# Hyperraising in Kalaallisut

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## 1   Introduction

Hyperraising has been documented in a diverse set of languages and shown to have implications for our understanding of case, movement, and their interactions (e.g. Fong 2018, Halpert 2019, Halpert & Zeller 2015, Nunes 2008, Potsdam & Polinsky 2012, Zyman 2018). In what follows I investigate hyperraising to object in Kalaallisut (Inuit, Greeland, iso:kl) and discuss its implications for movement, locality, case, and syntactic ergativity. In terms of movement, the conclusion reached is that a higher or a lower copy of a movement chain may be pronounced in Kalaallisut (cf. Boskovic & Nunes 2007). As regards locality, I argue that absolutive and ergative DPs are co-specifiers of CP and as such equidistant to a higher matrix hyperraising probe (Longenbaugh & Polinsky 2018). The key claim relating to case is that copies of a single movement chain may bear distinct cases, which adds a new perspective on the Dependent Case analysis of the Kalaallisut case system developed by Bittner & Hale (1996) and Yuan (2018, 2022). Finally, Kalaallisut hyperraising informs us about the nature of syntactic ergativity in the language. In particular, the fact that ergative subjects can hyperraise suggests that the impossibility of extracting ergative subjects in relativization might not be due to generalized inversion of the absolutive argument over the ergative argument, contra prevailing views (Aldridge 2004, Bittner 1994, Bittner & Hale 1996, Coon *et al.* 2014, Coon *et al.* 2021, Murasugi 1992, 1997a, 1997b, Yuan 2018, 2022).[1]

An additional goal of the paper is to provide a thorough description of hyperraising to object in Kalaallisut. The construction is mentioned briefly in descriptive grammars of Kalaallisut (Fortescue 1984:38, Sadock 2003:32; see also Kleinschmidt 1851:73-74), but, to the best of my knowledge, has not been discussed in the theoretical literature. Unless noted otherwise, the data in this paper comes from the second author, who grew in Upernavik in North West Greenland in the 1950s. The analysis and theoretical claims were developed by the first author.

The rest of this introduction provides relevant background on the morphosyntax of the language. Section 2 argues that we are indeed dealing with hyperraising and not prolepsis or long-distance agreement. Section 3 develops an analysis of raising of intransitive subjects. This analysis is extended to raising of objects and transitive

subjects in section 4 and to covert hyperraising in section 5. Section 6 examines the predictions of the analysis and considers two alternative analyses. Section 7 discusses the case properties of the construction and section 8 its implications for the analysis of syntactive ergativity. Section 9 concludes.

Kalaallisut is polysynthetic with noun incorporation (Sadock 1980) and pro drop (Yuan 2018:154). Unmarked order is SOV, though other orders are possible (Fortescue 1984:93ff, Kleinschmidt 1851/1968:98–101). Case alignment is ergative-absolutive. Absolutive is morphologically unmarked and there is no morphological ergative/absolutive case distinction in pronouns and plural nouns. Verbs agree with subject and object and agreement is exponed with mood.[2] These properties are illustrated by the examples in (1)-(3)[3,4]

(1) Naja-**p**      Juuna       ikior-**paa**.
    Naja-ERG Juuna.ABS help-3SG>3SG.IND

    Naja helped Juuna.                                              12/11/2022 AFX

(2) Juuna        angerla-jaar-**poq**.
    Juuna.ABS leave-early-3SG.IND

    Juuna left early.                                              12/11/2022 AFX

(3) **Kaagi**-sor-uma           ajori-ssu-akkit.
    cake-consume-2sg.con angry-FUT-1SG>2SG.IND

    If you eat the cake, I'll be angry with you.          5/15/2023 ANM

Complement clauses typically appear after the verb and trigger 3SG object agreement on the matrix verb (Fortescue 1984:34):[5]

(4) Ilisima-**vaa**           urni-ssa-giga.
    know-3SG>3SG.IND come.to-FUT-1SG>3SG.PART

    He$_i$ knew that I would come to him$_j$.                    (Fortescue 1984:36)

In what follows, raising patterns are primarily illustrated with *eqqaama-* 'remember' below, but hyperraising is possible with each of the monotransitive clausal

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[2]There are eight moods; four independent moods found only in main clauses and four dependent moods found in dependent clauses. Most relevant here are the INDICATIVE (independent) and PARTICIPIAL (dependent) moods.

[3]Each example is annotated with the date of elicitation and the letter-code for the relevant page in my note book.

[4]Glossing conventions: ABS = absolutive; AP = antipassive; CON = conditional mood; CONJ = conjunction; ERG = ergative; FOC = focus; FUT = future; IND = indicative mood; INST = instrumental; PART = participial mood; POSS = possessive; SBJ = subjunctive. Though the absolutive-ergative distinction is morphologically neutralized in pronouns and plural nouns, I gloss these ERG and ABS based on their syntactic function.

[5]There are a dozen intransitive embedding verb, including *isumaqar-* 'think', which agree only with the matrix subject. As expected, they do not allow hyperraising and I set them aside.

embedding predicates we have examined to date.[6] Throughout the paper, I use DP$^\oplus$ for the raised DP, following Deal (2017a).

## 2 Hyperraising

The agreement pattern in (5), with a null 2SG pronominal DP$^\oplus$, could represent at least three distinct configurations:

(5) Nassuiaap-**pakkit**    angerla-jaar-tutit.
    explain-1SG>⟮2SG⟯.IND leave-early-2SG.PART

    I explained that you left early.             10/1/2022 AG

    a. PROLEPSIS: **pro**$_i$  V-1SG>**2SG** [$_{CP}$ **pro**$_i$ V]

    b. LONG-DISTANCE AGREEMENT: V-1SG>**2SG** [**pro** V]

    c. HYPERRAISING: **pro**  V-1SG>**2SG** [$_{CP}$ ~~**pro**~~ V]

Under the prolepsis analysis in (5a), the matrix verb agrees locally with a null pronoun that is base-generated in the matrix clause (Salzmann 2017). This matrix pronoun shares $\phi$-features with a co-indexed pronoun in the embedded clause giving the appearance of matrix agreement with an embedded argument. This analysis can be contrasted with the long-distance agreement analysis in (5b), where the matrix verb in fact agrees with the embedded argument across a clause boundary (Polinsky & Potsdam 2001, Branigan & MacKenzie 2002). A third possible analysis, and the one I will be arguing for here, is hyperraising (5c): a single null pronominal is generated in the embedded clause, moves to the matrix clause, and Agrees locally with the matrix verb (Fong 2018, Halpert & Zeller 2015, Zyman 2018).

### 2.1 Evidence for hyperraising

The first piece of evidence for hyperraising is the fact that an overt DP$^\oplus$ can be realized in the matrix clause.

(6) **Illit**    eqqaama-**vakkit**    angerla-jaar-tutit.
    ⟮2SG⟯.ABS remember-1SG>⟮2SG⟯.IND leave-early-2SG.PART

    I remember that you left early.         11/6/2022 ACU

This observation is consistent with both hyperraising and prolepsis, but not with long-distance agreement.

    Secondly, DP$^\oplus$ cannot be realized in both the embedded and the matrix clause.

(7) \***Illit**    eqqaama-vakkit    **illit**    angerla-jaar-tutit.
    2SG.ABS remember-1SG>2SG.IND 2SG.ABS leave-early-2SG.PART

    Intended: I remember that you left early.     11/13/2022, ADG

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[6]*annilaangagi-* 'be afraid that'; *eqqaa-* 'mention'; *eqqaama-* 'remember'; *ilimagi-* 'expect'; *ilisima-* 'know'; *isumaqatigiip-* 'agree'; *kissaatigi-* 'wish'; *malugi-* 'notice'; *nalu-* 'not know'; *nalunngit-* 'know'; *nassiuaa-* 'explain'; *oqaatigi* 'mention'; *oqaluttuari-* 'talk about'; *oqaluuseri-* 'discuss'; *paasi-* 'understand'; *pileriar-* 'discover'; *puior-* 'forget'; *qulari-* 'doubt; *qutsavigi-* 'be glad that'; *siunnersuutigi-* 'suggest'; *taku-* 'see'; *tupigi-* 'be surprised that'; *tusaa-* 'hear'.

This prohibition follows straightforwardly from a movement analysis: there are not two independent DPs to pronounce.[7] The lack of co-occurrence of matrix DP$^\oplus$ and embedded DP pronoun is furthermore evidence against a prolepsis analysis in which a base-generated DP in the upstairs clause is co-indexed with a base-generated pronoun in the downstairs clause. If there are two base-generated pronouns, one upstairs and one downstairs, we expect it to be possible to pronounce both.[8]

The third piece of evidence for movement comes from the locality profile of the construction. In sentences with two layers of embedding it is possible to: i) not raise anything (8); ii) raise a DP from the lowest clause to the middle clause (9); iii) raise a DP from the middle to the highest clause (10); and iv) raise a DP from the lowest clause through the middle clause to the highest clause (11). What is not possible is to raise a DP from the lowest clause to the highest clause without stopping off in the middle clause. This is illustrated by the ungrammaticality of (12), in which the lowest and highest clauses show agreement with DP$^\oplus$, but the middle clause does not.

(8)  Taku-ara          malugi-gaat          angerla-jaar-tutit
     see-1SG>$\boxed{\textbf{3SG}}$.IND notice-3PL>$\boxed{\textbf{3SG}}$.PART leave-early-2SG.PART
     I saw that they noticed that you left early.          10/30/2022 ABZ

(9)  Taku-ara          malugi-gaatsit          angerla-jaar-tutit.
     see-1SG>3SG.IND notice-3PL>$\boxed{\textbf{2SG}}$.PART leave-early-$\boxed{\textbf{2SG}}$.PART
     I saw that they noticed that you left early.          10/30/2022 ABZ

(10) Taku-akka          malugi-gaat          angerla-jaar-tutit
     see-1SG>$\boxed{\textbf{3PL}}$.IND notice-$\boxed{\textbf{3PL}}$>3SG.PART leave-early-2SG.PART
     I saw that they noticed that you left early.          10/30/2022 ACJ

(11) Taku-akkit          malugi-gaatsit          angerla-jaar-tutit.
     see-1SG>$\boxed{\textbf{2SG}}$.IND notice-3PL>$\boxed{\textbf{2SG}}$.PART leave-early-$\boxed{\textbf{2SG}}$.PART
     I saw that they noticed that you left early.          10/30/2022 ACE

(12) *Taku-akkit          malugi-gaat          angerla-jaar-tutit.
     see-1SG>$\boxed{\textbf{2SG}}$.IND notice-3PL>3SG.PART leave-early-$\boxed{\textbf{2SG}}$.PART
     Intended: I saw that they noticed that you left early.          10/30/2022 ACJ

Under a hyperraising analysis, this is exactly what we expect: movement from the lowest clause can proceed successive cyclically via the middle clause into the highest clause, but cannot skip the middle clause as indicated by the lack of DP$^\oplus$ agreement on the middle verb in the ungrammatical (12). The ungrammaticality of (12)

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[7]To make this inference under the copy theory of movement we need to assume that Kalaallisut does not allow multiple copy pronunciation. I know of no construction in the language where this is allowed and I will therefore assume that it is not. On that basis, the ungrammaticality of (7) is explained under a hyperraising analysis.

[8]As pointed out to me by Amy Rose Deal, Salzmann (2017:16-27) develops a more complex analysis of prolepsis in which the matrix pronoun is licensed by a predication relationship with the embedded CP. The specifier of the embedded CP is occupied by a null operator that binds a resumptive pronoun in side the embedded clause. Under this analysis, too, we expect (7) to be possible (Martin Salzmann p.c. 6/27/2023).

goes unexplained on a prolepsis analysis, because we expect prolepsis to be able to skip a clause (Fong 2018:13, Martin Salzman p.c. 11/24/22). The long-distance agreement suffers from a different problem: if there is no movement involved and Agree cannot skip a CP, 2SG object agreement on the verb of the top-most clause in (11) cannot be derived. The 2SG controller is base-generated in the lowest clause where it is inaccessible to the object agreement probe in the highest clause.

Finally, the construction exhibits island effects, as illustrated by the ungrammaticality of left-branch extraction in (13). (2SG>3PL.ABS indicates 2SG possessor of 3PL possessee in an absolutive possessive DP.)

(13)    \***Illit**      eqqaama-vakkit      [~~illit~~ panit-it]
     2SG.ERG remember-1SG> 2SG.IND     daughter-2SG>3PL.ABS
     angerla-jaar-tut.
     leave-early-3PL.PART

     Intended: I remember that your daughters left early.      12/11/2022 AFS

This is expected under a hyperraising analysis, since DP$^{\oplus}$ moves into the matrix clause. It is equally expected under a long-distance agreement analysis where the embedded target of matrix agreement moves to the left edge of the embedded clause (Polinsky & Potsdam 2001, Branigan & MacKenzie 2002). Island sensitivity is unexpected, however, under a prolepsis account, where there is no movement (Deal 2017:4, Salzmann 2017:3).

| | Hyperraising | Prolepsis | Long Distance Agreement |
|---|---|---|---|
| Matrix realization | √ | √ | X |
| No doubling | √ | X | √ |
| Locality | √ | X | X |
| Island sensitivity | √ | X | √ |

**Table 1:** Evidence for hyperraising

## 3   An analytic proposal

I propose that the derivation of hyperraising constructions proceeds in three steps:

1. regular $\phi$-agreement in the embedded clause
2. hyperraising of DP$^{\oplus}$ from the embedded to the matrix clause
3. regular object agreement with DP$^{\oplus}$ in the matrix clause

My analysis is couched within the Interaction and Satisfaction theory of Agree (Deal 2015, 2022, to appear a.o.). In this framework, probes are specified for INTERACTION features, which are the features the probe can interact with (i.e. copy back to itself from a goal) and SATISFACTION features, which are features that cause the probe to halt. A probe is furthermore specified for MOVEMENT: does interaction with, or satisfaction by, a particular goal cause the goal to move (to the specifier of the head hosting the probe). To illustrate with a well-known example, and using the notation developed in Deal (to appear), the English $\phi$-probe on T has the specification: [INT:$\phi$, SAT:$\phi^{M}$]. According to this specification the probe will interact with

the first $\phi$-bearing goal it encounters (= the subject) and copy back $\phi$-features from that goal. Since the satisfaction condition is $\phi^M$, that top $\phi$-bearing goal satisfies the probe and moves to specifier of TP. The probe expones the $\phi$-features it copied back, deriving regular subject-verb agreement.
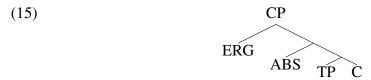
## 3.1 Regular $\phi$ agreement in the embedded clause

Kalaallisut $\phi$-agreement operates in a similar manner to $\phi$-agreement in English, but differs in two respects. First, there are two $\phi$-probes; one for ergative goals and one for absolutive goals, reflecting the fact that Kalaallisut verbs register $\phi$-features of both the subject and the object (Compton 2018, Yuan 2018, 2022). This case-sensitivity is captured by CONJUNCTIVE specification of the satisfaction features of the agreement probes (Scott 2021, Oxford 2022; see also Bobaljik 2008 and Deal 2017 for important precursors). One of the two probes can only be satisfied by an absolutive goal, the other can only be satisfied by an ergative goal.[9] Second, Inuit $\phi$-probes are high in the structure: on C (Compton 2018) or on dedicated AgrS and AgrO heads above NegP (Yuan 2018, 2022). Under the mirror principle the high position of the $\phi$-probes accords with agreement being realized in the outer-most suffix on the verb, following polarity, aspect, and tense suffixes. The analysis developed below, will work under either Yuan's probes-in-Agr analysis or under Compton's probes-in-C analysis. For concreteness, I will follow Compton's analysis here and place the two $\phi$-probes on C. According to both Compton (2018) and Yuan (2018, 2022), both $\phi$ probes trigger movement to the specifier of the head hosting the probe. This analysis is encapsulated in the probe specifications in (14).

(14) Kalaallisut $\phi$ probes on C
  a. [SAT:$\phi$+abs$^M$]
  b. [SAT:$\phi$+erg$^M$]

The structural configuration of the absolutive (ABS) and ergative (ERG) argument in the C-domain is determined by which $\phi$-probe probes first. I will assume that the ABS $\phi$-probe probes first and the ERG $\phi$-probe second.[10] This yields a structure where ERG is in an outer specifier of CP and ABS in an inner specifier (Compton 2018:169):[11]

(15)



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[9]The other side of the coin is the specification of the interaction conditions of these $\phi$-probes. Two possibilities present themselves: the interaction conditions could be similarly conjunctively specified for case and $\phi$ (and therefore only copy back features from one goal each) or they could be a single more general feature, like $\mathcal{F}$ (and copy back features from more than one goal, if the first goal it encounters does not satisfy it). As far as I can tell, either option can generate the correct agreement pattern. Pending further investigation, I therefore set the issue aside and omit interaction specification for the two $\phi$-probes in (14).

[10]Independent evidence for ordered probing is presented in Bossi & Diercks (2019), Scott (2021), Jarvis (2022), Drummond (2023), Georgi (2012), Béjar & Rezac (2003), and Coon & Keine (2021).

[11]This is on the assumption that there is no "tucking-in." If there is tucking-in, it is the ERG $\phi$-probe that probes first to derive the structure in (15) where ERG is higher than ABS.

This structure is supported by the fact that ERG can bind into ABS, but not vice versa (Bittner 1994:43).

## 3.2 Hyperraising

The result of regular $\phi$-agreement is that DP$^\oplus$ occupies a specifier of the embedded CP. To engender movement into the matrix clause the hyperraising probe must be positioned in the matrix clause. Specifically, I will assume that it is on matrix v. According to van Urk & Richards (2015), a matrix probe must first Agree with the embedded CP itself, before it can Agree with a goal contained in it (see also Halpert 2019). If so, the hyperraising probe must be specified to interact with the CP goal (to "unlock" the CP for Agree into it), but not be satisfied by the CP. If the probe was satisfied by the CP, it would halt the probe before it could Agree with DP$^\oplus$. These desiderata are accomplished by the following probe specification: [INT:$\phi$, SAT:D$^M$]. The interaction feature $\phi$ allows the probe to interact with CP. (Recall from section 1, example (4), that embedded CPs trigger 3SG object agreement on the matrix verb, suggesting that CPs have $\phi$ features.) The specification of the satisfaction condition as D entails that the hyperraising probe will not be satisfied by the CP but continue probing until it finds DP$^\oplus$. Finally, the movement specification on the satisfaction feature D causes movement of DP$^\oplus$ to the specifier of matrix v.

As shown in (8)-(11), hyperraising structures alternate with structures without raising. I propose that this is due to there being two flavors of v in the Kalaallisut lexicon: a probe-less v and a v that bears the hyperraising probe [INT:$\phi$, SAT: D+$\phi^M$]. When the former is present, there is no hyperraising. When the latter is present, hyperraising (of some argument) takes place. The probe-less v can combine with Vs of any stripe, whereas the latter v only combines with transitive embedding predicates.

## 3.3 Regular agreement in matrix clause

From its raised position in specifier of matrix v, DP$^\oplus$ is accessible to the absolutive $\phi$-probe on matrix C. Thus the $\phi$-features of DP$^\oplus$ will be registered on the matrix verb, alongside the $\phi$-features of the matrix subject. This three-step analysis illustrated by example in (16).

(16)  Naja-p      illit       eqqaama-vaatit              [ ~~illit~~
      Naja-ERG 2SG.ABS remember-3SG>2SG.IND   2SG
      angerla-jaar-tutit]
      leave-early-2SG.PART
      Naja remembers that you left early.              4/16/2023 AME

The embedded verb shows absolutive agreement with its intransitive subject (DP$^\oplus$; step I). That subject moves to the matrix clause, leaving an unpronounced copy in the embedded clause (step II). From its raised position, the 2SG DP$^\oplus$ satisfies the absolutive $\phi$-probe on matrix C (step III). The ergative $\phi$-probe on matrix C is satisfied by the 3SG matrix subject, yielding the 3SG>2SG agreement marker *-vaatit* on the matrix verb.

## 4 Beyond intransitives

The hyperraising probe is not case-discriminating and thus we expect it to attract the highest argument from a transitive embedded clause. This is indeed a common pattern: only subjects can raise to object in Janitzio P'urhepecha (Zyman 2018:106–108), Mongolian (Fong 2018, Mia Gong p.c. 12/30/2022), and Zulu (Halpert & Zeller 2015:479); see also Ademola-Adeoye 2011 for a cross-linguistic study that confirms this generalization.

However, in Kalaallisut either the ergative subject (17) or absolute object (18) may raise:

(17)  **Meeqqa-t** eqqaama-vakka illit ikior-aatsit.
child-PL.ABS remember-1SG>3PL.IND 2SG.ABS help-3PL>2SG.PART

I remember that **the children** helped you.          1/29/2023 AID

(18)  **Illit** eqqaama-vakkit meeqqa-t ikior-aatsit.
2SG.ABS remember-1SG>2SG.IND child-PL.ERG help-3PL>2SG.PART

I remember that the children helped **you**.          1/29/2023 AID

While typologically unusual, hyperraising of a non-highest argument is attested elsewhere, e.g. in Niuean hyperraising to subject (Longenbaugh & Polinsky 2018):[12]

(19)  To maeke **e ekekafo**$_1$ [ke lagomatai t$_1$ a Sione]
FUT possible ABS doctor SBJ help ABS Sione

The doctor can help Sione.          L&P ex. (5b)

(20)  To maeke **a Sione**$_1$ [ke lagomatai he ekekafo t$_1$ ]
FUT possible ABS Sione SBJ help ERG doctor

The doctor can help Sione.          L&P ex. (5c)

The possibility of hyperraising the absolutive argument in (18) is unexpected under the structure in (15): if ERG is higher than ABS it should not be possible to hyperraise ABS, and yet (18) is grammatical.[13] Following Longenbaugh & Polinsky's (2018) analysis of Niuean, I propose that raising of ABS is possible because ERG and ABS are co-specifiers of CP and as such equidistant from the hyperraising probe on matrix v. (In Nieuan the head hosting the equidistant DPs is v, but the logic is the same.) I cast equidistance stochastically. In some derivations the hyperraising probe will encounter ERG first and be satisfied by it, resulting in ERG raising. In other derivations the hyperraising probe will encounter ABS first and ABS raises.

One concern about this analysis is equidistance itself. While equidistance has been part of the Minimalist Program from its inception (Chomsky 1995), there is

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[12]Raising of a non-highest argument is also attested in languages with nominative-accusative alignment: Kipsigis (Kalenjin, Kenya) allows hyperraising to object of transitive subject or transitive object (Madeline Bossi, p.c., 5/12/2022, Jake & Odden 1979, see also Driemel & Kouneli 2021).

[13]If ABS is higher than ERG, as in Yuan's 2018 and 2022 analyses, then the puzzle is why ERG can raise in (17). The equidistance analysis developed here can account for the possibility of raising either argument under either an ABS > ERG analysis or an ERG > ABS analysis.

a substantial body of literature arguing that it should be abandoned (e.g. Ndayi-ragije 1999, McGinnis 2001, Hiraiwa 2001) or revised in ways that would render the present account of (17)-(18) untenable (e.g. Ochi 2009, Bošković 2016). As I discuss in section 6, the equidistance analysis nonetheless compares favorably to alternative analyses of the alternation in (17)-(18), specifically conjunctive probing and scrambling.

## 5   Covert hyperraising

In addition to DP$^\oplus$ surfacing in the matrix clause, DP$^\oplus$ may surface inside the complement clause and nonetheless control object agreement on the matrix verb:

(21)   Eqqaama-nngi-lakka         [qaqagukkut[14] meeqqa-t
       remember-NEG-1SG>3PL.IND when         child-PL.ABS
       angerlar-tut].
       leave-3PL.PART
       I don't remember when the children will leave.         12/18/2023 AGE

The interpretation of (21) indicates that the wh-word *qaqagukkut* is inside the embedded clause: we are concerned with the time of the leaving of the children, not with the time of the speaker's remembering. Since DP$^\oplus$ is right of *qaqagukkut*, DP$^\oplus$ is also pronounced inside the embedded clause.

Below I argue that (21) is derived by covert hyperraising to object, following Deal's (2017a) analysis of Nez Perce.

### 5.1   Covert hyperraising or long-distance agreement?

Like structures with overt hyperraising, structures where DP$^\oplus$ surfaces inside the embedded clause show island effects. In (22) matrix agreement with the 2SG possessor of the embedded subject is ungrammatical. This is explained if the possessor raises covertly to the matrix clause violating the Left Branch Condition.

(22)   *Eqqaama-**vakkit**        [**illit** pani-tit]
        remember-1SG>2SG.IND 2SG daughter-2SG>3PL.ABS
       angerla-jaar-tut.
       leave-early-3PL.PART
       Intended: I remember that your daughters left early.         12/18/2022 AGB

However, if long-distance agreement is fed by A-bar movement of the agreement controller to the left-edge of the embedded clause (Polinsky & Potsdam 2001, Branigan & MacKenzie 2002), the ungrammaticality of (22) is also accounted for under a long-distance agreement analysis. To tell covert hyperraising apart from

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[14]The standard form is *qaqugukkut*.

long-distance agreement we need to look at the agreement pattern in multiple embedding structures.[15]

(23) Taku-akkit malugi-gaatsit **illit** angerla-jaar-tutit.
see-1SG>$\boxed{\text{2SG}}$.IND notice-3PL>2SG.PART $\boxed{\text{2SG}}$ leave-early-2SG.PART
I saw that they noticed that you left early. 02/09/2023 ALX

As noted in the discussion of example (11) in section 2, a long-distance analysis cannot account for the verb in the highest clause being able to agree with DP$^{\oplus}$ in the lowest clause. Without movement of DP$^{\oplus}$ into the middle CP, agreement between the highest verb and DP$^{\oplus}$ would have to span that middle clause. Such agreement could be possible if the middle clause underwent radical restructuring, such that it was small enough to allow Agree across it. However, the middle clause expones agreement. This fact indicates that the middle clause is a full CP, because $\phi$-probes are on C. Alternatively one could hypothesize that Kalaallisut CPs are not phases and therefore agreement across a middle CP is allowed. However, Compton & Pittman (2010) provide compelling arguments that CP is a phase in closely related Inuktitut. While there is not room to explicitly demonstrate that their arguments carry over to Kalaallisut, I note that their arguments are based on shared features of the two languages, including the existence of noun incorporation, suffixal adverbs, and suffixal verbs, and the lack of free standing functional items. Finally, clear cases of long-distance agreement cannot skip a clause, as show for Tsez by Polinsky & Potsdam (2001:617–618, 625) and for Innu-aimûn by Branigan & MacKenzie (2002:402). I conclude that (23) is derived by covert hyperraising and not long-distance agreement.

## 5.2 Chain Resolution

Alternation between overt and covert hyperraising has been documented for hyperraising to subject in Adyghe by Potsdam & Polinsky (2012). Following their lead, I analyze overt hyperraising as pronunciation of the higher copy of the hyperraising movement chain and covert hyperraising as pronunciation of the lower copy of the hyperraising movement chain. This immediately raises a question: why is it possible to pronounce either copy? The answer has two parts: Landau's (2006) general PF Chain Resolution Algorithm and the lack of a Kalaallisut-specific requirement that a particular copy be pronounced.

Under the Copy Theory of Movement movement creates chains which must be resolved for pronunciation (at PF) and interpretation (at LF). At PF two opposing principles govern chain resolution: P-Recoverability (protecting chain members from deletion) and Economy of Pronunciation (forcing deletion of chain members where possible):

(24) P-Recoverability (Landau 2006:56)
In a chain $<X_1 \ldots X_i \ldots X_n>$, where some $X_i$ is associated with phonetic content, $X_i$ must be pronounced.[16]

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[15]Deal (2017a:8) provides a different diagnostic that distinguishes the two analyses in Nez Perce. A DP that has been scrambled across a clause boundary occupies an A-bar position. From there it can be agreed with but not A-moved due to the ban on improper movement. This diagnostic cannot be applied in Kalaallisut, since there is no cross-clausal scrambling (Sadock 2003:25).

(25) Economy of Pronunciation (Landau 2006:57)
    Delete all chain copies at PF up to P-recoverability

As it stands, the Chain Resolution Algorithm requires that exactly one chain member be pronounced, but underdetermines which copy is pronounced. If no further restrictions are imposed, we expect that lower copy pronunciation (covert raising) is grammatical alongside higher copy pronunciation (overt raising). Economy of Pronounciation correctly rules out pronunciation of both the higher and the lower copy:

(26) *__Illit__      eqqaama-vakkit              [$_{CP}$ __illit__      angerla-jaar-tutit.]
      2SG.ABS remember-1SG>2SG.IND      2SG.ABS leave-early-2SG.PART

      Intended: I remember that you left early.              11/13/2022, ADG

On this analysis, the fact that hyperraising can be overt or covert stems from a *lack* of any language-specific requirement as to whether it is higher or lower copies that are pronounced.


## 6   Predictions and alternative analyses

Before turning to the implications of the analysis, I examine three predictions of the analysis and discuss two alternatives to the equidistance aspect of the analysis, namely scrambling and conjunctive probing.


### 6.1   What hyperraising cannot do

Above we have seen that Kalaallisut hyperraising displays three degrees of freedom: whether it takes place or not, whether it targets an absolutive or ergative argument, and whether that argument is pronounced in the embedded or matrix clause. In this section I consider three predictions the analysis makes about what hyperraising *cannot* do.

First, the analysis predicts that hyperraising cannot move a phrase that lacks a D feature, since D is the satisfaction condition for the hyperraising probe. This is borne out by the example in (27) which involves the temporal adverb *qangali* 'long since'. If *qangali* could raise from the embedded clause, (27) should have a reading where the adverb is associated with the leaving event, but it does not.

(27) __Qangali__  nassuiar-sinnaa-vara              Naja        angerla-toq.
      long-since explain-be.able-1SG>3SG.IND Naja.ABS leave-3SG.PART

      Unavailable: I explained that Naja had long since left.      6/4/2023 AOI

Second, hyperraising cannot move two DPs into the matrix clause:

(28) *__Illit__    __meeqqa-t__   eqqaama-vakkit              ikior-itit.
      2SG.ABS child-PL.ABS remember-1SG>2SG.IND help-2SG>3PL.PART

      Intended: I remember that you helped the children.      4/9/2023 ALZ

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[16]For Kalaallisut this statement is complicated by the availability of pro-drop in movement chains (see ex. (5)). I will set this complication aside here.

The present analysis explains this as follows: whichever embedded DP the hyperraising probe probes first satisfies it and moves. This halts probing and therefore no further movement into the matrix clause is possible.

Third, it is not possible for one DP to hyperraise while another DP controls matrix object agreement. This is shown in (29), where the embedded 3PL object *meeqqat* 'children' has raised, but matrix object agreement is controlled by the 2PL embedded subject *Najap illillu* 'Naja and you'.

(29)  *\*__Meeqqa-t__   eqqaama-__vassi__      Naja-p    illil-lu
      child-PL.ABS remember-1SG>2 PL  Naja-ERG  2 SG.ERG-CONJ
      ikior-isi.
      help-2PL>3PL.PART
      Intended: I remember that Naja and you helped the children.    1/15/2023
      AHD

This follows from locality of regular $\phi$-probing from C. The absolutive $\phi$-probe on matrix C first encounters the raised DP$^{\oplus}$ (*meeqqat*) in specifier of matrix vP and interacts with it. The 3PL $\phi$-features of DP$^{\oplus}$ satisfies the probe. Once satisfied, the probe halts and therefore never interacts with the lower 2PL subject DP. Consequently the 2PL object form *-vassi* in (29) cannot be generated.

## 6.2 Scrambling

Above I have attributed the possibility of raising ABS across ERG to the two DPs being equidistant from the hyperraising probe. Another analysis is that ABS scrambles across ERG, making ABS the highest goal for the hyperraising probe, without any appeal to equidistance. This analysis is initially attractive because we have independent evidence that ABS can scramble over ERG, as in (30):

(30)  Illit        meeqqat         ikior-paatsit.
      2SG.ABS child-3PL.ERG help-3PL>2SG.IND
      The childred helped you.                            01/29/2023 AIU

A challenge for a scrambling analysis comes from the fact that covert hyperraising can also target either ERG (31) or ABS (32) of an embedded SOV clause.[17]

(31)  Eqqaama-vakka       meeqqa-t      illit      ikior-aatsit.
      remember-1SG>3PL.IND child-PL.ERG 2SG.ABS help-3PL>2SG.PART
      I remember that the children helped you.            04/02/2023 ALL
(32)  Eqqaama-vakkit      meeqqa-t      illit      ikior-aatsit.
      remember-1SG>2SG.IND child-PL.ERG 2SG.ABS help-3PL>2SG.PART
      I remember that the children helped you.            04/02/2023

---

[17]Examples like (31) where DP$^{\oplus}$ is linearly adjacent to the matrix verb are always accepted, whereas examples like (32) where DP$^{\oplus}$ and the matrix verb are not adjacent are occasionally rejected (4/33) or judged of questionable grammaticality (4/33). Similarly, examples where an adverb of the embedded clause intervenes between the matrix verb and DP$^{\oplus}$ are occasionally rejected (2/15). It thus seems likely that the observed asymmetry between (31) and (32) is due to a mild adjacency preference and not to some structural difference between ERG and ABS.

A scrambling analysis cannot generate (32) where, on the face of it, there is no scrambling and yet ABS raises. As pointed out to me by Giovanni Roversi, a scrambling analysis could generate (32), if lower copy pronunciation of the scrambling movement chain is allowed. That is, covert scrambling of ABS could feed covert hyperraising of ABS. I think this is not a viable analysis. According to Fortescue (1984:93ff, 193ff), reordering of nominal constituents serves information structural purposes, e.g. expressing emphasis by fronting a constituent. If so, the notion of covert scrambling seems problematic: how could scrambling express information structural properties of a DP if a scrambled DP appears in the same position as an unscrambled DP?

## 6.3 Conjunctive probing

A second alternative to the equidistance analysis is conjunctive probing. On this view the hyperraising probe probes conjunctively for A-bar and $\phi$-features ([INT:-, SAT: A-bar+$\phi^M$]) and it is the distribution of A-bar features on ERG and ABS that determines which raises. If the higher DP (ERG) bears an A-bar feature, the higher DP will hyperraise. If it is the lower DP (ABS) that bears an A-bar feature, the lower DP will raise.

Relevant for this analysis is that fact that hyperraising can target DPs with different A-bar properties, including null pronouns (5), which make good topics, focused DPs (33), and wh-phrases (34).

(33) **Illit** **kisivit** eqqaama-vakkit Naja-p
2SG.ABS only.2SG remember-1SG>2SG.IND Naja-ERG
taku-gaatit.
see-3SG>2SG.PART
I remember that Naja saw only you. 1/8/2023 AGY

(34) **Kikkut** eqqaa-vai angerla-jaar-tut?
who.PL mention-3SG>3PL.INT leave-early-3PL.PART
**Who all** did she mention left early? 10/30/2022 ABV

This featural range of DP$^\oplus$ suggests that it cannot be a specific A-bar feature that is involved, but instead a generalized A-bar feature, as in certain analyses of verb second (Van Urk 2015, Mikkelsen 2015; see also Baier 2018:46, Aravind 2018:19). A generalized A-bar feature subsumes specific A-bar features here topic, focus and wh, allowing for hyperraising in (5), (33), and (34), respectively.

This analysis is initially attractive in that it does away with equidistance and covert scrambling. Moreover, it straightforwardly explains why we find the same raising possibilities in overt and covert raising. However, it is empirically untenable. This is most directly shown in covert hyperraising configurations where the ergative and absolutive arguments of the embedded clause are both wh-phrases. Here the conjunctive probe analysis predicts that only the highest wh-phrase can hyperraise. The ergative argument bears both $\phi$ (by virtue of being a DP) and A-bar (by virtue of being a wh-phrase). It will therefore satisfy the probe and halt it. This rules out raising of the lower absolutive DP. Since the wh-feature is inherent to the ergative

wh-phrase, raising of the lower absolutive wh-phrase is ruled out categorically. No matter the features of the lower DP, it is predicted to not raise. This prediction is false, as shown in (35), where the lower ABS wh-phrase controls agreement on the matrix verb.

(35) Eqqaama-vakka          kiap          kikkut          ikior-ai.
    remember-1SG>3PL.IND who.SG.ERG who.PL.ABS help-3SG>3PL.PART
    I remember who$_{sg}$ helped who$_{sg}$,                    ALH 04/02/2023

## 7  Case

Below I document the morphological case properties of overtly and covertly raised DPs and briefly relate these to different theories of case assignment.

Kalaallisut follows the pattern documented for Adyghe (Potsdam & Polinsky 2012:84) and Nez Perce (Deal 2017:5): DP$^{\oplus}$ expones the case it is assigned in the clause where it surfaces. This is most clearly illustrated with a transitive subject DP$^{\oplus}$. A transitive subject DP$^{\oplus}$ is assigned ergative case in the embedded clause and surfaces with morphological ergative when realized in the embedded clause (i.e. under covert hyperraising).

(36) Eqqaama-vakka          anaana-**vit**
    remember-1SG>3PL.IND mother-SG.2SG.POSS.⌐ERG⌐
    anaana-**ma**-lu              arfeq taku-gaat
    mother-SG.1SG.POSS.⌐ERG⌐-CONJ whale see-3PL>3SG.PART
    I remember that your mother and my mother saw the whale. 12/21/2022 AGK

(37) *Eqqaama-vakka          anaana-**t**
    remember-1SG>3P.IND mother-SG.2SG.POSS.⌐ABS⌐
    anaana-**ga**-lu              arfeq taku-gaat
    mother-SG.1SG.POSS.⌐ABS⌐-CONJ whale see-3PL>3SG.PART
    Intended: I remember that your mother and my mother saw the whale. 12/21/2022 AGK

In overt hyperraising a transitive subject DP$^{\oplus}$ expones absolutive, which is the case assigned to it as a transitive object of the matrix verb.

(38) *Anaana-**vit**              anaana-**ma**-lu
    mother-SG.2SG.POSS.⌐ERG⌐ anaana-SG.1SG.POSS.⌐ERG⌐-CONJ
    eqqaama-vakka          arfeq taku-gaat.
    remember-1SG>3PL.IND whale see-3PL>3SG.PART
    Intended: I remember that your mother and my mother saw the whale. 12/21/2022 AGK

(39)　Anaana-**t**　　　　　　　anaana-**ga**-lu
　　　 mother-SG.2SG.POSS.⟦ABS⟧ anaana-SG.1SG.POSS.⟦ABS⟧-CONJ
　　　 eqqaama-vakka　　　　 arfeq　taku-gaat.
　　　 remember-1SG>3PL.IND whale see-3PL>3SG.PART
　　　 I remember that your mother and my mother saw the whale.　　12/21/2022
　　　 AGK

Applying the analysis of Adyghe in Potsdam & Polinsky (2012:90,95), we can understand (36)-(39) as follows: In all four configurations the transitive subject receives ergative case in the embedded clause and absolutive case in the matrix clause. Hyperraising therefore results in a two-copy movement chain where the two copies have distinct case features: the lower copy has ergative and the higher absolutive. Thus, if the lower copy is pronounced it will necessarily expone ergative as in (36). If the higher copy is pronounced it will necessarily expone absolutive as in (38). This analysis assumes that Case is a syntactic feature assigned to a DP by a functional head. Related analyses of "case-shedding" (Bejar & Massam 1999) or "case-override" (Merchant 2006:19) also rely on case being a syntactic feature.

However the main-stream analysis of Kalaallisut case is cast within a Dependent Case framework (Bittner 1994, Bittner & Hale 1996, Yuan 2018, 2022), in which ergative case is not a syntactic feature assigned by a functional head, but rather depends on the presence of an unmarked (= absolutive) DP in a particular structural configuration with the ergative DP within a particular domain. In Yuan's (2018, 2022) analysis specifically the transitive object moves over the transitive subject and the transitive subject receives downward dependent ergative case in the vP-external case domain. The differential case exponence in overt and covert hyperraising is interesting from a dependent case analysis perspective. According to Baker (2015:272), if dependent case is added to one copy in a movement chain, it automatically belong to all copies in the chain (see also Marantz 1991:249). Under this assumption, an overtly raised transitive subject should expone ergative case, but in fact it expones absolutive. This raises interesting questions about the source of the absolutive on $DP^{\oplus}$ in configurations like (39). As pointed out to me by Michelle Yuan, dependent case analyses of case stacking (e.g. Levin 2017) is relevant here, as is the interaction between dependent case assignment and covert movement. I leave both for future investigation.

## 8　Syntactic ergativity

A common manifestation of syntactic ergativity is the impossibility of extracting transitive subjects. Following Aissen (2017), I refer to this as the ERGATIVE EXTRACTION CONSTRAINT (EEC). A popular analysis of the EEC appeals to inversion of the absolutive argument over the ergative argument (Aldridge 2004:227-344, Coon *et al.* 2014, Coon *et al.* 2021); for Inuit see Murasugi 1992, 1997a, 1997b; Bittner 1994; Bittner & Hale 1996; Yuan 2018, 2022). This inversion renders extraction of the ergative argument impossible, which explains the EEC. Different accounts differ as to what exactly prevents ergative extraction (e.g. locality, or feature gluttony). What is important here is that EEC is due to a general fact about clause

structure—inversion of the absolutive over the ergative—and not due to properties of the individual extraction construction in question.

## 8.1  Ergative extraction in Kalaallisut

Kalaallisut famously disallows relativization of an ergative subject (Fortescue 1984:50, Bittner 1994:58):

(40)  *Meeqqa-t  [__$_{erg}$ akornuser-aannga]  sinip-put
       child-PL.ABS       disturb-3PL>1SG.PART sleep-3PL.IND

       Intended: The children that disturbed me are sleeping.     3/12/2023 AKS

The "repair" strategy is antipassivization, whereby the erstwhile ergative becomes absolutive and can be extracted:

(41)  Meeqqa-t [__$_{abs}$ uan-nik  akornuser-sui-sut]  sinip-put.
       child-PL        1SG-INST disturb-AP-3PL.PART sleep-3PL.IND

       The children who disturbed me are sleeping         3/12/2023 AKS

If the EEC is due to a general property of clause structure (inversion of the absolutive argument over the ergative), we expect all extraction constructions to be subject to the EEC, but in Kalaallisut they are not (cf. Otsuka 2010 on Tongan (Polynesian, Tonga, iso:to)).

As we have seen in section 4, ergative subjects can hyperraise:

(42)  **Meeqqa-t** eqqaama-vakka        illit    ikior-aatsit.
       child-PL.ABS remember-1SG>3PL.IND 2SG.ABS help-3PL>2SG.PART

       I remember that **the children** helped you.           1/29/2023 AID

Similarly, it is possible to front ergative wh-phrases in the formation of content questions:[18]

(43)  **Kia-p**       Upernavim-mi  taku-vaatit?
       who-SG.ERG Upernavik-LOC see-3SG>2SG.INT

       **Who** saw you in Upernavik?                          16/10/2022 ABO

Finally, Kalaallisut has a focus construction in which a phrase is fronted and marked with the clitic =*una* (SG) or =*uku* (PL); see Fortescue 1984:74-76. As shown in (44), focus fronting can target a transitive subject.

(44)  **Meeqqa-n=uku**       ippassaq Naja     ikior-aat.
       child-PL.ERG=FOC.PL yesterday Naja.ABS help-3PL>3SG.PART

       It was the children that helped Naja yesterday.     06/11/2023 AOV

---

[18]An alternative analysis of (43) is that the wh-initial word order is derived by scrambling. See Gillion (1999) and Sherkina-Lieber (2004) for relevant discussion of wh-interrogatives is closely related Inkutitut. More work is needed to definitively establish a wh-movement analysis for Kalaallisut and I leave the matter for future research.

Thus the EEC holds for relativization, but not hyperraising, wh-questions, and focus fronting. This state of affairs is unexpected under an inversion analysis: because the EEC is predicated on a general fact about clause structure (inversion of the absolutive argument over the ergative argument), we expect the EEC to hold for extraction in general, but in Kalaallisut it is specific to individual extraction constructions. To account for this I pursue a case-discrimination analysis.

## 8.2 A case-discrimination approach

Kalaallisut is not the only language in which the EEC holds for some constructions but not others. Polinsky (2017:7) observes that in Chukchi (Chukotko-Kamchatkan, Siberia, iso:alr) relative clauses are subject to the EEC but wh-questions are not. Deal (2017b) develops a case-discrimination account of this contrast: the head responsible for relativization requires its target to be absolutive, whereas the head responsible for movement in wh-questions does not. This account does not appeal to inversion and locality, only to case properties of the goal.

Drummond (2023:180ff) formalizes case-discrimination as conjunctive probing for case and A-bar features. Specifically, the probe responsible for relativization has the satisfaction specificiation [SAT: rel+abs$^M$]. It is therefore not able to move ergative goals. This accounts for the EEC without appeal to inversion. Since it is individual A-bar probes (rel, wh, foc) that are specified for conjunctive satisfaction features, it is straightforward to account for cases where the EEC holds in some A-bar extraction contexts, but not others. Concretely, we can specify the four Kalaallisut extraction probes as in Table 1.[19]

| CONSTRUCTION | CASE-DISCRIMINATING? | PROBE SPECIFICATION |
|---|---|---|
| relativization | yes | [SAT: rel+abs$^M$] |
| hyperraising | no | [SAT: D+$\phi^M$] |
| wh-questions | no | [SAT: wh$^M$] |
| focus fronting | no | [SAT: foc$^M$] |

**Table 2:** Probe specifications for Kallaalisut movement constructions

Further support for a case-discrimination approach over an inversion analysis comes from other dissociations of case, inversion, and extraction. First, case-sensitivity is not limited to the EEC. It is also observed in Tongan (Polynesian, Tonga, iso:to) conjunction reduction, where extraction is not an issue (Otsuka 2010). Second, relativization in Nukuoro (Polynesian Outlier, Nukuoro Atoll, Pohnpei iso:nkr) is subject to the EEC, though the language demonstrably lacks inversion (Drummond 2023:173-177). These facts show that we cannot tie case sensitivity too closely to inversion. For these cases, at least, case-discrimination provides a better suited alternative.

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[19]If nothing further is said, the relativization probe in the first row predicts that only absolutive arguments can be relativized with the strategy in (41). This seems to be borne out: relativization of obliques is done with a different, possessive, strategy (Fortescue 1984: 53-54), and possessors, which bear ergative case, are difficult to relativize all together (Bittner 1994:57).

## 9   Conclusions and loose ends

This paper has provided the first in-depth investigation of hyperraising to object in Kalaallisut. To the best of our knowledge, no system exactly like it has been documented, but each of its key properties are familiar from other languages. First, Kalaallisut has covert hyperraising to object, as does Nez Perce (Deal 2017a). Second, Kalaallisut allows both overt and covert hyperraising, as does Adyghe in hyperraising to subject (Potsdam & Polinsky 2012). Finally, Kalaallisut allows both ergative and absolutive arguments to hyperraise, as does Niuean (Longenbaugh & Polinsky 2018). The components of the proposed analysis are similarly familiar: unlocking an embedded CP for probing from the outside (van Urk & Richards 2005, Halpert 2019), alternation between lower and higher copy pronunciation (Landau 2006, Potsdam & Polinsky 2012), and equidistance (Longenbaugh & Polinsky 2018).

The construction casts new light on case and syntactic ergativity in Kalaallisut. In particular, overt hyperraising shows "case-override", which, on the face of it, is unexpected under a dependent case analysis. Additionally, hyperraising can target a transitive subject. This sets hyperraising apart from relativization which does not allow extraction of a transitive subject. I suggested that this contrast is best captured by a case-discriminating analysis of syntactic ergativity.

At least three issues require further attention. First, the diagnostics for distinguishing hyperraising from prolepsis need to be applied to all argument types in a systematic fashion. Second, the implications of the equidistance analysis for our understanding of the observed binding asymmetry (ERG can bind into ABS, but ABS cannot bind into ERG) need to be investigated. Finally, the argument in favor of the case-discriminating analysis of the EEC on relativization is strongest if hyperraising, wh-movement, and focus fronting are comparable to relativization as extraction constructions. More work is needed to determine this.

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