

# An AGREE-based account of the gap distribution in *tough*-constructions vs gapped-degree phrases

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## 1. Introduction

*Tough*-constructions (henceforth **TC**) and gapped-degree phrases (henceforth **GDP**) are two surface-similar adjectival constructions selecting for a “gapped” infinitival complement. As shown in (1), both constructions appear compatible with an object-gap ( $\_og$ ), meaning, a dependency between the matrix subject and the embedded object position.

- (1) a. Suzi is **tough** to talk to  $\_og$ .  
b. Suzi is friendly **enough** to talk to  $\_og$ .

But despite the superficial similarities between *tough*-constructions and gapped-degree phrases, only the latter allow for subject-gaps ( $\_sg$ ), as shown in (2).

- (2) a. \* Joseph is **tough**  $\_sg$  to talk to Suzi.  
b. Joseph is friendly **enough**  $\_sg$  to talk to Suzi.

This contrast has been successfully explained using the notion of ANTI-LOCALITY, which is a constraint banning movement dependencies that appear “too short”. The specific implementation of this constraint, due to Erlewine (2016), and advocated for by Brillman and Hirsch (2016), was designed to disallow movement from one Specifier position to an immediately higher Specifier position – hence its name, Spec-to-Spec ANTI-LOCALITY. In the case of the TC/GDP contrast, this constraint predicts that the presence of a DegP layer located above CP in gapped-degree phrases, should allow to rescue subject-gapped-degree phrases from ungrammaticality. This relies on the assumption that  $\bar{A}$ -movement chains can skip intermediate positions (here in particular, Spec-CP).

Spec-to-Spec ANTI-LOCALITY however, cannot directly account for a specific subclass of gapped-degree phrases – *tough*-gapped-degree phrases (henceforth **TGDP**). TGDPs are gapped-degree phrases featuring a degree-modified *tough*-predicate. Surprisingly, those constructions generally behave like *tough*-constructions gap-wise, meaning, they disallow subject-gaps (3b) and allow object-gaps (3a).<sup>1</sup>

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<sup>1</sup> Certain TGDPs, such as (i), actually appear grammatical.

(i) Suzi is **too tough**  $\_sg$  to like Joseph.

Brillman and Hirsch (2016) rightfully noticed that those constructions are only acceptable under a specific reading, which is not the standard reading assigned to *tough*-constructions. This intuition is clarified by the following inferences:

- (3) a. Suzi is **too tough** to talk to <sub>og</sub>.  
 b. \* Joseph is **too easy** <sub>sg</sub> to please Suzi.

Given that those structures most probably involve a DegP layer just like regular gapped-degree phrases, Spec-to-Spec ANTI-LOCALITY predicts that subject-gaps should be allowed. Brillman and Hirsch (2016) proposed a workaround to this issue, based on the assumption that ungrammatical subject-gap TGDPs may feature a structure different from that of GDPs, whereby the Degree phrase adjoins to the *tough*-predicate, instead of complementing it. In this paper, we propose an alternative account of the gap distribution of *tough*-constructions, gapped-degree phrases and *tough*-gapped-degree phrases, which does not rely on any specific implementation of ANTI-LOCALITY, but rather, makes use of an extension of Kinyalolo's Constraint (Kinyalolo 1991), combined with two independently motivated semantic constraints. Additionally, we will see that our account allows us to retain one single  $\theta$ -grid for *tough*-predicates, while making the status of the complement clause more transparent in the case of *tough*-gapped-degree phrases.

## 2. Background on the syntax of *tough*-constructions and gapped-degree phrases

### 2.1 *Tough*-constructions

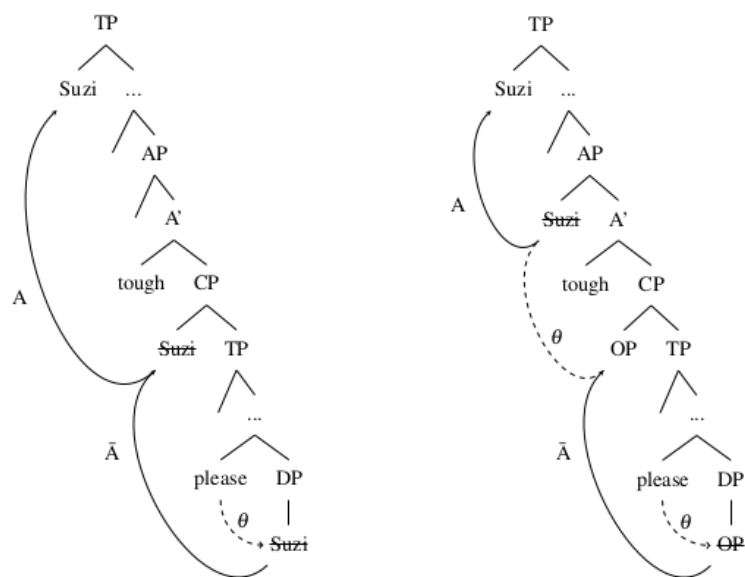
In the rich literature on *tough*-constructions, the “linking” mechanism between the matrix subject and the embedded gap has been analyzed as movement, as in the LONG-MOVEMENT approaches (Rosenbaum 1967, Hicks 2009, Longenbaugh 2017 i.a.), or binding/agreement as in the BASE-GENERATION approaches (Chomsky 1977, Lasnik and Fiengo 1974, Rezac 2006 i.a.). Standard LONG-MOVEMENT approaches have to make the assumption that *tough*-movement consists in  $\bar{A}$ - followed by A-movement, a sequence dubbed “Improper” Movement by Chomsky (1986), and which is generally disallowed. Standard BASE-GENERATION approaches on the other hand, pose problems in terms of  $\theta$ -assignment. In both cases however, the gap (trace for LONG-MOVEMENT, null operator for BASE-GENERATION) is assumed to  $\bar{A}$ -move to the embedded Spec-CP position. Evidence in support for this movement step comes from the absence of intervention effects within the embedded clause (cf. Longenbaugh 2017 and (4a)); parasitic-gap licensing (cf. Chomsky 1982 and (4b)); and island-creation (cf. Chomsky 1977, Rezac 2006 and (4c)).

- (4) a. *Aspects* was **annoying** [ to be asked by Joan [ to convince Matt to read <sub>og</sub> ]].  
 b. ? *On Raising* is **easy** to admire <sub>og</sub> without having read <sub>pg</sub>.  
 c. \* *Where*<sub>2</sub> was *Syntactic Structures*<sub>1</sub> **enjoyable** [to read <sub>1</sub> <sub>2</sub> ].

The two approaches to *tough*-constructions, LONG-MOVEMENT and BASE-GENERATION, are summarized in Figure 1.

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- (i) Suzi is **too tough** <sub>sg</sub> to like Joseph.  
 ⇨ It was too difficult for Suzi to like Joseph.  
 ⇒ Suzi is too tough a person to like Joseph.

We will come back to this distinction in the next sections.



(a) The LONG-MOVEMENT view

(b) The BASE-GENERATION view

Figure 1: Two views on the derivation of *tough*-constructions

## 2.2 Gapped-degree phrases

The literature on gapped-degree phrases uniformly adopted a binding approach to those constructions (see Meier 2003, Nissenbaum and Schwarz 2011, Brillman and Hirsch 2016, Brillman 2017 i.a.). Nissenbaum and Schwarz (2011), Brillman (2015, 2017), and Brillman and Hirsch (2016) in particular, assume that a null operator moves to the Specifier of a Degree phrase (Spec-DegP), DegP being located immediately above CP. This movement (or at least a step thereof) has  $\bar{A}$ -properties, supported again by the possibility of a long-distance dependency, island-sensitivity, and parasitic gap licensing (Brillman 2015, Brillman and Hirsch 2016, Brillman 2017). This is illustrated in (5).

- (5) a. *Aspects* is **too** dense [to be asked by Joan [to convince Matt to read  $_{og}$ ]].  
 b. ? *On Raising* is **too** well-written to admire  $_{og}$  without having read  $_{pg}$ .  
 c. \* *Where<sub>2</sub>* was *Syntactic Structures<sub>1</sub>* **too** abstract [to read  $_{1}$   $_{2}$ ].

Building on an observation by Hartman (cf. Hartman (2011a), Hartman (2011b)), Brillman also suggested that gapped-degree phrases, like *tough*-constructions supposedly, exhibit defective intervention effects linked to A-movement (cf. Chomsky (2000)). This led to the conclusion that null operator movement to Spec-DegP in gapped-degree phrases was in fact two-step Improper Movement. More specifically, it was argued that the null operator  $\bar{A}$ -moved to Spec-CP, before A-moving to Spec-DegP. Arguments based on defective intervention must be taken with care however. Bruening (2014) for instance, showed that minimal displacement of the intervening PP (the experiencer) in the *tough*-construction can render the structure grammatical, as exemplified in (6).

- (6) Sugar is (to many people) **important** (\*to many people) to give up  $_{og}$ .

This is unexpected if the kind of intervention effect attested in *tough*-constructions is driven by A-movement to the matrix Spec-TP, as suggested by Hartman. Another issue pointed out by Bruening is that of adjunct intervention, which in *tough*-constructions yields the same ungrammaticality pattern as experiencer intervention, as exemplified in (7) below.

(7) Sugar was (in such conditions) **hard** (\*in such conditions) to give up <sub>og</sub>.

This is again unexpected under a defective intervention analysis, because adjuncts are no interveners with respect to A-movement. We think that those two observations by Bruening extend to gapped-degree phrases:

(8) This jacket is (for Johnny) **too** small (\*for Johnny) for Mary to buy <sub>og</sub>.

(9) This towel is (at the moment) **too** wet (? at the moment) to use <sub>og</sub>.

This puts into question an Improper Movement account of gapped-degree phrases. Moreover, if movement to Spec-DegP was indeed a mixture of A- and  $\bar{A}$ -movement, then, one should decide on the nature of the kind of one fell swoop movement “skipping” Spec-CP that has to be posited to explain the grammaticality of gapped-degree phrases under the ANTI-LOCALITY account that we will describe in more detail in the next section. If one fell swoop movement to Spec-DegP inherits the properties of the target position, and if DegP is indeed an A-position, then, the various  $\bar{A}$ -properties of gapped-degree phrases would remain mysterious. For all these reasons, we will assume that movement from Spec-CP to Spec-DegP is  $\bar{A}$  and not A, and that gapped-degree phrases are not Improper Movement structures. Figure 2 below summarizes the various movement chains posited in the literature for *tough*-constructions and gapped-degree phrases.

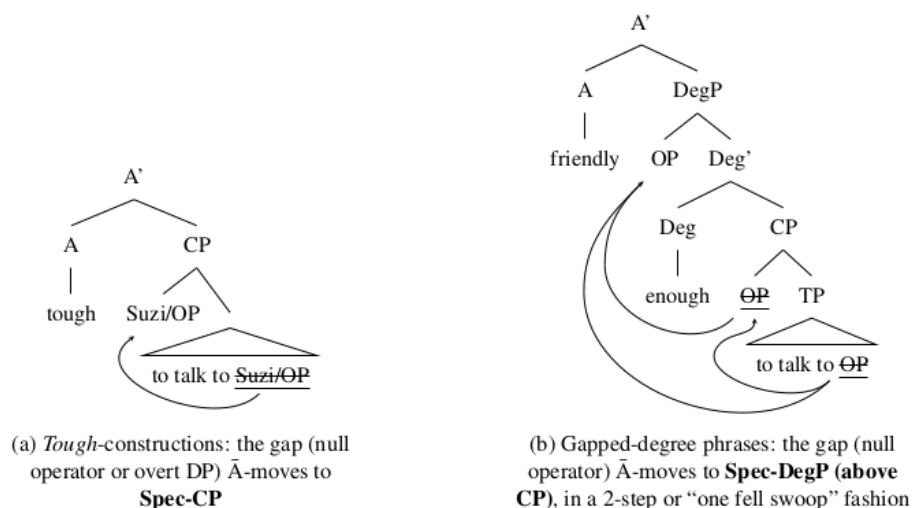


Figure 2: Movement chains assumed in the literature for *tough*-constructions and gapped-degree phrases (object-gap case)

### 2.3 The “Spec-to-Spec” ANTI-LOCALITY account of the gap contrast

The gap contrast between *tough*-constructions and gapped-degree phrases has been explained in previous work *via* a specific notion of ANTI-LOCALITY (henceforth **AL**), designed such that

movement from Spec-TP to Spec-CP, characteristic of subject-gap *tough*-constructions, is considered AL-violating. This specific implementation of ANTI-LOCALITY, dubbed “Spec-to-Spec” ANTI-LOCALITY and due to Erlewine (2016), disallows movement dependencies between two Specifier positions such that one is located immediately above the other. This constraint directly disallows movement from Spec-TP to Spec-CP, and therefore predicts subject-gap *tough*-constructions to be ungrammatical (see Figure 3a). To derive the grammaticality of both types of gapped-degree phrases (subject- and object-gap), the ANTI-LOCALITY account requires the additional assumption that movement from Spec-TP to Spec-DegP be allowed to “skip” the Spec-CP position. This way, gapped-degree phrases are expected to feature a longer movement dependency than subject-gap *tough*-constructions, and are in turn predicted to escape Spec-to-Spec ANTI-LOCALITY. Figures 3c and 3d illustrate this line of reasoning.

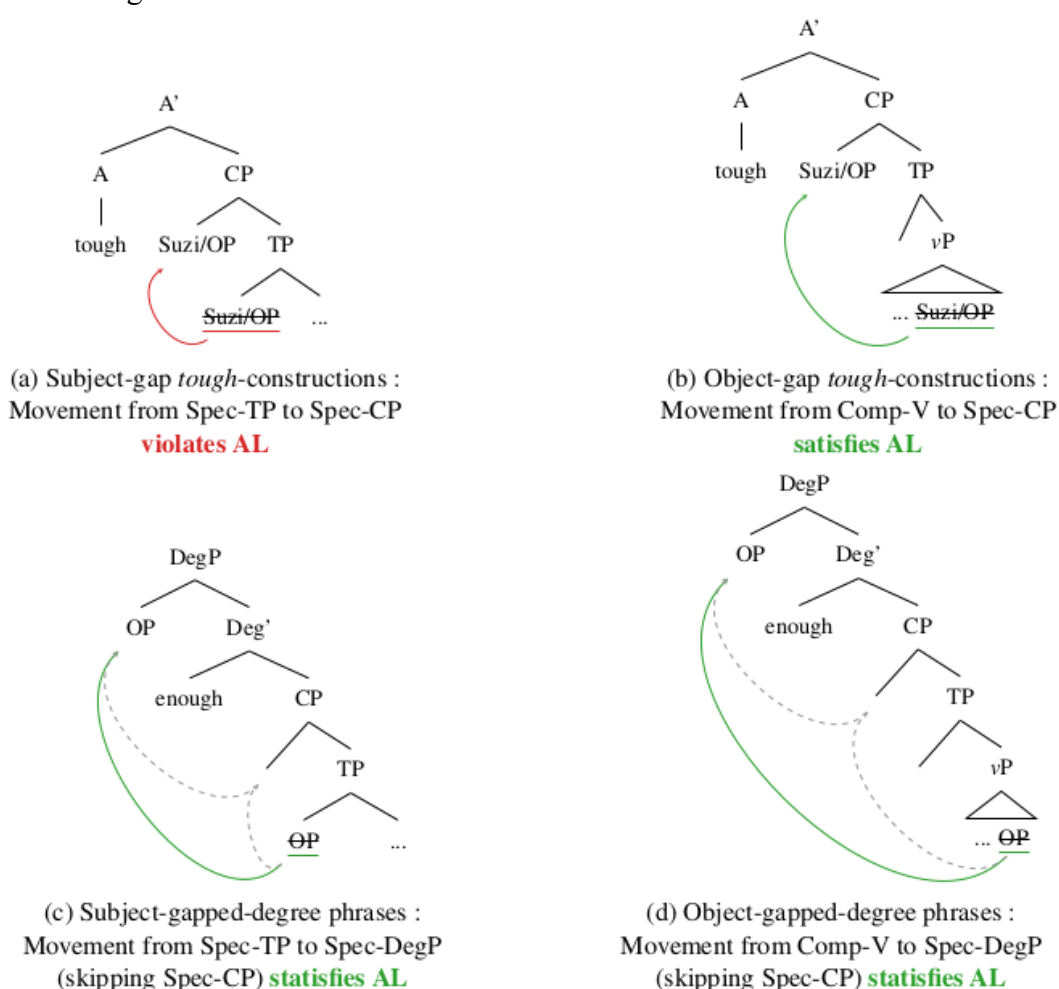


Figure 3: Movement chains posited by the “Spec-to-Spec” ANTI-LOCALITY account of Brillman and Hirsch (2016) for *tough*-constructions and gapped-degree phrases

Regarding *tough*-gapped-degree phrases, the ANTI-LOCALITY account requires one more assumption. Indeed, if ANTI-LOCALITY simply applied to a GDP structure involving a *tough*-predicate (instead of a regular gradable adjective), subject-gaps would be predicted to be grammatical, because movement from Spec-TP to Spec-DegP (skipping Spec-CP) would be possible. Brillman and Hirsch (2016) do not strictly disallow this possibility, but argue that it

competes with another, surface-similar, yet ungrammatical derivation, whereby the degree phrase adjoins to the adjectival phrase, making the structure analog to a *tough*-construction in the relevant respects. The two competing derivations are illustrated in Figure 4 below.

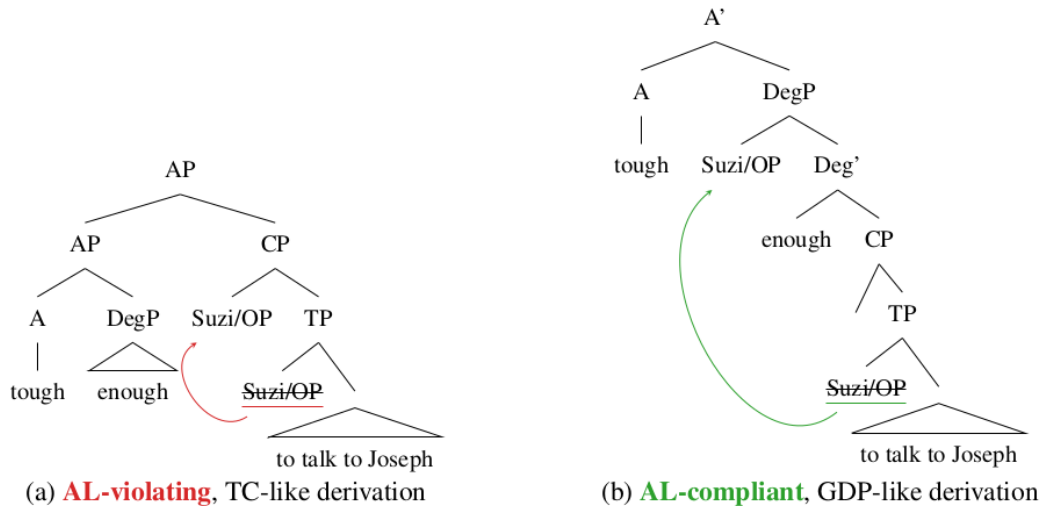


Figure 4: Movement chains posited by the “Spec-to-Spec” ANTI-LOCALITY account of Brillman and Hirsch (2016) for structurally ambiguous *tough*-gapped-degree phrases (subject-gap case)

The assumption that *tough*-gapped-degree phrases are structurally ambiguous comes from the fact that those constructions can receive two different readings, one in which the predicate acts like a standard *tough*-predicate (i.e., modifies the event denoted by the embedded clause), and another in which the *tough*-predicate seems to behave like a regular gradable adjective, modifying the matrix subject. Those two readings are rendered in (10a) (in that order) for the object-gap case. The adjoined structure associated to a TC-like derivation and represented in Figure 4a, is supposed to correspond to the standard *tough*-reading, while the “stacked” structure associated to a GDP-like derivation and represented in Figure 4b is supposed to correspond to the non-standard reading of *tough*. The former reading is the only one that appears unavailable in the subject-gap case, as exemplified in (10b).

- (10) a. Suzi is **too tough** to talk to <sub>og</sub>.  
 ⇒ It is too tough to talk to Suzi. TC-like derivation  
 ⇒ Suzi is too tough a person to be talked to. GDP-like derivation
- b. Suzi is **too tough** <sub>sg</sub> to talk to Joseph.  
 ≠ It is too tough for <sub>Suzi</sub> to talk to Joseph. TC-like derivation  
 ⇒ Suzi is too tough a person to talk to Joseph. GDP-like derivation

We think that this account captures the right intuition about the semantic behavior of *tough*-gapped-degree phrases. However, it also posits two very different structures for *tough*-gapped-degree phrases, as well as two different  $\theta$ -grids for the *tough*-predicate (one in which *tough* modifies an event-type complement, and another in which it modifies an individual-type

subject). More generally, the ANTI-LOCALITY account is based on a much debated constraint<sup>2</sup> that might appear counter-intuitive if we assume that syntactic restrictions should target configurations or operations characterized by some degree of formal complexity (from a processing or production point of view). In fact, short-distance dependencies, such as subject *wh*-movement, are normally seen as easier from an acquisition and languages processing standpoint (see e.g. Friedmann, Belletti, and Rizzi 2009). It is thus surprising for a constraint such as ANTI-LOCALITY to disallow similar kinds of configurations.

### 3. Contribution and Roadmap

Is ANTI-LOCALITY really part of the grammar, or just the manifestation of a more general and grounded principle? In this paper, we propose an alternative account of the gap distribution of *tough*-constructions, gapped-degree phrases and *tough*-gapped-degree phrases which does not require to appeal to the notion of ANTI-LOCALITY. Instead, our account heavily builds on recent observations by Oxford (2020) and Pesetsky (2021), by relying on an AGREE-based constraint: Kinyalolo's Constraint (henceforth **KC**, cf. Kinyalolo 1991, Carstens 2003 i.a.), a repairable constraint targeting cases of multiple agreement by the same goal with different probes. More specifically, we propose that the embedded gap present in the constructions at stake successively moves from its original subject or object position to higher Specifier positions, as a result of Agreement with the corresponding heads – T (subject-gap cases), C, and Deg (gapped-degree cases). We argue that the range of constructions observed results from (1) repairs of Kinyalolo's Constraint violations occurring during those steps of successive Agreement, and (2) independently motivated semantic type-mismatch considerations targeting the clausal complement of the structures at stake. As a result, our account, unlike the previous ones, is resolutely positioned at the syntax-semantics interface. In particular, it provides an explanation as to why *tough*-gapped-degree phrases may behave like *tough*-constructions gap-wise, without positing two fundamentally different structures and different  $\theta$ -grids for the *tough*-predicate. It also replaces ANTI-LOCALITY by a general-purpose and independently motivated constraint, successfully capturing the interplay between syntax and semantics in the target constructions.

The paper is organized as follows. In Section 4, we flesh out two semantic, type-driven constraints restricting the shape of the infinitival complement of *tough*-constructions and gapped-degree phrases. In Section 5, following recent observations by Oxford (2020) and Pesetsky (2021), we propose that ANTI-LOCALITY be replaced by a specific implementation of Kinyalolo's Constraint. We derive the gap distribution of *tough*-constructions, gapped-degree phrases and *tough*-gapped-degree phrases in Section 6.

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<sup>2</sup> AL has in fact received many implementations over the years, that are roughly divided into three groups: “Comp-to-Spec” (Pesetsky and Torrego 2001, Abels 2003, Kayne 2005), “Spec-to-Adj” (Bošković 1994, Bošković 1997, Saito and Murasugi 1999, Bošković 2005, Boeckx 2009), and finally, the “Spec-to-Spec” family we are focusing on in this paper (Grohmann 2000, Grohmann 2003, Erlewine 2016).

## 4. Semantic assumptions

### 4.1 The constraints at a glance

In this section, we introduce two semantic constraints governing the type of the complement clause in *tough*-constructions and gapped-degree phrases. More specifically, these semantic constraints are intended to act as post-syntactic “filters” allowing to rule out the unattested constructions (e.g., subject-gap *tough*-constructions), among all those generated by the syntax.

- \*NoC : the complement clause of *tough*-predicates must contain a C-head.  
 \*C : the complement clause of degree modifiers should not contain a C-head.

In order to set out the rationale of those constraints, we start by reviewing a recent analysis pertaining to the semantics of embedded clauses.

### 4.2 Some background on the semantics of embedded clauses

As noted by Kratzer (2006), and more recently by Moulton (2009), Moulton (2015) and Bogal-Allbritten and Moulton (2016), embedded clauses seem to be distributed like DPs. A first piece of evidence in favor of this claim is that attitude verbs like *believe* can combine with either DPs (as in (11a)), or CPs (as in (11b)).

- (11) a. Jotaro believes [<sub>DP</sub> Jolyne’s story ].  
 b. Jotaro believes [<sub>CP</sub> that Jolyne lies ].

Another piece of evidence is based on the observation that *that*- and *for*-clauses can be equated with DPs. This is shown in (12).

- (12) a. [<sub>DP</sub> The fact ] is [<sub>CP</sub> that Jolyne lies ].  
 b. [<sub>DP</sub> The challenge ] is [<sub>CP</sub> for Jolyne to escape ].

Those syntactic facts are quite unexpected under the traditional view of DPs and embedded clauses, whereby DPs denote properties (type  $\langle e, t \rangle$ ), while CPs denote propositions (type  $\langle s, t \rangle$ ). This set of data, according to Kratzer (2006) and subsequent work, motivates an analysis of CPs whereby the C-head (*that*, *for*) takes a proposition (the “clause”) as argument and returns a property of “individuals with propositional content” (type  $\langle e, \langle s, t \rangle \rangle$ ). This lifting operation is formalized in the equations below (from Kratzer 2006).

$$\begin{aligned} \llbracket C \rrbracket &= \lambda P_{st}. \lambda x_e. \lambda w_s. \text{CONT}(x)(w) = P \\ \text{CONT}(x)(w) &= \{w' \mid w' \text{ is compatible with the intentional content of } x \text{ in } w\} \end{aligned}$$

The key takeaway from this analysis is that an embedded clause involving a CP is expected to be property-denoting, whereas a clause devoid of a CP should be proposition-denoting.



### 4.3 \*NoC: the complement clause of *tough*-predicates must contain a C-head

Let us start with the first semantic constraint, \*NoC, according to which *tough*-predicates must combine with a clause containing a C-head. Unlike other adjectives, which usually characterize “pure” individuals, *tough*-predicates have been argued to be properties of events (type  $\langle e, \langle s, t \rangle \rangle$ ). In particular, a *tough*-predicate embedding an infinitival clause will characterize the kind of event denoted by the embedded clause (cf. Gluckman 2019, Gluckman 2021). This suggests that a *tough*-predicate takes its complement clause as a semantic argument, and combines with it *via* FUNCTIONAL APPLICATION, or PREDICATE MODIFICATION. This in turn entails that the embedded clause in a *tough*-construction cannot be a bare proposition (i.e., a set of worlds).<sup>3</sup> This claim is made more concrete in (13) below.

- (13) Suzi is tough to talk to  $\_og$ .  
 $\approx$  There is a *talking-to-Suzi* event that is tough.  
 $\neq$  The set of worlds where Suzi is being talked to is tough.

Gluckman (2021) argued that a sentence such as (13) can receive the proper semantic interpretation as soon as the *tough*-predicate combines with the infinitival clause *via* PREDICATE MODIFICATION. Under that view, the infinitival clause is a property of events with propositional content (type  $\langle e, \langle s, t \rangle \rangle$ ). This, in the framework set out by Kratzer (2006), is only possible in the presence of a C-head, be it overt or covert. More specifically, the *for*-head in a *tough*-construction is intended to lift a proposition (type  $\langle s, t \rangle$ ) into a type  $\langle e, \langle s, t \rangle \rangle$ , identical to the type of *tough*-predicates. We therefore argue that *tough*-predicates must combine at LF with a clause containing a C-head (type  $\langle e, \langle s, t \rangle \rangle$ ).

### 4.4 \*C: the complement clause of a degree modifier should not contain a C-head

We now turn to the second constraint, \*C, which states that a degree modifier such as *too* or *enough* should not combine with a clause containing a C-head. As argued in Hacquard 2015, gapped-degree phrases “have traditionally been analyzed as comparative constructions which relate an actual degree to a modalized one”. This leads degree-modified adjectives to combine with propositions (cf. also Heim 2000, Nissenbaum and Schwarz 2011, Hacquard 2015). This is exemplified by the following lexical entry for *too* (from Hacquard 2015).

$$\begin{aligned} \llbracket \text{too} \rrbracket &= \lambda P_{\langle d, \langle e, \langle s, t \rangle \rangle \rangle} \cdot \lambda Q_{\langle s, t \rangle} \cdot \lambda x_e. P(\lambda d : \forall w' \in \text{Acc}(w). \neg Q(w') \Leftrightarrow P(d)(x)(w'))(x)(w) \\ \llbracket \text{too friendly} \rrbracket &= \lambda Q_{st}. \lambda x_e. \text{Friendly}(\lambda d : \forall w' \in \text{Acc}(w). \neg Q(w') \Leftrightarrow \text{Friendly}(d)(x)(w'))(x)(w) \end{aligned}$$

According to this lexical entry, *too* takes a predicate P of type  $\langle d, \langle e, \langle s, t \rangle \rangle \rangle$ , a proposition

<sup>3</sup> One could argue that a set of events could be retrieved from a set of worlds using a specific kind of covert operator, which, applied to the set of worlds, would return the set of events that occur in all the worlds from the set, and only in them. However, it remains unclear how to guarantee that any event retrieved *via* this operator really *coincides* with the event originally denoted by the embedded clause, instead of simply *correlating* with it (i.e. being different from the original event, but yet happening in exactly the same relevant worlds). An analysis without this kind of operator, i.e., without a proposition-denoting clause, seems to be more elegant, but also less prone to such inaccuracies.

Q of type  $\langle s, t \rangle$  referring to the embedded clause, and an individual  $x$ . *Too* then states that  $x$  verifies  $P$  to a degree  $d^*$  in  $w$ ,  $d^*$  being the degree such that the set of accessible worlds where the negation of the embedded clause holds coincides with the set of accessible worlds where the predicate holds for  $x$  at a degree  $d^*$ . In other words,  $d^*$  “guarantees” that the embedded clause is not realized in any accessible world. Crucially, the embedded clause has to be a proposition in order to capture this modal flavor of degree modification. If again we subscribe to the view on embedded clauses set out by Kratzer (2006) and subsequent work, this means that the complement clause of degree-modified adjectives cannot involve a C-head, because otherwise, it would be lifted into a property. We then conclude that gapped-degree phrases must embed clauses that are devoid of a C-head.

## 5. Syntactic assumptions

In this section, we introduce Kinyalolo’s Constraint and spell out how it may achieve the same results as ANTI-LOCALITY. We also flesh out the underlying structure of the constructions at stake: *tough*-constructions, gapped-degree phrases and *tough*-gapped-degree phrases.

### 5.1 A brief review of Kinyalolo’s Constraint (KC)

Kinyalolo’s Constraint was initially formulated as a morphological constraint restricting redundant agreement marking at the word level (see Kinyalolo 1991, Carstens 2003, Carstens 2005). This constraint is illustrated in (14) below for the Bantu language Kilega (example from Kinyalolo 1991 and Carstens 2003). As shown in (14a), subjects in Kilega (here, *elephant*) agree with all the aspectual and modal heads present in the sentence. As shown in (14b) however, this redundant Agreement pattern gets obliterated under incorporation: in that case, only the highest head exhibits overt agreement marking.

- (14) a. Nzogu **zí** - kili **z** - á - twag - a maswá.  
 10elephant 10AGR - be.still 10AGR - ASP - stampede - FV 6farm.  
 ‘The elephants are still stampeding over the farms.’
- b. pro **mú** - ná - kúbul - (**\*mú**) - íl - é mázi.  
 pro **IIPL** - MOD - pour - (**\*IIPL**) - ASP - FV 6water.  
 ‘You could have poured water.’

Kinyalolo’s Constraint has regained interest in recent years with work by (Alok and Baker 2018, Oxford 2017, Oxford 2020 and Pesetsky 2021 i.a.), and has been extended to other domains and languages. Pesetsky (2021) in particular, suggests that local movement from Spec-TP to Spec-CP (i.e., agreement with both T and C), instead of being prohibited by ANTI-LOCALITY, leads to a violation of Kinyalolo’s Constraint, which in turn triggers some kind of reduction in either the TP or the CP system. This, according to Pesetsky, would have the potential to explain a variety of phenomena that were previously believed to be driven by ANTI-LOCALITY: *that*-trace effects (seen as CP-reduction, cf. (15)) in languages such as English, and ANTI-AGREEMENT (seen as TP-reduction, cf. (16), taken from Ouali 2006) in languages such as Tamazight Berber. Whether to alter CP or TP seems to depend on the *criticality* (Chomsky 2000, Rizzi 2006, i.a.) of the Spec-CP position, i.e., whether Spec-CP is linked to scope-discourse semantics (topicality, focus etc.), or alternatively constitutes a final landing site for  $\bar{A}$ -movement. A non-criterial CP layer then constitutes a privileged target for KC-repairs.

Criterial positions in (15) and (16) are signaled using the † symbol.

- (15) [<sub>CP</sub>† Who do you think [<sub>CP</sub> ~~that~~ [<sub>TP</sub> ~~won the race ?~~ ]]]
- (16) [<sub>CP</sub>† mani thamttut ag [<sub>TP</sub> ~~ʔlan~~ araw ? ]]  
 [<sub>CP</sub>† which woman that [<sub>TP</sub> ~~see.PERF.PART.3SG.FEM~~ boys ? ]]  
 ‘Which woman saw the boys?’

Our account is based on this more liberal, and syntactic view of Kinyalolo’s Constraint. Crucially also, we need to postulate that repairs of Kinyalolo’s Constraint do not constitute post-syntactic phenomena, but rather, feed semantic interpretation, such that the deletion of, say, a C-head, has consequences at LF. Finally, we stipulate that the embedded Spec-CP position is never criterial in the structures at stake – in *tough*-constructions in particular. In the case of gapped-degree phrases, this may be justified by the fact that Spec-CP is not the final landing site of the gap (Spec-DegP is). In the case of *tough*-constructions, the justification is perhaps a bit less straightforward since, at least under a BASE-GENERATION approach, Spec-CP is the final landing site of the gap. We postulate however that, even in that kind of configuration, the embedded Spec-CP position does not have the right scope-discourse properties to constitute a criterial position (relatedly, even if the gap ends up in Spec-CP under a BASE-GENERATION account, it remains bound by a higher element, namely, the base-generated matrix subject). In brief, we think that it is reasonable to assume that the embedded Spec-CP is not criterial and therefore, constitutes a preferred target for repairs of Kinyalolo’s Constraint.

## 5.2 Key assumptions about the underlying syntax the constructions at stake

We remain agnostic regarding the exact nature of the gap in the case of *tough*-constructions. We assume that embedded objects standardly move from the Comp-V position and subjects from the Spec-*v*P position. Additionally, we posit that  $\bar{A}$ -movement is “strictly” successive-cyclic, i.e., never skips  $\bar{A}$ -positions. In particular, a gap moving to Spec-DegP in a GDP configuration is unable to “skip” Spec-CP, as it could do in the work of Brillman and Hirsch (2016). We suppose that the three structures at stake involve an adjectival projection (AP), hosting the matrix predicate, i.e. a *tough*-predicate or gradable adjective. Gapped-degree phrases additionally involve a degree-modifying layer (DegP), hosting the degree modifier (*too* or *enough*). This projection is assumed to be located right below the adjectival projection. In the particular case of *too*-gapped degree phrases, the Deg-head is expected to move past the predicate to yield the correct word order. The infinitival clause, which is a complement of DegP in the case of gapped-degree phrases, and a complement of AP in the case of *tough*-constructions, is initially assumed to be a full-fledged CP. The underlying structures of *tough*-constructions and gapped-degree phrases as we just described them, are schematized in Figure 5 below.

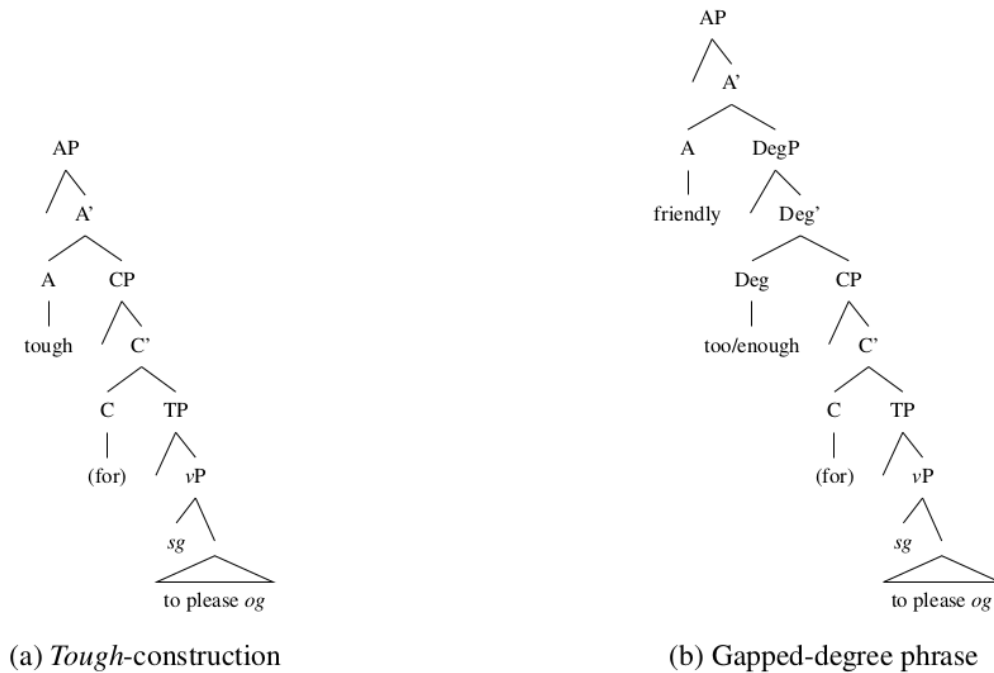
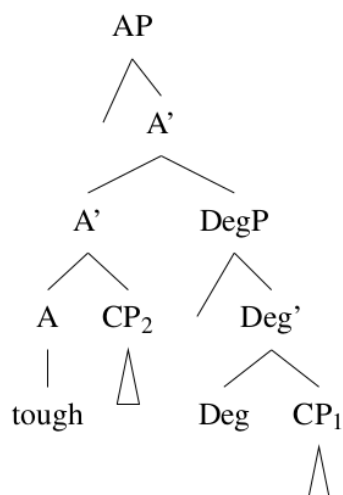


Figure 5: Assumed underlying structure of *tough*-constructions and gapped-degree phrases

We depart from the account by Brillman and Hirsch (2016) with respect to *tough*-gapped degree phrases. Brillman and Hirsch (2016) assumed that those constructions were structurally ambiguous, one parse being TC-like, and another parse being GDP-like. This particular view seemed to require two different  $\theta$ -grids for *tough*: one in which *tough* specifies an event, and one in which it specifies the subject. *Contra* Brillman and Hirsch (2016), we want to stipulate that *tough*-gapped-degree phrases all have the same core structure, which is similar to that of a gapped-degree phrase, except that DegP is adjoined to the adjectival head instead of being a complement. The two interpretations of the *tough*-gapped-degree phrase then result from different kinds of complements being overtly realized: in the case of the TC-reading, the overt clause corresponds to a complement of the *tough*-predicate, whereas in the case of the GDP-reading, the overt clause corresponds to a complement of the degree modifier. The positions of those two possible complements are indicated in Figure 6. The English sentences in (17) and their French counterparts in (18), which feature overt realization of both clausal complements, illustrate that ungrammaticality arises when the complement clause of the *tough*-predicate, but not that of the degree modifier, contains a subject gap. As a side note, the contrast is perhaps even clearer with the French data from (18), because this language happens to use distinct prepositions to introduce clausal complements of *tough* as opposed to those of degree modifiers: *à* is consistently used for *tough*-constructions, while *pour* appears in gapped-degree phrases.<sup>4</sup>

<sup>4</sup> One last thing to note about the French examples is that the counterparts of (17a) and (17c), (18a) and (18c) respectively, do not involve object-gaps in the clausal complement of the degree phrase, but instead, some sort of resumptive pronoun referring to the matrix subject (*le*). French gapped-degree phrases (and not only *tough*-gapped-degree phrases) generally disallow object-gaps – a further restriction that we do not attempt to explain here.

Figure 6: Assumed underlying structure of a *tough*-gapped-degree phrase

- (17) a. This book is **easy enough** to read <sub>og</sub> to find <sub>og</sub> in this store.  
 b. This book is **easy enough** to read <sub>og</sub> <sub>sg</sub> to be found in this store.  
 c. \* This book is **easy enough** <sub>sg</sub> to be read to find <sub>og</sub> in this store.  
 d. \* This book is **easy enough** <sub>sg</sub> to be read <sub>sg</sub> to be found in this store.
- (18) a. Ce livre est **assez facile** à lire <sub>og</sub> pour le trouver dans un magasin.  
 b. Ce livre est **assez facile** à lire <sub>og</sub> pour <sub>sg</sub> être trouvé dans un magasin.  
 c. \* Ce livre est **assez facile** à <sub>sg</sub> être lu pour le trouver dans un magasin.  
 d. \* Ce livre est **assez facile** à <sub>sg</sub> être lu pour <sub>sg</sub> être trouvé dans un magasin.

Under that view, the complement clause in a sentence such as *Suzi is too tough to talk to can* be parsed as either a complement of *tough*, or a complement of the degree modifier *too*.

- (10) a. Suzi is **too tough** [<sub>CP2</sub>] [<sub>DegP</sub> [<sub>CP1</sub> to talk to <sub>og</sub>]].  
 ⇒ Suzi is tough (to impress, to interact with, to persuade, to talk to...), to a degree that makes talking to her impossible in all accessible worlds.  
 b. Suzi is too tough [<sub>CP2</sub> to talk to <sub>og</sub>] [<sub>DegP</sub> [<sub>CP1</sub>]].  
 ⇒ Suzi is tough to talk to, to a degree that makes whatever salient task involving her impossible in all accessible worlds.

This allows to posit the same kind of lexical entry for *tough* in *tough*-constructions and *tough*-gapped-degree phrases, also consistent with the claim that an individual cannot be *tough simpliciter*, even in sentences such as those in (19). Put it in another way, our account guarantees that *tough*-predicates always specify an event, be it overtly or covertly realized.

- (19) a. This problem is **tough** (to solve <sub>og</sub>).  
 b. Those kids are **easy** (to manage <sub>og</sub>).

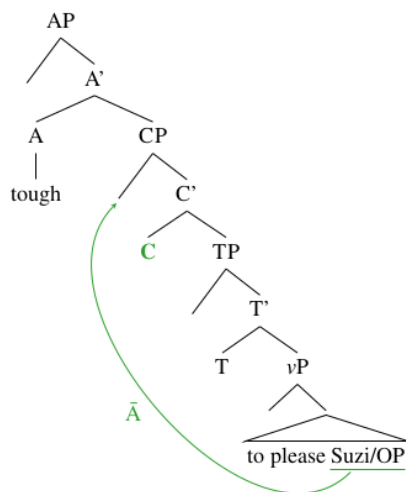
## 6. Deriving the gap distribution of the three structures at stake

In this section, we derive the gap distribution of *tough*-constructions, gapped-degree phrases, and *tough*-gapped-degree phrases, based on the stipulated underlying structures for those three constructions, the action of Kinyalolo's Constraint, and the semantic restrictions laid out in Section 4. We proceed construction type by construction type, starting with *tough*-constructions.

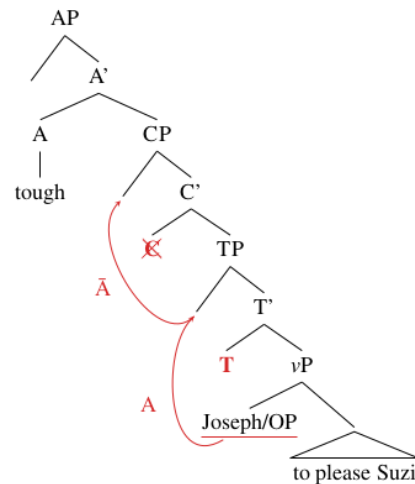
### 6.1 Tough-constructions

*Tough*-constructions are compatible with object-gaps and incompatible with subject-gaps. Let us start with the object-gap case; in that configuration, the gap moves from the object position to Spec-CP in order to agree with the C-head, which does not lead to any violation of Kinyalolo's Constraint. The resulting structure, having retained its C-head, remains compatible with the semantic requirements of the *tough*-construction (\*NoC). We therefore predict object-gap *tough*-constructions to be grammatical. This is schematized in Figure 7a below.

In the subject-gap case, the gap first agrees with T and moves to Spec-TP, then agrees with C and moves to Spec-CP. This leads to one violation of Kinyalolo's Constraint, and to the deletion of the C-head since Spec-CP is assumed not to be criterial. The resulting structure thus involves a *tough*-predicate with a clausal complement devoid of a C-head, which constitutes a violation of \*NoC. We therefore predict subject-gap *tough*-constructions to be ungrammatical. This is schematized in Figure 7b below.



(a) Object-gap case: no KC-violation; the semantic requirements of the TC are verified



(b) Subject-gap case: one KC-violation leading to the deletion of C; the semantic requirements of the TC are no longer verified

Figure 7: Derivation of subject- and object-gap *tough*-constructions

### 6.2 Gapped-degree phrases

We now turn to gapped-degree phrases involving standard gradable adjectives (no *tough*-predicate). Those constructions are compatible with both subject- and object-gaps. Let us start again with the object-gap case; in that configuration, the gap moves from the object position to

Spec-CP in order to agree with the C head, then to Spec-DegP in order to agree with the Deg head. This leads to one violation of Kinyalolo's Constraint, and to the deletion of the C-head since Spec-CP is not criterial. The resulting structure thus involves a degree-modifying projection with a clausal complement which is devoid of a C-head, i.e., compatible with the semantic requirements of gapped-degree phrases (\*C). We therefore predict object gapped-degree phrases to be grammatical. This is schematized in Figure 8a below.

In the subject-gap case, the gap first agrees with T and moves to Spec-TP, then agrees with C and moves to Spec-CP, then finally agrees with Deg and moves to Spec-DegP. This leads to two violations of Kinyalolo's Constraint, and to the deletion of the C- and T-heads. The resulting structure again involves a degree-modifying projection with a clausal complement which is devoid of a C-head, i.e. compatible with the semantic requirements of gapped-degree phrases. We therefore predict subject gapped-degree phrases to be grammatical as well. This is schematized in Figure 8b below.

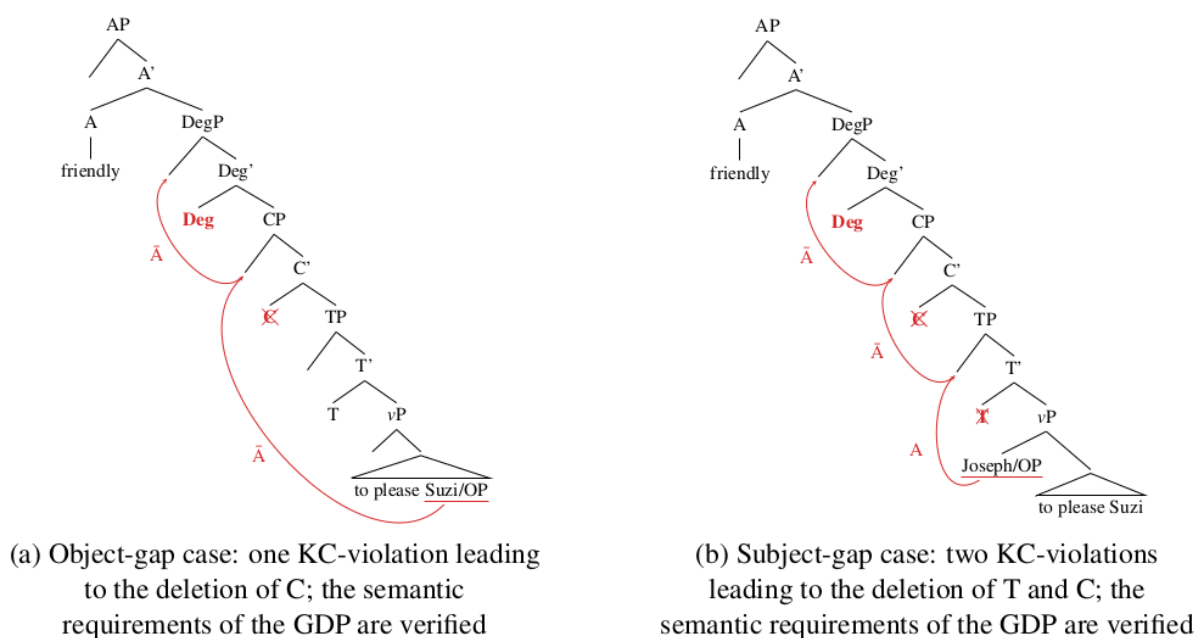


Figure 8: Derivation of subject- and object-gapped-degree phrases

### 6.3 *Tough*-gapped-degree phrases

We finally turn to the more complex case of *tough*-gapped-degree phrases. As previously mentioned, those structures have two readings, that we argue depend on where the overt complement clause is realized. If the clause is realized as a complement of the *tough*-predicate, then the *tough*-gapped-degree phrase is predicted to be subject to the same restrictions as a TC; if the clause is realized as a complement of the degree modifier, then, the *tough*-gapped-degree phrase is predicted to be subject to the same restrictions as a GDP. This distinction is transparent by languages like French, which do not make use of the same preposition to introduce clausal TC-complements (preposition *à*) vs clausal GDP-complements (preposition *pour*):

- (20) a. Ce livre est assez facile {  $\hat{a}_{(TC)}$  / \* $\text{pour}_{(GDP)}$  } lire  $\text{---}_{og}$ .  
 This book is enough easy {  $\text{to}_{(TC)}$  / \* $\text{to}_{(GDP)}$  } read  $\text{---}_{og}$ .  
 ‘This book is easy enough to read.’
- b. Ce livre est assez facile { \* $\hat{a}_{(TC)}$  /  $\text{pour}_{(GDP)}$  }  $\text{---}_{sg}$  être lu.  
 This book is enough easy { \* $\text{to}_{(TC)}$  /  $\text{to}_{(GDP)}$  }  $\text{---}_{sg}$  be read.  
 ‘This book is easy enough to be read.’

Under this hypothesis, the case of *tough*-gapped-degree phrases is simply a mixture of the two previous cases (*tough*-constructions and “simple” gapped-degree phrases). Indeed, focusing first on “TC-like” TGDPs, whereby the infinitival clause is a complement of the *tough*-predicate, the arguments leading to the ungrammaticality of a subject-gap turn out to be exactly the same as those laid out in Section 6.1. Namely, movement of the gap from an object position will not lead to any KC-violation and leave the C-head intact so that the semantic requirements of *tough* are met; while movement of the gap from a subject position will lead to one KC-violation and to the deletion of the C-head, which violates the semantics requirements of *tough*. We thus predict subject-gap *tough*-gapped-degree phrases under the TC-parse to be ungrammatical, and their object-gap counterpart to be grammatical. Turning to “GDP-like” TGDPs, we see again that the arguments leading to the grammaticality of both types of gaps turn out to be exactly the same as those laid out in Section 6.2. Movement from an object position leads to one KC-violation and to the deletion of the C-head, thus guaranteeing that the semantic requirements of the degree modifier are met; while movement of the gap from a subject position leads to two KC-violations and the deletion of both T and C, again in compliance with the semantic requirements of the degree modifier.

## 7. Conclusion

Under our view, the gap distribution of *tough*-constructions, gapped-degree phrases and *tough*-gapped-degree phrases results from an interplay between syntax and semantics. We indeed captured the contrasts in the gap distribution of those structures thanks to two key ingredients: (1) Kinyalolo’s Constraint, which produced repaired candidate structures fed to (2) semantic type-driven constraints targeting clausal complements. Contrary to the previous ANTI-LOCALITY account, in which ungrammaticality was triggered by movement dependencies that were deemed “too short”, ungrammaticality arises in our account when a repair of a violation of Kinyalolo’s Constraint leads to an unresolvable type-mismatch between the embedding predicate and its clausal complement. In the particular case of semantically ambiguous *tough*-gapped-degree phrases, our framework did not require us to posit two fundamentally different structures, but rather, it led us to assume that different complement clauses (of the *tough*-predicate, of the degree modifier) could be overtly realized, and therefore involve a (potentially problematic) gap. Hopefully, this view provides a clearer picture of the semantics of those constructions as well.

Our account comes with a few *caveats* however. First, it crucially relied on the assumption that deletion of the C-head as a repair of Kinyalolo’s Constraint was total and occurred prior to Spell-Out, in order to have consequences at LF. This assumption might appear quite strong given the fact that Kinyalolo’s Constraint seems to sometimes yield partial obliteration (“impoverishment”) instead of total deletion. This has been argued to occur in Spanish (Nevins 2007, Nevins 2012), languages of the Algonquian family (Oxford 2017, Oxford 2020), as well



as French and Buli (Pesetsky 2021). In all those cases, instead of being completely deleted, the head leading to a violation of Kinyalolo's Constraint is realized as a default or elsewhere form. Within our framework, this would suggest that repaired heads may be able to still be active at LF in certain specific cases.

Second, our account makes challenging predictions from a language processing or language acquisition standpoint. Indeed, unlike the existing ANTI-LOCALITY account by Brillman and Hirsch (2016), our account makes the prediction that gapped-degree phrases should be consistently more difficult to produce and process than *tough*-constructions, as they require on more repair of Kinyalolo's constraint in each case (subject- and object-gap). Our recent acquisition study focused on *tough*-constructions and gapped-degree phrases did not confirm this prediction (see Hénot-Mortier et al. 2022); however, other factors should probably be considered to evaluate the difficulty of a given construction from a child's perspective; for instance: is the child aware of the syntactic requirement of *tough*-predicates or degree modifiers? Does the child always consider embedded clauses to be full-fledged CPs? Those questions are difficult to elucidate and left for future work.

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