

Notes on *Tough*-Sentences in English

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Abstract

The so-called *Tough*-adjective in English appears in at least two types of construction: one containing as its subject an expletive "it" semantically associated with a sentence-final infinitival clause and the other with a non-expletive subject interpreted as an object in an embedded infinitival clause. Based on the observations indicated below, we will show that the two constructions have distinct structural properties and the infinitival clauses of these constructions are in totally different positions. We will further suggest that the subject of the *Tough*-adjective occupies a θ -position and the infinitival clauses in these constructions are assigned a distinct θ -role. Thus, this paper argues strongly against the analysis that directly relates these two constructions syntactically.

Keywords : *Tough*-adjective, *Tough*-Movement, domain of subject-predicate relation

0. Introduction

In this paper, we will first consider the syntax of the following type of construction in English, which contains as its subject an expletive item "it" associated with a sentence-final infinitival clause:¹

- (1) a. It is tough to grasp this concept.
b. It is hard to get along with John.

Each of the sentences above has a corresponding construction whose matrix subject is interpreted as an embedded object in the infinitival clause:

- (2) a. This concept is tough to grasp.
b. John is hard to get along with.

We will also discuss the syntax of this construction in this paper.

In the tradition of the generative grammar, the two constructions have often been regarded as reflecting a typical instance of movement relation, and several analyses have been proposed to capture this relation. One of the most familiar analyses is that of Postal (1971). He proposes to derive sentences like (2) from the structures that underlie sentences like (1) by a movement rule called *Tough*-Movement. Following his terminology, let us refer to the construction in (1) as the non-TM construction (henceforth, NTMC) and that in (2) as the TM construction (henceforth, TMC).

1. The structural position of the infinitival clause in the NTMC

Now consider where the infinitival clause in the NTMC is positioned. First of all, let us examine the possibility that the infinitival clause is contained in the AP headed by the post-copular adjective (so-called *Tough*-adjective). It is generally assumed that, when *wh*-movement applies to an adjective, it moves the whole AP. For example, the adjective "eager" takes an infinitival clause as its complement and forms a single constituent AP with it. This sequence can be preposed when *wh*-movement applies to the adjective, as the following examples show:

- (3) a. John is ready to leave.
b. How ready to leave is John?

Thus, preposability of the sequence of words serves as a test for the constituency of the sequence. Then, if the sequence of a *Tough*-adjective and an infinitival clause in the NTMC is shown to be preposable, we can safely say that the infinitival clause is in AP.

The examples below, however, suggest that the sequence in question does not form a constituent and the infinitival clause is AP-external:

- (4) a. It was difficult to study for the exam.
b. It was hard to read the book.
(5) a.*How difficult to study for the exam was it?
b.*How hard to read the book was it? (Nanni(1978: 17-18))

On the other hand, it is always possible to prepose the *Tough*-adjective and leave the infinitival clause in situ:

- (6) a. How difficult was it to study for the exam?
 b. How hard was it to read the book? (ibid.)

This contrast constitutes a strong piece of evidence that the infinitival clause in the NTMC is in an AP-external position.

One might argue that the examples in (5) are unacceptable because the preposed elements are "too heavy" as compared with the residual parts, and that the unacceptability of (5) is not attributable to the alleged nonconstituency. For example, note the following examples:

- (7) a. Though Max is eager for Mary to see the play,
 he probably won't be able to get tickets.
 b.*Eager for Mary to see the play though Max is,
 he probably won't be able to get tickets. (Berman(1974:382))

It is true that the low acceptability of (7b) is due to the stylistic factor just mentioned, and it may be possible that the same factor contributes in some degree to the ill-formedness of the examples like (5). There is, however, good evidence to suppose that the preposed elements in (5) do not form a constituent. Consider the following:

- (8) a. How easy to please it is!
 b. How easy to eat it is! (Higgins(1979:69))

These sentences, with the *Tough*-adjective and the infinitival clause preposed, are fully grammatical, illustrating that the stylistic factor noted above does not work here. However, as Higgins indicates, they cannot be read as an NTMC, but they do have a TMC reading. That is, the subject pronoun "it" does not function as an expletive element, but denotes a specific referent. This fact demonstrates that the *Tough*-adjective and the infinitival clause in the NTMC do not form a constituent.

Having confirmed the infinitival clause is AP-external, let us consider how higher position the infinitival clause occupies. We start by reviewing two rules involved in the following deletion phenomenon:

- (9) a. Joan must be kind to the children, and you must ϕ , too.
 b. Peter was happy, and Betsy was ϕ , too.

Note that the deletion site in (9a) includes the post-auxiliary copula, but that in (9b) excludes the finite copula. To account for this contrast, two rules have been assumed: the rule that raises the copula into an auxiliary position when no auxiliary is present there, and the rule that deletes the post-auxiliary phrase (henceforth, PAP), as seen in the derivations below: ²

- (10) a. You must [be kind to the children]
 You must [be kind to the children] no copula raising
 You must ϕ PAP deletion
- b. Betsy [was happy]
 Betsy was [t happy] copula raising
 Betsy was ϕ PAP deletion

Then, consider the following NTMC examples :

- (11) It isn't hard to solve this problem, though
 a. John claims it is to.
 b.*John claims it is to solve it.
 c. John claims it is. (Oehrle(1979:586))

The sentence (11a) indicates that the infinitival clause is positioned PAP-externally, while the examples (11b,c) suggest that it is PAP-internal.

Now we must be careful in evaluating the examples like (11b,c) as evidence for the latter possibility. It is true that (11b) is more than redundant and seems unacceptable. This is, however, due to some pragmatic factor, and there are well-formed sentences corresponding to (11b), such as the following:

- (12) a. It isn't hard to solve calculus problems, but it is to solve geometry problems.
 b. It isn't hard to solve calculus problems, but it is to construct them. (ibid.)

Furthermore, it is possible that (11c) is derived by deleting not only the PAP but also the infinitival clause. The latter deletion is needed independently to derive the following example: ³

- (13) It actually isn't very hard to solve calculus problems, though
 John claims that it's hard.

Once again, (11c) does not constitute evidence that the infinitival clause is PAP-internal. On the other hand, (11a) and (12a,b) show that the infinitival clause in the NTMC is located PAP-externally.

2. The TMC

In Section 1, we have seen that the *Tough*-adjective does not form a constituent with the infinitival clause in the NTMC, and in particular that the infinitival clause occupies an AP/PAP-external position in the NTMC. The latter observation, in fact, is of much importance. Aki (1984) claims that the infinitival clause in the TMC is a complement selected by the *Tough*-adjective and is located within the AP, citing the following: ⁴

- (14) a. How tough to open with a knife was the package?
 b. How simple to sew neatly the pattern was! (Aki(1984:8))

One might argue, as Nanni (1978) really does, that the infinitival clause is AP-external, citing the following examples:

- (15) a. How difficult was he to arrange to meet?
 b. How easy is John to please?

This fact, however, does not give any evidence against the claim by Aki(1984): such a phenomenon can be observed in APs in general:

- (16) a. How ready to go is John?
 b. How ready is John to go? (Hendrick(1978:263))
 (17) a. How fond of Sally are you?
 b. How fond are you of Sally? (Baltin(1981:262))

In order to describe the sentences like (15), (16b), and (17b), we assume, following Baltin (1981), that the complement selected by an adjective can optionally move rightward outside of the AP: ⁵

- (18) a. John is [_{AP} ready to go]
b. John is [_{AP} ready t] [to go]

These observations lead us to conclude that the TMC is structurally distinct from the NTMC: the infinitival clause in the TMC is AP-internal and that in the NTMC is AP/PAP-external. Though seemingly counterintuitive, this conclusion may be supported by the following contrasts suggesting the structural difference of the two constructions: ⁶

- (19) a.*John is hard for me, unfortunately, to deal with.
b. It is hard for me, unfortunately, to deal with John. (Postal(1974:148))
(20) a.*Who are we hard for even to be polite to?
b. Who is it hard for even to be polite to us? (Langendoen and Pullum(1977:65))

3. Thematic properties of the *Tough*-adjective

Now we are in a position to consider the TMC and the NTMC in a theoretical perspective. A question to ask is whether the matrix subject of the TMC is θ -marked by the *Tough*-adjective or not. Berman (1974), among others, argues that the matrix subject of the TMC is selected not by the *Tough*-adjective, but by the predicate of the embedded clause, and is raised into the matrix subject position by a rule like *Tough*-Movement, citing the following contrast:

- (21) a.??John is handy.
b. John is handy to send.

Examples like (21a), however, become fully acceptable when they are put in an appropriate context, as noted by Bolinger (1961):

- (22) Q: Who'll we send?
A: Oh, John's handy. Let's send him. (Bolinger (1961:372))

This fact shows that the low acceptability of (21a) is due to some pragmatic factor and we can safely say that the matrix subject of the TMC is θ -marked by the *Tough*-adjective.

As we saw in the last section, the infinitival clause in the TMC is a complement selected by the *Tough*-adjective. Thus, the *Tough*-adjective in the TMC takes a subject argument and a complement argument (= an infinitival clause). Following Kaneko (1994), let us assume that the infinitival clause "specifies the domain in which the main proposition holds" (p. 29) and is assigned the "Domain-role":

(23) John would be hard to get along with.

(24) hard: [Theme, Domain]

The infinitival clause in the NTMC, located AP/PAP-externally, obviously is not a complement to the *Tough*-adjective. The only possibility is, as seems reasonable, that it is an extraposed subject argument of the *Tough*-adjective:

(25) a. To get along with John would be hard.

b. It would be hard to get along with John. extraposed variant

(26) hard : [Theme]

Thus, the infinitive clauses in the TMC and the NTMC behave in a totally different way: that in the TMC specifies the defining domain of the main subject-predicate relation, while that in the NTMC is its (extraposed) subject.

Notice that the lexical specification below subsumes sentence patterns like (28):

(27) hard: [Theme, (Domain)]:

(28) a. The problem would be easy.

b. The problem would be easy to solve.

c. To solve the problem would be easy.

d. It would be easy to solve the problem.

4. Conclusion

We have arrived at the following conclusions:

- (29) The infinitival clauses in the TMC and the NTMC originate in totally different positions.
- (30) The subject position of the TMC/NTMC is a θ -position.

These two conclusions, if correct, argue strongly against any approach that assumes (A) that the TMC and the NTMC are structurally similar or (B) that the subject position of the TMC/NTMC is not a θ -position.

Notes

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- 1. In this paper we will not discuss the problem of where the Benefactive/Experiencer phrase "for NP" is placed. For some discussion, see Nanni (1978) and Aki (1984), among others.
- 2. Besides (9a) we have the following deletion variant:
 - (i) Joan must be kind to the children, and you must be ϕ , too.

This suggests that the copula raises into a position intervening between an auxiliary and the PAP even in the presence of the auxiliary. This raising operation is independently motivated by the fact that a sentence adverb can appear in a position following the auxiliary-copula sequence:

- (ii) You will be actually free.

Note that this possibility of raising does not affect our discussion, since all the relevant examples in the text, with no auxiliary, have their copula in the auxiliary position.

- 3. Another possibility is that the matrix subject "it" in (11c) is not an expletive but a pronoun referring to the preceding infinitival clause.
- 4. Nanni (1978) claims that the sequence of the adjective and the infinitive in (14) is in fact a complex

adjective generated by a word formation rule. It is empirically and theoretically impossible, however, to sustain this claim, as shown clearly by Aki (1984).

5. For further discussion, see Baltin (1981) and Aki (1984). Now it may be helpful to repeat here the crucial examples with preposed elements which we have seen in Sections 1 and 2:

(i) The infinitival clause in the NTMC is AP-external.

(5) a.*How difficult to study for the exam was it?

b.*How hard to read the book was it?

(6) a. How difficult was it to study for the exam?

b. How hard was it to read the book?

(ii) The infinitival clause in the NTMC is PAP-external.

(11) a. It isn't hard to solve this problem, though John claims it is to.

(12) a. It isn't hard to solve calculus problems, but it is to solve geometry problems.

b. It isn't hard to solve calculus problems, but it is to construct them.

(iii) The infinitival clause in the TMC is AP-internal.

(14) a. How tough to open with a knife was the package?

b. How simple to sew neatly the pattern was!

6. Note that it has often been pointed out that the TMC and the NTMC have distinct semantic properties, as seen below:

(i) a.*Joe is impossible to talk to because he's out of town.

b. It is impossible to talk to Joe because he's out of town. (Oosten(1977:468))

(ii) a.*517 is difficult for Max to factor easily.

b. It is difficult for Max to factor 517 easily. (Steever(1977:599))

(iii) a.*John is possible to please.

b. It is possible to please John. (Akatsuka(1979:1))

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