A featural and edge-based analysis of hyperraising

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1 Introduction

‘Hyper-raising’ (HR) describes a biclausal sentence where the embedded clause is finite, but which a DP, typically the subject, raises from. Both the positions of departure and landing are case-marked. This can be schematized as follows:

(1) \([\text{CP} \ldots \text{DP}_\text{case} \alpha \ldots [\text{CP} \text{COMP} \ldots <\text{DP}_\text{case} \beta > \ldots]]\)

HR differs from the standard variety of raising to subject and from exceptional case marking (ECM)/object shift. In these constructions, the embedded clause is nonfinite. As a consequence, the subject cannot be licensed there and raises into the matrix clause to be assigned case. Standard raising to subject is illustrated with English examples below.

(2) Standard raising to subject in English
   a. Ravi is likely [ t to have bought a new car ].
   b. The cat seems [ t to be out of the bag ].

HR can also target the matrix subject position. This is found in Brazilian Portuguese (BP) (Ferreira 2000; 2009; Martins & Nunes 2005; Nunes 2008; Petersen & Terzi 2014), exemplified below, Lubukusu (Carstens & Diercks 2013), and Zulu (Halpert 2016; 2018).

(3) HR to subject in BP (adapted from Nunes 2008: p. 84)
   a. Parece [ que o João comprou um carro ].
      seems [ COMP the João bought a car ]
      ‘It seems that João bought a car.’
   b. O João parece [ que t comprou um carro ].
      the João seems [ COMP t bought a car ]
      ‘It seems that João bought a car.’

ECM/object shift constructions are illustrated below, again with English sentences.

(4) Standard ECM/object shift in English
   a. Alex, believes Anna with all their heart [ t to have finished her paper already ].
   b. Carol believes the cat [ t to have been out of the bag for a while now ].

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1 In this paper, I do not distinguish between these two analyses of accusative subjects of nonfinite clauses. What matters here is that the source of the accusative case is in the matrix clause.
2 Uncited data from BP is my own, São Paulo dialect.
The HR counterpart (HR to object) can be found in Mongolian, illustrated below, Korean (Yoon 2004; 2007), Japanese (Bruening 2002; Tanaka 2002; Takeuchi 2010, a.o.), Nez Perce (covert HR to object, Deal 2017), Janitzio P’urhepecha (Zyman 2017), Sakha (Baker & Vinokurova 2010), Romanian (Alboiu & Hill 2011; 2013; 2016), and Zulu (Halpert & Zeller 2015). In (5a), the embedded subject is assigned nominative (morphologically null in Mongolian), as expected. In (5b), it is marked with accusative case instead. Notice that the accusative DP precedes the matrix adverb changaar ‘loudly’.

(5) **HR to object in Mongolian**

Bat loud-INST [Dorj.NOM good noble COMP ] say-PST
‘Bat said loudly that Dorj is good and noble.’

Bat Dorj-ACC loud-INST [ t good noble COMP ] say-PST
‘Bat said loudly that Dorj is good and noble.’

As noted above, a remarkable difference between HR and standard raising (to subject and to object) is that HR departs from a finite clause, while standard raising from a nonfinite clause. As hinted at above, the usual explanation given for the motivation for standard raising is that nonfinite clauses are defective and as such unable to assign case to the subject. As such, it has to rely on a matrix assigner to be licensed. In HR constructions, on the other hand, the embedded clause is finite, which is able to license a subject, as we can see in the non-HR examples (3a) and (5a). In these sentences, the embedded subject sits just where it is expected to be because it can be licensed there. Under this view, HR is unmotivated, so it should not be possible at all. This is the correct result for a language like English, which does not allow for neither HR to subject nor to object.

(6) **No HR in English**

a. * Ravi seems [ (that) t bought a car ].

b. * Alex believes Anna with all their heart [ (that) t has already finished her paper ].

However, as seen from the data above, a general prohibition against HR is too strong. HR challenges common assumptions made about the locality of syntactic operations and the licensing conditions of DPs. For concreteness, consider the minimalist view of these principles:

(7) **Phase Impenetrability Condition (“strong”) (Chomsky 2001: p. 14)**

The domain of H [*head of a strong phase*] is not accessible to operations at ZP [*the smallest strong phase dominating HP*]; only H and its edge are accessible to such operations.

(8) **Activity Condition (Chomsky 2001: p. 6)**

Goal as well as probe must be active for Agree to apply. [...] For the Case/agreement systems, the uninterpretable features are $\phi$-features of the probe and structural Case of the goal N. $\phi$-features of N are interpretable; hence N is active only when it has structural Case. Once the Case value is determined, N no longer enters into agreement relations and is “frozen in place”.

Under common assumptions, a finite CP like the embedded clause in a HR construction is a phase. The PIC (7) says that the complement domain of that CP should be inaccessible to probes above it. As a consequence, a probe in the matrix clause (T or v) should be unable to raise the subject of the embedded clause. This would preclude the possibility of HR. But the PIC, as stated in (7), has enough leeway to allow for a potential goal to be visible to a probe outside the phase where it sits, since the edge of the phase is accessible to an external probe. But that is when the Activity Condition (8) kicks in to prevent HR again: a finite clause, 3The Mongolian data in this paper was elicited during the class 24.942 (MIT, Spring/2017) and during Summer/2017 (MIT). Many thanks to M. Buyandelger and, specially, to U. Byambadalai for their patience and helpfulness!

4Alboiu & Hill (2016) argue that Romanian does not have HR. However, the conclusion is mostly based on theoretical and analysis-specific assumptions (e.g. HR only arises when the embedded clause is defective, as in Martins & Nunes 2005); the data is very similar to that argued in §2 to argue in favor of HR.
unlike their defective nonfinite counterparts, is able to assign case to their subjects. Case assignment, according to (8), renders a DP inactive, so that, even if the subject of an embedded finite clause somehow reaches the edge of the CP, it cannot Agree with an external probe because it will no longer be active. In sum, HR introduces the following questions:

(9) a. **PIC problem**: how come a DP inside a finite embedded CP, a phase, can Agree with a probe (T or v) in the embedding clause?

b. **Case problem**: how come a DP moves from a case position in the embedded clause into another case position in the embedding clause?

This paper is an attempt to answer the questions in (9). Following Béjar & Massam (1999), Nevins (2005), a.o., I assume that Case does not make a DP ineligible to enter into further A-relations, contra the Activity Condition stated in (8). Furthermore, the main proposal I put forth is that there are A-features (i.e. features that create A-positions, as opposed to A-features) in the head of the embedded finite CP that trigger the movement of a DP to the edge of that CP. From [Spec, CP], the DP should be visible to a matrix probe (T/v). The proposal is summarized in the following schema, where the solid arrows represent movement and the dashed arrows, probing:

\[(10) [CP \ldots DP \ T/v \ldots [CP <DP> [CP' \ COMP \ldots <DP> \ldots]]]\]

In this analysis, movement to the edge of the embedded phase, call it [Spec, CP], is a crucial ingredient. The PIC problem (9a) that HR introduces will be side-stepped by exploring a possibility that the definition of the PIC itself provides: the fact that the edge of a phase can be accessed from outside will allow the subject of an embedded finite CP to move out of it.

The main empirical motivation in support of a stopover position in the derivation of HR sentences will be provided by Mongolian, where an accusative subject can stay inside the embedded clause, as suggested by adverbial placement (11b). The accusative subject can nevertheless contain a locally bound anaphor that is bound by the matrix subject. If the embedded subject bears nominative case, which presumably occupies [Spec, TP], the result is ungrammatical, (11a).

(11) **Correlation between binding and HR in Mongolian**

   Bat [ tomorrow sister.NOM-REFL.POSS come-N.PST COMP ] say-PST
   Int.: ‘Bat said that his (own) sister is coming tomorrow.’

    Bat [ tomorrow sister-ACC-REFL.POSS come-N.PST COMP ] say-PST
    ‘Bat said that his (own) sister is coming tomorrow.’

If the embedded clause-internal nominative (11a) and the accusative subjects (11b) were occupying the same position, the grammaticality contrast could not be accounted for. However, if the embedded subject can only receive accusative case by virtue of moving to the edge of the phase, as in (10), this can account for why binding is possible in (11b). The analysis will also receive support from the interaction between HR and long distance scrambling in Mongolian.

The proposal that HR implies movement to the edge of the phase will also pave the way for a solution to the Case Problem (9b). The edge of the phase not only provides an escape hatch for the embedded finite subject to move into the matrix clause, but also allows it to be probed by a matrix case assigner. Stated in a dependent case (Marantz 2000) vocabulary, the phase edge allows the hyperraising subject to participate in a case calculus with case competitors in the matrix clause. This proposal can be summarized as follows:

(12) **Multiple case-marking across phases**

A DP can enter the disjunctive case hierarchy again, as long as it is able to move from one domain of case assignment (a CP phase) into another.
A relevant property of the analysis to be put forth is that it is A-features that trigger the movement of the embedded subject. Assuming a featural definition of syntactic positions (Van Urk 2015), this means that [Spec, CP] can be an A-position, in opposition to the usual assumption that this is inherently an \( \overline{X} \)-position. Binding in Japanese and BP and passivization in Japanese and Korean will suggest that HR is indeed a type of A-movement.

Van Urk also shows that, taking a featural definition of syntactic positions to its full conclusion, we may expect for there to be syntactic positions that have composite properties if they are created by a composite A/\( \overline{A} \)-probe. Van Urk shows that this explains the properties of V2 in Dinka. If we combine the proposal in (10) and the possibility of composite probes, we may expect for there to be a variety of HR that is derived by a composite probe. This seems to be true of Kipsigis, illustrated below, and Imbabura Quechua, where an embedded object can hyperraise across the embedded subject.

(13) **HR of object across subject in Kipsigis** (adapted from Jake & Odden 1979: (11))

(a. mòcè Mù:sá [ k₃-tïl Kíplànjât pè:ndɔ̃ ].
\[ \text{wants Musa [ 3s.SUB-cut Kiplangat meat ]} \]
\[ \text{‘Musa wants that Kiplangat cut the meat.’} \]

(b. mòcè pè:ndɔ̃ Mù:sá [ k₃-tïl Kíplànjât t ].
\[ \text{wants meat Musa [ 3s.SUB-cut Kiplangat t ]} \]
\[ \text{‘Musa wants that Kiplangat cut the meat.’} \]

This creates a minimality problem. In order to avoid it, we could say that the complementizer in this variety of HR has a composite A/\( \overline{A} \)-probe, and not just an A-probe, as in (10). If the embedded subject does not bear matching features, it will be skipped over until a lower argument with the appropriate features can be found.

This paper is divided in two parts, each dedicated to one of the questions in (9). In §2, we see empirical arguments that HR is indeed derived by raising. Based on these diagnostics, we will also be able to distinguish between HR, on the one hand, and copy-raising and prolepsis, on the other. In §3, I start setting the stage for the core proposal. First, I show data from Mongolian that suggest that it is possible for a hyperraised DP to actually stay inside the embedded clause, while receiving case from the matrix clause. I will call this ‘medial-raising’. The interaction between binding and medial-raising in Mongolian in turn suggests that the position occupied by the medial-raised DP is higher than the canonical subject position. The stopover position [Spec, CP] captures the dual behavior of medial-raised DPs: this position is still inside the embedded clause, but, being at the edge of a phase, it is accessible to a higher probe. This would capture the possibility of being marked with accusative case. In §4, I propose that the features that trigger the movement of the hyperraising DP to [Spec, CP] are A-features. The fact that HR in Japanese can create new antecedents for binding and the fact that Japanese and Korean allow for a hyperraised DP to be further passivized give some credence to this proposal. Taking for granted the possibility of composite probes, I hypothesize that there could be an instance of HR that is triggered by this type of probe. HR in Kipsigis and Imbabura Quechua seem to allow for this type of construction. We then turn to the second part of the paper. In §5, we first review evidence that HR consists in movement that passes through more than one case position. Capitalizing on the proposal that HR presupposes a stopover at [Spec, CP], I propose that a DP can be assigned more than one case as long as it is able to move from one domain of case assignment into another. We will also review other solutions to the case problem. §6 briefly summarizes the proposal put forth here and considers why HR is not found in every language.

## 2 HR involves raising

There are several well-known diagnostics that indicate that a DP that has undergone standard raising or ECM is not an argument of the matrix clause, but of the embedded clause instead. They carry over to HR.

One of the raising diagnostics is the preservation of idioms. In (14), an example of HR to subject in BP, the subject of the subject-verb idiom surfaces in the matrix clause and yet the idiomatic reading is preserved. As in standard raising, this suggests that the subject of the embedded idiom has moved into the matrix clause, seeing that it could not have been base-generated there.
(14) **Idiom preservation in HR to subject in BP** (adapted from Nunes 2008: ex. 20)

a. Parece [ que a vaca foi pro brejo ].
   seems [ COMP the cow went to-the swamp ]
   ‘It seems that things went bad.’

b. A vaca parece [ que foi pro brejo ].
   the cow seems [ COMP went to-the swamp ]
   ‘It seems that things went bad.’

Similar data can be found in HR to subject in Zulu (Halpert 2012: p. 59). Idiom preservation can also be seen in HR to object, illustrated by the Zulu data in (15).

(15) **Idiom preservation in HR to object in Zulu** (Halpert & Zeller 2015: (15))

   1sg-expect-FV [(that) AUG-5.steinbok 5.SM-exit-SUBJ LOC-9-pot-LOC ]
   ‘I expect the secret to come out.’

b. Ngi-lindel-a i-qhina [(ukuthi) li-phum-e e-m-bize-ni].
   1sg-expect-FV AUG-5.steinbok [(that) 5.SM-exit-SUBJ LOC-9-pot-LOC ]
   ‘I expect the secret to come out.’

Bruening (2002: ex. 30) and Bondarenko (2017: ex. 8/9) show idiom preservation in HR to object in Japanese and in Buryat, respectively.

The preservation of idioms indicates that the raised or ECM’ed DP is not an argument of the matrix clause. Another diagnostic to the same effect is that the embedded position cannot be filled by an overt pronoun. This is illustrated below with BP (16b) and Mongolian (17b).

(16) **No embedded pronoun in HR to subject in BP**

a. Parece [ que as crianças comeram doce ].
   seem.SG [ COMP the children ate candy ]
   ‘It seems that the children ate candy.’

b. As crianças parecem [ que (*elas) comeram doce ].
   the children seem.PL [ COMP (*they) ate candy ]
   ‘The children seem to have eaten candy.’

(17) **No embedded pronoun in HR to object in Mongolian**

   Bat [ tomorrow Dulma book read-NON.PST COMP ] say-PST
   ‘Bat said that Dulma will read a book tomorrow.’

   Dorj Nara-ACC loud-INSTR [ (*3SG) good COMP ] say.PST
   ‘Dorj said loudly that Nara will come tomorrow.’

If the DPs as crianças ‘the children’ or Nara and the embedded subject position in (16b) and (17b) respectively were just independent of each other (though coreferent), we might expect that the embedded position could be filled by an overt pronoun. This is a reasonable expectation if we consider that all the languages mentioned display some type of *pro-drop*. As such, the matrix DP in the constructions of interest

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5The matrix verb in this sentence agrees with the plural pre-verbal DP as crianças ‘the children’. As Ferreira (2000; 2009) and Nunes (2008) observe, this rules out the possibility of analyzing this sentence as a type of base-generation at the left periphery, which does not trigger agreement. In fact, left dislocation (with a non-agreeing matrix verb and a prosodic break before it) yields a grammatical sentence:

(i) As crianças, parece [ que *elas* comeram doce ].
   the children seem.SG [ COMP they ate candy ]
   ‘The children, it seems that they have eaten candy.’
could actually be base-generated there and resumed by a null pronoun in the embedded clause. However, inserting a pronoun in the embedded subject position renders the sentence ungrammatical. This suggests again that the DP that surfaces in the matrix clause and the embedded subject position are related to each other via movement.

Further diagnostics point to the conclusion that this relation is created by movement. Quantifier floating is one of those diagnostics. In BP, *os meninos* ‘the boys’ in (18b) is pronounced in the matrix clause, while the quantifier *todos* ‘all’ is in the embedded clause. A straightforward way to account for the relationship between (18a) and (18b) is to say that the latter is derived from the former via movement of *os meninos* departing from the embedded clause, stranding the quantifier in the base position.

(18)  **Quantifier floating in HR to subject in BP**

a. Parece [ que todos os meninos comeram doce ].
   ‘It seems that all the boys ate candy.’

b. *Os meninos parece que todos comeram doce*.
   ‘The boys seem all to have eaten candy.’

(19)  **Quantifier floating in HR to object in Janitzio P’urhepecha**

(19a) is a sentence with a canonical embedded finite complement (i.e. without HR). (19b) is a sentence with an accusative DP interpreted as the embedded subject and with a quantifier marking a position it has occupied at some nonsurface derivational stage. Again, a reasonable way to relate constructions like (19a) and (19b) would be to say that the latter is derived from the former via quantifier stranding. It is noteworthy that the stranded quantifier in (19b) is marked with nominative case, while the hyperraised DP bears accusative case. This will be relevant in the proposal that HR is instance of multiple case assignment in §5.

A straightforward way to diagnose movement is island sensitivity. If the constructions described as HR involve movement, the prediction is that the embedded position of the hyperraised DP is linked to should not be inside an island. The prediction is correct, as can be seen from the BP data below.

(20)  **Island sensitivity in HR to subject in BP**

a. Parece [ que começou a chover [adjunct depois que alguns alunos chegaram ] ].
   ‘It seemed to start to rain after some students arrived.’

b. *Alguns alunos parecem [ que começou a chover [adjunct depois que t chegaram ] ]
   some students seem.PL [ COMP started to rain.INF [ after COMP t arrived ] ]
   Int.: ‘It seemed to start to rain after some students arrived.’

Island sensitivity can also be witnessed in Nez Perce. Covert HR in Nez Perce (Deal 2017) will be commented on in more detail when we turn to the Case Problem in §5. For now, notice that the embedded subject in (21a) bears the expected embedded subject case, namely, nominative, the case of intransitive verbs in a tripartite system like Nez Perce (Deal 2010; 2017). Nevertheless, the matrix verb displays object agreement
that cross-references the embedded subject. As we will see below, Deal analyzes (21a) as involving HR to object, explaining the matrix object agreement, but covertly, explaining why the hyperraised DP still surfaces in the embedded clause. (21b) corroborates the hypothesis that (21a) involves movement: this sentence is ungrammatical because the hyperraised DP is inside an island.

(21) **Island sensitivity in covert HR to object in Nez Perce (Deal 2017: (13/12))**

a. ‘Aayat-onm hi-nees-nek-se [CP mamay’ac hi-pa-paay-no’].
   ‘The woman thinks the children will arrive tomorrow.’

b. ‘Aayato-nm hi-nees-nek-se [CP [adjunct ke kaa mamay’ac
   woman-ERG 3SUBJ-O.PL-think-IMPERF [    [ when children.NOM
   hi-pa-paayo’ ] hi-lloy-no’ qiiwn ]
   3SUBJ-S.PL-arrive-FUT ], 3SUBJ-be.happy-FUT old.man.NOM ]
   Int.: ‘the woman thinks that when the kids arrive, the old man will be happy.’

Finally, reconstruction facts provide quite a compelling argument for movement in HR. Consider first the basics of NPI licensing in BP, (22a). According to Nunes (2008), the NPI um dedo ‘a finger’ is in the embedded clause, while the negative phrase ninguém ‘nobody’ is in the matrix clause. The result is ungrammatical, since the NPI licensor and the NPI have to be clause-mates. In (22b), where ninguém is now the embedded subject and hence clause-mate with the NPI, is grammatical.

(22) **Basics of NPI licencing in BP (adapted from Nunes 2008: p. 95)**

a. *Ninguém disse [ que a Maria mexeu um dedo para me ajudar ].
   nobody said [ that the Maria moved a finger to me help ]
   Lit.: ‘Nobody said that Maria didn’t lift a finger to help me.’

b. A Maria disse [ que ninguém mexeu um dedo para me ajudar ].
   the Maria said [ that nobody moved a finger to help ]
   ‘Maria said that nobody lifted a finger to help me.’

Nunes (2008) also remarks that the HR example (23b) has a similar surface order as that in (22a). According to Nunes (2008), the NPI um dedo ‘a finger’ is in the embedded clause, while the negative phrase ninguém ‘nobody’ is in the matrix clause. The result is ungrammatical, since the NPI licensor and the NPI have to be clause-mates. In (22b), where ninguém is now the embedded subject and hence clause-mate with the NPI, is grammatical.

(23) **NPI licensing in HR to subject in BP (adapted from Nunes 2008: p. 95)**

a. Parecia [ que ninguém ia mexer um dedo para me ajudar ]
   seemed [ that nobody went move a finger to help ]
   ‘It seemed that nobody was going to lift a finger to help me.’

b. Ninguém parecia [ que t ia mexer um dedo para me ajudar ]
   nobody seemed [ that t went move a finger to help ]
   ‘It seemed that nobody was going to lift a finger to help me.’

Similar NPI data can be seen in Sakha. Here, the NPI is kim-ŋe daqany ‘anyone’. If it is base-generated in the matrix clause (in (24a), as the addressee argument of et ‘tell’), while negation is in the embedded verb, the result is ungrammatical. In (24b), the NPI is in accusative form (kim-i daqany) and it is interpreted as the embedded subject. Negation is again attached to the embedded verb, but the result is grammatical. Reminiscent to the BP data above, a HR analysis can account for why (24b) is grammatical, while (24a) is not.

(24) **NPI licensing in HR to object in Sakha (adapted from Baker & Vinokurova 2010: (42/43))**

a. *Min kim-ŋe daqany [ pro kel-bet dien ] et-ti-m
   I who-DAT PRT [ pro come-NEG.AOR.3S that ] tell-PAST-1S
   ‘I told no one to come.’ (lit. ‘I told anyone that he should not come.’)
   I who-ACC PRT [win-NEG-PAST.3SS that ] hope-AOR-1SS
   ‘I hope that nobody won (the lottery).’

In this section, we established that HR does indeed involve raising. Before we continue with the description of the HR properties we are concerned with in this paper, we turn to a comparison of HR with other constructions that we could plausibly conflate HR with, namely, copy-raising and prolepsis. However, since these constructions do not involve movement, we will see that reducing HR to these constructions is actually misguided.

2.1 Movement-free analyses

All the languages mentioned above that have HR also allow for some type of pro-dropping, a correlation first observed by Ura (1994) (but see Halpert (2018)’s arguments against Ura’s analysis of HR). A reasonable hypothesis is that HR actually involves base-generation of a DP in the matrix clause, which is linked with a null pronoun in the embedded clause. Two constructions that display these properties are copy-raising (Landau 2011, a.o.) and prolepsis (Davies 2005; Salzmann 2017, a.o.), illustrated below with English examples.

(25) Copy-raising in English (adapted from Landau 2011: p. 783)
   a. This roomi seems like/as if/as though it, needs some cleaning.
   b. Suzani sounded like/as if/as though Frank really offended heri.
   c. The cocktails, tasted like there was pomegranate in themi.

(26) Prolepsis in English (adapted from Davies 2005: (6/34))
   a. I believe about Kate that she won the Daughter-of-the-Year award.
   b. Sheryli thought about/of Tim that the police would never catch him.
   c. Sheryli imagined about/of Tim that Ed McMahon would award $10 million to him.

HR to subject could be compared to copy-raising (25), where a DP occupies the matrix subject position and is linked with a pronoun in an embedded, finite clause. HR to object in turn could be analogized to prolepsis (26), where a DP occupies a matrix object position and is linked with a pronoun in the embedded finite clause. The only difference between the constructions in (25) and (26) and HR would be that in the latter, the embedded pronoun is not pronounced, seeing that the HR languages mentioned here allow for a dropped subject.

That the reduction of HR to copy-raising and prolepsis is not on the right track is suggested by the fact that the embedded position in HR constructions cannot in fact be overtly filled with a pronoun, as we saw in the BP and Mongolian data in (16b) and (17b), repeated below.

(27) a. Brazilian Portuguese
   As crianças parecem [ que (*elas) comeram doce ].
   the children seem.PL [ COMP (*they) ate candy ]
   ‘The children seem to have eaten candy.’

   b. Mongolian
   Dorj Nara-g chang-aar [ (*ter) sain gej ] khel-sen.
   Dorj Nara-ACC loud-INSTR [ (*3SG) good COMP ] say.PST
   ‘Dorj said loudly that Nara will come tomorrow.’

As suggested above, the impossibility of filling the embedded clause with an overt pronoun can be explained if the matrix DP and the embedded gap position are not derivationally independent of each other, but related by movement instead.

Furthermore, compelling evidence that HR to subject and copy-raising are not the same construction is provided by reconstruction in HR in BP. Consider first (28). The lack of an inverse scope reading in
this sentence shows us that a quantifier contained inside an embedded finite clause (todas as guerras ‘every war’) cannot take scope over a quantifier base-generated inside the embedding clause (dois soldados ‘two soldiers’).

(28) **Brazilian Portuguese: $\nexists$ every > two

Dois soldados disseram/pensaram [ que todas as guerras foram interrompidas ].

two soldiers said/thought [ COMP every the wars were interrupted ]

‘Two soldiers said/thought that every war were interrupted.’

On the basis of this restriction, consider the behavior of embedded quantified expressions in HR. Unlike (28), the HR example (29b) does allow for an inverse scope reading. Importantly, the same reading is available for the non-HR baseline (29a), where the higher quantifier dois soldados ‘two soldiers’ is clearly inside the embedded clause. The availability of an inverse scope reading in (29b) can be explained straightforwardly if dois soldados is base-generated inside the embedded clause, so that todas as batalhas ‘every battle’ can locally take scope over it.

(29) **Reconstruction in HR to subject in BP**

a. Parece [ que dois soldados morrem em todas as batalhas ].

seems [ COMP two soldiers die in every the battles ]

‘It seems that two soldiers die in every battle.’

b. Dois soldados parecem [ que morrem em todas as batalhas ].

two soldiers seem [ COMP die in every the battles ]

‘Two soldiers seem to die in every battle.’

In contrast, in the copy-raising example (30b), the matrix DP two soldiers has to take wide scope with respect to the embedded universal quantifier. Compare this sentence with (30a), where two soldiers surfaces in the embedded clause and where thereby an inverse scope reading is possible.

(30) **No reconstruction in copy-raising in English**

a. It seems like two soldiers die in every battle.  

b. Two soldiers seem like they die in every battle.

The lack of an inverse scope reading in (30b) can be explained if the DP that surfaces in the matrix clause in a copy-raising construction is actually base-generated there: the matrix quantifier cannot scope under a quantifier in the embedded clause because it has never been there. Likewise, a quantifier inside an embedded finite clause cannot take scope over a quantifier in the embedding clause. This is the case, for instance, in all the possible derivations that Landau (2011: §4) propose for copy-raising constructions.7

We now turn to the possibility of analyzing HR to object as an instance of prolepsis (26). Idiom preservation and island sensitivity facts allow us to tease them apart. The Zulu HR to object data in (15) is repeated in (31) as a sample of the preservation of idioms in HR to object.

(31) **Idiom preservation in HR to object in Zulu**

a. Ngi-lindel-a [(ukuthi) i-qhina li-phum-e e-m-bize-ni ].

1SG-expect-FV [(that) AUG-5.steinbok 5.SM-exit-SUBJ LOC-9-pot-LOC

‘I expect the secret to come out.’

b. Ngi-lindel-a i-qhina [(ukuthi) li-phum-e e-m-bize-ni ].

1SG-expect-FV AUG-5.steinbok [(that) 5.SM-exit-SUBJ LOC-9-pot-LOC

‘I expect the secret to come out.’

In prolepsis constructions, however, idioms are not preserved. This is illustrated by prolepsis in Madurese.

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6Thank you to N. Richards (p.c.) for discussion and data.

7Landau (2011) focuses on the source of the ϑ-role of the matrix DP, which can be the matrix or the embedded, derived predicate (i.e. a predicate created during the syntactic derivation as a consequence of operator movement). Irrespective of the ϑ-source though, the matrix DP is base-generated in the matrix clause.
(32) **Madurese: no idiom preservation in prolepsis** (Davies 2005: p. 655)

a.

Siti ngera  bari’  [ ja’  nase’  la  daddi  tajjin  ].
Siti AV.think  yesterday  [ COMP  rice  already  become  porridge ]
’Siti thought yesterday that it was too late to do anything about it.’
Lit.: ‘Siti thought yesterday that the rice had become porridge.’

b.  Siti ngera  nase’  bari’  [ ja’  la  daddi  tajjin  ].
Siti AV.think  rice  yesterday  [ COMP  already  become  porridge ]
‘Siti thought about the rice yesterday that it had become porridge. *(literal meaning only)*

If HR to object and prolepsis were instantiations of the same construction, an idiom preservation difference would not be expected. In contrast, if prolepsis is derived by the base-generation of the matrix DP in the matrix clause itself (as proposed by Davies 2005, a.o.), while HR to object is derived via movement, the difference can be accounted for.

Likewise, a contrast in island sensitivity argues against reducing HR to object and prolepsis to the same analysis. We saw in (21b), repeated below, that covert HR to object in Nez Perce is not allowed from adjuncts.

(33) **Island sensitivity in Nez Perce covert HR**

* ‘Aayato-nm  hi-nees-nek-se  [CP  [ adjunct  ke  kaa  mamay’ac  hi-pa-paay-no’ ]],
woman-erg  3SUBJ-O.PL-think-IMPERF  [ when  children.NOM  3SUBJ-S.PL-arrive-FUT ],
hilloy-no’  qiwn  ].
3SUBL.be.happy-FUT  old.man.NOM ]
Int.: ‘The woman thinks that when the kids arrive, the old man will be happy.’

A proleptic pronoun, however, can be located inside an adjunct, as can be seen in the following Madurese example:

(34) **Madurese: no island sensitivity in prolepsis** (adapted from Davies 2005: (43b))

a.  Ebu  manyessel  [adjunct  polana  na’kana’-na  lo’  patang  a-caca  ].
mother AV-regret  [ because  RED-child-DEF  not  RECIP  AV-speak ]
‘Mother regrets (is regretful) because her children do not speak to each other.’

b.  Na’kana’-na,  e-manyessel-le  Ebu  [adjunct  polana  pro,  lo’  patang  a-caca  ].
RED-child-DEF  OV-regret-LV  mother  [ because  pro  not  RECIP  AV-speak ]
‘Mother regrets (is regretful) about her children because they do not speak to each other.’

This island-sensitivity contrast could not be explained if HR to object and prolepsis were identical constructions. Once again, a straightforward explanation is that prolepsis involves base-generation of a DP in the matrix clause, so that no island violation is incurred. The opposite is true of HR, hence the ungrammaticality of a sentence like (33).

A conclusion that we can draw from the comparison between HR to object and prolepsis is that we cannot reduce the former to the latter. (See additional arguments from Zulu, Nez Perce, and Janitzio P’urhepecha in Halpert & Zeller 2015, Deal 2017, and Zyman 2017, respectively.)*

In this section, we examined raising diagnostics, concluding that HR does involve movement. Based on this finding, we also ruled out the possibility of reducing HR to copy-raising or prolepsis. Relevantly though, the movement established above departs from a finite clause, in violation of the strong PIC. In the next section, we turn to an analysis that tries to circumvent this problem.

*Another conclusion that we can draw is that HR to object is also not an instance of finite control (Ferreira 2000; 2009; Nunes 2008; Boeckx et al. 2010). The idiom preservation data (31) is particularly relevant, since control is well-known not to preserve idioms. See further arguments in Halpert & Zeller (2015) and Zyman (2017).*
§2 showed that HR is derived with movement. Since this movement departs from a finite clause, HR seems to be a violation of the Phase Impenetrability Condition (7), repeated below as (35).

(35) Phase Impenetrability Condition (“strong”)

The domain of H [head of a strong phase] is not accessible to operations at ZP [the smallest strong phase dominating HP]; only H and its edge are accessible to such operations.

But notice that an escape hatch position is hardwired into this definition of the PIC: the edge of a phase is visible to a probe in the immediately higher phase. Along with other proposals (Tanaka 2002, Obata & Epstein 2011, Bondarenko 2017, Wurmbrand 2017, Zyman 2017, a.o.), I will explore that possibility to provide a solution to the case and PIC problems. I capitalize on the edge escape hatch position embedded in the definition of the PIC in (35). There is independent empirical evidence from long distance agreement in Tsez (Polinsky & Potsdam 2001) that the edge of a phase is accessible to matrix probes. (See also related phenomena in Passamaquoddy in Bruening 2002 and in Innu Aimün in Branigan & MacKenzie 2002. For an overview, see Bhatt & Keine to appear.).

Specifically, I propose that the complementizer in the complement of HR句子 has some feature F, which will be specified in §4, that trigger the movement of the embedded subject to [Spec, CP].

(36) A solution to the PIC problem (version 1/2)

The CP a DPhyperraises from has F-features that trigger its movement to the edge of the embedded clause, [Spec, CP].

Being at the edge of the embedded phase, the embedded subject is now visible to a matrix probe like T or v, giving rise to HR to subject and HR to object, respectively.

(37) $\text{[CP ... DP}_{T/v} \downarrow [\text{CP <DP >}_{C'} \text{COMP} ... <\text{DP}> ...]]$  

This proposal has two crucial components. First, it relies on a particular type of complementizer, one that has the appropriate F-features. Furthermore, (37) implies that HR is not the direct movement of the embedded subject all the way into the matrix clause. Rather, the embedded subject stops over at the edge of the embedded clause [Spec, CP] first. In what follows, I try to provide evidence in support of each of these components of the proposal. Below, I briefly discuss some morphological suggestion that there may be different complementizers, one that allows for HR and one that does not. In §3.1, we turn to suggestion that a higher position for a subject to occupy before effectively hyperraising into the matrix clause is necessary.

As just mentioned, this proposal implies that there are two types of complementizers or that the same complementizer may bear different features. Consider again, for instance, HR to subject in BP (repeated from (3)).

(38) HR to subject in BP

a. Parece [ que o João comprou um carro ].  
   seems [ COMP the João bought a car ]  
   'It seems that João bought a car.'

b. O João parece [ que t comprou um carro ].  
   the João seems [ COMP t bought a car ]  
   'It seems that João bought a car.'

Unlike standard raising and ECM, HR is optional. A way to make the analysis compatible with this fact is to say that a complementizer in HR languages may or not bear F-features. If it does not, a non-HR sentence obtains; if it does, the output of the derivation is a HR sentence. While this is obviously no more than a restatement of the facts, Takeuchi (2010) suggests that the complementizer may indeed play a relevant
role in the derivation of HR sentences. Takeuchi observes that in Japanese, the verb *tazune* ‘inquire’ can subcategorize for clauses with different complementizers, this difference correlating with the possibility of HR to object.

(39) *Japanese: √HR to object with* ka to (adapted from Takeuchi 2010: (32))

a. Taroo-wa Hanako-ga baka **ka** to tazune-ta.
   Taroo-TOP Hanako-NOM stupid Q COMP inquire-PST
   ‘Taro inquired whether or not Hanako is stupid.’

b. Taroo-wa Hanako-o baka **ka** to tazune-ta.
   Taroo-TOP Hanako-ACC stupid Q COMP inquire-PST
   ‘Taro inquired whether or not Hanako is stupid.’

(40) *Japanese: XHR to object with* ka (adapted from Takeuchi 2010: (30))

a. Taroo-wa Hanako-ga baka **ka** tazune-ta.
   Taroo-TOP Hanako-NOM stupid Q inquire-PST
   ‘Taro inquired whether or not Hanako is stupid.’

b. * Taroo-wa Hanako-o baka **ka** tazune-ta.
   Taroo-TOP Hanako-ACC stupid Q inquire-PST
   ‘Taro inquired whether or not Hanako is stupid.’

In (39), *tazune* combines with a clause headed by *ka to* and HR to object is possible. In (40) however, the verb combines with a *ka* clause and HR is no longer a possibility. The only difference between these sentences is in the complementizer, leading Takeuchi (2010) to hypothesize that it is an important component in determining whether HR is possible. We could take the contrast between (39) and (40) to be a morphologically transparent version of an alternation like that in (38). In (38), the complementizers have different features, just as in (39) and (40), but the difference can be overtly seen only in the latter case.

Similar data that makes the same point can be taken from Lubukusu. (41a) is a baseline sentence and (41b) the corresponding HR example. In both of these sentences, the embedded complementizer is *mbo*. When the embedded complementizer is *ali*, as in (41c), HR is no longer a possibility.

(41) *Lubukusu* (Carstens & Diercks 2013: p. 100ff)

a. Ka-lolekhana [ **mbo** babaandu ba-kwa ].
   6SA-seem [ that 2.people 2SA.PST-fall ]
   ‘It seems that the people fell.’

b. Babaandu ba-lolekhana [ **mbo** t ba-kwa ].
   2.people 2SA-seem [ that t 2SA.PST-fall ]
   ‘It seems that the people fell.’

c. * Mikaeli a-lolekhana [ **ali** t a-si-kona ].
   Michael 1SA-seem [ that t 1SA-PERS-sleep ]
   Int.: ‘Michael seems to be still sleeping.’

Again, the contrast between (41b) and (41c) could be explained if the properties of the embedded complementizer play a crucial role in determining whether or not hyperraising is possible.

Relatedly, HR seems to be lexically restricted. Tanaka (2002: fn. 1) reports on several verbs that do not allow for HR to object in Japanese. Likewise, according to Deal (2017), in Nez Perce covert HR to object is possible for verbs like *neki* ‘think’ and *cukwe* ‘know’, but not for a verb like ‘tell’. Nunes (2008) observes that HR is possible for the verbs *parecer* ‘seem’, *perigar* ‘to run the risk’. However, it is not possible, for instance, with the verb *calhar* ‘turn out’, even though it allows for standard raising and for an impersonal construction. (See more examples in Nunes 2008.) By comparing (42) with (43), we see that, while both can participate in standard raising as well as in impersonal constructions, only *parecer* ‘seem’ (43c) allows for HR – *calhar* ‘turn out’ (42c) does not.
Complementation pattern of calhar ‘turn out’ in BP

a. A Maria calhou [ de ter feito pão demais ]. 
   the Maria turned.out [ of have.INF done bread too.much ]
   ‘Maria ended up making too much bread.’
   infinitival complement

b. Calhou [ que a Maria fez pão demais ].
   turned.out [ COMP the Maria did bread too.much ]
   ‘It turned out that Maria made too much bread.’
   impersonal construction

c. * A Maria calhou [ que t fez pão demais ].
   the Maria turned.out [ COMP t did bread too.much ]
   ‘It turned out that Maria made too much bread.’
   \ hyperraising

Complementation pattern of parecer ‘seem’ in BP

a. A Maria parece [ ter feito pão demais ].
   the Maria seems [ have.INF done bread too.much ]
   ‘Maria seems making too much bread.’
   infinitival complement

b. Parece [ que a Maria vai fazer pão ].
   seems [ that the Maria goes do.INF bread ]
   ‘It seems that Maria will make bread.’
   impersonal construction

c. A Maria parece [ que t vai fazer pão ].
   the Maria seems [ that t goes to.do bread ]
   ‘It seems that Maria will make bread.’
   \ hyperraising

Since calhar and parecer seem to have the same syntax, the comparison between (42) and (43) would lead us to conclude that there is a lexical component to HR. The analysis proposed here provides a way to accommodate this restriction. The question that we are faced with is how to block HR in a language that otherwise allows for it (e.g. BP, Mongolian, Nez Perce, Zulu, etc). Something other than the role of complementizers mentioned above has to be added. Once we open up the possibility of the same complementizer to bear different features, this possibility should be available to (43c), incorrectly ruling this sentence in. Assuming a featural view of selection (see Adger 2003; Wurmbrand 2014, a.o.), I propose that different predicates may or may not be compatible with a CP bearing F-features. A predicate like calhar ‘turn out’ would not be compatible with this type of complement, while parecer ‘seem’ would be compatible with either a CP with no F-features or a CP bearing them.

This is somewhat comparable to the subcategorization of interrogative complements. While a verb like say is compatible both with a CP with a Wh-feature and one without, conclude is compatible only with the latter.9

(44) a. Robin said [what Alex read].
   b. Robin said [that Alex read A Handmaid’s Tale].
   c. Robin concluded [that Alex read A Handmaid’s Tale].
   d. * Robin concluded [what Alex read].

Once again, this is no more than a restatement of the facts. The analysis I put forth here has no way to predict which predicates allow for HR and which do not. I just acknowledge the lexical component that HR possibly has and try to make the analysis consistent with this. It is worth mentioning though that not every account is compatible with the restrictiveness of HR. Carstens (2011), for instance, proposes a parametric analysis. Once a parameter is set so that HR is allowed in a given language, it is not clear how we would rule it out for every relevant predicate that can combine with a finite CP complement.

9The resemblance between interrogative complements and HR would be restricted to their movement properties, in that HR would lack the semantic import of Wh-movement. Thank you to M. Hackl (p.c.) for drawing my attention to this shortcoming.
3.1 Medial-raising: when the “hyperraised” subject stays in the embedded clause

Besides the $F$-features in the embedded complementizer, another crucial component of the analysis put forth here is the stopover position in [Spec, CP]. In this analysis, HR is not a movement into the matrix clause in one fell swoop. Rather, it is a stepwise operation that targets first the edge of the embedded clause before finally landing in the matrix clause. Obviously, it is necessary to find evidence that [Spec, CP] really is relevant in the derivation of HR sentences. The evidence will come from medial-raising constructions, that is, sentences where the subject of an embedded finite clause stays inside the embedded clause and yet is able to interact with the matrix clause for both binding and case marking purposes. Medial-raising, illustrated in this section with HR to object in Mongolian, is schematized as follows:

\[
\begin{array}{c}
\text{CP} \ldots \text{v} \ldots \text{[CP} \alpha \text{DP-ACC} \ldots]\end{array}
\]

The discussion that accusative finite subjects in Mongolian can stay inside the embedded clause has two parts. First, I show that the accusative can follow unambiguously embedded adverbs and also be part of a scrambled clause. Data of this type, however, leaves unspecified the position in the embedded clause where the accusative subject is. That is when we turn to binding data, which will suggest that accusative subjects have to be in a higher position than [Spec, TP].

In (46a), the verb *khelsen ‘said’* takes a finite embedded complement and the subject (*Dulmaa*) bears nominative case, as expected. In (46b), the embedded subject now bears accusative case. Despite the difference in case, notice that the embedded subject is preceded by the adverb *margaash ‘tomorrow’,* which unambiguously modifies the embedded clause. This suggests that an embedded subject can be marked with accusative case while remaining in the embedded clause. Specifically, a way to account for (46b) would be to say that the embedded subject moves to the edge of the embedded clause, where it is accessible to accusative case assignment by the matrix v. The adverb either moves up as well or is base-generated in a higher position to begin with. This yields the linear order seen in (46b).

(46) Embedded adverb placement in Mongolian

\begin{itemize}
\item a. Bat [ *margaash Dulmaa* nom unsh-n gej ] khel-sen.
\text{Bat [ tomorrow Dulmaa NOM book read-N.PST COMP ] say-PST}
\text{‘Bat said that Dulma will read a book tomorrow.’}
\item b. Bat [ *margaash Dulmaa-g* nom unsh-n gej ] khel-sen.
\text{Bat [ tomorrow Dulmaa-ACC book read-N.PST COMP ] say-PST}
\text{‘Bat said that Dulma will read a book tomorrow.}
\end{itemize}

(46) is an instance of what I dubbed ‘medial-raising’: the embedded subject seems to stay inside the embedded clause, as diagnosed by adverb placement, and yet it is marked with accusative case.\(^{11}\)

\(^{10}\)The introduction of the term ‘medial-raising’ is purely for convenience. I do not claim to have discovered a new type of construction. Furthermore, as will be clearer throughout this section, medial-raising is to be distinguished from ECM out of a finite clause if the latter involves the subject of an embedded finite clause receiving accusative case while sitting in [Spec, TP]. We will see that medial-raising involves a position that is higher than the canonical subject position.

\(^{11}\)However, there is an alternative derivation to obtain the same linear order as that seen in (46b). We could say that first *margaash* scrambles into the matrix clause and *Dulmaa* is effectively hyperraised in a matrix position below *margaash*. The resulting linear order would be the same.

\begin{itemize}
\item (i) Bat *margaash Dulmaa-g* [CP *margaash Dulmaa* non unsh-n gej ] khel-sen.
\item (ii) *Margaash* Bat [ *Dulmaa-g* buuts id-n gej ] khel-sen.
\hspace{1cm}Int.: ‘Bat said that Dulma will eat dumplings tomorrow.
\end{itemize}

Independently, though, *margaash* cannot scramble into the matrix clause (ii), regardless of the case of the embedded subject. As such, it is likely that (46b) is an instance of medial-raising.
Another argument for medial-raising comes from the fact that the whole embedded clause can also be scrambled, while still containing an accusative subject. (47a) shows that accusative case is not a possibility for a possessum in an unembedded clause. (47b) shows that this is nevertheless a possibility in a finite embedded clause. (47b) is to be contrasted with (47c), where the whole embedded clause is moved to the left. Notice that the possessum still bears accusative case.

\[(47)\] **Clausal scrambling in Mongolian**

a. Sharlovan(*-g) Bat-id baigaa.  
carrot(*-ACC) Bat-DAT COP  
‘Bat has a carrot.’

b. Dulmaa chang-aar sharlovan-g Bat-id baigaa gej khel-sen.  
Dulma loud-INSTR carrot-ACC Bat-DAT COP COMP say-PST  
‘Dulma said loudly that Bat has a carrot.’

c. [ Sharlovan-g Bat-id baigaa gej ] Dulmaa chang-aar Dorj-id khel-sen.  
‘That Bat has a carrot, Dulma said loudly to Dorj.’

(47c) could be an instance of medial-raising: the embedded subject is pied-piped along by the scrambled clause that contains it and, relevantly, it still bears accusative case.\(^{12}\)

To summarize, the adverb placement and clausal scrambling data suggest that, in Mongolian, a subject can be marked with accusative case while staying inside the embedded clause (i.e. medial-raising is a possibility in this language). Nothing was said, however, about the exact position occupied by the accusative subject. It could well be the case that it stays in the canonical subject position, by assumption, [Spec, TP]. However, binding data suggest that the position that a medial-raised DP occupies in the embedded clause is not [Spec, TP], but a higher position.

### 3.2 Medial-raising and binding in Mongolian

The reflexive possessive -ee (whose form is subject to vowel harmony) has to be locally bound. In (48a), -ee is attached to the only nominal in the sentence. The sentence is ungrammatical as a consequence of the lack of an antecedent. Indeed, if -ee is taken away, as in (48b), the result is grammatical. (48c) shows that the presence of an antecedent is necessary, but not sufficient. In this sentence, -ee is interpreted as the subject of the most deeply embedded nominalized clause. The antecedent has to be the closest subject (Nara) and cannot be the highest subject (Bat). In other words, the licensing of -ee obeys locality too.

\[(48)\] **Licensing of reflexive possessive in Mongolian**

tomorrow sister.NOM-REFL.POSS come-N.PST  
Int.: ‘My sister is coming tomorrow.’

\(^{12}\)We could in principle interpret (47c) as involving movement of the the possessum sharlovan ‘carrot’ into the matrix clause, where it is marked with accusative case by the matrix v, before the whole clause remanant-moves to the left. The net result is string-vacuous, as schematized below.

(i) sharlovan-g [t Bat-id baigaa gej] Dulmaa changaar [sharlovan Bat-id baigaa gej] Dorjid khelsen

However, if these movements are effected in a non-string vacuous way, the result is ungrammatical. In (ii), Dorj hyerraises to a position before the matrix subject (Bat) and the matrix adverb changaar and the remainder of the embedded clause scrambles to the beginning of the sentence.

(ii) * [ t sain seheetin gej ] Bat Dorj-iig, chang-aar t khel-sen.  
[ t good noble COMP ] Bat Dorj-ACC loud-INSTR t say-PST  
Int.: ‘That Dorj is good and noble, Bat said loudly.’

The ill-formedness of (ii) sentence suggests that (47c) really is an instance of medial-raising.
b. Margaash egch (miin) ir-ne.
tomorrow sister.NOM (POSS) come.N.PST
‘My sister is coming tomorrow.’

Bat [ Nara [ cat see-PST-ACCREFL.POSS ] say-PST COMP ] know-N.PST
‘Bat knows that Nara said that she saw a cat.’
Lit.: ‘Bat knows [that Nara said [-aa-1/2 saw a cat]]’

Consider now the behavior of reflexive possessive -ee in the subject of embedded finite clauses. If it is appended to the nominative subject of an embedded clause (49a), the sentence is ungrammatical. Given what we just saw about the licensing of the reflexive anaphor, we could reasonably explain the ungrammaticality of the sentences in (49) as violations of Condition A: the reflexive possessive cannot be bound by the matrix subject because the latter is outside the binding domain of the reflexive. This in turn implies that the embedded clause can be the binding domain of the embedded subject.

(49) Reflexive possessive in embedded NOM subject in Mongolian

a. * Bat loud-\textsuperscript{INSTR} [ sister.NOM-REFL.POSS wonder-with COMP ] say-PST
   Int.: ‘Bat said loudly that his (own) sister is wonderful.’

b. * Bati [ margaash egch-\textsuperscript{ee} ir-ne gej ] khel-sen.
   Bat [ tomorrow sister.NOM-REFL.POSS come-N.PST COMP ] say-PST
   Int.: ‘Bat said that his (own) sister is coming tomorrow.’

Conversely, if the subject is accusative, the result is grammatical. Significantly, in (50b), the accusative subject containing -ee follows the unambiguously embedded adverb margaash ‘tomorrow’, suggesting again that the accusative subject is still inside the embedded clause. Likewise, in (50c), the embedded clause as a whole was scrambled, including the -ee-containing accusative subject. (50b) and (50c) are therefore examples of medial-raising. But, even though the accusative subject remains inside the embedded clause, the reflexive possessive contained in it can be bound by the matrix subject.

(50) Reflexive possessive in embedded ACC subject in Mongolian

   Bat sister-ACCREFL.POSS loud-\textsuperscript{INSTR} sister-ACCREFL.POSS wonder-with COMP say-PST
   ‘Bat, said loudly that his\textsubscript{1/2} (own) sister is wonderful.’

   Bat [ tomorrow sister-ACCREFL.POSS come-N.PST COMP ] say-PST
   ‘Bat said that his (own) sister is coming tomorrow.’

c. [ Egch-iig-\textsuperscript{ee} ir-ne gej ] Bati khel-sen.
   [ sister-ACCREFL.POSS come-N.PST COMP ] Bati say-PST
   ‘That his (own) sister is coming, Bat said.’

If the accusative subject in these sentences were occupying the same position as a nominative subject, (50b) and (50c) should be as ungrammatical as the sentences in (49), contrary to fact. How then can we account for the fact that the accusative subjects in (50b) and (50c) seem to stay inside the embedded clause, while also being bound by the matrix subject?

If the medial-raised DP were occupying the same position as the nominative subject, canonical and medial-raised sentences in which the embedded subject contains the reflexive possessive -ee should equally be violations of Condition A, that is, they should both be ruled out because the anaphor in the embedded clause cannot be bound by the matrix subject. Rather, it could be the case that the binding domain of the accusative subject actually includes the matrix subject. But what position could a medial-raised subject be occupying so that it can be bound by the matrix subject and receive accusative case from the matrix v, but staying inside the embedded clause all the while? [Spec, CP] in the analysis put forth here provides just this type of dual position: it is inside the embedded clause, but it is accessible to the matrix clause, by virtue of being at the edge of the lower clause. If the accusative subject in the sentences above that contains
the reflexive possessive move to [Spec, CP], we can explain why they can be bound by the matrix subject: movement to this position extends the binding domain of the embedded subject, which then includes the matrix subject. In sum, the binding data in Mongolian medial-raising suggests that [Spec, CP] is a relevant position in the derivation HR sentences.

The correlation between movement to [Spec, CP] and binding in medial-raising is reminiscent of data like (51), where intermediate movement of which picture of himself to [Spec, CP] is crucial for the anaphor to be bound by the matrix subject John.

(51) Which picture of himself did John say [CP t that Bill liked t best ]?

In the next section, we explore scrambling data in Mongolian that also seem to corroborate the analysis put forth so far.

3.3 Medial-raising and long distance scrambling in Mongolian

We concluded above that [Spec, CP] (more generally, the phase edge) was the position where medial-raised DPs receive accusative case. What then happens to accusative subjects that are effectively pronounced in the matrix clause, as in e.g. (5b), repeated and modified below?

(52) ACC subject pronounced inside the matrix clause in Mongolian
   Bat Dorj-ACC loud-INSTR [ t [ t good noble COMP ] ] say-PST
   ‘Bat said loudly that Dorji is good and noble.’

I follow Hiraiwa (2005)’s and Bondarenko (2017)’s analyses of HR to object in Japanese and Buryat, respectively. In particular, Bondarenko argues that medial-raising in Buryat can be optionally followed by scrambling. In what follows, I call ‘long distance scrambling’ the scrambling of nominals out of an embedded finite clause.

(53) illustrates (some of) the positions that a hyperraised DP can occupy in Mongolian. In (53b), the accusative is inside the matrix clause, as it precedes an unambiguously matrix adverb. It is also possible for an accusative subject to be realized in the left-most position of the matrix clause, (53d).

(53) Positions that a hyperraised DP can occupy in Mongolian
      Bat loud-INSTR [ dog.NOM wonder-with COMP ] say-PST
      ‘Bat said that dogs are wonderful.’
   b. Bat nakhoi-g chang-aar gaikh-tai gej khel-sen.
      Bat dog-ACC loud-INSTR wonder-with COMP say-PST
      ‘Bat said that dogs are wonderful.’
      Bat [ Dulmaa.NOM book read-N.PST COMP ] say-PST
      ‘Bat said that Dulmaa will read a book.’
   d. Dulmaa-g Bat [ nom unsh-n gej ] khel-sen.
      ‘Bat said that Dulmaa will read a book.’

The latter option suggests that the matrix positions occupied by hyperraised are not restricted to dedicated object positions (i.e. a matrix object shift position). At least the leftmost position in (53d) could be a position occupied by other DPs as well.13

With this in mind, consider the long distance scrambling of non-accusative DPs. In fact, if the same matrix positions are occupied by a nominative DP, as in (54), or a dative DP, as in (55), that is base-generated in the embedded clause, the result is ungrammatical.

13Thank you to D. Pesetsky for raising this objection.
(54) No long distance scrambling of nominative embedded DPs in Mongolian
   Bat loud-INSTR [Dorj.NOM good noble COMP] say-PST
   'Bat said loudly that Dorj is good and noble.'
   Bat Dorj.NOM loud-INSTR [t good noble COMP] say-PST
   Int.: 'Bat said loudly that Dorj is good and noble.'
   Int.: 'Bat said loudly that Dorj gave a book to Dulmaa.'

(55) No scrambling of dative embedded DPs in Mongolian
   'Bat said loudly that Dorj gave his book to Dulmaa.'
14
   Bat Dulmaa-DAT [Dorj(-acc) t book-REFL.POSS give-PST COMP] loud-INSTR say-pst
   'Bat said loudly that Dorj gave his book to Dulmaa.'
   Dulmaa-DAT Bat [Dorj t book-REFL.POSS give-PST COMP] loud-INSTR say-pst
   Int.: 'Bat said loudly that Dorj gave his book to Dulmaa.'

(54) and (55) seem to establish that long distance scrambling is not a possibility in Mongolian. Given the possibility of medial-raising in Mongolian (see §3.1), if an accusative finite subject is placed in the matrix clause, this would have to be a consequence of long distance scrambling. From this perspective, scrambling out of a finite clause must be the be a possibility in Mongolian. But how come then, that, if we try to long distance-scramble a non-accusative DP, the result is ungrammatical?

I propose that long distance scrambling is in fact not possible in Mongolian, at least not of nominative or dative nominals (and temporal adverbs, fn. 11). Schematically:

(56) \[\begin{array}{c}
\text{[CP} \ldots \text{DP}_{\text{nom/dat}} \ldots \text{[CP}} \quad \text{C' \quad COMP} \quad \ldots \text{<DP}_{\text{nom/dat}} > \quad \ldots\text{]}\end{array}\]

Admittedly, this proposal tries to account for the ill-formedness of the scrambling attempts in (54) and (55) by brute force. But, when combined with the edge-based analysis of HR put forth here, it also provides enough leeway to model the possibility of scrambling of accusative subjects. Scrambling out of a finite embedded clause is only possible if the scrambling DP first moves to [Spec, CP], as a consequence of the F-features in C. From that position, it will necessarily receive accusative case from the matrix clause, under the assumption that case assignment is an obligatory operation. Being at the edge of a phase, the embedded subject (now bearing accusative case) can scramble locally into the matrix clause:

(57) \[\begin{array}{c}
\text{[CP} \ldots \text{DP}_{\text{acc}} \ldots \text{[CP} \quad \text{<DP}_{\text{acc}} > \quad \text{[C'} \quad \text{COMP}_F \quad \ldots \text{<DP} > \quad \ldots\text{]}\end{array}\]

In short, the proposal that HR involves a stopover position in [Spec, CP] also provides an explanation as to why scrambling of accusative subjects is possible, even though scrambling out of finite clauses seems to not be a possibility in Mongolian. In other words, the long distance scrambling contrast discussed in this section lends further support to the analysis proposed here that accusative subjects in Mongolian are derived by movement and crucially, a particular instance movement that stops over at [Spec, CP].

14This sentence helps establish that gej clauses in Mongolian are indeed finite, regardless of the case of the subject (nominative or accusative), in that this type of clause tends to constrain long distance scrambling.
3.4 Arguments in favor of an edge-based analysis of HR from other languages

While the motivation for positing medial-raising was provided by Mongolian in this section, other languages furnish additional suggestion to this effect. Capitalizing on NPI licensing facts, Takeuchi (2010) (based on Hiraiwa’s work) argues that the medial-raised subject in Japanese can also stay inside the embedded clause. The particle -mo has to be c-commanded by negation. By assumption, when it is not adjacent to the Wh-word, it is adjoined to CP. The Wh-word dare ‘who’ in turn has to be c-commanded by the dissociated particle. This is possible when the Wh-word bears nominative case, as in (58a), but also when it bears accusative case, as in (58b). Given the c-command requirements just mentioned, the accusative subject in (58b) must still be inside the embedded clause. (58b) then seems to be another instance of medial-raising. Takeuchi’s analysis also predicts that (58c) should be ungrammatical: in this sentence, there is effective HR (the accusative dare precedes the matrix adverb orokanimo ‘foolishly’), so that it is outside of the c-command domain of the dissociated particle.


a. Yuki-wa orokanimo [ dare-ga baka da to ]-mo omowa-nak-atta.
   Yuki-TOP foolishly [ who-NOM stupid COP COMP ]-PRT think-NEG-PAST
   ‘Yuki foolishly did not think that anybody is stupid.’

b. Yuki-wa orokanimo [ dare-o baka da to ]-mo omowa-nak-atta.
   Yuki-TOP foolishly [ who-ACC stupid COP COMP ]-PRT think-NEG-PAST
   ‘Yuki foolishly did not think that anybody is stupid.’

c. * Yuki-wa dare-o orokanimo [ baka da to ]-mo omowa-nak-atta.
   Yuki-TOP who-ACC foolishly [ stupid COP COMP ]-PRT think-NEG-PAST
   Int.: ‘Yuki foolishly did not think that anybody is stupid.’

These NPI licensing data suggest that accusative subjects in Japanese can stay inside the embedded clause. Takeuchi mentions (58) as one an empirical argument to motivate movement to [Spec, CP] in HR to object in Japanese. However, if the accusative NPI in (58b) were in [Spec, TP], NPI licensing could still have been legitimate, since [Spec, TP] is c-commanded by the particle -mo that is adjoined to the embedded CP. Similarly to the Mongolian adverb placement and clusal scrambling data, the position of the medial-raised subject in (58b) is left unspecified.

Janitzio P’urhepecha provides clearer suggestion that this position is higher than the canonical subject position(s). Zyman (2016) observes that HR to object in this language interacts with Wh-movement, the latter preempting the former.

(59) Blocking of Wh-movement in HR to object in Janitzio P’urhepecha (Zyman 2016: (24))

a. Ambe=ri ueka-sín-∅-gi eska Alicia kusta-a∅-ka?
   what=2S want-HAB-PRS-INT that Alice play.music-FUT-PRS-SBJ
   ‘What do you want Alice to play?’

b. ?* Ambe=ri ueka-sín-∅-gi Alicia-ni eska kusta-a∅-ka?
   what=2S want-HAB-PRS-INT Alicia-ACC that play.music-FUT-PRS-SBJ
   Int.: ‘What do you want Alice to play?’

c. ? Ueka-sín-∅-ga=ri Alicia-ni eska kusta-a∅-ka ma pirekua.
   want-HAB-PRS-IND2=2S Alice-ACC that play.music-FUT-PRS-SBJ a song
   ‘You want Alice to play a song.’

In (59a), the embedded subject (Alicia) is marked with nominative case and Wh-movement of the embedded object is permitted. However, if the embedded subject is marked with accusative (i.e. if it is hyperraised), Wh-movement is surprisingly no longer possible, as seen in (59b). In the absence of Wh-movement, a HR sentence is fine again, (59c). Zyman (2016) argues that the interaction between Wh-movement and HR can be expected if HR involves an intermediate step in [Spec, CP], which also happens to be the position
a Wh-phrase moves through. Assuming that only one such position is available, we could explain why HR and Wh-movement cannot co-exist in the same derivation.15

Finally, Bondarenko (2017) observes that the case of the embedded subject correlates with the possibility of indexical shift, as first found by Shklovsky & Sudo (2014) regarding the related language Uyghur. When the embedded subject is an indexed marked with nominative case, indexical shift is a possibility. However, if it is marked with accusative case, indexical shift is no longer possible.

(60) HR and indexical shift in Buryat (Bondarenko 2017: (25/24))

a. sajənə (bi) tɔrgə əmdəl-3-b əzə əmdəl-3.  
   Sajana.NOM (1SG.NOM) cart break-PRT1-1SG COMP know-PRT1  
   ‘Sajana found out that she broke the cart.’

b. sajənə namɛjə tɔrgə əmdəl-3 əzə əmdəl-3.  
   Sajana.NOM 1SG.ACC cart break-PRT1 COMP know-PRT1  
   ‘Sajana knows that I (= the speaker) broke the cart.’
   NOT: ‘Sajana found out that she broke the cart.’

Bondarenko conjectures that, under the assumption that indexical shift is derived by a monster operator at the left periphery, the unavailability of a shifted reading in (60b) could be explained by a necessary movement of the hyperraised subject to the edge of the embedded clause in a position that is higher than the monster operator.

In this section, I tried to argue that movement to the edge of the embedded clause is necessary in the derivation of HR sentences. We saw data from adverb placement and clausal scrambling that suggests that the medial-raised subject in Mongolian can stay inside the embedded clause. The interaction between medial-raising and binding and long distance scrambling in the same language further specified this inner position as [Spec, CP]. We also briefly examined data from Janitzio P’urhepecha and Buryat where HR to object interacts in non-trivial ways with left periphery phenomena, namely, Wh-movement and indexical shift. These data lend support in favor of an edge-based analysis of HR.

4 Towards a featural definition of syntactic positions

I proposed that a key component in the derivation of HR is an intermediate movement to [Spec, CP], triggered by some unidentified features that I labeled ‘F’. I propose that they are A-features, i.e. features that create A-positions, as opposed to A-features (Van Urk 2015).

(61) A solution to the PIC problem (version 2/2)

The CP a DP hyperraises from has A-features that trigger its movement to the edge of the embedded clause, [Spec, CP].

In this section, I try to motivate this part of the proposal.

The first piece of evidence that HR is a type of A-movement is furnished by the creation of new antecedents for binding in Japanese.

15We should of course ask if we can find this correlation in other HR languages. BP for one allows for Wh-movement out of HR embedded clauses.

(i) Brazilian Portuguese

Que livro os alunos parecem [ que tHR esqueceram de ler tWh ]  
which book the students seem.PL [ COMP t forgot of read.INF t ]

‘Which book does it seem that the student forgot to read?’

I will have to leave this as an unresolved issue.
Creation of new antecedents for binding in HR to object in Japanese (Tanaka 2002: p. 640)

each other-GEN teacher-NOM they-ACC [ t₁ fool-COP-COMP ] think-PROG
‘Each other’s teachers think of them₁ as fools.’

they-ACC each other-GEN teacher-NOM t₁ [ t₁ fool-COP-COMP ] think-PROG
‘Them₁, each other’s teachers think of t₁ as fools.’

The same type of data is found in Romanian:

(63) Romanian (Alboiu & Hill 2016: p. 273)

O her hear.3 pl each other mamă mother copiii children ei her [ că works mult ]
Lit.: ‘Her₃ children hear each of their₃ mothers say she₃ is working hard.’

As Tanaka (2002) and Alboiu & Hill (2016) remark, this is a signature property of A-movement and not of \( \Lambda \)-movement. If HR indeed passes through [Spec, CP], this has to an A-position, otherwise the sentences in (62) would be incorrectly ruled out as instances of improper movement. The analysis proposed here is basically identical to that in Tanaka (2002), since both propose that [Spec, CP] can be an A-position. However, the motivation in Tanaka (2002) is mainly theoretical, as it is an answer to the PIC problem that capitalizes on the escape hatch position that is embedded within the definition of the strong PIC itself. However, it lacks the empirical motivation for the need of a higher position. I tried to provide this evidence from medial-raising in Mongolian, §3.1, which, as mentioned, was first discovered for Buryat by Bondarenko (2017).

Similarly, Japanese (64) and Korean (65) provide suggestion that HR is a type of A-movement from the possibility of passivization, an instance of A-movement.

(64) Passivization in Japanese

a. Anna-wa [ Mary-ga/o kasikoi to ] omotteiru.
Anna-TOP [ Mary-NOM/ACC smart COMP ] thinks
‘Anna thinks that Mary is smart.’

b. Mary-ga/*o (Anna-ni) orokanimo [ kasikoi to ] omow-are-teir-u.
Mary-NOM/*ACC (Anna-by) foolishly [ smart COMP ] think-PASS-PROGR-PRES
‘Mary is foolishly thought (by Anna) to be smart.’

(65) Passivization in Korean (Yoon 1993: p. 505)

I-TOP [ Chelswu-ACC is.smart-COMP ] believePRS-DCL
‘I believe that Chelswu is smart.’

b. Chelswu-ka (na-uyhay) [ t ttokttokha-tako ] mit-(e)-ci-n-ta.
Chelswu-NOM (I-by) [ t is.smart-COMP ] believe-(e)-PASS-DCL
‘Chelswu is believed to be smart (by me).’

Finally, BP provides two arguments that HR is a type of A-movement. First, as observed by Ferreira (2009) and Nunes (2008), HR to subject in this language can trigger verbal agreement in both the matrix and the embedded verb, as seen in (66), repeated from (16b). As Ferreira and Nunes remark, verbal agreement in BP is triggered exclusively by A-movement.

(66) HR and agreement in Brazilian Portuguese

As crianças parece-m [ que t comera-m doce ].
the children seem-3PL [ COMP t ate-3PL candy ]
‘The children seem to have eaten candy.’
Likewise, HR in BP can bind variables without inducing weak cross-over effects:¹⁶

(67) **No weak crossover effect in Brazilian Portuguese HR**

Nenhum aluno parece pro orientador dele, [ que entendeu a lição ].
no  student seem  for. the advisor  of. he [ COMP understood the lesson ]
‘No student seems to his advisor to have understood the class.’

The creation of new antecedents for binding, passivization, and ϕ-agreement are signature properties of A-movement. Based on this data, we could conclude that HR is an instantiation of A-movement. If it is indeed the case that HR presupposes an intermediate position, [Spec, CP], then this position would also have to be of the A-type.

If correct, this conclusion is incompatible with the common view of syntactic positions according to which they are inherently A or A, [Spec, CP] being an example of the latter type. An alternative view is that in Van Urk (2015) (see summary in §4.1 below), where syntactic positions are defined featurally: if a syntactic position is created by an operation that is based on A-features, it is an A-position; if the operation is based on A-features, then it is an A-position. If the present analysis is on the right track then it provides further support for a featural definition of syntactic positions, as opposed to identifying particular positions as being inherently A or A.

### 4.1 A consequence: HR of lower embedded DPs

According to Van Urk (2015), the upshot of a featural definition of syntactic positions is that, as long as there is a syntactic operation that is driven by both A- and A-features (i.e. a composite probe), there should be syntactic positions that display hybrid properties too.¹⁷ Van Urk shows that this is true of movement to [Spec, CP] in Dinka.

Dinka is a V2 language where the phrase that moves to the initial position also triggers ϕ-agreement. This can be seen in (68), where the V2 verb agrees with the object that moved to its left. Notice that the object moves across the subject. ϕ-agreement is a typical property of A-positions, while the skipping over of higher, in principle adequate goals, is a typical property of A-movement.

(68) **V2 and agreement in Dinka** (Van Urk 2015: p. 103)

a. Yịn Ø-ci móc tịịŋ.
   you 2-PREF.OV man.GEN see.NF
   ‘You, the man has seen.’

b. Miir à-càa tịịŋ.
   giraffe 3SG-PREF.1SG see.NF
   ‘A giraffe, I have seen.’

c. Miịrɛ́ à-a-càa ké tịịŋ.
   giraffes 3PL-PREF.1SG 3PL see.NF
   ‘Giraffes, I have seen.’

In order to reconcile these two properties, Van Urk proposes that C in Dinka has both an A- and an A-probe, the fulfilling of which creates a hybrid position, [Spec, CP].

Likewise, in (69), móc ɛgbɛ́ ‘every man’ moves from the embedded clause into the left periphery of the matrix clause. Cross clausal movement is usually taken to be a property of A-movement (HR aside). However, the moved quantifier phrase can bind a pronoun that it moves across. This an obviation of a weak crossover effect, a signature property of A-movement.

¹⁶Thank you to M. Hackl (p.c.) for drawing my attention to this possibility.
¹⁷A composite probe is a probe that is concomitantly looking for an appropriate hybrid goal. It does not suffice that a single head has separate A- and A-probes.
Dinka (VanUrk 2015: p. 110)

\[\text{Mòc ḕbɛ̀́n, à-yí tiéen-dè, luéel [CP ɛ́ that].}\]

man every 3S-HAB-OV woman-SG.3SG say.NF [C ɛ́ cook.SV]‘Every man, his wife says is cooking.’

Again, these properties can be accounted for in a unified way by the proposal that the movement of mòc ḕbɛ̀́n is triggered by a composite A/Ā-probe. This brief summary provides the empirical motivation behind composite probes. See more details in VanUrk (2015).

We now have two ingredients. On the one hand, there is the HR analysis put forth here based on the movement to an intermediate position, [Spec, CP], triggered by an A-feature in COMP. On the other hand, we have the featural definition of syntactic positions, VanUrk (2015). The consequence of this view of syntactic positions is that there could be positions that are defined by both A- and Ā-features. If we combine these ingredients, the expected consequence is that there could be a type of HR that is triggered by a composite A/Ā-probe. This is possibly true of HR to object in Kipsigis and Imbabura Quechua.

Jake & Odden (1979) argue that embedded subjects and non-subject lower arguments can hyperraise in Kipsigis. (70) is a basic paradigm where a DP realized in the matrix clause is interpreted semantically as the subject of the embedded clause. In (70b), the embedded subject bears different tone marking than in (70a). It is also placed inside the matrix clause, where it precedes the matrix subject (Mù:sá).

(70) Kipsigis: matrix DP interpreted as embedded subject (Jake & Odden 1979: (7))

a. mòcè Mù:sá [kòlápát Kíplàŋàt ].
   wants Musa [run Kiplangat ]
   ‘Musa wants Kiplangat to run.’

b. mòcè Kíplàŋàt Mù:sá [kòlápát ].
   wants Kiplangat Musa [run ]
   ‘Musa wants Kiplangat to run.’

(71) is a similar paradigm, but now the DP that is realized in the matrix clause is interpreted not as the embedded subject, as in (70), but as the embedded object.

(71) Kipsigis: matrix DP interpreted as embedded object (Jake & Odden 1979: (11))

a. mòcè Mù:sá [kò-tíl Kíplàŋàt pè:ndò].
   wants Musa [3S.SUB-cut Kiplangat meat ]
   ‘Musa wants that Kiplangat cut the meat.’

b. mòcè pè:ndò Mù:sá [kò-tíl Kíplàŋàt ].
   wants meat Musa [3S.SUB-cut Kiplangat ]
   ‘Musa wants that Kiplangat cut the meat.’

If (71) is an instance of HR of an embedded object (to a matrix object position), then Kipsigis introduces an additional Minimality/Shortest Move/Attract Closest challenge, in that a lower DP is moving across the embedded subject, which is itself a candidate to move, as we saw in (70).

Jake & Odden provide two types of data that suggest that Kipsigis displays HR. First, it obeys locality. In a sentence with three levels of embedding, if the subject (72a) or object (72b) of the most deeply embedded clause hyperraises into the highest clause skipping over the intermediate clause, the result is ungrammatical. In (72a) and (72b), HR is supposed to be expressed by the prefixes that cross-reference the most embedded subject and object, respectively.

(72) Kipsigis: relationship between matrix DP and “gap” obeys locality (Jake & Odden 1979: (18))

   1S-want-2S [3S-make Musa [2S-cut meat ]] Int.: ‘I want that Musa make you cut the meat.’

18V2 agreement in Dinka and HR are similar phenomena, but not completely identical. As we just above, in Dinka any DP may occupy the first position, crossing higher DPs on its way there. In the instances of HR seen so far, it is always the embedded subject that undergoes HR. This is the highest DP in the embedded clause, so that there is no HR across higher DPs that should be equally good candidates for HR. (See however data with exactly this profile in Kipsigis and Imbabura Quechua right below.)
   1s-want-2s [ 3s-make Musa [ 3s-cut-2s Kìplangat ] ]
   Int.: ‘I want that Musa make Kìplangat cut you.’

(72a) and (72b) contrast with prolepsis (in English), where a proleptic constituent (Mary) can be resumed by a proleptic pronoun two clauses down.

(73)  No locality restriction in English prolepsis

I know of Alex [that Max said [that they i are the best candidate for the job]].

Second, if a DP is inactive for further syntactic operations, it is also inactive for HR. In (74a), a passivized object is topicalized. in (74b) the agent of the passive undergoes topicalization, but the result is ungrammatical.

(74)  Kipsigis: agents of passives cannot topicalize (Jake & Odden 1979: (49))

   meat  TOP-PAST-PASS-cut Musa
   ‘The meat was cut by Musa.’

   Musa  TOP-PAST-pass-cut meat
   Int.: ‘The meat was cut by Musa.’

While it is not obvious why (74b) should be ungrammatical, what is relevant to the purposes here is that agents of passives cannot undergo HR either:

(75)  Kipsigis: agents of passives cannot hyperraise (Jake & Odden 1979: (50))

a.  ʒ-mɔ́c e pɛ:ndɔ́ [ kɛ́:-tîl Kìplàŋàt ].
   1s-want meat [ PASS-cut Kìplangat ]
   ‘I want the meat to be cut by Kìplangat.’

b.  * ʒ-mɔ́c Kìplàŋàt [ kɛ́:-tîl pɛ:ndɔ́ ].
   1s-want Kìplangat [ PASS-cut meat ]
   Int.: ‘I want the meat to be cut by Kìplangat.’

The ungrammaticality of (75b) must be contrasted with the well-formedness of the sentences in (71) above. In both, the matrix verb is mɔ́c ‘want’ and in both sentences the same DP surfaces in the matrix clause (Kìplàŋàt). If these constructions were just instances of prolepsis, (75b) and (71) should both be equally well- or ill-formed, contrary to fact. There is some suggestion then that these Kipsigis sentences are instances of HR and not of prolepsis.

Something along these lines can also be said of Imbabura Quechua, which Jake (1985) argues displays HR out of nominalized clauses. (76) is a basic paradigm, where a DP that surfaces in the matrix clause obligatorily with accusative case is interpreted as the semantic embedded subject.

(76)  Imbabura Quechua: matrix DP interpreted as embedded subject (Jake 1985: p. 158ff)

a.  Maria-ca cri-n [ Francisco cay-pi  ca-j-ta ].
   Maria-TOP believe-3 [ Francisco here-in be-PRES-ACC ]
   ‘Maria believes that Francisco is here.’

b.  Maria-ca  Francisco°(-ta) cri-n  [ cay-pi  ca-j-ta ].
   Maria-TOP  Francisco°(-ACC) believe-3  [ here-in be-PRES-ACC ]
   ‘Maria believes that Francisco is here.’

Besides being interpreted as the embedded subject, a matrix DP in Imbabura Quechua can also be interpreted as lower arguments. (In the sentences below, -mi seems to be an evidentiality marking of sorts. According to Jake (1985), this marking can occur in matrix elements, so that it gives us reason to think that the DPs in question are indeed placed somewhere in the matrix clause.)
Imbabura Quechua: matrix DP interpreted as embedded object (Jake 1985: p. 166)

   [ he you-DAT soup-ACC serve-PST-ACC ] think.1SG
   ‘I think that he served you some soup.’

b. api-ta yuya-ni [ pai can-man cara-shca-ta ].
   soup-ACC think.1SG [ he you-DAT serve-PST-ACC ]
   ‘I think that he served you some soup.’

c. can-da yuya-ni [ pai api-ta cara-shca-ta ].
   you-ACC think.1SG [ he soup-ACC serve-PST-ACC ]
   ‘I think that he served you some soup.’

Imbabura Quechua: matrix DP interpreted as embedded instrumental (Jake 1985: p. 168)

a. Ruza Tyia ricu-ju-n [ ñuca pala-wan alla-j-ta ].
   Rose Aunt see-PROG-3 [ I shovel-INSTR dig-PRES-ACC ]
   ‘Aunt Rose sees me digging with a shovel.’

b. Ruza Tyia pala-ta-mi ricu-ju-n [ ñuca alla-j-ta ].
   Rose Aunt shovel-ACC-WIT see-PROG-3 [ I dig-PRES-ACC ]
   ‘Aunt Rose sees me digging with a shovel.’

Imbabura Quechua: matrix DP interpreted as embedded beneficiary (Jake 1985: p. 168)

   that woman [ I boss-BEN work-PRES-ACC ] know-3
   ‘That woman knows I work for the boss.’

b. chai warmi amu-ta-mi [ ñuca trabaja-j-ta ] yacha-n.
   that woman boss-ACC-WIT [ I work-PRES-ACC ] know-3
   ‘That woman knows I work for the boss.’

Even though there seems to be some freedom in which lower argument the matrix accusative DP can be interpreted as the DP surfaced in the matrix clause, this does not hold of all embedded DPs. Comitatives, for example, cannot. This provides the first suggestion that these Imbabura Quechua sentences are instances of HR. (Compare (80) with the Kipsigis (75b), where the embedded agent of passive cannot be hyperraised.)

Imbabura Quechua: matrix DP cannot be interpreted as embedded comitative (Jake 1985: p. 175)

a. can-ga ricu-rca-ngui-chu [ chai jari ñuca wan tushu-ju-j-ta ].
   you-TOP see-PST-2SG-Q [ that man I-COM dance-PRES-ACC ]
   ‘Did you see that man dancing with me?’

b. * can-ga ñuca-ta ricu-rca-ngui-chu [ chai jari tushu-ju-j-ta ].
   you-TOP I-ACC see-PST-2SG-Q [ that man dance-PRES-ACC ]
   Int.: ‘Did you see that man dancing with me?’

The ungrammaticality of (80) does not seem to attributable to an interaction between the matrix verb and a pronoun, since the sentence (81b), which has a similar make-up, is grammatical.

Imbabura Quechua: matrix DP can be a pronoun (Jake 1985: p. 161)

a. ñuca ricu-rca-ni [ can calpa-ju-j-ta ].
   I see-PST-1SG [ you run-PRES-ACC ]
   ‘I saw you running’

b. ñuca can-da ricu-rca-ni [ calpa-ju-j-ta ].
   you-ACC see-PST-1SG [ run-PRES-ACC ]
   ‘I saw you running’

25
The second suggestion is provided again by locality patterns. With three levels of embedding, if the matrix verb tries to agree with the lowest subject directly, the result is ungrammatical, as in (82b), agreement taken to be a morphological reflex of HR in (82). If the intermediate clause also displays agreement, as in (82c). Recall that the ill-formedness of (82b) is not really expected under a prolepsis account.

(82) *Imbabura Quechua: relationship between matrix DP and “gap” obeys locality (Jake 1985: p. 177)

   [ you [ 1 go-PRES-acc ] see-PST-ACC ] think-3
   ‘He thinks that you saw me go.’

   [ you [ go-PRES-acc ] see-PST-ACC ] think-me-3
   Int.: ‘He thinks that you saw me go.’

   [ you [ go-PRES-acc ] see-me-PST-ACC ] think-me-3
   ‘He thinks that you saw me go.’

In sum, there is some suggestion that Kipsigis and Imbabura Quechua have HR and furthermore of a particular type: an embedded argument that is lower than the subject can also hyperraise. As mentioned, this introduces an extra minimality problem. I propose that in this type of construction, C has not only an A-probe, but also an A-probe, that is, a composite A/A-probe in the sense of Van Urk (2015). An appropriate goal for this type of hybrid probe has to have matching features. If the embedded subject does not have them, it will be skipped over, analogously to garden-variety A-movement. Conversely, if the object bears A/A-features, it will be an adequate goal, allowing it to be hyperraised. The proposal can be schematized as follows:

(83) [CP ... T/v ... [CP DP APA ... [CP COMP APA ... DP APA ...]]]

Under this view, there actually is no minimality violation in the derivation of the Kipsigis and Imbabura Quechua sentences where a lower argument seems to be hyperraising. The embedded object or another non-core argument can raise across the embedded subject because it is the only appropriate goal for a composite probe.

Once we propose an A-feature in C and allow for the possibility of composite probes, the possibility of C bearing a probe of the latter type comes out as a free option. I tried to show here that the Kipsigis and Imbabura Quechua HR of the embedded object or a non-core argument across the subject could be an instantiation of this expectation. If the HR analysis proposed here, we end up with the following typology of probes in C:

(84) a. Single A-probe in C: garden-variety A-movement

b. Single A-probe in C: hyperraising of embedded subject

c. Composite A/A-probe in C: hyperraising of embedded DP that is not necessarily the highest in the embedded clause

To wrap up this section, I should mention that Seiter (1978; 1980) also analyzes raising constructions in Niuean that have the same profile as the data discussed here: certain subjunctive complements where all DPs can be licensed also allow for the raising of subjects and, relevantly to the purposes of this section, of objects too. The composite probe analysis proposed here could in principle be compatible with the Niuean data as well. However, Longenbaugh & Polinsky (2018) show that it is a general property of the language that both subjects and the objects can be legitimate targets of syntactic operations like Wh-movement and genitive conversion, even though the subject asymmetrically c-commands the object. The raising pattern mentioned above is thus just an instance of an overarching pattern in Niuean. Longenbaugh & Polinsky propose an analysis of this data that is based on equidistance: the object in Niuean moves out of the VP and into the vP, so that it becomes part of the same minimal domain as the subject. As a consequence, subjects and objects become legitimate goals for the purposes of raising, Wh-movement, and genitive conversion.
Needless to say, more investigation on Kipsigis and Imbabura Quechua is called for. The purpose here was to draw attention to a set of data that could be made sense of if HR can also be triggered by a composite A/Ā-probe.

4.2 Interim summary

We have seen that the description of HR as a biclausal sentence where the complement is finite and yet the subject raises from there is empirically sound. We also excluded any plausible alternative analyses that do not include movement. Specifically, we saw that reducing HR to copy-raising or prolepsis is not tenable. We then moved on to the proposal I make in this paper, namely, that HR involves an intermediate movement step at [Spec, CP]. This allows us to sidestep the PIC problem, since the edge of a phase is visible by a probe in the containing phase. Indirect support for the reality of [Spec, CP] in the derivation of HR was furnished by medial-raising in Mongolian. To recall, in medial-raising, the embedded subject can stop off at a high position still inside the embedded clause. I also proposed that it is A-features placed in C that drive the movement of the embedded subject to the edge of the embedded clause. The empirical basis for the proposal was the fact that HR can create a new antecedent for binding in Japanese, feed passivization in Korean and in Japanese, and trigger ϕ-agreement in BP. These are hallmarks of A-movement. If correct, an implication of this analysis is that it argues in favor of a featural definition of syntactic positions. Van Urk (2015) observes that, if we take this view to its logical conclusion, we may expect for there to be hybrid syntactic positions that display both A- and Ā-properties. I tentatively argued that HR to object in Kipsigis and Imbabura Quechua could be an instance of movement triggered by a composite A/Ā-probe to [Spec, CP], seeing that it is able to hyperraise a lower argument across the subject.

Next, I explore further the idea that [Spec, CP] is relevant in the derivation of HR in order to provide an answer to the case problem.

5 HR as an instance of multiple case assignment

It seems that HR constructions involve the movement of a DP passing through two case positions. Consider for instance the Mongolian data in (5), repeated below as (85).

\begin{quote}
(85) Case marking in HR to object in Mongolian
\begin{enumerate}
\item a. Bat chang-aar [Dorj sain seheettin gej] khel-sen.
   Bat loud-INSTR [Dorj NOM good noble COMP] say-PST
   ‘Bat said loudly that Dorj is good and noble.’
\item b. Bat Dorj-iiig chang-aar [t sain seheettin gej] khel-sen.
   Bat Dorj-ACC loud-INSTR [t good noble COMP] say-PST
   ‘Bat said loudly that Dorj is good and noble.’
\end{enumerate}
\end{quote}

In (85a), the embedded subject is marked with nominative case, as expected. In (85b), it has moved into the matrix clause, as established in section §2. The landing site is an accusative case position. As mentioned, this is a violation of the Activity Condition (8), as it is applied to DPs: an unvalued case feature renders a DP active in the derivation, but once it is valued, the Activity Condition dictates that the DP should not enter into further A-relations, including raising. In this section, we examine data from Nez Perce, Janitizio P’uerhepecha, and Korean, that suggest that HR is an instance of a construction where a DP is assigned more than one case. In other words, the data to be examined suggest that HR is an instance of multiple case assignment (Béjar & Massam 1999; see also Richards 2013 and Levin 2017). In a multiple case assignment structure, the same DP is assigned more than one case.

As we saw in (19b), repeated below as (86), in Janitizio P’uerhepecha the embedded subject may hyperraise into an accusative case position, leaving behind a quantifier with the nominative case an embedded subject is expected to be assigned.
Intransitivesubjectsaremakedwith,nominativecase.Intheprolepsisconstruction(thermalternativepossessionconstruction,whiletheaccusativecasemustbecomingfromthematrixclause.

Basedonthesefacts,DPstillcountsasamatrixobject,asindicatedbythetransitiveagreementandcasepatterninthematrixDPdisplaysthemorphologyofatypical(non-hyperraised)embeddedsubject.Nonetheless,thelessimplehyperraised

NezPerceiscovert.Wealreadysawin§

explainingawaythetransitivecaseandagreementinthematrixclause.Specifically,
intransitive,thesubjectismarkedwithnominativecase.

thecaseexpecteddownstairs,ergativein(acin

verbhasanadditionalnominalobject,Angel.
The matrix verb now displays agreement with both the subject and the object (the portmanteau affix pee-). The subject and the object, furthermore, display the cases expected for a transitive verb, ergative and accusative, respectively. The accusative DP is cross-referenced by a (proleptic) pronoun intheembeddedclause. Finally, the covert HR sentence inNezPercehasacombinationofthepropertiesofthetwootherconstructions. The matrix subject is marked with the ergative case characteristic of transitive subjects and the matrix verb displays a portmanteau agreement affix thatcross-references a subject and an object, as in (87b). However, there is no matrix accusative DP in (87c), as there is in (87b). Rather, the embedded subject position is filled with an overt DP that bears the case expected downstairs, ergative in (87c), as in (87a).

(87) NezPerce: subcategorization pattern of neki ‘think’ (adapted from Deal 2017: (5/7/11))

a. Taamsas hi-neki-se [CPAngel-nim hi-naas-wapayata-ca mamay’as-na].
   ‘Taamsas thinks Angel is helping the children.’

b. Taamsas-nim pee-nek-se Angel-ne [CP pro hi-naas-wapayata-ca mamay’as-na].
   ‘Taamsas thinks Angel is helping the children.’

c. Taamsas-nim hi-nees-nek-se [CP mamay’as-nim poo-payata-six Angel-ne].
   ‘Taamsas thinks the children are helping Angel.’

In (87c), the embedded verb is transitive, so that the subject bears ergative case. Conversely, if the verb is intransitive, the subject is marked with nominative case.

(88) Nez Perce (Deal 2017: (10))

Harold-nim hi-nees-nek-se [CP hitemenew’eeet hi-wsiix wiweepcux].
   Harold-ERG 3SUBJ-O.PL-think-imperf [student.NOM 3SUBJ-be-PRES.PL smart]
   ‘Harold thinks the students are smart.’

Despite the surface order, Deal (2017) analyzes sentences like (87c) and (88) as involving HR to object, explaining away the transitive case and agreement in the matrix clause. Specifically, Deal argues that HR in Nez Perce is covert. We already saw in §2 that it obeys islands (see (21b)). (Deal 2017: (9) also shows that prolepsisin Nez Perce does not display island sensitivity.) Because this operation is covert, the hyperraised DP displays the morphology of a typical (non-hyperraised) embedded subject. Nonetheless, the hyperraised DP still counts as a matrix object, as indicated by the transitive agreement and case pattern in the matrix clause. Based on these facts, Deal (2017) concludes that Nez Perce counts as an instance of a multiple case assignment construction.

Finally, case stacking in Korean may display, undercertain conditions, the cases from the embedded and from the matrix clause stacked in the hyperraising DP. In (89), the innermost dative case comes from the embedded possessive construction, while the accusative case must be coming from the matrix clause.

Zyman (2017) argues that this is a suggestion that nominative case is available in the embedded clause, in addition to the accusative case that the hyperraised DP receives in the matrix clause. Alternatively said, HR to object in Janitzio P’urhepecha seems to be an instance of multiple case assignment.

Next we turn to covert HR to object in Nez Perce. According to Deal (2017), a verb like neki ‘think’ may take three types of complements, a canonical CP complement (87a), a nominal, along with a CP that contains a proleptic pronoun (87b), and a covert HR to object CP (87c). In the canonical CP complement structure (87a), the matrix verb does not display object agreement and the subject Taamsas bears the case that intransitive subjects are marked with, nominative case. In the prolepsis construction (87b), the matrix verb has an additional nominal object, Angel. The matrix verb now displays agreement with both the subject and the object (the portmanteau affix pee-). The subject and the object, furthermore, display the cases expected for a transitive verb, ergative and accusative, respectively. The accusative DP is cross-referenced by a (proleptic) pronoun in the embedded clause. Finally, the covert HR sentence in Nez Perce has a combination of the properties of the two other constructions. The matrix subject is marked with the ergative case characteristic of transitive subjects and the matrix verb displays a portmanteau agreement affix that cross-references a subject and an object, as in (87b). However, there is no matrix accusative DP in (87c), as there is in (87b). Rather, the embedded subject position is filled with an overt DP that bears the case expected downstairs, ergative in (87c), as in (87a).
Case stacking in Korean (adapted from Yoon 2007: (55a))

I-TOP Cheli-DAT-(only)-ACC [ t [ problem-NOM exist-COMP ] ] think

‘I think that only Cheli has problems.’

If (89) is a Mirror Principle-complying structure (Baker 1985), then the morpheme ordering may also be revealing of the steps of the syntactic derivation. But more investigation is necessary. For a general theory of case stacking in Korean, see Levin (2017).

Similar data is found in Romanian, but without stacking. It is possible for dative subjects to hyperraise to a matrix object position, but the latter is realized with accusative case.

Romanian: dative subject hyperraises to accusative position (Alboiu & Hill 2016: p. 269)

a. Am văzut [ că (lui Ion) i-a fost foame ].
   have.1SG seen [ that (the.DAT Ion) to.him-has been hungry ]
   ‘I saw that Ion was hungry.’

b. L-am văzut pe Ion [ că i-a fost foame ].
   him-have.1SG seen  DOM Ion [ that to.him-has been hungry ]
   ‘I saw that Ion was hungry.’

c. * I-am văzut lui Ion [ că i-a fost foame ].
   to.him-have.1SG seen the.DAT Ion [ that to.him-has been hungry ]

In this section, we examined HR data where there is morphological evidence of the cases assigned both in the matrix and in the embedded clause. There is reason then to consider that HR is an instance of multiple case assignment (Béjar & Massam 1999, a.o.), that is, a type of construction where the same DP is assigned more than one case. In the next section, I Levin (2017)’s theory of multiple case assignment, which is couched on a dependent case framework.

5.1 Movement to the edge feeds case assignment

The section above was dedicated to showing that HR is an instance of multiple case assignment (Béjar & Massam 1999), as already suggested by Alboiu & Hill (2016) and Deal (2017) about HR to object Romanian and in Nez Perce, respectively. In this section, I propose a particular implementation of multiple case assignment, based on a modification of the dependent case theory. As we will see below, this particular approach to case is chosen due to the properties of HR to object in Sakha. Specifically, I assume a phase-grounded version of dependent case and propose that the same DP can be assigned more than one case as long as it can move out of the phase where case is assigned. Recall that the present analysis of HR rests precisely on the embedded subject moving between CP phases via [Spec, CP].

The two common views of case can be modified in order to formalize multiple case assignment. If we conceive of case as being assigned by a dedicated functional head (Chomsky 2000; 2001, a.o.), we could say that the same DP can be assigned case by different functional heads in the same derivation. Alternatively, if we assume a dependent case view (Marantz 2000; Baker & Vinokurova 2010; Baker 2014; Levin & Preminger 2015, a.o.), then we could propose that the same DP can enter the disjunctive case hierarchy more than once.

I choose the dependent case option over the view that case is assigned by functional heads on empirical grounds. We saw in §2 that Sakha (Baker & Vinokurova 2010) is an HR to object language. As Baker & Vinokurova (2010) emphasize, what is remarkable about HR to object in Sakha is that it allows for an accusative embedded subject, even in the absence of a functional head that is able to assign this case. In (91a), the matrix verb xomoj ‘become sad’ is intransitive; it is to be contrasted with its transitive counterpart xomot ‘make sad’. Nevertheless, the hyperraised DP Aisen bears accusative case. Similarly, in (91b) the matrix verb is passivized. Passivization is usually taken to prevent a verb from assigning accusative case. But gain the hyperraised DP bears accusative case.

(90) Similar data is found in Romanian, but without stacking. It is possible for dative subjects to hyperraise to a matrix object position, but the latter is realized with accusative case.
(91) **ACC without ACC assigner in HR to object in Sakha** (Baker & Vinokurova 2010: (37/38))

   Keskil Aisen-ACC [ come-NEG.AOR.3SS that ] become.sad-PAST.3SS
   ‘Keskil became sad that Aisen is not coming.’

b. Sargy **kim-i daqany** [ tönün-ümū dien ] erenner-îlin-ne.
   Sargy.NOM who-ACC PRT [ return-NEG-3SS that ] promise-PAS-PST.3SS
   ‘Sargy was promised that nobody would return.’

Baker & Vinokurova (2010) remark that the presence of accusative in (91a) and (91b) in intransitive sentences poses a serious challenge to the view that case is assigned by dedicated functional heads, since there is no accusative case assigner in the matrix clause of these sentences. However, a configurational approach to case can predict this data (an overview of dependent case is right below). Briefly, under Baker & Vinokurova (2010)’s analysis, in (91a) and (91b), the hyperraised DP becomes part of the same case assignment domain as a DP that is base-generated there. The higher DP acts as a case competitor, causing the hyperraised DP to be assigned downwards dependent case, accusative.19

I will capitalize on the proposal put forth here that HR involves the movement of a DP across phases, phases being the domain where case assignment is determined. Specifically, I assume Baker (2014)’s implementation. In a dependent case system, the case marking a DP bears does not depend on the presence of dedicated functional heads. Rather, case is calculated based on the presence or absence of other DPs, called ‘case competitors’, in a given domain. Case assignment obeys a hierarchy of different types of case:

(92) **Disjunctive case hierarchy** (Marantz 2000)

    lexical case ≫ dependent case ≫ unmarked case ≫ default case

First, all lexically determined cases are assigned. Lexical case assignment takes a DP out of the case competition. Next, dependent case is assigned. As hinted at above, the assignment of this type of case requires the presence of another case competitor DP. The dependent cases in nominative/accusative case systems and ergative/absolutive case systems are accusative and ergative, respectively. The definition of dependent accusative case, which is what we will deal with here, is below.

(93) **Dependent accusative case** (Baker 2014)

    If there are two distinct argumental NPs in the same phase such that NP₁ c-commands NP₂, then value the case feature of NP₂ as accusative unless NP₁ has already been marked for case.

Finally, any DP that has not received lexical nor dependent case is assigned unmarked case, nominative or absolutive.

The definition in (93) is based on phases being the domains. Baker (2014)’s particular implementation of a phase-based dependent case system has the following components:

(94) **Phase-based dependent case** (adapted from Baker 2014: p. 343/355)

a. C and v are phase heads.

b. Their complements (IP, VP) are Spell-Out domains.

c. Spell-Out involves mapping relevant c-command relations onto linear order statements, case assignment, and so on.

d. CP is always a ‘hard phase’: its complement is invisible for later operations.

e. vP may be a ‘hard phase’ or a ‘soft phase’. It is if soft, the contents of its complement do remain visible in the next stage of derivation, but only c-command relationships are considered at later spell-outs.

19See however Bondarenko (2017), who shows that HR to object in Buryat is prohibited from the complement of verbs that are unable to assign accusative case. Bondarenko argues convincingly that this impossibility would not accord well with a dependent case view of case, since, regardless of the case assigning properties of the matrix verb, there is always a DP in the matrix clause that should be able to feed dependent case in the hyperraised DP.
We have described HR as involving the movement of a DP from an embedded finite clause into the embedding clause, also a finite domain. Given that finite clauses (CPs) are phases, HR can be restated as the movement from one phase to another and likewise, from one domain of case assignment to another. Even though CP is a hard phase, as stated in (94d), the analysis provided allows for a way of the embedded subject to move out of the embedded phase through [Spec, CP]. This allows the hyperraising DP to be assigned case in the embedded phase before it moves to [Spec, CP], where it becomes part of a matrix phasal case assignment domain.

That the hyperraised DP and a matrix subject are visible to each other is suggested by binding facts, as initially observed by Baker & Vinokurova (2010) regarding HR to object in Sakha, (95). If the embedded subject is nominative, no Condition B violation is incurred. In contrast, if the embedded subject bears accusative case (i.e. if it has hyperraised), the result is ungrammatical if the accusative DP is co-indexed with the matrix subject. Baker & Vinokurova suggest that this could be taken as evidence that the hyperraised DP is accessible to the matrix subject, the latter feeding dependent case in the former. (And recall the binding data in Mongolian discussed in §3.1.)

(95) Binding in HR to object in Sakha (Baker & Vinokurova 2010: (41))

a. [ Sarsyn min bar-a-byn dien ] ihit-ti-m.  
   [ tomorrow I(NOM) leave-AOR-1sS that ] hear-PAST-1sS
   ‘I heard that I am leaving tomorrow.’

   [ I(ACC) tomorrow leave-AOR-1sS that ] ] hear-PAST-1sS
   ‘I heard (of me) that I am leaving tomorrow.’

As in the proposal in Béjar & Massam (1999), a DP is marked with case multiple times by virtue of passing through more than one case position. But this possibility is restricted by the availability of a means to A-move a DP out of a phase where case is calculated. In the present analysis, the means is provided by the A-features in C, which trigger the movement of the embedded subject (or possibly of a lower DP if C bears a composite probe). We can formalize multiple case assignment in HR as in (96), which is directly based on Levin (2017)’s theory of case stacking:

(96) Multiple case-marking across phases

A DP can enter the disjunctive case hierarchy again, as long as it is able to move from one domain of case assignment (a CP phase) into another.

We now have all the ingredients in place to model multiple case assignment in HR. The derivation starts in (97a), where the embedded CP (marked with a ‘*’ to distinguish it from the matrix CP) is derived. This is a domain of case assignment, according to (94). The subject DP1 feeds dependent case to the object DP2 (accusative). DP1 is assigned unmarked case (nominative). The derivation continues in (97b), where CP* is embedded under the matrix CP. The A-features in C trigger the movement of the embedded subject DP1 to [Spec, CP]. As a consequence of this movement, DP1 becomes part of the case assignment of the matrix clause. According to the proposal in (96), this allows DP1 to participate in another iteration of case assignment. Now the matrix subject DP3 feeds accusative case in the embedded subject.
In this analysis, a second case is assigned to the embedded subject while it sits in [Spec, CP], that is, while it is still within the embedded clause. This adequately accounts for the medial-raising data in §3.1.

6 Concluding remarks

This paper set out to provide a solution to the questions in (9), repeated below as (98).

(98)  
    a. **PIC problem**: how come a DP inside a finite embedded CP, a phase, can Agree with a probe (T or v) in the embedding clause?  
    b. **Case problem**: how come a DP moves from a case position in the embedded clause into another case position in the embedding clause?

The main proposal I made was that movement to the edge of the embedded clause was a necessary intermediate step of movement. This proposal capitalized on the escape hatch position that is built into the definition of the strong version of the PIC. But it received some empirical support from Mongolian (and Buryat, Bondarenko 2017), where the medial-raised subject can in fact stay inside the embedded clause. The edge of the embedded provides this dual position, since it is still inside the embedded clause, while also being accessible to a matrix probe.

Taking into consideration the fact that HR can feed A-movement in Japanese, Korean, and BP, I also proposed that [Spec, CP] is an A-position. This runs counter to the common assumption that [Spec, CP] is necessarily an A-position. If it is on the right track, this analysis provides further support for a featural definition of syntactic position (Van Urk 2015). With the addition of composite probes, a free outcome of the analysis is that it is capable to account for the variety of HR that is found in Kipsigis and Imbabura Quechua, where a DP that is lower than the embedded subject seems to be able to hyperraise. If the proposal put forth here is on the right track, it lends further support to a featural view of syntactic positions, as well as to composite, A/A-probes.

It is possible that the present analysis also has some bearing on the locality of case assignment. In §3.1, we saw that an embedded finite subject in Mongolian can receive accusative case from the matrix v without

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20This section, specially the potential implications of the analysis and the part concerning the restrictiveness of HR, benefited a great deal from discussion with D. Fox (p.c.) and M. Hackl (p.c.).
exiting the embedded clause. We also saw that that this DP has to occupy a position (namely, [Spec, CP])
that is higher than the canonical subject position, [Spec, TP]. If correct, the analysis is informative of the
locality of case assignment. Specifically, case can be assigned across a phase, but the DP that will receive
that case has to be at least as high as the edge of that phase.

A question that I did not address here is why is HR so restricted. To recall, I proposed that HR is derived
by a dedicated complementizer that has A-features, along with the possibility of case stacking. We could
hypothesize that HR is found only in a handful of languages because it requires a combination of these
particular components. As such, it could be the case that HR will be unavailable in languages where [Spec,
CP] is exclusively an A position, that is, a matrix probe (T or v) could not agree with a DP that moved to
this A position. But even if Agree with a DP in an A position were possible in a given language, HR will
still be ruled out if it does not allow for case stacking.

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21If Polinsky & Potsdam (2001)’s and Bruening (2002)’s analyses of long distance agreement are correct, then the ban against Agree
with DPs in Â-positions cannot be stated as a universal prohibition. In these analyses, the DP that is Agreed with at long distance
occupies precisely this type of position.


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