The Natural Class of *Tough*-Predicates, and Non-finite Clauses

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1. Introduction

Decades of work have revealed a great deal about the alternation in (1), the *tough*-construction (Rosenbaum, 1967; Lasnik & Fiengo, 1974; Chomsky, 1977; Browning, 1987; Brody, 1993) a.m.o.

(1) a.   It is difficult for John to read this book.
     b.   This book is difficult for John to read e.

Still, we have a poor understanding of why some predicates participate in the alternation above (*difficult, easy*) but other things don't (*tall, quick*). Here I address this issue by exploring what defines the natural class of *tough*-predicates (ToughPreds), and what this tells us about the types of embedded clauses that appear in the *tough*-construction (*for*-CPs).

I first show that many types of phrases (APs, DPs, VPs) can participate in the *tough*-alternation. Based on this expanded data set, we can define the class of ToughPreds using two semantic factors: *modality* and *eventivity*. Finally, I explore the connection between ToughPreds and *for*-CPs, arguing that *for*-CPs describe properties of *contentful events*, adopting ideas from Hacquard (2006); Moulton (2009).

I will not attempt to derive the alternation in (1). The goal here is simply to define the class of ToughPreds and their connection to *for*-CPs. I leave the derivational link between (1) open for now. See Gluckman (2018) for an analysis based on the conclusions presented here.

2. What makes a ToughPred

Tough-predicates display the following two empirical properties.

> **Property I.** An expletive/pleonastic subject alternates with a non-expletive subject that is co-indexed with a non-subject gap in an embedded clause.

This just means that there has to be an alternation like in (2).

(2) a.   It is easy/difficult/important/tough/hard to cut this tree down.
     b.   This tree is easy/difficult/important/tough/hard to cut e down.

> **Property II.** The non-expletive subject is a *syntactic* argument of the main clause, but a *thematic* argument of the embedded clause.

Property II is observed in the fact that the following entailments do not go through (Dalrymple & King, 2000).

(3) a.   This tree is easy/difficult/annoying/boring to cut e down.
     b. $\neq$?? This tree is easy/difficult/annoying/boring.

To the extent that (3b) are grammatical, it can only be with reference to some implied (or elided) event. The class of *tough*-predicates includes the following adjectives.

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(4) *easy, impossible, difficult, hard, simple, tough, unhealthy, stimulating, boring, interesting, entertaining, amusing, gratifying, important, harmful, damaging, %possible, %legal, illegal, crucial, %necessary*   (adapted from Lasnik & Fiengo 1974)

Properties I and II also pick out a set of nominal and verbal predicates.

2. ***Tough*-nouns** : *a pain (in the ass/neck), a joy, a pleasure, a bitch, the pitts, a waste (of time/money), a cinch, . . .*   (Lasnik & Fiengo, 1974; Flickinger & Nerbonne, 1992)

   (5) a. It was a pain/a pleasure/a bitch (for Tom) to paint the fence
        b. The fence was a pain/a pleasure/a bitch (for Tom) to paint e
        c. $\not\Rightarrow$?? The fence was a pain/a pleasure/a bitch.

3. **Psych-verbs** : *frighten, amuse, depress, stress out, surprise, startle, excite, . . .*   (Pesetsky, 1987)

   (6) a. It frightens/amuses/depresses me (for my kids) to play with guns.
        b. Guns frighten/amuse/depress me (for my kids) to play with e.
        c. $\not\Rightarrow$ Guns frightens/amuses/depresses me.

Note that while (6c) has a sensible meaning, it does not mean the same thing as when there is a *for*-CP. In (6c), some property of guns frightens the speaker, while in (6b), playing with guns frightens/amuses/depresses the speaker. It is this meaning that is not entailed in (6c).[1]

4. ***worth it/worthwhile***[2] :   (Bayer, 1990; Jacobson, 1992; Levine & Hukari, 2006)

   (7) a. It's worth it/worthwhile (for us) to invest in cryptocurrencies.
        b. Cryptocurrencies are worth it/worthwhile (for us) to invest in e.
        c. $\not\Rightarrow$?? Cryptocurrencies are worth it/worthwhile.

5. ***make sense***

   (8) a. It makes sense (for John) to mow the lawn first.
        b. The lawn makes sense (for John) to mow e first.
        c. $\not\Rightarrow$?? The lawn makes sense.

6. **Take-TIME Construction (TTC)** : (Dalrymple & King, 2000; Gluckman, 2016; Klingvall, 2018)

   (9) a. It took a week (for John) to paint the fence.
        b. The fence took a week (for John) to paint e.
        c. $\not\Rightarrow$?? The fence took a week.

Note that the TTC need not involve a time-expression. Anything that can "measure out" or "bound" an event is acceptable.

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[1]All psych-verbs can appear in the adjectival *-ing* form as well. I assume that these fall into the class of *tough*-adjectives. I will also note that there is considerable speaker variation as to the acceptability of psych-verbs as ToughPreds. There seem to be various factors that allow the alternation in (6), including genericity, definiteness of the subject, animacy of the subject, aktionsart of the non-finite verb, and modality of the non-finite verb.

[2] Bayer and Jacobson also includes dialectal *worth Ving*:

   (i) %It's worth cleaning that sweater

   (ii) %That sweater is worth cleaning e.

See also dialectal *needs Ving*. I put these aside here, but nothing below is contradicted by these data.

(10) a. It takes three steps (for John) to reach the door.

     b. The door takes three steps (for John) to reach e.

     c. $\not\Rightarrow$?? The door takes three steps.

7. ***cost*** :   (Kawai, 2002)

(11) a. It costs \$10 to ride the rollercoaster

     b. The rollercoaster costs \$10 to ride e.

     c. $\not\Rightarrow$ The rollercoaster costs \$10.

(12) a. It cost us a lot of time to visit Macchu Picchu.

     b. Macchu Picchu cost us a lot of time to visit e

     c. $\not\Rightarrow$?? Macchu Picchu cost us a lot of time.

Like the TTC, *cost* need not involve an monetary value, just some unit of "worth."

Importantly, in all cases the the antecedent-gap chain displays the same properties. There's an A′-dependency in the lower clause, but unlike typical A′-gaps, the dependency is only "weakly" unbounded.

(13) The students
$\left\{ \begin{array}{c} \text{are easy/difficult/important} \\ \text{are a pain/a joy/a bitch} \\ \text{frighten/amuse/depress me} \\ \text{take a while/a lot of energy} \\ \text{cost a lot} \\ \text{make sense} \\ \text{are worth it/worthwhile} \end{array} \right\}$ …

     a. … for the professors to bribe e [before grading pg]   PARASITIC GAP

     b. … for the professors to try to bribe e.   UNBOUNDED

     c. * … for the professors to decide to bribe e.   "WEAKLY" UNBOUNDED

On the other hand, the non-expletive subject in all cases is clearly sitting in an A-position in the higher clause, apparently an argument of the main-clause predicate, despite being thematically associated with the lower clause. The subject can further A-raise and trigger agreement on the verb.

(14) a. The students seem to
$\left\{ \begin{array}{c} \text{be easy/difficult/important} \\ \text{be a pain/a joy/a bitch} \\ \text{frighten/amuse/depress me} \\ \text{take a while/a lot of energy} \\ \text{cost a lot} \\ \text{make sense} \\ \text{be worth it/worthwhile} \end{array} \right\}$ to bribe e.
$\begin{array}{r} \textit{\textbf{tough}}\text{-}\textbf{As} \\ \textit{\textbf{tough}}\text{-}\textbf{Ns} \\ \textbf{psych-Vs} \\ \textbf{TTC} \\ \textit{cost} \\ \textit{make sense} \\ \textit{worth it} \end{array}$

     b. The students
$\left\{ \begin{array}{c} \text{are easy/difficult/important} \\ \text{are a pain/a joy/a bitch} \\ \text{frighten/amuse/depress me} \\ \text{take a while/a lot of energy} \\ \text{cost a lot} \\ \text{make sense} \\ \text{are worth it/worthwhile} \end{array} \right\}$ to bribe.
$\begin{array}{r} \textit{\textbf{tough}}\text{-}\textbf{As} \\ \textit{\textbf{tough}}\text{-}\textbf{Ns} \\ \textbf{psych-Vs} \\ \textbf{TTC} \\ \textit{cost} \\ \textit{make sense} \\ \textit{worth it} \end{array}$

Thus, we find a heterogenous group of predicates that participate in an identical alternation. There are adjectives (*tough*-As), nouns (*tough*-Ns), and verb phrases (TTC, psych-verbs, *cost*, *make sense*, *worth it*). I postulate two properties that characterize this class of predicates. The first is that they are all predicates of events. The second is that they are all evaluated relative to a set of beliefs.

2.1. ToughPreds and events

That ToughPreds are "eventive" in some way has been noted by a number of authors (Pesetsky, 1987; Jones, 1991) a.o. In fact, the generalization is simply that all ToughPreds are predicates of events. They can all be predicated of event-denoting subjects like gerunds (15), or event-nominals (16).

(15) Biking to school

is easy/difficult/important.	**tough-As**
is a pain/a joy/a bitch.	**tough-Ns**
frightens/amuses/depresses me.	**psych-Vs**
takes a while/a lot of energy.	**TTC**
costs a lot/$1000.	*cost*
makes sense.	*make sense*
is worth it/worthwhile.	*worth it*

(16) The destruction of the city

was easy/difficult/important.	**tough-As**
was a pain/a joy/a bitch.	**tough-Ns**
frightened/amused/depressed me.	**psych-Vs**
took a while/a lot of energy.	**TTC**
cost a lot.	*cost*
made sense.	*make sense*
was worth it/worthwhile.	*worth it*

In contrast, not all ToughPreds may occur with individual-denoting subjects (as we've already seen).

(17) The tree/the car/the lake

*was easy/difficult/important.	**tough-As**
*was a pain/a joy/a bitch.	**tough-Ns**
✓frightened/amused/depressed me.	*psych-Vs*
*took a while/a lot of energy.	**TTC**
✓cost a lot.	*cost*
*made sense.	*make sense*
*was worth it/worthwhile.	*worth it*

Some of the ToughPreds are strict in this regard: the TTC and *worth it/worthwhile* can never describe a property of an individual. Some property of John cannot measure an amount of time, or be worth it/worthwhile.

(18) * John/the sun/this rock

took an hour.	**TTC**
was worth it/worthwhile.	*worth it*

However, among the ToughPreds, many classes have some ambiguous members. There are predicates that describe properties of individuals in addition to describing events. In this use, they do not have Property II. (Using the progressive makes this reading prominent — though it is not obligatory.)

(19) My horse

is (being) difficult.	**tough-As**
is (being) a pain.	**tough-Ns**
is annoying me.	**psych-verbs**
is making sense.	*make sense*
costs $100.	*cost*

I assume that some ToughPreds also have functions as *pretty*-class predicates, i.e., *Mary is pretty to look at e*, which don't have an expletive version.[3] Since this is not a systematic commonality across ToughPreds, I put these uses aside.

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[3]It's worth noting that for some classes, this is a systematic ambiguity: all psych-verbs and *cost* display this ambiguity. For other classes with multiple members (*tough*-As) and (*tough*-Ns), the ambiguity appears to be lexically idiosyncratic.

2.2. ToughPreds and modality

The majority of ToughPreds describe particular kinds of events: *subjective* events. The truth of the assertion involving a ToughPred is evaluated relative to someone's (the *judge*'s) epistemic/doxastic state (cf, Fleisher 2008; Keine & Poole 2017). The core (perhaps defining) property of subjective predicates is that they permit *faultless disagreement*: we can disagree on the truth, without either of us being judged to be speaking falsely (Kölbel, 2004). Compare (20) and (21). In (20), one of the interlocutors has said something false: objectively the cake is or isn't vegan. In (21), however, both interlocutors might be saying something true: they just have differing tastes.

(20) a. "This cake is vegan."   (21) a. "This cake is tasty."

  b. "No it's not."   b. "No it's not."

Based on faultless disagreement, *tough*-As, *tough*-Ns, *make sense*, and *worth it* pattern with *tasty*.

(22) a. "It $\left\{ \begin{array}{c} \text{is easy/difficult/important} \\ \text{is a pain/a joy/a bitch} \\ \text{makes sense} \\ \text{is worth it/worthwhile} \end{array} \right\}$ (for John) to read this book."   ***tough*-As**
***tough*-Ns**
make sense
worth with

  b. "No, it isn't/doesn't."

Also characteristic of subjective predicates is that when the judge is explicitly stated, then subjective disagreement disappears. (23b)'s response is judged infelicitous because the addressee is not in a position to evaluate the beliefs of the first speaker.[4]

(23) a. "This cake is tasty to me."

  b. # "No it isn't."

Based on this pattern, we observe that psych-verbs (which obligatorily subcategorize for an object) are also subjective.[5]

(24) a. "It frightened/amused/depressed me to watch this movie."

  b. # "No, it didn't."

However, even among *tough*-adjectives, there are elements which are not typically defined as subjective *per se* (in that they are not *judge-dependent*).[6]

(25) a. It's crucial/illegal/impossible to make your own beer.

  b. You own beer is crucial/illegal/impossible to make e.

  c. Making your own beer is crucial/illegal/impossible/

Still, assuming that subjectivity is a sub-type of the general category of modality (Lasersohn, 2005; Portner, 2009), then we can simply identify the natural class of ToughPreds as those predicates which describe *modal events*.

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[4]This is sometimes called *faulty disagreement*, as opposed to *faultless disagreement*.

[5]Note that when used in their adjectival form, then the psych-verbs pattern simply as *tough*-As.

  (i) "It's (extremely) frightening/amusing/depressing to watch this movie."

  (ii) "No it isn't."

[6]See also Fleisher (2014) for the class of *rare*-class adjectives, which are also not subjective/judge-dependent. Crucially, they are still modal (and descriptions of event-kinds).

This further allows us to capture the two clear exceptions to the subjectivity generalization above: the TTC and *cost*. These don't pattern like subjective elements: when we give them an definable measurement, then they are entirely objective.[7]

(26) a. It took an hour to paint the fence. (27) a. It costs $100 to paint the fence.

     b. The fence took an hour to paint *e*.   b. The fence costs $100 to paint *e*.

The modality here is difficult to detect — but it is nonetheless present. Consider how they interact with other modal operators as in (28). In principle, the modal *must* should give rise to an ambiguity between an epistemic and a deontic reading in (28a) and (28b).

(28) a. {According to what Jim said, #According to FAA rules}
      The flight to LA must take an hour.   ✓ epistemic, # deontic.

     b. {According to what Jim said, #According to FAA rules}
      The flight to LA must cost $500.   ✓ epistemic, # deontic.

The fact that the deontic reading is inaccessible is best explained by positing that there is something modal about the predicate that is under *must*, since nothing else in the sentence is demonstrably modal. This is of course the same pattern that we find with other non-subjective ToughPreds.

(29) {According to what Jim said, #According to FAA rules}
     The flight to LA must be crucial/illegal/impossible.   ✓ epistemic, # deontic.

It's worth contrasting the TTC with a similar predicate like *last*, which permits both readings (30a). *Last* is not a ToughPred (30b), (30c).

(30) a. {According to what Jim said, According to FAA rules}
      The flight to LA must last an hour.   ✓ epistemic, ✓ deontic.

     b. * It lasts an hour (for John) to get to Chicago.

     c. * Chicago lasts an hour (for John) to get to Chicago.

The data in (28) are consistent with treating the TTC and *cost* among the class of root modals (which include *crucial* etc). The lack of a deontic reading is subsumed by the inability to recursively embed identical modal types (Kratzer, 1981).[8]

If we accept that the TTC and *cost* are modal elements, and assume that subjectivity is a subtype of modality, we can state concisely the natural class of ToughPreds and a general schema for all ToughPreds.

(31) a. ToughPreds describe an event evaluated relative to a set of beliefs.

     b. $\llbracket \text{TOUGHPRED} \rrbracket^j = \lambda e \lambda w.\ \text{TOUGHPRED}(e)$ in w relative to j.
       "e is an event of TOUGHPRED in w relative to the judge j's beliefs."

3. ToughPreds and clause types

We have said nothing so far about another property shared among ToughPreds: the availability of a non-finite clause. In English, all ToughPreds *can* combine with *for*-CPs, and all ToughPreds *must*

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[7]They can also be given subjective measurements, like *a while* or *a lot of money.* In this case, they pattern like other subjective predicates.

[8]Intuitively, the TTC and *cost* are associated with a circumstantial modal base, i.e., a set of worlds in which a certain amount of time has passed or a specified amount of money is paid. Roumi Pancheva (p.c.) points out that, at least in some cases, the TTC and *cost* are *implicative* in that they give rise to actuality entailments, which can be taken as a further argument for modality in these contexts.

(i) It $\left\{ \begin{array}{c} \text{took us a week} \\ \text{cost us \$500} \end{array} \right\}$ to paint the fence, # and so we didn't do it.

combine with a *for*-CP when there's an antecedent-gap. That is, the (non-subject) gap in a *tough*-predicate is always in a *for*-CP.[9] This means that there is no predicate like the hypothetical *schmifficult* (cross-linguistically, Comrie & Matthews 1990).

(32) a.   It is schmifficult that John read this book.

     b.   * This book is schmifficult that John read *e*.   UNATTESTED

But why can't there be a *tough*-construction involving a finite clause? Stated differently, what is the correlation between modal events and *for*-CPs? The core observation made below is that *for*-CPs also describe special kinds of events: events that are associated with propositional content. As such they need an event with an attitude holder (the judge) and a set of beliefs. This is what the ToughPred provides.

3.1. For-CPs, propositions, and events

Theoretically, *for*-CPs have a dual status. From a semantic perspective, *for*-CPs are typically grouped together with finite clauses in that they describe "states of affairs" (Chierchia, 1990) or (modal) propositions (Bresnan, 1971; Stowell, 1982; Bhatt, 1999; Portner, 1997). For instance, in a standard analysis of *John wants [PRO to go to Chicago]*, the contribution of *[PRO to go to Chicago]* is typically taken to express a proposition, no different from the meaning associated with a finite clause, e.g., *(that) John goes to Chicago*. However, distributionally, *for*-CPs, are often grouped together with gerunds (Rosenbaum, 1967; Duffley, 2003): they appear to denote events.

For instance, like gerunds, and unlike finite CPs, *for*-CPs can refer to iterated occurrences.

(33) a.   (For John) to skip school is a frequent occurrence.

     b.   (For the magician) to make the rabbit vanish was a one-time event.

     c.   (For the Cubs) to win was a rare occurrence.

(34) a.   (John's) skipping school is a frequent occurrence.

     b.   (The magician's) making the rabbit vanish was a one-time event.

     c.   (The Cub's) winning was a rare occurrence.

(35) a.   * That John skipped school is a frequent occurrence.

     b.   * That the magician made the rabbit vanish was a one-time event.

     c.   * That the Cubs win is a rare occurrence.

Similarly, they can be anaphorically referred to using a noun like *event*, but not *fact* (cf Moulton 2009 discussed below).

(36) a.   (For John) to open the door would startled me.
       Yes, that event/*fact would startle me, too.

     b.   (For the magician) to make the rabbit vanish would amaze me.
       Yes, that event/*fact would amaze me, too.

     c.   (For the Cubs) to win would excite John.
       Yes, that event/*fact would excite John.

They can also be used predicatively to describe an event (here as a purpose clause), but not an individual-denoting nominal (Faraci, 1974; Jones, 1991).

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[9]*Modulo* dialectal *worth Ving/needs Ving* discussed in item 2. The generalization can also be stated negatively as, "The gap *cannot* be in a finite clause." Also, it is debated in the literature as to whether the *tough*-construction involves a *for*-CP or something smaller (TP/VP/*v*P), in which case the *for*+NP is parsed as part of the main clause (e.g., Bresnan 1971 vs. Bach & Horn 1976). However since many ToughPreds do not license *for*-PPs in the main clause (TTC, *cost*, *illegal*), the only parse is one where *for* is a complementizer. See Bach & Horn (1976) for a similar point concerning *ready*.

(37) a.   The examination was [for the teacher to assess the kids' potential]

  b.   * The classroom was [for the teacher to assess the kids' potential]

  c.   The election was [for the country to determine its next ruler]

  d.   * The constitution was [for the country to determine its next ruler]

The generalization is that *for*-CPs syntactically pattern like eventive expressions, but at the same time they appear to express (modal) propositions. I propose to capture this dual-status by analyzing *for*-CPs as properties of *contentful events*.

4. Analysis

ToughPreds describe "modal events" and *for*-CPs simultaneously describe events and propositions. Notice that ToughPreds and *for*-CPs share the property of describing an event. This cannot be coincidental. I believe this overlap in meaning tells us something about the formal connection between the ToughPred and the *for*-CP.

I make two assumptions. The first is that finite clauses headed by *that* describe *contentful individuals* whose content is the proposition denoted by *that*'s complement (Kratzer, 2006; Moulton, 2009).

(38) a. $\text{CONTENT}(x)(w) = \{\, w' : w'$ is compatible with the intensional content determined by x in $w\, \}$
(after Kratzer 2013:197)

  b. $[\![C_{that}]\!] = \lambda P_{\langle st \rangle} \lambda x \lambda w.\ \text{CONTENT}(x)(w) = \{\, w' : P(w') = 1\, \}$

  c. $[\![\text{that John left}]\!] = \lambda x \lambda w.\ \text{CONTENT}(x)(w) = \{\, w' : \text{John left in } w'\, \}$

  d. $[\![\text{story}]\!] = \lambda x \lambda w.\ \text{story}(x)(w)$

  e.

$$\begin{array}{c} \text{NP}_{\langle e,st \rangle} \\ \diagup \quad \diagdown \\ \end{array}$$

$$\text{N}_{\langle e,st \rangle} \qquad \text{CP}_{\langle e,st \rangle}$$
$$\text{story}$$
$$\text{that John left}$$

  f. $J(38e)]\!] = \lambda x \lambda w.\ \text{story}(x)(w)\ \&\ \text{CONTENT}(x)(w) = \{\, w' : \text{John left in } w'\, \}$

(38e) describes an individual whose content is the proposition that John left. The impetus for this proposal is to capture the idea that *that*-CPs bear properties of being individuals as well as being bearers of truth/falsity (Moulton, 2009, 2013).

The second assumption is that there are also *contentful events*, i.e., events which are associated with propositional content, like the event argument associated with *believe* (Hacquard, 2006). The idea behind this proposal is that, if we consider a verb like *believe* from a Neo-Davidsonion perspective, then we can think about an event e of belief, and the set of beliefs that are held at e (by the attitude holder of e).

Generalizing these two ideas, *for*-CPs are the counterpart to *that*-CPs: they are predicates of *contentful events*, equating the content of the event with the proposition denoted by the clause. (See also a similar treatment in Grano 2015.)[10]

(39) a. $[\![C_{for}]\!] = \lambda P_{\langle v,st \rangle} \lambda e \lambda w.\ \text{CONTENT}(e)(w) = \{\, w' : \exists e' \text{ such that } P(e')(w') = 1\, \}$

  b. $[\![\text{for John to read this book}]\!] = \lambda e \lambda w.\ \text{CONTENT}(e)(w) = \{\, w' : \exists e' \text{ such that John reads-}e' \text{ this book in } w'\, \}$

For-CPs distribute like event-denoting elements, but they can only appear in a (syntactic) context that supplies an event associated with a set of beliefs. That is, because they describe a contentful event, they must combine with something that "anchors" the contentful event, i.e., a set of doxastic alternations

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[10]The existential quantification over events in the modal worlds is needed for reasons that are not directly relevant here. See Gluckman (2018) for a detailed derivation and further discussion.

and an attitude holder. This is precisely what the ToughPred does: the ToughPred describes an event evaluated relative to a set of beliefs, and so can appropriately anchor the CONTENT function.

(40) a.

$$AP_{\langle v,st\rangle}$$

$A_{\langle v,st\rangle}$ $CP_{\langle v,st\rangle}$
difficult

for John to read this book
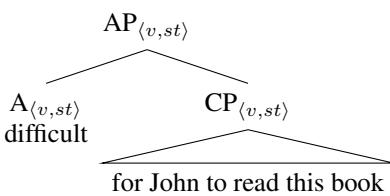
  b. $[\![(40a)]\!]^j = \lambda e \lambda w.\ e$ is difficult in w relative to j &
    CONTENT$(e)(w) = \{\ w' : \exists e'$ in w' such that John reads-e' this book in $w'\ \}$

(40a) describes an event which the judge finds to be difficult, and the content of this event (i.e., the belief the judge holds at e) is that John reads this book.

In this way we can explain the dual status of *for*-CPs and the inherent relationship between ToughPreds and *for*-CPs. Note that we immediately derive why there is no *tough*-construction involving a finite-clause: it's a type-mismatch. ToughPreds are of type $\langle v, st\rangle$ but finite clauses are of type $\langle e, st\rangle$. Similarly, we now know why *tall, quick* are not ToughPreds: they don't describe modal events, and so cannot combine with a *for*-CP. Finally, notice that now there's no need to list two versions of all ToughPreds. They are always predicates of modal events. Sometimes they have an event-denoting subject, sometimes they simply combine with a *for*-CP.

The analysis above neatly captures the noted fact that *for*-CPs are "modally restricted." They must occur in the presence of a modal operator (Faraci, 1974; Pesetsky, 1992; Portner, 1997).[11]

(41) a. ??John loved for Mary visit Chicago.   (ok on generic reading)
   b.   John would love for Mary to visit Chicago.

On the present account, this is because the CONTENT function must be anchored. We also predict that in the absence of C_{for}, the modality should disappear. This prediction is supported by the case of subject infinitival relatives, i.e., *the first man to walk on the moon was here*, which lack a CP layer and are not (necessarily) modal (Bhatt, 1999).[12]

5. On cross-linguistic variation

It's notable that cross-linguistically, the same set of predicates tend to be ToughPreds (cf Comrie & Matthews 1990). This suggests a universal link between modal event descriptions and the *tough*-construction. Still, there is a large amount of cross-linguistic variation in, a) the class of ToughPreds in a particular language, and b) the properties of the *tough*-construction in a particular language. Given the proposal above, we might place some of the variation across languages on the properties of the non-finite complementizer, or more generally, non-finite clauses. If a language lacks C_{for}, then it's predicted that it should have no (English-like) *tough*-construction. Finally, let me re-iterate that I have not intended to provide an analysis for the antecedent-gap chain. Clearly, something more must be said about when a gap is and isn't possible with a predicate that can appear with a *for*-CP.

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[11]See Hacquard (2010) for discussion of the relation between events and modality.

[12]Note that this follows an established tradition of placing the modality associated with *for*-CPs on the complementizer (Pesetsky, 1992; Bhatt, 1999), as opposed to on the matrix predicate. The CONTENT function employed here is consistent with FACTUALITY modal base (Kratzer, 2013). This is consistent with Grano's (2015) claim that *for*-CPs are associated with root (i.e., non-epistemic) modality.

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