Ā-probing for the closest DP

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Abstract We consider the typology of attested Ā-extraction asymmetries between core argument DPs and its consequences for the nature of probing. In particular, we question whether an Ā-probe can be required to specifically target the closest accessible DP. Such an Ā-probe specification is part of the influential Aldridge 2004, 2008 analysis of syntactically ergative extraction restrictions, but has not been widely adopted outside of work on ergative languages. In a non-ergative language, we expect the availability of such a probe to result in a subject-only Ā-extraction restriction. We reassess the evidence from asymmetries in relativization, especially Keenan and Comrie 1977, and provide new, stronger evidence for the existence of Ā-extraction limited to the closest DP argument, in non-ergative languages. We conclude that Ā-probes indeed can be specified to target the closest accessible DP and discuss analytical choices for their implementation.

Contents

1 Introduction

A central concern of syntactic theory is how non-local dependencies are formed, and how they are constrained. Since Chomsky 2000, 2001, much of this work has been fruitfully discussed in terms of *probes* and their specifications. Probes initiate a search for a *goal* that matches a particular feature specification, to Agree with or to Move. This paper contributes to the question of the possible feature specifications and behaviors of Ā-probes.

For example, we may describe *wh*-movement in a language like English as involving C probing for the closest [WH] constituent (see e.g. Rizzi, 1990). This allows for *wh*-movement of the embedded subject in (1a) or the embedded object in (1b); in either case, the moved goal is the closest constituent with a [WH] feature. Intervening non-*wh* constituents are ignored. When there are multiple potential goals accessible to the probe, the structurally closest goal is chosen, reflected in the contrast in (1c).

(1) **Ā-probing for the closest [WH] goal:**

a. C[PROBE:WH] you expect *who* to eat the sandwich ⇒
Who do you expect ___ to eat the sandwich?

b. C[PROBE:WH] you expect Sara to eat *what* ⇒
What do you expect Sara to eat ___?

c. C[PROBE:WH] you expect *who* to eat *what* ⇒
Who do you expect ___ to eat *what*?
**What* do you expect *who* to eat ___?

There are, however, languages with much stricter restrictions on Ā-extraction, such that only particular types of arguments can be Ā-extracted. Aldridge 2004, 2008 develops one influential approach to the analysis of so-called syntactic ergativity, narrowly defined as a ban on the Ā-extraction of transitive subjects. (See Deal 2015a, 2016 and Polinsky 2017 for recent overviews and discussion.) One component of Aldridge's analysis is a claim that Ā-probing can be restricted as in (2):

(2) **Ā-probing for the closest DP:**
An Ā-probe can be specified to target the closest accessible DP.

Combined with a commonly adopted approach to the clause structure of ergative languages, a probe of this type will necessarily target absolutive arguments.

In this paper, we critically evaluate this conjecture in (2) and its consequences for grammatical theory, in particular considering its relevance for the analysis of non-ergative languages. In many languages, the subject is regularly the structurally highest DP in a clause. If an Ā-probe can be specified to necessarily attract the closest DP, we therefore predict that objects may never be Ā-extracted across subjects.

Relevant here is the well-known work of Keenan and Comrie 1977 *et seq*, which claims that there are languages that have a relativization strategy that can only target subjects. We therefore review this literature, and show that it does *not* by itself strongly motivate Ā-probing of the closest DP argument. We then show that stronger arguments *do* exist for the existence of the predicted type of Ā-extraction restriction. In particular, Ā-probing for the closest DP makes accurate predictions for apparent exceptions to subject-only extraction restrictions: even in a language where subjects are frequently the highest DP in a clause, if the language has a strategy for raising a non-subject DP to a higher position, this movement may feed the extraction restriction. We conclude that Ā-probes indeed can be specified to necessarily target the closest DP, as proposed by Aldridge, and that such Ā-probes are not limited to ergative languages.

2 Syntactic ergativity in Philippine-type languages

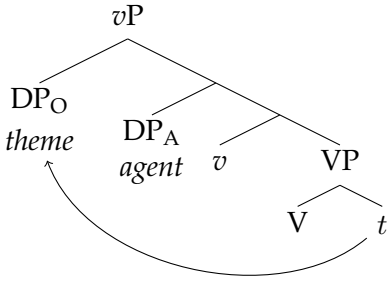
We begin by reviewing the Aldridge's (2004, 2008) analysis for syntactic ergativity in so-called "Philippine-type" Austronesian languages, such as Tagalog. Philippine-type languages are verb-initial with case marking patterns which can be analyzed as exhibiting ergative-absolutive alignment.[1] Among core arguments of the verb, these languages allow only for Ā-extraction of the absolutive DP.

Aldridge's theory for this extraction restriction is one specific instantiation of what Deal 2016

[1] "Philippine-type" refers to a set of shared behavioral characteristics, including case marking and rich "voice" morphology on verbs. Another class of Austronesian languages, discussed below, is the "Indonesian-type," which lack core argument case distinctions and have fewer voices. See e.g. Himmelmann 2002, Ross 2002, and Blust 2010. The description of Philippine-type languages as ergative has been controversial. See for example Erlewine, Levin, and Van Urk 2017 and Chen 2017, and discussion in section 3 below.

refers to as the "standard theory of syntactic ergativity," narrowly referring to an absolutive-only extraction restriction. The shared intuition of these proposals is that transitive objects (O) canonically occupy a structural position above that of transitive subjects (A).[2] For Aldridge, in a transitive clause with two core arguments, an agent and theme, the theme will move to an outer specifier of *v*P. The agent is base-generated as the inner specifier of DP. See (3). The verb is ultimately pronounced higher, preceding its arguments.

(3) **Monotransitive *v*P as in Aldridge's account:**



Aldridge also discusses clauses with applicatives, where the DP moved to the outer specifier is a goal, instrument, or location instead of a theme.[3]

We now turn to the question of Ā-extraction. Aldridge shows that Ā-extraction of DPs in these Philippine-type languages is limited to the extraction of absolutive arguments, e.g. transitive objects (O) and intransitive subjects (S); transitive subjects (A) cannot be Ā-extracted. Following the proposed structure for transitive clauses, Aldridge proposes that Ā-probing by C necessarily targets the closest DP.[4] See (4) below. Ā-extraction from a transitive clause will thus necessarily target the outer specifier of *v*P, which may be a transitive object (O) or an applicativized argument (see discussion above).[5] There is no way to target a transitive subject (A) for Ā-movement.[6]

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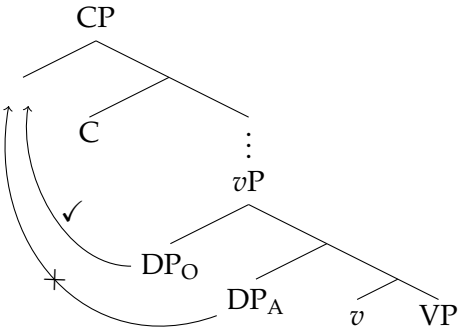
[2] Other examples of the "standard theory" include Campana 1992, Murasugi 1992, Ordóñez 1995, Bittner and Hale 1996, Coon, Mateo Pedro, and Preminger 2014, and Assmann, Georgi, Heck, Müller, and Weisser 2015.

[3] This analysis dovetails with the widely-adopted inherent case theory for ergative case (e.g. Woolford, 1997, 2006; Legate, 2002, 2008; Aldridge, 2004, 2008; see also Sheehan 2017 for a recent overview). Because the agent receives ergative case in its thematic position, there is no need for the agent to syntactically associate with a higher functional head such as T as in many proposals for structural nominative case.

[4] Specifically, Aldridge (2004: 338) writes: "C has an EPP feature, which attracts a DP. In a transitive clause, the closest DP will be the internal argument absolutive, residing in the outer specifier of v. The external argument will not be attracted, because doing so would violate Attract Closest."

[5] As noted by Aldridge (2012: 197 fn 9), "closest" must be defined so that two specifiers of the same phrase do not count

(4) **Ā-probing for the closest DP from (3):**



In an intransitive clause, the sole DP argument (S) is closest to the probe and thus can be Ā-extracted as well.[7] This derives the syntactically ergative Ā-extraction restriction.

Aldridge's analysis for the extraction asymmetry in Philippine-type languages thus relies on the conjecture stated in (2), repeated here:

(5) **Ā-probing for the closest DP:** =(2)

An Ā-probe can be specified to target the closest accessible DP.

We should step back and note that Ā-probing of this form — if it exists — is conceptually surprising and perhaps unusual.[8] Such a probe would lead to an Ā-extraction process that has the locality profile of A-movement, rather than the familiar long-distance and 'relativized' character of Ā-movement (as in e.g. Chomsky, 1977; Rizzi, 1990; see (1) above). It also raises questions for whether and how non-DPs can be Ā-extracted in such a language, which we return to at the end of this paper. We also note that alternative accounts for the extraction behavior of such Philippine-type languages exist, which do not require Ā-probing for the closest DP (5).[9] We discuss such alternatives in the next section. In the pursuit of a maximally restrictive theory of grammar, then,

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as equidistant for higher probes, *pace* Chomsky's (2000: 122, 130; 2001: 27) Equidistance principle.

[6] Syntactically ergative languages generally have a strategy for Ā-extracting notional transitive subjects (A). A common one is to antipassive the clause, so that the A subject becomes a formally intransitive S subject, and thus eligible for Ā-extraction. See Aldridge 2012 for further discussion of this approach in Tagalog.

[7] Intransitive *v* for Aldridge does not move any argument to its specifier. Intransitives are either unergative, with the agent DP being the sole specifier of *v*P, or unaccusative, where the sole DP argument is lower, but with *v*P being a "weak phase" in Chomsky's (2001) terms and thus permeable for probing from above.

[8] There is rather little explicit discussion of this important aspect of Aldridge's proposal. We are aware of such discussion only in Aldridge 2008: 990, 992 note 6, Deal 2015a: 698–699, and Polinsky 2017: 18–20.

it is tempting to reject the possibility of probing of the form in (5), or to somehow limit its availability to ergative languages.

The goal of this paper is to show that there nonetheless *is* substantial motivation for the existence of Ā-probing that is restricted to the closest DP (5), in non-ergative languages. The first place we might look for such evidence will be the literature on subject-only relativization strategies.

3 Subject-only relativization revisited

In many languages of the world, subjects are generally the highest DP in a clause. If an Ā-probe can be specified to only attract the structurally closest DP (5), we may then expect some such languages to exhibit subject-only restrictions on Ā-extraction.

In their work on the typology of relativization, Keenan and Comrie (Keenan and Comrie, 1977, 1979; Comrie and Keenan, 1979; hereafter "K&C") claim that there exist languages which have a relativization strategy which applies specifically to subjects but to no other types of arguments.[10] As noted by Deal (2015a: 698–699), the hypothesis in (5) may be relevant for the analysis of such languages. We therefore review K&C's claims here, re-interpreted as potential evidence for the existence of Ā-probing for the closest DP.

In their survey, K&C report eleven languages which allow for the relativization of subjects but not objects: Northeast Aoba/Ambae, Arabic, Kiribati (Gilbertese), Iban (Sea Dayak), Javanese, Kera, Malagasy, Māori, Minangkabau, Tagalog, Toba Batak. Of these, only Malagasy and Toba Batak are discussed in any detail in K&C 1977. Some supporting data for the other languages were published as a supplement in 1979. With the exception of Arabic and Kera (East Chadic), all of these languages are Austronesian.[11]

We briefly discuss the evidence from relativization in these languages, considering the data provided by K&C as well as in subsequent work. Again, our goal is to see whether these pat-

[9] For syntactic ergativity in other language families, too, there are accounts which do not involve Ā-probing for the closest DP (5). See Deal 2016, 2017 and Polinsky 2017 for two recent approaches.

[10] K&C discuss "strategies" of relativization, of which a particular language may have multiple. Individual strategies are distinguished, for example, by whether they involve gapping, resumptive pronouns, or relative pronouns, or by other distinguishing morphosyntactic characteristics.

[11] There is additionally a note on subject-only participial relatives in "many European languages (e.g. German, Russian, and Polish)" (K&C 1977: 70). See fn. 20 below.

terns provide compelling evidence for the possibility of an Ā-probe being required to target the closest DP. Although Ā-probing of this form has subsequently been proposed for three of these languages — for Arabic (Shlonsky, 1992; see fn. 13), Māori (Douglas, 2018; see fn. 19), and Toba Batak (Erlewine, 2018; discussed below) — we conclude that this broad and surface-level look at relativization strategies is overall insufficient for teaching us about the possible modes of Ā-probing in grammar.

We first consider Kiribati (Oceanic; VOS), which K&C describe as utilizing a gap strategy for subject relatives (6a) but a pronoun strategy for object relatives (6b). (This same description applies to Northeast Ambae (also Oceanic), Arabic, and Kera as well; see fn. 13.) Object pronouns appear on the verb with the linker *-i-*.[12]

(6) **Kiribati relative clause data in K&C 1979: 337:**

a. *te aine are orea te mane*
the woman REL hit the man
'the woman who hit the man'

b. *te mane are oro-i-**a** te aine*
the man REL hit-TR-3SG the woman
'the man that the woman hit'

At first glance, such a language seems amenable to an analysis utilizing an Ā-probe which targets the closest DP: Ā-extraction is limited to the structurally highest DP, the subject, with relativization of other arguments necessitating the use of resumptive pronouns.[13]

However, this view is challenged by data on long-distance object extraction in Sabel 2013. In (7), fronting the embedded plural object 'Mary and Tien' triggers a third-plural pronoun on the embedded verb 'love,' as expected, but also on the higher verb 'know':

[12] Following Harrison 1978, Sabel 2013 calls *-i-* a transitivity marker and we follow their glossing here. It is possible that the verb *orea* in (6a) includes the third-singular object marker but without the transitivity marker, as suggested by Sabel (2013). In fact, K&C gloss *orea* in (6a) as "hit-3sg" and *oroia* in (6b) as "hit-him." Here we follow Trussel (1979: 140–145) in simply glossing the verb as *orea*.

[13] This suggestion echoes the Shlonsky 1992 analysis for relativization in Palestinian Arabic. Shlonsky proposes (p. 451) that "the Palestinian C^0 *ʔilli* identifies its Specifier as an A-position. Therefore, movement to [Spec/*ʔilli*] is a subcase of A-movement that is constrained by the [Specified Subject Constraint] (or the Minimality Condition, relativized to A-chains; see Rizzi (1990))." Although not in the probe-goal language used here, Shlonsky's analysis amounts to proposing that the Ā-probe for relativization must target the closest DP.

(7) **Long-distance object movement in Kiribati**: (Sabel, 2013: 18)

*Meeiri ao Tien aika ti ata-i-**ia** bwa e tangir-i-**ia** Rui.*
Mary and Tien REL.3PL 1PL know-TR-3PL that 3SG love-TR-3PL Rui

'It's Mary and Tien that we know that Rui loves.'

Based on such examples, Sabel argues that the object "pronoun" on Kiribati object extraction verbs is a form of agreement fed by successive-cyclic movement of the object. This dual pronoun marking in (7) forms an argument against describing Kiribati object extraction as a simple resumptive pronoun strategy.

Next, we turn to Toba Batak, Iban, Javanese, and Minangkabau — all Indonesian-type Austronesian languages (see fn. 1). K&C describe these four languages essentially equivalently, as necessitating the use of a passive for the extraction of transitive objects.[14] Here we concentrate on Toba Batak (VOS), which we have first-hand knowledge of.[15] K&C's description of relativization in Toba Batak is correct, and this behavior could indeed be derived by Ā-extraction of DPs targeting the closest DP. However, Cole and Hermon 2008 puts forwards an alternative approach, which we now introduce.

Cole and Hermon's analysis of Toba Batak builds on an observation by Schachter (1984: 124) that "nothing can ever come between the verb and [non-subject DP]." For example, (8) shows that the adjunct 'yesterday' cannot be placed between an active verb and its theme:

[14] All four have strategies for relativization over non-DP positions. We discuss non-DP movement in section 5.3. This description at first glance also applies to Māori with canonical transitive verbs, but there are also additional strategies for direct object relativization, as well as other classes of predicates which behave differently. See Bauer 1982 and Douglas 2018.

[15] For Javanese, K&C's description is incomplete, though perhaps not problematically so. Objects can indeed be relativized using the canonical *di-* passive, as noted by K&C, but also by so-called "nasal voice deletion," leaving a bare verb with a preverbal subject (Cole, Jonczyk, and Lilley, 1999; Sato, 2012). Whether this bare verb structure constitutes a passive as well — promoting the object to feed the subject-only restriction — appears to vary. Cole et al. report that in Semarang Javanese, this structure is only possible with object extraction, and is not a general passive, but Sato reports that it can be used as a productive bare passive in Kendal Javanese. At least for Kendal Javanese, then, the basic description of a ban on object relativization may be accurate. The Mualang dialect of Iban (Sea Dayak), as described in Tija 2007, seems to behave as in Kendal Javanese. We thank Alex Smith and Carly Sommerlot (p.c.) for pointing us to Ibanic resources. For Minangkabau, we have not been able to access sufficiently rich descriptions to independently evaluate these claims.

(8) **Non-subject is immediately postverbal in Toba Batak:** (Erlewine, 2018: 677 ex. 31a)

Man-jaha {**nantoari*} *buku* {*nantoari*} *si Poltak* {*nantoari*}.
ACT-read *yesterday book yesterday PN Poltak yesterday

'Poltak read a book yesterday.'

The non-subject DPs which must be adjacent to the verb are precisely those which cannot be relativized.[16] Cole and Hermon 2008 propose that the derivation of VOS word order in Toba Batak involves fronting the verb phrase — containing exclusively the verb and non-subject DP argument, if any — which "freezes" this material for further extraction.[17] Such an account has no need for a restriction on Ā-probing for the closest DP; the subject is the only DP argument that is eligible for movement.

Although attractive, there ultimately is reason to analyze Toba Batak as a language where the Ā-extraction of DPs is indeed limited. While it is true that Ā-extraction of a single DP must target the subject, Erlewine 2018 shows that, under certain circumstances, both the subject and non-subject can be fronted simultaneously, as in (9). Such multiple fronting structures are not possible in relativization.

(9) **Fronting both DP arguments in Toba Batak:** (*ibid.*: 669 ex. 17b)

Aha [*holan si Poltak*] *mang-allang*
what only PN Poltak ACT-eat

'What did only Poltak eat?'

Such examples teach us that it cannot simply be the case that non-subject DPs are immobile, contrary to the predictions of Cole and Hermon 2008.[18] Instead, Erlewine 2018 argues, these facts are best captured by Ā-extraction of DPs in Toba Batak always targeting the closest DP, but able to

[16] The inability to be relativized and requirement to be immediately postverbal also holds of passive agents. Preliminary data on Javanese adverb placement (Nurhayani, 2014: 133–137) appear to show the same correlation: unextractable DP arguments cannot be separated from the verb by an adverb, in postverbal position.

[17] Pensalfini 1995 and Rackowski and Travis 2000 pursue this intuition for the extraction restriction in Malagasy.

[18] The postverbal adjacency facts as in (8), then, require an independent explanation. See Erlewine 2018 for one answer, related to the Case licensing of these arguments.

attract multiple goals: Once the highest DP — the subject —- has undergone movement, the probe can move the lower, non-subject DP to a higher position.

We conclude from this brief discussion of the Toba Batak facts that the subject-only relativization strategies reported by K&C for Toba Batak and other Indonesian-type languages are indeed compatible with an analysis based on Ā-probing for the closest DP, but does not immediately require it. In the case of Toba Batak, a case could be made that the language employs Ā-probing for the closest DP, but only through further work investigating additional constructions.[19]

Finally, we turn to Malagasy and Tagalog. Both are Philippine-type Austronesian languages explicitly discussed in Aldridge 2004, 2008 as amenable to her analysis for syntactic ergativity reviewed above, which involves Ā-probes that necessarily target the closest DP. However, the description of Ā-extraction in these languages as "absolutive-only" — or "subject-only" in K&C's description — has itself been controversial, and is not shared by a variety of alternative accounts. Particularly influential are accounts which treat the apparent absolutive-only extraction restriction as epiphenomenal, due to verbal and nominal morphology which cross-references the choice of Ā-extracted argument. See especially the "case agreement" approaches of Pearson 2001, 2005 for Malagasy and Rackowski 2002 and Rackowski and Richards 2005 for Tagalog. Yet another alternative approach discusses apparent "extraction" restrictions in these languages without appealing to extraction at all, instead analyzing different "voice" forms as different participant nominalizations; see Keenan 2008 for Malagasy and Kaufman 2009 for Tagalog.[20] The proper analysis of the apparent $\overline{\text{A}}$-extraction restrictions in Philippine-type languages thus continues to be controversial and potentially amenable to a variety of analytic approaches. Relativization in these languages thus cannot be taken to be clear, immediate motivation for the availability of Ā-probes targeting the closest DP.

In conclusion, in this section we considered the cases of subject-only relativization strategies in

[19] Similarly, further arguments have been presented for extraction restrictions in Māori being due to Ā-probing for the closest DP. See Douglas 2018 for details.

[20] Such analyses may also extend to the subject-only participial relatives in European languages mentioned by K&C (1977: 70); see fn. 11. Such deverbal nominalizations of their highest subject arguments could easily be derived without any Ā-movement at all. See e.g. Baker and Vinokurova 2009 and Bowers 2011 on the structure and interpretation of agent nominalizations such as with English *-er*. On these analyses for Philippine-type languages, though, see also Hsieh 2019 for a forceful response to Kaufman's "nominalist" analysis of Tagalog.

K&C 1977 *et seq*. Reinterpreted as potential evidence for the possibility that some Ā-probes must target the closest nominal, we conclude that the evidence in K&C is mixed and generally weak. For most cases, there are compelling alternative analyses to one involving a restricted Ā-probe, or there is insufficient data to make any particular conclusions about restrictions on Ā-probes in the language. If Ā-probing for the closest DP is indeed a possibility available to the grammar, and not just in the grammars of ergative languages, we would hope to see more compelling motivation.

4 New evidence for Ā-probing for the closest DP

In this section, we showcase stronger examples of subject-only restrictions on Ā-extraction which are due to Ā-probes that are required to target the closest DP. For concreteness, we suggest that this is a result a probe seeking the combination of an Ā-feature (e.g. WH, REL) and an A-feature (D) (see e.g. Van Urk, 2015; Erlewine, 2018), which we notate [PROBE:Ā+D] in the general case. This [PROBE:Ā+D] will move a fully matching goal with [Ā, D] features, but ceases probing after it finds even a partial match ([Ā] or [D]).[21,22]

With a probe of the type just described, we expect extraction of DP_2 in (10) to be impossible: DP_1 c-commands DP_2 and therefore counts as structurally closer to the probe.

(10) * [PROBE:Ā+D] ... [DP_1 ... [$DP_{2[\bar{A}]}$ ...

This logic makes two predictions. First, if a language has an independent mechanism for bringing DP_2 above DP_1, we expect the probe to then be able to interact with DP_2:

(11) ✓ [PROBE:Ā+D] ... [$DP_{2[\bar{A}]}$ ... [DP_1 ... [<$DP_{2[\bar{A}]}$> ...

[21] The inability of [PROBE:Ā+D] to probe past partial matches may be subject to variation across individual probes or languages. See for example Coon and Bale 2014 for discussion of composite probes which are able to skip as well as target partially matching goals. This could plausibly be thought of in terms of Deal's (2015b) interaction and satisfaction, where probes may be specified to halt their search when a certain feature is found. [PROBE:Ā+D] could be an Ā-probe whose satisfaction feature would be [D], but only moves [Ā, D].

[22] As this probe seeks both A- and Ā-features, we might wonder whether the resulting movement has A- or Ā-properties. Van Urk 2015 shows that such movement in Dinka exhibits mixed A/Ā-properties.

Second, if there is no c-command relationship between two DPs, we might expect either nominal to be extractable, as neither is closer to the probe than the other. One possible such configuration would arise when DP_2 is at the edge of DP_1:

(12) ✓[PROBE:Ā+D] ... [$_{DP1}$ $DP_{2[Ā]}$ ...] ...

In this section, we present evidence from relativization in Turkish and Rejang that motivate the existence of Ā-probing for the closest DP, as described here. In particular, we will see that the configurations in (11) and (12) indeed allow for Ā-extraction of DP_2 in constructions that disallow extraction in the configuration in (10). Neither language is morphologically ergative.

4.1 Turkish

Turkish has two forms for relative clauses, shown below in (13), traditionally described as a subject/non-subject distinction (Underhill, 1972; Hankamer and Knecht, 1976; a.o.). We follow Cagri 2005, 2009 in glossing them 'subject relative' (SR) and 'non-subject relative' (NSR) here. The SR suffix receives a simple analysis as the exponent of a head which has an Ā-probe which is specified to probe for the closest nominal.

(13) **Two relative clause forms in Turkish:** (Cagri, 2005: 24 ex. 15a, 4 ex. 3a)

a. [___ *kız-ı* *sok-**an***] *arı*
girl-ACC sting-SR bee
'the bee that stung the girl'

b. [*bayan-ın* ___ *otur-duğ-u*] *divani*
lady-GEN sit-NSR-3S sofa
'the sofa the lady is sitting on'

In certain circumstances, non-subjects may be extracted using the SR form. Crucially, this seems to involve a non-subject first moving to a position above the subject within the relative clause. Consider first the case of possessor sub-extraction from the object in (14).[23] This is possible when the subject is indefinite or bears contrastive focus, both of which require the subject to appear low, in an immediately preverbal position.

[23] Whether or not speakers allow relativization of the object itself from this configuration appears to be a point of some inter-speaker variation. While Cagri (2005) reports theme relativization to contrast with possessor-of-theme relativization, Temürcü (2001) allows extraction of themes in these contexts.

(14) **Possessor-of-theme relative with SR form:** (*ibid.*: 28 ex. 20a)

[[___ *bacağ-ın-ı*] *arı* *sok-an*] *kız*
leg-POSS-ACC bee sting-SR girl

'the girl whose leg a bee/some bees stung'

In addition, with subjects meeting the aforementioned condition, temporal relatives may also be formed with SR as well:

(15) **Temporal relatives with SR form:** (*ibid.*: 180 ex. 62a,b)

a. [___ *bomba patlay-an*] *gün*
bomb explode-SR day

'the day a bomb exploded'

b. [___ *kar yağ-an*] *gün-ler*
snow rain-SR day-PL

'the days it snowed'

Such examples show that the apparent subject orientation of the SR form is really a requirement to extract the highest nominal.

We propose that the SR head bears [PROBE:Ā+D] of the form described above, allowing it to extract only the highest nominal in its domain. Smuggling the possessor within the object across the subject causes the possessor to become the highest movable nominal in the clause, as schematized below.[24,25]

(16) ✓[PROBE:REL+D] ... [$_{DP2}$ DP$_{3[REL]}$ ...] ... [DP$_1$ ... <DP$_2$>

Nominal temporal adjuncts naturally occupy a position above the low subject.

In both cases, positioning an eligible nominal above the low subject feeds extraction of a non-subject using the SR form. This suggests both that the regular subject orientation of SR is due to subjects regularly being the highest DP in the clause, and that SR cannot be tied to other subjecthood properties. It is best modeled using Ā-probing for the closest DP.

[24] For discussion of "smuggling" derivations, see Belletti and Collins to appear and its introduction.

[25] See also Nakamura 1996 and Branan 2018 for discussion of similar subextraction facts in Tagalog, compatible with Aldridge's account and the discussion of subextraction here.

4.2 Rejang

Rejang is an Austronesian language spoken in Sumatra. We will see that relativization is limited to the highest accessible nominal, whether or not that nominal is the subject.

Rejang is canonically SVO, with transitive verbs having two verb forms, active and passive. Active themes and passive agents cannot be extracted — with one exception, discussed below. To extract the theme of a transitive clause, it must first be promoted to subject position using a passive (17).

(17) **Rejang theme relativization requires passivization:** (McGinn, 1998: 362 ex. 5b, 6)

a. **tun* [*gi* *pelisi* *o* *m-akep* ___ *kelem*] *o*
person C_{gi} police the ACT-catch last.night DET
'the person that the police arrested last night'

b. *tun* [*gi* *t<en>akep* *pelisi* ___ *kelem*] *o*
person C_{gi} PASS-catch police last.night DET
'the person that was arrested by the police last night.'

There is evidence that the restriction on extraction in Rejang is a requirement that only the highest nominal undergo extraction, rather than a restriction specifically targeting the subject of the clause. Evidence for this comes from three sources: subject cliticization, long distance extraction, and extraction of possessors, which will be presented in that order.

McGinn (1998: 372–373) notes one exception to the ban on active theme extraction: Relativization of active themes is possible if the subject is a clitic pronoun, as in (18). McGinn shows that the subject here is a reduced, clitic form and appears adjacent to the verb, rather than in the canonical subject position which precedes the auxiliary *mulaé*.[26]

[26] The structure here is reminiscent of the so-called "Passive type 2" in Malayic languages (see e.g. Chung, 1976; Arka and Manning, 1998), but importantly differs in retaining the active voice morphology on the verb.

(18) **Theme relativization across a subject clitic:** (*ibid.*: 372 ex. 36)

pilem [*gi* *mulaé* *ku* *toton* ___ *kelem*] *o*
movie C_{gi} begin 1sg ACT-watch last.night DET

'the movie that I began to watch.'

The possibility of theme relativization in (18) is accounted for straightforwardly on our account. It is well documented (McGinnis, 1998; Anagnostopoulou, 2003) that clitic arguments do not intervene for extraction in the same way that a full DP does; presumably, cliticization of an argument into the verb renders it invisible for higher [D]-sensitive probes, or it is skipped as it is not eligible for movement (see also Branan 2020). With the subject being a clitic, the object is now the closest DP to the probe on C.

Next we turn to long-distance relativization. First, we note that in non-extraction contexts, embedded clauses take the complementizer *bawo*, in contrast to *gi* in the relative clause above, (17b). This alternation will be important for the discussion that follows.

(19) **Complement clause with complementizer *bawo*:** (*ibid.*: 359 ex. 2a)

Alui *m-adea'* [$_{CP}$ ***bawo*** *Desi* *teko* *ceño'*]
Alui ACT-say C Desi come late

'Alui said that Desi came late.'

Long-distance subject extraction in Rejang comes in two forms. In one option, the embedded clause has the complementizer *bawo*, with a resumptive pronoun in its subject position (20a). In the second option, the embedded clause is headed by *gi*, with a subject gap (20b). In both cases, the higher clause must appear in the passive.

(20) **Two forms of long-distance subject relatives:** (*ibid.*: 368 ex. 26, 28)

a. *tun* *tuey* [*gi* ___$_{CP}$ *n-adea* *Alui* [$_{CP}$ ***bawo*** ***si*** *teko* *ceño'*]] *o*
person old C_{gi} PASS-say Alui C he came late DET

'the old person of whom it was said that he came late'

b. *tun* *tuey* [*gi* ___CP *n-adea* *Alui* [CP ***gi*** ___DP *teko* *ceñoʼ*]] *o*
person old C_{gi} PASS-say Alui C_{gi} came late DET

'the old person of whom it was said that he came late'

We first consider the complementizer and gap/resumptive alternations. Both reflect strategies for getting the nominal target for relativization to the edge of the embedded CP. The nominal can be base-generated at the edge and bind a local pronoun, as in (20a), or it can move from embedded subject position using the complementizer *gi*, as in (20b).

The entire embedded CP itself is then moved to the higher subject position via passivization of 'say,' although it is then pronounced in its base position, leaving the CP gap indicated in (20).[27] Movement of the embedded clause to this higher subject position causes the DP at the embedded clause edge to be the highest nominal in the clause, allowing the relative complementizer to extract it.

(21) **The closest nominal may be *in* a clausal subject:**

✓ [PROBE:REL+D] ... [CP $DP_{2[REL],i}$ ... <DP_2>/pro_i ...] ... [DP_1 ... <CP>

Further evidence that the extraction restriction in Rejang reflects [PROBE:Ā+D] on C, and need not target subjects, comes from a peculiar restriction on possessor extraction. Possessor relativization is allowed, but only for subjects of possessors and with a resumptive pronoun. This is shown by the contrasts in (22).

(22) **Possessor relativization from subject, with resumptive:** (*ibid.*: 370 ex. 33a,b)

a. *tun* [*gi* [*nyung* ***ne***/*___] *panjang*] *o*
person C_{gi} nose his/*___ long DET

'the person whose nose is long'

b. **tun* [*gi* *Alui* *klea'* [*ngenyan* ***ne***]] *o*
person C_{gi} Alui ACT-see wife his DET

'the person whose wife Alui saw'

[27] See Rackowski and Richards 2005 and Van Urk and Richards 2015 for similar analyses of long-distance extraction in Tagalog and Dinka, respectively. The postverbal position of the agent *Alui* in (20) forms an argument against passive morphology simply appearing as a reflection of extraction across the verb.

The contrast between (22a) and (22b) shows that possessor relativization is locality-sensitive and does not reflect a free process of pronominal binding. In addition, the *gi* complementizer — which correlates with movement, as we saw in (20) — is an additional reason to believe that (22a) involves extraction.

We can understand these facts as an analogue to the long-distance extraction facts above: The extracted nominal in this case is base-generated at the edge of the subject DP and linked to the local possessor pronoun. Given this proposal, (22a) is another case where a non-subject may be extracted because there is no closer nominal to the probe.

(23) **The closest nominal may be *in* a nominal subject:**

✓ [PROBE:REL+D] ... [$_{\text{DP1}}$ DP$_{2[\text{REL}],i}$ ... N *pro*$_i$] ...

In sum, a close look at the apparent subject-only extraction restriction in Rejang — and the shape of its various exceptions — provides strong motivation for the theory of probing presented here. Rejang exhibits strategies by which nominals *within* subjects — both nominal and clausal — become the closest nominal to the probe and therefore can be extracted.

5 Variation in probing

Through more detailed investigations of extraction restrictions in Turkish and Rejang, we have established that Ā-probing for the closest DP is indeed a strategy employed by the grammar of non-ergative languages. This evidence serves to support the idea that languages may employ Ā-probing for the closest DP, thus indirectly supporting the feasibility of the Aldridge 2004, 2008 approach to syntactic ergativity presented above.

At the same time, we know that languages also employ relativized Ā-probing which can skip intervening nominals without the matching Ā-feature. In this final section, we turn to the nature of this variation. We show that Ā-probing for the closest DP is not a language-level parameter, nor is it a construction-level parameter. Instead, we argue that this choice of restricted probing is made on individual heads.

5.1 Haya

We begin with a discussion of relativization in Haya, a Bantu language of the Great Lakes region of Africa. Haya shows us that heads at different positions in a single Ā-construction can differ the choice to employ Ā-probing for the closest DP or not. This supports the view that this behavior is a property of a particular probe specification on heads, as in [PROBE:Ā+D] as described above, rather than a language-level or construction-level property.

Short relativization in Haya can target both subjects and objects:[28]

(24) **Local relativization in Haya is unrestricted:** (Duranti, 1977: 120 ex. 1, 121 ex. 13)

a. *embw' é-y-a-ly' ébitooke*
dog REL-it-TAM-eat bananas
'the dog that ate bananas'

b. *ebitook' eby' émbwá y-á-lya*
bananas REL dog it-TAM-eat
'the bananas that the dog ate'

Duranti 1977 shows that, in long-distance relativization of an object in Haya, the object must be promoted to subject before undergoing further Ā-movement to the final landing site in the matrix clause, as demonstrated below.

(25) **Long-distance theme relative requires passivization:** (*ibid.*: 129 ex. i–iii)

a. *Kato n-a-tekelez' [$_{CP}$ aty' omwaana y-a-bon abashaija*
Kato PR-he-thinks C child he-PAST-see men
'Kato thinks that the child has seen the men.'

b. **abashaij [abo Kat' a-li-ku-tekelez' [$_{CP}$ aty omwaaana y-a-bona*
men REL Kato he-be-to-think C child he-PAST-see
'the men that Kato thinks the child has seen'

c. *abashaij [abo kat' a-li-ku-tekelez' [$_{CP}$ ati ba-a-bon-**w** omwaaana*
men REL Kato he-be-to-think C they-PAST-see-PASS child
'the men that Kato thinks have been seen by the child'

[28] The form of the relative marker in (24–25) varies due to agreement. In addition, in subject relatives (24a), the relative marker prefixes to the verb.

This can be understood if the conditions on long-distance extraction in Haya allow extraction only of the highest argument of the embedded clause — i.e. a subject-only restriction on extraction resulting from intermediate movement being driven by [PROBE:Ā+D] on embedded C, despite the highest clause of the relative not being restricted in this way.[29] Promotion of an internal object to subject position through passivization causes the theme to be the highest nominal in the embedded clause, allowing it to be probed and thereby extracted.

For the analysis developed here, whether or not the extraction restriction will obtain in a configuration involving C is a function of the lexical items in the context. In particular, if the relevant featural makeup of the elements differs between two such contexts — i.e. if some Cs in a language bear [PROBE:Ā+D] but others do not, we expect only those which bear [PROBE:Ā+D] to display the relevant restriction on extraction. It is relatively common for embedded complementizers to differ from matrix complementizers in terms of what they attract; consider, for instance, the presence vs. absence of T-to-C movement and *do*-support in standard English matrix and embedded questions. Haya, then, is a language in which the outermost relative complementizer (*abo* in (25)) bears [PROBE:Ā], but the the embedded complementizer *ati* bears [PROBE:Ā+D]: only extraction out of clauses headed by *ati* exhibit the subject-only restriction, even within a single long-distance extraction chain.

5.2 Late Archaic Chinese

Late Archaic Chinese (LAC) exhibits a number of extraction asymmetries which are attributable to restricted Ā-probing by [PROBE:Ā+D] as described above. At the CP level, Aldridge 2019 shows that only subjects can be Ā-extracted to the clause edge in LAC and therefore proposes that these processes involve Ā-probing for the closest DP. In the interest of space, we will not review this evidence from movement to Spec,CP here. Instead, here, we call attention to a restriction on the behavior of non-subject *wh*-phrases which undergo Ā-movement to a clause-medial position (Aldridge, 2010).

While the canonical word order of LAC is SVO, Aldridge shows that *wh*-objects in LAC appear preverbally, as shown in (26).[30]

[29] Other Bantu languages display similar subject-only restrictions on all clauses; see in particular Demuth and Harford 1999 and Henderson 2006 for more details on these and other patterns of relativization in Bantu.

[30] We follow Aldridge and the historical Chinese linguistics literature in presenting examples with transcriptions based on

(26) **Clause-medial *wh*-fronting:** (Aldridge, 2010: 2 ex. 2b, 7 ex. 12b)

a. *Wú shéi* [*qī* ___]?
I who deceive
'Who do I deceive?'

b. *Gōng shéi* [*yù xiāng* ___]?
you who want appoint
'Who do you want to appoint?'

As Aldridge (2010, 2019) notes, there are two case frames for ditransitives in LAC: one, where the recipient appears preverbally, itself preceded by a marker, *yǐ*, (27a), and another, where the recipient appears postverbally with a preposition, after the theme (27b).

(27) a. ...*yǐ* REC V THEME

b. ...V THEME P REC

From the frame in (27a), the recipient can be extracted (28a). From (27b), the theme can be extracted (28b). Ā-movement of the second DP argument of a ditransitive is not attested.

(28) ***Wh*-movement of first argument of each ditransitive:** (*ibid.*: 23 ex. 52a,b)

a. Kè jiāng *hé* [yǐ __ jiào guǎrén]?
you MOD what YI teach me
'What are you going to teach me?'

b. *Hé* [qiú __ yú mín]?
what ask of people
'What will [you] ask of the people?'

These facts support the view that Ā-probing with [PROBE:Ā+D] is a possible option for movement-driving heads in general, and not just with C. In LAC, the head which triggers clause-medial movement (perhaps *v*, following Aldridge 2010, 2019) bears [PROBE:WH+D].[31]

5.3 Tagalog

The existence of Ā-extraction constructions that must target the closest DP naturally leads to the question or whether and how non-DP constituents can be Ā-extracted. As we have argued in this section, Ā-probing for the closest DP is not a language-level parameter. A language that utilizes [PROBE:Ā+D] may also Ā-extract non-DPs, but we predict that this may involve different

modern Mandarin pronunciations of the attested examples.

[31] If the predicate-internal subject hypothesis holds of LAC, the agent may be base-generated in Spec,*v*P as well. [PROBE:WH+D] on *v* cannot attract the agent which is already its specifier, making the first object of the ditransitive count as its closest nominal goal. See Branan 2020.

heads/probes, or instead utilize different strategies altogether. In this section, we return to Tagalog — one of the languages that motivated Aldridge's account for its DP extraction asymmetry using Ā-probing for the closest DP — and see that non-DP extractions indeed behave differently.

Here we highlight the fact that DPs and non-DPs behave very differently in their topicalization and focus-fronting, exemplified here with *wh*-questions. DP fronting, as in (29a) must target the absolutive argument — here, the object of 'eat' — and is separated from the clause with an *ang* case marker. Non-DP fronting, as in (29b) lacks this marker.

(29) **DP vs non-DP *wh*-fronting in Tagalog:** (Henrison Hsieh, p.c.)

a. *Ano ang k<in>ain* ***=mo*** __ *sa kusina?*
what ABS <TR.PFV>eat ERG.2SG OBL kitchen
'What did you eat in the kitchen?'

b. *Saan* ***=mo*** *k<in>ain ang mangga* __*?*
where ERG.2SG <TR.PFV>eat ABS mango
'Where did you eat a mango?'

The examples in (29) reflect another, important difference between these two structures. The subject in (29a,b) is a second-position clitic pronoun, which encliticizes to the verb in (29a), but encliticizes to the *wh*-phrase itself in (29b).

Based on such contrasts and other arguments, many authors have argued that DP *wh*/focus-fronting as in (29a) is a biclausal pseudocleft construction built from a headless relative clause (Paul, 2001; Aldridge, 2004; Potsdam, 2009), whereas non-DPs as in (29) are fronted directly to the left periphery (Aldridge, 2004). See also Hsieh 2020, in preparation for further discussion of differences between DP and non-DP extraction constructions in Tagalog. Such differences between DP and non-DP variants of Ā-constructions support the view that, in a language that involves [PROBE:Ā+D] for the Ā-extraction of DPs, different probes or strategies are used for Ā-extraction of non-DPs.

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