

ON SYMMETRIC ASPECTS OF GRAMMAR

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Symmetry in Syntax: Merge, Move, and Labels, by Barbara Citko, Cambridge University Press, Cambridge, 2011, xii+276pp.

Contrary to the traditionally accepted view that asymmetric relations are the core relations of the language faculty (Chomsky (1995, 2000, 2008), Kayne (1994), Moro (2000), Di Sciullo (2002, 2005)), Citko's *Symmetry in Syntax: Merge, Move, and Labels* investigates three fundamental syntactic mechanisms, i.e. Merge, Move, and Labeling, arguing that all three can also be symmetric under well-defined circumstances. After providing an overview of each chapter of the book, this article explicates puzzling dual selections in CP layers of Japanese, Korean, and Spanish, and presents a way of accommodating them under Citko's theory of symmetric labeling.*

Keywords: *symmetry, asymmetry, Merge, Move, Label*

1. Introduction

The main goal of Barbara Citko's *Symmetry in Syntax: Merge, Move, and Labels* is to investigate symmetric aspects of three fundamental syntactic mechanisms: Merge (External Merge), Move (Internal Merge), and Labeling. Contrary to the claims that asymmetric relations are the core relations of the language faculty (Chomsky (1995, 2000, 2008), Kayne (1994), Moro (2000), Di Sciullo (2002, 2005)), Citko argues that there exist symmetric relations in the mechanisms of Merge, Move, and Labeling. This book

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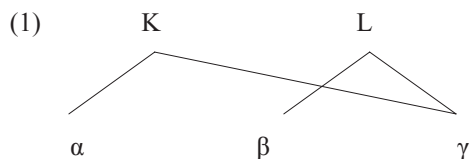
is certainly an indispensable reading not only for scholars interested in the structure of questions, relative clauses, coordination, double object constructions, and copular sentences but also for those seriously concerned with the basic architecture of the language faculty. The organization of this article is as follows. Section 2 presents a summary of this book, explicating symmetry in Merge, Move, and Labeling. Section 3 investigates further consequences of Citko's symmetric labeling by looking at CP layers in Japanese, Korean, and Spanish. I will show that CP layers in these languages involve dual selections in the sense that a matrix predicate syntactically and semantically selects different heads within a CP domain simultaneously. I will then suggest a way of accommodating the hitherto unexplained dual selections under Citko's theory of symmetric labeling and point out residual issues that need further investigation. Section 4 presents the concluding remarks.

2. An Overview

Chapter 1, "Rationale," first provides a general introduction to the concepts of symmetry, asymmetry and antisymmetry. It then provides an overview of the minimalist program, the theoretical framework assumed throughout this book, closely investigating three fundamental syntactic mechanisms, i.e. Merge, Move, and Labeling. Chapter 2, "Asymmetry in syntax," reviews both empirical and theoretical reasons behind the claim that syntactic structures, operations, and relationships are fundamentally asymmetric, focusing on the asymmetric properties of Merge, Move, and Labeling. Chapter 3, "Symmetric Merge," provides both theoretical and empirical arguments in favor of a particular symmetric structure, the multidominant structure. Chapter 4, "Symmetric Move," presents evidence for symmetric movement, i.e. a type of movement that can target two elements in a given structure with equally grammatical results. Chapter 5, "Symmetric labels," argues in favor of the existence of symmetric labels in grammar. Chapter 6, "Conclusion," offers a brief summary and some general thoughts on the nature and origin of symmetry and asymmetry in grammar. In the following subsections, I will explicate symmetric Merge, Move, and Labeling in more detail.

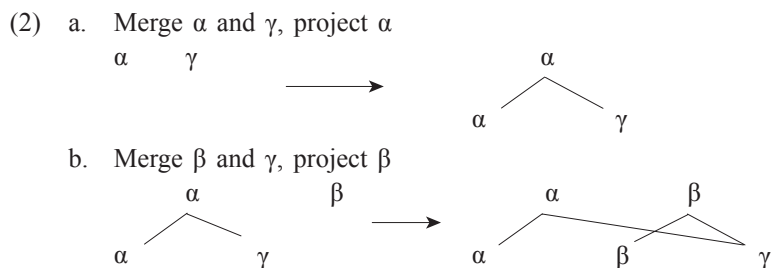
2.1. Symmetric Merge

In a multidominant structure, a type of symmetric structure, one node has two mothers, as represented below (Citko (2011: 43)):

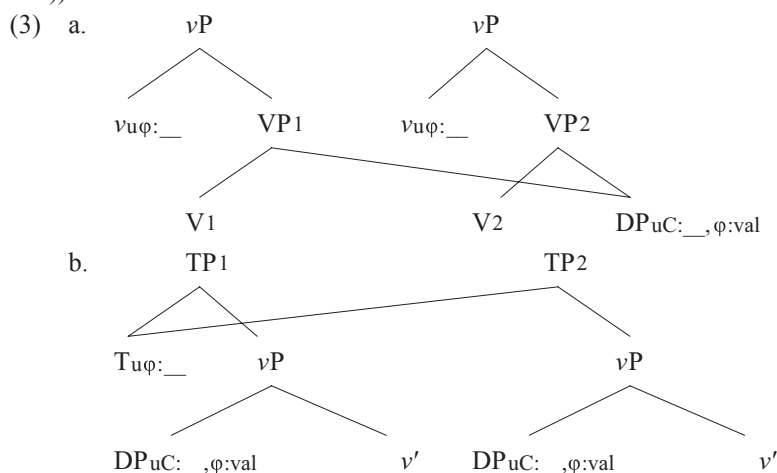


(1) is symmetric in the sense that α and β bear the same type of relationship to γ , which is called the pivot. Citko discusses how multidominant structures are generated, linearized, and have their features valued.

First, she argues that a multidominant structure is generated by Parallel Merge. Parallel Merge does not require any extra mechanism but combines the properties of Internal Merge and External Merge. As shown in (2a), α undergoes External Merge with γ . β undergoes Internal Merge with γ , as shown in (2b). γ becomes the pivot shared between α and β (Citko (2011: 44)):

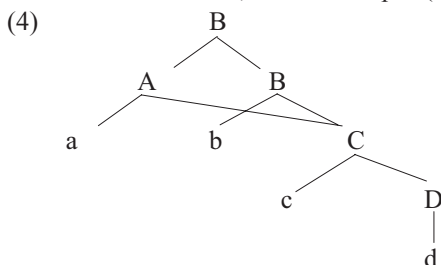


She then argues that features are valued in a multidominant structure in terms of Multiple Probe Agree (3a) or Multiple Goal Agree (3b) (Citko (2011: 48)):



In (3a), one goal (the shared object DP) has its case feature valued by two probes (two v heads) simultaneously and values the ϕ -features of the two v heads simultaneously. The shared DP receives two case values, each from a different v . This is not a problem if the two case values are identical. If they are distinct, however, this result is impossible unless the lexicon of the language contains an appropriate syncretic form. In (3b), one probe (the shared T) values case features on two goals (two subject DPs) and has its ϕ -features valued by the two subject DPs, which agree in ϕ -features.

Finally, Citko shows that there are many different ways to linearize the multidominant structure. One is to adopt Wilder's (1999) analysis, which makes the multidominant structure linearizable with relatively minor modifications to Kayne's (1994) LCA (Linear Correspondence Axiom). Let us consider multidominant structure (4), where C (and everything C dominates) is shared between A and B, as an example (Citko (2011: 53)):



If we assume Kayne's LCA, b asymmetrically c -commands c and d , and thus, b should precede c and d . Kayne defines the image of a category X to be the (unordered) set of terminals that X dominates. In (4), the image of A includes c and d . Since A , whose image includes c and d , asymmetrically c -commands b , it should follow from the LCA that c and d precede b . Since the linear ordering includes both $\langle b, c \rangle$, $\langle b, d \rangle$ and $\langle c, b \rangle$, $\langle d, b \rangle$, (4) violates the antisymmetric requirement in linear ordering, unless the shared element C undergoes overt movement or is null to begin with. Wilder, on the other hand, defines the image of a category of X to be the (unordered) set of terminals that X fully dominates, where the notion of full dominance is defined as below (Wilder (1999: 590–591)):

- (5) a. X fully dominates α iff X dominates α and X does not share α .
 b. α is shared by X and Y iff (i) neither X and Y dominates the other, and (ii) both X and Y dominate α .

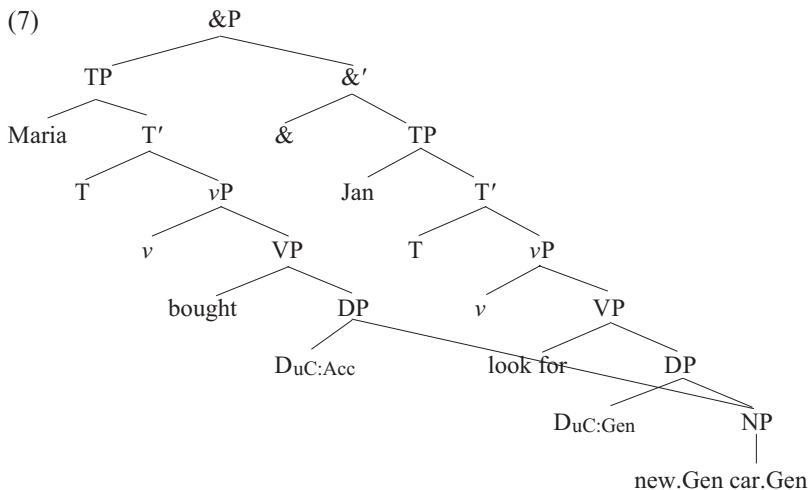
Under Wilder's modified LCA, A does not fully dominate c and d , and thus, the image of A does not include c and d . Asymmetric c -command of b by

A does not cause *c* and *d* to precede *b*; there is no antisymmetric requirement violation in (4). Let us consider how (3a, b) are linearized under Wilder's modified LCA. In (3a), since DP is shared by VP₁ and VP₂, it is not fully dominated by either VP₁ or VP₂. The terminals of DP are not included in the image of either VP₁ or VP₂. Hence, they are linearized only within the right-hand structure by the modified LCA; there is no antisymmetric requirement violation in (3a). Similarly, in (3b), since T is shared by TP₁ and TP₂, it is not fully dominated by either TP₁ or TP₂. T is not included in the image of either TP₁ or TP₂; T is linearized only within the left-hand structure. (3b) can be linearized without violating the antisymmetric requirement.

Citko argues in favor of symmetric Merge through investigating constructions that can be analyzed as multidominant; across-the-board *wh*-questions, questions with conjoined *wh*-pronouns, gapping, right node raising (RNR), standard and transparent free relatives, and serial verbs (Citko (2011: 15–16, 74)):

- (6) a. Across-the-board *wh*-questions
What did John write and Bill review?
- b. *Wh*-and-*wh* Questions
What and why did John eat?
- c. Gapping
John writes poems and Mary short stories.
- d. Right Node Raising (RNR)
Maria kupiła _____ a Jan szuka _____
Maria bought_{Acc} _____ and Jan looks-for_{Gen}
nowego samochodu. (Polish)
new.Gen car.Gen
'Maria bought and Jan is looking for a new car.'
- e. Standard Free Relatives
John reads whatever Mary writes.
- f. Transparent Free Relatives
John wrote what some might call a poem.
- g. Serial Verbs
ò dá sɛ la nɛné ɔɔ. (Dágáárè)
3Sg Past roast Fem meat eat
'He roasted the meat and ate it.'

Due to space limitations, I will look only at RNR. RNR is analyzed as a multidominant structure where NP is shared between two conjuncts. (6d), for example, is assigned structure (7) (Citko (2011: 76)):



One should notice that it is not DP but NP that is shared in (7). Given that case is a property of DPs, not NPs, Agree takes place between v and D. In (7), since there are two D heads, there are two instances of Agree. This leads to a case mismatch between the two D heads, i.e. the accusative case on the first D and the genitive case on the second D. The shared NP is assigned the same case as the second D. This follows from the property of concords; NP concords with the D with which it is spelled out. If DP were shared, on the other hand, the two DPs would have their case features valued by two v heads simultaneously in terms of Multiple Probe Agree; the two case values would have to be identical, contrary to fact. It should be noted that (7) is linearizable without violating the antisymmetric requirement if we adopt Wilder's modified LCA. This is because TP does not fully dominate the shared NP, and thus, the image of the former does not include the latter. Asymmetric c-command of *Jan* and *look for* by TP does not cause the shared NP *new car* to precede *Jan* or *look for*.

Citko presents the properties of RNR that favor the symmetric Merge analysis over alternatives involving movement, where the shared element undergoes rightward ATB movement. I will look at three of them that show that no movement is involved in RNR. First, RNR does not obey islands. (8) and (9) show that RNR does not obey the *wh*-island constraint or the complex NP constraint:

- (8) John wonders when Bob Dylan wrote ____, and Mary wants to know when he recorded ____ his great song about the death of Emmett Till. (Abels (2004: 5))

- (9) Mary knows a man who buys ____, and Bill knows a man who sells ____ pictures of Fred. (Wexler and Culicover (1980: 299))

Second, there are languages such as Polish that do not allow preposition stranding in movement constructions but do in RNR (Citko (2011: 71)):

- (10) a. *Którym stołem_i książka leży pod *t_i*?
which table book lies under
'Which table is the book under?'
- b. Książka leży pod ____ a lampa wisi nad ____
book lies under ____ and lamp hangs over ____
nazym nowym stołem.
our new table
'The book is under and the lamp hangs over our new table.'

Third, the pivot behaves as if it has not been moved with respect to Binding Principles A, B, and C effects:

- (11) a. I liked ____ and Mary_i disliked ____ that picture of herself_i.
b. *I liked ____ and Mary_i disliked ____ a picture of her_i.
(Citko (2011: 72))
- c. *She_i disliked ____ and I hated ____ that picture of Mary_i.
(Levine (1985: 496))

2.2. Symmetric Move

Symmetric Move is a type of movement that can target two elements in a given structure with equally grammatical results. Citko deals with passive movement in double object constructions and crosslinguistic variations. There are some languages where passive movement is symmetric. In British English, Norwegian, Icelandic, Swahili locatives, and Kinyarwanda goals, either the direct or indirect object can undergo passive movement, as exemplified by (12) (Citko (2011: 112)):

- (12) a. John was given *t* a book.
b. A book was given John *t*. (British English)

There are other languages where passive movement is an asymmetric operation in that it can target only one of the objects. In American English, Danish, Swahili benefactives and goals, and Kinyarwanda benefactives, only the indirect object can undergo passive movement. In American English, for example, (12a) is acceptable, whereas (12b) is not. On the other hand, in German, Spanish, and the vast majority of Polish double object construc-

tions, only the direct object can undergo passive movement, as shown in (13) (Citko (2011: 112)):

(13) Polish

- a. Jan wysłał Ewie paczkę.
John.Nom sent Eve.Dat package.Acc
'John sent Eve a package.'
- b. Paczkę została wysłana (Ewie) *t* prez Janka.
package.Nom was.3Fem sent Eve.Dat by John
'The package was sent (to Eve) by John.'
- c. *Ewa była wysłana *t* paczkę
Eve.Nom was.3Fem sent package.Acc
przez Janka.
by John
'Eve was sent a package by John.'

On the assumption that the indirect object is merged higher than the direct object, we should expect only the indirect object, which is closer to T, to be able to passivize in accordance with Relativized Minimality (or any of its more current formulations such as Attract Closest or Shortest Move) as represented in (14):

- (14) a. [TP [T_[EPP] [IO [... DO]]]]
 ↑
 └──────────┘
- b. [TP [T_[EPP] [IO [... DO]]]]
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 └──────────┘
 X

This is what happens in one type of asymmetric passives as observed in languages such as American English. The main question the author addresses is what conditions allow the direct object to move to the subject position in symmetric passives such as (12) and the other type of asymmetric passives such as (13). She claims that there are two ways for the direct object to move to the subject position, i.e. a locality-based strategy and a case-based strategy.

Citko first investigates two previously proposed locality-based strategies. Anagnostopoulou (2003) and Doggett (2004) propose a word order variation account, where the ability of a direct object to undergo passivization is linked to its ability to shift around the indirect object. Moving the direct object over the indirect object places it closer to T, as shown in (15a). If this movement is optional, the indirect object can passivize as well, as shown in (15b) (Citko (2011: 127)):

- (15) a. $[_{TP} \text{ DO}_i [T_{[EPP]} [t'_i [IO [\dots t_i]]]]$
 ↑ ↑
 b. $[_{TP} \text{ IO}_i [T_{[EPP]} [t_i [\dots \text{DO}]]]]$
 ↑ |

Recall that British English allows symmetric passives as exemplified by (12). There are dialects of British English that allow the DO-IO pattern, as shown below:

- (16) a. I gave it him. (Gast (2007: 31))
b. She gave a book the man. (Hughes and Trudgill (1979: 21))

If the DO-IO pattern is the source of the direct object passive, the fact that either object can passivize in British English follows from the word order variation account.

On the other hand, McGinnis (2002) proposes a high applicative account, which links the ability of a direct object to undergo passivization to the availability of a high applicative. A high applicative is a phase head, which enables it to attract the direct object to its outer Spec, the position from which it is closer to T than the indirect object, as shown in (17):

- (17) $[_{TP} \text{DO}_i [_{T_{[EPP]}} [_{vP} v [_{Appl_H P} t'_i [_{IO} [_{Appl_H} [_{vP} V t_i]]]]]]]$

If the direct object does not undergo movement to the outer Spec of the high applicative head, the indirect object moves to the subject position. Hence, in a high applicative structure, we have a symmetric passive. A low applicative head, by contrast, is not a phase head, and thus lacks such an escape hatch, as shown in (18a). Movement of the direct object over the indirect object violates the locality condition, as shown in (18b):

- (18) a. $[_{TP} DO_i [_{T_{[EPP]}} [_{vP} v [_{VP} V [_{Appl_L P} t'_i [_{IO} [_{Appl_L} t_i]]]]]]]]]$
 b. $[_{TP} DO_i [_{T_{[EPP]}} [_{vP} v [_{VP} V [_{Appl_L P} [_{IO} [_{Appl_L} t_i]]]]]]]]]$

Citko argues that although both types of locality-based strategies might be applicable for some languages and dialects, they do not capture the full range of possible passivizations of direct objects, which motivates the need for a case-based strategy. Polish is a language that adopts a case-based strategy. Citko observes that although the Polish double object construction has an IO-DO base word order, it also has a derived DO-IO word order, as shown in (19) (Citko (2011: 120)):

- (21) a. Ewa uczyła Janka matematyki.
 Eve.Nom taught John.Acc math.Gen
 ‘Eve taught John math.’
 b. Janek będzie uczony *t* matematyki przez Ewę.
 John.Nom will.be taught math.Gen by Eve
 ‘John will be taught math by Eve.’
 c. *Matematyka będzie uczony Janka *t* przez Ewę.
 math.Nom will.be taught John.Acc by Eve
 ‘Math will be taught to John by Eve.’

In (21a), the indirect object is accusative (rather than dative) and the direct object is genitive (rather than accusative). In (21a), *v* values the uC feature of the indirect object as accusative, and the Appl head values the uC feature of the direct object as genitive, as shown below:

- (22) [TP Subj [T [*v* [_{VP} taught [_{ApplP} IO [_{ApplL} DO]]]]]]
-

Since the passive morphology absorbs *v*'s ability to value case, T is the closest element that can value the uC feature of the indirect object; the indirect object (but not the direct object) undergoes passive movement, as shown in (23):

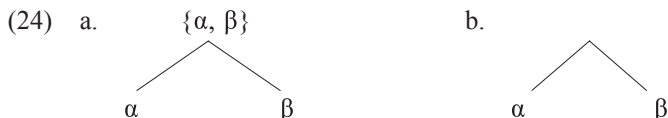
- (23) [TP IO_i [T [*v* [_{VP} taught [_{ApplLP} *t*_i [_{ApplL} DO]]]]]]
-

Hence, in addition to the locality-based strategies, a case-based strategy is needed to account for passivization in double object constructions in languages such as Polish.

2.3. Symmetric Labels

Citko devotes the first part of Chapter 5 to justifying the existence of labels. After reviewing Collins' (2002) proposal that eliminates labels from grammar, she argues in favor of the existence of labels by showing that there are operations that refer to category labels both in narrow syntax and at the interfaces.

She then turns to a discussion of symmetric labels. Given the inclusiveness condition, which bans the introduction of new entities during a derivation, there are two ways a label can be symmetric—if both merged elements project as the label, as shown in (24a), or if neither of them does, as shown in (24b). In either case, the features of α and β contribute equally to the identity of the label:



The focus is on symmetric labels of the type given in (24a). The resulting symmetric label in (24a) can be the union of the features of α and β or their intersection. Chomsky (1995) does not allow either of these two options, thereby excluding symmetric labels of the type in (24a). This is because union creates a constituent with conflicting feature values, while intersection creates a constituent with few or no features. Either way, the symmetrically labeled constituent will not be able to participate in further syntactic computation; for example, it cannot be selected by other heads to create a syntactic structure. Citko argues, however, that Chomsky's view is by no means a logical necessity. If the elements undergoing Merge are identical or nearly identical in syntactic features, their union is not contradictory and their intersection is not null; either union or intersection gives us a label for a merged constituent that can support further syntactic computation. She follows Baker and Stewart (1999) in claiming that symmetrically labeled constituents, i.e. double-headed constituents, are possible when and only when the two elements undergoing Merge do not conflict in categorial features. In other words, categorial feature identity is all that is required for symmetric labels to be possible.

Citko argues that symmetric labels are involved in serial verb constructions such as (25a–c), nominal small clauses such as (26), and comparative correlatives such as (27):

- (25) a. Covert coordination
 Ózó ghá tòbòrè lé evbàré rri óré. (Edo)
 Oao Fut by-self cook food eat it
 'Ozo will cook the food by himself and eat it.'
 (Baker and Stewart (1999: 10))
- b. Consequential serial verb construction
 Ózó ghá tòbòrè lé evbàré óré. (Edo)
 Oao Fut by-self cook food eat
 'Ozo will by himself cook the food and eat it.'
 (Baker and Stewart (1999: 13))
- c. Resultative serial verb construction
 Ózó suá Úyi dé. (Edo)
 Ozo push Uyi fall
 'Ozo pushed Uyi, causing him to fall.'

(Baker and Stewart (1999: 17))

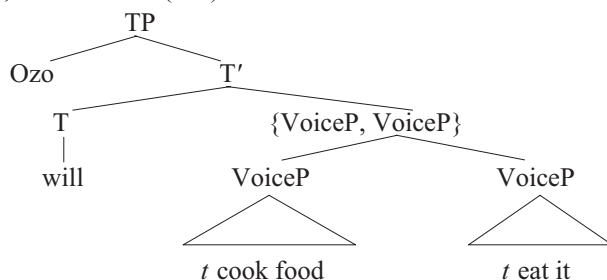
- (26) Valentina Ivanova sekretar' gorkoma
 Valentina Ivanova.Fem secretary.Masc city-committee
 I vernyj tovarišč po partii.
 and loyal.Masc comrade.Masc at party
 (____ : Phonetically Null Copula)

'Valentina Ivanova is the secretary of the city committee and a loyal party comrade.'
 (Pereltsvaig (2008: 54))

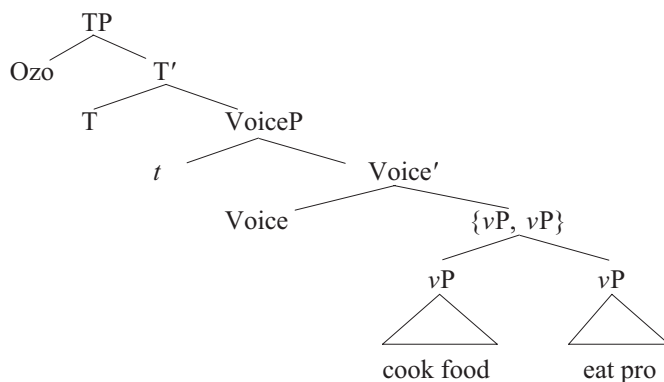
- (27) The more you smile, the happier you get. (Citko (2011: 188))

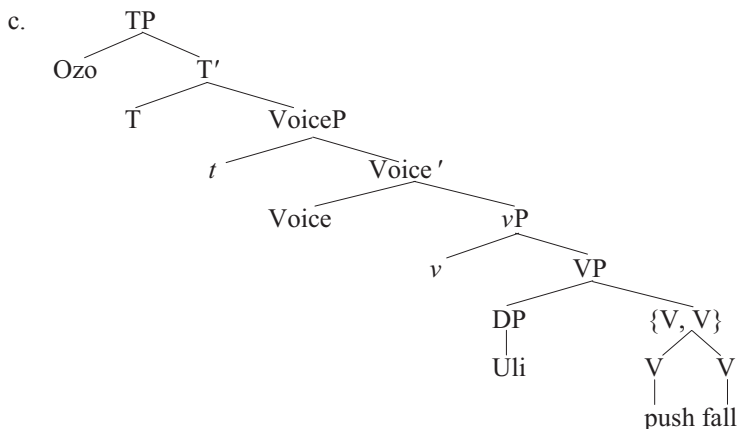
There are three types of serial verb constructions: covert coordination constructions, consequential serial verb constructions, and resultative serial verb constructions. Essentially following Baker and Stewart's analysis, Citko claims that these three types differ with respect to the constituent that is symmetrically labeled. As shown in (28a), covert coordination (25a) involves a symmetrically labeled VoiceP. The consequential serial verb construction (25b) involves a symmetrically labeled vP, as represented in (28b). The resultative serial verb construction (25c) involves a symmetrically labeled V, as shown in (28c):

- (28) a.

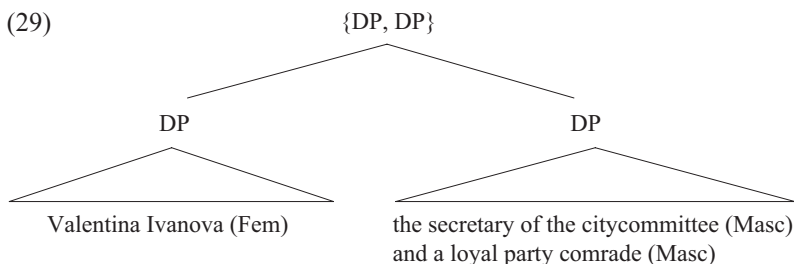


- b.



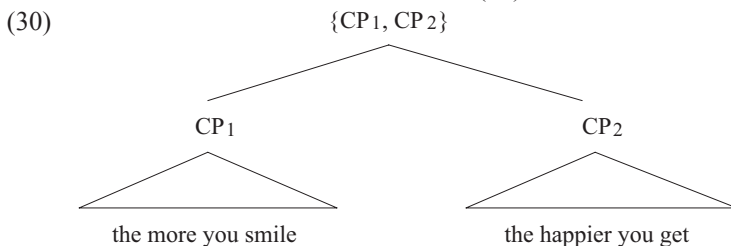


In nominal small clauses, Citko claims that the derived subject DP originates within the small clause, where it forms a symmetrically labeled constituent with the predicative DP. (26), for example, is assigned the following structure:



It should be noted that although the two DPs do not match in gender features, her analysis allows us to form the symmetric label, since the merged elements, i.e. the two DPs, share the categorial features.

Comparative correlatives in languages such as Polish, Hindi, and English are analyzed as having symmetric labels that contain the features of both the relative and matrix CPs. The structure of (27) is as follows:



Evidence for the symmetric label analysis comes from the fact that *wh*-movement is possible from either clause, as shown in (31) (den Dikken (2005: 504)):

- (31) a. a person who_i [the more you meet t_i], [the more you hate him]
 b. a person who_i [the more you meet him], [the more you hate t_i]

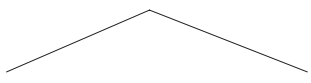
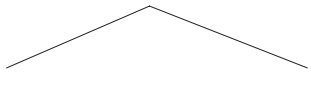
It should be noted that symmetry with respect to *wh*-movement cannot be accounted for by adjunction structure analyses (see, among others, den Dikken (2005), McCawley (1998)), where one CP is adjoined to the other. This is because *wh*-movement out of the adjoining CP violates the adjunct condition.

3. Dual Selections and Symmetric Labeling

As mentioned in section 2.3, Citko adopts Baker and Stewart's theory of labeling, claiming that symmetric labels are possible as long as merged elements do not conflict in categorial features. Her symmetric labeling, however, differs from Baker and Stewart's in that while she claims a symmetric label to be the union of its constituents, Baker and Stewart claim it to be their intersection. Suppose that α and β have the same specifications of categorial features N and V but different feature specifications of F:

- (32) a. $\alpha = \{-N, +V, +F\}$
 b. $\beta = \{-N, +V, -F\}$

Since α and β do not conflict in categorial features, their merger can lead to a symmetric label. Under Citko's view, the resulting label is the union of the features of α and β , as represented in (33a). Under Baker and Stewart's view, on the other hand, the resulting label is the intersection of the features of α and β , as represented in (33b):

- (33) a. $\gamma\{-N, +V, -N, +V, +F, -F\}$
- 
- b. $\gamma\{-N, +V\}$
- 

It should be noted that all the evidence Citko adduces in favor of the union symmetric label, i.e. serial verb constructions, nominal small clauses, and

comparative correlatives, is also compatible with Baker and Stewart's intersection approach. In the next section, I will investigate CP layers in Japanese, Korean, and Spanish. I will show that they involve dual selections in the sense that a matrix predicate syntactically and semantically selects different heads within a CP domain simultaneously. I will subsequently show that the dual selections can be accommodated under the union approach but not under the intersection approach. I will then point out residual issues that need further investigation in Citko's union approach to symmetric labeling.

3.1. Dual Selections

3.1.1. Japanese

Grimshaw (1979) and Pesetsky (1982) argue that predicates must bear a property that selects the semantic type of their complements, i.e. that of their sister constituents, such as interrogative and declarative. In Japanese, predicates such as *tazuneru* 'ask' semantically select an interrogative clause as their sister. They can take as their sister a clause headed by the interrogative complementizer *ka* 'Q' but not a clause headed by the declarative complementizer *to* 'that,' as shown by the contrast between (34a) and (34b):

- (34) a. *John-wa Bill-ni [Mary-ga kita to] tazuneta
 John-Top Bill-Dat Mary-Nom came that asked
 Lit. 'John asked Bill that Mary came.'
 b. John-wa Bill-ni [dare-ga kita ka] tazuneta
 John-Top Bill-Dat who-Nom came Q asked
 'John asked Bill who came.'

As pointed out by Fukui (1986), Saito (2010), Hoshi (2011), Miyagawa (2011), and Ishii (2012), the complementizers *ka* 'Q' and *to* 'that' can be stacked in the complement clause selected by predicates such as *tazuneru* 'ask' and *shitsumonsuru* 'question,' as exemplified by (35):

- (35) John-wa Bill-ni [dare-ga kita ka to] tazuneta
 John-Top Bill-Dat who-Nom came Q that asked
 Lit. 'John asked Bill that who came.'

Given that semantic selection is local in that an element can only semantically select its sister, the question arises as to how the matrix predicate *tazuneru* 'ask' can semantically select the interrogative complementizer *ka* 'Q' skipping over the declarative complementizer *to* 'that' in (35).

We cannot simply assume that the declarative complementizer *to* 'that' is transparent for selection in (35). As pointed out by Saito (2010), not all matrix predicates allow complementizer stacking. Although predicates

such as *shiritagaru* ‘want-to-know,’ *chosasuru* ‘investigate,’ and *hakkensuru* ‘discover’ semantically select an interrogative clause, as shown in (36), they cannot take complementizer stacking clauses, as shown in (37) (Saito (2010: 5)):

- (36) John-wa [dare-ga kita ka] shiritagatteiru
 John-Top who-Nom came Q want-to-know
 Lit. ‘John wants to know who came.’
- (37) *John-wa [dare-ga kita ka to] shiritagatteiru
 John-Top who-Nom came Q that want-to-know
 Lit. ‘John wants to know that who came.’

The contrast between (35) and (37) shows the difference in syntactic selection between *tazuneru* ‘ask’ and *shiritagaru* ‘want-to-know’; predicates such as *tazuneru* ‘ask’ can syntactically select a clause headed by *to* ‘that,’ whereas predicates such as *shiritagaru* ‘want-to-know’ cannot. Since Chomsky (1965), it is generally agreed that sisterhood relations hold in syntactic selection (subcategorization in Chomsky’s (1965) term). It then follows that predicates such as *tazuneru* ‘ask’ require a clause headed by *to* ‘that’ to appear as its sister. I argue that dual selections are involved in complementizer stacking clause (35):

- (38) Dual Selections
- a. Semantic selection between *tazuneru* ‘ask’ and the interrogative complementizer *ka* ‘Q’ at LF
 - b. Syntactic selection between *tazuneru* ‘ask’ and the declarative complementizer *to* ‘that’ in overt syntax as a driving force of Merge

In (35), the semantic selection property of *tazuneru* ‘ask’ requires a clause headed by *ka* ‘Q’ to appear as its sister, while its syntactic selection property requires a clause headed by *to* ‘that’ to appear as its sister.¹

One might argue that complementizer stacking clauses are not complement clauses but direct quotations introduced by the quotation marker *to*. As pointed out by Ishii (2012), however, there is evidence to support the complement clause view. As space is limited, I will only look at three arguments in favor of the complement clause view. First, Miyagawa (1987)

¹ The present discussion crucially assumes that we need both syntactic and semantic selection, which is contrary to Pesetsky’s (1982) view that syntactic selection can be subsumed under semantic selection. If there were no syntactic selection, there would be no way of accounting for the contrast between (35) and (37), since *tazuneru* ‘ask’ and *shiritagaru* ‘want-to-know’ have the same semantic selectional properties.

observed that direct *wh*-questions with *ka* ‘Q’ are deviant if the verb is in the plain form without the polite suffix *-masu*, as shown by the contrast between (39a) and (39b):

- (39) a. *Dare-ga kita ka (plain form)
 who-Nom came Q
 ‘Who came?’
 b. Dare-ga kimashita ka (polite form)
 who-Nom came Q
 ‘Who came?’

In complementizer stacking clause (35), *ka* ‘Q’ is used with the plain verb form *kita* ‘came,’ rather than with the polite form (39b). This shows that complementizer stacking clause (35) does not involve a quoted direct *wh*-question but a complement clause.

Second, direct quotations are opaque to extraction as shown below:

- (40) *What did Mary say, “I am going to buy *t*?”

- (41)?*Sono shitsumon-ni Mary-ga, “Dare-ga *t* tadashiku
 that question-Dat Mary-Nom who-Nom correctly
 kotaeta no kashira” to tazuneta rashii
 answered Q Part(icle) that asked seem
 Lit. ‘That question, it seems that Mary asked, “Who answered *t*
 correctly?”’

Extraction out of a complementizer stacking clause, on the other hand, is possible, as shown in (42):

- (42) Sono shitsumon-ni Mary-ga [dare-ga *t* tadashiku
 that question-Dat Mary-Nom who-Nom correctly
 kotaeta ka to] tazuneta rashii
 answered Q that asked seem
 Lit. ‘That question, it seems that Mary asked that who answered
 t correctly.’

This also shows that complementizer stacking clauses are not direct quotations but complement clauses.

Third, direct quotations are opaque to pronominal binding, as shown in (43) and (44):

- (43) Mary₁ asked John, “Who cheated her_{*1/2}?”
 (44) Mary₁-ga John-ni, “Dare-ga kanozyo_{*1/2}-o damashita
 Mary-Nom John-Dat who-Nom she-Acc cheated
 no kashira,” to tazuneta rashii
 Q Part that asked seem
 ‘It seems that Mary asked John, “Who cheated her?”’

In (43) and (44), the pronoun within the direct quotation cannot be identified as coreferential with the matrix subject *Mary*. In (45), on the other hand, the pronoun *kanozyo* ‘she’ within the complementizer stacking clause can be coreferential with *Mary*. Complementizer stacking clauses are not opaque to pronominal binding, which indicates that they are complements:

- (45) Mary₁-ga John-ni [dare-ga kanozyo_{1/2}-o damashita
 Mary-Nom John-Dat who-Nom she-Acc cheated
 ka to] tazuneta rashii
 Q that asked seem
 Lit. ‘It seems that Mary asked John that who cheated her.’

3.1.2. Korean

Korean also has complementizer stacking clauses, which involve dual selections (Ishii (2012)). In Korean, a matrix verb semantically selects a mood marker within its complement clause, as shown in (46)–(49):

- (46) John-nun [Mary-ka ku mwuncey-lul phwul-ess
 John-Top Mary-Nom that problem-Acc solved
 ta/*nya/*la/*ca ko/*nun] cwucangha-ess-ta
 Decl/Q/Imp/Exh that claimed
 ‘John claimed that Mary solved that problem.’
- (47) John-nun Mary-eykey [*pro* ku mwuncey-lul phwul-ess
 John-Top Mary-Dat that problem-Acc solved
 *ta/*nya/*la/*ca ko/*nun] mul-ess-ta
 Decl/Q/Imp/Exh that asked
 ‘John asked Mary whether she solved that problem.’
- (48) John-nun Mary-eykey [*pro* ku mwuncey-lul phwul
 John-Top Mary-Dat that problem-Acc solve
 *ta/*nya/*la/*ca ko/*nun] myengryengha-ess-ta
 Decl/Q/Imp/Exh that ordered
 ‘John ordered Mary to solve that problem.’
- (49) John-nun Mary-eykey [*pro* ku mwuncey-lul phwul
 John-Top Mary-Dat that problem-Acc solve
 *ta/*nya/*la/*ca ko/*nun] ceyanha-ess-ta
 Decl/Q/Imp/Exh that suggested
 ‘John suggested to Mary to solve that problem.’

Verbs such as *cwucangha* ‘claim’ semantically select the declarative mood marker *ta*, as shown in (46). Verbs such as *mul* ‘ask’ semantically select the interrogative mood marker *nya*, as shown in (47). Verbs such as *myengryengha* ‘order’ semantically select the imperative mood marker *la*, as

shown in (48). Verbs such as *ceyanha* ‘suggest’ semantically select the exhortative mood marker *ca*, as shown in (49).

Similarly, a matrix noun semantically selects a mood marker in its complement clause, as shown in (50)–(53):

- (50) [John-i ku mwuncey-lul phwul-ess ta/*nya/*la/*ca
John-Nom that problem-Acc solved Decl/Q/Imp/Exh
*ko/nun] cwucang
that claim
‘the claim that John solved that problem’
- (51) [John-i ku mwuncey-lul phwul-ess *ta/nya/*la/*ca
John-Nom that problem-Acc solved Decl/Q/Imp/Exh
*ko/nun] cilmwu
that question
‘the question whether John solved that problem’
- (52) [*pro* ku mwuncey-lul phwul *ta/*nya/la/*ca *ko/nun]
that problem-Acc solve Decl/Q/Imp/Exh that
myenglyeng
order
‘the order to solve that problem’
- (53) [*pro* ku mwuncey-lul phwul *ta/*nya/*la/ca *ko/nun]
that problem-Acc solve Decl/Q/Imp/Exh that
ceyan
suggestion
‘the suggestion to solve that problem’

A question arises about how the matrix predicate can semantically select a mood marker skipping over *ko/nun* ‘that’ in (46)–(53). We cannot claim that *ko* and *nun* are transparent for selection. Matrix verbs take *ko* but not *nun*, as shown in (46)–(49). Matrix nouns, on the other hand, take *nun* but not *ko*, as shown in (50)–(53). This shows that matrix verbs syntactically select *ko* ‘that,’ whereas matrix nouns syntactically select *nun* ‘that.’ Hence, dual selections are also involved in Korean complementizer stacking clauses: semantic selection between a matrix predicate and a mood marker at LF and syntactic selection between a matrix verb/noun and *ka/nun* ‘that’ in overt syntax as a driving force of Merge.

3.1.3. Spanish

Dual selections are also involved in the Spanish complementizer system. In Spanish, manner of speaking verbs such as *susurrar* ‘whisper,’ *tartamudear* ‘stutter,’ and *gimir* ‘groan’ semantically select a clause headed by the

declarative complementizer *que* 'that,' as shown in (54) (Suñer (1993: 64)):

- (54) a. El niño tartamudeó [que se había peleado con su
The boy stuttered that self have fought with his
mejor amigo].
best friend
'The boy stuttered that he had fought with his best friend.'
b. *El niño tartamudeó [con quién se había peleado Luis].
the boy stuttered with whom self have fought Luis
'The boy stuttered with whom Luis had fought.'

Verbs such as *preguntar* 'ask,' *preguntarse* 'wonder,' and *decir* 'say/tell,' on the other hand, semantically select an interrogative clause, as shown in (55):

- (55) a. *Pepe preguntó [que habíamos recorrido ocho países].
Pepe asked that have visited eight country
'Pepe asked that we had visited eight countries.'
(Suñer (1993: 64))
b. Rogelio nos preguntó [cuándo podríamos entregar la
Rogelio us asked when could hand-in the
tarea].
assignment
'Roger asked us when we would be able to hand in the as-
signment.'
(Plann (1982: 302))

As pointed out by Plann (1982), with matrix predicates such as *preguntar* 'ask,' *preguntarse* 'wonder,' *decir* 'say/tell,' and *repetir* 'repeat,' *que* 'that' may precede an interrogative word within their complement clause, as exemplified by (56):

- (56) a. Rogelio nos preguntó [que cuándo podríamos entregar
Rogelio us asked that when could hand-in
la tarea].
the assignment
Lit. 'Roger asked us that when we would be able to hand in
the assignment.'
(Plann (1982: 302))
b. El psiquiatra nos dijo/repetió muchas veces
the psychiatrist us told/repeated many times
[que por qué lo habríamos hecho].
that why it could have done
Lit. 'The psychiatrist {told us/repeated to us} many times
that why we could have done it.'
(Plann (1982: 301))

In (56), the matrix predicate semantically selects the interrogative clause

skipping over *que* ‘that,’ which apparently violates the locality condition on selection. We cannot simply assume that *que* ‘that’ is transparent for selection. Unlike the verbs in (56), verbs such as *explicar* ‘explain,’ *revelar* ‘reveal,’ and *confesar* ‘confess’ semantically select an interrogative clause, as shown in (57a), but do not allow the presence of *que* ‘that,’ as shown in (57b) (Plann (1982: 303)):

- (57) a. Luisa explicó/reveló/confesó [cómo la habían
 Louise explained/revealed/confessed how her have
 hechizado].
 bewitched
 ‘Louise explained/revealed/confessed how they had bewitched
 her.’
- b. *Luisa explicó/reveló/confesó [que cómo la habían
 Louise explained/revealed/confessed that how her have
 hechizado].
 bewitched
 Lit. ‘Louise explained/revealed/confessed that how they had
 bewitched her.’

The difference in acceptability between (56) and (57b) shows that the matrix predicates in (56) syntactically select *que* ‘that,’ whereas those in (57) do not. Hence, dual selections are involved in (56); predicates such as *preguntar* ‘ask,’ *preguntarse* ‘wonder,’ *decir* ‘say/tell,’ and *repetir* ‘repeat’ syntactically select *que* ‘that’ and semantically select an interrogative clause.

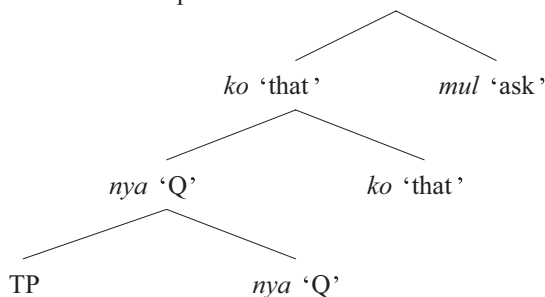
3.2. A Symmetric Labeling Analysis of Dual Selections

In the traditional analysis, there are two possible structures of CP layers, i.e. the head-complement structure and the adjunction structure. According to Chomsky (2004), the head-complement structure is introduced by Set Merge, while the adjunction structure by Pair Merge. Set Merge takes two objects, combines them into one, and projects one of them as the label. Pair Merge takes two objects, combines them into one, and projects both of them as the label in the form of an order pair. Consider the Korean complementizer stacking clause (47) (repeated here as (58)) as an example:

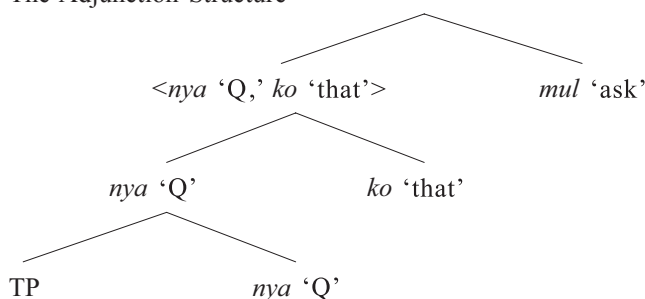
- (58) John-nun Mary-eykey [*pro* ku mwuncey-lul phwul-ess
 John-TOP Mary-Dat that problem-Acc solved
 nya ko] mul-ess-ta
 Q that asked
 ‘John asked Mary whether she solved that problem.’

Under Chomsky's labeling theory, (58) would be assigned either the head-complement structure (59a) or the adjunction structure (59b):

(59) a. The Head-Complement Structure



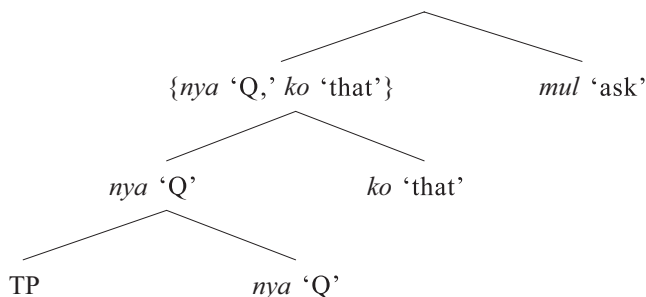
b. The Adjunction Structure



As pointed out by Citko (2011: 175), although adjunction structures have complex labels consisting of an ordered pair under Chomsky's analysis, they do not have symmetric labels; one is subordinate to the other. In (59b), for example, *ko* 'that' is subordinate to *nya* 'Q' so that the label has the property of *nya* 'Q' but not that of *ko* 'that.' Given the sisterhood condition on selection, the dual selections cannot be captured by either the head-complement structure or the adjunction structure. The head-complement structure (59a), whose label is *ko* 'that,' satisfies syntactic selection but not semantic selection. On the other hand, the adjunction structure (59b), whose label is *<nya* 'Q,' *ko* 'that'>, satisfies semantic selection but not syntactic selection. It should be noted that Rizzi's (1997) cartographic approach would assign a head-complement structure to (58), whatever category *nya* 'Q' and *ko* 'that' may belong to; this would explain syntactic selection but not semantic selection.

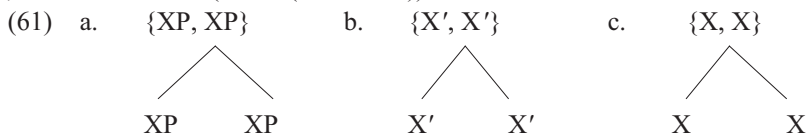
Under the symmetric labeling analysis, (58) is assigned structure (60):

(60)



In (60), the two elements undergoing Merge, i.e. *nya* 'Q' and *ko* 'that', both of which belong to C, do not conflict in categorial features, whatever categorial features C may have; Citko's labeling theory expects the symmetric label {*nya* 'Q,' *ko* 'that'} to be possible. Recall that she claims a symmetric label to be the union of the features of its constituents. In (60), the symmetric label has the features of both *ko* 'that' and *nya* 'Q.' This satisfies the dual selections, i.e., it satisfies syntactic and semantic selections simultaneously. Baker and Stewart's intersection approach to symmetric labeling, on the other hand, cannot capture the dual selections, since the features relevant to syntactic and semantic selection, i.e. the syntactic features of *ko* 'that' and the interrogative feature of *nya* 'Q,' are not shared by these two elements, and thus, the symmetric label does not have these features. Hence, the dual selections in Korean present evidence in favor of Citko's union approach to symmetric labeling.

The symmetric label in (60) presents another interesting theoretical consequence of Citko's symmetric labeling analysis. She argues that symmetric labels are allowed irrespective of the phrase-theoretical status of the elements involved; the element involved can be maximal, minimal, or intermediate, as shown below (Citko (2011: 178)):



Given that symmetric labels are possible as long as the two elements undergoing Merge do not conflict in categorial features, we should expect that elements of different phrase-theoretical statuses can be merged and the resultant constituent can be assigned a symmetric label. It should be noted that in the bare phrase structure, the phrase-theoretical status, i.e. being minimal, intermediate, or maximal, is not included as one of the inherent properties of a category but is determined in terms of relations. Although

she does not pursue this possibility, (60) provides evidence for the existence of such symmetric labels whose constituents have different phrase-theoretical statuses; *ko* 'that' is minimal, whereas *nya* 'Q' is intermediate.

Let us next consider whether Citko's approach can also accommodate the dual selections in Japanese and Spanish. The difference between Korean, on the one hand, and Japanese and Spanish, on the other, resides in the fact that while Korean *ko* 'that' does not have any force/mood, the Japanese *to* 'that' and Spanish *que* 'that' have a declarative force/mood. Recall that in Korean, predicates such as *cwucangha* 'claim' semantically select declarative clauses, as exemplified by (46) (repeated here as (62)). This semantic selection is satisfied by the declarative mood marker *ta* but not by *ko* 'that,' which indicates that *ko* 'that' does not have any force/mood:

- (62) John-nun [Mary-ka ku mwuncey-lul phwul-ess ta ko]
 John-Top Mary-Nom that problem-Acc solved Decl that
 cwucangha-ess-ta
 claimed
 'John claimed that Mary solved that problem.'

In Japanese and Spanish, on the other hand, when predicates such as *omou* 'think' and *tartamudeó* 'stutter' semantically select declarative clauses, as shown in (63) and (54a) (repeated here as (64)), this semantic selection is satisfied by *to* 'that' and *que* 'that,' respectively. Hence, *to* 'that' in Japanese and *que* 'that' in Spanish have a declarative force/mood:²

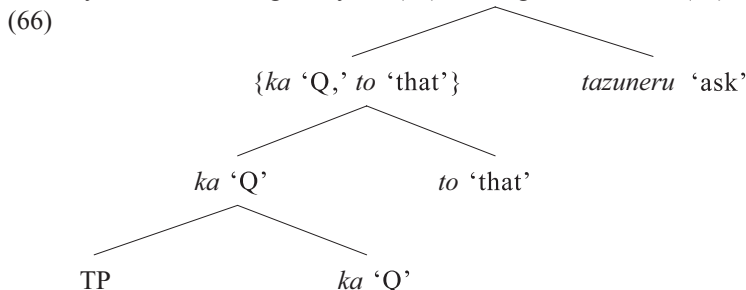
- (63) John-wa [Mary-ga kita to] omotteiru
 John-Top Mary-Nom came that think
 'John thinks that Mary came.'
- (64) El niño tartamudeó [que se había peleado con su mejor
 The boy stuttered that self have fought with his best
 amigo].
 friend
 'The boy stuttered that he had fought with his best friend.'

² An anonymous *EL* reviewer pointed out that examples such as (63) and (64) do not show that *to* 'that' in Japanese and *que* 'that' in Spanish have a declarative force/mood. This is because Japanese and Spanish may have a covert declarative force/mood marker inside *to/que* 'that,' which corresponds to the overt declarative force/mood marker *ta* in Korean. If such is indeed possible, complementizer stacking in Japanese and Spanish can also be accommodated under Citko's symmetric labeling just like complementizer stacking in Korean is. This is certainly an intriguing line of inquiry to follow, but I leave this important issue for future research.

Given that *to* ‘that’ in Japanese and *que* ‘that’ in Spanish have a declarative force/mood, let us consider dual selections in these two languages, taking a Japanese complementizer stacking clause (35) (repeated here as (65)) as an example:

- (65) John-wa Bill-ni [dare-ga kita ka to] tazuneta
 John-Top Bill-Dat who-Nom came Q that asked
 Lit. ‘John asked Bill that who came.’

Under the symmetric labeling analysis, (65) is assigned structure (66):



The symmetric label, whose constituents are *ka* ‘Q’ and *to* ‘that,’ has both interrogative and declarative force/mood features. Recall that this mismatch in force/mood feature does not prevent us from forming the symmetric label. This is because under Citko’s symmetric labeling, as long as the two elements undergoing Merge do not conflict in categorial features, symmetric labels are possible. The symmetric label, which has the features of both *to* ‘that’ and *ka* ‘Q,’ satisfies both syntactic and semantic selections; the dual selections in Japanese and Spanish can be captured.

It is not entirely clear, however, whether this symmetric labeling analysis of the dual selections in Japanese and Spanish is plausible or not. Given the traditional assumption that labels are required for both syntactic computation and interface conditions (Full Interpretation) (see, among others, Chomsky (2008)), it is reasonable to claim that the symmetric label in (66) would result in an anomalous interpretation at LF due to its contradictory force/mood features. In other words, although the derivation of (65) with the symmetric label (66) could proceed during the syntactic computation without any problems, it would result in an anomalous interpretation at LF. We might be able to assume (67) to avoid such an anomalous interpretation:

- (67) If a symmetric label contains contradictory semantic features, only the one selected by a head is visible for its LF interpretation.

According to (67), since the interrogative feature of the symmetric label {*ka* 'Q,' *to* 'that'} is selected by the matrix predicate *tazuneru* 'ask,' only the interrogative feature (but not the declarative feature) is visible at LF in (66). (67), however, is just a stipulation, not an explanation. It is therefore fair to say that the dual selections in Japanese and Spanish cannot be given a principled account under Citko's union approach to symmetric labeling unless it is made clear how a symmetric label is interpreted at LF when it contains contradictory semantic features. We need to further investigate into what interpretations symmetric labels receive at the LF interface under Citko's union approach.³

Before closing this section, it is worth noting that there is a linear ordering restriction between the stacking complementizers in Japanese and Korean.⁴ In Japanese, while the *ka-to* 'Q-that' sequence is acceptable, as shown in (65) (repeated here as (68)), the *to-ka* 'that-Q' sequence is not, as shown in (69):

- (68) John-wa Bill-ni [dare-ga kita ka to] tazuneta
 John-Top Bill-Dat who-Nom came Q that asked
 Lit. 'John asked Bill that who came.'

- (69) *John-wa Bill-ni [dare-ga kita to ka] tazuneta
 John-Top Bill-Dat who-Nom came that Q asked
 Lit. 'John asked Bill who that came.'

Similarly, while the mood marker-*ko* 'that' sequence is acceptable, as exemplified by (70), the *ko* 'that'-mood marker sequence is not, as exemplified in (71):

- (70) John-nun [Mary-ka ku mwuncey-lul phwul-ess ta ko]
 John-Top Mary-Nom that problem-Acc solved Decl that
 cwucangha-ess-ta
 claimed
 'John claimed that Mary solved that problem.'

³ An anonymous *EL* reviewer suggested the possibility that dual selections derive multidominant structures. The dual selections in Japanese, for instance, would be represented by a multidominant structure where there is a shared matrix verb that selects *ka* 'Q' and *to* 'that' in each conjunct. Such a multidominant structure analysis is worth pursuing especially because an anomalous LF interpretation due to contradictory semantic features would not arise. There is, however, need of further investigation into whether it is plausible to assume that dual selections involve a hidden coordinate structure. I leave this important issue for future research.

⁴ I would like to thank anonymous *EL* reviewers for bringing this issue to my attention.

- (71) *John-nun [Mary-ka ku mwuncey-lul phwul-ess ko ta]
 John-Top Mary-Nom that problem-Acc solved that Decl
 cwucangha-ess-ta
 claimed
 'John claimed that Mary solved that problem.'

Saito (2010) gives a semantic account to this ordering restriction between the complementizers in Japanese. Recall that while predicates such as *ta-zuneru* 'ask' and *shitsumonsuru* 'question' can take *ka-to* 'Q-that' stacking clauses as their complements, predicates such as *shiritagaru* 'want-to-know,' *chosasuru* 'investigate,' and *hakkensuru* 'discover' cannot. Saito observes that those that can take *ka-to* 'Q-that' stacking clauses as their complements can also occur with a direct quotation, as shown in (72), whereas those that cannot take a *ka-to* 'Q-that' stacking clause as their complement cannot occur with a direct quotation, as shown in (73):

- (72) John-wa "Dare-ga kimashita ka" to tazuneta
 John-Top who-Nom came Q that asked
 Lit. 'John asked, "Who came?"'
 (73) *John-wa "Dare-ga kimashita ka" to shiritagatteiru
 John-Top who-Nom came Q that want-to-know
 Lit. 'John wants to know, "Who came?"'

In other words, only those predicates that are compatible with direct quotations can take *ka-to* 'Q-that' stacking clauses as their complements. Saito claims that the *ka-to* 'Q-that' stacking clauses express paraphrases of direct discourse, analyzing *to* 'that' in the *ka-to* 'Q-that' stacking clause as a complementizer for paraphrases of direct discourse in the sense of Plann (1982). He argues that the *ka-to* 'Q-that' sequence is possible, since *to* 'that' embeds a paraphrase of a direct discourse utterance and a direct discourse utterance can be a question. Since there is no way of forming a question from a paraphrase of a direct discourse question, however, the *to-ka* 'that-Q' sequence is not allowed. Since *ko* 'that' in Korean functions as a direct quotation marker as well as a complementizer, Saito's analysis could be extended to the ordering restrictions in the complementizers in Korean, though I leave its detailed discussion for future research.

4. Conclusion

This article first provided an overview of Citko's claim that symmetry can be found in three fundamental syntactic mechanisms, i.e. Merge, Move, and Labeling, which is contrary to the traditionally accepted view that asym-

metric relations are the core relations of the language faculty. It is important to note that she does not claim that syntactic mechanisms have to be symmetric but that they do not necessarily have to be asymmetric. I then explicated the puzzling dual selections in the CP layers of Japanese, Korean, and Spanish. I suggested a way of accommodating the dual selections under Citko's union-based symmetric labeling. I then pointed out that further investigation is needed regarding how union-based symmetric labels should be interpreted at the LF interface.

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