

Taking Time with the *Tough*-Construction¹

We provide a syntactic analysis of the Take-Time Construction (*It took an hour to complete the test*). Our investigation provides insight into well known issues concerning the related *tough*-construction. Using a battery of standard syntactic diagnostics, we conclude that the Take-Time Construction and the *tough*-construction require a predication analysis of the antecedent-gap chain (e.g., Williams 1983), not a movement analysis (e.g., Hicks 2009). We also conclude that the nonfinite clause is in a modificational relationship with the main clause predicate (e.g., Hornstein 2001), not a selectional relationship (e.g., Keine & Poole 2017). Broadly, we expand on the class of *tough*-constructions, illustrating crucial variation among predicates, and pointing the way to a unified analysis. Our investigation also reveals undiscussed aspects of English syntax, including the fact that English has a High Applicative position (Kim 2012).

1. INTRODUCTION

The *tough*-construction in (1) has generated an enormous amount of healthy theoretical debate.¹

- (1) (a) It was difficult to complete this test.
 (b) This test was difficult to complete *e*.

The alternation in (1) is not confined to just adjectives (cf, Lasnik & Fiengo 1974, Williams 1983), though this fact has not generally played a significant role in the analysis of (1). Nevertheless, it has been recognized that other kinds of predicates can be *tough*-predicates, including nouns (Lasnik & Fiengo 1974) and psych-verbs (Pesetsky 1987). The focus of this study is on the Take-Time

[1] We'd like to thank . . .

[1] Restricting discussion just to English, see Bayer (1990), Bresnan (1971, 1972), Brody (1993), Browning (1987), Chomsky (1977, 1981), Dalrymple & King (2000), Epstein (1989), Fleisher (2008, 2013, 2015), Gluckman (2018, 2019), Goh (2000), Grimshaw (1990), Grover (1995), Hartman (2011, 2012), Heycock (1994), Hicks (2009), Hornstein (2001), Jones (1991), Keine & Poole (2017), Lasnik & Fiengo (1974), Levine & Hukari (2006), Longenbaugh (2015, 2016), Nanni (1980), Poole et al. (2017), Postal (1971, 1974), Williams (1983).

Construction (TTC), which has also been observed to allow the *tough*-alternation (Klingvall 2018, Gluckman 2019); (Jones 1991: 227); (Chomsky 1981: 319, credited to Tim Stowell).²

- (2) (a) It took an hour to complete this test.
 (b) This test took an hour to complete *e*.

As we illustrate in section 2, the alternation in (2) is identical to that in (1), and so should be given the same theoretical explanation. The contribution of this paper is to investigate the syntactic properties of the *tough*-construction through the lens of the TTC. As an instantiation of the general phenomenon that comprises the *tough*-construction, a close look at the alternation in (2) sheds light on what is, and is not, a viable analysis of (1).

The TTC provides clarity on two core issues with respect to the *tough*-construction. Foremost, we find that the subject *this test* does not get to its surface position in (2) via movement out of the lower clause; however, we find evidence that it has moved from somewhere lower in the main-clause. This finding is compatible with *predication*-based approaches to the *tough*-construction (as in e.g., Williams 1983 among others), rather than *movement*-based approaches (as in e.g., Postal 1971 among others). Moreover, it discriminates among various kinds of predication-based accounts as well in that it is not consistent with licensing the non-expletive subject *this test* in its surface position (as argued in, e.g., Řezáč 2006), rather, the “*tough*-subject” is a (non-thematic) argument of the *tough*-predicate (Jones 1991 among others).

Second, we find that the relationship between the nonfinite clause and the main clause is a *modification*al, rather than a *selection*al relationship. In (2), the nonfinite clause is a VP modifier. This again differentiates among analyses of the *tough*-construction between those that treat the nonfinite clause as an argument of the *tough*-predicate (e.g., Keine & Poole 2017), versus those that treat it

[2] The Take-Time Construction is most widely recognized as a diagnostic for telicity (Mourelatsos 1978, Mittwoch 1991, MacDonald 2006) and Borer (2005: 330) among others.

as adjoined to the *tough*-predicate (e.g. Mulder & den Dikken 1992, Hornstein 2001).

In addition to these two core observations, we make an ancillary observation about English syntax. We find clear evidence for a *high applicative* position in English — a language that is otherwise argued to lack high applicatives (Pylkkänen 2008). The data are consistent with what is argued in Kim (2012) and lexical decomposition approaches to light verbs (Ritter & Rosen 1997, Hale & Keyser 2002).

Our final point is more general. We point out that the TTC is representative of the class of predicates that participate in the *tough*-construction, including *cost* and *set X back* (Jones 1991), and possibly psych-verbs (Pesetsky 1987). Thus, the findings below are not simply a “quirk” of the TTC, rather the properties that we investigate here are broadly applicable in English syntax. In our specific investigation of the TTC, we are therefore addressing both the homogeneity and heterogeneity of the general class of predicates that permit the *tough*-alternation. We contribute to the finding that all predicate types, adjectives, nouns, and verbs, are potential *tough*-predicates (cf, Williams 1983). In this way, we start to build a profile of the range of “core” properties of the *tough*-construction, where each predicate type differs, and why.

Our paper is structured in the following way. We will first confirm in section 2 the parallels between (1) and (2), showing that both constructions involve the same somewhat idiosyncratic properties. We will also note how the two constructions diverge in both form and meaning. We investigate the TTC specific properties in section 3, using standard tests for constituency, movement, and c-command. We then turn to back to the *tough*-construction in section 4, showing how our findings shed light on the numerous previous proposals of the alternation in (1). In section 5, we expand our investigation briefly to comment on other predicates that could possibly provide further insight into the *tough*-construction, as well as the general argument structure of English. In section 6, we conclude.

2. SHARED PROPERTIES OF THE TTC AND *tough*-CONSTRUCTION

The purpose of this section is to establish the (well-known) defining properties of the *tough*-construction, and illustrate that the TTC represents an instance of the same idea. The first and central observation is that in both cases, we find an alternation between an expletive/pleonastic subject and non-expletive subject binding a (non-subject) gap in a lower nonfinite clause (represented throughout with ‘*e*’).

- (3) (a) It was difficult to repair the car.
 (b) The car was difficult to repair *e*.
- (4) (a) It took an hour to repair the car.
 (b) The car took an hour to repair *e*.

The characteristic property of this alternation is that the non-expletive subject in the examples in (3b) and (4b) are *syntactically* arguments of the main clause, but *thematically* arguments of the lower clause. The latter point is illustrated by the fact that without the nonfinite clause, the *tough*-subject is not possible, demonstrated by the lack of entailment in (5).³

- (5) (a) The car/tree/table was difficult to move *e* ≠ ??The car/tree/table was difficult.
 (b) The car/tree/table took an hour to move *e* ≠ ??The car/tree/table took an hour.

To the extent that we can understand the second sentences in (5), it must be with respect to an elided or implicit event. Thus, we appear to have a case of non-local selection. The natural response is to treat this as a case of movement (as in, e.g., Chomsky (1981)). But this in fact raises more questions, since there is very

[3] This of course differentiates the *tough*-construction from the related *pretty*-class adjectives, where the subject is possible without an implicit/elided clause.

(i) The painting was pretty (to look at *e*).

See further discussion in section 4.

good evidence that the movement step in the lower clause comprises a step of A'-movement. This would make the antecedent-gap chain an instance of *improper movement*, i.e., an A'-chain head by something in an A-position. Evidence for the A'-step comes from standard diagnostics like islandhood, extraction of goals in double-object constructions, and licensing of parasitic gaps (Chomsky 1977).

(6) Creates islands⁴

(a) * What is that sonata easy to *e* play on *t_{wh}*?

(b) * What did that sonata take an hour *e* to play on *t_{wh}*

(7) No extraction of indirect objects

(a) * Mary was difficult to give *e* a book

(b) * Mary took an hour to give *e* a book

(8) Parasitic gaps

(a) Kathryn was easy to convince *e* without insulting *pg*

adapted from (Heycock 1991: 225)

(b) Kathryn took an hour to convince *e* without insulting *pg*.

Even more unusual, the A'-movement is restricted in ways that other A'-movements are not. For instance, it does not appear to generally cross clausal boundaries.⁵

[4] This is noted in Chomsky (1977: 105) to be *not* true in all cases .

(i) What violin is that sonata_{*j*} easy to play *e* on *t_j*

Jacobson (2000) shows that islands effects do appear when other factors are introduced. It is also worth noting that Faraci (1974: 22) prefigures Chomsky's original discussion with the observation that once there's an antecedent-gap chain, "the remaining NP in the VP complement to the *tough*-type predicate cannot be chopped."

(ii) the sonatas_{*i*} which it is easy to play *t_i* on this violin

(iii) *the sonatas_{*i*} which this violin is easy to play *t_i* on *e*

(Faraci 1974: 22)

We now understand these examples as instances of a *wh*-constraint violation.

[5] There are few noted exceptions to this (Jacobson 2000, Postal & Ross 1971), but the point stands that the gap is not as widely available as expected for A'-movement.

(i) Lima beans are hard (for me) to imagine anyone liking *e* / wanting to eat *e* / thinking they can get Mary to *e*. (Jacobson 2000: 9)

(ii) The lima beans took an hour to decide to eat *e*.

- (9) (a) * The test was difficult to say that Mary completed *e*.
 (b) * The test took an hour to say that Mary completed *e*.

It has also been widely noted that the *tough*-construction resists connectivity effects. *Tough*-subjects cannot be interpreted for scope (10) or for variable binding (11) inside at the gap position (Postal 1974, Epstein 1989, Fleisher 2013).⁶ *Tough*-subjects also permit Condition C obviation (Munn 1994) (12).

- (10) (a) Many people are easy to convince *e*.
 ≠ It is easy to convince many people. after (Epstein 1989: 651)
 (b) Many people took an hour to convince *e*.
 ≠ It took an hour to convince many people.
- (11) (a) * Its_{*i*} shelf was easy to put every book_{*i*} on *e*
 cf, The shelf was easy to put every book on *e*.
 (b) * Its_{*i*} shelf took an hour to put every book_{*i*} on *e*
 cf, The shelf took an hour to put every book on *e*.
- (12) (a) A picture of John_{*i*} is hard for him_{*i*} to draw *e*.
 adapted from (Munn 1994: 403)
 (b) A picture of John_{*i*} took an hour for him_{*i*} to draw *e*.

We will put aside in this paper how to derive the particular *A'*-properties associated with this movement. The crucial point is that there is a parallel between the *tough*-construction and the TTC in this regard. Note though that, as discussed below, there are semantic distinctions with respect to which predicates are permitted in the lower clause: the TTC imposes a telicity requirement, which makes some embedding predicate (like *imagine*) infelicitous in the TTC for independent reasons (i.e., they are not telic predicates).

[6] This too is widely debated with many claiming that bound variables are possible (Hicks 2009, Sportiche 2006, Salzmann 2017). However, Poole et al. (2017) point out (citing a blog post by Benjamin Bruening) that all known examples involve picture-NPs, or similar “logophoric” elements, and so are confounded by the known properties of such perspectival elements. However, even given this observation, it appears that there is just a basic disagreement about grammaticality in the literature. For instance, Salzmann (2017) gives the following example of binding (adapted from Mulder & den Dikken 1992: 308).

- (i) His_{*i*} car is tough for me to believe that any German_{*i*} would be willing to part with *e*.
 (Salzmann 2017: 332)

We have found no speakers of English who share this judgment. Pending further investigation into dialectal variation, we will continue under the assumption that such bound variables are not possible.

We finally briefly note that the *tough*-construction and TTC share many similarities in where the gap in the lower clause is allowed to appear. An illustrative example is the fact that Raising-to-object/ECM'd arguments are not permitted as *tough*-subjects, though object control is perfectly fine as a target for the gap (Postal 1974).

(13) Raising-to-object/ECM

- (a) * Smith was easy for John to expect *e* to recover

(Postal 1974: 193)

- (b) * Mary took an hour to expect *e* to complete the test.

(14) Object control

- (a) Bill is tough to persuade *e* [PRO to smoke cigars]

(Postal 1974: 193)

- (b) Mary took an hour to persuade *e* [PRO to complete the test]

The examples illustrate that the exact same particular (and somewhat peculiar) properties of the *tough*-construction are also found in the TTC.

This is not to say that the constructions are entirely identical. There are some notable and important differences between the *tough*-construction and the TTC. First, obviously, they mean different things. This is important to point out because it affects which nonfinite verbs are permitted. The TTC imposes a telicity restriction on the nonfinite verb, and therefore it is incompatible with stative verbs (Mourelatos 1978, Mittwoch 1991), a property not shared by the *tough*-construction.⁷

[7] However, there are also noted restrictions on which nonfinite verbs are permissible in the *tough*-construction (Nanni 1978, Dalrymple & King 2000). It's generally noted that "non-volitional" predicates are degraded.

(i) ?? It was tough for John to lack money.

(ii) ?? It was easy for Mary to want that expensive dress.

(iii) ?? It was hard for the teacher to prefer the hardcover edition.

adapted from (Dalrymple & King 2000: 14)

We put aside this interesting fact here, but the analysis below is perfectly consistent with this restriction. In subsection 3.1, we adopt the idea that the nonfinite clause and the *tough*-predicate

- (15) (a) It's difficult to owe money to the mob
 (b) ?? It took a year to owe money to the mob.

The TTC also differs syntactically in a striking way: it has a richer argument structure, licensing what we refer to as a *middle subject*.

- (16) (a) It was (*Mary) tough (*Mary) to read this book.
 (b) It took Mary a year to read this book.

The syntactic status of the middle subject will play an important role in analysis of the TTC. We return to it in subsection 3.2.

The TTC also has a more “flexible” argument structure in that it permits the non-expletive subject to bind a non-object gap, something which is expressly disallowed in canonical *tough*-predicates.⁸

- (17) (a) * Mary was difficult to finish the test.
 (b) * The bus was easy to arrive.
- (18) (a) Mary took an hour *e* to finish the test.
 (b) The bus took an hour *e* to arrive.

Finally, there is the obvious observation that there are simply more parts to the TTC. It minimally consists of the light verb *take* plus a “measure phrase.” Note that the measure phrase need not be a temporal unit, as long as it describes some “bounded” interval.⁹

form a complex predicate by meaning conjunction or properties of events. Thus, we will derive that the *tough*-construction will be restricted to nonfinite event descriptions which can have manner adverbials like “in a difficult/easy/hard/... way,” which is not possible for such non-volitional predicates.

[8] In this way, the TTC is similar to the adjective *ready* (i), (ii), though *ready* does not allow an expletive version (cf Chomsky 1977: 109), (iii).

(i) The chicken is ready to eat *e* (... we are hungry).

(ii) The chicken is ready PRO to eat (... it is hungry).

(iii) *It is ready to eat the chicken

Too/enough-degree constructions also follow this pattern.

[9] Interestingly, there are more idiomatic uses of the TTC that involve what are less obviously measure phrases, (i). Surprisingly, such idiomatic uses do not permit antecedent-gap chains, (ii), nor middle subjects (iii).

- (19) (a) It takes 3 steps to reach the door.
 (b) It took 10lbs of pressure to crush the rock.

Thus, while the *tough*-construction proper involves the syntactic relation between an adjective and nonfinite clause, the TTC is a more complex syntactic creature. We view this as a benefit, because we believe that the relative simplicity of the *tough*-construction hides many of the complex factors that go into the relation between the two clauses. The TTC's relative "complexity" actually makes the issues somewhat more transparent.

We take the preceding correlations to validate treating the TTC as a proxy for the *tough*-construction, along with the authors cited above. We turn in the next sections to a thorough investigation of the TTC, putting the *tough*-construction aside until section 4.

3. PROPERTIES OF THE TTC

3.1. Constituency

We will start with a discussion of constituency. In principle, there is nothing wrong with a measure phrase like *an hour* and a nonfinite clause like *to finish the test* forming a constituent. However, they do not form a constituent in the TTC. Though this may seem counterintuitive at first glance, this fact is demonstrated through basic constituency tests which force the measure phrase and the nonfinite clause to form a constituent, for instance, *all*- and pseudo-clefting. The (b) examples simply demonstrate that clefting is possible in the TTC.

- (20) (a) * An hour to finish the test is all/what it took.

-
- (i) It took three days/the death of his father to convince John to go home.
 (ii) John took three days/*the death of his father to convince *e* to go home.
 (iii) *It took John the death of his father to decide to go home.

We have no explanation for this, though we note that the examples with *the death of his father* seem to lack the purpose/rationale clause reading identified in subsection 3.1. The semantic relationship between *the death of his father* and the nonfinite clause is very different than that between a measure phrase and the nonfinite clause. This difference in meaning likely reflects a difference in structure which in turn rules out the antecedent-gap and middle subject, though we must put aside an explicit explanation.

- (b) An hour is all/what it took to finish the test.
- (21) (a) * A year to learn French is all/what it took.
- (b) A year is all/what it took to learn French.

A measure phrase and a nonfinite clause also cannot be a fragment answer to the question *What did it take?* (The responses are marked infelicitous because they are grammatical utterances, just not in the given context.)

- (22) What did it take?
- (a) # An hour to finish the test.
- (b) # A year to learn French.

It is worth comparing examples where the measure phrase and nonfinite clause *do* form a constituent. An illustration of such a context is the Have-Time Construction (HTC).¹⁰

- (23) (a) Mary has an hour to finish the test.
- (b) An hour to finish the test is all/what Mary has.
- (c) What does Mary have?
- An hour to finish the test.

We also point out that the semantic role of the nonfinite clause is different when the measure phrase and nonfinite clause form a constituent. In the HTC, it is possible to paraphrase the relationship as a relative clause, whose head is the measure phrase (24). This is not possible with the TTC, (25).

[10] It is likely that the HTC is in fact ambiguous in that the nonfinite clause *can* form a constituent with the nonfinite clause, but it is also possible that it is merged as a modifier of the VP/vP. As evidence, we note that the HTC can also be paraphrased using a purpose clause, (i), (ii). See discussion further discussion below.

- (i) Mary has an hour (in order) to finish the exam.
- (ii) Mary has a year (in order) to learn French.

Furthermore, the two readings are distinguished when the measure phrase is clefted away from the nonfinite clause. This is the expected result if the difference between the two readings correlates with a difference in adjunction height, e.g., NP versus VP/vP.

- (iii) An hour is what/all Mary has (in order/*in which) to finish the exam.
- (iv) A year is what/all Mary has (in order/*in which) to learn French.

- (24) (a) Mary has an hour (in which) to finish the test.
 (b) Mary has a year (in which) to learn French.
- (25) (a) It took an hour (*in which) to finish the test.
 (b) It took a year (*in which) to learn French.

Instead, the nonfinite clause in the TTC is more accurately parsed as a purpose/rationale clause.¹¹ (This reading is also available with the HTC, see footnote 10.)

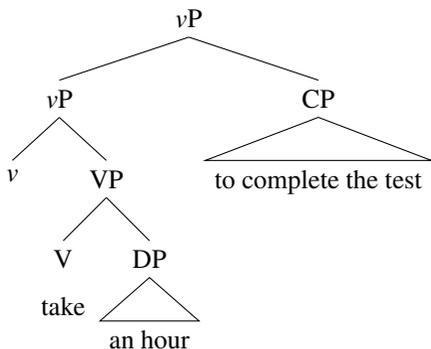
- (26) (a) It took an hour (in order) to finish the test.
 (b) It took a year (in order) to learn French.

The lack of constituency with the measure phrase and the parse as a purpose/rationale clause lead us to conclude that the nonfinite clause is merged as a modifier of the verb phrase (Faraci 1974), here assumed to be the complex $v+V$.¹²

(27)

[11] Though the difference is often collapsed (cf. Jones 1991: 26 footnote18), Faraci (1974: 28) *et seq* distinguishes purpose from rationale clauses in part by noting that rationale clauses answer the question *Why did X happen?*, rather than the *Why did A do X?* for purpose clauses. In practice however, we believe that line is fairly blurry between when something is a purpose vs. rationale clause. The distinction is not directly relevant in this paper, as the crucial point is about the height of adjunction, rather than terminological classification. (Moreover, the TTC answers neither *why*-question.) We note though that the TTC has somewhat conflicting morpho-syntactic properties. They can always be paraphrased with *in order*, suggesting that they are rationale clauses, but they also all allow object gaps, suggesting that they are purpose clauses. Still, the impersonal nature of the TTC means that there is never an Agent thematic role in the main, which is typically required for purpose clauses elsewhere. Note as well that Jones (1991) understands rationale clauses (IOCs in his terminology) as being capable of “free adjunction,” i.e., adjunction at any level (practically meaning adjunction at either VP or S). As the next sections illustrate, the nonfinite clause in the TTC must be merged at some clause internal position for issues related to scope and control of PRO.

[12] We understand the head v to be equivalent to Voice (as in Kratzer 1996) in that it is responsible for the thematic properties of VP-external argument structure.



The tree in (27) predicts that the measure phrase does not c-command the nonfinite clause. The binding data in (28) confirm this prediction.

- (28) * It took took every students_i's lunch-hour for her_i to finish cramming for the test.

We understand the adjunction relation in terms of the semantic process of predicate modification (Heim & Kratzer 1998), or meaning conjunction. In a Neo-Davidsonian event semantics, the combined meaning of the two clauses is given in (29). The predicate TAKE-AN-HOUR is a function that “measures” or “bounds” an event, such that TAKE-AN-HOUR(*e*) means, “*e* measures/is bounded at one hour.”

- (29) $\llbracket(27)\rrbracket = \lambda e. \text{TAKE-AN-HOUR}(e) \wedge \text{complete}(e) \wedge \text{AGENT}(e)=\text{PRO}_{arb} \wedge \text{THEME}(e)=\text{the test}$

Notice that we neatly explain the telicity restriction found in the TTC. Because the two events are conjoined via predicate modification, the event described by the nonfinite predicate must measure an hour — that is, it is bounded — because in fact they are the same event.¹³

[13] We note one constituency test that suggests that the measure phrase and nonfinite clause are a constituent: coordination, illustrated in (i).

(i) It took [a week to read this book] and [an hour to watch the movie about it]

We attribute this not to DP coordination, rather, vP coordination, assuming that the head complex *v*+*V* moves further up to a higher projection (e.g., Aspect or Appl proposed in subsection 3.2).

3.2. *Middle subjects*

The TTC permits an additional argument, which we refer to as the *middle subject*.

- (30) (a) It took Mary an hour to finish the test.
 (b) It took the students a year to learn French.

The terminology “middle subject” is a descriptive label. It is meant to reflect the fact that the middle subject is in complementary distribution with an overt subject in the nonfinite “*for-CP*.”

- (31) (a) It took Mary an hour (*for John) to finish the test.
 (b) It took the professors a year (*for the students) to learn French.

We identify the relationship between the middle subject and the empty subject position of the nonfinite clause as (obligatory) control, rather than raising. This is diagnosed by the fact that the middle subject position does not tolerate expletive subjects (32), nor does it permit idiom chunk interpretations (33), nor meaning-preservation under passivization (34).

- (32) (a) It took an hour for there to be a full classroom.
 (b) * It took there an hour to be a full classroom.
 (c) It took two days for it to snow.
 (d) * It took it two days to snow.
- (33) (a) It took an hour for the cat to get out of the bag. ✓idiom, ✓literal
 (b) It took the cat an hour to get out of the bag. *idiom, ✓literal
 (c) It took an hour for the shit to hit the fan. ✓idiom, ✓literal
 (d) It took the shit an hour to hit the fan. *idiom, ✓literal
- (34) (a) It took an hour for the doctor to examine Mary.
 =It took an hour for Mary to be examined by the doctor.
 (b) It took the doctor an hour to examine Mary
 ≠ It took Mary an hour to be examined by the doctor.

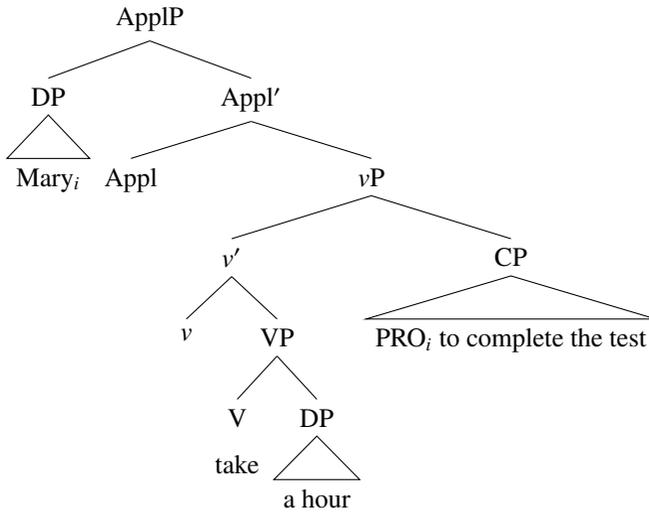
We further observe that the middle subject is scopally fixed outside of the nonfinite clause. Such lack of connectivity we again take as evidence for a control relation. The comparison between the middle subject position and the subject position inside of the nonfinite clause makes the point concisely. The quantifier to the right of *for* scopally interacts with the quantified object in a way that the middle subject does not, (35).

- (35) (a) It took every women an hour to read two books.
 ≠ It took an hour for every woman to read two books.
- (b) It took three students a year to learn some language.
 ≠ It took a year for three students to learn some language.

Thus, the middle subject is case- and theta-licensed *in situ*, similar to *It strikes me that Mary cheated*. But we also note that the middle subject is always optional, unlike *strike*: **It strikes that Mary cheated*. What then is the structural position that the middle subject occupies?

We identify this element as the specifier of an applicative head. The middle subject is an applied object, which is in an obligatory control relationship with the adjoined nonfinite clause. Furthermore, because of the structural position of the adjoined clause, this must be an instantiation of a *high applicative*, i.e., an argument that is related to an event (rather than to another DP) (Pylkkänen 2008).

(36)



We assume, following Landau (2015), that obligatory control requires a strict c-command requirement between the controller and PRO, which in turn forces the applicative to be a high, rather than low applicative head. That is, if Appl were merged above *an hour*, the applied argument would not c-command the nonfinite clause.¹⁴

An applicative analysis is confirmed by considering languages with overt applicative morphology. Consider the Bantu language Logoori (Luhia, Bantu). In Logoori, the TTC patterns identically to English on all relevant diagnostics, and licenses a middle subject with the applicative morpheme.¹⁵

[14] We further note that this is not an instance of *logophoric control*, identified in part by the ability to license partial control.

- (i) *It took Mary an hour to surround the castle
- (ii) *It took Mary ten minutes to gather in the park.

[15] Glosses for Logoori: 9: noun class 9; APPL: applicative; FV: final vowel; INF: infinitive; SM: subject marker.

Thanks to Mwabeni Indire for help with the Logoori phrases. He notes that he believes that the expression is calqued from English, though this does not diminish the validity of the evidence. Note that we explicitly reject the idea that the middle subject starts in the specifier of vP due to, a) the morphological facts in (37); b) the event-relation discussed below in (38); and c) the interaction with the *tough*-subject, discussed in subsection 3.3.

- (37) (a) ya-vogor-a muhiga mulala kwiiga Logoori
 9_{SM}-take-FV year one learn.INF Logoori
 ‘It took a year to learn Logoori.’
- (b) ya-vogor-el-a Imali muhiga mulala kwiiga Logoori
 9_{SM}-take-APPL-FV Imali year one learn.INF Logoori.
 ‘It took Imali a year to learn Logoori.’

Finally, we point out that treating the middle subject as a high applicative again matches our intuitions. The middle subject seems to be “involved” in the event in some way that the subject of the nonfinite clause is not. For instance, in (38), the difference between the two sentences seems to be in whether *Mary* is “measuring out” the event of taking an hour. In (38a), we get the sense that *Mary* has attempted to stand for an hour. (38b) also has this reading, but it additionally has a reading in which the speaker in some way is measuring out this event, like s/he is waiting for *Mary* to stand up.

- (38) (a) It took *Mary* an hour to stand up.
 (b) It took an hour for *Mary* to stand up.

We interpret this to be a result of the Appl head mapping the middle subject directly to the “taking an hour” event in (38a). We will refer to this thematic relation as an AFFECTED thematic relation. This affected reading is a result of *Mary* being in a relationship with the event that measures an hour, as described by the higher ν P.¹⁶ In contrast, merged inside of the nonfinite clause, *Mary* is not directly related to this event. She is simply mapped to the event of standing up (as the Agent). In such cases, we assume that the measurement of time is “speaker-oriented”—a notion that we will not attempt to formalize. Thus, the truth conditions of (39)/(40) minimally differ in that (39a) has an extra thematic relation that (40a) lacks.

- (39) (a) It took *Mary* an hour to complete the test.

[16] Note that “affectedness” as used here does not imply “animacy,” since inanimates can be middle subjects as well, e.g., *It took the tree an hour to fall.*

(b) $\llbracket(39a)\rrbracket = \lambda e. \text{TAKE-AN-HOUR}(e) \wedge \text{AFFECTED}(e) = \text{Mary}_i \wedge \text{complete}(e) \wedge \text{AGENT}(e)=\text{PRO}_i \wedge \text{THEME}(e)=\text{the test}$

(40) (a) It took an hour for Mary to complete the test.

(b) $\llbracket(40a)\rrbracket = \lambda e. \text{TAKE-AN-HOUR}(e) \wedge \text{complete}(e) \wedge \text{AGENT}(e)=\text{Mary}_i \wedge \text{THEME}(e)=\text{the test}$

However, if this is correct, the data from the TTC point to a potential problem: English is generally thought to *lack* a high applicative. Indeed, in the typology of applied arguments, English is considered to be a canonical example of a language that only has a low applicative, i.e., a head that relates an individual to another individual, rather than an event (Pylkkänen 2008).

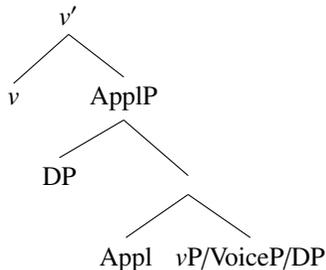
We will however adopt the view of Kim (2012), who argues that English does have structurally higher applicatives, which can be observed in the following data

(41) (a) John had Mary pick up the book.

(b) John had Mary walk out of his classroom.

(c) John has a book.

(d) (Kim 2012: 73)



The idea explored by Kim is that *have* in general is merely the realization of the complex of Appl and the higher verbal head v (taking a cue from Freeze's (1992) analysis of *have* as P-incorporation). In the examples in (41a) and (41b),

[17] Terminologically, Kim 2012 calls this a *peripheral applicative*, to distinguish it from the high and low applicatives, though structurally it is identical to Pylkkänen's (2008) high applicative. See also discussion of applicative arguments in Cuervo 2003.

Appl is merged above the verbal domain. In these cases, Appl “denotes a relation between the causee, *Mary*, and the event” described by the verb phrase (p. 77).¹⁸

To the extent that light verbs like *have* are related to *take*, an idea that we consider highly plausible from a lexical decomposition point of view (Hale & Keyser 2002), then we believe that postulating a high applicative head with *take* is motivated in English. However, we will remain agnostic as to the name of this projection. It is not the goal of the paper to provide a decompositional analysis of the light verb *take* in English, nor to derive the distribution of high applicatives in English. The point made here is simply that there is sufficient evidence for treating the middle subject as a high applied argument.

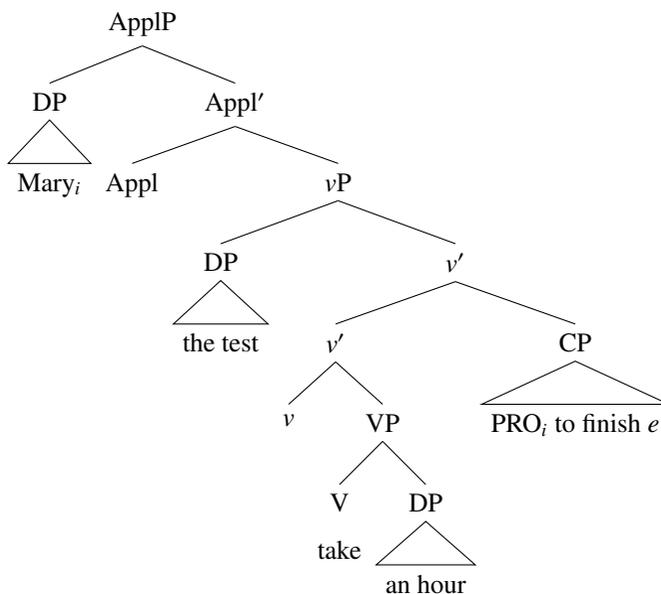
3.3. *The interaction of subjects*

In this section we will consider the interaction of the *tough*-subject (*the test*) and the middle subject (*Mary*), in (42).

(42) The test took Mary an hour to complete *e*.

Though the middle subject cannot be interpreted (for scope and variable binding) inside of the nonfinite clause (as shown in subsection 3.2: (35)), nor can the *tough*-subject (as shown in section 2: (10)), the two positions do scopally interact with each other, as we might expect if they are in the same clause. Surprisingly, however, the *tough*-subject can be interpreted for scope *below* the middle subject. Again, it is worth comparing the middle subject versions with the

[18] The proposal here is most consistent with Kim’s structure for *causative have* (41a), in which Appl is merged directly over *vP*. *Take* then would be distinguished from *have* in lacking a higher *v_{cause}* projection which licenses the external argument. However, it is also possible to recast the analysis for the TTC provided here using a Voice projection as well, in which case the structure is equivalent to Kim’s experiencer *have* (41b). It’s worth noting that the proposal is also generally consistent with the account of *have* in Ritter & Rosen 1997 as well (*modulo* some slight structural differences), though it requires postulating extra movements that are not motivated in the TTC. See their work and criticisms in Kim 2012: 79ff for discussion. We should note that recent work on Bantu applicatives has sought to break down the high/low applicative distinction (e.g., Jerro 2016) in terms of lexical semantics. We endorse this view, and believe it may resolve some of the issues here, but we do not currently see how it solves the issue of restricting when an event-related applicative like that in the TTC is permitted in English. We also point the reader to the work on Spanish “temporal” *tener/llevar* in Fernández-Soriano & Rigau (2009), who argue for a lexical decomposition of similar data in different varieties of Spanish.



The argument in spec-*v*P promotes to the subject position, past the middle subject. We assume that the middle subject is licensed *in situ* and is therefore inactive for further syntactic processes (Chomsky 2000, 2001).¹⁹

The structure is consistent with approaches to the *tough*-construction in which the nonfinite clause merges an operator and then is later predicated of the subject which is generated (athematically) in the main clause. The subject then gets a thematic role through some mechanism of “thematic transmission,” whereby the head of the chain is assigned a thematic role through the operator (Williams 1983, Browning 1987, Heycock 1994).²⁰ Though it is possible to capture this idea in a variety of different formalisms, we believe that the notion of “thematic transmission” (as it is intended for the *tough*-construction) follows

[19] We note that we also find Condition C obviation (i), which is characteristic of A-movement chains (ii), and so is consistent with the analysis below.

- (i) This picture of John_i took him_i an hour to paint *e*.
- (ii) This picture of John_i seems to him_i to be beautiful.

[20] See also the ideas proposed in Mulder & den Dikken (1992) and Nissenbaum (2000: 43, fn 17) for treating the *tough*-construction as a kind of parasitic gap, as well as Jones’s (1991) notion of a “latent-patient.”

- (c) $\llbracket vP \rrbracket = \lambda e. \text{TAKE-AN-HOUR}(e) \wedge \text{complete}(e) \wedge \text{AGENT}(e)=\text{Mary} \wedge \text{Theme}(e)=\text{the test}$

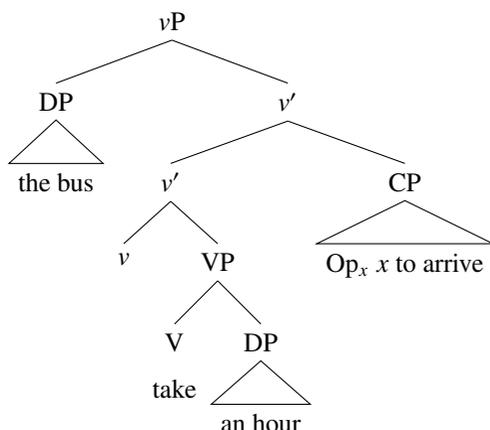
We assume that v in these cases licenses a non-thematic subject. This can be captured formally by adopting the ideas in Schäfer (2008), Alexiadou et al. (2015), who argue that v /Voice is specified for two features, a syntactic feature that modulates whether v /Voice requires (DP) specifier, and a semantic feature that modulates whether v /Voice semantically selects for a thematic role. On the approach here, v in the TTC is specified as positive for the first type of feature (it requires a DP specifier), and negative for the second (it does not assign a thematic role). In Schäfer (2008), Alexiadou et al. (2015), this is the configuration that licenses expletive arguments, which is precisely what we predict for the TTC (and hence the *tough*-construction), since we have here an alternation between an expletive subject and a non-expletive subject.

We note that there is nothing here that forces the subject in spec- vP to bind an operator gap. It is formally possible that the operator be co-indexed with the subject position, as in (50).²¹

- (50) (a) The bus took an hour to arrive.
 (b) The tree took a year to fall.
 (c) The ball took 10 minutes to roll itself into the den.

(51)

[21] It's important to use animate subjects in the examples in (50) to control for an ambiguity which treats *take* as a lexical verb, like *John took a year (off) to learn French*. Though this lexical use shares some structural similarities with what is discussed in this paper, it crucially loses the telic reading, (... *but doesn't speak a word*), which we take to be a defining property of the TTC.



The minimal pair in (52) are therefore derived via very different mechanisms.²²

- (52) (a) The bus took an hour [Op_x x to arrive]. → Operator movement
 (b) It took the bus an hour [PRO to arrive]. → Control of PRO

This difference is detectable through A'-diagnostics targeting the movement in the nonfinite clause, in particular the availability of a parasitic gap in (54a), but not in (54b).²³

- (53) (a) ? The bus took an hour [Op_x x to start up [after fixing *pg*]]
 (b) * It took the bus an hour [PRO to start up [after fixing *pg*]]
- (54) (a) ? The flowers took a week [Op_x x to open [after watering *pg*]]
 (b) * It took the flowers a week [PRO to open [after watering *pg*]]

Most importantly, because the middle subject gets a thematic role in the main clause, it is not eligible for the same “rescuing” via operator binding. This explains why the middle subject cannot bind a non-subject gap.

[22] Note that the middle subject binds PRO through the control algorithm, which we assume to be distinct from the predication relation illustrated here (*pace* Chierchia 1984).

[23] It's likely that an unaccusative verb is necessary to make this diagnostic work, though the point still holds that there is grammaticality distinction which can only be accounted for if there is A'-movement in one case, but not the other.

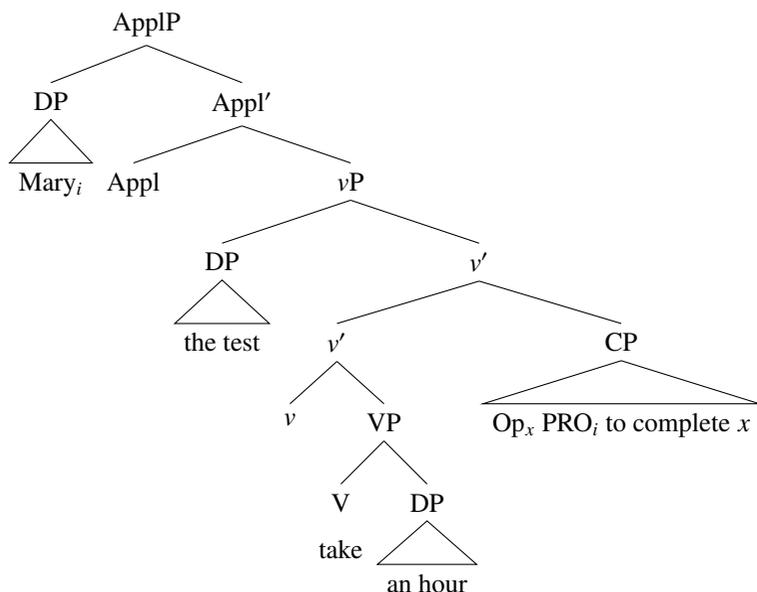
- (55) (a) * It took the test an hour for Mary to complete e .
 (b) * It took French a year for Mary to complete e .

The ungrammaticality of (55) follows if syntactic chains can have one and only one thematic role, i.e., the Theta Criterion (or however this is captured in Minimalism). The problem with (55) is that the predication relation attributes to the middle subject the thematic role of the lower clause, but the middle subject already has a thematic relation in the main clause, (56).

- (56) $\llbracket vP \rrbracket = \lambda e. \text{TAKE-AN-HOUR}(e) \wedge \text{AFFECTED}(e)=\text{the test} \wedge \text{complete}(e) \wedge$
 $\text{AGENT}(e)=\text{Mary} \wedge \text{THEME}(e)=\text{the test}$

Since we still wish to to exclude attributing multiple thematic roles to a syntactic chain (*modulo* Hornstein 2001), the sentences in (55) require the middle subject to bear two thematic roles, and therefore are out on independent grounds. A PRO argument, on the other hand, independently bears the thematic role assigned in the nonfinite clause.

- (57) (a)



- (b) $[[\text{AppIP}]] = \lambda e. \text{TAKE-AN-HOUR}(e) \wedge \text{AFFECTED}(e) = \text{Mary}_i \wedge \text{complete}(e) \wedge \text{AGENT}(e) = \text{PRO}_i \wedge \text{THEME}(e) = \text{the test}$

Thus, the fact that the light verb *take* does not assign a thematic role ensures that a subject generated in its specifier has to get one from somewhere else, like predication. In contrast, because the middle subject does get a theta role in the main clause, it is precluded from getting one via predication.

A related question is why the middle subject, when present, must bind *something* in the nonfinite clause. That is, it isn't immediately clear from the analysis why (58a) are ungrammatical.

- (58) (a) * It took John an hour for Mary to finish the test.
 (b) * It took John a year for Mary to learn French.

This is, of course, a well known issue in the study of control, i.e., why some predicates require an obligatory control relationship (Landau 2015, Grano 2012). We will not settle the question here.²⁴

4. IMPLICATIONS FOR THE *tough*-CONSTRUCTION

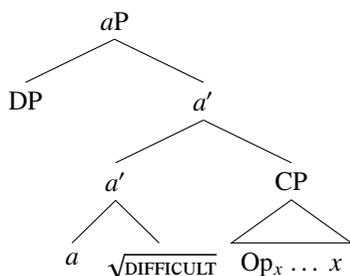
Given the extensive theoretical landscape concerning the *tough*-construction, in this section we wish to illustrate how the TTC sheds light on which proposed analyses of the *tough*-construction are plausible. We focus on two factors which have been debated in the literature: i) predication vs. movement of the *tough*-subject; ii) selection vs. modification of the nonfinite clause. We illustrate how the predication-based analysis of the TTC is supported in the *tough*-construction proper, and that the nonfinite clause is not a selected argument of the *tough*-predicate. We consequently review the noted evidence against this position, i.e., that the *tough*-subject is not an argument of the *tough*-predicate and that the nonfinite clause is selected, and point out the faults in these arguments.

[24] And indeed, it appears to be one way in which *cost/set X back* and the TTC differ. See discussion in section 5.

4.1. Predication, not movement

Exporting the analysis of the TTC to the *tough*-construction, the *tough*-subject is generated in the specifier of the adjectival projection *a*P, and the nonfinite clause is adjoined to *a*P.

(59)



This analysis explicitly denies that the various movement-based analyses, most recently in Hicks 2009, Hartman 2012, Longenbaugh 2016, are correct.²⁵

Moreover, with regard to the position of the subject, the data differentiates between some models of predication analyses. The data are consistent with proposals like Williams (1983), Wilder (1991), Keine & Poole (2017), Nissenbaum (2000), Jones (1991), Mulder & den Dikken (1992) which treat the *tough*-subject as a selected argument of the predicate. In contrast, the predication analyses offered in Browning (1987), Heycock (1994), Řezáč (2006), in which the subject does not have a selectional relationship with the main-clause predicate are not consistent with the TTC data.²⁶ The interaction of the middle subject and *tough*-subject demonstrate that there must be a position lower in the clause which the subject can reconstruct into.

The main argument against a selectional relationship between the *tough*-subject and the main clause predicate comes from nominalizations. It is noted that

[25] For movement analyses in alternative (older) frameworks, see Lees (1960), Postal (1971), Postal & Ross (1971), Bresnan (1971), Chomsky (1981), Bayer (1990), Jacobson (1992), Brody (1993).

[26] In Heycock (1994), Řezáč (2006) the link between the antecedent and gap is accomplished by generating the *tough*-subject *in situ* and linking it (via e.g. Agree) with an operator.

the *tough*-construction does not survive nominalization of the *tough*-predicate, as in (60) (Chomsky 1977: 109); (Pesetsky 1991: 101). Thus, the reasoning goes, the *tough*-subject cannot be selected, unlike e.g., *John's eagerness to please*.

- (60) (a) * Bill's difficulty to please *e*
 (b) * the store's convenience to visit *e*
 (c) * the fruit's impossibility to eat *e* (Pesetsky 1991: 101)

On the present analysis, (60) are understood by the fact that such nominalizations are *root*-nominalizations, and so have the structure [*n* [$\sqrt{\text{ROOT}}$]]. They therefore lack an adjectival projection which selects for the subject and which is an appropriate position for the nonfinite clause to adjoin to. This idea is supported by Pesetsky's (1991) observation that nominalizations in *-ness* do permit the antecedent-gap chain, though he notes speaker variation.

- (61) (a) % the door's easiness to open *e*
 (b) % it's awkwardness to pronounce *e*
 (c) % the problem's trickiness to solve *e* (Pesetsky 1991: 101)

These facts follow if *-ness* nominals (for some people) are derived from adjectival predicates (e.g., [*n* [*a* [$\sqrt{\text{ROOT}}$]]]), and therefore include a projection in which the non-thematic subject can be generated and that the nonfinite clause can adjoin to. The TTC makes the same point more explicitly because it lacks a root-derived nominal, but has a gerundive nominalization. Because this includes *vP* (and apparently the applicative phrase given the possibility of a middle subject), there is a position (*spec-vP*) that selects for a subject before nominalization.²⁷

[27] Additionally, *acc*-gerunds permit the gap (i), but *poss*-gerunds with prepositional complements do not (ii). Note that gerunds of the *tough*-construction are also possible (iii) — unexpected if the *tough*-subject is generated in *spec-TP* or a topic phrase, as in Rezáč (2006).

- (i) The book taking everyone a year to read was an impediment to its sales.
 (ii) *The book's taking of year to read was an impediment to its sales.
 (iii) The book's being difficult to read was an impediment to its sales.

These facts are all consistent with the analysis put forth here, under the assumption that (ii) lacks *vP*.

(62) (a) ? The book's taking everyone a year to read *e* is an impediment to its sales.

(b) ? The bus's taking an hour *e* to arrive really pissed me off.

Independent evidence for selection is also observed in Fleisher's (2015) *rare*-class predicates (although Fleisher does not interpret it as such, adopting an analysis based on Řezáč 2006).

(63) (a) * They are rare to find *e* (Quirk et al. 1985: 1395)

(b) this kind of tuning is rare to hear in chipmusic in general.

(Fleisher 2015: 73)

Fleisher's core observation is that *rare*-predicates only permit kind-denoting subjects, rather than type-denoting subjects, even when used at *tough*-predicates. At the very least, such data indicate that the availability of a *tough*-subject is in part dependent on the lexical semantics of the main clause predicate, which in turn argues against an analysis that completely severs this link.

4.2. *Modification, not selection*

The analysis above also has implications for the relationship between the *tough*-predicate and the nonfinite clause. In particular, we have found evidence that this is *not* a selectional relationship, rather, it is one of modification, as in Williams (1983), Wilder (1991), Contreras (1993), Mulder & den Dikken (1992), Hornstein (2001). This rules out treatments of the *tough*-construction which treat the nonfinite clause as an argument of the *tough*-predicate (Keine & Poole 2017, Longenbaugh 2015, Salzmann 2017).

However, there are two fairly strong arguments supporting a selectional relationship between the *tough*-predicate and the nonfinite clause. First, it is noted that there are idiosyncratic restrictions on which adjectives can and cannot be *tough*-predicates. For instance, Landau (2011) offers the following evidence to suggest that the nonfinite clauses ("Op-derived clauses") are selected in the *tough*-construction.

- (64) (a) High-heeled shoes are impossible to wear *e* in this neighborhood.
 (b) * High-heeled shoes are forbidden to wear *e* in this neighborhood.
 (Landau 2011: 797).

However, it seems that this distinction is not as robust as Landau claims. Many examples of *forbidden* as a *tough*-predicate can be found in a Google search.²⁸

- (65) (a) However, some of those character traits are forbidden for us to express. <https://www.yaiy.org/Magazine/articles/0705inlikeness.html>
 (b) There are two parts of any Kosher animal that are forbidden for us to eat <http://www.askmoses.com/en/article/554,1953584/Are-all-parts-of-a-kosher-animal-kosher.html>

In fact, this is probably evidence that certain *tough*-predicates select for *subjects*, rather than nonfinite clauses, just like what is illustrated in Fleisher (2015). That is, *forbidden* imposes selectional restrictions on what can be a *tough*-subject, not whether it can combine with a nonfinite clause. Indeed, the same sentences are perfectly grammatical without a gap, e.g., *It is forbidden for us to eat two parts of any Kosher animal*, showing that nonfinite clauses are perfectly compatible with these predicates.

The second argument against a modification relationship appeals to the semantic relationship between the *tough*-predicate and the embedded clause. Řezáč (2006: 291ff) argues that the lack of an entailment relationship illustrates that the nonfinite clause cannot be an adjunct, since entailment is a general property of (intersective) modification. (Judgments are cited as given.)

- (66) (a) The stone is easy [to lift *e*] $\not\zeta$ The stone is easy.

[28] This is also true of the well-known positive/negative antonyms which seem to differ with respect to being *tough*-predicates (e.g., *possible/impossible*, *legal/illegal*). In actuality, there are numerous examples of the positive forms of such predicates as *tough*-predicates online, contrary to the reported judgment.

- (b) Tartalo bought the pig [to eat *e*] \subset Tartalo bought the pig.

(Řezáč 2006: 291)

Of course, this argument only goes through if the *tough*-subject is in fact thematically licensed in the main-clause, which it is not.

Arguments in favor of a modification analysis include the following ellipsis data from Contreras (1993: 5ff). Contreras first notes that VP ellipsis is not possible when the VP is an adjunct (cf Lobeck 1986, Zagona 1988).

- (67) (a) John persuaded Mary to leave, and Fred persuaded Jane to [_{VP} *e*]
 (b) * John runs to stay fit *e*, and Bill swims to [_{VP} *e*] (Contreras 1993: 5, citing Zagona (1988))

If the nonfinite clause is an argument of the *tough*-predicate, we would expect to be able to elide its VP, contrary to fact.²⁹

- (68) * John is easy for us to please, but Bill is hard for us to [_{VP} *e*]
 adapted from Contreras (1993: 5)

Empirical evidence for modification also comes from comparison with true complements to adjectives, which are not acceptable in attributive position, though (some) nonfinite clauses are.

- (69) (a) * the [suspicious of his wife] man
 adapted from Nanni (1980: 573)
 (b) an easy to read book

Finally, Wilder (1991) notes an additional theory-internal argument for treating the nonfinite clause as an adjunct. He observes that, “TM infinitives now

[29] Additional evidence of the adjunct status of the nonfinite clause, at least at the surface representation, comes from degree modification.

(i) Mary is more difficult than Sam [to talk to *e*]

Given the standard assumption that *than X* is an argument of *more* which extraposes rightward, then the nonfinite clause must be able to sit in an extraposed position. Similar data is given in Heycock (1994: 232), showing that, at the surface representation, the nonfinite clause is adjoined.

form a class with infinitival relatives and purpose clauses; they never occur as arguments to lexical heads, but only as adjuncts” (p. 125). That is, nonfinite clauses with operator gaps are *never* selected for (pace Landau 2011).

We note though, that unlike the TTC, the *tough*-construction does not have a paraphrase as a purpose/rationale clause (Wilder 1991: 129)

- (70) (a) It’s easy (*in order) to finish the test.
 (b) It’s difficult (*in order) to learn French.

This is a natural consequence of the fact that the nonfinite clause is a *vP* modifier in one case and an adjectival modifier in another. Since purpose/rationale clauses are naturally *VP/vP* oriented, then the lack of such a reading is expected when the nonfinite clause modifies a different category.

The categorial difference between *aP* and *vP* also explains why the *tough*-construction does not license a middle subject: High Appl heads select for verbal projections, not adjectival projections.

5. ON DIFFERENT CLASSES OF *tough*-PREDICATES

We will conclude with a brief look at similar constructions. Our main point in this section is to illustrate that the TTC does not have exceptional properties. Rather, it is representative of a larger class of predicates, which in turn demonstrates that the class of *tough*-predicates admits semantic and syntactic variability. For instance, *cost*, also permits middle subjects, as does the idiomatic *set X back* (Jones 1991: 227). (See also discussion of Spanish light verbs in Fernández-Soriano & Rigau 2009.)

- (71) (a) It cost me \$2 to buy that book
 (b) That book cost me \$2 to buy *e* after (Jones 1991: 227)
- (72) (a) It set John back two bucks to buy that book
 (b) ? That book set John back two bucks to buy *e*. (Jones 1991: 228)

The core components of the analysis apply to these constructions as well. The nonfinite clause is a modifier of the verb phrase, and the middle subjects

are licensed in the main clause, as are the *tough*-subjects.³⁰ However, there are also differences among the constructions as well. For instance, *cost/set X back* do not exhibit obligatory control, unlike the TTC.

- (73) (a) * It took Mary 20 minutes for John to buy a car.
 (b) It cost Mary \$5,000 for John to buy a car.
 (c) It set Mary back \$5,000 for John to buy a car.

We will not address the interesting variation in lexical semantics of light-verb constructions in the *tough*-construction here. We tentatively suggest that *cost/set X back* may involve a low applicative, relating the middle subject directly to the amount. Our intuitions are that, unlike the TTC, *cost* and *set X back* both involve transfer of possession, which is elsewhere characteristic of low applicatives generally (Pylkkänen 2008).

Our general point here is that a close look at any one of these constructions reveals something deeper about the core alternation of the *tough*-construction. Though there is variation among the class of *tough*-predicates, there are constant elements as well (Gluckman 2019). There is always an alternation between an expletive subject and non-expletive subject binding a non-subject gap; there is always a “weak” A’-step; there is always a nonfinite clause. In the case of the TTC, *cost*, and *set X back*, the nonfinite clause demonstrably modifies the main clause, and the *tough*-subject demonstrably starts lower than its surface position. These facts in turn point to a particular brand of analysis of the *tough*-construction. The most accurate analyses are those which treat the *tough*-subject as an argument of the main clause and the nonfinite clause as a modifier. Thus the ideas set

[30] We also note that psych-verbs permit what look like “middle subjects,” though the behavior of such arguments is slightly different than the TTC (Pesetsky 1987). However, there are “compositional” psych-constructions involving light-verbs which do support the syntactic and semantic claims above.

- (i) It gave me a headache to think about that problem.
 (ii) That problem gave me a headache to think about *e*.

Headache and *to think about (the problem)* are not a constituent; *that problem* can be shown to reconstruct below *me*, but not into the nonfinite clause.

forth in Mulder & den Dikken (1992) (who treat the *tough*-construction as a kind of parasitic gap) come closest to correct response (but see also Jones 1991, Nissenbaum 2000).

6. CONCLUSION

A close examination of the TTC reveals syntactic variation in *tough*-constructions. Though they share many core properties, the TTC and the “canonical” *tough*-construction diverge in important syntactic dimensions. We have capitalized on these differences to explore what is, and it is not, a viable analysis for the this particular (heterogenous) class of predicates. We conclude that the non-expletive subject in the TTC/*tough*-subject is a selected argument of the *tough*-predicate. And we further conclude that the nonfinite clause is a modifier of the main clause. Both conclusions point to a particular kind of analysis of the *tough*-construction in general. Our study expands the range of inquiry for *tough*-structures in general, as well as the various aspects of argument structure in English.

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