문학석사 학위논문

Movement in Specificational Copular Constructions

한정적계사 구문의 이동현상 연구

2014년 2월

서울대학교 대학원

언어학과 언어학전공

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이 논문을 문학석사 학위논문으로 제출함
2013년 11월

서울대학교 대학원
언어학과 언어학전공
손 나 래

손나래의 문학석사 학위논문을 인준함
2013년 12월

위 원 장 _____ (인)

부위원장 _____ (인)

위 원 _____ (인)

Abstract

Movement in Specificational Copular Constructions

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Copular constructions are sentences involving a copula such as *be* and two maximal phrases around the copula. Among others, specificational copular constructions such as *The best candidate is John* have been assumed to be derived from predicational copular constructions such as *John is the best candidate* via Predicate Inversion, which is an A-movement of a predicative DP '*the best candidate'* into the pre-copular position (Moro 1997, Heggie 1988, Mikkelsen 2005, Den Dikken 2006, among others). Particularly, strict restriction on A'-extraction of/from post-copular DPs in specificational sentences has been used as supporting evidence of Predicate Inversion which

results in unfavorable syntactic environments for *wh*-extraction (c.f. ***whose arrest** do you think the biggest upset was?*). In the literature, generalizations around movement in specificationals were made as follows: *Wh*-extraction is simply impossible in specificational sentences (Moro 1997, Den Dikken 2006).

However, this thesis presents counter-evidence to the previous generalizations; contrary to complex *wh*-phrases, bare *wh*-phrases can be extracted from the same position from which complex *wh*-phrases cannot be (c.f. ***what** do you think the biggest upset was?*). Therefore such unpredicted asymmetric *wh*-extraction between complex *wh*-extraction and bare *wh*-extraction requires us to modify previously established generalizations.

In order to solve the puzzle, this thesis approaches to the puzzle with a totally different point of view; the problem lies not in A'-extraction of *wh*-phrases, but Predicate Inversion across complex *wh*-phrases. In other words, a sentence such as *whose arrest do you think the biggest upset was?* is ungrammatical not because inappropriate *wh*-movement has occurred, but because Predicate Inversion has occurred within an inappropriate condition, which renders the sentence ungrammatical. On the other hand, a sentence such as *what do you think the biggest upset was?* is grammatical since Predicate Inversion has properly occurred.

In this thesis, two essential but disregarded factors are considered. First, the motivation of Predicate Inversion can be described as topicalization of

predicates into Spec TP (Mikkelsen 2005). Second, the problematic complex *wh*-phrases in specificationals such as *whose x, which x* are also topic like, discourse linked (D-linked, Pesetsky 1987) *wh*-phrases. On the other hand, grammatical *wh*-extraction involves non D-linked *wh*-phrases such as *what, who,* etc. By putting two factors in together, this thesis argues that under the Relativized Minimality (Rizzi 1990), topicalization of a predicative DP should be blocked by an intervener D-linked *wh*-phrase. Predicate Inversion, however, does not impose any problem when a referential DP is non D-linked bare *wh*-phrase such as *what, who, etc*. In this thesis, a new generalization on movement in specificationals is proposed as follows: Topical predicative DPs cannot move across D-linked *wh*-phrases in the derivation of Predicate Inversion.

Keywords: Specificational Copular Constructions, Predicate Inversion, *Wh*-extraction, Relativized Minimality, Identificational Focus

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1. Introduction

1.1 Copular constructions

Copular constructions are sentences involving a copula such as *be* and two maximal phrases around the copula, as indicated in (1).

(1) XP be YP [where YP is not a participal VP] (Den Dikken 2005)

Though XP and YP can be various categories such as DPs, APs, PPs, CPs, etc., most studies on the syntax of copular constructions focus on constructions where XP and YP are both DPs.[1] What is interesting is meaning of copular constructions is derived by not a verb, namely copula, but two DP constituents around the copula.

Higgins (1979) categorized copular constructions into four types: predicationals, specificationals, equatives, and identificationals.[2]

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[1] Types of XPs and YPs in copular constructions can be various as follows:

(i)	My colleagues are nice people.	XP=DP	YP=DP
(ii)	My colleagues are nice.	XP=DP	YP=AP
(iii)	My colleagues are at the office.	XP=DP	YP=PP
(iv)	That they lost is an unfortunate thing.	XP=CP	YP=DP (Den Dikken 2005)

[2] Prior to Higgins (1979), there had been two way distinctions. Among others, Akmajian (1970) divides pseudoclefts into two types: predicational and specificational pseudoclefts.

(i) What he ate for supper is food for the dog

(ii) a. Predicational: 'His supper serves as food for the dog.'

b. Specificational: 'He eats food for the dog for his supper.'

Besides Akmajian, Kruisinga and Erades (1953) divides double-NP copular constructions into classifying and identifying. Gundel (1977) categories them into attributive and identificational. For more details, see Den Dikken (2005). He gives full accounts of literatures of copular constructions, and introduction part of this thesis is mostly based on his work. Examples (2) - (5) and their definitions are from Den Dikken (2005)

When property of a pre-copular DP is contributed entirely by a post-copular DP, that construction is called a **predicational** copular sentence.

(2) Predicationals

a. John is a teacher
b. Mary is a pretty girl

In a **specificational** copular sentence, a post-copular DP specifies a 'value' for the 'variable' which is set up in a pre-copular expression. For example, in (3a), the pre-copular DP *the bank robber* restricts the 'variable' for which the post-copular DP specifies the referent of *John Thomas* as a 'value' (Declerck 1988).[3]

(3) Specificationals

a. The bank robber is John Thomas
b. The only people that can help you are the Prime Minister and the Queen herself

Two more types are included in the taxonomy. An **equative** sentence is used to equate referents of the two expressions flanking the copular, and an **identificational** sentence is used for teaching the names of people or things.

[3] Comorovski (2007) cites the original definition of Higgins (1979) as follows:
"The subject of a specificational copular clause acts as the heading of a list; it therefore has descriptive content. The subject is not referential, but attributive-like ('superscriptional'). The postcopular noun phrase is referential and specifies the members of the list." However, most works including this thesis adopt Declerck (1988) who first used the terms 'variable' and 'value'.

(4) Equatives

a. The Morning Star is the Evening Star

b. Dr. Jekyll is Mr. Hyde

(5) Identificationals

a. That (man) is John's brother

b. That (place) is Boston

Since Higgins (1979), there have been great debates over the possibility of reducing Higgins' taxonomy, particularly in deciding in which type specificationals could be reduced. As Higgins himself had assumed pre-copular DPs in specificationals as neither referential nor predicative elements, the problem of deciding whether such DPs are referential or predicative has been controversial issue. In literature, two sides of approaches stand out as the most prominent[4]; one side is non-predicational approaches (in 2.1.1) which argue that specificational sentences can be reduced into equative sentences where both pre and post-copular DPs are all <e> type referents. The other side is predicational approaches (in 2.1.2). They insist that pre-copular DPs in specificational are indeed <e, t> type predicates which have undergone an A-

[4] The terms 'non-predicational approaches' and 'predication approaches' are adopted from Den Dikken (2005). In his work, 'non-predicational approaches' is used to introduce studies of Akmajian (1970), Heycock and Kroch (1999, 2002), Rothstein (2001), among others. They argue that there is no movement of a predicative DP into A-position (Spec TP). Instead, it is only a referential DP that is able to undergo such movement. The term 'non-predicational' indicates their arguments are contrary to predicational approaches which argue an A-movement of a predicative DP forms a specificational sentence.

movement from VP-internal position. [5] Based on this assumption, specificationals can be reduced into a sub-type of predicationals, namely inverse predicational copular constructions.[6]

Though each side has grounded on strong evidence to support its own argument, the following data on *wh*-movement phenomena (in 1.2) suggest that syntax of specificational sentences indeed includes an A-movement of the predicative DP into pre-copular position, as predicational approaches have argued.

[5] The notion of A-movement of predicative DP is called by various terms, such as Predicate Inversion (Den Dikken 2006), Predicate Raising (Moro 1997), topicalization of predicative DP (Mikkelsen 2005), etc. This *thesis* mostly uses Predicate Inversion before section 4. After section 4, I refer to Predicate Inversion as topicalization of predicative DP based on the assumption that topicalization of a predicative DP is the motivation of an A-movement of the predicative DP (Mikkelsen 2005).

[6] The term 'inversion' is used in the studies which assume a logical subject is not a pre-copular DP, but a post-copular DP. Accordingly, what is in pre-copular position is a predicate which is invert with a logical subject.

1.2 The scope of this thesis: Movement in specificationals

As discussed in 1.1, the meaning of copular constructions depends on the meaning of two DP constituents. In (6a), DP_2 *the biggest upset* attributes the property of DP_1 *Brian's arrest*. On the other hand, in (6b), DP_2 *Brian's arrest* specifies a value for the pre-copular variable *x*, namely DP_1 *the biggest upset.*

(6) DP_1 *be* (=copula) DP_2 (Den Dikken 2006)

a. [$_{DP1}$ Brian's arrest] was [$_{DP2}$ the biggest upset] *Predicational sentence*
b. [$_{DP1}$ The biggest upset] was [$_{DP2}$ Brian's arrest] *Specificational sentence*

It is quite interesting to find that such mirrored word orders in (6a) and (6b) can lead to not only different interpretations, but also asymmetrical movement patterns in extraction of post-copular DPs. For instance, *wh*-movement of a post-copular DP in predicational sentences is grammatical, as in (7b). On the other hand, *wh*-extraction from the same position is strictly forbidden in specificational sentences, as in (8b).

(7) *Wh*-extraction in predicationals

a. Brian's arrest was **the biggest upset**
b. **How big an upset** do you think [Brian's arrest was _]?

(8) Restricted *wh*-extraction in specificationals

a. The biggest upset was **Brian's arrest**

b. ***Whose arrest** do you think [the biggest upset was _]?

(Den Dikken 2006)

As for such asymmetrical movement patterns, predicational approaches attempt to provide explanatory accounts. For example, Den Dikken (2006) argues that ungrammatical *wh*-extraction in specificationals, as in (8b), is a consequences of Predicate Inversion; an A-movement of a predicative DP into the pre-copular position, which inevitably results in an unfavorable syntactic environment to extract a post-copular DP. Accordingly, in the literature, generalizations on *wh*-movement phenomena in specificationals were established: *Wh*-extraction in specificational is simply impossible (Moro 1997, Den Dikken 2006).

Surprisingly, however, it turns out that in certain contexts, A'-extraction is possible in specificationals. Unlike complex *wh*-phrases such as *whose arrest* in (9a), bare wh-phrases such as *what* can be extracted from the post-copular position, as in (9b).

(9)Counter evidence: unexpected grammatical bare *wh*-question

a. ***Whose arrest** do you think [the biggest upset was _]?

b. **What** do you think [the biggest upset was _]?

The contrast between bare and complex *wh*-phrase extraction cannot be explained under previous studies which postulate complete frozenness of post-copular constituents (c.f. *Frozenness of Focus Elements*, Den Dikken 2006). Therefore, I call this conundrum the *wh*-movement puzzle in specificational copular constructions:

(10) ***Wh-movement puzzle in specificational copular constructions***

Bare *wh*-phrase extraction contradicts the presumed assumption that post-copular constituents in specificational constructions are frozen in place.

The goals of this thesis are dedicated to develop more adequate syntactic structure for specificational sentences and to analyze *wh*-movement puzzle presented above. As for a newly suggested syntactic structure, I propose concurrence of topicalization of a predicative DP and focalization of a referential DP in the syntax of specificationals. Based on the structure, a new perspective to investigate movement in specificationals is made: ungrammaticality of a sentence (9a) should be attributed not to illegitimate *wh*-movement, but to illegitimate Predicate Inversion which is ruled out under the (General) Relativized Minimality (Rizzi 1990); placing topical predicative DPs such as *the biggest upset* before topical complex *wh*-phrases such as *whose arrest* causes the derivation crash regardless of *wh*-extraction of *whose arrest*.

This thesis is organized as follows. Section 2 reviews previous studies on the syntax of specificational copular constructions and asymmetrical movement patterns between specificationals and predicationals. Section 3 presents counter evidence to previous generalizations around *wh*-movement in specificationals. In section 4, I propose an alternative syntactic structure of specificational sentences and analyze *wh*-movement puzzle. After specificational constructions in one of *in-situ wh*-languages are discussed in section 5, then Section 6 concludes the discussion.

2. Preliminaries

2.1 Syntax of specificationals

While pre-copular DPs in predicationals, equatives, and identificationals are invariably admitted to be referential, those in specificationals are differently defined according to whether an A-movement of predicates can be admitted or not. Series of works of Heycock and Kroch (1998, 1999, 2002), for example, strongly defend a position which does not approve an A-movement of predicates, admitting only an A'-movement of predicates in predicationals (2.1.1). On the other hand, Moro (1997), Den Dikken (2006) argue specification word order – 'variable' before 'value' - is formed by an A-movement of predicates (2.1.2). Before solving *wh*-movement puzzle in (10), we need to investigate the syntax of specificational copular sentences; what pre-copular DPs denote and which type they can be reduced into.

2.1.1 Non-predicational approaches: Specificationals as equatives

Non-predicational approaches (Heycock and Kroch 1998, 1999; Rothstein 2001; Sharvit 1999, Heller 2002, among others) argue that specificational sentences can be reduced into equative sentences where both pre and post-copular DPs are <e> type referents. The argument is based on the fact that not

all <e, t> type predicates can be located in pre-copular position. Predicative DPs in predicational sentences cannot be located in pre-copular position, as in (11b), (11d).

(11) a. [$_{DP1}$ John] is [$_{DP2}$ **the one thing I have always wanted a man to be** (he is honest)].
b. *[$_{DP1}$ **The one thing I have always wanted a man to be**] is [$_{DP2}$ John].
c. [$_{DP1}$ John] is [$_{DP2}$ **a doctor**].
d. *[$_{DP1}$ **A doctor**] is [$_{DP2}$ John]. (Heycock and Kroch 1999)

Heycock and Kroch strongly argue that the ungrammaticalities of (11b), (11d) support the argument that there is no movement of predicative DPs into an A-position, namely Spec TP. Note that this does not imply there is no movement of predicative DPs in copular constructions; Heycock and Kroch (1998) shows that predicative XPs can undergo overt movement, which is referred to as predicate fronting - an A'-movement of predicates into Spec CP.[7]

[7] Heycock and Kroch (1998, 1999) argue that specificationals in Italian have inversion based on the asymmetric agreement pattern between predicationals and specificationals.
(i) a. Le foto del muro *fu / furono la causa del la rivolta.
the pictures of the wall was /were the cause of the riot *predicational*
b. La causa del la rivolta *fu / furono le foto del muro.
the cause of the riot was / were the pictures of the wall *specificational*
Since in Italian specificational sentences number agreement is with post-copular DP, pre-copular DP is assumed as a constituent which undergoes inversion within the sentence. Note

(12) a. The paintings by O'Keefe were wonderful. ?? (Even more) **impressive** were the murals by Rivera.

b. My last guest was a charming woman. ?? (Also) **a charming woman** is my next guest.

(Birner 1992, via Heycock and Kroch 1998)

Predicate fronting can be observed in copular constructions as well. In predicational constructions, for example, predicative DPs which attribute properties of referential DPs can move into pre-copular position. In (13a), T agrees in numbers with a post-copular referential DP *factory closings and fascist propaganda*, which means a pre-copular predicative DP *a menace to our society* might have moved into a higher position than Spec TP. In other words, number agreement between T and the post-copular DP suggests that the predicative DP must be fronted to CP domain, not being involved in agreement with T. To make it easy to understand, I illustrated the derivational process with a tree structure, as in (13b).

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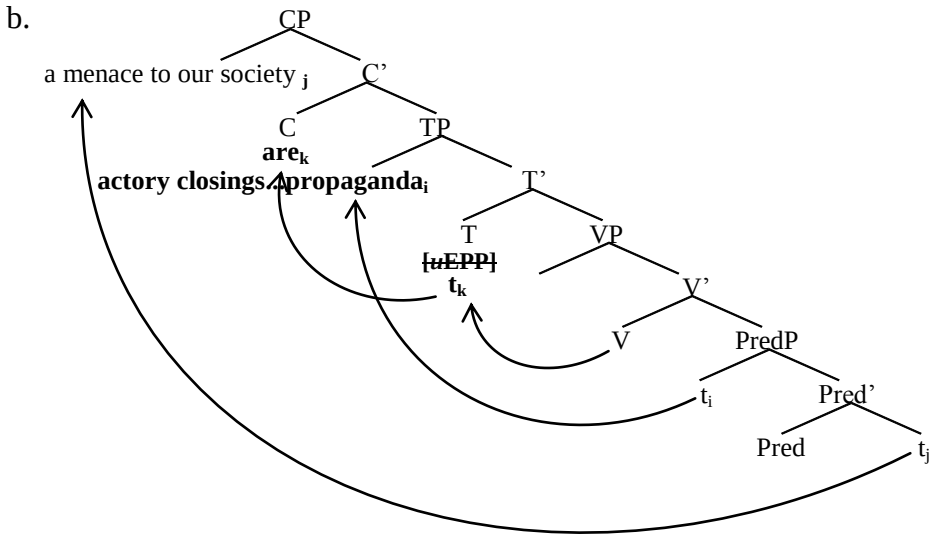
that under Heycock and Kroch's argument, (ib) is also equative sentence, but inverse equative sentence.

(13) a. Delinquency is a menace to our society. Also a menace to our society *is/**are factory closings and fascist propaganda**.

b.



Accordingly, the reason movement of a predicative DP in (13a) is admitted to be legitimate is that such movement is not an A-movement, but an A'-movement. Note that such predicate fronting requires special discourse context including an explicit indicator of comparison such as contrastive focus. The argument can be supported by the following example (14). When a sentence lacks pragmatic context, then it also lacks inverse agreement pattern, which means predicate fronting requires contrastive focus.

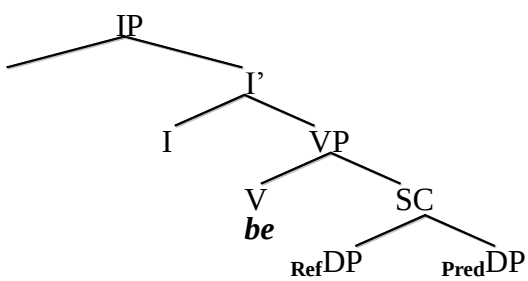
(14) **The biggest problem is**/*are factory closings

Heycock and Kroch conclude that specificationals should be reduced into equatives; every DP in specificationals is identical as an <e> type argument.

2.1.2 Predicational approaches: Specificationals as predicationals

Predicational approaches argue that both predicationals and specificationals share identical structures regarding their predicational relations. Since predicational relations in copular constructions are directly expressed by two DPs, one of them must be a referential DP, and the other should be a predicate of the referential DP. Without a copula, two participant DPs -referential DPs and predicative DPs- constitute the smallest projection called Small Clause (SC).[8] In this projection, syntactic position for each DP is determined according to its role in the argument structure. Referential DPs are merged in a left branch of Small Clause (SC) just like external arguments of transitive verbs are first merged into a left branch (Spec of *v*P). Consequently, predicative DPs are merged in the right branch of SC.

(15) Syntactic structure of copular constructions



(Moro 1997)

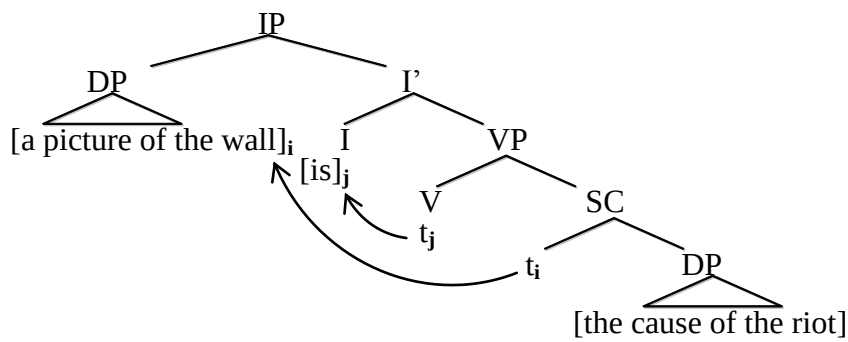
[8] In literature, the basic predicational relations have been expressed within Small Clause (Hoekstra 1988). In studies of copular constructions, internal structures of SCs were different from individual studies: bare Small Clause structure in Moro (1997), PredP in Mikkelsen (2005) adopting Bower (1993), or Relator Phrase (RP) in Den Dikken (2006).

In predicational approaches, syntax of copular constructions can involve two kinds of movements: One is a movement of a referential DP, and the other is a predicative DP's movement.[9] The former is a case of predicational sentences. A sentence such as *a picture of the wall is the cause of the riot,* as in (16a), is formed by a movement of a referential DP *a picture of the wall* from a left branch of Small Clause (SC) into another left branch, namely Spec IP (=TP) .

(16) Predicationals (canonical copular sentence)

a. A picture of the wall is the cause of the riot

b.



(Moro 1997)

On the other hand, specificational sentences are formed by movement of predicative DPs (Williams 1983; Heggie 1988; Moro 1990, 1997; Den Dikken

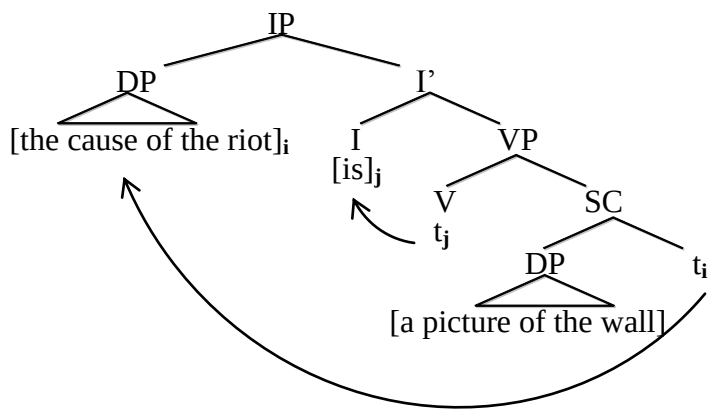
[9] Note that this section aims to provide readers with the reasons why this thesis follows predicational approaches and views specificational constructions as inverse copular constructions. Since the scope of this thesis is not to attest whether specificationals are indeed inverse copular constructions or not, I decided to put various, but related studies together, rather than to review each study in detail. See Moro (1997), Den Dikken (2006), and Mikkelsen (2005) for detailed discussion.

2006, among others). Specificational constructions such as *the cause of the riot is a picture of the wall* are construed as follows; the pre-copular DP *the cause of the riot* is an inverted predicate which moved into Spec TP instead of a referential DP *a picture of the wall* which is left in SC, as depicted in (17b).

(17) Specificationals (inverse copular sentence)

a. The cause of the riot is a picture of the wall.

b.



(Moro 1997)

In order to argue that specificational sentences are indeed formed by an A-movement of predicative DPs, two factors have been attested. One is that pre-copular DPs in specificational sentence are not referential but predicate. The other is that predicative DPs in Spec TP are inverted predicates which moved to Spec TP instead of referential DPs. Such movement has been referred to as Predicate Inversion (Den Dikken 2006), or Predicate Raising (Moro 1997).

The first assumption that pre-copular DPs in specificationals are indeed predicate, not referential DPs, can be proved by the result of tag-question tests in (18a), (18b). Mikkelsen (2005) attests that the pre-copular DPs of specificationals are predicative DPs by means of a tag-question test. Though pre-copular DPs in (18a) and (18b) are identical as *the winner*, the anaphoric pronoun in the tag-question in specificational sentences is different from that of predicational sentences; the subject of specificational sentences pronominalizes with *it* as in (18a) while that of predicational sentences is the gender pronoun *she*, as in (18b).

(18) a. **The winner** was Susan, wasn't ***she/it**? *specificational sentence*

b. **The winner** was Norwegian, wasn't **she/*it**? *predicational sentence*

(Mikkelsen 2005)

There are two claims with which Mikkelsen explained such asymmetry[10]; one is that the antecedent of the pronoun in a tag question is the subject of the tagged sentence, and the other is that pronominalization is sensitive to the semantic type of the antecedent. Based on these claims, Mikkelsen argues that a use of *she* in (18b) indicates a referential interpretation of the pre-copular DP, *the winner*, whereas the use of *it* as in (18a) indicates a predicative interpretation of the pre-copular DP. Therefore, as argued in Mikkelsen (2005),

[10] The first idea is based on the works of Bolinger (1957), Bowers (1976), Bresnan (1994). The Second idea was from Doron (1988), Engdahl (2001), Heggie (1988), among others. See Mikkelsen (2005) for more detailed reasoning.

this evidence can support the claim that pre-copular DPs of specificational sentences are indeed predicative DPs, originally merged as predicates of referent DPs.

The next assumption that specificationals are formed by Predicate Raising (or Predicate Inversion) can be attested by Moro (1990, 1997). In the principles and parameters framework, Moro first argues that the word order of specificational sentences is derived by Predicate Raising into Spec TP.[11] He noticed that predicational word order is allowed in either Small Clause (without *to be*) or ECM constructions (including *to be*), as in (19a). On the other hand, specificational word order is allowed only in ECM constructions where *to* (a head of infinite TP) and *be* (a head of VP) appear between a 'variable' *the problem* and a 'value' *Brian's arrest*, as in (19b).[12]

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[11] In earlier works, Williams (1983), Partee (1986a) argue that specificationals are derived by "inversion around the copula"; NP1 is a predicate (<e,t> type, predicate) and NP2 is the subject, a referential expression of type <e>. Heggie (1988) also argued that specificationals are inverse predicational sentences. However, Heggie's syntactic structure of specificational sentences is different from Moro's in placing a predicative DP in Spec CP and a subject DP in Spec TP.

(i) Predicational
  a. John is the best candidate
  b. [$_{\mathbf{CP}}$ [$_{\mathbf{TP}}$John [$_{\mathbf{T}'}$ is [$_{\mathbf{VP}}$ [$_{\mathbf{V}'}$ <be> [$_{\mathbf{SC}}$ <John> the best candidate]]]]]]

(ii) Specificational
  a. The best candidate is John
  b. [$_{\mathbf{CP}}$ The best candidate [C' is [$_{\mathbf{TP}}$ John [$_{\mathbf{T}'}$ is [$_{\mathbf{VP}}$ [$_{\mathbf{V}'}$ <be> [$_{\mathbf{SC}}$ <John> <the best candidate>]]]]]]

[12] Den Dikken (2005) noted that Heggie (1988) had found the same patterns between predicational pseudoclefts and specificational pseudoclefts; it is impossible to embed a specificational pseudocleft (with *wh*-clause < XP order) under ECM verbs such as *consider*. This means, the word order of a *wh*-clause before XP as in (ii) is not the original word order in the SC.

(i) What John is important to himself (specificational pseudocleft)
(ii) *I consider what John is important to himself
(iii) %I consider what John is **to be** important to himself

(19) a. I consider Brian's arrest (to be) the problem. *predicational*

b. I consider the problem *(to be) Brian's arrest. *specificational*

According to Moro, referential DPs such as *Brian's arrest* are merged in the left branch of SC and predicative DPs such as *the problem* are in the right branch of SC, as in (20a). Therefore predicational word order – a referential DP precedes a predicative DP – can be maintained either before *Brian's arrest* moves from Small Clause as in (20b) or after it moves to Spec TP of infinite TP where a head of infinitive TP *to*, and a head of VP *be* are include, as in (20c).

(20) Predicational

a. [$_{\mathbf{SC}}$ [$_{\mathbf{DP1}}$ Brian's arrest] [$_{\mathbf{DP2}}$ the problem]].

b. I consider [$_{\mathbf{SC}}$ [$_{\mathbf{DP1}}$ Brian's arrest] [$_{\mathbf{DP2}}$ the problem]].

c. I consider [$_{\mathbf{TP}}$Brian's arrest [$_{\mathbf{T'}}$ to [$_{\mathbf{VP}}$[$_{\mathbf{V'}}$ be [$_{\mathbf{SC}}$[$_{\mathbf{DP1}}$ ***t***][$_{\mathbf{DP2}}$ the problem]]]]]]

Moro argues that the obligatoriness of *to be* in specificationals indicates the fact that the pre-copular predicative DP, *the problem* is allowed to be merged in the left branch of (infinite) TP, but not in the left branch of SC; if *the problem* were merged in the left branch of SC and *Brian's arrest* were merged in the right branch of SC, then two DPs could be a compliment of a verb *consider* in a form of SC (without *to be*). In other words, without

postulating movement of predicative DPs over referential DPs, we cannot explain how predicative DPs such as *the problem* can precede referential DPs such as *Brian's arrest*. When predicative DPs move, SC is too small to allow internal movement into itself, as indicated in (21b). Therefore when Predicate Raising occurs, the predicative DP *the problem* should move to the available site, outside of the SC (namely Spec TP) as in (21c).

(21) Specificational

a. [$_{SC}$ [$_{DP1}$ Brian's arrest] [$_{DP2}$ the problem]]. [13]

b. *I consider [$_{SC}$ the problem [$_{SC}$ [$_{DP1}$Brian's arrest] [$_{DP2}$ ***t***]]]

c. I consider [$_{TP}$ the problem [$_{T'}$ to[$_{VP}$[$_{V'}$ be[$_{SC}$[$_{DP1}$Brian's arrest][$_{DP2}$ ***t***]]]]]]

That is the reason why *to be* must be involved when an ECM verb takes its complement in specificational word order, 'variable before value'. Based on such evidence, Moro argues specificational word order – variable before value- is derived by Predicate Raising. [14]

[13] Non-predicational approaches such as Heycock and Kroch (1999) argue that specificational copular sentences should be reduced into equative copular sentences. According to them, specificational word order in matrix clause –variable before value- reflects the orders of two constituents in SC. Therefore, 'variable' *the problem* should be merged in the left branch and 'value' *Brian's arrest* is in the right branch of the SC. However, (19b) contradicts their argument by showing that specificational word order cannot constitute a SC.

[14] It seems that specificational copular constructions can be formed rather freely in Moro (1990, 1997); there is no syntactic motivation to move predicative DPs into pre-copular position. Therefore, when he explain (19c), the existence of *to be* is simply attributed to as

Hitherto I have reviewed two main arguments from predicational approaches: pre-copular DPs in specificationals denote predicate (Mikkelsen 2005), and such predicative DPs appear pre-copular position via movement called Predicate Raising (Moro 1990, 1997). This thesis believes such peculiar properties of specificational sentences demonstrate that specificational sentences are indeed constructed by an A-movement of predicative DPs. In the view of predicational approaches, one of the most interesting topics in the literature of specificational copular constructions is discussed in 2.2: Restriction on *wh*-extraction of/from post-copular DPs in specificationals.

2.2 Restriction on *wh*-extraction in specificationals

Based on the argument above, post-copular DPs in specificationals turned out to have different status from those in predicationals. As in (22a), post-copular position in predicationals is filled with predicative DPs while such position in specificationals is filled with referential DPs, as in (22b).

(22) $DP_{\mathbf{1}}$ *be* (=copula) $DP_{\mathbf{2}}$

a. [**Referential** Brian's arrest] was [**Predicational** the biggest upset] *predicational*

b. [**Predicational** The biggest upset] was [**Referential** Brian's arrest] s*pecificational*

---

the consequence of Predicate Raising. In Den Dikken (2006), however, *to be* is assumed as the evidence of Phase Extension which will be discussed in 2.2.2.

In addition to the different properties of post-copular DPs, two constructions differ in licensing A'-extraction of/from post-copular DPs (Moro 1997, Den Dikken 2006, among others). As for sub-extraction phenomena, asymmetric movement patterns between predicationals and specificationals can be observed. In predicational sentences, *which riot* can be sub-extracted from a post-copular DP, *the cause of which riot*, as in (23a). Contrary to predicational constructions, sub-extraction from the same position is not allowed in specificationals; *which wall* cannot move into the matrix clause, as depicted in (24b).

(23) *Predicationals*

a. [**DP1** A picture on the wall] was [**DP2** the cause of the riot]

b. **Which riot** do you think [**DP1** a picture on the wall] was [**DP2** the cause of _]?

(24) *Specificationals*

a. [**DP1** The cause of the riot] was [**DP2** a picture of the wall]

b. ***Which wall** do you think [**DP1** the cause of the riot] was [**DP2** a picture of _]?

(Moro 1997)

Apropos of *wh*-movement of whole post-copular DPs, the same asymmetrical patterns are observed between two constructions. In predicationals, post-copular DPs such as *how big an upset* can be extracted

from post-copular position as in (25b) while A'-extraction from the same position is strictly restricted in specificational sentences, as in (26b).

(25) *Predicationals*

a. [$_{DP1}$ Brian's arrest] was [$_{DP2}$ the biggest upset]

b. **How big an upset** do you think [$_{DP1}$ Brian's arrest] was < $_{DP2}$ how big an upset>?

(26) *Specificationals*

a. [$_{DP1}$ The biggest upset] was [$_{DP2}$ Brian's arrest]

b. ***Whose arrest** do you think [$_{DP1}$ the biggest upset] was < $_{DP2}$ whose arrest>?

(Den Dikken 2006)

In predicational approaches, such asymmetrical *wh*-movement patterns in (23)-(26) can be attributed as a consequence of Predicate Raising (or Predicate Inversion). In GB theory, Moro (1997) attributed peculiar movement patterns in specificationals as the consequence of Predicate Raising, which yields unfavorable syntactic environment to license a trace of *wh*-phrases (discussed in 2.2.1). Among recent studies, under the MP, Den Dikken (2006) argues that Predicate Inversion via Phase Extension leads *wh*-extraction from post-copular position to violate Phase Impenetrability Condition (Chomsky 2001), which later discussed in 2.2.2.

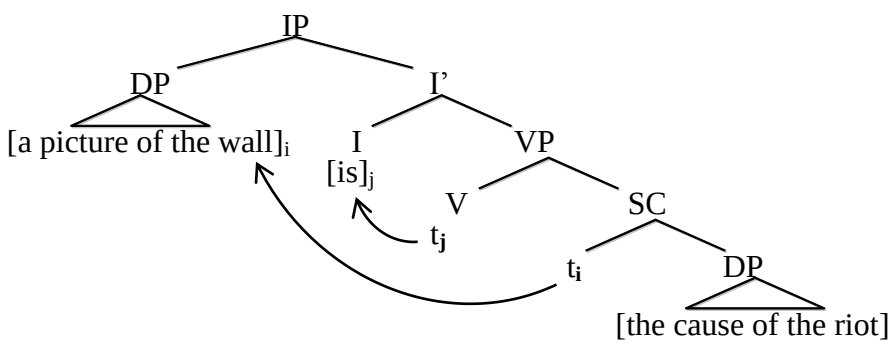
2.2.1 Trace licensing conditions (Moro 1997)

As Moro (1997) pointed out, though specificationals and predicationals share the same underlying structures, after Predicate Raising has taken place in specificationals, two sentences have entirely different structures. As depicted in (27b), predicational sentences are formed by an A-movement of referential DPs into Spec TP (canonical copular sentences). On the other hand, in specificationals, predicative DPs move into pre-copular position passing referential DPs, as in (28b), (inverse copular sentences). In this way, Predicate Raising makes two constructions differ in where post-copular DPs are actually located; post-copular DPs in canonical copular sentences are located in the right branch of SC while those in inverse copular sentences are situated in the left branch of SC.

(27) Predicationals (canonical copular sentence)

a. A picture of the wall is the cause of the riot

b.

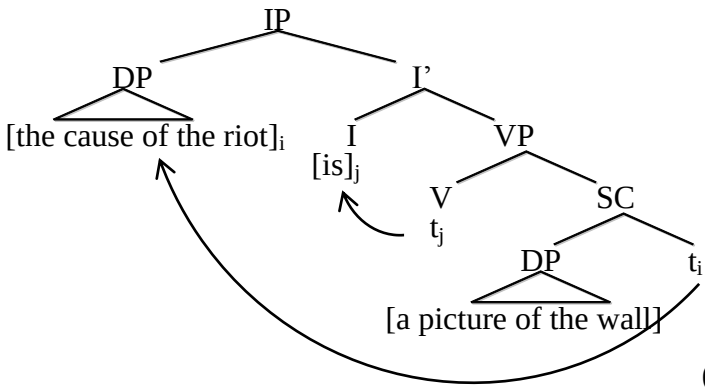


(Moro 1997)

(28) Specificationals (inverse copular sentence)

a. The cause of the riot is a picture of the wall.

b.



(Moro 1997)

Based on the assumption that post-copular DPs of specificational sentences are situated in the left-branch of SC, Moro (1997) explains the following asymmetrical sub-extraction patterns between specificational and predicational sentence, as depicted in (29b) and (30b) respectively.

(29) *Predicationals*

a. [$_{DP1}$ A picture on the wall] was [$_{DP2}$ the cause of the riot]

b. **Which riot** do you think [$_{DP1}$ a picture on the wall] was [$_{DP2}$ the cause of _]?

(30) *Specificationals*

a. [$_{DP1}$ The cause of the riot] was [$_{DP2}$ a picture of the wall]

b. ***Which wall** do you think [$_{DP1}$ the cause of the riot] was [$_{DP2}$ a picture of _]?

(Moro 1997)

Moro argues that sub-extraction phenomena in copular constructions should respect Subjacency Condition, a version of Cinque (1990a).[15] In the syntactic structure of specificationals, which Moro (1997) proposes, a referential DP is merely an adjunct of SC while a predicative DP is an argument which is L(exically)-marked by a verb, namely copula. In other words, an element in the left branch of SC is a just adjunct while one in the right branch of SC is an L- marked complement. In the case of former, an adjunct DP is considered as a bounding node from which any movement is prohibited under Subjacency Condition. This is the very reason why (30b) is ungrammatical. Though *a picture of the wall* is a post-copular DP, it is not in the same position as the post-copular DP *the cause of the riot* in predicationals. As Moro argues, post-copular DPs in specificationals are situated in the left-branch of SC, post-copular DP *a picture of the wall* is not L-marked by a copula. As a result, sub-extraction of *which wall* from such adjunct DP will cross the bounding node, which makes the derivation violate of Subjacency Condition[16].

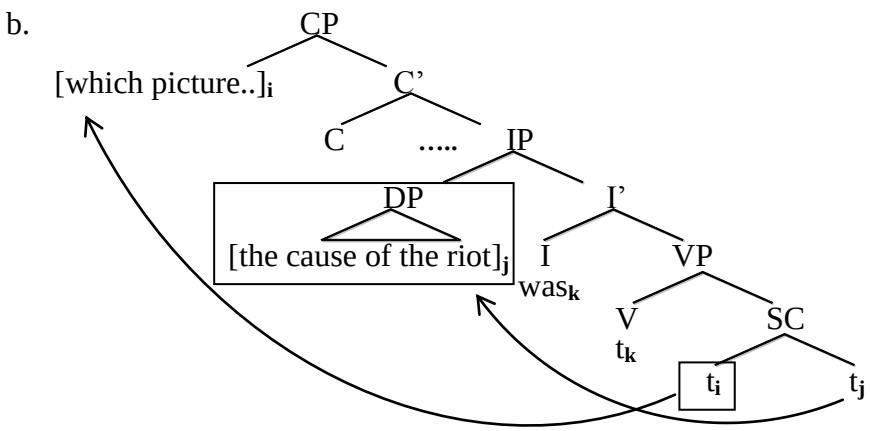
[15] Moro (1997) adopts Cinque's version which argues crossing one bounding node can cause Subjacency violation. Cinque (1990a) refined the formulation of the Subjacency Condition by proposing two differences with respect to Chomsky's version: first, a single barrier is sufficient to trigger a Subjacency violation; second, L-marking (Lexical marking) is not defined in terms of theta-role assignment but in terms of 'selection' (see Cinque 1990a, and references there) Chomsky (1970a)' version is also noted in Moro (1997): the subjacency condition was originally formulated as a generalization covering a series of violations that has features in common: they all involve an extraction that crosses at least two constituents of a certain kind (the so-called 'bounding nodes') without intermediate steps (Chomsky 1970a).

[16] A'-movement from the left branch of SC shows the same effect as the CED effect (Huang 1982); A subject DP in the left branch of TP (Spec TP) does not allow sub-extraction from it.

In addition to the sub-extraction, Moro explains the reason A'-extraction of whole post-copular DPs in specificationals is also banned. Based on account of Empty Category Principal (ECP, Chomsky 1986) he insists that trace should observe locality condition – a trace satisfies locality (in the narrow sense of the ECP condition). Not being lexical verb, copula is not a proper head-governor of the trace left by *wh*-extraction. Therefore trace licensing has to depend on the local antecedent. To get out of SC without violating locality condition, DPs must move to the closest landing site, Spec TP. In specificational sentence, however, Spec TP position is already occupied by raised predicates. Therefore *wh*-phrases should move into higher position skipping Spec TP. Here arises problem, though. Raised the predicate located in Spec TP prevents a trace from being locally licensed by its antecedents. As in (31b), trace of DP_1 *which picture on the wall* cannot be licensed properly due to an improper antecedent *the cause of the riot* in Spec TP.

(31) a.*[$_{DP1}$ Which picture on the wall] do you think [$_{DP2}$ the cause of the riot] was?

b.



2.2.2 Frozenness of focus elements (Den Dikken 2006)

Den Dikken (2006) suggests all predicational relationships are mediated by a R(ELATOR), as in (32a), and there is no strict requirement for the subject to be merged in the specifier position; the subject can be merged in the complement position while the predicate is merged in the specifier position as in (32c).

(32) a. [$_{\mathbf{RP}}$ XP [$_{\mathbf{R}'}$ R(ELATOR) YP]]
b. [$_{\mathbf{RP}}$ SUBJECT [$_{\mathbf{R}'}$ R PREDICATE]]
c. [$_{\mathbf{RP}}$ PREDICATE [$_{\mathbf{R}'}$ R SUBJECT]][17] (Den Dikken 2006)

Copular sentences are also regard as constructions in which a predicational relationship between pre and post-copular DPs is mediated by R(ELATOR).[18]

[17] Den Dikken (2006) refers to such constructions as Predicate-specifier structures, instances of *reverse predications*. The following examples can be represented with Predicate-specifier structure with lexicalized RELATOR-head such as *by*, *for*.
(i) Brian is [$_{\mathbf{RP}}$ [$_{\mathbf{VP}}$ loved *t*][RELATOR=*by* [$_{\mathbf{DP}}$ Imogen]
(ii) Brian is [$_{\mathbf{RP}}$ [$_{\mathbf{AP}}$ clever][RELATOR=*for* [$_{\mathbf{DP}}$ a five-year-old]
He rejects the idea that specificational sentence may be represented in predicate-specifier structure which has predicative DP base-generated in Spec RP, as in (32c). Empirical evidences show that with respect to A'-extraction, predicate-specifier constructions behave differently from predicate inversion constructions. He concluded that since predicate-specifier constructions allow extraction of subject across predicative DP, pre and post-copular constituents in specificationals couldn't have been generated in predicate-specifier structure.
(iii) Who do you think Brian is loved by *t*?
(iv) ?A five-year-old, Brian would actually be clever for *t* (but unfortunately, he is twelve already)

[18] Though Den Dikken adopts Moro's idea that specificationals are inverse copular sentences, his work is different from Moro's in postulating a different structure for each construction.

(33) RP structure for a predicational sentence

a. John is the best candidate

b. [**RP** John [**R**, R [the best candidate]]]

(34) RP structure for a specificational sentence[19]

a. The best candidate is John

b. [**RP** John [**R**, R ***pro*-predicate** [**CP** *Op*…..the best candidate]]]

As illustrated in (34b), a complement position of RP in specificationals is filled with *pro*-predicate which is modified by a reduced relative. Den Dikken assumes that the motivation of Predicate Inversion comes from this; a reduced free relative is not properly licensed when it stays in the complement position of RP.[20] He argues that such null head of the reduced free relative must move to Spec TP in order to be formally licensed and content-licensed. This A-movement of pro-predicate is similar to the Predicate Raising in Moro (1997).[21] Den Dikken referred to this movement as Predicate Inversion, generalized in (35).

[19] I simplify the original version of Den Dikken (2006) so as to help the reader understand the derivation more easily. In addition, since my analysis is not dependent upon the structure of convoluted RP structures nor plans to elaborate syntactic operations used in Den Dikken (2006), I modified the derivation to be as simple as possible. In Den Dikken (2006), the original syntactic structure of specificationals is schematized as follows:

(i) [**RP1** John [**R**, RELATOR [Predicate [pro-predicate [**CP** Op**i** [**C**, C [**RP2** t**i** [**R**, R [the best candidate]]]]]]]]]

[20] Den Dikken (2006) regards this movement – a movement to be formally licensed and content-licensed – as somewhat similar behavior of *pro* and *pro*-licensing (Rizzi 1986).

[21] Two studies are not exactly same since Moro postulate specificationals and predicationals share the same underlying syntactic structure while Den Dikken proposed different syntactic structure for each construction – one with *pro*-predicate and the other without *pro*-predicate.

(35) *The overarching syntactic rationale for Predicate Inversion*

Predicate Inversion involves A-movement to subject position triggered by the need to license an empty predicate head.

One problem arises, though. A referential DP in Spec RP prevents Predicate Inversion from complying with the Minimal Link Condition (MLC). In order to avoid this problem, Den Dikken (2006) suggests that Phase Extension is required here; head movement from R to F (a head of functional phrase, FP) can make members of the same minimal domain equidistant. As in (36a), *Bill's arrest* was in an edge position– being in specifier of a phase (RP) which is marked with ϕ. However, after Phase Extension (head movement of R to T – a functional head of TP) takes place, phase is extended to TP. Consequently, Spec RP and Spec TP become equidistant from each other, which makes Predicate Inversion – an A-movement of *pro..the biggest upset* into Spec TP – legitimate, as depicted in (36b).

(36) a. [$_{\mathbf{RP}}$ Brian's arrest [$_{\mathbf{R'}}$ R [*pro*-predicate… the biggest upset]]]
ϕ

b. [$_{\mathbf{TP}}$ *pro*..the biggest upset$_{\mathbf{j}}$ [$_{\mathbf{T'}}$ T+R$_{\mathbf{i}}$ [$_{\mathbf{RP}}$ Brian's arrest [$_{\mathbf{R'}}$ t$_{\mathbf{i}}$ [t$_{\mathbf{j}}$]]]]]
ϕ (ϕ)

At this point, the most important consequence of the Phase Extension can be drawn. Though Phase Extension does help Predicate Inversion avoid

violating MLC, this operation makes Spec TP become new edge, and consequently Spec RP is not edge position any more. This is the key to explaining why A'-extraction of post-copular DPs in specificationals is strictly restricted; As in (37b), post-copular DP *whose arrest* in specificationals cannot move to the sentence initial position while *how big an upset* in predicational sentences can move into the matrix clause, as in (37a).[22]

(37) a. **How big an upset** do you think Brian's arrest was _? *predicational*

b. ***Whose arrest** do you think the biggest upset was _? s*pecificational*

After Phase Extension takes place, A'-extraction of *whose arrest* from Spec RP to Spec CP is forbidden since any movement from non-edge position will violate Phase Impenetrability Condition (PIC, Chomsky 2001); Elements which are located in the complement of the phase head are supposed to be sent to spell-out domain, and become inert to further movement, as in (38b).

(38) a. ***Whose arrest** do you think the biggest upset was _? *specificationals*

b. *[$_{CP}$**whose arrest**…[$_{TP}$the biggest upset$_j$ [$_{T'}$T+R$_i$[$_{RP}$<**whose arrest**>[$_{R'}$ t$_i$ t$_j$]]]]]

→ ***SPELL-OUT!***

[22] In the case of predicational sentences which do not require Phase Extension to take place, a post-copular DP such as *how big an upset* in (37a) moves from Complement of RP to Spec of CP without violating any locality condition. Neither an A-movement of *John's arrest* to Spec TP nor successive cyclic A'-movement of *how big an upset* into the Spec CP violates PIC.

As for the information structure in specificationals, Den Dikken (2006) noted that Predicate Inversion is a syntactic device that explicitly marks inverted predicative DPs as topic while referential DPs left in Spec RP as focus. Based on this, he proposed a generalization on movement phenomena in specificationals, as in (39).

(39) *Frozenness of Focus Elements* (Den Dikken 2006)

A constituent that ends up in a syntactic configuration that leads it to be interpreted as a focus will inevitably be interpreted as the focus of the clause that it is in, and will literally be frozen in place.

According to the generalization (39), the restriction on *wh*-extraction of post-copular DPs in specificationals – as in (37b) - is explained; Predicate Inversion makes post-copular focus elements frozen in place, and any further movement from it is simply impossible.[23]

[23] Unlike Moro (1997), Den Dikken (2006) did not deal with sub-extraction phenomena. I assume the reason Den Dikken did not concern about sub-extraction comes from this: the generalization he proposed - frozenness of focus elements- is sufficiently enough to predict illegitimate sub-extraction in specificational constructions.

3. Asymmetry in *Wh*-extraction

3.1 Counter evidence: Bare *wh*-extraction in specificationals

Though each study I reviewed in section 2 takes different approaches to explain restriction on *wh*-extraction in specificationals, a common agreement is reached: Any movement from a post-copular position in inverse copular constructions is strictly forbidden.

Surprisingly, however, contrary to the previously established generalization, it turns out that in certain contexts, A'-extraction is possible in specificationals. The examples (40)-(42) are all interpreted as specificationals. In those sentences, however, bare *wh*-phrases are extractable from the post-copular position.

(40) a. The biggest upset was **John's arrest**.

b. **What** do you think the biggest upset was _?

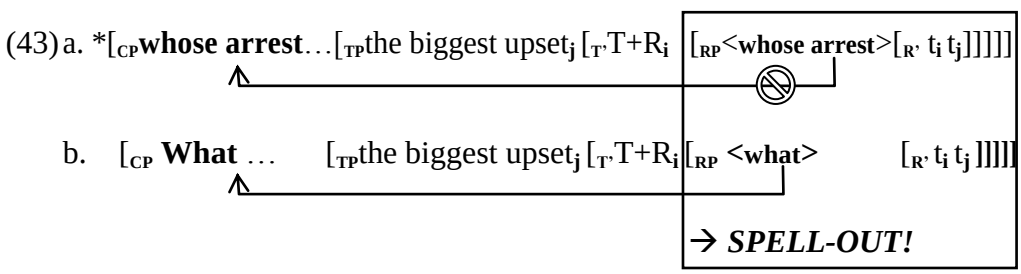
(41) a. My favorite season is **spring**.

b. Could you tell me **what** your favorite season is _?

(42) a. I think the best musician of this generation is **Beatles**.

b. **Who** do you think the best musician of this generation is _?

Previous studies fail to explain the grammaticality of bare *wh*-questions. In Den Dikken (2006), for example, Predicate Inversion is accompanied by phase extension from RP to TP. As a result, Spec RP is no longer phase edge, and any *wh*-extraction from such non-edge position yields a PIC violation. However, in (43b), a bare *wh*-phrase *what* can be extracted from the very non-edge position from which a complex *wh*-phrase *whose arrest* could not escape, as in (43a).[24]



The contrast between bare and complex *wh*-phrase extraction cannot be explained under previous studies, which postulate complete frozenness of the

[24] Recently, Den Dikken (2009, 2013) has proposed a new generalization on A'-extraction in Predicate Inversion constructions; the requirement of the maintenance of information-structural articulation and its order constraints A'-extraction in copular constructions. He argues that leftward *wh*-movement of the postcopular DP in specificationals overturns the information-structural articulation; prior to *wh*-movement, a topic is followed by a focus constituent, but *wh*-movement of focus would overturn 'topic before focus' articulation to 'focus before topic' which results in the ungrammaticality.

(i) a. The biggest pain in the neck is some politician from the Netherlands
[Topic: The biggest pain in the neck] … [Focus: some politician]
b. *Which politician do you think the biggest pain in the neck is _?
[Focus: which politician] … [Topic: the biggest pain in the neck] … <Focus>

However, I found that all A'-extractions of post-copular DP in predicate inversion constructions, whether it is complex *wh*-phrase or bare *wh*-phrase, may overturn the information-structural articulation pattern. Therefore under Den Dikken (2009, 2013), we still cannot explain why bare *wh*-phrases behave differently from complex *wh*-phrases.

post-copular DPs. Therefore, I call this conundrum the *wh*-movement puzzle in specificationals:

(44) ***Wh-movement puzzle in specificational copular constructions***

Bare *wh*-phrase extraction contradicts the presumed assumption that post-copular constituents in specificational constructions are frozen in place.

3.2 Interim discussion

Peculiar properties of specificational sentences, such as the presence of the predicative anaphoric pronoun *it* in tag-questions, the obligatoriness of copula under SC taking verbs such as *consider* (in 2.1), and *wh*-movement restrictions on post-copular DPs (in 2.2), successfully justify the postulation of Predicate Inversion in the syntax of specificationals. This thesis, therefore, still supports what predicational approaches have argued; specificational sentences are inverse copular constructions. However, one of the strongest pieces of evidence supporting Predicate Inversion is now weakened by the counter evidence this thesis presents in 3.1; contrary to the previous generalization, bare *wh*-phrases can be extracted from a post-copular position in specificational sentences.

In order to solve this puzzle, two goals should be achieved in this thesis: one is to find an alternative mechanism of Predicate Inversion, which does not result in so-called freezing effect on post-copular DPs (in 4.1). If they were structurally frozen, as Den Dikken argues, then bare *wh*-phrases should be trapped in their base position, contrary to the fact. The other is to investigate an alternative perspective to distinguish syntactic environments around complex *wh*-phrases from those around bare *wh*-phrases (in 4.2).

4. Proposal

In this section, I propose an alternative syntactic structure for a specificational sentence with which we can analyze *wh*-movement puzzle presented above. As for a suggested structure, this thesis argues that 'topicalization' of predicative DPs and 'focalization' of referential DPs co-occur in the syntax of specificational copular constructions (in 4.1). In order to solve the *wh*-movement puzzle, a new approach to evaluate grammaticality of specificational sentences is proposed in 4.2. This thesis suggests that there does not exist restriction on A'-extraction, but restriction on Predicate Inversion exists in a certain condition. Under the (General) Relativized Minimality (Rizzi 1990), D-linked *wh*-phrases with a [topic] feature intervene the way of Predicate Inversion of predicates which involve the same [topic] feature.

4.1 Suggested structure

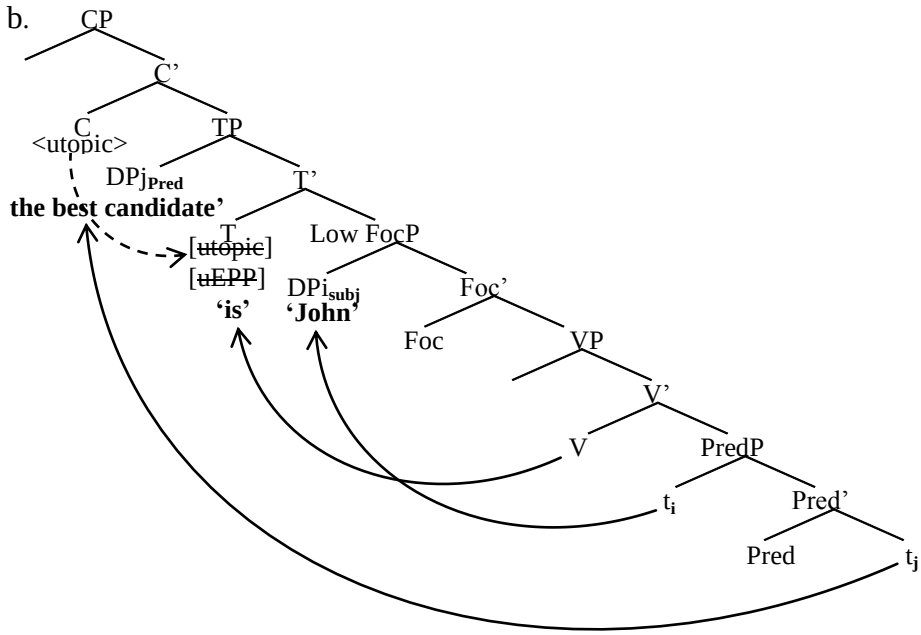
This thesis proposes an alternative syntactic structure of specificational sentences. In (45b), both a referential DP and a predicative DP move into the designated positions; the former moves into Spec Low FocP (referred to as

focalization of the referential DP, in 4.1.2) and the latter moves into Spec TP (referred to as topicalization of the predicative DP, in 4.1.1).

(45) Suggested structure of specificational sentences.

a. The best candidate is John.

b.



4.1.1 Topicalization of predicative DPs[25]

As for the motivation of Predicate Inversion, I adopt Mikkelsen (2005) which argues that specificational sentences are derived by topicalization of

[25] As for the term topicalization and focalization, I adopt definition of Belletti (2001) "With TOPICALIZATION of an element I refer here to the process through which that element is dealt with as the TOPIC of discourse, the GIVEN information. In the literature the term TOPICALIZATION often indicates the process that we here refer to as FOCALIZATION : the singling out of an element of the clause as the NEW or CONTRASTIVE information." (Belletti 2001: note 1)

predicative DPs. Based on Birner (1994, 1996), Mikkelsen suggests that the preference for the topic to be in subject position (Prince 1981, Beaver 2004) causes a specificational clause. As in (46b), when T bears an uninterpretable feature, [*u*top], it attracts a predicate DP with an interpretable feature, [top], into Spec TP.

(46) a. $[_{TP}$ $DP_{\mathbf{ref}}$ $[_{T'}$ T $[_{\mathbf{PredP}}$ <$DP_{\mathbf{ref}}$> $[_{\mathbf{Pred'}}$ Pred $DP_{\mathbf{pred}}]]]]$ *predicational*

b. $[_{TP}$ $DP_{\mathbf{pred}}$**[top]** $[_{T'}$ T **[~~*u*top]~~** $[_{\mathbf{PredP}}DP_{\mathbf{ref}}$ $[_{\mathbf{Pred'}}$ Pred <$DP_{\mathbf{pred}}$>$]]]]$ *specificational*

The argument that specificationals are formed by topicalization of predicates can be supported by the following data. Indefinite DPs which resist being located in pre-copular position, as in (47b), can be situated in pre-copular position when they contain discourse-old information, topic, as in (48a), (48b).

(47) a. John is a doctor

b. *A doctor is John[26] (Heycock and Kroch 1998)

(48) a. [**One** friend of mine you could talk to] is Dianna (Partee 1999)

b. [**A philosopher** who seems to share the Kiparskys' intuitions on some factive predicate] is Unger (1972), who argues that…

(Delacruz 1976, via Mikkelsen 2005)

[26] Based on the ungrammaticality of (47b), Heycock and Kroch (1998, and the sequential works) strongly argue that predicates cannot move A-position.

As a matter of fact, Mikkelsen's claim that pre-copular DPs in specificational sentences are interpreted as topic of the sentences is not new. In the literature, specificationals have been reported to have fixed information structure; pre-copular predicates are topic while post-copular referents are focus (Den Dikken 2006, Partee 2010, Heycock & Kroch 2002, Declerck 1988, among others). Based on the assumption that an answer to a *wh*-question is new information in the discourse, Heycock & Kroch (2002) attested the argument with *wh*-constituent question.[27] As in (49a) and (49b), either pre or post-copular DPs can be an answer to *wh*-questions in predicational word order – referential DPs come before predicative DPs. In (50b), however, pre-copular DPs cannot be answered to *wh*-questions when these two DP constituents are ordered in specificational word order.

(49) Predicationals

a. Q: Who is the mayor?
   A: [**FOCUS** John] is the mayor.
b. Q: Who/What is John?
   A: John is [**FOCUS** the mayor].

(50) Specificationals

a. Q: Who is the mayor?
   A: The mayor is [**FOCUS** John]

[27] This test is based on Halliday (1967). According to Halliday (1967), a constituent in the answer that corresponds to the *wh*-phrase in the question is the focus.

b. Q: Who/What is John?
A: *[**FOCUS** The mayor] is John (Heycock & Kroch 2002)

The ungrammaticality of (50b) led many studies, including Mikkelsen (2005), to the conclusion that while predicationals have free information structures, specificational sentences have a fixed information structure where topical precopular DPs are followed by focal elements.

With regard to the topical status of pre-copular predicates, this thesis argues that Korean data can support Mikkelsen (2005) which argues topicalization of predicates in specificationals. In Korean, the invert predicate in specificationals should be marked by a Topic marker '*–nun*', as in (51b). However, the pre-copular subject DP in predicationals can be marked either by a Nominative Case marker '*-i/ka*' or a Topic marker '*–nun*', as in (51a).[28]

(51) a. Chulswu -e casal -i/nun kacang khun chungkyek -i -da
Chulswu's suicide -NOM/TOP the biggest upset/shock-COP-Dec
'Chulswu's suicide is the biggest upset/shock' *predicational*

[28] In Japanese, and Malagasy specificational, topic markers also appear with invert predicates.
(i) Japanese
a. Hanako-wa suugaku-no kyoosi da
Hanako-TOP math-GEN teacher COP
b. Suugaku-no kyoosi-**wa/*ga** Hanako da
math-GEN teacher-TOP/NOM Hanako COP (Hasegawa 1996)
(ii) Malagasy
a. Ny ilaiko **dia** fiara sy trano.
DET need.1SG(GEN) **TOP** car and house
'What I need is a car and a house.'
b. Ny manasa lamba **dia** Rabe.
DET AT.wash cloth **TOP** Rabe
'Who is washing clothes is Rabe' (Paul 2010)

b. kacang khun chungkyek-*i[29]/nun Chulswu-e casal -i-da
the biggest upset/shock-NOM/TOP Chulswu's suicide-COP-Dec
'The biggest upset/shock is Chulswu's suicide' *specificational*

The obligatory topic marker with the invert predicate in (51b) supports the argument from Mikkelsen (2005), which proposes predicative DPs in specificational copular constructions are moved into pre-copular position in order to delete an uninterpretable feature, [*u*top] on T with an interpretable feature, [top] of predicative DPs.

Though the claim that pre-copular DPs in specificationals are interpreted as topic of the sentences is indeed common argument, what makes the work of Mikkelsen (2005) distinctive is her attempt to posit such discourse property into the syntactic structure of specificational copular sentences; deletion of an uninterpretable topic feature on T can be the motivation of Predicate Inversion (or Predicate Raising). In addition, her argument provides us with an alternative mechanism of Predicate Inversion, as well. Since Mikkelsen does not postulate Phase Extension nor PIC violation, we could avoid wrongly predicting bare *wh*-phrases to be frozen in place. Furthermore, in 4.2, we will see that the notion of topicalization plays a leading role in analyzing *wh*-movement puzzle.

[29] According to Jo, Jungmin (2007), sentence having predicative DP marked with -i/-ka in sentence initial position is interpreted as predicational sentence, not specificational sentence. This is what Heycock and Kroch refer to predicate fronting construction.

4.1.2 Focalization of referential DPs

Apropos of information structures of specificationals, the other part should be discussed; post-copular referential DPs are interpreted as focus of the sentences (Den Dikken 2006, Partee 2010, Heycock & Kroch 2002, Declerck 1988, among others).[30] Though it is true that post-copular DPs in specificationals are interpreted as focus, this pattern is not unique to specificationals. As (49b) indicated, post-copular DPs in predicationals can have focus interpretation as well. Accordingly, a question may arise. Do focal elements in specificationals have identical semantics to those in predicationals? This thesis answers "No."

It has been argued that specificational copular sentences - including cleft and pseudocleft constructions - are distinguished from predicationals in the notion of 'exhaustivity' (Higgins 1979, Declerck 1988, Huber 2000, among others). Declerck (1988) argues that specificational cleft sentences have a so-called exhaustiveness implicature.[31] That is, DPs presented after expletive subject *it* and the copula are exclusively identify the values for variable *x*,

[30] In syntax and phonology interface studies, syntactically marked externalization strategies are usually called defocalization strategies. For example, by removing defocused categories from VP, focal element (such as subject focus) alone remains in VP domain where unmarked focal stress is assigned (Zubizarreta 1998).

[31] Declerck (1988) argues that such exhaustiveness is neither presupposition nor entailment. Rather, he argues exhaustiveness follows from the act of specification if the speaker respects the conversational Maxims by Grice (1975); the speaker should provide the correct values for the variable (the Maxim of Quality) and the speaker should give the complete (exhaustive) list of the values satisfying the variable (the Maxim of Quantity).

presented in *wh*-clauses or that-clauses. In (52), for example, listeners have right to conclude that only John and Bill are those who got punished.

(52) It was John and Bill who got punished

Higgins (1979) mentioned about exhaustiveness in specificationals, as well. According to him, pre-copular *wh*-clauses in specificational pseudo-clefts delimit domains while post-copular DPs indentify the particular members of the domain. As in (53a), it is implied that *a pen and a pencil* exhaustively identify what I bought. But Higgins admitted such exhaustiveness can be cancelled, as in (53b).

(53) a. What I bought was a pen and a pencil.

b. What I bought was a pen and a pencil, among other things.

By adopting the notion of exhaustiveness (or exhaustivity in É Kiss 1998) in specificational constructions, this thesis argues that focal elements in specificationals have distinctive syntactic status from those in predicationals. In other words, we should consider how the syntax of copular constructions can single out focal elements which can be interpreted as exhaustive value(s) for the variable x. In previous studies, the notion of in-situ focus and frozenness effect on such in-situ focus might be able to take on the role. For instance, Den Dikken (2006) argues that an A-movement of predicates into

preverbal position leads post-copular DPs to be automatically interpreted as focus and become frozen in place; A'-extraction of such focal elements is literally impossible. Therefore, the idea of in-situ focus seemed to help establish different syntactic status of (exhaustive) focus in specificational; one forced to be interpreted as focus by Predicate Inversion behaves differently from that is irrelevant to such enforcement.

In section 3, however, this thesis proved that post-copular focus elements can indeed engage in *wh*-movement when such focus elements are bare *wh*-phrases; as in (54a), the post-copular DP 'what' moves to Spec CP of a matrix clause, contrary to the generalizations of previous studies which assume complete frozenness of post-copular DPs in specificationals (Moro 1997, Den Dikken 2006).

(54) Counter evidence: unexpected grammatical bare *wh*-question

a. *__Whose arrest__ do you think [the biggest upset was _]?
b. __What__ do you think [the biggest upset was _]?

The fact that focal elements in specificationals can involve in *wh*-movement makes the issue go back to square one. The question, 'How does the syntax of copular constructions distinguish the exhaustive focus from the non-exhaustive focus?' should be asked again. This thesis answers that focal elements in specificationals must undergo syntactic movement to a designated

position below TP. By adopting the notions of structural focus and identificational focus in É. Kiss (1998a, 2006a, among others), I suggest that focus in predicational constructions is prosodic focus which is interpreted as information focus while that in specificationals is structural focus interpreted as identificational focus.

In the analysis of Hungarian preverbal focus, É. Kiss argues that postverbal focus (information focus) which does not have exhaustive reading should be distinguished from preverbal focus (identificational focus) which has obligatory exhaustivity in its interpretation. Compare the two alternative ways, as in (55b), (55c), of answering the *wh*-question in (55a). The answer in (55b) is false if I also invited others than Peter and Paul. The answer in (55c), on the other hand, does not imply or implicate that I invited nobody but Peter and Paul, as a non-exhaustive answer.

(55) a. [FocP KIKET [hívtá meg ma estére?]]
who-PL-ACC invited-you PRT today evening-for
'Who did you invite for tonight?'

b. [FocP PÉTER és PÁLT ([[hívtám meg]])
'It is Peter and Paul (that I invited)'

c. Meg hívtám PÉTER és PÁLT
'I invited Peter and Paul' (É. Kiss 1998)

In his later works such as É. Kiss (2006a, 2009, 2010), he suggests that preverbal exhaustive focus in Hungarian should be regarded as specificational predicate which has moved into the preverbal position via focus movement. In the configuration of a syntactic predicate-subject structure, specificational predication is established and a [+exhaustive] feature is a semantic consequence of this specificational predicate role.[32] Based on the idea, this thesis also postulates syntactic movement of focal elements in copular constructions, if and only if such elements are interpreted as identificational focus. However, it is hard to directly adopt the notion of Hungarian preverbal focus slot into the study of copular constructions. Therefore I made some modification on the position to which identificational focus in copular constructions moves.

According to Belletti (2001 for analysis of postverbal focus in Italian), *v*P resembles CP with respect to the articulated heads for interpretations. In Italian, post-verbal subjects fill one of these *v*P-peripheral dedicated positions, depending on its interpretation in discourse contexts.[33] For example, if a

[32] É. Kiss noted that the idea of specificational predicate is based on Higgins (1973) and Huber (2000). They argue the exhaustive identification associated with structural focus is a function of specificational predication. The focus serves to specify the set determined by the presupposed sentence part by listing its members, and it fulfils this function if it enlists the members of the set exhaustively. For detailed discussion, refer to É. Kiss (2006a, and the sequential works).

[33] The idea on the relationship of syntactic structure and interpretation of discourse property grounds on the general guidelines of the cartographic approaches (Rizzi 1997, 2004; Belletti 2004a; Cinque 2002; Benincà & Poletto 2002 among others); a fine-grained and detailed clausal architecture is enriched with dedicated heads and specifiers directly visible to the interpretive systems at the interface with discourse and prosody (Belletti 2004a).

subject is interpreted as new information, then the subject fills the specifier of Focus P located between TP and *v*P, as in (56c); post-verbal focal elements such as *Gianni* in (56b) moves to an A'-position in *v*P-periphery.

(56) Postverbal subject in Italian

a. [$_{CP}$ ……[$_{TP}$ …….[$_{TopP*}$ Top [$_{FocP}$ Foc [$_{TopP*}$ Top ……[$_{vP}$]]]]]]

b. E' partito / ha parlato Gianni
has left / has spoken Gianni

c. [$_{CP}$…[$_{TP}$ pro…è…partito/ha parlato…[$_{TopP}$ [$_{FocP}$ **Gianni** [$_{TopP*}$ [$_{vP}$ ….]]]]]

Since this focus projection is in lower position than that in CP, this vP-peripheral focus projection is called Low FocP as well.[34] This thesis extends

[34] Belletti (2004b) presents supporting evidences of existence of functional projections within VP periphery by showing that *ne*-cliticization and sub-extraction from post-verbal subject focus is restricted in Italian.

(i) *ne*-cliticization
a. Ha telefonato il direttore del giornale al president.
has phoned the director of the newspaper to the president
b. ?? Ne ha telefonato il derettore al president.
of it has phoned the director to the president
c.?? Ne hanno telefonato molti al president.
of them have phoned the many to the president

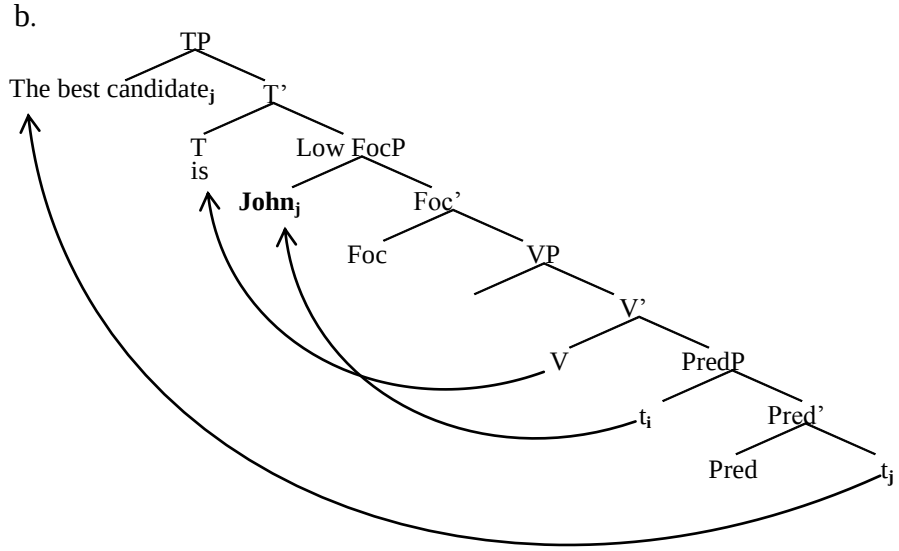
(ii) sub-extraction
a. Ha telefonato il direttore del giornale al president.
has phoned the director of the newspaper to the president
b. ?? Il giornale di cui ha telefonato il direttoreal president.
the newpaper of which phoned the director to resident

Belletti suggests that such restrictions can be assumed as CED-type effects, and attributes such effect to subject focus' being situated in non-argument position, namely Spec Low FocP; sub-extraction from non-argument position cannot be as grammatical as extraction from argument position. Though I do not exploit LowFocP in order to explain restriction on A'-movement as Belletti did, movement of subject focus into Low FocP is indeed relevant to our discussion; if subject has moved to A'-position, then a prediction is made. Improper movement – from A' to A position – will be ruled out, and the prediction is borne out with English, Russian data.

the idea to the realm of copular constructions; focus elements in specification sentences also move to Spec Low FocP, as in (57b).[35]

(57) a. The best candidate is **John** *specificational*

b.



In (57b), focus elements in specificationals move into a non-argument position below TP, namely Spec of Low FocP. Such movement can be referred to as focalization. The assumption on the focalization of identificational focus into an A'-position leads to a prediction: Identificational focus may not be found in Spec TP since any movement from an A'-position (e.g. Spec Low FocP) into an A-position (e.g. Spec TP) is strictly forbidden under Improper Movement

[35] Note that though I adopt the notion of Low Focus P from Belletti, this thesis does adopt Belletti's suggestion on the semantics of postverbal focus. While Belletti assumes such postverbal arguments have information focus, this thesis regards them as identificational focus which should be distinguished from information focus (É. Kiss 2006a, and the sequential works).

(Chomsky 1986). The prediction is borne out with English copular sentences where pre and post-copular DPs have different number feature and T agrees with post-copular DPs, as in (58b).

(58) a. **The biggest problem is** those parents (**Predicational/Specificational*)

b. The biggest problem **are those parents** (*Predicational/*Specificational*)

Based on the Case theory that argues constituents agree with T in number feature are located in Spec TP, this thesis argues that post-copular DPs in specificationals cannot be located in Spec TP. In specificationals, T agrees with the singular pre-copular DP, *the biggest problem*, as in (58a). However, when T agrees with the plural post-copular DP, *those parents*, specificational reading disappears, as in (58b).[36]

What is interesting about agreement pattern in specificationals is that even in a language where T indeed agrees with a post-copular DP, post-copular DPs in specificationals have different syntactic distribution from those in predicationals. Through some test which was first used in Mikkelsen (2005), I found that focal elements in Russian specificationals cannot move into an A-

[36] Predicationals where predicative DPs precede referential DPs are called 'predicate fronting constructions' in Heycock and Kroch (1998). According to Heycock and Kroch (1998), predicate DP in predicational can undergo A'-movement, namely movement to Spec CP. In that case, T agrees with post-copular DP in Spec TP. They regard this construction as one and only possible predicate movement among copular constructions, and they call it predicate fronting construction.

(i) Delinquency is a menace to our society. Also a menace to our society **are**/*is **factory closings and fascist propaganda**. (Predicational / *Specificational)

position, namely Spec TP. Before we discuss Russian data, let's review on the test in Mikkelsen (2005). Mikkelsen (2005) conducted a test to find syntactic positions of two types of inverted predicates in Danish copular sentences; first type is inverted predicates from specificationals, and the other type is those from predicationals. In Danish, (59) has ambiguous meanings between predicationals and specificationals.

(59) Inverted predicate construction in Danish

Den	højeste	spiller	pa	holdet	er	Minna
The	tallest	player	on	team-DEF	is	Minna

'The tallest player on the team is Minna (Specificational)' or
'Minna is the tallest player on the team (Predicational)'

However, when negation *ikke* is included in the sentence, such ambiguity disappears. Syntactic distributions between subject *Minna* and *ikke* are different in each construction. When the negation *ikke* 'not' precdeds the referential DP *Minna*, the sentence is interpreted as a specificational sentence, as in (60a), On the other hand, when it is interpreted as predicational sentence, *Minna* precedes *ikk*, as in (60b). Unless we assume downward movement of a negation *ikke*, it is natural to conclude that in predicational sentences (60b), the logical subject *Minna* moved to Spec TP across the negation *ikk*. In addition, the inverted predicate *Den højeste spiller pa holdet* 'the tallest player on the team' moved in Spec CP along with T to C movement of the copula, *er*.

(60) a. Den højeste spiller pa holdet er ikke Minna.
The tallest player on team-DEF is not Minna
'The tallest player on the team is not Minna.' *specificational*

b. Den højeste spiller pa holdet er Minna ikke.
The tallest player on team-DEF is Minna not
'Minna is not the tallest player on the team.' *predicational*

Though Mikkelsen's test was originally designed to investigate syntactic positions of pre-copular predicative DPs, I used this test to see the syntactic distribution of focal elements in specificationals. What makes this test interesting is the fact that specificational constructions in Russian show number and gender agreement between T and the post-copular DPs.[37] Therefore, in Russian, agreement patterns between specificationals and predicational sentences with inverted predicates are identical. Based on the fact, I could test whether focus interpretation could affect syntactic positions of referential DPs in specificationals and those in predicate fronting

[37] Partee (2010) argue that since in Russian, post-copular DP agrees with T in person, number, and gender, unlike English, it is natural to assume that syntactic subject of specificational sentence is post-copular DP, and pre-copular DP is inverted predicate which has been moved into some left peripheral position.

(i) a. The pictures of the wall *was / were the cause of the riot.
b. The cause of the riot was / *were the pictures of the wall

(ii) Russian
a. Pricˇinoj avarii *byla /byli neispravnye tormoza.
reasonSg.$_{\textbf{Fem.Ins}}$ of-accident wasSg.$_{\textbf{Fem}}$/were.$_{\textbf{Pl}}$ broken brakes.$_{\textbf{Pl}}$
'The reason for the accident was broken brakes'.
b. Edinstvennyj, kto stal na nasˇu storonu, *byl /byla Varvara
only-person.$_{\textbf{Masc.Nom}}$ who came to our side was$_{\textbf{Masc}}$/was$_{\textbf{Fem}}$ Barbara$_{\textbf{Fem}}$
'The only person who defended us was Barbara'.

constructions.[38] Through some tests, it turned out right. While *John* in predicationals can precede negation *ne* 'not', or adverbial *vsegda* 'always', as in (61a) and (61b), specificationals show different patterns. Focal elements *John* can precede neither *vesgda* 'always' nor *ne* 'not', as in (62b), (62d).

(61) Predicate fronting constructions (predicationals)

a. Moim luchshim drugom **John ne** byl (On byl prosto moim kollegoj)
My best friend$_{\mathbf{INS}}$ John neg was (he was just my colleague$_{\mathbf{INS}}$)
'John was not my best friend, he was just my colleague.'

b. Moim pomoshchnikom, **John** byl **vsegda**
My helper$_{\mathbf{INS}}$ John was always
'John was always my helper.'

(62) Predicate inversion constructions (specificationals)

a. Moim luchshim drugom byl **ne** **John** (a Peter)
My best friend$_{\mathbf{INS}}$ was neg John (but Peter)
'My best friend was not John, it is Peter.'

b. *****Moim luchshim drugom byl **John** **ne** (a Peter)
My best friend$_{\mathbf{INS}}$ was John neg (a Peter)

c. Moim pomoshchnikom **vsegda** byl **John**
My helper$_{\mathbf{INS}}$ always was John

d. *****Moim pomoshchnikom byl **John** **vsegda**
My helper$_{\mathbf{INS}}$ was John always
(Geist, via P.C with Partee)

[38] The issue on Case licensing remains as a residue in my thesis. Therefore, at this moment, I assume DPs which do not show phi-feature agreement with T may have inherent Case.

In Russian, two types of constructions -specificationals and predicate fronting constructions- look alike in the way that T agrees with post-copular DPs in number and gender. However, a single difference in focus interpretation makes them have different distribution.[39] Based on newly discovered phenomenon through (61)-(62), this thesis suggests that identificational focus located in Spec Low FocP cannot move into the higher A-position such as Spec TP since any movement from an A'-position into an A-position is strictly forbidden under Improper Movement (Chomsky 1986).

4.1.3 Consequence: Feature Inheritance[40]

The fact that referential DPs in specification sentence cannot move to Spec TP automatically leads to the following reasoning; It would be only predicative

[39] I acknowledge that Russian data (61)-(62) are not sufficient enough to support the argument. There need a lot of discussion on the distribution of each elements. Moreover, it may be inappropriate to test whether a focal DP can move in Spec TP or not with Russian data since this language does not require obligatory movement into Spec TP for agreement with T. And the fact negation cannot be left alone in Russian might lead to the ungrammaticality of (62b). Despite the facts, however, I believe it is worth to prove that logical subjects having identificational focus behave differently from any other subjects which do not have such focus even in a language where post-copular DPs can agree with T in specificationals as well as in predicationals.

[40] I adopt the term 'feature inheritance' from Miyagawa (2010). In the work, a concrete implementation of Chomsky's (2001) Uniformity Principle is proposed. Miyagawa argues that every language contains the same set of grammatical features; these features include the discourse features of topic and focus, and they all initially occur on C. The difference between an agreement-based language such as English and a discourse-configurational language such as Japanese is in the feature that is inherited by T: in the English-type, the agreement feature is inherited by T while in the Japanese-type the discourse features are inherited by T. However, this paper is different from Miyagawa in arguing that even agreement-based language such as English shows discourse feature inheritance from C to T.

DPs that could fill Spec TP in order to satisfy EPP (Extended Projection Principle, Chomsky 1981) requirement on T. This prediction turns out to be true in English. In specificationals, predicative DPs located in pre-copular position agree with T in number, while referential DPs in post-copular position do not agree with T, as in (63a).[41] In addition, when post-copular DPs agree with T, as in (63b), then such constructions are interpreted as rather predicationals which Heycock and Kroch refer to as predicate fronting constructions.

(63) a. [$_{CP}$[$_{TP}$**The biggest problem is** [$_{LowFocP}$those parents]] **Predicational/Specificational*

b. [$_{CP}$The biggest problem **are** [$_{TP}$**those parents**]] *Predicational/*Specificational*

At this point, I would like to raise a question. Is it a coincidence or consequence that predicative DPs in specificationals move to Spec TP? According to Mikkelsen (2005), it is a coincidence; when T has an [*u*topic] feature, then a predicative DP which has an [*i*topic] feature moves Spec TP. Otherwise, if T does not have an [*u*topic] feature, then a referential DP moves to Spec TP, yielding predicational sentences. This thesis, however, answers the question saying "It is a consequence." I strongly suggest that topicalization

[41] Since the scope of this thesis is not dealing with whether Russian has EPP or not, I simply adopt a claim that Russian does not have EPP. Among others, I refer to Bailyn (2003), which argues that Russian differs from English and other languages in its ability to check the EPP by any argument and not just a Nominative subject or Locative PP predicated of the Nominative subject.

of predicative DPs into Spec TP is a result of an intended syntactic operation to satisfy EPP on T. To be specific, I assume that in specificational constructions, an [*u*topic] feature is originally generated in C. But it should be inherited from C to T for some reason. Since referential DPs in Spec Low FocP are unable to move to Spec TP (due to Improper Movement), there is no way to satisfy EPP on T with referential DPs. This thesis suggests such problem can be solved by feature inheritance from C to T. I suggest that an [*u*EPP] on T can be deleted by predicative DPs if and only if an [*u*topic] feature is inherited from C to T as a last resort to satisfy EPP on T.

Based on the suggestions that an [*u*topic] feature is originally merged in C and predicative DPs are topicalized into Spec TP by the inherited [*u*topic] feature from C to T, we can integrate various yet related phenomena. The first is topicalization in copular sentences and that in non-copular sentences. Object topicalization in non-copular constructions, as in (64a), differs from topicalization of predicative DPs in copular constructions, as in (64b).[42]

(64) a. [$_{\mathbf{CP}}$Those books, [$_{\mathbf{TP}}$**John has** read _ three times]]

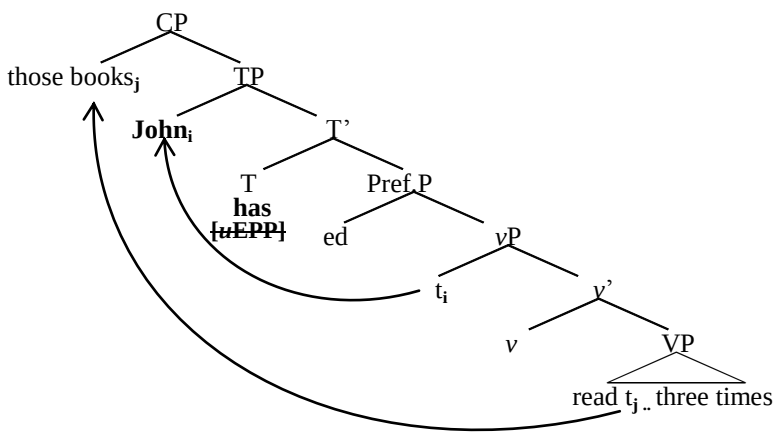
b. [$_{\mathbf{CP}}$ [$_{\mathbf{TP}}$**The biggest problem is** those parents]]

[42] To explain why topicalized object cannot moves to Spec TP, Mikkelsen suggests that uninterpretable feature on T, such as EPP, cannot be satisfied by object DP which already has its case feature valued by *v* and becomes inert for feature interaction with T. Consequently, topicalization of object should be attracted by C while T enters into the Agree relation with the subject. In this way, Mikkelsen divides attractors into two types; C for object topicalization in non- copular construction, and T for predicate topicalization in copular sentence.

I suggest that an [*u*topic] feature is merged on C both in transitives (64a) and specificationals (64b). However, the two constructions differ in the way to satisfy EPP requirement on T. In transitive, EPP requirement on T can be satisfied by subject DPs such as *John* as depicted in (65b).

(65) a. [$_{\mathbf{CP}}$Those books, [$_{\mathbf{TP}}$ **John has** read _ three times]]

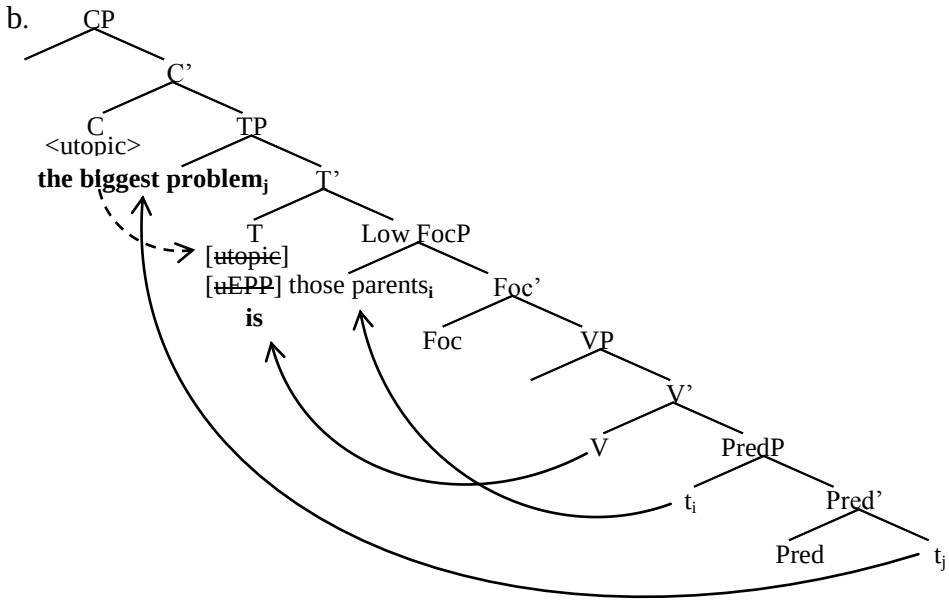
b.



On the other hand, in specificational sentences, the only thing available to satisfy EPP requirement on T is a predicative DP (Note that a referential DP in A'-position cannot move to A-position). Therefore, as a last resort, feature inheritance from C to T takes place so that topicalization of a predicative DP and the deletion of an uninterpretable EPP feature on T can occur at the same time, as depicted in (66b).

(66) a. [$_{CP}$ [$_{TP}$**The biggest problem is** those parents]]

b.



Next is about pre-copular predicative DPs in two copular constructions, namely specificationals and predicationals. They differ in the places where these predicative DPs are located. In specificationals, the inverted predicate *the biggest upset* is in Spec TP seeing that it agrees with T in number, as in (67b). But in predicationals, the fronted predicate *the biggest upset* moves to Spec CP across the referential DP *those parents* in Spec TP which agree with T, as in (67a).

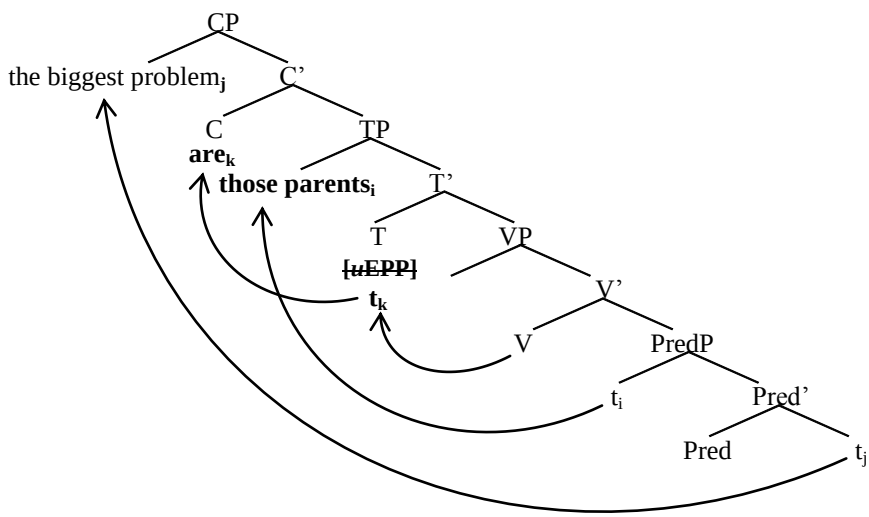
(67) a. [$_{CP}$The biggest problem, **are** [$_{TP}$ **those parents**]] *Predicational/ *Specificational*

b. [$_{CP}$ [$_{TP}$**The biggest problem is** those parents]] **Predicational / Specificational*

This thesis argues that the differences result from different informational status of referential DPs between two constructions. In predicational sentences, referential DPs do not have focus information, so they move to Spec TP in order to satisfy EPP on T. In the meantime, predicative DPs which have contrastive focus interpretation (Heycock and Kroch 1998, 1999) move to Spec CP/FocP for its interpretational requirement, as depicted in (68b).[43]

(68) a. [$_{CP}$The biggest problem, **are** [$_{TP}$ **those parents**]] *Predicational/ *Specificational*

b.

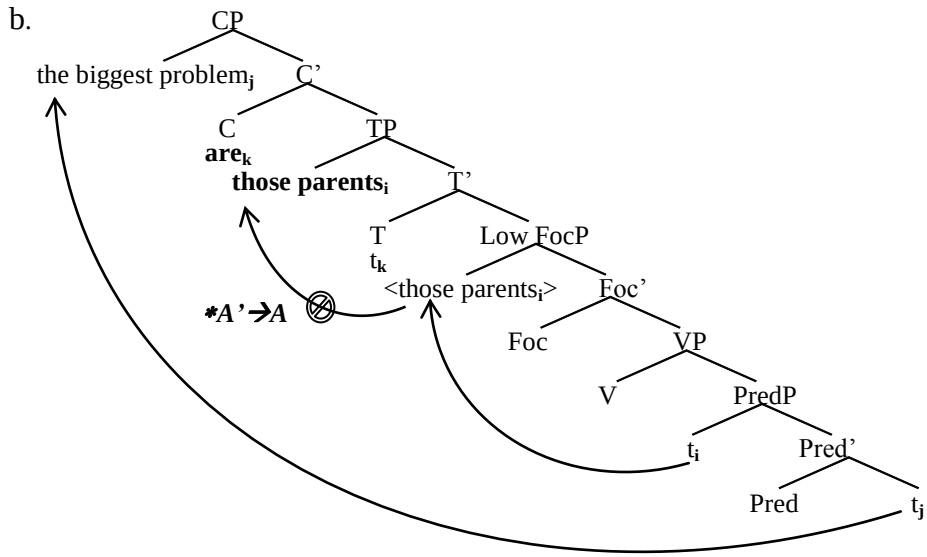


In specificational sentence, the referential DP in LowFocP cannot move into A-position, as in (69b). That is why post-copular DPs in specificational sentences cannot agree with T while those in predicationals can, as we observed in (67b).

[43] Note than in predicationals, predicative DPs with contrastive focus are allowed to be located in pre-copular position, yielding predicate fronting constructions (Heycock and Kroch 1998).

(69) a. [$_{CP}$The biggest problem, **are** [$_{TP}$ **those parents**]] *Predicational/ *Specificational*

b.



The new suggestions that an [*u*topic] feature is originally generated in C and topicalization of predicative DPs into Spec TP is a consequence of feature inheritance from C to T - can elaborate Mikkelsen (2005)'s work, as well. By providing supporting evidence of postulating an [*u*topic] on T in specificationals, the question how T could have an [*u*topic] in the first place can be answered; it is the consequence of intended syntactic operations, not just a coincidence.[44]

[44] This thesis agrees on the ideas such as Predicate Inversion, topicalization, Predicate Raising, etc. However, this thesis argues that specificational sentences are not inverse predicational sentences. Since I postulate Low FocP in specificationals, syntactic structure of specificationals is totally different from that of predicationals which does not involve Low FocP.

4.2 Analysis

4.2.1 RM effect on Predicate Inversion

Locality condition is surely one of the most important factors which must be considered in studies of inverse copular constructions. Since Predicate Inversion inevitably passes potential candidates, namely referential DPs, it should be mentioned how Predicate Inversion can take place without violating locality condition. For example, Phase Extension (Den Dikken 2006), reviewed in 2.2, may be one of the most articulated explanations. The attempt, however, was proved to be inadequate to explain unexpected grammatical bare *wh*-questions, as (54) and reappears in (70b).

(70) a. *__Whose arrest__ do you think [the biggest upset was _]?

b. __What__ do you think [the biggest upset was _]?

Therefore, this thesis proposes another possible approach: It is not absolute distance but relative distance that is pertinent to evaluate locality in Predicate Inversion. I hypothesized that specificational sentences involving complex *wh*-phrases are ungrammatical not because inappropriate *wh*-movement has occurred, but because inappropriate Predicate Inversion has already occurred.

This thesis adopts a notion of (General) Relativized Minimality (Rizzi 1990, 1997, 2004). Rizzi argues that in a configuration such as (71a), Y cannot

be related to X if Z intervenes and Z has certain characteristics in common with X, which means Minimality in syntactic derivation is relativized to the nature of the structural relation to be established.

(71) Relativized Minimality (Rizzi 1990)

a. X . . . Z . . . Y

b. A local relation cannot hold between X and Y when Z intervenes, and Z is somehow a potential candidate for the local relation.

The following example demonstrates RM effect in syntactic derivation, in which certain structural environments block chain formation. In (72b), *wh*-chain formation from adverbial position to Spec of matrix CP is failed. Under the RM, the ungrammatical *wh*-movement of *how* in (72b) can be explained; a chain cannot connect *how* and its trace because another *wh*-element intervenes in the embedded Spec CP.

(72) a. I wonder who could solve the problem in this way

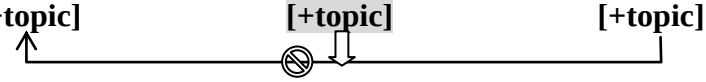
b. *How do you wonder who could solve this problem <how>?

I noticed that such locality condition depending on Relativized Minimality suits the locality issue around Predicate Inversion, perfectly. In order to understand how Relativized Minimality (RM) is relevant to specificational sentences, two factors should be considered. First, the

motivation of Predicate Inversion can be explained by **topicalization** of predicate into Spec TP (Mikkelsen 2005). Second, the problematic complex *wh*-phrases such as *whose x, which x* are **topic**-like discourse linked (D-linked) *wh*-phrases. In this condition, topicalization of predicative DPs across D-linked *wh*-phrases violates the RM, as illustrated in (73a), (73b). However, when non-D-linked elements, such as bare *wh*-phrase *what*, are involved in the derivation, as in (73c), Predicate Inversion does not violate the RM.

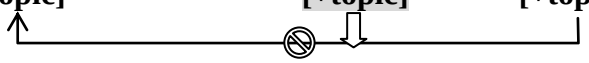
(73) a. *Predicative DP . . . D-linked *wh*-phrase. . . <Predicative DP>

[+topic] **[+topic]** **[+topic]**



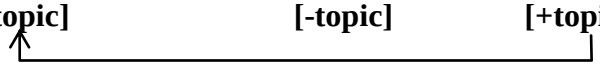
b. * **the biggest upset$_i$** was **whose arrest** **t$_i$**?

[+topic] **[+topic]** **[+topic]**



c. **the biggest upset$_i$** was what **t$_i$**?

[+topic] **[-topic]** **[+topic]**



A new generalization on movement phenomena in specificationals is made; when intervening referential DPs have the same informational property as topicalized predicates, such derivation is ruled out under RM:

(74) ***Relativized Minimality effect in specificational copular constructions***

Topical predicative DPs cannot move across D-linked *wh*-phrases in the derivation of Predicate Inversion.

4.2.2 Solution to *wh*-movement puzzle

In section 3, I presented puzzling *wh*-extraction phenomena. While complex *wh*-phrases are not extractable from post-copular position in specificational sentences, bare *wh*-phrases can be extracted from the same position, as in (75b). Since none of previous studies properly can explain such unexpected grammatical bare *wh*-questions, I called it *wh*-movement puzzles in specificationals, as in (76).

(75) a. ***Whose arrest** do you think the biggest upset was _?
b. **What** do you think the biggest upset was _?

(76) ***Wh*-movement puzzle in specificationals**

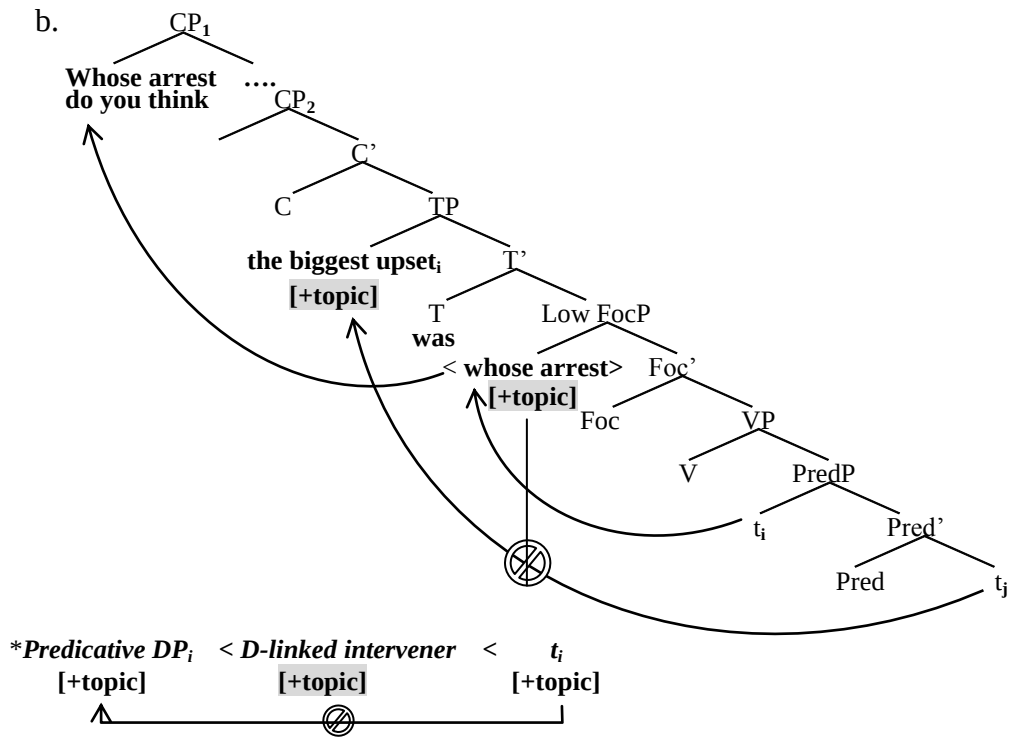
Bare *wh*-phrase extraction contradicts the presumed assumption that post-copular constituents are frozen in place after predicate inversion.

Previous studies have focused on structural restrictions caused by Predicate Inversion which make A'-extraction of post-copular DPs impossible (*c.f.* frozenness of focal elements (Den Dikken 2006); ECP/Subjacency Condition (Moro 1997)). This thesis, however, suggests that Predicate Inversion does not freeze post-copular constituents. Instead, the ungrammaticality such as (75a) arises from inappropriate Predicate Inversion itself which violate the locality condition of Relativized Minimality. As

depicted in (77b), an intervening subject in Spec Low FocP with a [topic] feature blocks a local relation between an invert predicate in Spec TP and its trace left in Complement of PredP; **topicalization** of the predicative DP, *the biggest upset*, across the other **topical** element, *whose arrest*, causes the derivation ill-formed under the Relativized Minimality.

(77) a. *Whose arrest do you think the biggest upset was _?

b.

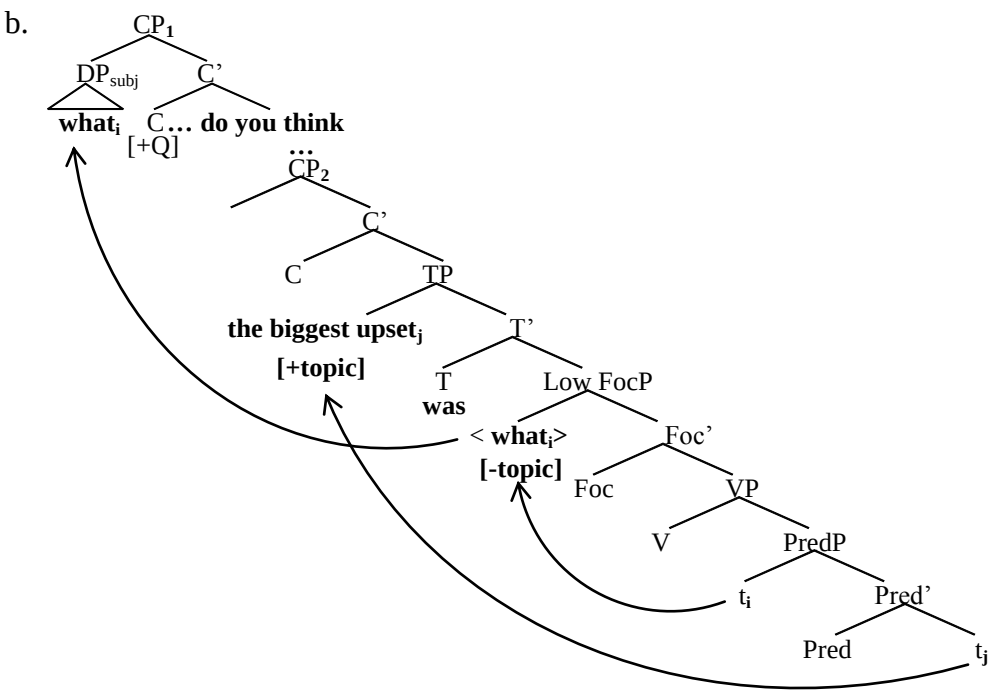


On the other hand, when subject is not D-linked *wh*-phrase, RM effect does not arise between topicalized predicate and focalized subject. Therefore, Predicate Inversion into Spec TP and *wh*-phrase movement to Spec CP are

compatible in the derivation, as in (78b). Topicalization of *the biggest upset* from Comp PredP to Spec TP does not induce any problem; since bare *wh*-phrase *what* does not have topic feature, Predicate Inversion across the non-topical element is free from RM. Within the derivation, *what* once moved to Low FocP of embedded clause undergoes further A'-movement to Spec CP of the matrix clause.

(78) a. What do you think the biggest upset was _?

b.



In (78b), topicalization of *the biggest upset* from Comp PredP to Spec TP does not induce any problem; since bare *wh*-phrase *what* does not have topic feature, predicate inversion is free from RM. Within the derivation, *wh*-movement of

bare *wh*-phrase *what* undergoes further A'-movement from Spec LowFocP to Spec CP.

Wh-movement puzzles in specificationals are now solved; the asymmetry in A'-extraction of complex *wh*-phrases and that of bare *wh*-phrases should be understood as the result of differences in structural environments for Predicate Inversion. In other words, ungrammatical sentences such as *whose arrest do you think the biggest upset was?* are not ruled out by inappropriate A'-movement, but by restriction on Predicate Inversion across an intervener D-linked *wh*-phrases.

5. *Wh*-in-situ and Specificational Constructions

Brazilian Portuguese (BP) specificationals show interesting word order patterns when in-situ *wh*-phrases are engaged. Although Brazilian Portuguese allows *wh*-in-situ questions, specificational copular constructions do not allow in-situ *wh*-phrases, as in (79b).

(79) a. O melhor jogador de futebol é Mateus
the best player of soccer is Matt

b. *O melhor jogador de futebol é **[qual brasileiro]**?
the best player of soccer is which Brazilian
'Which/what Brazilian is the best soccer player?' (Barros 2010)

One who defenses frozenness of focus elements (Den Dikken 2006, discussed in 2.2.2) may attribute the ungrammaticality of (79b) to the occurrence of illegitimate *wh*-movement in specificational constructions; Predicate Inversion freezes any movement -covert as well as overt- of focus elements. Based on the following Chichewa data (80), however, Den Dikken (2006) already concluded that Predicate Inversion does not restrict covert (or LF) *wh*-movement of focal elements.[45] In (80a), an argument *nkhandwe* 'fox' is

[45] "That conclusion still leaves room for the possibility that the *wh*-features of the in-situ *wh*-phrase move at LF, via feature movement (Chomsky 1995)" (Den Dikken 2006:131)

located after a locative phrase *pa-m-chenga* ‘on the sand’ and a verb *p-a-im-a* ‘stand’.[46] Surprisingly, in- situ *wh*-phrases such as *chi-yaˆni* ‘what’ in (80b) are compatible with inverted locative predicates. Accordingly, Den Dikken suggests that LF-movement of focus elements is exempted from the condition of frozenness of focus elements.

(80) a. pa-m-chenga p-a-im-a nkhandwe
16-3-sand sm:16-perf-stand-ind 9fox
‘On the sand is standing the fox.’

b. kodı´ pa´-m-chenga p-a-im-a chi-yaˆni?
Q 16-3-sand sm:16-perf-stand-ind 7-what
‘On the sand is standing what?’ (Chichewa)

Since the attempt to rely on the restriction of *wh*-extraction in inverse constructions failed, we need to find alternative to explain ungrammaticality in (79b). The question “Why do in-situ *wh*-phrases in Brazilian Portuguese specificational constructions, as in (79b), behave differently from those in Chichewa locative inversion constructions, as in (80b)?” can be answered under the generalization (74), reappears in (81).

[46] Den Dikken assumes that such locative inversion constructions are derived by Predicate Inversion.

(81) ***Relativized Minimality effect in specificational copular constructions***

Topical predicative DPs cannot move across D-linked *wh*-phrases in the derivation of Predicate Inversion.

Under the generalization, a prediction about syntactic distribution of in-situ *wh*-phrases and inverted predicates is made; in-situ topical D-linked *wh*-phrases cannot be preceded by topical predicative DPs while in-situ non-topical *wh*-phrases are compatible with topical predicative DPs. This prediction is borne out with (79b) - reappears in (82b) - and (82c), respectively. Contrary to in-situ *wh*-phrase *qual brasileiro* 'which Brazilian' in (82b), in-situ *wh*-phrase *quem* 'who' can be preceded by topical predicative DP *O melhor jogador de futebol* 'the best soccer player', as in (82c).

(82) a. O melhor jogador de futebol é Mateus
the best player of soccer is Matt

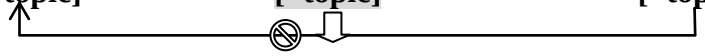
b. *O melhor jogador de futebol é **[qual brasileiro]**?
the best player of soccer is which Brazilian
'Which/what Brazilian is the best soccer player?'

c. O melhor jogador de futebol é **quem**?
the best player of soccer is who
'Who is the best soccer player?' (a native BP speaker)

Under the analysis based on the RM, asymmetry between (82b) and (82c) can be analyzed as follows: *O melhor jogador de futebol* 'the best player of soccer' cannot move across another topical element, *qual brasileiro* 'which Brazilian' which intervenes the path of Predicate Inversion, as depicted in (83a), (83b).

(83) a. *****Predicative DP . . . D-linked *wh*-phrase. . . <Predicative DP>

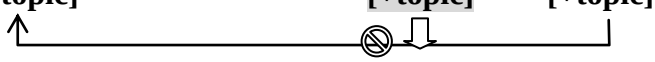
[+topic] **[+topic]** **[+topic]**



b. * [O melhor jogador de futebol] é **[qual brasileiro]** **t_i**?

'the best player of soccer' 'is' 'which Brazilian'

[+topic] **[+topic]** **[+topic]**



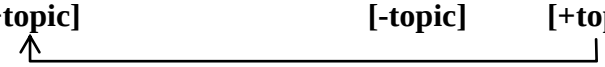
'Which/what Brazilian is the best soccer player?'

On the other hand, this intervention effect does not happen when Predicate Inversion occurs across non-topical element, *quem* 'who', as in (84).

(84) [O melhor jogador de futebol] é **quem** **t_i**?

'the best player of soccer' 'is' 'who'

[+topic] **[-topic]** **[+topic]**



'Who is the best soccer player?'

In this way, the new generalization can be strengthened with evidence from BP. When we investigated English copular constructions, intervention effect in Predicate Inversion was hard to be detected. For the language is one of overt *wh*-movement languages, complex *wh*-phrases such as *whose arrest* cannot stay in- situ. Accordingly, it was hard to discern whether the ungrammaticality comes from illegitimate *wh*-movement or illegitimate Predicate Inversion. On the other hand, in Brazilian Portuguese, syntactic environment between grammatical *wh*-questions and ungrammatical *wh*-questions can be distinguished within minimal pair differences; inverted predicates before either in-situ complex *wh*-phrases or in-situ bare *wh*-phrases.

6. Conclusion

This thesis investigated movement phenomena in specificationals which show unpredicted grammaticality under previous studies. In specificationals, bare *wh*-phrases are extractable from the post-copular position where previously has been assumed as a syntactically frozen place. In order to solve the puzzle, this thesis set two goals: 1) to provide an alternative syntactic structure of specificational sentences with which we can explain asymmetry between immobile complex *wh*-phrases and mobile bare *wh*-phrases, 2) to distinguish syntactic environment involving complex *wh*-phrases from those where bare *wh*-phrases are included.

The first goal, about a syntactic structure of a specificational sentence, was realized as a suggested structure where both 'topicalization of predicate DPs with a [+topic] feature' and 'focalization of referential DPs with a [+identificational focus]' co-occur. With this newly suggested structure, I explained why A-movement of focus elements is restricted in specificational sentences; since elements with [+identificational focus] underwent 'focalization' into an A'-position (Spec Low FocP), they cannot move into an A-position such as Spec TP according to Improper Movement (Chomsky 1986). Based on the assumption, this thesis suggested the possibility of [*u*top] feature inheritance from C to T as a last resort to satisfy the EPP requirement.

Accordingly, I concluded that topicalization of predicative DPs into Spec TP is not a coincidence, but a consequence of feature inheritance. In this new perspective, various inverse constructions such as object topicalization in non-copular constructions, predicate fronting in predicationals, and Predicate Inversion in specificationals could be explained in a rather unified way.

Next goal was to analyze the asymmetry between *wh*-extraction of complex *wh*-phrases and that of bare *wh*-phrases. While previous approaches were dedicate do find syntactic environment to restrict A'-extraction of post-copular DP in specificationals, This thesis provided a new perspective; ungrammaticality in specificationals can be detected regardless of *wh*-movement since there is another movement whose acceptability varies depending on the properties of intervening arguments. Predicate Inversion across *wh*-phrases in Spec Low FocP is the very case. This thesis paid attention to the discourse properties of inverted predicates and referential *wh*-phrases. D-linked complex *wh*-phrases such as *whose arrest* as well as inverse predicates such as *the biggest upset* are both topical elements which entail presupposition. On the other hand, bare *wh*-phrases such as *what* are irrelevant with such topicality. Based on the fact, this thesis investigated the implication of Predicate Inversion over referential *wh*-phrases when *wh*-extraction has not occurred yet. In specificational constructions with complex *wh*-phrases, a predicative DP is topicalized over another topical element, complex *wh*-phrase in Sec Low FocP (before *wh*-extraction occurs). On the other hand, when bare

wh-phrases are involved, topicalization of a predicative DP crosses a non-topical bare *wh*-phrase which is situated in Spec Low FocP. Rizzi's Relativized Minimality can explain why specificationals with complex *wh*-phrases are ungrammatical; an in-situ complex *wh*-phrase interrupts a chain between an inverted predicate and its copy. In other words, Predicate Inversion occurred within an inappropriate condition is the very cause to lead the sentence ungrammatical. In this way, we could distinguish syntactic environments of Predicate Inversion between complex *wh*-phrases and bare *wh*-phrases.

Based on the analysis, a new generalization around movement in specificational constructions was made: Topical predicative DPs cannot move across D-linked *wh*-phrases in the derivation of topicalization. As one of *wh*-in-situ languages, Brazilian Portuguese (BP) proved that the new generalization is able to properly predict syntactic distribution of inverted predicates and *wh*-phrases in specificational copular constructions. Despite of the fact that BP is one of *wh*-in-situ languages, in-situ D-linked *wh*-phrases are not allowed to be preceded by pre-copular predicative DPs.

Remaining issue is to prove how predicative DPs with a [+topic] are compatible with topical D-linked *wh*-phrases in Korean (For detailed data, see Appendix). In this language, interestingly, pre-copular predicative DPs can precede even D-linked *wh*-phrases, contrary to Brazilian Portuguese and English. Hypothetically, in fact, predicative DPs can appear in front of D-

linked *wh*-phrase if and only if an [*u*topic] feature on C can be deleted without topicalization of predicative DP. One way is to postulate an external merge of topical DPs into Spec CP and semantically vacuous predicates such as *pro*-predicate in SC (or PredP). In S.-W. Kim (2012), the possibility of inverse copular constructions whose pre-copular DPs are *pro*-predicate (optionally pronounced as *kukes* 'it' in Korean) was proposed. In the further research, if topical DPs in Korean specificationals can be proved to have been externally merged, then this thesis's argument that movement in specificational copular constructions is regulated by the Relativized Minimality will be more strengthened.

Appendix: Korean specificational constructions

In Korean, predicative DPs can precede D-linked *wh*-phrases, as in (1b).

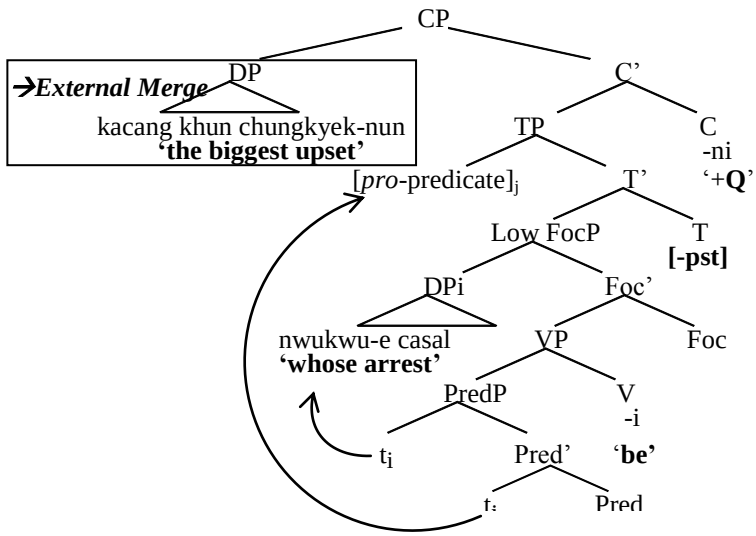
(1) a. kacang khun chungkyek-nun **Chulswu-e** **casal** -i-da
the biggest upset/shock-TOP Chulswu's suicide -COP –Dec
'The biggest upset/shock is Chulswu's suicide'

b. ne-nun [kacang khun chungkyek-un **nwukwu-e casal**-i-rako]
you-TOP the biggest upset/shock-TOP whose suicide-COP-COMP
saengkakha- ni?
think-Q
'(*in English), whose suicide do you think the biggest upset was?'

Adopting S.-W. Kim (2010, 2012), I propose that Korean specificational constructions involve Predicate Inversion of a *pro*-predicate and external merge of a topical DP, as in (2b).

(2) a. kacang khun chungkyek-un (kukes-i) nwukwu-e casal-i-ni ?
the biggest upset/shock-TOP (*pro*-NOM) whose suicide-COP-Q
‘(in English), * the biggest upset was whose suicide?’

b.



In this structure, D-linked *wh*-phrase does not function as an intervener of Predicate Inversion since such *pro*-predicate is semantically null argument.

This thesis, however, found that it is more natural to have *kukes* ‘it’ with topic marker ‘*-un*’ than with nominative marker ‘*-i*’, as in (3a) and (3b).

(3) a. #kacang khun chungkyek-un (kukes-i) nwukwu-e casal-i-ni ?
the biggest upset/shock-TOP (*pro*-NOM) whose suicide-COP-Q

b. kacang khun chungkyek-un (kukes-un) nwukwu-e casal-i-ni ?
the biggest upset/shock-TOP (*pro*-TOP) whose suicide-COP-Q
‘(in English), * the biggest upset was whose suicide?’

I am still working on the exact syntactic property of *pro*-predicate. At this point, I tentatively assume such preference of a topic maker over a nominative maker is predictable when we assume the *pr*o-predicate requires to be licensed by the topical elements which are externally merged into Spec CP. However, when we assume topical status of *pro*-predicate, the issue of intervention effect caused by topicalization of a predicate over another topical intervener should be re-considered. This topic remains as one of the most challenges in this thesis and will be dealt in the future research.

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국문초록

한정적계사 구문의 이동현상 연구

본 논문은 한정적계사 구문(specificational copular constructions)에서 나타나는 의문사이동 비대칭 현상에 대하여 분석함으로써 한정적계사 구문의 통사 구조와 서술어 도치(Predicate Inversion) 현상의 원리와 제약을 밝히는 것을 목표로 한다. 기존 연구에서 *The biggest upset was John's arrest* 와 같은 한정적계사 구문의 의문사 이동 제한 현상은 서술어 도치 가 있다는 증거로 사용되어왔다 (Moro 1997, Den Dikken 2006 등). 그러나 본 논문은 한정적계사 구문에서 의문사 이동이 가능하다는 것을 입증함으로써 서술어 도치와 의문사 이동의 관계를 새롭게 정립할 필요가 있음을 주장한다. 본고는 ***Whose arrest*$_i$** *do you think the biggest upset was* t_i*?* 와 같이 복합 *wh*-의문사(which/whose NP)의 이동은 엄격히 제한되는 반면, 의문대명사(what, who)가 이동한 ***What*$_i$** *do you think the biggest upset was* t_i*?* 가 정문인 이유를 설명하기 위하여 다음과 같은 제안을 한다.

첫째, 서술어 도치는 주제성 자질(topic feature)을 가진 서술어구의 주제화(topicalization)로 볼 수 있으며, 기존 연구의 주장과는 달리 의문사 이동을 제한하지 않는다. 본고는 서술어 도치가 일어나도 의문사의 이동이 가능하다는 가능성을 제안함으로써 의문대명사의

이동 현상을 이론적으로 예측 가능한 현상으로 본다. 또한 주제성 자질을 한정적 구문의 통사 구조에 포함시킴으로써 의문사 이동 비대칭 현상을 설명할 수 있는 통사적 환경을 마련하였다.

다음으로, 본고는 상대적 최소성 (Relativized Minimality)의 관점에 근거하여 화맥에 연결된 (D-linked) 복합 *wh*-의문사는 서술어 도치 과정에서 간섭 효과 (intervention effect)를 일으킬 수 있음을 주장한다. 이는 도치된 서술어(inverted predicate)와 복합 *wh*-의문사가 같은 주제성 자질을 가지고 있기 때문이다. 이로써 복합 *wh*-의문사가 포함된 한정적계사 구문이 비문인 이유는 서술어 도치와 간섭 효과의 상호 작용으로 보아야 한다는 새로운 시각을 제시한다.

마지막으로, 본 논문은 한정적 계사 구문의 초점 자질 (focus feature)은 확인초점(identificational focus)이며 운율로 실현되는 정보초점(information focus)과는 달리 통사 구조 내에서 이동을 통해 해석됨을 주장한다. 이로써 한정적계사 구문은 주제화와 초점화 이동을 모두 포함한 통사 구조를 가지게 되며 초점화 이동을 포함하지 않은 다른 주제화 구문과 구분됨을 보인다.

Keyword: 계사 구문, 한정적계사 구문, 서술어 도치, 의문사 이동, 상대적 최소성, 확인초점

학번: 2010-20030