers all stopped scolding the students.’
(57) a. stamatisan [na malonun oli i dhaskali tus mathites]
    stop.3PL SBJV scold.3PL all the teacher.PL the students
    ‘All the teachers stopped scolding the students.’

b. *stamatisan oli [na malonun i dhaskali tus mathites]
    stop.3PL all SBJV scold.3PL the teachers the students

As with the scope data, this last fact is unexpected under a BR derivation. The embedded subject in (57b) would raise into the matrix clause, resulting in an LF identical to the grammatical (56b). The fact that (57b) is ungrammatical strongly suggests that this derivation does not occur.

These facts indicate that the embedded subject in Greek shows uniformly low behavior and never has a representation in the matrix clause. A Backward Raising analysis is thus not appropriate. Potsdam and Polinsky 2008 and Alexiadou et al. to appear argue that a long-distance in-situ agreement mechanism such as Agree is necessary in order to account for the Greek pattern:

(58) \[\begin{array}{c}
\downarrow \\
\text{Agree} \\
\downarrow \\
\end{array}\]

\[
\text{stamatisan [TP na malonun [i dhaskali] tus mathites]} \\
\text{stop.3PL SBJV scold.3PL the teacher.PL the students} \\
\]

‘The teachers stopped scolding the students.’

In contrast to Adyghe, a timing theory of covert movement cannot and should not be invoked.\(^\text{15}\)

\(^{15}\) A morphological theory of covert movement would be suitable for the Greek facts; however, we argued above that such theories are untenable because of the Adyghe pattern.
5.2 Conclusions

The Greek/Adyghe picture yields a number of clear conclusions as well as several questions for further investigation. Most importantly, Adyghe provides support for the existence of covert A-movement. In some sense, this is a desirable result. Languages offer extensive evidence for covert A' movement. The distinction between A and A' movement should be epiphenomenal, a consequence of independently interacting properties and not primitives in the theory. If this is the case, then there should be no covert A' movement without covert A movement. There should be only covert movement, and Adyghe supports this result. Such a conclusion indicates that both covert movement and Agree are needed in the theory. Neither can be reduced to the other. This raises the question of what the division of labor is between the two.

Nevertheless, covert A movement, and BR in particular, seems quite rare. We are aware of a number of potential false BR cases like Greek and Romanian in which we would claim there is no covert movement: Icelandic (Holmberg and Hróarsdóttir 2003) Hungarian (Szabolcsi 2008), Finnish (Szabolcsi 2008), Spanish (Alexiadou et al. to appear), and possibly Italian (Szabolcsi 2008). In contrast, only one other case of true BR involving covert movement has been proposed, Standard Arabic (Haddad 2009). This raises the questions of why BR is so rare and what distinguishes languages like Greek from those like Adyghe.

In part, our lack of awareness of covert A-movement may be hiding many cases. We generally see only what we are looking for. More concretely, BR is difficult to identify. The salient morphosyntactic characteristic is agreement between a raising verb and an embedded subject; however, this requires both overt agreement and a subject that is unambiguously in the embedded clause. The agreement must be distinct from what one expects to appear with a null expletive. The Greek/Adyghe contrast indicates that even if
agreement suggests the presence of BR, that may be a false start since there may still not be covert movement.

For A-movement more generally, clear cases of covert A-movement will be difficult to diagnose because A-movement is so local. Such cases will likely have a more obvious non-movement analysis. Apparent cases do exist in the literature and further research will determine whether they withstand scrutiny.

We close with a tentative account of the parametric difference between Adyghe and Greek type languages, which builds on that in Alexiadou et al. to appear. As Alexiadou et al. discusses, Greek has certain syntactic characteristics that make the Agree analysis available. We assume the following definition of Agree (see Alexiadou et al. to appear, Chomsky 2004, Baker 2008).

(59) Agree occurs between a probe P and a goal G iff

a. P c-commands G

b. There is no X such that X intervenes between P and G and has the relevant feature that is being checked

c. P and G are in the same phase\(^{16}\)

As a result of Agree, the relevant features on P and G are valued with the same feature values and any uninterpretable features are checked. The agreement between the raising verb and the embedded nominative satisfies the conditions on Agree indicating that the desired Agree relation can be formed. First, the higher verb, the probe, c-commands the

\(^{16}\) We do not assume an Activation Condition on Agree which requires that the goal have an unchecked Case feature in order to participate in an Agree relation (see also Bhatt 2005, Bošković 2007a, 2007b for the same conclusion). In particular, for Greek, we assume that nominative Case is available in the lower clause, contra Alexiadou et al. to appear. It would thus not satisfy such an Activation Condition.
embedded nominative subject, the goal. Second, no phase intervenes between the probe and goal as we accept that the complement to the raising verb is a semantically and morphologically tenseless TP and not a CP. It is thus not a phase (Alexiadou et al. 2008, to appear, Alboiu 2007, and Rivero and Geber 2008). This Agree relation results in the checking of the raising verbs uninterpretable agreement features. Further, we assume, following Alexiadou and Anagnostopoulou 1998, that the EPP in Greek can be satisfied by movement of the verb to T\textdegree. This obviates the need for the embedded subject to raise, either overtly or covertly, into the matrix clause for EPP purposes. Nothing would drive the movement.\textsuperscript{17}

Adyghe, in contrast, cannot satisfy the EPP with verb movement to T\textdegree so the EPP must be satisfied by phrasal movement to spec,T. This precludes a long-distance Agree analysis for Adyghe, regardless of whether or not the complement clause is a phase. At the same time, because Case is available in the embedded clause, as discussed above, the alternation between backward and forward raising appears.

\textsuperscript{17} The apparent raising that yields SVO word order in (49) is a result of movement to a clause-initial A\textsuperscript{'} position (Alexiadou and Anagnostopoulou 1998).
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