

Degree Phrases and Nominal Phrases in *Tough*-Constructions

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Abstract

The present paper attempts to empirically support Chomsky's (1977; 1981) A' movement in the analysis of the infinitival clause in *Tough*-Constructions. The present paper argues that the *Tough*-Construction in its abstract structure has both a Degree Phrase exemplified by such as *so.../as.../too.../how...* and a Nominal Phrase. Adopting the analysis of Kennedy and Merchant (2000) that the Degree Phrase is located in the specifier position of a functional projection whose head is sometimes occupied by the overt *of*, the present paper further extends this analysis to the structures of such constructions as *be worthy of...*, *be difficult of access*, and NP *be (too) difficult (%of) to VP*: the overt *of* in these constructions is the lexicalization of the functional head in the sense of Kennedy and Merchant (2000). After these preliminary discussions, the present paper discusses and solves various syntactic problems that have been put forward, particularly in Chomsky (1977; 1981) and Jones (1983). Finally, it becomes apparent that Chomsky's postulation of A' movement in the *Tough*-Construction is entirely viable and the criticism from Jones is virtually non-existent.

1. Introduction

The aim of this article is to support Chomsky's (1977; 1981) A' movement in the analysis of the infinitival clause in the *Tough*-Construction exemplified as:

(1) John is difficult to please.

This construction has been a hotly debated issue in generative linguistics until the most recent work of Hicks (2009). In the course of a long discussion on the *Tough*-Construction, Jones's (1983) criticism has been effectively neglected in major Minimalist work, in so far as I know, despite its significant empirical critique of Chomsky's (1977; 1981) A' movement, a standard analysis of *Tough*-Constructions. Chomsky's analysis postulates that a Null Operator base-generates in the complement position of the VP (Verb Phrase) and moves to Spec-CP (Specifier of Complementiser

Phrase), and that this moved Operator is co-indexed with the subject of the sentence, as exemplified by the following.

(2) John_i is difficult [_{CP} Op_i [_{TP} PRO to please *t*_i]].¹

The most contested claim of this proposal is that whereas the overt counterpart of this Operator can be found in a position after the Nominal Phrase but not in ordinary *Tough*-Constructions.²

(3) (a) This is an easy violin on which to play sonatas.

(b) This is a pleasant room in which to work. (Chomsky 1977: 104)

(4) (a) *This violin is easy on which to play sonatas.

(b) *This room is pleasant in which to work. (Jones 1983: 133)

The contrast between the examples in (3) on the one hand and the ones in (4) on the other is that there are no nominal phrases in front of the relative clause in the latter. However, the present paper argues that the *Tough*-Construction in its abstract structure has both the Degree Phrase (DegP) exemplified by *too* and *so* and the Nominal Phrase (NP) such as (4). That is to say, the primary point of the present paper is that the *Tough*-Construction which appears as (1) is in its abstract structure as what follows, holding both DegP and NP;³

(5) John is {too/so/very} difficult a person to please.

Postulating on these two “hidden” elements in the *Tough*-Construction solves many unresolved puzzles of this construction.

The present paper adopts and is heavily dependent upon the hypothesis by Kennedy and Merchant (2000: 125) that the functional head, *of*, appears in the syntactic position between Degree Phrases and indefinite articles (see the literature cited in Kennedy and Merchant (2000)).

(6) We have [_{FP} {too/so} difficult [_F (%of)] a problem].⁴

The present paper also attempts to argue that the *of* of this nature is also the lexicalization of F⁰ (the head of the functional projection) in other constructions that we will see later.⁵

1 This is from Hicks’s (2009: 536) concise summary of Chomsky’s (1977) work with the italic being made by the Hick’s original.

2 See Chomsky (1981: Section 5.4.) for the discussion on the relation between (i) and (ii) below.

(i) John is easy to please.

(ii) John is an easy person to please.

(Chomsky 1981: 309)

3 Taylor (2003) provided the first in-depth research on *Tough*-Constructions with degree adverbs, to my knowledge. The present paper owes a great deal to Taylor’s (2003) insight of combining Degree Phrases with *Tough*-Constructions. See her numerous empirically interesting data of the *Tough*-Construction.

4 Kennedy and Merchant (2000: 102) treats *enough* as “degree morphology” which heads DegP. (See the literature cited there.) In addition, Kennedy and Merchant (2000: 130, fn. 28) also mentions the following:

(i) ?He’s reliable enough a man.

The overt *of* just after the *enough* is possible here, too. Since DegP is located in Spec-FP in Kennedy and Merchant (2000: 125), their analysis means (if my understanding of their argument is correct) that the DegP headed by the *enough* is in Spec-FP.

(ii) We have [_{FP} **difficult enough** [_F (%of)] a problem].

Radford (1989) and Tonoike (1993) discuss the structure “ADJ *enough* a/an NP”. (See the detail for their analyses). Although Radford (1989: his (14)) and Tonoike (1993: 49-50 and fn.25) do not directly argue about the overt *of* as in (ii), I owe largely to their insights, as well as Kennedy and Merchant’s.

5 Iwasaki (2010) argues that the functional head in the sense of Kennedy and Merchant (2000) is FocP⁰.

The organization of the present article is as follows. In section 2, we analyze the structure of the construction *be worthy of* in terms of the degree projection and its structural parallel with the *Tough*-Construction. In section 3, we extend this analysis to the *be difficult of access* Construction, featuring nominal and verbal properties of the complement of the *of*. In section 4, we will look at empirical data and establish a working hypothesis of the syntactic structure of the *Tough*-Construction, and subsequently analyze various empirical problems in defense of the hypothesis. In section 5, we will summarize the argument and comment on Jones's (1983) criticism of Chomsky (1977; 1981) on a methodological ground.

2. The syntactic analysis of the *be worthy of*

It seems worth mentioning that the *worthy of* construction such as (7) below has the same functional head embodied by the *of* as we saw above.

(7) %The problem is worthy of considering.⁶

This construction is similar to the *Tough*-Construction in that the complement of the VP *considering* has a co-indexed relation with the subject of the sentence, *the problem*.⁷

The first impression about the *of* in (7) would be that the *of* in (7) functions like a connector of *worthy* and the following gerund. If this were correct, the coordination would show that the *of* can appear in front of both of the coordinated gerunds. However, this prediction turns out to be incorrect. Consider:

(8) (a) *He is worthy [of respecting] and [of asking for help].

(b) He is worthy of [respecting] and [asking for help].

Normally, the coordination of this sort should optionally allow the overt *of* in front of the second element as in such as (9):

(9) (a) He is tired [of his wife] and [of his boss]!

(b) He is tired of [his wife] and [his boss]!

Alternatively, this *of* may be considered to be the same *of* that is used by some speakers in the so-called *too... to...* construction. In fact, the construction allows explicit degree words.

(10) (a) This is too worthy (%of) a problem to be analyzed.

(b) This is so worthy (%of) a problem that we should not ignore it.

These pieces of empirical data show that the *be worthy of* construction has also one type of Degree

6 Regarding the type of the structure as in (7), see Konishi ed. (1989: p. 2097). However, there are some native speakers who consider (7) to be ungrammatical. For these speakers, (ii) is grammatical.

(ii) The problem is worthy of consideration.

7 Akiyama (1989) suggests that there are "the sixteen similarities and the four differences between the *worth* construction and the *tough* construction" (p. 11 [italics in the original]). See Akiyama (1989) for the details.

Phrase which is located in the specifier position of the functional projection whose head is sometimes realized as the overt *of*. One possibility that appears worth pursuing is that there is indeed a Degree Phrase in the *Tough*-Construction, given the structural similarity between the *Tough*-Construction and the *be worthy of* construction.

3. The *difficult of access* Construction

Before analyzing the ordinary *Tough*-Construction, let us further extend the functional head *of* analysis to another construction which is presumably a cousin of the *Tough*-Construction such as exemplified below.

(11) John is difficult of access.⁸

Since the *of* usually takes an NP (rather than a VP), it seems reasonable to regard *access* in (11) as NP. Similar structures are as follows.

(12) (a) %The test is difficult of application.

(b) %The mistake is difficult of correction.

Let us suppose that the *of* in (11) is the same type of functional head that we have already discussed thus far. A piece of empirical evidence is that the *difficult* in (11) can be modified by the Degree words such as *too*, *so*, and *very*.

(13) He is {so/too/very} difficult of access.

The implication of (13) is that *it is (very) difficult to access John*. At least semantically, (or possibly syntactically) the *access* and the *John* are linked as just above as a verb and its complement. The pivotal issue, on the other hand, is that the *access* in (11) has at least the property of a nominal, too. That is, the *access* in (11) functions in two ways: verb-like and nominal-like. This verb-like property of the *difficult of access* Construction would make it plausible to assume that the construction in (11) is similar to the *Tough*-Construction in this regard, and perhaps it may be possible to assume that there is the same type of functional projection: a nominal projection with a Degree Phrase. This is an issue to be discussed in the next section.

8 It seems that some speakers allow *approach* instead of *access*. Also, (11) is similar in its structure to (i).

(i) John is worthy of access.

There are also similar cases.

(ii) As they don't value themselves, they find it **difficult of value** others.

[<http://www.narellanva-p.schools.nsw.edu.au/Content/Home/DownloadDocuments/selfEsteemBullying.pdf>] <as of 5 Nov. 2010>

(iii) This proposition is **difficult of support**.

[<http://www.jstor.org/pss/1327852>] <as of 5 Nov. 2010>

The shared characteristics seem to be that the elements after *of* must satisfy the following conditions:

(a) the word has the same forms of the VP and NP.

(b) when they are (interpreted as) NPs, they are uncountable in number.

(c) the VP and NP should be of the same stress and of the same spelling.

4. *Tough*-Construction as the ‘ADJ + *of to VP*’

4.1. Hypothesis and Empirical Data

Given that the constructions such as the *be worthy of* and the *difficult of access* are eligible to have degree modification such as *too* and *so* and that the *Tough*-Construction is also able to have such degree expressions, it may be conceivable to assume that the *Tough*-Construction may sometimes have an overt *of*.⁹

An online search tells us that there are some varieties of English that allow overt *of* of this nature as follows:

(14) ... [Adjective] **of** to [Verb]....¹⁰

The data of this kind may indicate that the *Tough*-Construction has not only covert DegP but also NP in an underlying abstract structure. Let there be such covert DegP and NP in the ordinary *Tough*-Construction such as (5), as a working hypothesis. This hypothesis paves the way to the solution of a large number of the remaining puzzles that other preceding research has failed to account for. This is an issue discussed for the next subsection.

The more theoretical advantages there is of this hypothesis to be found, the more plausible we would find this hypothesis. That is, the empirical data suggested in (14) is simply a clue to a further theoretical inquiry: and this initial supposition is to be tested on the basis on theoretical merits. At the ultimate stage, the grammaticality of the sentence structure in (14) by some native speakers is not a final question but only a theoretical consequence or capacity of predicting consequences that the initial hypothesis would bring determines how valid the relevant hypothesis is.

4.2. Hypothesis and Theory: In Support of A' Movement

In this section, it is argued that Chomsky's (1977; 1981) proposal of A' movement in the *Tough*-Construction is strengthened by the present paper's argument that the apparent Adjectival Phrase is in fact a Nominal Phrase in an implicit manner. Chomsky (1977: 104) shows some instances in which the copula complement is occupied by a Nominal Phrase rather than an Adjectival Phrase, such as in (15).

9 Such an overt *of* (which is perhaps a performance error but could be part of a representation of a relevant speaker's LINGUISTIC KNOWLEDGE) is sometimes overt in cases such as the following example from Kitson (1993):

(i) you only partially wrote or wrote but did not think enough **of** to revise and submit for publication [Source: Kitson, Gay. 1993. "On writing: getting started, getting stuck, and getting finished." Part of a symposium on: Publishing in journals on family. *Marriage and Family Review* 18: 143-159. (from p. 145)] [emphasis added]

Recall the structure in fn. 4: namely, *enough of a/an NP*. This means that (i) is a deleted form of:

(ii) you only partially wrote or wrote but did not think enough **of** [amount] to revise and submit for publication.

10 In consideration of copyright concerns and space limit, I do not cite specific examples here, except the similar example cited in fn. 9.

(15) John is an easy person to please.

Chomsky further elaborates this structure, focusing on the case with the overt realization of the Relative concurring in a Finite Clause, such as (16a-b).

(16) (a) This is an easy violin on which to play sonatas.

(b) This is a pleasant room in which to work.

(Chomsky 1977: 104)

As Jones (1983) and Borsley (2006) indicate, when an Adjective is predicative, that is, when a copula complement is an Adjectival Phrase, not a Nominal Phrase, then the overt Relative is disallowed:

(17) *This violin is easy on which to play sonatas.

Opponents, such as Jones and Borsley, might wish to say that this is a piece of counterevidence against Chomsky's A' movement analysis of the *Tough*-Construction. However, the present paper argues that such a claim is too hasty and that Chomsky's theory on A' movement is indeed tenable, by arguing that the apparent Adjectival Phrase is in fact a Nominal Phrase.

The central argument of the present paper throughout is (i) that the Adjectival Phrase entails a covert Degree expression and (ii) that such a Degree expression and a following indefinite article plus a nominal are covert in common *Tough*-type constructions. The following is overt counterparts of this type to Chomsky's instances in (16):

(18) (a) ??This is {too/so} easy a violin on which to play sonatas.

(b) ? This is {too/so} pleasant a room in which to work.

These are at least marginally ACCEPTABLE for native speakers although these are disfavored for stylistic reasons: in regard to the GRAMMATICALITY of these, these should be judged to be grammatical. The present paper's argument is that the materials in (16) have the abstract, "underlying" structure in (18).

This is rendered fairly plausible if we look at the following contrast from Lasnik and Fiengo (1974: 536).¹¹

(19) (a) The mattress is thin.

(b) *The mattress is thin to sleep on.¹²

(c) The mattress is too thin to sleep on.

This means that sometimes the *Tough*-Construction cannot appear without entailing overt Degree Phrases. This would make it possible to consider that there is a covert Degree Phrase in every

11 They also show the following with *enough*.

(i) The football is soft.

(ii) *The football is soft to kick.

(iii) The football is soft enough to kick

(Lasnik and Fiengo 1974: 536, fn. 3)

12 Contra Lasnik and Fiengo, Chris Cummins (pers. comm.) suggests that this is grammatical; to him it conveys the meaning that the mattress is not optimally thick for the purpose, but unlike —...*too thin*... —that sleeping on it is still possible.

Tough-Construction.

Furthermore, Lasnik and Fiengo raise an insightful suggestion (1974: 537, fn.3). They argue that the common *Tough*-Construction has two interpretations.

- (20) (a) The chicken is too old to eat.
 (b) The chicken_i is too old to eat *t*_i
 (c) The chicken_i is too old *t*_i to eat.

(Lasnik and Fiengo 1974: 537, fn.3)

Regarding (20c), according to them, “the understood object of the complement is interpreted as identical with the matrix subject.” This renders a further support to the present paper’s argument that there is a covert nominal in a post-adjectival position in the *Tough*-Construction.

Another piece of evidence in support of the current argument comes from Jones’s (1983: 136) examples:

- (21) (a) *This hypothesis is unwise to rely on.
 (b) *The principle is wicked to base your actions on.
 (c) *The occasion is unfortunate to raise such a matter on.

He contrasts these with what follows.

- (22) (a) This is an unwise hypothesis on which to reply.
 (b) This is a wicked principle on which to base your actions.
 (c) This is an unfortunate occasion on which to raise such a matter.

Before pointing out Jones’s logic and its subsequent failure, let us review Chomsky’s implication. Chomsky (1977) regards (16) as pieces of empirical support for the *wh*-element by assuming the parallelism between such NP-including sentences in (16) and the *Tough*-Construction including not NP but AP as in what follows:

- (23) (a) This violin is easy to play sonatas on. (Chomsky 1977: 105, Jones 1983: 133)
 (b) This room is pleasant to work in. (Jones 1938: 133)

The present paper supports Chomsky in this point since we argue that the latter as in (23) is in fact the “superficial” version of the “underlying” counterpart which has both overt degree modification and a nominal under discussion, exemplified by the following:

- (24) (a) This violin is too easy a violin to play sonatas on.
 (b) This room is too pleasant a room to work in.

Jones presumably would want to contend that if Chomsky and this paper are correct, it should follow that when (22) is grammatical, (21) must also be grammatical but—according to Jones—the ungrammaticality of (21) nullifies Chomsky’s (and this paper’s) linking of (23) with (16). However, as just an opposite of diminishing the validity of our argument, Jones’s empirical data renders us a

good opportunity to further support the present paper's argument, which in turn supports Chomsky's (1977; 1981) A' movement in the *Tough*-Construction. Following the primary hypothesis of this paper, let us add the explicit Degree Phrase to the given *Tough*-Construction in (21) and then what we gain is as follows:

(25) (a) This hypothesis is {too/so/very} unwise to rely on.

(b) The principle is {too/so/very} wicked to base your actions on.

(c) The occasion is {too/so/very} unfortunate to raise such a matter on.

These sentences are fully acceptable. This strengthens the postulation that the *Tough*-Construction has implicitly a Degree Phrase and that the *Tough*-Construction (which has, by definition just above, (c) overt DegP) has a covert Nominal Phrase. Normally, the *Tough*-Construction is grammatical even when it does not have either DegP or NP (or both). However, sometimes in the extremely perverse cases as Jones raises, the *Tough*-Construction *looks* ungrammatical when it lacks either overt DegP or overt NP (or both).

The discussion thus far renders support to the A' movement analysis by Chomsky (1977; 1981), since the Nominal expression always allows its complement to be the Relative Clause (RC). There is ample evidence in support of this line of argument, which I think is relevant to some significant points that Chomsky (1977) raises.

Firstly, this may solve the questions that Chomsky (1977: 105) attempts to solve. Consider the following examples:

(26) (a) *What sonatas is this violin easy to play on?

(b) *The sonatas that this violin is easy to play on—are in your book.

The *what sonatas* derives from the complement of the *play* and the *this violin*, from the complement position of the Preposition *on*, the illustration of these being as what follows (see Chomsky 1977: 105, ex. (133)).

(27) *[What sonatas]_i is [this violin]_j [easy [to play *t_i* on *t_j*]]?¹³

The counterpart to this, i.e. the case with the Nominal Phrase would be as follows, the co-index relations among the relevant elements being the same as above.

(28) *[What sonatas]_i is [this violin]_j [**an easy violin [RC to play *t_i* on *t_j*]**]?

It should be noted that the *to play on* is a post-modification of the nominal phrase, *an easy violin*, thus the *an easy violin to play on* being one constituent, within which *to play on* being another smaller constituent. This means that the extraction of *what sonatas* from the complement position of Verb *play* would result in the violation of the Complex NP Island Effect (Ross 1967). Therefore, the postulation of the underlying structure of the Nominal Phrase behind the apparent Adjectival

13 See Hicks (2009: 541), too, who follows Chomsky (1977).

Phrase seems to well be compatible with the ungrammaticality of the structure such as (26a). The same explanation would hold about (26b).

Secondly, the proposal of the Nominal Phrase behind the Adjectival Phrase is eligible to account for the empirical observation by Chomsky (1977: 109), such as in (29b) below:

(29) (a) John's eagerness to please—surprised me.

(b) *John's difficulty to please—surprised me.

The two sentences' Nominal Phrases above respectively correspond to the following *Tough*-Constructions.

(30) (a) John is eager to please.

(b) John is difficult to please.

The question that Chomsky (1977) attempts to solve is why the nominalized expression in (29b) is impossible despite the complete grammaticality of (29a). The ungrammaticality of (29b) is straightforwardly answered if we consider the “underlying” nominal expression behind it. That is, (30b) is in fact equivalent to:

(31) John is [_{NP (or DP)} {too/so} difficult a person] to please.

The essential nature of this argument is that (30b)'s Adjectival Phrase is in fact a Noun Phrase. The counterpart nominal of *{too/so} difficult a person to please* would be something like what follows.

(32) John's {too/so}-difficult-to-please personality

This eliminates the possibility of other types of nominalization. Hence, this shows that (29b) cannot be a nominal counterpart to (30b).

Thirdly, the nominal hypothesis here is able to account for the ungrammaticality of the double *for*-led elements, such as (33).

(33) *The hard work is pleasant for the rich [for the poor to do].

(Chomsky 1981: 312) [brackets in original]

Chomsky argues that “adjective-complement constructions with matrix argument subjects are impossible” (p. 312) in contrast with the non-*Tough*-Construction such as what follows.

(34) It is pleasant for the rich [for the poor to do the hard work]

(Chomsky 1981: 310) [brackets in original]

I regard the first *for* as being a preposition which forms a PP and the formed PP functions as an Adjunct. Therefore, it can move to other places in the sentences as follows.

(35) (a) For the rich, it is pleasant [for the poor to do the hard work]

(b) It is, for the rich, pleasant [for the poor to do the hard work]

(c) It is [for the poor to do the hard work] for the rich.

In contrast, as Chomsky argues, the *Tough*-Construction disallows the double Arguments.¹⁴ This can be explained on the basis of the Nominal Phrase in lieu of the apparent Adjectival Phrase in the *Tough*-Construction. The following (36a) with AP has in fact the “underlying” structure of (36b) with an NP.

(36) (a) *The hard work is pleasant on which for the researchers to embark.

(b) The hard work is [a pleasant work [_{RC} on which for the researchers to embark]].

If the one-to-one correspondence between the AP-type *Tough*-Construction such as (36a) and the NP-type *Tough*-Construction such as (36b) is on the right track, then the infinitival clause within the *Tough*-Construction is considered to be a type of the Relative Clause (RC) modifying the Antecedent at an abstract, “underlying” level. This line of thinking plausibly explains the ungrammaticality of the sentence such as (37) in which the subject led by *for* in the infinite clause appears.

(37) *The hard work is a pleasant work [_{RC} on which **for** the non-experts **for** experts to embark].

Whereas the preposition *for* entailing NP as its complement is eligible to appear repeatedly, the complementizer *for* (in (37), the head of Fin in the sense of Rizzi (1997)) cannot do so. The ungrammaticality of (37) is explained by the fact that both *for* is located within the scope of the Relative Clause, and hence both are regarded as complementizers. This triggers the double complementizers (Fin-complementizers) within one CP, which is clearly incorrect.

Fourthly, the nominal projection hypothesis here can account for the problem that Aniya (1994: 53-54) raises in reference to Kuno (1972). Aniya (p. 53) summarizes Kuno’s argument: “*to*-infinitive clause of *Tough*-Constructions obligatorily states self controllable action.” The following is the cited examples by Aniya from Kuno.

(38) (a) *John is easy for Bill to resemble.

(b) *Such a person is hard for me to come to like.

Aniya adds his view that past research within the Principles and Parameters framework has not explained (38a-b).

However, if we suppose that AP in the relevant *Tough*-Construction is in fact NP, then the counterparts to (38a-b) would be (39a-b):

(39) (a) John is [{so/too} easy a person]_i Op_i for Bill to resemble *t_i*.

(b) Such a person is [{so/too} hard a person]_i Op_i for Bill to resemble *t_i*.

These are semantically anomalous in that the propositions that *Bill resembles a very easy person*, that *Bill resembles a very hard person* are obviously odd.

14 Chomsky (1981: 312) shows the following:

(i) *the hard work is pleasant for the rich [for the poor to do]. [square brackets in the original]

See his account of this.

Fifthly, the Noun Phrase proposal offers a solution to what Lasnik and Fiengo (1974) suggest about the intentionality with their following examples.

- (40) (a) John is intentionally easy to please.
 (b) *It is intentionally easy to please John.
 (c) *To please John is intentionally easy.

The grammaticality of (40a) can be accounted for when we postulate a Nominal Phrase instead of an Adjectival Phrase.

- (41) John is [[intentionally {so/too} easy a person] to please].
 (=John is [an intentionally very easy person] to please.)

Finally, we can eliminate the Adjective that cannot be located in the DegP which is located in Spec-FP in the sense of Kennedy and Merchant (2000) (perhaps due to its semantic property lacking the degree emphasis).

- (42) (a) This mission is impossible to achieve.
 (b) This mission is not possible to achieve.
 (c) *This mission is possible to achieve.

The (un)grammaticality of the empirical data can be accounted for by the semantic property of *possible* and *impossible* from our central claim based on the functional projection in the sense of Kennedy and Merchant (2000). Consider the following contrasts:

- (43) (a) {How/So/Too} impossible (of) a mission¹⁵
 (b) */??{How/So/Too} possible (of) a mission

The ungrammaticality of (43b) comes from the semantic property of the Adjectival Phrase which is located in the specifier position of the functional projection in (43b). The *possible* is not an Adjective which should be modified by the degree word.

While (42a) and (42b) are both grammatical, (42a) is slightly better than (42b). (42b) is ambiguous in regard to the scope of the *not*. If the *not possible* functions as one consistent, i.e. AJDP, then the sentence may be fine because the *not possible* (as DegP) can be located in the specifier position of the functional projection in the sense of Kennedy and Merchant (2000). In contrast, if the *not* performs as a modifier of the the *possible to please*, then it is not located in Spec-FP.

In relation to the adjective *impossible* in the *Tough*-Construction, Jones (1983: 135) argues that the semantics of (44a)'s bracketed part can be ascribed to (44b) and hence he contends that the Adjective *impossible* seems to “modify the infinitival clause rather than the head noun,”

15 The equative comparative is put aside here since this is irrelevant to the Degree Phrase which highlights and emphasizes the relevant expression.

(i) Just as impossible a mission as ...

exemplified by the following.

(44) (a) John is [an impossible man to work for].

(b) a man for whom it is impossible to work.

(Jones 1983: 135)

If he were correct, then his argument would be against our hypothesis; the relevant Adjective is in Spec-FP, semantically modifying the nominal located in Comp-FP. However, the relation between (44a) and (44b) does not necessarily hold: consider the following.

(45) (a) *John is [a possible man to work for].

(b) a man for whom it is possible to work.

Despite the perfect grammaticality of (45b), the counterpart in (45a) is ungrammatical. Notice that the type of the structure as in (44b), (45b) does not necessarily have the counterpart as in (44a): in fact, (45a) is unacceptable. Hence, it is false to tacitly assume that every instance of the former type is eligible to have the counterpart of the latter type. To the extent the syntactic relation of the two structures (e.g. (45a) and (45b)) is obscure, Jones's claim as above would be undermined.

We have one remaining problem with the *Tough*-Construction. Obata (2009) suggests that "*Tough*-predicates take an infinitival (control) CP, not a finite CP." [italics in the original] Hence, the following is ungrammatical.

(46) *This problem is difficult **that we solve**.

However, if we add nominals and degree words in the way we have already seen, then a finite CP in *Tough*-predicates turns out to be acceptable.

(47) (a) This (problem) is a very difficult problem that we (should) solve.

(b) ?This (problem) is [so/too] difficult a problem that we (should) solve.

(c) How difficult a problem this (problem) is that we (should) solve!

Cf. (d) *This problem is difficult that we (should) solve.

Thus, it appears that *Tough*-Constructions when with overt nominals and degree words can take finite clauses.

5. Concluding Remarks

The present paper has attempted to defend Chomsky's (1977; 1981) A' movement in the analysis of the infinitival clause in the *Tough*-Construction. The present research has elucidated that there are two hidden structures: Degree Phrases (owing to the original insight by Taylor (2003)) and Nominal Phrases, exemplified by the following:

(48) John is [_{DegP}{too/so/very} difficult] a [_{NP} person_i] [_{Op} PRO to please *t_i*].

The present paper also has argued that the DegP above is located in the specifier position of the functional projection advocated by Kennedy and Merchant (2000), whose head is, as Kennedy and Merchant (2000) suggest, sometimes realized as the overt lexical item *of*. The hypothesis has attempted to examine constructions such as %*be worthy of*.

This paper also has examined Jones's (1983) criticism of Chomsky's (1977; 1981) A' movement analysis of the *Tough*-Construction's infinitival clause. The present paper has amply shown in an empirical fashion that Jones's critique of Chomsky is virtually non-existent, in so far as the empirical problems that the present paper discussed are concerned.

I would like to add one more thing from a methodological point of view: Jones's (1983) approach to this area is "largely negative" (p. 159). Jones's attempt to refute Chomsky's A' movement analysis was, at least partially based on the effort to find the evidence such as (21). I am not sure whether this type of approach is entirely productive in research. This paper shows that Jones's attempt to deny any A' movement in the evidence is problematic with regard to the overall argumentation and to (25) in particular. However, even if his contention had not been rectified in this way, his method of argument in itself would have remained to be reconsidered. Chomsky's A' movement in the *Tough*-Construction is not nullified by such counterevidence that Jones raises.¹⁶ Of course, I am not pessimistic about the syntactic operations and exemplifying the result of them as empirical evidence. However, I am positive that they are significant only when used in a productive method, i.e. either corroborating past research or otherwise—in addition to raising some pieces of counterevidence—finding an "alternative" solution.¹⁷

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¹⁶ See Reider (1996:118, fn4) for a relevant discussion on Jones's (1983) method of argument, from a point of methodology in science, which I think is entirely compatible with the present paper's suggestion.

¹⁷ See Borsley (2001: section 8) and Hatakeyama (2004: chapter 7) for relevant issues.

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