

# English Negative Inversion and Split Projection

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**Park, Se-Young. (2016). English Negative Inversion and Split Projection. *The Linguistic Association of Korea Journal*, 24(4), 179-195.** This paper is research on English negative Inversion through the analyses based on Split Projection. Here, we have tried to solve two questions: One is "What triggers preposed negative movement and SAI movement?" and the other is "Where is the landing site of the movements? According to Park(1996, 2013)'s theory, these movements are caused by SHA and OSHA in functional categories (CP, FocP, TP). Unlike previous theories, the analyses on landing site of the movements are reinforced through OSHA in CP, FocP, and TP. The auxiliary in SAI moves to [Spec2, TP2], not to [Foc, FocP]. In the embedded clause, interrogative *wh*-phrase moves to [Spec2, FocP2], not to [Spec, CP]. Park(1996, 2013)'s OSAs make it unnecessary to set up new topic phrases in Rizzi(1997)'s structure. If we assume Park(1996, 2013)'s OSHA as the available theory, we have better explanatory power to analyze intricate negative constructions with another focus phrase or topic phrases consistently.

**Key Words:** negative inversion, SAI, interrogative *wh*-phrase focus phrase, topic phrase, OSHA, split projection

## 1. Introduction

There are two kinds of preposed negative constructions in English. One is the negative construction with inversion and the other is the negative construction without inversion.<sup>1)</sup>

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1) Here, the inversion means Subject-Auxiliary Inversion(SAI) or Subject-Verb Inversion(SVI) following the preposed negative. For convenience sake, SAI and SVI are indicated into SAI uniformly.

- (1) a. Not a single word did he say all day.
  - b. Never in my life have I seen such a big fish.
  - c. Under no circumstances must you eat the fruit.
  
- (2) a. Not long ago, John attended a party.
  - b. Not far away, it was raining very hard.
  - c. Not unexpectedly, most local business depends on tourism.

Klima(1964) and Rudanko(1980) call negations of (1) the sentential negation and negations of (2) the constituent negation. The sentential negation is based on the fact that the scope of the negation is the whole sentence, and in the case of the constituent negation, the scope of the negation is a part of the sentence.

Quirk et al.(1972) suggests the following sentences still have SAI like (1).

- (3) a. Rarely does crime pay so well as many people there.
  - b. Little did I expect such enthusiasm from so many.
  - c. Only after hours of interrogation did he confess.

In the negative words, there are several words which are negative in meaning, but not in form, like *rarely*, *little*, *only*, and etc. They normally cause SAI, like (3).

Even in embedded clauses, the preposed negative gives rise to SAI.

- (4) a. I swear that on no account will I tell anyone about this.
  - b. Lee said that at no time would she agree to visit Robin.

Anyway, it is generally accepted that the preposed negative gives rise to SAI in both root negatives and embedded negatives.

The main purpose of this paper is to solve two questions: One is 'What triggers inversion in the negative inversion constructions, like (1),(3) and (4)? and the other is 'Where is the landing sites of movements including the preposed negative? These problems have been discussed for a long time by many linguists (Klima(1964), Rizzi(1997), Pesetsky & Torrenco (2001), Haegeman & Guéron (1999), etc.).

The negative inversion constructions can also appear with topic phrases.

- (5) a. To John, nothing would we give.  
 b. \*Nothing, to John would we give.
- (6) a. Becky said that these books, only with great difficulty can she carry  
 b. \*Becky said that only with great difficulty, these books, can she carry.  
 (Koizumi 1995:259)

We accept that the preposed negative moves to the spec position of the focus phrase, according to Rizzi(1997)'s split functional projections. In (5) and (6) we find topic phrases must precede focus phrases in both root negatives and embedded negatives.

The following examples are negative inversion constructions with other focus phrases, namely *wh*-words.

- (7) a. \*On which table only with great difficulty would she put the big rock?  
 b. I wonder on which table only with great difficult would she put the big rock. (Koizumi 1995:262)  
 c. Sue wonders why in no way would John work.

As (7a) shows, the focus phrase and the negative phrase cannot be used together, because the landing site of the two constituents is the same position, [Spec, Focus P]. However, (7b) and (7c) are both grammatical.

In order to solve these problems we propose Park(1996)'s analysis<sup>2)</sup> based on split projection hypothesis.

In sum, the landing site of the preposed negative is [Spec, FocusP] in both the root clause and the embedded clause, and the negative inversion constructions can co-occur with topic phrases and/or focus phrases. In section 2 we study the previous theories and problems concerning negative inversion constructions under the Minimalist Program theory. Section 3 is devoted to the necessity of an alternative to solve the intricate negative inversion constructions, using Park(1996, 2013)'s analyses. Section 4 is the conclusion of this paper.

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2) According to Park (1996), every functional category (CP, TP, or DP) can have both Spec-Head Agreement (SHA) and Outer Spec-Head Agreement (OSHA). While SHA is an obligatory rule, OSHA is an optional rule. See Section III for more details.

## 2. Negative Inversion Construction

This section deals with the cause of SAI in the negative inversion constructions, and the landing sites of the preposed negative including *wh*-phrase and topic phrase under the Minimalist Program theory.

### 2.1 Trigger of SAI

As for negative inversion constructions, we earlier found that SAI occurs in both root clause and embedded clause.

- (8) a. Not a moment did the worker waste.  
 b. I promise that on no account will I write a paper during the holidays.

The trigger of SAI has been discussed by many linguists. Emonds(1976) mentions that preposed negatives cause SAI and are not separated from the main clause by a comma.

Haegeman(1991) suggests that the negative phrases preposed to [Spec, CP] should activate V to C movement, as suggested by Lightfoot(1989), this is due to the fact that once [Spec, CP] is activated the head must be filled lexically.

Haegeman & Zanuttini(1991) proposes the Neg-Criterion using Spec-Head relations in negative inversion constructions.

- (9) Neg-Criterion  
 a. Each Neg  $X^{\circ}$  must be in a Spec-Head relation with a Negative operator.  
 b. Each Negative operator must be in a Spec-Head relation with a Neg  $X^{\circ}$ .

According to Neg-Criterion, a negative operator and a negative head must be in Spec-Head relation. In (8a) if a negative operator, *not a moment* is situated on a specifier, a Neg  $X^{\circ}$ , *did* should move to a head to satisfy a Spec-Head relation. Neg-Criterion can also apply to the embedded clause of negative inversion constructions in (8b). If a negative operator, *on no account* is located on a

specifier, a Neg X°, *will* should move to a head to satisfy a Spec-Head relation. As a result of it, SAI is found in negative inversion constructions.

However, this theory cannot explain why constituent negations like (2a,b,c) do not have SAI, although negatives are preposed respectively. For conveniences, we will cite the examples of (2) again.

- (2) a. Not long ago, John attended a party.  
 b. Not far away, it was raining very hard.  
 c. Not unexpectedly, most local business depends on tourism.

Next, we study Quirk et al. (1985)'s theory on the trigger of SAI. Preposed negatives of (2) can be paraphrased into the assertive forms like (10).

- (10) a. Not long ago, John attended a party.  
 a' A short time ago, John attended a party.  
 b. Not far away, it was raining very hard.  
 b' Near here, it was raining very hard.  
 c. Not unexpectedly, most local business depends on tourism.  
 c' Expectedly, most local business depends on tourism.

Quirk et al. (1985) proposes that constituent negations like (10a,b,c) are affirmative sentences, not negative sentences.<sup>3)</sup> Also it shows that the affirmative form is the reason why SAI doesn't take place in constituent negations.

Quirk & Greenbaum (1990) argues that affirmative sentences belong to the domain of affirmative forms and that what belongs to the domain of non-affirmative forms is interrogative sentences, negative sentences, conditional sentences and comparative sentences .

The triggering process of SAI is also being treated in Chomsky(1998). He proposes uninterpretable features<sup>4)</sup> play a key role in the triggering process. In

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3) The constituent negation cannot have Negative Polarity Items(NPIs) which are used only in negative sentences. (NPIs: any, anyone, anytime, yet, either, etc.)

(i) Not long ago there was a rainstorm somewhere.  
 (ii) \*Not long ago there was a rainstorm anywhere.

other words, the elimination of uninterpretable features triggers Move including SAI.

We will assume SAI occurs from the elimination of an uninterpretable feature, [+NA(non-affirmative)] from now on, accepting the theories of Quirk & Greenbaum(1990) and Chomsky(1998).

## 2.2 Landing Site of Preposed Negatives

Haegeman(1991) suggests that SAI occurs in the negative inversion construction as well as in the interrogative sentence. The negative constituent is preposed on [Spec, CP] before V-to-C movement. If the position, [Spec, CP] is activated, then the head should be completed lexically.

In Chomsky(1993), he proposes that all *wh*-phrases should be under [Spec, CP] to check the [+wh] feature on LF and that *wh*-phrase movement to [Spec, CP] is overt because of strong-feature. In the same vein, negative constituents move to [Spec, CP] to check the [+Neg] feature.

- (11) a. [<sub>CP</sub> Under what circumstances [<sub>C</sub> would [<sub>TP</sub> you go there]]]?  
 b. [<sub>CP</sub> On no account [<sub>C</sub> will [<sub>TP</sub> I go there ]]].

However, if we assume negative constituents move to [Spec, CP] then we cannot explain the grammaticality of (12a).

- (12) a. She said that on no account would she go there.  
 b. \*She asked me under what circumstances would I go there.

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4) Chomsky says features of (a) and (b) below are [+interpretable features], and features of (C) are [-interpretable features].

- (a) Feature that can be interpreted by the conceptual -intentional system (C-I).  
 (b) Feature that can be interpreted by the articulatory-perceptual system (A-P).  
 (c) Feature that cannot be interpreted by C-I or A-P

Uninterpretable features of (C) include gender, number, person, tense, EPP, and case features, etc.

Unlike interrogative inversion (12b), negative inversion (12a) is possible in the embedded clause. If the auxiliary *would* moves to C and the negative phrase *on no account* moves to [Spec, CP] then there is no room for the complementizer *that*.

As part of the solution for this problem, Haegemen & Guéron(1999), accepting Rizzi(1997), argues that CP must be decomposed into a number of discrete functional projections (Force Phrase, Topic Phrase, Focus Phrase, Fitness Phrase). According to them, the preposed negative constituent moves to the specifier of FocP and the auxiliary, Foc in FocP.

- (13) a. Under no circumstances can there be any compromise.  
 b. John said that in no case would he give up.

In the root clause (13a) and the embedded clause (13b), the preposed negative constituents move to the specifier of FocP respectively. And each auxiliary moves to Foc in FocP, resulting in SAI.

The problem is that we cannot explain the impossibility of (12b) by means of Haegemen & Guéron(1999)' analyses. Unlike negative inversion, interrogative inversion doesn't permit SAI in the embedded clause. But interrogative inversion always has SAI in the root clause, like (14).

- (14) a. What languages can you speak?  
 b. Under what circumstances would you go there?

If *wh*-words, like preposed negatives, are situated on [Spec, FocP], SAI must occur even in the embedded clause because of the landing site of auxiliary [Foc, FocP].

Suh(2007), accepting Haegemen & Guéron(1999)' theory, postulates that in the embedded clause, *wh*-words are situated on [Spec, CP], not [Spec, FocP].<sup>5)</sup>

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5) Suh(2007) postulates if we assume that C has an uninterpretable feature [uFoc] as well as EPP in the root clause but C has only EPP in the embedded clause, *wh*-words or *wh*-operators move to [Spec, CP], not [Spec, FocP] in the embedded clause. She contends that T should inherit the uninterpretable [uFocus] from C and that T is moved under [Foc, FocP], with the feature [uFocus].

- (15) a. She doesn't know what he bought yesterday.  
 b. Sue wonders why in no way would John work.  
 c. Mary asked John why under no circumstances would he go there.

According to Suh(2007)'s theory, in (15a) *wh*-word, *what* moves to [Spec, CP]. Since there is no FocP in the embedded clause, SAI doesn't occur. So (15a) is a grammatical sentence. Her theory can explain the possibility of (15b,c). If *wh*-words *whys* move to [Spec, CP] in (15b,c) respectively, the position [Spec, FocP] can avoid a doubly filled situation.

However, Suh(2007)'s theory has a demerit, the lack of consistency on *wh*-word's landing site: [Spec, FocP] in the root clause and [Spec, CP] in the embedded clause.

We will turn to this problem in section 3.2 and propose a solution for the lack of consistency by using Park (1996)'s analysis.

Lastly, we deal with proposed negative inversion and/or interrogative inversion used together with topic phrases.

- (16) a. During the holidays, why did they invite Mr. Min?  
 b. He said that onions, never in his life had he been able to eat.  
 c. I wonder why during the holidays they invited Mr. Min.

If we assume Suh(2007)'s theory, in (16a,b) TopP must be situated between CP and FocP, and in (16c) TopP must be located between CP and TP.

Rizzi (1997:290) contends that one clause can contain as many topics as are consistent with its (topicalizable) arguments and adjuncts; on the other hand, there is a unique structural focus position, focalization of two elements is excluded. In other words, a focus and one or more topics can be combined in the same structure. In that case, the focal constituent can be both preceded and followed by topics.

Based on the arguments of Rizzi (1997), we propose the following articulated structure roughly:

- (17) CP - TopP - FocP - TopP - TP

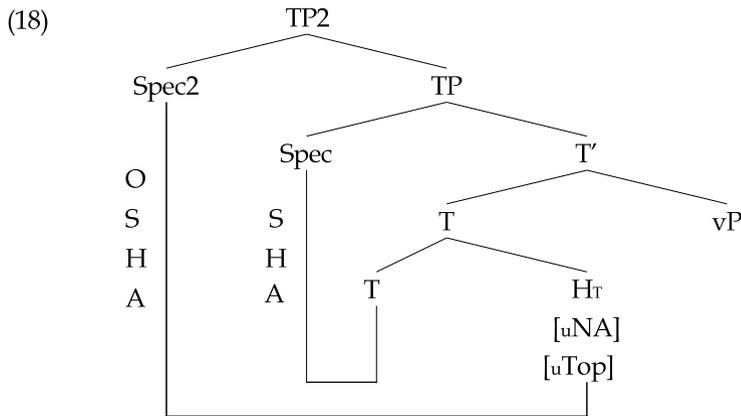
We will investigate Park (1996)'s analysis replacing (17) in section 3, without setting up two new TopPs.

### 3. Split Projection Hypothesis

In this section we propose the solution for intricate negative inversion with topic phrases by using Park(1996)'s analysis based on split projection hypothesis.

#### 3.1 Necessity of TP2

The following structure is the Split-TP with both Spec-Head Agreement (hereafter, SHA) and Outer Spec-Head Agreement (hereafter, OSHA)<sup>6</sup>, according to Park(1996)' theory.



We propose the possibility that another head, H<sub>tr</sub> has an uninterpretable non-assertive feature, [uNA]<sup>7</sup> or an uninterpretable topic feature, [uTop].<sup>8</sup>

6) OSHA is an optional rule to indicate another agreement-relation between Spec2, Outer Spec and HT, another head Chomsky-adjoined to T. SHA is an obligatory rule.

7) Park (2013) suggests the feature [uSAI] instead of [uNA], but each feature has the same function to cause SAI.

8) Park (1996) proposes the necessity of [Spec2, TP] in order to explain Korean Topicalizations.

If we assume  $H_{\Gamma}$  has an uninterpretable feature [ $uNA$ ] or an uninterpretable feature [ $uTop$ ] in case of necessity, the following examples can be handled more clearly.

- (19) a. Did John buy the smart phone?  
 b. Will you tell her the story?  
 c. That tree, the leaves are too big.  
 d. Not long ago, John attended a party. (=2a)

In (19a,b), if  $H_{\Gamma}$  has an uninterpretable feature [ $uNA$ ], auxiliaries *Did* and *Will* move to [ $Spec2, TP2$ ], resulting in SAI. If  $H_{\Gamma}$  has an uninterpretable feature [ $uTop$ ] in (19c,d), the preposed topic phrases *That tree* and *Not long ago* move to [ $Spec2, TP2$ ] without SAI. But auxiliaries and topic phrases cannot co-occur on [ $Spec2, TP2$ ].<sup>9)</sup>

Haegeman & Guéron(1999), accepting Haegeman(1995)'s theory, argues that the auxiliary moves to [ $Foc, FocP$ ] and it gives rise to SAI. But verb in  $vP$  is closer to [ $Spec2, TP2$ ] than [ $Foc, FocP$ ], so we assume OSHA of TP, an optional rule, is more appropriate to economy principle under Minimalist Program.

When there is a topic phrase in a clause, SAI doesn't occur in any case. If this is true, [ $Spec2, TP2$ ] is a position not for an auxiliary but for a topic phrase. Many linguists (Haegeman(1995), Rizzi(1997), Haegeman & Guéron(1999), etc.) propose a new phrase, Topic Phrase between  $FocP$  and TP. However, we contend that OSHA in TP can replace Topic Phrase without setting up a new phrase.

We will present OSHA in TP has better explanatory power in the preposed negative inversion construction or interrogative inversion construction, when it is used together with OSHA in  $FocP$ .

### 3.2 Necessity of $FocP2$

To solve the lack of consistency on *wh*-word's landing site: [ $Spec, FocP$ ] in

9) (a) Mary said that these books, only with great difficulty can she carry.

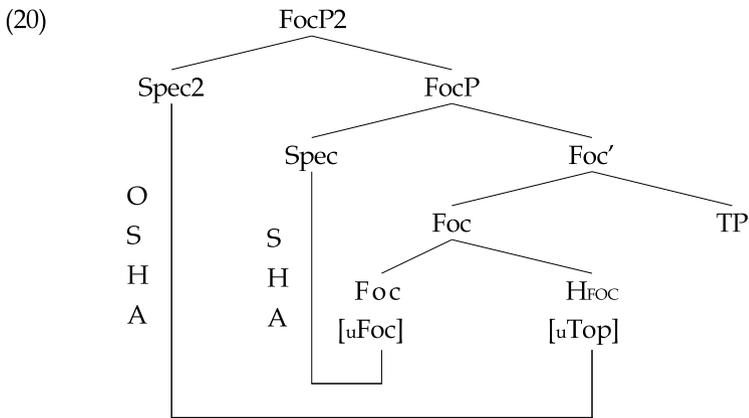
(b) \*Mary said that only with great difficulty, **these books**, **can** she carry.

The example (b) shows that topic phrases and auxiliaries cannot co-occur on [ $Spec2, TP2$ ].

the root clause and [Spec, CP] in the embedded clause, we accept Park(2013) which based on Park(1996)'s theory. Park(2013) proposes the structure of FocP based on Split Projection Hypothesis. Specifically, following OSHA in TP, Park(2013) suggests OSHA in FocP, which is derived by agreement between Outer [Spec2, FocP] and H<sub>Foc</sub>, another head Chomsky-adjoined to Foc, along with SHA which is derived by agreement between [Spec, FocP] and Head, Foc.

OSHA in TP has an important role to deal with SAI or Topicalization as Park(1996) shows, whereas OSHA in FocP has a key role to keep the consistency in analyzing landing sites of preposed negatives and *wh*-words.

The following structure is the Split FocP including both SHA and OSHA in the Focus Phrase.



Under the structure (20), preposed negative constituents and *wh*-phrases move to [Spec, FocP] to check the uninterpretable focus feature [uFoc] on Foc, head of FocP. And the topic phrase moves to [Spec2, FocP2] to check the uninterpretable topic feature [uTop] on H<sub>Foc</sub>, another head of FocP, which is OSHA in FocP.

The following examples show that focus phrases(preposed negatives or *wh*-phrases) occur together with topic phrases.

- (21) a. He said that onions, never in his life had he been able to eat.
- b. During the holidays why did they invite Mr. Min?

According to (18) and (20), in (21a,b) focus phrases(*never in his life, why*) move to [Spec, FocP] to check the feature [ $\mu$ Foc] and the auxiliaries(*had, did*) move to [Spec2, TP2] to check the feature [ $\mu$ NA].

The problem is how to treat topic phrases to precede focus phrases in (21a,b). Haegeman & Guéron(1999), accepting Rizzi(1997)'s theory, argues they can be schematized by setting up a new Topic phrase between CP and FocP, like (22).

(22) CP - Top - FocP

If we apply OSHA in FocP to (21a,b), we can treat topic phrases to precede focus phrases without setting up a new topic phrase. Topic phrases(*onions, during the holidays*) move to [Spec2, FocP2] to check the feature [ $\mu$ Top] on H<sub>FOC</sub>.

In sum, topic phrases can be analyzed by OSHA in FocP2 or OSHA in TP2 without separate Topic projections. If we accept Split Projections (18) and (20), the structure is roughly like (23).

(23) CP - (FocP2) - FocP - (TP2) - TP

[Spec2, FocP2] and [Spec2, TP2] are the positions for topic phrases under optional projection. [Spec2, TP2] is also the position for an auxiliary in SAI.

### 3.3 Focus and Topic

According to the position of a constituent in a clause, we notice whether it is focus phrase or topic phrase.

- (24) a. With no job would John be happy.  
 b. With no job, John would be happy.  
 c. I wonder why during the holidays they invited Mr. Min.  
 d. I promise that during the holidays on no account will I write a paper during the holidays. (Haegeman & Guéron 1999:339)

According to (18) and (20), the preposed negatives *with no job* in (24a,b) vary

depending on whether or not they have SAI. In (24a), *with no job* which is followed by SAI is focus phrase, but *with no job* without SAI in (24b) is topic phrase. The former is situated on [Spec, FocP] and the latter, [Spec2, TP2].

Haegemen & Guéron(1999) argues *wh*-word which is focus phrase moves to [Spec, CP], not [Spec, FocP] in the embedded clause.<sup>10</sup> In (24c) *wh*-word *why* moves to [Spec, CP] and since there is no position for auxiliary namely [Foc, FocP], SAI doesn't occur. *Wh*-word *why* in (24d) also moves to [Spec, CP] and another focus phrase *in no way* moves to [Spec, FocP] and auxiliary *would* moves to [Foc, FocP].

However, we argue, accepting (18) and (20), *wh*-word which is focus phrase moves to [Spec, FocP] in the embedded clause as well as the root clause uniformly. The consistency can be maintained if the auxiliary moves to [Spec2, TP2] instead of [Foc, FocP], and [Foc, FocP] has an uninterpretable feature [<sub>u</sub>Foc] which focus phrase *wh*-word deletes.

In (24c) *wh*-word *why* moves to [Spec, FocP] instead of [Spec, CP] to check the feature [<sub>u</sub>Foc] and the topic phrase *during the holidays* moves to [Spec2, TP2] to check the feature [<sub>u</sub>Top] on Hr. Negative phrase *on no account* in (24d) moves to [Spec, FocP] to delete the feature [<sub>u</sub>Neg] and topic phrase *during the holidays* moves to [Spec2, FocP2] and auxiliary *will* moves to [Spec2, TP2].

However, how should we deal with the examples (25a,b) which have two focus phrases in one clause?

- (25) a. Sue wonders why in no way would John work. (=15b)  
 b. I wonder on which table only with great difficulty would she put the big rock. (Koizumi 1995:262)

Accepting Rizzi(1997)'s structure (17)<sup>11</sup>, we contend *wh*-word is not Focus

10) I wonder why during the holidays they invite Tom.

Unlike Haegemen & Guéron(1999), in 10), we propose topic phrase *during the holidays* moves to [Spec2, TP] and focus phrase *why* moves to [Spec, FocP] to check the uninterpretable feature [<sub>u</sub>Foc] on [Foc, FocP]. It is against economy principle under Minimalist Program to propose focus phrase *wh*-phrase moves to [Spec, CP] through [Spec, FocP] in embedded clause.

11) In this paper, we accept Rizzi(1997)'s structure: CP - TopP - FocP - TopP - TP which excludes focalization of two elements in one clause, and the focal constituent can be both

phrase but Topic phrase when *wh*-word occurs with another Focus phrase in the same clause. In (25a) *wh*-word *why* moves to [Spec2, FocP2], and focus phrase *in no way* moves to [Spec, FocP] and *would* moves to [Spec2, TP2]. Likewise, focus phrase *only with great difficulty* in (25b) moves to [Spec, FocP] and topic phrase *on which table* moves to [Spec2, FocP2], and *would* moves to [Spec2, TP2].

Lastly, we analyze the following examples according to (18), (20) and (23).

- (26) a. This is a book which during the holidays on no account will I read.<sup>12)</sup> (Haegeman & Guéron 1999:347)  
 b. In how many countries of the world, such behavior, under no circumstances would autocratic leaders tolerate!  
 (Radford 2009: 328)

In (26a), the relative *wh*-word *which* moves to [Spec, CP] to delete the feature [uRel] on C, and topic phrase *during the holidays* moves to [Spec2, FocP2] from [Spec2, TP2], negative phrase *on no account* moves to [Spec, FocP] to delete the feature [uNeg] on Foc, and the auxiliary *will* moves to [Spec2, TP2] to delete the feature [uNA] on H<sub>T</sub>. The example (26b) is a construction which has exclamation *wh*-phrase *in how many countries of the world* and topic phrase and negative phrase. Exclamation *wh*-phrase *in how many countries of the world* moves to [Spec, CP] to delete the feature [uExc] on C, and topic phrase *such behavior* moves to [Spec2, FocP2] from [Spec2, TP2], and negative phrase *under no circumstances* moves to [Spec, FocP] to delete the feature [uNeg] on Foc, and auxiliary *would* moves to [Spec2, TP2] to delete the feature [uNA] on H<sub>T</sub>.

In summary, by using the structures (18), (20), and (23) we can analyze intricate negative constructions with another focus phrase or topic phrases more consistently.

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preceded and followed by topics. We accept this ordering constraint, but we argue Park(1996, 2013)'s OSHAs(18, 20) make it unnecessary to set up new topic phrases in Rizzi(1997)'s structure.

12) Rizzi(1997) says that relative *wh*-words must precede topics, and interrogative *wh*-words must follow topics.

## 4. Conclusion

In English there are two kinds of negative construction: One is when negative phrase is preposed, SAI occurs, and the other is when negative phrase is preposed, SAI doesn't occur in the negative construction. We assume negative phrase with SAI is Focus and negative phrase without SAI is Topic. Here we mainly deal with the cause of the movements and the landing site of the movements.

Most linguists argue the preposed negative is situated on [Spec, FocP], like *wh*-phrase in interrogative sentences, and the auxiliary is situated on [Foc, FocP], causing SAI. We accept the landing site of preposed negatives namely [Spec, FocP], like interrogative *wh*-phrase, but we contend the landing site of auxiliary is [Spec2, TP2] not [Foc, FocP]. The position [Spec2, TP2] is also used for the place where topic phrase is situated, according to Park(1996, 2013)'s theories.

It is generally accepted by most linguists that another focus phrase, interrogative *wh*-phrase moves to [Spec, FocP] in the root clause, but to [Spec, CP] in the embedded clause. However, we argue interrogative *wh*-phrase moves to [Spec, FocP] equally in both the root clause and the embedded clause. In addition we propose that in the embedded clause, interrogative *wh*-phrase should be regarded as topic phrase which moves to [Spec2, FocP2] by OSHA in focus phrase.

Negative phrase and interrogative *wh*-phrase can co-occur in the embedded clause. In the previous theory, interrogative *wh*-phrase is moved to [Spec, CP] in order that negative phrase and interrogative *wh*-phrase don't move to [Spec, FocP] together. We argue interrogative *wh*-phrase moves to [Spec2, FocP2], not [Spec, CP]. The position [Spec2, FocP2] is also used for topic phrase preceding focus phrase,

In sum, Park(1996, 2013)'s OSAs make it unnecessary to set up new topic phrases in Rizzi(1997)'s structure, and give better explanatory power on treating intricate negative inversion constructions with another focus phrase or topic phrases consistently.

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