博士論文

A Study of Inversion Constructions in English

（英語における倒置構文の研究）

名古屋大学大学院人文学研究科

人文学専攻

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2021 年　12 月

Doctoral Dissertation

A Study of Inversion Constructions in English

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December 2021

Abstract

This thesis is a theoretical investigation of some inversion constructions in English: quotative constructions, locative inversion constructions, preposing around *be*, *so*-inversion constructions, and *neither*-inversion constructions. The aim of this thesis is to give principled explanations to the inversion constructions within the recent framework of the Minimalist Program.

Chapter 1 introduces main theoretical backgrounds that this thesis adopts: the phase-based derivational model, Feature Inheritance, the Labeling Algorithm (Chomsky (2001, 2004, 2008, 2013, 2015, 2019)), and the A′-related feature (van Urk (2015)).

Chapter 2 investigates a synchronic aspect of quotative constructions. Unlike the two previous studies (Collins and Branigan (1997) and Collins (1997)), it is argued with some pieces of empirical evidence that the subject DP in quotative inversion, in fact, raises to the specifier of T. This thesis claims that there are two types of quotative constructions and each type has both SV and VS orders. C heads in the constructions systematically possess four types of features ([uφ], [uδ], [EPP], and [uQ-V]), while the quotative inversion has an additional feature: [V-EPP], which functions as the driving force of verb movement. Given two types of verbs, R1 verbs and R2 verbs, can occur in quotative constructions (Uchida (1979)), this thesis proposes that the constructions undergo different derivations depending on the verb type.

Chapter 3 is dedicated to a diachronic aspect of quotative constructions. Based on the corpus research, it is revealed that quotative constructions have maintained almost the same configuration since Old English, with verb movement remaining attested even after the period when it lost, though their feature composition was slightly changed over time. In particular,

quotative constructions first developed with the two verbs, *quoth* and *say*, and they underwent a unique development, which can be regarded as deviant from the development of the English language itself on the grounds that inversion took place regardless of the subject type even after the ME period, when the V-to-T movement was almost never observed. The fact that the constructions had the inverted word order as their default form yielded a distinctive clause type, Quotative, with the unique feature [uQ-V] originated on C. This feature induces either of the two semantic effects under an Agree relation with a main verb: semantic reduction of a main verb or semantic complementation to a main verb. This historical change took place in the two stages, first in EModE and second in LModE, leading to the occurrence of a variety of verbs in the constructions, including ones which do not have the meaning of *say*. As the consequence of the distinct historical development, two types of QCs are attested in English.

Chapter 4 examines the derivations of locative inversion constructions and preposing around *be* under the Labeling Algorithm. It is proposed that in their derivations, the two types of unvalued feature, [uφ] and [uδ], are introduced with the merger of C and both of them are inherited by T. The former enter into an Agree relation with φ-features on the subject DP remaining in situ and get assigned their value. On the other hand, the latter agrees with the topic feature on the preposed elements, which undergo movement to the specifier of T. Then, the label of the created set, which is {XP, YP} structure, is determined via feature sharing of the A′-related features, resulting in <Top, Top>. In addition, it is shown that some empirical facts illustrating the dual properties of the preposed elements can be captured by adopting the featural approach to A- and A′-distinction.

Chapter 5 explicates the derivations of *so*-inversion constructions and *neither*-inversion constructions under the Labeling Algorithm. It is assumed that *so* is an affirmative polarity adverb with the feature [+Pol] and moves to the clause-initial position. Combining the Labeling Algorithm with the mechanism of polarity determination by Holmberg (2012) and

his subsequent works (Holmberg (2013, 2014, 2016)), this thesis argues that the trigger of subject auxiliary inversion, or T-to-C movement, is attributable to the requirement of labeling via feature sharing with respect to polarity features; that is, the set, whose members are CP and PolP (= *so*), is determined as <Pol, Pol>. Then, it is demonstrated that the proposed analysis can provide principled explanations with some empirical facts of the constructions, including the ones that are problematic for previous studies. Furthermore, this thesis shows that the proposed analysis can be extended to the account of the negative counterpart of *so*-inversion constructions, namely *neither*-inversion constructions.

Chapter 6 is the conclusion of this thesis.

Acknowledgements

This thesis is greatly indebted to the following people and I would like to express my deep gratitude to them.

First of all, I would like to appreciate my professors, Takeshi Omuro and Tomoyuki Tanaka. They have taught me a lot of essential techniques to account for facts of the English language from various points of view. They also have provided me with enormous insightful suggestions and helpful comments about my studies. I could not have completed this thesis if it had not been for their indispensable support.

Second, I am grateful to my seniors Hiroyuki Nawata, Seishirou Ibaraki, Ryoichi Kondo, and Koji Koike, all of whom gave me many invaluable comments and suggestions on an earlier version of this thesis. My gratefulness is also devoted to my colleagues Yuta Tanaka, Takuya Hirata, Shuhei Uchida, Toshihiro Kasai and Toshiro Mori. They have had an informal academic conversation on some topics of the English language with me, which is always helpful and stimulates me very much from a variety of perspectives.

Third, I would like to appreciate my father Masanori Kobayashi, my loved grandmother Teruko Kobayashi, my grandfather Shiro Kobayashi, my brother Kenta Kobayashi, my sister Ayuka Kako for supporting me economically and mentally. Thanks to them, I can concentrate on finishing this thesis without any inconvenience.

Chapters 2 to 5 are revised and extended versions of the following previously or presently published papers of mine.

Chapter 2: Kobayashi, Ryoya (2019) "Eigo ni okeru Inyoukukoubun no Tougo Bunseki (A Syntactic Analysis of Quotative Constructions in English)," *IVY* 52, 19-38.

Chapter 3: Kobayashi, Ryoya (2021b) "Inyouku Koubun no Tsujiteki Henka ni kansuru Ichi Kousatsu (A Consideration of the Diachronic Change in Quotative Constructions)," *JELS* 38, 30-36.

Chapter 4: Kobayashi, Ryoya (2020) "Labeling Algorithm ni motozuku Shugo-Hogo Touchi no Bunseki (The Analysis of Preposing Around *Be* Based on Labeling Algorithm)," *JELS* 37, 66-71.

Chapter 4: Kobayashi, Ryoya (2022) "Bashokutouchikoubun to Labeling Algorithm (Locative Inversion Constructions and Labeling Algorithm)," *Omuro Takeshi Sensei Taikan Kinen ronshuu*, Kaitakusha, Tokyo.

Chapter 5: Kobayashi, Ryoya (2021a) "The *So*-inversion, Polarity and Copy Theory," *Linguistic and Philology* 40, 29-45.

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CHAPTER 1

INTRODUCTION

1.1. General Introduction

   In most English declarative sentences, a subject DP canonically precedes a finite verb, as shown in (1). On the other hand, in some sentences such as interrogatives, English has a different word order: a subject DP follows an auxiliary or a finite verb, as shown in (2), where the auxiliary *will* occupies the sentence-initial position, which is so-called subject auxiliary inversion (henceforth, SAI).

      (1)   *English canonical word order*

                  John will read the book.   (Chomsky (1995: 49))

      (2)   *Subject Auxiliary Inversion*

                  Will$_i$ John t_i read the book.   (Chomsky (1995: 49))

In addition to the canonical examples above, various types of inversion constructions are observed in English. The aim of this thesis is to clarify syntactic structures of inversion constructions in English and provide them with principled explanations under the framework of the Minimalist Program (Chomsky (1995), and his subsequent works (Chomsky (2000,

2001, 2004, 2008, 2013, 2015, 2019)). In the first place, the following subsections briefly review the inversion constructions that this thesis is concerned with.

1.1.1. Quotative Constructions

When a direct speech complement ("quotes") of verbs of saying and thinking is included in a sentence, subject-verb inversion optionally takes place, as illustrated in (3).

(3) *Quotative Constructions*

a. "We haven't had that spirit here since 1969," the captain said.

b. "We haven't had that spirit here since 1969," said the captain.

(Gyoda (1999: 276))

The only difference between (3a) and (3b) is whether the subject DP follows the verb or not. Following Collins and Branigan (1997), this thesis calls these sentences "quotative constructions" (henceforth, QCs). Among them, a sentence with subject-verb inversion, such as (3b), is called "quotative inversion" (henceforth, QI). These sentences appear more often in the written language than the spoken language, but they are sometimes found in spoken narrative as well.

QCs are already attested in Old English with the same configuration as in the present-day English. A relevant example is shown in (4).

(4) Gehyr ðu, mann, cwæð se halga Ysodorus,

hear you man said the holy Isidore

' "you hear, man," said the saint Isidore.'

(coverhom,HomU_7_[ScraggVerc_22]: 157.2956)

There are only a few previous studies on the historical development of QCs (Suñer (2000) and Cichosz (2019), among others).   Moreover, as far as I know, no literature attempts to clarify the whole picture of the historical development of QCs in terms of generative grammar.   In contrast, there are some generative studies that explore the possible derivations of QCs in the present-day English.   The points to be discussed are the status of the quote, the subject position and the verb movement.   Collins and Branigan (1997), the pioneers of this research topic, claim that a null quotative operator, which is merged in the complement position of V, undergoes movement to the specifier of C and is coindexed with an actual quote, which is external to the clause, possibly adjoined to CP.   As a result, the content of the null quotative operator is identified.   Then, under the framework of feature checking (Chomsky 1995), Collins and Branigan (1997) assume that a main verb raises to C in the covert syntax in order to enter into a Spec-head configuration with C carrying a [+quote] V-feature.   As for the subject, it is also assumed that the subject DP remains in its base-generated position.

1.1.2.   Locative Inversion Constructions and Preposing Around *Be*

Typical examples of locative inversion constructions (henceforth, LICs) and preposing around *be* (henceforth, PAB) are illustrated in (5) and (6).

(5)   *Locative Inversion Constructions*

a.   In the corner was a lamp.

b.   Into the room walked John.   (Mikami (2010: 298))

3

(6)   *Preposing Around* Be

    a.   Less fortunate was the girl in the backseat.   (Rochemont (1978: 30))

    b.   Found at the scene of the crime was an axe.

(Rochemont and Culicover (1990: 69))

    c.   Joining the chorus of political figures was former Georgia Sen. Sam

Nunn.   (Samko (2014: 373))

In both LICs and PAB, the locative PP and the preposed elements (APs and participle phrases (henceforth, PartPs)) occur pre-verbally, while the subject DP follows the finite verb. It is well-known that the locative PP in LICs and the fronted elements in PAB exhibit a mixed property of subjecthood and topichood, displaying both A- and A′-properties. Accordingly, the status of the preposed elements has been the focus of debate, though the number of literature on PAB is little, which is probably because PAB shares many similarities with LICs, as will be discussed in chapter 4 (see also Emonds (1976), Mikami (2009) and Samko (2016) for the previous studies on PAB). There are mainly two standpoints in terms of the syntactic position of the fronted elements. On one side, Collins (1997) and Kitada (2011) argue that the locative PP moves to the canonical subject position, the specifier of T. On the other side, Bresnan (1994) and Mikami (2010) claim that the locative PP undergoes movement to the specifier of C. With respect to the postverbal subject DP in LICs, there is a consensus among most of the literature (Collins (1997), Wu (2008), Kitada (2011), Koike (2013), and Arano (2014)), though the details of their analyses diverse, argue that it remains in its base-generated position and does not raise to the canonical subject position, or the specifier of T.

1.1.3. *So*-inversion Constructions and *Neither*-inversion Constructions

Typical examples of *so*-inversion constructions (henceforth, SICs) and *neither*-inversion constructions (henceforth, NICs) are illustrated in (7).

(7)　　　So-*inversion Constructions and* Neither-*inversion Constructions*

　　　a.　John can speak French, and so can Mary.　　　　(Toda (2007: 188))

　　　b.　I didn't say anything else and neither did he.　　　　(COCA: 2018, FIC)

The examples show that when *so* and *neither* with some additive meaning, as in *too* and *also*, are located in the clause-initial position, SAI takes place.　Although the literature on SICs and NICs is little, there are different points of views as for the derivation of SICs and the syntactic treatment of *so*.　Quirk et al. (1972, 1985) and Huddleston and Pullum (2002) analyze that SICs are a construction involved with *so* as a simple adjunct and the simple SAI, that is, T-to-C movement of an auxiliary.　On the other hand, Toda (2007) casts doubt on this simple SAI analysis, though admitting the necessity of SAI.　He proposes that SICs contain *so* as a pro-form of VP and an operation of subject postposing due to examples like (8).

(8)　　　a.　Bill must be a genius and so must be Ann.　　　　(Toda (2007: 190))

　　　b.　Leslie had been there, and so had been Sandy.

　　　　　　　　　　　　　　　　　(Culicover and Winkler (2008: 651))

In the second clause in (8), the two auxiliaries are adjacent, preceding the subject DP in the clause-final position.　If SICs involved SAI alone, the surface strings of the second clauses would be *so must Ann be* in (8a) and *so had Sandy been* in (8b), where only one auxiliary precedes the subject DP.　Therefore, Toda claims that SICs can be accounted for by an

operation of subject postposing, in addition to SAI.

1.2.   Theoretical Backgrounds

This section introduces four theoretical backgrounds, the phase-based derivational model, the mechanism of Feature Inheritance, the Labeling Algorithm, and the A′-related feature. The discussion in the following chapters is basically developed along the lines of them.

1.2.1.   The Phase-based Derivational Model

Under the traditional framework, it is assumed that syntactic structures are sent off to the semantic and phonological components after all the syntactic operations have been applied. Contrary to the assumption, within the framework of the recent Minimalist studies proposed by Chomsky (2000) and his subsequent works (Chomsky (2001, 2004, 2008, 2013, 2015)), it is postulated that syntactic structures are constructed in units of phase; CP and $v*$P (which has an external argument in its specifier position), constitute a phase.   This is based on the semantic and phonetic aspects that the two categories possess.   From the semantic point of view, CP and $v*$P constitute a propositional domain and a thematic domain, respectively.   In particular, CP is the minimal construction including tense, event structure and illocutionary force.   On the other hand, $v*$P represents a full argument structure in which predication relation is established by an external argument and a verb phrase.   From the phonetic point of view, these categories have a sort of phonetic independence, as clearly observed in the fronting phenomena (VP fronting, clefts, and so on).

The relevant parts of phases are successively handed over to the Sensory-Motor (henceforth, S-M) and Conceptual-Intentional (henceforth, C-I) Interfaces by the operation of Transfer. This operation applies to the complement positions of the phase heads (C and $v*$), that is TP and VP.   After the application of Transfer to the domains, they are inaccessible for further

syntactic operations such as Internal Merge. This restriction is called the Phase Impenetrability Condition (henceforth, PIC), which is defined as in (9). The term *edge* refers to either specifiers or adjoined elements of α.

(9)   Phase Impenetrability Condition (PIC)

In phase α with head H, the domain of H is not accessible to operations outside α; only H and its edge are accessible to such operations.

(Chomsky (2000: 108))

This phase-based derivational model makes syntactic computation more efficient. Specifically, the information of a syntactic structure to deal with is divided into each phase domain by virtue of Transfer, which must be cyclically applied after all the syntactic operations in a relevant phase have been completed. As a consequence, this procedure leads to the reduction of computational burden at each step of derivation.

    Taking the discussion above into consideration, let us consider the derivation of the *wh*-question in (10a) as an example. A relevant syntactic structure is illustrated in (10b). (Note that V-to-v*/ T-to-C movements are not included in (10b) for expository purposes.)

(10) a. What did he see?

b.
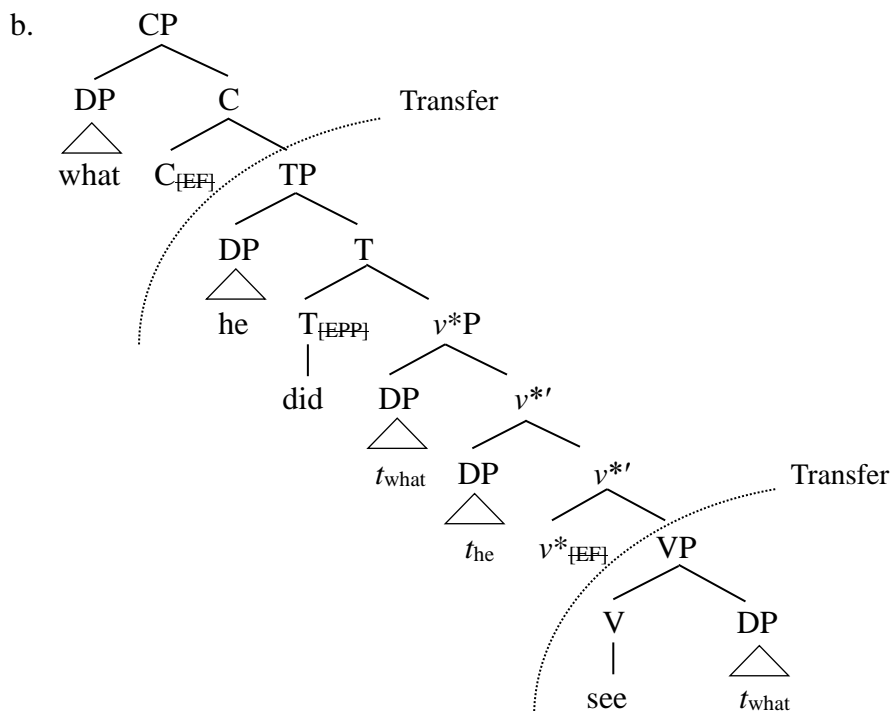
(Koike (2016: 61))

In (10b), the subject DP and the object DP are merged in the specifier of *v* and the complement position of V, respectively.   If the object DP remains there and is included in the transfer domain of *v**, it will not be able to undergo any syntactic operation in the next phase because of the PIC.   Thus, the object DP raises from the complement position of V to the outer specifier of *v** by the Edge Feature (henceforth, EF) on *v**, which triggers A′-movement (Chomsky 2008).[1]   With this movement, the object DP *what* escapes from the transfer domain of *v**, so that it can still be a target of further syntactic operations in the next phase. After all the operations within the *v**P phase have been completed, Transfer applies to the

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[1] According to Chomsky (2008), EF possesses several properties.   First, EF is a property of a lexical item (henceforth, LI) and cannot be taken away from it.   Second, unlike φ-features, EF does not require feature-matching between elements entering into an Agree relation with it.   EF functions not only to drive syntactic operations just like EPP-feature but to meet the basic properties of LIs.   However, the concept of EF has been abandoned since Chomsky (2013), and therefore this thesis does not adopt it for the driving force of A′-movement.

complement of the phase head and hence the relevant information of the syntactic structure is handed over to the S-M and C-I Interfaces. Next, at the CP phase, T enters into an Agree relation with the subject DP with respect to φ-features; the unvalued φ-features (henceforth, [uφ]) on T act as a probe and detect a goal (= the φ-features on the subject DP) within the search domain, getting assigned its value (Chomsky (2001)). Then, the subject DP moves from the specifier of $v*$ to the specifier of T in order to satisfy the EPP-feature on T. On the other hand, the object DP in the outer specifier of $v*$ undergoes further movement to the specifier of C under the probing of EF on C. Once all the syntactic operations in this phase have been completed, Transfer applies to the complement of the phase head, that is, TP and hence the relevant information of the syntactic structure is sent off to the S-M and C-I Interfaces.

To sum up, the syntactic derivation proceeds phase by phase; the operation of transfer applies in a cyclic fashion, with which the domain of a phase head is handed over to the S-M and C-I Interfaces. Consequently, the transferred elements are not entitled to undergo any syntactic operation in the next phase, which reduces the computational load and hence contributes to the improvement of computational efficiency.

1.2.2. Feature Inheritance

Under the phase theory discussed above, it is assumed that since derivations proceed phase by phase, phase heads are the locus where unvalued features, which induce syntactic operations such as agreement or movement, originally exist. This implies that it is impossible for a non-phase head to drive any syntactic operation because it does not have an unvalued feature. However, this could be problematic for T, because on the surface string, it seems that the locus of the φ-features, which are involved with Case-agreement, is not C but T. In fact, the specifier of T is the target of raising of the external argument or the unaccusative /

passive object. Furthermore, Richards (2007) points out a problem concerning unvalued

features remaining on the phase head. Let us consider the phase-based derivation shown in

(11), where C is a phase head and its complement, that is TP, is transferred to the Interfaces.[2]

Transfer

(11)　　　[$_{CP}$ C$_{[uF]}$ [$_{TP}$ T [$_{v*P}$ …]]]
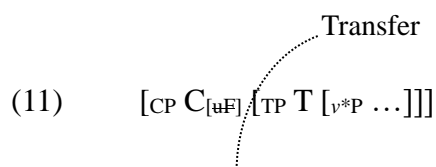
In (11), an unvalued feature on the phase head C remains untransferred, though it enters into

an Agree relation and gets valued. According to Richards (2007), it is obligatory for

unvalued features to be removed when the operation of Transfer applies to the domain. This

argument is based on the following two reasons. One is that unvalued features are illegible

at the C-I Interface. The other is that distinguishing unvalued features from interpretable

(valued) ones is impossible once they are valued. Thus, for the derivation to proceed

successfully, Transfer and feature valuation have to take place at the same time, but the

configuration in (11) does not meet the demand.[3]

　Chomsky (2008) then proposes the mechanism of Feature Inheritance; unvalued features on

phase heads are inherited to the head of their complement, as illustrated in (12).[4]

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[2] In (11) and (12), [uF] represents an unvalued feature and the strike-through on it means that the valuation of it has been done.

[3] See Richards (2007) for a detailed discussion on this argument.

[4] Ouali (2008) argues that features on a phase head may follow the following theoretically possible ways of inheritance:

　(i)　a.　KEEP: a phase-head retains unvalued features (no inheritance).
　　　　b.　SHARE: the copy of unvalued features remains on a phase head even after the inheritance.
　　　　c.　DONATE: unvalued features are inherited to a non-phase head with no copy left behind.

This thesis only assumes the third option DONATE, so that features on a phase head are transmitted onto a lower head without leaving behind their copy. See Ouali (2008) and Gallego (2014) for the discussion on the empirical support for the other options in (i).

Transfer

(12)　　　$[_{CP}\ C_{[\_\_]}\ [_{TP}\ T_{[uF]}\ [_{v*P}\ \ldots]]]$

Feature Inheritance
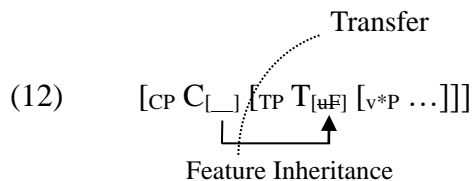
In (12), an unvalued feature which originally existed on C is transmitted onto T, so it can get valued within the transfer domain.　Consequently, the problem mentioned above is solved. The assumption of Feature Inheritance can straightforwardly account for the observation that infinitives in raising constructions or Exceptional Case-marking (ECM) constructions lack φ-features.　Following the standard assumption that raising and ECM verbs take TP, not CP, as their complement ((Bošković (1997) and Chomsky (2001)), we can assume that T head in the constructions is not selected by C.　This means that [uφ] are not introduced into the derivation and that Feature Inheritance does not take place.　Thus, T is dependent on C with respect to φ-features.

In sum, with the assumption that syntactic structure is constructed with units of phases, unvalued features, which drive syntactic operations, are first introduced into the derivation with a phase head and then inherited to a non-phase head.

1.2.3.　The Labeling Algorithm

It has been generally assumed that the label determination is incorporated into a merger operation: when a syntactic object α is merged with another one β, the label of the resulting constituent is automatically determined as α.　However, in the relatively recent minimalist framework, this idea has been abandoned and Merge is considered as just an operation to combine one element with another.　That is, which element is merged with which element has no influence on deciding a label of a projection.　Then, Chomsky (2013, 2015) advocates the independent computational mechanism to determine a label of a syntactic object: the

Labeling Algorithm (henceforth, LA).[5]   It is assumed that labels play no role in syntax, but are necessary in order for syntactic objects to be given a legitimate interpretation at the C-I Interface.   Thus, label-less sets will lead to the derivational crash.   Under the framework of LA, labels are identified via minimal search: the closest head within a relevant syntactic constituent is chosen as its label.   In addition, Merge can apply freely and hence no driving force is necessary.   Labels of syntactic objects can be determined in the following ways.

   First of all, when a head H and a phrase XP are merged, as shown in the case of (13a), the head H is chosen as the label of the resulting object via minimal search.   On the other hand, the label of α cannot be determined in more complicated cases like (13b), where a phrase XP and another phrase YP are merged.   In (13b), both heads of the phrases are equidistant, which prevents the minimal search from choosing the closest head.   Hence, such a configuration leads to the derivational crash.

(13)   a.   α = H   b.   α = ?

              H   XP   XP   YP

For the structure such as (13b) to be given a proper label, Chomsky (2013) proposes two ways. One is to move out either of the elements building the relevant structure.   Under the assumption that a copy of the moved element becomes invisible to labeling computation, Chomsky (2013) argues that the label of α can be properly determined as YP through movement of XP as illustrated in (14a).   On the other hand, the other is to share prominent features which the heads of both phrases possess.   It should be noticed that this feature sharing option presupposes feature matching and an agreement relation between the two features.   In the case of (14b), in which both XP and YP have a matching prominent feature

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[5] LA is assumed in chapters 4 and 5.

[F], the label of α can be determined as <F, F> by sharing their features.

(14)   a.   α = Y   b.   α = <F, F>

t_{XP} YP $XP_{[F]}$ $YP_{[F]}$

With the discussion above in mind, let us consider how a canonical sentence like (15) is derived under the framework of LA.   The relevant derivation of (15) is shown in (16).[6]

(15)   John likes Mary.

(16)   a. $[_\alpha \, EA_{[\phi]} \, v^* \, [_{VP} \ldots]]$

     b. $[_\beta \, T \, [_\alpha \, EA_{[\phi]} \, v^* \, [_{VP} \ldots]]]$

     c. $[_\beta \, EA_{i[\phi]} \, T \, [_\alpha \, t_i \, v^* \, [_{VP} \ldots]]]$

     d. $[_\gamma \, C \, [_\beta \, EA_{i[\phi]} \, T_{[u\phi]} \, [_\alpha \, t_i \, v^* \, [_{VP} \ldots]]]]$

          $\rightarrow \; \alpha = v^* \quad \beta = \text{<}\phi, \phi\text{>} \quad \gamma = C$

In (16a) EA is merged with the set consisting of v^* and VP.   As a consequence, the set α is created, which cannot be given a label at this timing of the derivation because it is of the form of so-called {XP, YP} structure (cf. (13b)).   In (16b), the created set α and T are merged and in (16c), EA raises to the specifier of T, which results in the creation of the set β. Consequently, EA leaves its copy behind, which makes it possible to determine the label of the set α since its lower copy is invisible to LA.   Therefore, the label of α is determined as v^*. In (16d), C with [uφ] undergoes External Merge with the set β and enters into an Agree

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[6] In (16), EA stands for the external argument and the irrelevant part of the derivation is omitted for an expository purpose.

relation with the EA with respect to φ-features (cf. Chomsky (2019)). Then, Feature Inheritance applies and hence the feature on C is handed over to T. Assuming that T is too "weak" to serve as a label in English, Chomsky (2015) argues that the label of the set β, which is of the form of {XP, YP}, is determined via feature sharing of the φ-features. As a result, the label of the set β can be appropriately determined as <φ, φ>. Since the unvalued feature has been deleted and there are no undetermined labels, the derivation successfully converges.

Summing up, labels are determined under LA, an independent computational system conducted by minimal search, by which the closest head from the set is figured out and chosen as its label. Two options are available when the closest head cannot be detected on the grounds that the set is of the ambiguous form, that is, composed of two phrases. One is raising of the one of the two phrases, which renders the copy of the moved element invisible to LA. The other is sharing the prominent features that both phrases have and choosing them as the label of the set.

1.2.4. The A′-related Feature

Following van Urk (2015) and Tim Chou (2020), this thesis assumes that there is an unvalued and unspecified feature on C that has something to do with any A′-related information such as Topic, Focus, and Q, etc. According to Deal (2014) and Preminger (2011), there are languages suggesting that different components of φ-features (person, number, and gender) are eligible to either constitute a non-selective probe that can enter into an Agree relation with any bundle of φ-features regardless of value, or be relativized to specific features. Extending this pattern of φ-agreement to A′-features, van Urk (2015) assumes that the same agreement mechanism applies to A′-features on C. That is, there is an unvalued feature on C which can construct an agreement relation with any valued A′-features.

We call this unvalued and unspecified feature [uδ] henceforth, adopting the technical term of Miyagawa (2010, 2017). The agreement process of [uδ] is illustrated in (17).

(17)

```
        CP                              CP
       /  \                            /  \
   C[uδ]   TP                     C[Topic]  TP
          /\           →                   /\
   Agree /  \                             /  \
        /____\                           /____\
       |
       |
       └──→ XP[Topic]              XP[Topic]
```
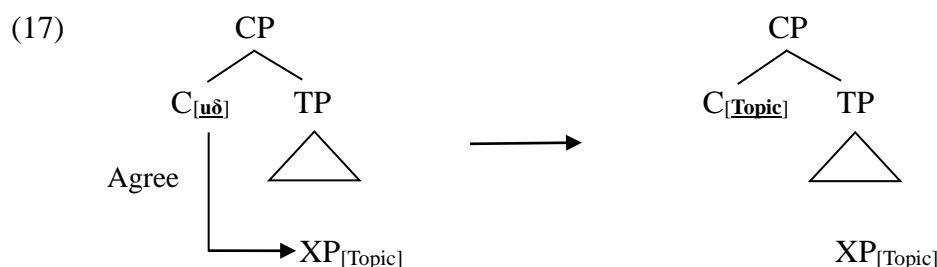
In (17a), [uδ] enters into an Agree relation with the topic feature on XP within TP and gets assigned its value, receiving the featural information on topic, as shown in (17b). Thus, the value of [uδ] is dependent on the valued feature of an element which enters into an Agree relation with it.[7]

In the subsections discussed above, four theoretical backgrounds, the phase-based derivational model, Feature Inheritance, LA, and the A′-related feature, are briefly introduced, which are basis of the discussions of the following chapters.

1.3. The Organization of this Thesis

The rest of this thesis is organized as follows: chapter 2 discusses a synchronic aspect of QCs, focusing on the properties of essential elements comprising QCs, that is, subjects, verbs, and quotes. It is claimed that the subject DP in QCs does not stay in situ but moves to the specifier of T, occupying a different syntactic position from that of other inversion constructions such as LICs. In regard to the verb, based on the detailed empirical facts provided by the previous studies (Uchida (1979) and Yamaguchi (2008)) and the historical

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[7] Following the assumption by Epstein et al. (2020), Otsuka (2021) proposes a similar assumption that C has an unvalued and unspecified discourse feature that can enter into an Agree relation with any valued discourse feature.

development of QCs (see chapter 3), this thesis argues that the verb in QCs is something like light verbs and can undergo movement to a higher head. As for the quote, this thesis, contrary to Collins and Branigan (1997), claims that the actual quote, not the null quotative operator, is introduced into the derivation because of some pieces of empirical evidence that it can license certain syntactic operations. It is also argued that the quote can be merged in two ways, Set-Merge and Pair-Merge, depending on the verb type, R1 and R2 (Uchida (1979)).[8] Given all of the discussions, we propose that C heads in QCs systematically have four types of features and that QI has an additional feature which works as the driving force of verb movement.

Chapter 3 is devoted to the discussion of a diachronic aspect of QCs. This thesis provides the historical data of QCs on the basis of the corpus research. It is shown that QCs are already attested in Old English and maintain almost the same configuration as the ones in present-day English. Considering some of the historical facts of two verbs, *quoth* and *say*, provided by Cichosz (2019) and the result of the corpus research, this thesis proposes that C on QCs acquired a unique unvalued feature in the course of their development, which induces either of the two semantic effects under an Agree relation with a main verb: semantic reduction or semantic complementation. It is argued that this historical change took place in the two phases and enabled a variety of verbs to occur in QCs, including ones which do not have the meaning of *say*.

Chapter 4 attempts to clarify the syntactic structures and derivations of LICs and PAB under the framework of LA discussed in section 1.2.3. This thesis assumes that in the constructions, C heads are merged not only with [uφ] but also with [uδ] and that both of them

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[8] Set-Merge takes two syntactic objects X and Y and forms the two-membered set {X, Y}. On the other hand, Pair-Merge takes two syntactic objects X and Y and forms the ordered pair ‹X, Y›. According to Chomsky (2004), Set-Merge and Pair-Merge correspond to substitution and adjunction, respectively.

are inherited by T. The latter enters into an Agree relation with a valued topic feature that the fronted element, which moved to the specifier of T, has. Then, in order to determine the label of the set, the feature sharing of the prominent features (cf. (14b)) proceeds, as a result of which its label is determined as <Top, Top>. On the other hand, [uφ] enter into an Agree relation with the φ-features on the subject DP remaining in its base-generated position, getting valued and deleted. Moreover, we propose the featural definition of A- and A′-properties, based on the proposals of van Urk (2015) and other previous studies (Obata and Epstein (2011), Mizuguchi (2019), and Tim Chou (2020)). It is shown that the proposed analysis can account for some properties of LICs and PAB, some of which cannot be accommodated by analyses of the previous studies.

Chapter 5 explicates alternative analyses of SICs and NICs under the framework of LA. It is pointed out that the three previous studies of SICs (Toda (2007), Wood (2008), and Hatakeyama et al. (2010)) all have the empirical and theoretical problems. This thesis assumes that *so* in SICs is an affirmative polarity adverb with an affirmative polarity feature and raises to the clause-initial position. Combining the framework of LA with the mechanism of polarity determination by Holmberg (2012) and his subsequent works (Holmberg (2013, 2014, 2016)), this thesis proposes that SAI in SICs is attributed to the requirement of labeling via feature sharing with respect to polarity features in order to circumvent the unlabelable situation. Then, it is demonstrated that the analysis under LA can give principled explanations to some empirical facts of SICs, including the ones that are problematic for the previous studies. Furthermore, we show that the proposed analysis can be extended to the explanation of the negative counterpart of SICs, namely NICs.

Finally, chapter 6 is the conclusion of this thesis and provides the summary of the analyses proposed in the preceding chapters.

Chapter 2

A Synchronic Aspect of Quotative Constructions in English

2.1. Introduction

Subject-verb inversion optionally occurs when a direct speech complement ("quotes") of verbs of saying and thinking is included in a sentence.   A relevant example is shown in (18).

(18)   a.   "We haven't had that spirit here since 1969," the captain said.

             b.   "We haven't had that spirit here since 1969," said the captain.

(Gyoda (1999: 276))

The two sentences in (18) are constructed with the same elements: the quote, subject, and verb.   The only difference between them is whether the subject follows the verb or not.   As mentioned in chapter 1, this thesis calls the sentences like (18) QCs and QCs with subject-verb inversion QI.

The surface structure of QI is similar to that of LICs in that a first constituent (a quote in QCs and a locative PP in LICs) is in the sentence-initial position and a main verb and a subject DP follow it.   The relevant example of LICs is repeated here as (19).

(19)   a.   In the corner was a lamp.

        b.   Into the room walked John.   (Mikami (2010: 298))

Due to its similarity in the word order, QI has been given analyses similar to those of LICs (Alexiadou and Anagnostopoulou (2001), Wu (2008), Richards (2010) among others): post-verbal subject DPs of these two types of inversion constructions remain in their base-generated position within $v^{(*)}$P.   In contrast with the analyses proposed by previous studies, this thesis argues that QI and LICs should be analyzed differently because of the fact that the subject DP in QI behaves differently from that in LICs under certain circumstances.[9] It is also assumed, contrary to previous studies, that the quote is introduced into the derivation in two ways: Set-Merge and Pair Merge.   Hence it plays two types of roles, namely an argument and an adjunct.

   The organization of this chapter is as follows.   Section 2.2 reviews two previous studies, Collins and Branigan (1997) and Collins (1997), who argue that the subject DP in QI remains in its base-generated position and postulate the null quotative operator that is coindexed with the actual quote to identify the content of it.   Section 2.3 discusses the properties of essential elements of QCs, namely subjects, verbs, and quotes, on the basis of some pieces of empirical evidence which the previous studies do not provide.   It is claimed that the subject DP in QI does not stay in situ but raises to the specifier of T just like that in ordinary sentences, in contrast with that in LICs and other inversion constructions.   In regard to the verb, the detailed empirical data are provided to clarify their properties.   As for the quote, it is shown that it can license certain syntactic operations and that it can constitute both an argument selected by a main verb and an adjunct modifying a main verb.   Section 2.4 proposes an

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[9] In this chapter, some pieces of empirical evidence of LICs are provided in order to compare the status of their subject DP with that of the subject DP in QI, but the analysis proposed here is just for QCs.   See chapter 4 in this thesis for the discussion and analysis of LICs.

alternative analysis of QCs under the phase theory and the Agree-based approach to verb movement along the lines of Haeberli and Ihsane (2016). In particular, it is argued that C heads in QCs have three (or four) additional features for their derivation to converge and that QCs undergo different derivations depending on the verb type. Then, we show that some properties of the constructions are given principled explanations. Section 2.5 is the conclusion of this chapter.

2.2.   Previous Studies

In this section, let us overview two previous studies on QCs within the framework of the Minimalist Program, Collins and Branigan (1997) and Collins (1997), pointing out their problems. The literature claims that the subject DP in QI stays in its base-generated position. However, the two previous studies take a different view about the syntactic positions of the quote and the main verb.

2.2.1.   Collins and Branigan (1997)

2.2.1.1.   Clausal Architecture

Before going into the details of the analysis of QCs in Collins and Branigan (1997), let us briefly introduce the clausal architecture they assume. Adopting the framework of the Minimalist Program, Collins and Branigan (1997) assume the following clausal architecture, which is proposed by Chomsky (1991).[10]

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[10] In this section, we use the term Agr(eement) just for an expository purpose. The functional projection Agr has been abandoned in the recent framework of generative grammar. The reason for this is that it only serves for a grammatical aspect, Case feature agreement, and hence does not give any contribution to semantic interpretation. In addition, there is no independent support in the empirical perspective for the assumption of this projection. See Chomsky (1995) for the detailed discussion of the abolishment of the Agr projection.

(20)

```
            AgrP
          /      \
       DP_i       Agr′
              /        \
           Agr_S        TP
                      /      \
                     T        AgrP
                            /       \
                         Agr_O       VP
                                   /    \
                                 t_i     V′
                                       /    \
                                      V      ⋯
```

(Collins and Branigan (1997: 3))
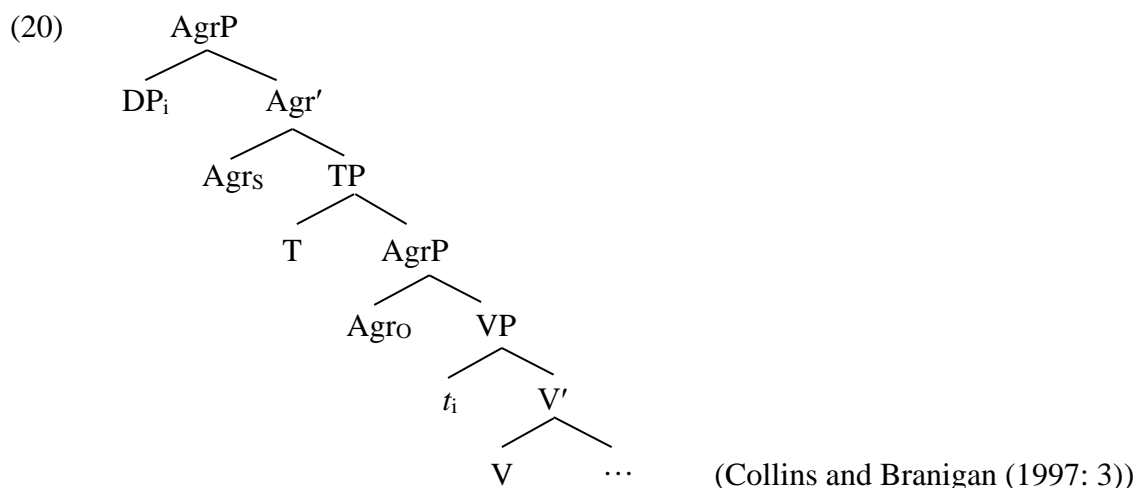
In this structure, it is assumed that subjects of transitive verbs are merged in the specifier of V, where they are assigned a θ-role, and then raise to the specifier of Agr$_S$ in order to have their Case and Agreement features checked. Objects are merged in the complement positions of verbs and raise to the specifier of Agr$_O$ in order to check their features in the same way as subjects. Taking this clausal architecture into consideration, the next subsection overviews the argument that Collins and Branigan (1997) make with respect to the syntactic positions and properties of the subject, the main verb and the quote.

2.2.1.2.   The Position of the Subject

The elements in QI to be first discussed is the subject DP. Collins and Branigan (1997) maintain that the subject DP in QI remains in its base-generated position and does not raise to the specifier of Agr$_S$, the ordinary subject position.[11] The proposal that the subject DP remains overtly in its base-generated position is mainly motivated by the following two facts: the applicability of Heavy-NP Shift (henceforth, HNPS) and the unavailability of subject-oriented floating quantifiers. The relevant examples of each fact are shown in (21)

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[11] In the recent minimalist framework, the base-generated position of a subject in transitive verbs and the ordinary subject position correspond to the specifier of $v*$ and the specifier of T, respectively, as overviewed in section 1.2.1 in chapter 1.

and (22).[12]

    (21)   *The Applicability of Heavy-NP Shift in QI*

           a.   "Where to?" asked of us [the balding driver with a blond mustache].

           b.   "The strudel is rather dry," whispered to Joan [the woman sitting at the end of the counter].

           c.   "Their food is expensive," said of the hotel [the manager of our guesthouse].   (Collins and Branigan (1997: 5))

    (22)   *The Availability of Subject-oriented Floating Quantifiers*

           a.   "We must do this again," the guests **all** declared to Tony.

           b.   "We must do this again," declared **all** the guests to Tony.

           c. * "We must do this again," declared the guests **all** to Tony.

                               (Collins and Branigan (1997: 6))

HNPS is an operation to move the subject to the right side of VP.[13] In (21), the subject DP appears on the right side of the complement position of the verb, indicating that it undergoes HNPS. In contrast, Collins and Branigan (1997), following the analysis of Sportiche (1988), assume that a quantifier appearing on the right side of the subject DP is left behind in its base-generated position when the subject DP undergoes overt movement to the inflectional layer. Thus, they attribute the ungrammaticality of (22c) to the subject DP in QI not being

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[12] The subjects that have undergone HNPS and the subject-oriented floating quantifiers are denoted by brackets and bold texts, respectively.

[13] Subjects in QI always appear on the left side of the complement position of the verb when they are not heavy enough to undergo HNPS, as shown in (i).

    (i)   a. "Where to?" asked the driver of his passenger.
          b. *"Where to?" asked of his passenger the driver.   (Collins and Branigan (1997: 4))

raised overtly from its base-generated position.   On the other hand, floating quantifiers can appear on the right side of the subject DP in the case where inversion does not take place, as (22a) illustrates.

2.2.1.3.   The Position of the Verb

The second element in QI to be discussed is the verb.   First, clausal negation is not allowed in QI, while it may be possible in non-inverted sentences with a fronted quote.   The relevant examples are given in (23).

(23)   a.   "Let's eat," said John just once.

           b.   "Let's eat," John didn't just say once.

           c. * "Let's eat," said not John just once.   (Collins and Branigan (1997: 8))

Given that the subject DP is located in the specifier of V, the verb in (23a) must have moved out of the VP to a functional position, presumably Agr_O.   The ungrammatical negative sentence (23c) indicates that the verb cannot undergo movement past NegP in the overt syntax. Based on the clausal structure presented in section 2.2.1.1, NegP occupies the position immediately above Agr_OP, and therefore the word order in (23c) also exemplifies that the verb does not move higher than Agr_O.

These data seem to show that the position of verbs in QI is lower than Neg, but the sentence is still unacceptable even if the verb does not move past NegP.

(24)   *"Let's eat," not said John just once.   (Collins and Branigan (1997: 8))

It seems that there is no clear difference between an ungrammatical V-Neg order and a

grammatical Neg-V order. However, Collins and Branigan (1997) claim that (24) does not weaken the argument that the verb does not move higher than Agr_O, based on the discussions of Pollock (1989) and Chomsky (1991). Consider the contrasts shown in (25).

(25)　　a. * John Agr_S T not [$_{VP}$ eats]

　　　　b.　John is$_{Agr}$ t_T not [$_{VP}$ t_V eating]　　　　(Collins and Branigan 1997: 8))

(25a) shows that verbs cannot move covertly to T past Neg due to the violation of the Head Movement Constraints (henceforth, HMC) (Travis (1984)), or Minimal Link Condition (henceforth, MLC) in minimalist terms (Chomsky (1991)). On the other hand, overt movement past Neg is allowed if the verb is an auxiliary *be*, as shown in (25b). Collins and Branigan (1997) explain the contrast observed in (25) in the same fashion: neither covert nor overt verb movement to T and then to AgrS is possible if the verb raises past Neg, because such a movement violates the MLC. Consequently, the derivation cannot converge because of the failure to establish the appropriate checking relation between the verb and T.

However, the ungrammatical example (23c), where the verb raises past Neg, cannot be accounted for in the same way as this case, because verbs can move past Neg in the overt syntax, as in (25b), without violating the MLC. Collins and Branigan (1997) argue that (23c) is not grammatical only because there has been a verb movement which targets a higher position than it is supposed to do.

To sum up, Collins and Branigan (1997) assume that the word order in QI is derived in the way that the verb moves overtly to Agr_O and the subject stays in situ, as a result of which their arguments lead to the following structure.[14]

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[14] The structure including the quote is discussed in the next subsection.

(26)   "Don't turn back!" warned Mercel.
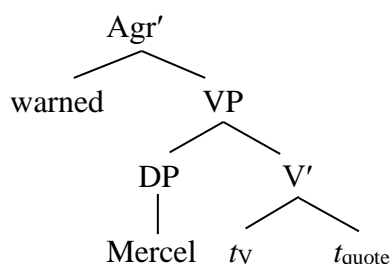
```
                    Agr′
                 ╱      ╲
            warned      VP
                      ╱    ╲
                    DP      V′
                    │     ╱    ╲
                 Mercel  tV    t_quote
```
                                               (cf. Collins and Branigan (1997: 9))

In the covert component, the verb undergoes further movement to T and Agr$_S$, and the subject

moves to the specifier of Agr$_S$ in order to check its Case and Agreement features with T.

2.2.1.4.   The Properties of the Quote and the Structure of QI

Collins and Branigan (1997) assume that in QI, a quote is base-generated in the

complement position of a transitive verb and raises to the sentence-initial position.   One

might suppose that the landing site of the fronted quote is the specifier of C in QI.   However,

a closer examination of the data reveals that the element that undergoes movement is not a

quote itself.   Consider the positions occupied by the quote in the relevant examples (27).

(27)   a.   "When on earth will the fishing begin again?" asked Harry.

           b.   "When on earth", asked Harry, "will the fishing begin again?"

           c.   Asked Harry: "When on earth will the fishing begin again?"

                                               (Collins and Branigan (1997: 10))

(27a) is completely acceptable, with the quote located in the sentence-initial position.   (27b),

where the quote is split, is also completely acceptable as long as parenthetical intonation falls

on the remainder.   Finally, as in (27c), the quote can marginally show up in the

sentence-final position, giving the sentence a somewhat formal flavor.[15] While (27a) is compatible with the assumption that the quote occupies the specifier of C, it is unlikely that the other sentences can adequately be explained by means of movement of the quote. Therefore, Collins and Branigan propose that it is not the quote but a null quotative operator which moves up to and occupies the specifier of C in the QCs, and that the quote itself is external to the clause, possibly adjoined to CP. The quote is coindexed with this null quotative operator and identifies the content of it. The relevant structures are given in (28).[16]

(28)   a.   "When on earth will the fishing begin again?"

$[_{CP}$ OP_i $[_{AgrP}$ asked Harry $t_i]]$.

b.   "When on earth", $[_{CP}$ $OP_{i \ AgrP}$ asked Harry $t_i]]$, "will the fishing begin again?"

c. $[_{CP}$ OP_i $[_{AgrP}$ Asked Harry $t_i]]$: "When on earth will the fishing begin again?"   (Collins and Branigan (1997: 11))

It is supposed that the quote itself has no direct role to play in the inversion clause, beyond controlling operator. In this regard, the quote can be considered to have the same role as the matrix subject in the *tough*-constriction (Chomsky (1986)).

(29)   a.   Kids are hard $[_{CP}$ OP_i $[_{AgrP}$ PRO to ignore $t_i]]$

b.   "What can we do?" $[_{CP}$ OP_i $[_{AgrP}$ repeated Gabrielle $t_i]]$

        (cf. Collins and Branigan (1997:11))

---

[15] Matsubara (2019) points out, on the basis of informant research, that this type of QI has a very archaic flavor and hence is unnatural in the present-day English.
[16] *OP* in each structure represents a null quotative operator, which is assumed to be base-generated in the complement position of a main verb.

In both the *tough*-construction (29a) and the QI (29b), the null operator binds a variable in an A-position. The null operator must be given the range of the variable by an antecedent because it does not supply the range. In (29a), an antecedent which supplies the range of the variable is the subject, while in (29b) it is the quote.[17]

Given the Last Resort principle (Chomsky (1995)), which restricts movement only if feature checking is required, movement of a null operator must be licensed by the requirement of feature checking, just as movement of other operators, such as a *wh*-phrase and a topic element, must be. Then, Collins and Branigan (1997) propose the feature [+quote] on C, which must be checked by an appropriate element in a Spec-head configuration. The checking operation proceeds in the same way that features like [+wh], [+neg], and [topic] are checked by complementizers with matching N-features (Pesetsky (1982); Haegeman and Zanuttini (1991)).

Inversion is not always triggered by movement of the null quotative operator from complement position of the verb to the specifier of C, as shown in (30).

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[17] It is argued that the assumption that a null quotative operator is involved in QI is also supported by the evidence from SICs in English, where the element *so* behaves syntactically and semantically much like a null quotative operator, but it is overtly realized. A relevant example is given in (i).

    (i)   John: Sylvie stole the painting.
            Mary: I thought she did!
            John: And so thought your brother, as well.   (Collins and Branigan (1997: 14))

So is used to refer back to some earlier part of the discourse. In this sense, *so* has the same role in semantics as a null quotative operator. In syntax, *so* triggers subject-verb inversion, in much the same way as does a quotative operator, suggesting that it is a covert counterpart to the overt element *so*. However, this thesis, as will be discussed in chapter 5, claims that *so* functions as an affirmative polarity adverb with a polarity feature. See chapter 5 for the detailed discussion of SICs.

(30)   a. "Who's on first?" Joe demanded.

        b. "Who the hell", Joe demanded, "is supposed to be coaching

            the base runner?"   (Collins and Branigan (1997: 12))

Collins and Branigan (1997) argue that the complementizer bearing a [+quote] feature must apparently be reinforced by the verb which assigns a θ-role to the trace of the operator when inversion takes place. It is assumed that the verb adjoins to the operator in the covert component in order to reinforce C. Then, they propose that there are two types of C: one triggers inversion, and the other does not. It is postulated that C that triggers inversion has a [+quote] V-feature in addition to the [+quote] feature. To have this feature checked, an appropriate head, which is the verb in this case, needs to adjoin to C. Thus, the verb raises to C in the covert component in order to check the [+quote] V-feature.

2.2.1.5.   EPP-feature in QI

As discussed in subsection 2.2.1.2, Collins and Branigan (1997) claim that the subject DP in QI remains in its base-generated position. One question arises from this argument: why the subject DP in QI is allowed to remain in its base-generated position, while subject DPs in other declarative sentences are not? In ordinary declarative sentences in English, some DP is required to occupy the specifier of T (= the specifier of Agr$_S$ in their analysis) to have the EPP-feature on T checked. The derivation does not successfully converge if the EPP-feature is not satisfied because it is assumed to be a strong feature, which must be checked before Spell-out. As the answer for this question, Collins and Branigan (1997) argue that in QI, T does not have to check its EPP-feature in the overt syntax, and that a C with a [+quote] feature is allowed to select a T with the weak version of an EPP-feature, while all other Cs are not. Weak features, unlike strong features, need not to be checked before Spell-out. That is,

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they can be checked in the covert component, but rather must do so in terms of Procrastinate.

Thus, the argument that the subject DP in QI remains in situ is attributed to the features of C.

Therefore, C heads in QI may select either T with a weak EPP-feature or T with a strong

EPP-feature.[18]

2.2.1.6. Problems

There are some theoretical problems against the analysis proposed by Collins and Branigan

(1997). The first one is on the assumption for the EPP feature on T. In order to maintain

the argument that the subject DP in QI stays in situ, they assume that a C with a [+quote]

feature selects a T with the weak version of an EPP-feature, while all other Cs do not.

Although they give an empirical support from another phenomenon (see fn.18), this is an *ad*

hoc assumption in order to account for the derivation of QI. This assumption does not

adequately account for why subject DPs in other declarative sentences are not allowed to

remain in their base-generated position. In addition, the concept of feature strength is no

longer maintained in the recent Minimalist framework because the checking theory has been

abandoned, so that this problem should be explained in a different way.

The second theoretical problem is that the empirical facts for the subject in-situ that Collins

and Branigan rely on is dubious. They follow Sportiche's (1988) stranded analysis of

floating quantifiers so as to support their claim. However, the stranded analysis has some

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[18] To support this assumption, Collins and Branigan (1997) present the same type of dependency between C and T that is found in French stylistic inversion. Stylistic inversion, where the subject follows the verb, takes place when some other category raises to the specifier of C, just as in QI.

   (i)   Quel livrei [$_{AgrP}$ a donné   Marie t_i á Paul?]]
        Which book   has given   Marie   to Paul   (Collins and Branigan (1997: 17))

In (i), the participle *donné* precedes the subject *Marie*, and the indirect object *á Paul* follows *Marie*. It is assumed that the subject in stylistic inversion also remains in situ, as the subject in QI does, because floating quantifiers cannot also appear on the right side of the subject in stylistic inversion. See Collins and Branigan (1997) for the details.

empirical problems.   According to Bobaljik (1995), who assumes that a floating quantifier is an adverb, the floating quantifier *all* cannot always be a part of the trace.   Let us consider the following examples.

(31)   a.   The student might all have left in one car.

           b.   [DP All the students] might have left in one car.   (Bobaljik (1995: 225))

Given the example (31b), it seems that *all* in (31a) is supposed to have floated from the DP *the students.*   Let us next observe the examples shown below.

(32)   a.   Some (of the) students might all have left in one car.

           b. * All (of) some (of the) students might have left in one car.

                                              (Bobaljik (1995: 225))

Interestingly, while *all* in (32a) can float from the DP that seems to have been a part of it, *all* in (32b) could not be a part of the DP which follows it.   This contrast is not explained if it is assumed that *all* constitutes a part of DP at some level.

   Moreover, Baltin (1995) argues that the stranded analysis incorrectly rules out quantifier stranding before the infinitive in infinitival complements of object-control verbs.   Let us take the following sentences as examples.

(33)   a.   I persuaded the men all PRO to resign.

           b.   The teacher ordered the two boys both PRO to pay close attention.

                                              (cf. Baltin (1995: 232))

The object DPs in the complement position of the verbs, which c-command PRO in the infinitives, are controllers of PRO. Although they appear on the left side of their quantifier, they are not raised to their surface position.[19] Thus, Sportiche's analysis seems to be problematic and hence the argument that floating quantifiers are not permitted in QI does not support the assumption of the subject DP in QI remaining in its base-generated position.[20]

Moreover, Collins and Branigan's analysis also has some empirical problems. As we will discuss in section 2.3, there are some pieces of empirical evidence that the subject DP in QI occupies the specifier of T, just like ordinary sentences. Collins and Branigan assume that the subject DP remains in its base-generated position, so that their analysis cannot give them any theoretical explanation.

This section has overviewed Collins and Branigan's analysis of QCs. It is assumed that the subject DP in QI remains in its base-generated position and C selects T with the weak version of an EPP-feature. The verb in QI raises to C in the covert syntax in order to satisfy the [+quote] V-feature on C. The null quotative operator is merged in the complement position of the verb, and then raises to the specifier of C in order to check the [+quote] feature on C. The actual quote, which adjoins to CP, is coindexed with the null quotative operator, and identifies the content of it.

---

[19] Being different from a case in the ECM constructions, a subject within an infinitival clause does not raise to the object position in a matrix clause in object-control constructions. This is supported by the following example in which an expletive *there* can be inserted to the subject position of infinitival clause in ECM constructions, while it cannot be so in object-control constructions.

(i)   a.   I believed there to be no alternative.
        b. * We persuaded there to be a strike.   (Radford (1988: 320))

Given the Sportiche's assumption that PRO does not undergo movement to the subject position of infinitival clause, these examples cannot be accounted for and therefore would be excluded, contrary to fact.

[20] See Baltin (1995) and Bobaljik (1995) for other theoretical problems against the stranded analysis of floating quantifiers proposed by Sportiche (1988).

2.2.2. Collins (1997)

Let us next overview the analysis of QCs proposed by Collins (1997). Collins assumes

the following syntactic structure of a simple clause.[21]

(34)

```
              CP
           ╱      ╲
          C        TP
               ╱      ╲
            DPᵢ        T'
                    ╱      ╲
                   T        TrP
                         ╱      ╲
                        tᵢ       Tr'
                              ╱      ╲
                             Tr       VP
                                   ╱      ╲
                                  V        DP
```
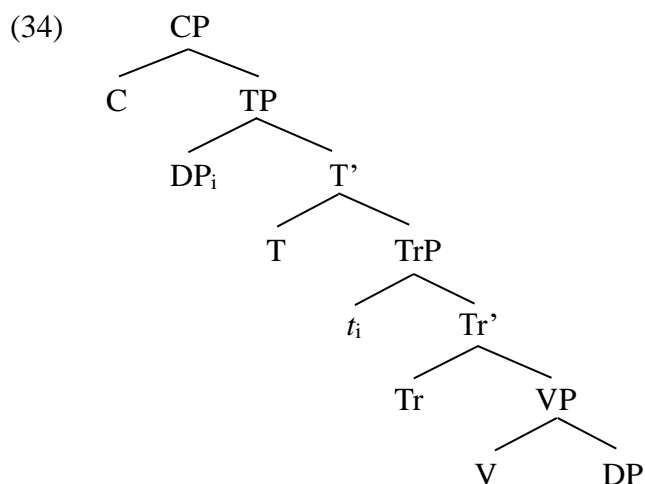
In this structure, a subject is merged in the specifier of Tr and an object is merged in the

complement position of V. Then, the subject raises to the specifier of T to have the Case

feature and the EPP-feature on T checked. When negation is included in this structure, the

negative *not* heads a NegP located immediately above TrP. With this structure in mind, let

us overview where the main verb and the quote in QI are syntactically positioned.[22]

2.2.2.1. The Position of the Verb

Based on the structure in (34), the verb in QI does not stay in its base-generated position

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[21] Collins (1997) proposes TrP (transitivity phrase), which corresponds to *v*P proposed by Chomsky (1995). It should be noted that even when unaccusative verbs are used, this phrase is present, but its head checks no accusative Case and assigns no θ-role to an external argument merged in the specifier of Tr.

[22] As for the position of the subject, Collins (1997) comes to the same conclusion as in Collins and Branigan (1997): the subject DP in QI does not raise from its base-generated position. This claim is based on the same motivation as given in Collins and Branigan (1997): subject-oriented floating quantifiers are not allowed to appear and HNPS can be applied to the subject DP. Therefore, this section does not give a review of the discussion on the subject.

because the position of the subject DP is assumed to be the specifier of Tr, which is higher

than that of the verb.   Collins (1997) provides some pieces of empirical evidence for verb

movement in terms of the syntactic positions of negation and adverbs.   Let us first consider

the placement of the negation.   Some relevant examples are illustrated in (35), which are the

repetition of (23).

(35)　　　a.　"Let's eat," John didn't say just once.

　　　　　b. * "Let's eat," not said John just once.

　　　　　c. * "Let's eat," said not John just once.　　　　　(cf. Collins (1997: 34))

Considering the structure provided in the previous subsection, the ungrammaticality of (35b)

is accounted for because there is no position for the verb between Neg and the subject DP.

As for (35c), it can be regarded as the violation of HMC because the verb moves to T by

skipping Neg.   In short, the verb cannot raise to T when NegP is included in the structure.

Therefore, (35b) and (35c) are ungrammatical.

　　Let us next consider (36), which illustrates the distribution of adverbs in QI.

(36)　　　a.　"I finally quit this job," John murmured happily.

　　　　　b.　"I finally quit this job," murmured John happily.

　　　　　c. ? "I finally quit this job," happily murmured John.

　　　　　d. * "I finally quit this job," murmured happily John.　　(cf. Collins (1997: 36))

In (36), we can find that the adverb may not appear between the subject DP and the verb in QI.

According to Collins (1997), (36d) can be explained if it is assumed that an adverb may not

be adjoined to TrP.   As for (36b) and (36c), it might be possible to assume that adverbs in

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these sentences are adjoined to TP or T′. If this assumption is on the right track, (36c) gives

the evidence that the verb has not raised to C in QI: since the example (36c) would be

ungrammatical if the verb moves to C. Therefore, Collins (1997) concludes that the verb in

QI moves no further than T.[23]

2.2.2.2. The Position of the Quote

Based on the analysis by Collins and Branigan (1997), it is assumed that the quote itself

does not undergo movement: it is the null quotative operator that undergoes movement.

While Collins and Branigan (1997) assume that the null quotative operator raises to the

specifier of C, Collins (1997) assumes that it moves to the specifier of T. Since the null

quotative operator occupies the specifier of T, it can satisfy the EPP-feature on T.[24] This

assumption is more conceptually desirable because there is no need to make any additional

assumptions as in Collins and Branigan (1997). Furthermore, it is postulated that the null

quotative operator does not bear φ-features because the quote does not exhibit plural

agreement. The following empirical evidence can lend a support for this assumption.

(37)   a. "Mary has already eaten," said ?he / ?I / *me / *him

         b. "Mary has already eaten," says / *say John

         c. "Mary has already eaten." say / *says the two men.

(cf. Collins (1997: 33))

As shown in (37a), the post-verbal subject DP must have nominative Case. On the other

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[23] The explanation of the motivation for the verb movement to T will be discussed in section 2.2.2.3.
[24] Collins (1997) claims the similarity between QI and LICs in assuming that the locative PP also moves to the specifier of T and checks the EPP-feature. In contrast, this thesis argues that the quote raises to the specifier of C, based on the fact that it is in a complementary distribution with a *wh*-phrase.

hand, (37b) and (37c) shows that the verb must agree with the post-verbal subject DP. If the null quotative operator had φ-features and filled in the specifier of T, such an agreement would not take place.

2.2.2.3. Analysis

With the discussion mentioned above in mind, Collins (1997) proposes the following syntactic structure for the QI in (38a), as shown in (38b).

(38) a. "I am so happy," said Mary.
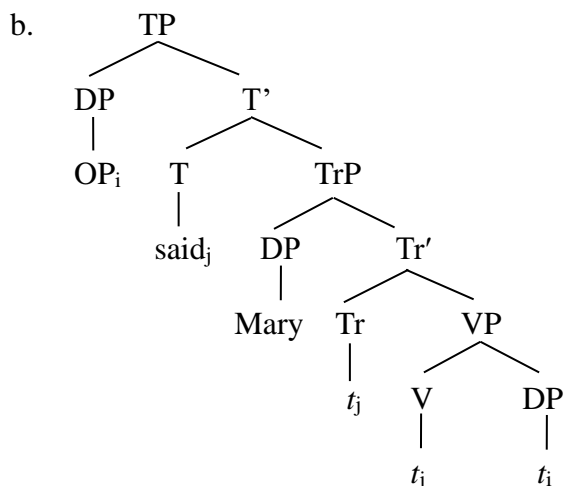
b.
```
                    TP
                  /    \
                DP      T'
                |      /   \
              OPᵢ    T      TrP
                    |      /   \
                 saidⱼ   DP     Tr′
                         |     /   \
                       Mary   Tr     VP
                              |     /  \
                             tⱼ    V    DP
                                   |    |
                                   tⱼ   tᵢ
```
(cf. Collins (1997: 40))

In this structure, the subject DP is merged in the specifier of Tr and stays there, while the verb raises to T via Tr. The null quotative operator is merged in the complement position of the verb and moves up to the specifier of T to satisfy the EPP-feature on T. Then, at LF, the formal features of the subject DP raise and adjoin to T, as a result of which the post-verbal subject DP is assigned nominative Case and agrees with the verb. With respect to the motivation for the verb movement to T, Collins (1997) presupposes the following statement.

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(39)   The EPP-feature of T may enter into a checking relation with the quotative

operator only if V[Quote] adjoins to T.   (Collins (1997: 41))

This statement is based on the fact that the verb that selects the null quotative operator in its

complement position must raise to T.   The relevant examples are illustrated in (40).

(40)   a.   "What time is it?" John was asking of Mona.

b. * "What time is it?" was John asking of Mona.

c. * "What time is it?" was asking John of Mona.   (Collins (1997: 41))

(40) shows that the auxiliary verb *was* is not allowed to raise to T in QI.   In addition,

do-support is not allowed as shown in (41).

(41)   *"Let's eat," didn't John say just once.   (Collins (1997: 41))

These examples lead to the generalization that auxiliaries are not allowed to move to T in QI.

Thus, Collins (1997) justifies the assumptions in (40) as the motivation for the verb

movement to T.

2.2.2.4.   Problems

Collins's (1997) analysis confronts the same kind of theoretical problem as Collins and

Branigan (1997).   Collins (1997) argues that the requirement of EPP-feature on T is satisfied

in QI only when the main verb raises to T.   Since the subject DP does not raise to the

specifier of T in his analysis, the verb has to raise at least to T to derive the inverted word

order with respect to the condition of (39).   However, as Collins (1997) admits, this

condition is the stipulation in order just to account for the derivation of QI, without any independent motivations.　More principled explanation should be required.　In addition, his analysis also faces some empirical problems.　As we will discuss in section 2.3, some pieces of empirical evidence suggest that the subject DP in QI occupies the specifier of T, just like ordinary declarative sentences.　Collins assumes the subject DP to stay in-situ, and therefore his analysis cannot account for such empirical facts.

2.2.3.　Summary

In section 2.2, we have overviewed the two previous studies (Collins and Branigan (1997) and Collins (1997)) and shown that both of them face some theoretical and empirical problems.　While they have different viewpoints about the syntactic positions of the verb and the quote (null quotative operator), they agree that the subject DP in QI remains in its base-generated position: the specifier of V / the specifier of Tr.　However, this thesis will argue with some pieces of empirical evidence that the subject DP in QI raises to the specifier of T, and provide more detailed empirical discussion of the other elements in QCs in order to clarify their properties and syntactic positions.

2.3.　The Properties of the Elements in QCs

This section provides some empirical facts from different viewpoints from the previous studies in order to clarify the syntactic positions and the properties of elements in QCs, namely, subjects, verbs, and quotes.　As shown in the previous sections, it is assumed in the literature that the subject DP in QI remains in its base-generated position.　On the other hand, this thesis claims that the subject DP in QI, in fact, raises to the specifier of T.　As for the verb, it is assumed, following the observation by Uchida (1979), that there are two types of verbs available in QCs and that they are required to comprise the core meaning [say + α].　In

regard to the quote, we postulate that it constitutes either an argument or an adjunct, depending on the way of merger. The former is selected by the main verb, hence introduced by Set-Merge, while the latter, introduced by Pair-Merge, plays a role as a modifier, which constructs the modification relation with a main verb.

2.3.1. The Position of the Subject

As discussed in section 2.2., Collins and Branigan (1997) and Collins (1997) argue that the subject DP in QI stays in its base-generated position, or the specifier of *v* (under the current theory) and does not move to the specifier of T. Most previous studies, such as Alexiadou and Anagnostopoulou (2001), Wu (2008), and Richards (2010) among others, accept this analysis of QI because its surface structure is similar to that of other inversion constructions like LICs. By contrast, this thesis claims that the post-verbal subject DP in QI is not in situ, but undergoes overt movement to the specifier of T. From the next subsection onward, some pieces of empirical evidence are provided in order to support the argument that the position of the subject DP in QI is the specifier of T, compared with that in LICs.

2.3.1.1. Tag Questions

Tag questions must have a pronoun that corresponds to the element in the specifier of T in the main clause (Bowers (1976) and Culicover (1992) among others). Let us first consider the following example of LICs.

(42)　　a.　In the garden is a beautiful statue, isn't there/*it?　(Bowers (1976: 237))

　　　　b.　Out of that cave stormed the fiercest dragon you ever did see,

　　　　　　didn't there? (??didn't it?)　　　　　　　　(Bruening (2016: 118))

In both (42a) and (42b), tag pronouns are realized as *there*. According to Bruening (2016), in these sentences, the specifier of T is occupied by the null *there*, and hence tag pronouns in LICs correspond to the null *there*.[25] With this in mind, let us next consider the following example of QI.

(43) a. "Hello," said the prettiest woman you ever did see, didn't she?

   (*didn't there / it)

   b. "Yes," answered men and women, didn't they? (*didn't there / it)

(Bruening (2016: 118))

Unlike the examples of LICs, in both (43a) and (43b), tag pronouns in QI correspond to post-verbal DPs (Arano (2014) and Bruening (2016)).[26] If the ordinary subject position, or the specifier of T, were empty, we would not expect tag pronouns to correspond to post-verbal DPs in QI. It should be noticed that no other elements correspond to the post-verbal subjects. As exemplified in (43), even if an expletive appears instead of the ordinary subject DP, the sentence is regarded as ungrammatical. These facts indicate that the post-verbal subject in QI overtly moves from its base-generated position to the specifier of T.

2.3.1.2. *Not*-initial NPs

Not-initial NPs can only appear as subjects (Postal (1974: 95)). The relevant examples are shown in (44), which distinguishes between subjects in QI and those in LICs.

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[25] Contrary to this claim, this thesis will argue in chapter 4 that the locative PP occupies the specifier of T and hence the tag pronoun is realized as *there* in LICs.

[26] Under the copy theory of movement (Chomsky (1995)), Arano (2014) assumes that the subject DP in QI undergoes covert movement with its phonological feature in order to meet the requirement of EPP feature on T, but its lower copy, which is the full copy of the moved element, is pronounced in the S-M Interface.

(44)   a.   "Aye!" said not many of those present.

                b.   Not many couples waltzed into the room.

                c. * Into the room waltzed not many couples.   (cf. Bruening (2016: 123))

The QI sentence in (44a) is grammatical, and hence the *not*-initial NP *not many of those present* is considered as a subject. On the other hand, the sentence in (44c), which is the inverted forms of (44b), is ungrammatical, which means that the *not*-initial subject in this inverted sentence does not function as a subject. This grammatical discrepancy suggests that the subject DP in QI is located at a different position from that in LICs.

2.3.1.3. Control

Subject DPs in QI and those in LICs show different properties with respect to controlling PRO. The former can be a controller of PRO in adjunct phrases, while the latter cannot (Arano (2014)). PRO is an empty category which must be c-commanded by the appropriate DP. Let us first observe the following examples of QI where post-verbal subjects can serve as the controller of the following participle phrases.

(45)   a.   "I thought Y'all were going to wait," said the girl, PRO fiddling with

                    a package of cassette tapes she was holding.

                b.   "Ah, Pam," said Sarah, PRO waving her hand in disgust.

                                      (Gyoda (1999: 278))

The subject DPs *the girl* in (45a) and *Sarah* in (45b) can be interpreted as the controllers of PRO in the participle phrases *fiddling* and *waving*, respectively. In general, the matrix subject functions as the controller of the participle in participle constructions. Based on the

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standard assumption that participle phrases following a matrix clause are adjoined to TP, it is reasonable to consider that the subject DPs of the matrix clause are located in the specifier of T, because they play a role as the controller by c-commanding PRO in the participle phrase. Let us next consider the following examples of LICs.

(46)   a.   Two sheiks lay near the oasis without PRO talking.

(Nishihara (1999: 387))

b. * Near the oasis lay two sheiks without PRO talking.   (Postal (1977: 150))

In (46a), where inversion does not take place, the subject DP *two sheiks* can c-command PRO in the adjunct phrase.   On the other hand, in (46b), which is the inverted version of (46a), the subject *two sheiks* located in post-verbal position cannot be interpreted as the controller of PRO in the adjunct phrase: PRO is not c-commanded by the subject.   The contrast between (45) and (46) suggests that post-verbal subjects in QI and those in LICs are interpreted in different positions: the former are interpreted in the specifier of T, while the latter are in the complement position of V.[27]

2.3.1.4.   Coordinate Structure

Generally, in coordinate structures, conjuncts are considered to have the same syntactic structure.   Consider the following example below:

(47)   "Very well, on this occasion," said Thomas, and lapsed into an understanding

silence.   (Gyoda (1999:279))

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[27] See chapter 4 for the detailed analysis of LICs.

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This example indicates that *Thomas* in the first conjunct also functions as the subject of the second conjunct. Note that the verb in the second conjunct is an unaccusative verb. Given the Unaccusative Hypothesis (Perlmutter (1978)), under which the subject of unaccusative verbs is base-generated in the complement position of the verb and raises overtly to the specifier of T, the subject in the second conjunct should occupy the specifier of T. As mentioned in Tanaka (2002), if the subject in the first conjunct were to remain in the specifier of *v* in QI, (47) would be the violation of the Coordinate Structure Constraint, because only the second conjunct would include a trace (copy) of the subject. Therefore, if the subject were assumed to stay in its base-generated position in QI, this sentence would be ungrammatical. On the other hand, by assuming that the subject DP in QI undergoes overt movement to the specifier of T, (47) is correctly regarded as a grammatical sentence. Specifically, in (47), both conjuncts include the trace (copy) of the subject, and hence (47) does not lead to the violation of the Coordinate Structure Constraint. Thus, this example suggests that the subject DP in QI undergoes overt movement to the specifier of T.

To sum up, all of the empirical facts given in section 2.3.1 indicate that the subject DP in QI is in the specifier of T, contrary to the assumption by Collins and Branigan (1997) and Collins (1997), both of whom assume the subject DP in QI to remain in situ.

2.3.2. The Properties of the Verb

This section discusses the properties of verbs in QCs. If the discussion in the previous sections is on the right track, the subject DP in QI occupies the specifier of T. It is generally assumed that main verbs in English never move to T (Pollock (1989)), but one might suppose that a main verb bypasses the head T and moves directly to the head C to derive the inverted word order of QI. However, this derivation is ruled out as a violation of HMC. Thus, there remains only one option available: movement to C via T. To discuss how this movement

takes place in QI let us first organize the characteristics of verbs that can occur in QCs.

Following the observation by Uchida (1979), we suppose that verbs related to the quote have to satisfy the requirement to comprise the communicative meaning [*say* + α]. According to Uchida (1979), the relevant verbs are categorized into the following two types; (i) verbs that themselves can convey the meaning of [*say* + α]; (ii) verbs that just convey the meaning of α of [*say* + α].　Following Uchida (1979), this thesis calls the former and the latter R1 and R2, respectively.　Here is the list of verbs that can occur in QCs.

Table 1: the list of verbs in QCs

R1	answer, beg, declare, demand, explain, insist, promise, recommend, shout (out), suggest, whisper, etc.
R2	burp, giggle, groan, growl, laugh, shriek, sing, sob, weep, etc.

In general, the verbs categorized into R2 do not directly relate to an action of saying aloud. However, they can express the communicative manner of the speaker that is associated with utterance.

Partly following Uchida (1979) and Gyoda (1999), this thesis assumes that the meaning of *say* is conveyed when a quote is fronted to the sentence-initial position and that this causes either of the two semantic effects: a semantic reduction of verbs or a semantic complementation to verbs.　The former takes place when an R1 verb is used in QCs, where the quote fronting enables the meaning of verbs to be reduced.　Specifically, the verbal meaning of [*say* + α] results in only [α], as a result of which the main role of verbs becomes something like a functional one (Gyoda (1999)).　On the other hand, the latter occurs when an R2 verb is used in QCs, in which the quote fronting makes up for the meaning of *say* so as to comprise QCs' core meaning of [*say* + α] because R2 verbs only have the meaning of α of

[*say* + α].　In short, the verbs in QCs just complement the communicative manner of the speaker who utters the content of the quote.

The assumption that the quote fronting conveys the meaning of *say* is supported by the contrast given in (48) and (49).

(48)　　a.　He giggled and said, "Cochon."

b. * He giggled, "Cochon."　　　　　　　　　　　(Uchida (1979: 24))

(49)　　a.　"He worked hard," Madame Volet said and giggled.

b.　"He worked hard," Madame Volet giggled.　　　(Uchida (1979: 24))

As (48) illustrates, if a quote is located in the sentence-final position, the sentence is not acceptable without the verb *say*.　On the other hand, as shown in (49), the case where a quote is located in the sentence-initial position, the sentence in (49b) is acceptable even if the verb *say* is not contained.　What the contrast between (48) and (49) shows is that the quote fronting adds the meaning of *say*, and therefore the sentences with the main verb which does not have the meaning of conveying something aloud can be accepted.

Another support for the proposed assumption can be provided by the examples in (50).

(50)　　a. "She always was highly strung," pursued Henry, leaning back in the car

as it shot past the church.　　　　　　　　(Gyoda (1999: 290))

b. *Henry pursued that she always was highly strung.　　(Gyoda (1999: 291))

Although the verb *pursue* is not a verbal communication verb, it is allowed to appear in (50a) because the meaning of the main verb is reduced by the fronted quote.　On the other hand,

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since *pursue* is not originally a verbal communication verb and does not select *that*-clause, it cannot occur in an indirect speech as (50b) shows.

In sum, verbs appearing in QCs are present in order just to complement an action of communication, which suggests that their role becomes something like a functional one. Chomsky (1995: 198) claims that the raising of auxiliaries *have* and *be* in English "reflects their semantic vacuity; they are placeholders for certain constructions, at most 'very light' verbs." In other words, this amounts to saying if verbs are semantically vacuous, they must undergo overt movement before Spell-Out. Main verbs in QCs might be semantically light along the same lines as auxiliaries *have* and *be* (Gyoda (1999)). However, since not all the meaning of the verb is reduced, verbs in QCs still have some semantic content to complement an action of communication. Thus, this thesis assumes that main verbs in QCs are not completely but partially semantically vacuous at least for R1 verbs, with the result that they are able to move to T in the same fashion as auxiliary verbs *have* and *be* do.[28] As for the movement of R2 verbs which cannot be considered as their meaning being reduced, it might be attributable to a Last Resort to satisfy the EPP feature on C for verb movement, which will be discussed in section 2.4.2.

2.3.3.   The Properties of the Quote

This section clarifies the properties of the quote on the basis of some empirical data. There are some pieces of convincing evidence which illustrate the parallelism between *wh*-phrases and the quote in QCs. Consider the following examples cited from Gyoda (1999):

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[28] While the movement of auxiliaries *have* and *be* to T is obligatory, the movement of verbs in QCs is optional and they move to C via T. How this difference of movement property is theoretically explained is shown in section 2.4.2.

(51)   a.   Who said, "The sun rises in the west"?

            b. * "The sun rises in the west," who said?

            c. * Who, "The sun rises in the west," said?   (Gyoda (1999: 284))

As shown in (51a), the *wh*-phrase *who* and the quote can be used in one and the same clause. On the other hand, the quote is not allowed to move into the sentence-initial position in *wh*-questions, as illustrated in (51b). Furthermore, as (51c) indicates, the *wh*-phrase cannot be preposed over the quote. These examples suggest that (51b) and (51c) are not acceptable because the *wh*-phrase *who* and the quote *"The sun rises in the west"* raise overtly into the same position. Therefore, they cannot cooccur in the sentence-initial position; this thesis assumes that the relevant position is the specifier of C. In contrast to (51b) and (51c), (51a) is acceptable because only the *wh*-phrase is pre-posed into the sentence-initial position: the *wh*-phrase and the quote do not compete for the specifier of C in this case.

    The assumption that the quote raises to the specifier of C can get a further support from the following example.

(52)   a. *I wonder who "Leave me alone!" shouted.   (cf. Wu (2008: 99))

            b. *I was taken aback when "I live alone" she replied.

                                  (cf. Huddleston and Pullum (2002: 1026))

These sentences show that regardless of inversion taking place, the quote also raises to the specifier of C in the embedded clause as well, as in the case of the *wh*-phrase. The observation above suggests that the quote in QCs occupies the specifier of C, and that it behaves in the same way as a *wh*-phrase. Thus, it seems reasonable to assume that a quote selects the specifier of C for its landing site when it raises, just as a *wh*-phrase moves into it.

This assumption is supported from the viewpoint of information structure. Birner (1992) claims that the information in the postposed NP that denotes the speaker is often familiar one as in extended dialogues, while the information in the pre-posed quotation is new. It is well known that the focus of a sentence is assigned to the newest information in a clause. The assumption that a quote targets the same landing site as a *wh*-phrase seems plausible because a pre-posed *wh*-phrase in an interrogative sentence also serves as the focus of the sentence. Furthermore, additional supporting evidence comes from the phonological fact. According to Green (1980) and Suñer (2000), a fronted quote attracts an attention to itself in that the main sentential stress of the whole utterance is put to it. Some relevant examples are illustrated in (53), in which the boldface indicates the position of a main sentential stress.

(53) a. "This is very in**ge**nious," Babar observes.

  b. "This is very in**ge**nious," observes Babar. (cf. Green (1980: 591))

On the other hand, the expression introducing the quote is pronounced with a quite flat intonation (similarly to parentheticals).[29]

However, it can be considered that examples like (27) in section 2.2.1.4, repeated here as (54), constitute the argument against the assumption that the quote itself undergoes movement.

(54) a. "When on earth will the fishing begin again?" asked Harry.

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[29] Green (1980) also claims that (ia) and (ib) are possible if it is relevant and unpredictable from the context who the speaker must be.

  (i) a. "This is very in**ge**nious," Babar ob**se**rves.
    b. "This is very in**ge**nious," observes **Ba**bar. (cf. Green (1980: 591))

b.   "When on earth" asked Harry, "will the fishing begin again?"

c.   Asked Harry: "When on earth will the fishing begin again?"

(Collins and Branigan (1997: 10))

As discussed in section 2.2.1.4, while (54a) is compatible with the assumption that the quote occupies the specifier of C, it is unlikely that (54b) and (54c) can be adequately explained by means of movement of the quote.   However, there are a number of problems with such reasoning.   According to Wu (2008), the quote itself can be involved in some syntactic operations within the clause.   Consider the following examples, which are originally observed by Partee (1973).

(55)   a.   When the surgeon said "Give me the scalpel", she handed him

the wrong *one*.

b.   When he said "Leave!", she wouldn't ___.

c.   When he said "Turn right", she did the *opposite*.   (Wu (2008: 105))

First, (55a) shows that the quote can license *one*-pronominalization.   The *one* in (55a) refers to *the scalpel* in the quote.   Second, (55b) exemplifies that the quote can function as an antecedent of VP-ellipsis: the underline following *wouldn't* indicates the elided part.   Lastly, (55c) shows that the quote can be referred to the use of *opposite*.   The *opposite* in (55c) refers to the content of the quote, and then "*she did the opposite*" means that she turned left. These observations exemplify that something inside the quote seems to be able to license certain syntactic operations, showing that the quote is integrated as a part of the syntactic structure, not just adjoined to the clause so as to be coindexed with the null quotative operator, as assumed in Collins and Branigan (1997) and Collins (1997).

Moreover, in QI like (54b), there seems to be certain placement restrictions to the discontinuity, which can also be observed in common parentheticals. Compare the examples of QI in (56) with the ones of parentheticals in (57).

(56)　　*Placement Restrictions of the Quote*

　　　a.　"When on earth", asked Harry, "will the fishing begin again?"

　　　b. * "When", asked Harry, "on earth will the fishing begin again?"

　　　c. * "When on", asked Harry, "earth will the fishing begin again?"

　　　d. * "When on earth will", asked Harry, "the fishing begin again?"

(Wu (2008: 105))

(57)　　*Placement Restrictions of Parentheticals*

　　　a.　When on earth, according to John, will the fishing begin again?

　　　b. * When, according to John, on earth will the fishing begin again?

　　　c. * When on, according to John, earth will the fishing begin again?

　　　d. * When on earth will, according to John, the fishing begin again?

(Wu (2008: 106))

Both of the quote and the parenthetical can be divided or inserted only where a major prosodic boundary is found.[30] The contrast above suggests that the assumption that the quote is present just for the semantic purpose to identify the content of a null operator is doubtful. If the quote were so, such placement restrictions would not hold. More importantly, in the approaches with a null operator, it is unclear when and where the quote

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[30] We have no answer for the mechanisms of such placement restrictions. In fact, there remain unclear points in this sort of topic. See Emonds (1973), McCawley (1982), and Ackema and Neeleman (2004) for the details of parentheticals.

enters into a co-referential relation with the null operator.   Therefore, this thesis assumes that

movement operation can be applied to the quote, not adopting the null operator approach.

   Furthermore, it should be noted that the traditional assumption is not always correct that a

quote is base-generated as an argument of a transitive verb due to the selectional relation

between them.   However, a closer observation clarifies that quotes can be merged without

building a selectional relation with verbs, as illustrated in the following examples.

(58)   a.   "I don't know," he shrugged.   (Yamaguchi (2009: 222))

        b.   "Right," nodded Henry.   (Uchida (1979: 24))

The main verbs in these examples are all intransitive verbs, so it should be impossible for

them to select the quote as their objects.   Moreover, as shown in the examples in (59),

transitive verbs can take their direct object, not a quote, in their complement positions in QCs,

which suggests that the quote is not selected by the main verb.

(59)   a.   That's not my fault," Charlie shook his head.   (Yamaguchi (2009: 222))

        b.   "We're just friend, Mother," she gave that little laugh and smiled the

             charming smile that hid the pure will.   (BNC, A6N 702 n/a)

Therefore, this thesis proposes that the quote can be merged in two ways: Set-Merge and

Pair-Merge.   In short, if a quote undergoes Set-Merge, it builds a selectional relation with a

verb and hence is licensed by the verb.   On the other hand, if it undergoes Pair-Merge, it

plays a role as an adjunct, which constructs a modification relation with a main verb and is

licensed on the basis of Transfer operation within the same domain (Kobayashi (2019)).[31] [32]

In this section, it has been assumed that the position of quotes is the specifier of C and quotes themselves or something inside them can license certain syntactic operations. This indicates that they are integrated as a part of the syntactic structure, not just adjoined to a clause in order to be coindexed with a null quotative operator. In addition, it is argued that quotes can constitute an argument or an adjunct depending on the way of merger.

2.3.4. Summary

In the discussion given in section 2.3, it has been shown that subject DPs in QI, in fact, undergo overt movement to the specifier of T, contrary to the previous studies reviewed in section 2.2. With respect to verbs in QCs, this thesis postulates that they play a role like a functional one to complement an action of communication because of the quote fronting, and therefore can move to C via T. In regard to quotes, they are assumed to constitute either an argument or an adjunct. The former is selected by a main verb, while the latter is adjoined and constructs the modification relation with a main verb. The next section proposes an alternative analysis of QCs and gives principled explanations to their properties.

2.4. Analysis

This section proposes the syntactic structures of QCs and shows that the proposed analysis can account for the empirical facts provided in the previous sections. It is argued that there are two types of QCs depending on the verb type (R1 and R2) and that quotes are necessary to be licensed in different ways on the basis of how they are merged: Set-Merge or Pair-Merge.

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[31] Hiroe (2014) proposes a similar assumption that quotes do not constitute a nominal argument expression but an adjunct clause.

[32] How these two types of quote work is discussed in section 2.4.2.

2.4.1. Theoretical Backgrounds

As outlined in chapter 1, this thesis assumes the phase-based derivational model advocated by Chomsky (2000) and his subsequent works (Chomsky (2001, 2004, 2008, 2013, 2015, 2019)), in which it is postulated that syntactic structures are constructed in units of phase. In the phase theory, CP and v*P constitute phases and their relevant parts are handed over in a cyclic fashion to the S-M and C-I Interfaces by the operation of Transfer. Transfer applies to the complements of the phase heads, or TP and VP, and renders the domains inaccessible for further syntactic operations. This is called the PIC, whose definition is repeated here as (60), in which the term *edge* refers to either specifiers or adjoined elements of HP.

(60)   Phase Impenetrability Condition (PIC)

The domain of a phase head H is not accessible to operations outside HP;

only H and its *edge* are accessible to such operations.

(cf. Chomsky (2001: 13))
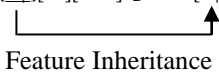
This phase-based derivational model makes syntactic computation more efficient. In particular, the information of a syntactic structure to deal with is divided into each phase domain by virtue of Transfer, with a result of the reduction of computational burden at each step of derivation. In addition, this thesis adopts Feature Inheritance, as outlined in chapter 1, in which an unvalued feature on a phase head, which is assumed to trigger syntactic operations, is inherited by a head of its complement.

Another assumption that this thesis adopts is that C head is introduced into the derivation not only with [uφ] but also with [uδ]. As discussed in chapter 1, [uδ] enters into an Agree relation with any A′-related feature (Topic, Focus, Q, etc.). The value of [uδ] is dependent on the valued feature that it enters into an Agree relation with. We presuppose that an

element that agreed with [uδ] is attracted by an EPP-feature on C, just like the raising of the

subject DP to the specifier of T due to the EPP-feature on T.[33]

Taking the discussion above into account, let us consider the phase-based derivation of a

wh-question in (61) as an example. The syntactic structure of (61) is illustrated in (62) (Note

that the irrelevant operation, V-to-v*/T-to-C movements, are omitted in (62) just for

expository purposes).

(61)   What did John buy?

(62)   a. $[_{v*P}$ what$_{i[Q]}$ $[_{vP*}$ John$_{[\varphi][uCase]}$ $v*$ $[_{VP}$ buy $t_i]]]$

   b. $[_{CP}$ C$_{[u\varphi][u\delta][EPP]}$ $[_{TP}$ T$_{[u\varphi][EPP]}$ $[_{v*P}$ what$_{i[Q]}$ $[_{v*P}$ John$_{[\varphi][uCase]}$ $v*$ $[_{VP}$ buy $t_i]]]]]$

   Feature Inheritance

   c. $[_{CP}$ what$_{i[Q]}$ C$_{[u\delta][EPP]}$ $[_{TP}$ John$_{j[\varphi][uCase]}$ did$_{[u\varphi][EPP](T)}$ $[_{v*P}$ t_i $[_{vP*}$ t_j $v*$

   $[_{VP}$ buy $t_i]]]]$

In (62a), the subject DP *John* and the object *wh*-phrase *what* are merged in the specifier of *v**

and the complement position of V, respectively. The object *wh*-phrase raises to the outer

specifier of *v** so as to escape from the domain of *v** which is to be transferred. Once all the

operations within the *v**P phase have been completed, Transfer applies to the complement of

the phase head, so that the relevant information of syntactic structure is sent off to the S-M

and C-I Interfaces. Next, in (62b), T and C are merged in order, and Feature Inheritance

applies, as a result of which [uφ] on C are transmitted to T. Then, [uφ] on T, acting as a

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[33] This kind of movement follows the same line with so called criterial movement (Rizzi (1997)). However, the framework adopted here does not assume a Split-CP. Thus, it is assumed that the left periphery is not decomposed into multiple sections.

probe, enter into an Agree relation with the φ-features on the subject DP, acting as a goal. This has [uφ] and the unvalued Case feature (henceforth, [uCase]) checked, and then the subject DP moves to the specifier of T in order to satisfy the EPP-feature on T. On the other hand, [uδ] on C enters into an Agree relation with the Q-feature on the object *wh*-phrase in the outer specifier of *v** and it is attracted by an EPP-feature on C, raising to the specifier of C. Since all the syntactic operations in the CP phase have been completed, Transfer applies to the complement position of the phase head, or TP, and hence the relevant information of syntactic structure is sent off to the S-M and C-I Interfaces.

Given the discussion in section 2.3.1, it is reasonable to assume that the syntactic position of the subject DP in QCs is the specifier of T. In addition, considering the discussion in section 2.3.3, we presuppose that the quote has a focus feature and occupies the specifier of C. For the inverted order to be derived, a main verb must raise to C. However, how does the successive verb movement theoretically occur?

This thesis assumes an Agree-based analysis of verb movement along the lines of Haeberli and Ihsane (2016). They propose that an unvalued V-feature (henceforth, [uV]), which is on functional heads related to verb movement, enters into an Agree relation with a verb, with the result that the requirement of its valuation is satisfied. After the valuation, if the functional head has an EPP-feature in addition to [uV], the verb raises there in order to meet its requirement. Extending this assumption to verb movement in QCs and taking into consideration their historical development, which will be discussed in detail in chapter 3, this thesis assumes that an unvalued Quotative-V feature (henceforth, [uQ-V]) is introduced into the derivation with a phase head C.[34] [uQ-V] enters into an Agree relation with a main verb

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[34] The same type of feature is assumed in Collins and Branigan (1997) and Gyoda (1999) in the framework of checking theory. However, checking theory has been abandoned and therefore the idea of feature strength is no longer able to be adopted in the current Minimalist framework. Moreover, none of them provide any empirical discussion on the assumption that C in QCs have such a specific feature. In contrast, we will show on the basis of the corpus research that QCs maintain almost the

in QCs and gets assigned a value, which in turn induces either of the two interpretive effects shown in (63).

(63)   a.   bleaching the meaning of *say*

              b.   complementing the meaning of *say*

(63a) takes place when R1 verbs are contained in the derivation, while (63b) occurs when R2 verbs are. In addition, this thesis assumes an optional EPP-feature on C which triggers overt verb movement to C via T.[35]

This section has overviewed some theoretical assumptions, the phase-based derivational model, the mechanism of Feature Inheritance, the A′-related feature [uδ], and the system of verb movement. In the next section, we propose the derivation of QCs.

2.4.2.   The Derivation of QCs

With the assumptions in section 2.4.1 in mind, let us first consider the derivation of QCs with R1 verbs. QI in (18b), repeated as in (64), is derived as in (65).[36]

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same form as in Present-day English throughout the history of English, even after the periods when verb movement to the inflectional domain was lost. This suggests the presence of some feature that triggers verb movement, independently of the development of the English language itself. See chapter 3 for the detailed discussion.

[35] This thesis follows Haeberli and Ihsane (2016) in assuming that T in present-day English also has [uV] but it does not have [V-EPP] and therefore V-to-T movement does not take place in declarative sentences. In the case of QCs with an R1 verb, a main verb becomes something like a functional element by entering into an Agree relation with [uQ-V] and hence can undergo movement like *have* and *be* (see the discussion in section 2.3.2). We presuppose that this type of verb movement does not require [V-EPP]. For an expository convenience, [uV] on T is omitted in the derivations in this chapter. We will give a detailed discussion on this in chapter 3.

[36] The EPP feature on C which triggers verb movement is represented as [V-EPP] in order to distinguish it from another EPP-feature which drives a movement to specifier positions.

(64) "We haven't had that spirit here since 1969," said the captain.

(Gyoda (1999: 276))

(65)

CP

Quote$_{k[Foc]}$ C′

V$_{j[u\delta][uQ\text{-}V][EPP][V\text{-}EPP]}$ TP   **Transfer**

DP$_{i[\varphi][uCase]}$ T′

$t_{j[u\varphi][EPP]}$ v*P

t_k v*P

t_i v*′   **Transfer**

t_j VP

t_j t_k
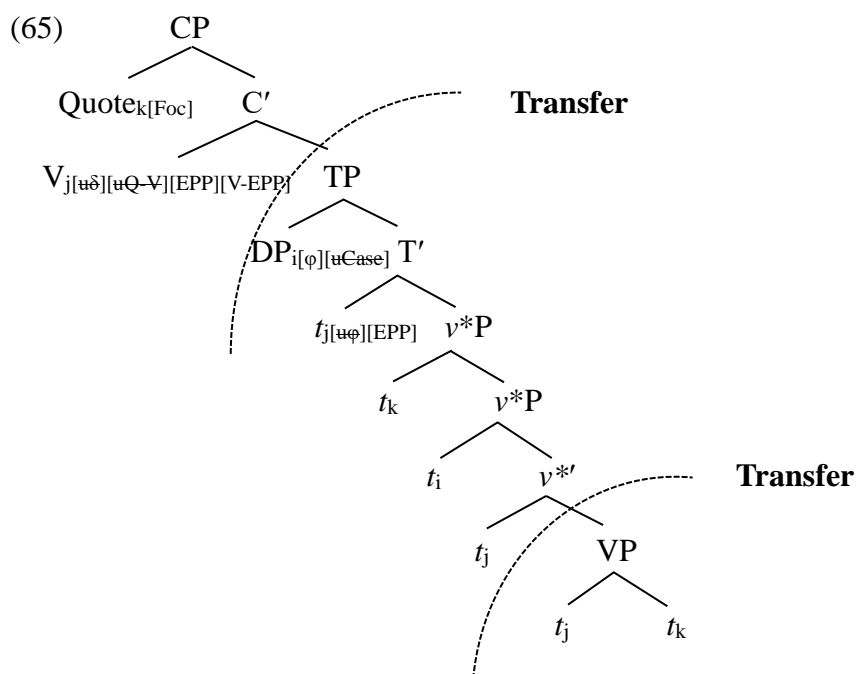
In (65), at the v*P phase, the quote and the subject DP undergo Set-Merge in the complement

of V (Collins and Branigan (1997)) and in the specifier of v*, respectively. It should be

noted that what is merged is not a null quotative operator but an actual quote, based on the

discussion in section 2.3.3.   The quote then raises to the outer specifier of v* to escape from

the transferred domain of v*, that is VP, so that it can be accessible for further syntactic

operations in the next phase.   Once all the operations within the v*P phase have been

completed, VP is sent off to the S-M and C-I Interfaces.   Next, at the CP phase, C is

introduced into the derivation with five types of features, namely, [uφ], [uδ], [uQ-V], [EPP]

and [V-EPP].   Feature Inheritance applies and [uφ] is transmitted to T.   [uφ] enter into an

Agree relation with the φ-features on the subject DP, with the result that they get assigned

values and [uCase] is deleted.   The subject DP raises to the specifier of T in order to satisfy

the EPP feature on T.   On the other hand, [uQ-V] on C enters into an Agree relation with the

main verb, which bleaches the meaning of the verb (cf. (63a)).   As a result, the verb can

undergo movement to T.   Then, [V-EPP] triggers its movement to C through heads in its way.

On the other hand, [uδ] enters into an Agree relation with the focus feature on the quote,

getting assigned a value, and the EPP feature on C triggers its movement to the specifier of C.

Since all the features get valued, the derivation successfully converges, with the result of the

inverted word order.

   Let us next consider the derivation of QCs in non-inverted form.   This thesis assumes it to

be derived when C does not have [V-EPP], which can be optionally assigned to a functional

head.   Then, the relevant example in (18a), repeated here as (66), has a syntactic structure

shown in (67), with the same derivational process as in (65) except for verb movement.

(66)   "We haven't had that spirit here since 1969," the captain said.

(Gyoda (1999: 276))

(67)
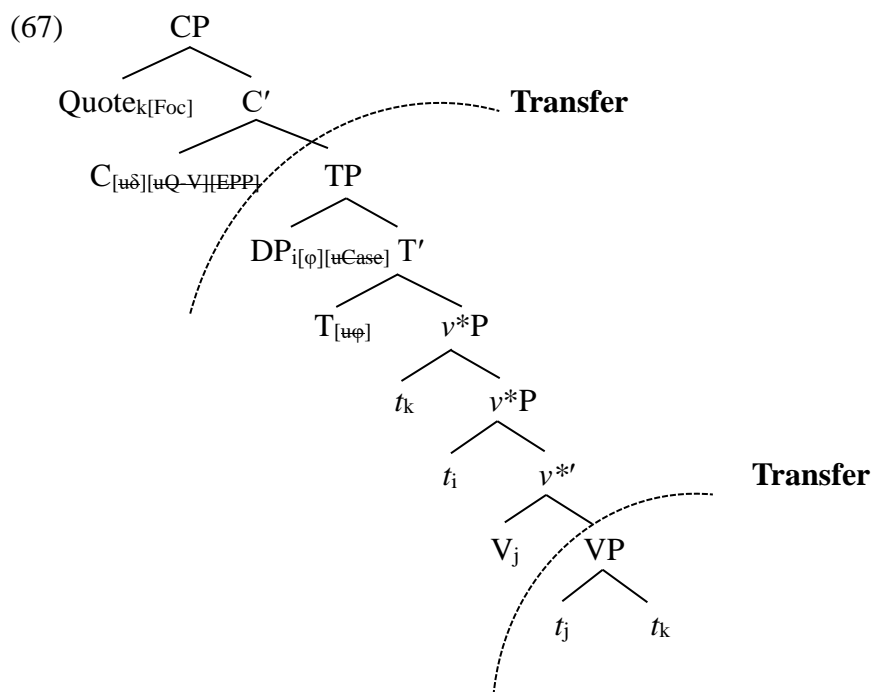
One question arises concerning why [V-EPP] feature can be optionally assigned to C in QCs.

This thesis argues that it is determined from a perspective of information structure.   In

particular, this thesis follows the observation by Cichosz (2019) that the choice between VS and SV in QCs depends on the pragmatic motivation. Following Biber's (1999: 922) argument that what comes second is more prominent, Cichosz (2019) argues that the choice of the word orders is based on the information value of a subject and a verb: if a subject has higher information value than a verb, the word order is VS, and vice versa. Reducing this idea to the proposed analysis here, this thesis claims that [V-EPP] is introduced into the derivation when the word order needs to be adjusted in terms of the information structure.[37]

Let us move on to the discussion on another type of QCs: QCs with R2 verbs. As mentioned in section 2.3.2, R2 verbs only have the meaning of α of [*say* + α], which suggests that they are not entitled to select a quote as its complement. In fact, some of the verbs categorized into R2 are intransitive verb, and hence impossible to take any object in the first place. In such cases, this thesis assumes that a quote is Pair-Merged and that it constructs a modification relation with a main verb within the same transferred domain (Kobayashi (2019)). This assumption is along the lines of Tanaka (2011), who proposes the condition that the modification interpretation is formed within a single transferred domain under the assumption that the computation in semantic component proceeds by a transferred domain. Based on this idea, Tanaka (2011) accounts for the extraposition from DP. The relevant examples are given in (68).[38]

(68)   a.   [A review __] came out yesterday **of this article**.

         b.   [A man __] appeared **with green eyes**.   (Tanaka (2011: 175))

---

[37] We cannot help admitting that this assumption is just a stipulation. This thesis leaves a more theoretical explanation for future research.

[38] The underline notation is used for the original position of extraposed elements to indicate that the potential interpretive correlation between extraposed elements and their host DPs.

The PP in boldface in each example is extraposed from DP. These elements establish a modification relation with their host DPs. According to his assumption, the extraposed elements and their host DPs must be within the same transferred domain in order to establish their modification relation. However, it seems that they are not included within the same transferred domain, and therefore Tanaka (2011) proposes an additional assumption in (69).[39]

(69) Feature Inheritance is available for EF, as well as Agreement features [AF].

(cf. Tanaka (2011: 184))

With the assumptions above in mind, consider the derivation of (68a), whose relevant structure is given in (70).

(70)
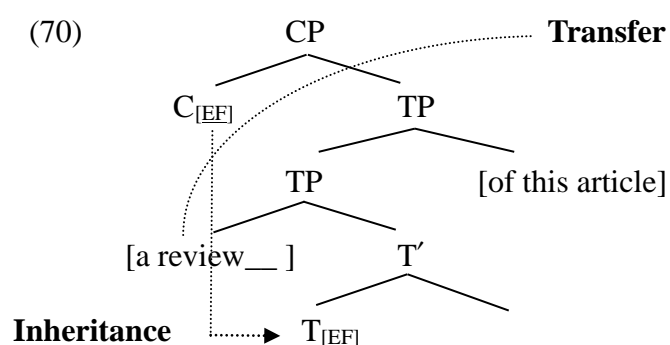
(Tanaka (2011: 185))

In (70), EF is inherited from C to T, and then PP *of this article* is extraposed from its host DP to the right edge of TP. As a result, both the extraposed PP and its host DP are within a single transferred domain, and therefore this configuration can meet the condition, resulting in establishing the appropriate modification interpretation at the C-I interface.

---

[39] Tanaka (2011) argues that Feature Inheritance of EF is an optional operation, while the one of AF is not. This difference of optionality of Feature Inheritance is based on their formal requirement. See Tanaka (2011) for the details of this.

Considering the discussion above, Kobayashi (2019) assumes the following licensing condition on the modification relation between a main verb and a quote.

(71)   The main verb and the quote must be within a single transferred domain.

(Kobayashi (2019: 26))

If we take into account the assumption that the quote can also function as an adjunct, as discussed in section 2.3.3, it can be considered that the main verb (that is, an R2 verb) and the quote must be within a single transferred domain so as to establish the proper modification relation.   The modification relation here means that the main verb as a modifiee enters into a semantic relation with the quote as a modifier.   We consider this relation to be parallel to transitive verbs taking their object so that they can meet their selectional relation.   The condition (71) requires that the main verb and the quote be interpreted as something like a semantic unit to guarantee their semantic connection.   R2 verbs are not capable of selecting the quote as their object because they are intransitive verbs and lack the meaning of *say*.   Then, R2 verbs enter into an Agree relation with [uQ-V], obtaining the meaning of *say* (cf. (63b)), and establish the semantic relation with the quote at the C-I Interface by being transferred in the same domain.[40]

With this assumption in mind, the derivation of QI with an R2 verb, shown in (72), proceeds as illustrated in (73).

(72)   "Right," nodded Henry.   (Uchida (1979: 24))

---

[40] We leave for future research the concrete mechanism that works at the Interface with respect to the semantic relation between the verb and the quote.

(73)

$$
\begin{array}{c}
\text{CP} \\
\diagup \quad \diagdown \\
\text{Quote}_{j[\text{Foc}]} \qquad \text{C}' \\
\end{array}
$$

CP
- Quote_{j[Foc]}
- C′
  - V_{k[u̶δ̶][u̶Q̶-V̶][EPP][V-EPP]} ----- **Transfer**
  - TP
    - DP_{i[φ][u̶C̶a̶s̶e̶]}
    - T′
      - t_{k[u̶φ̶][EPP]}
      - v*P
        - v*P
          - t_i
          - v*′
            - t_k
            - VP   ----- **Transfer**
        - t_j
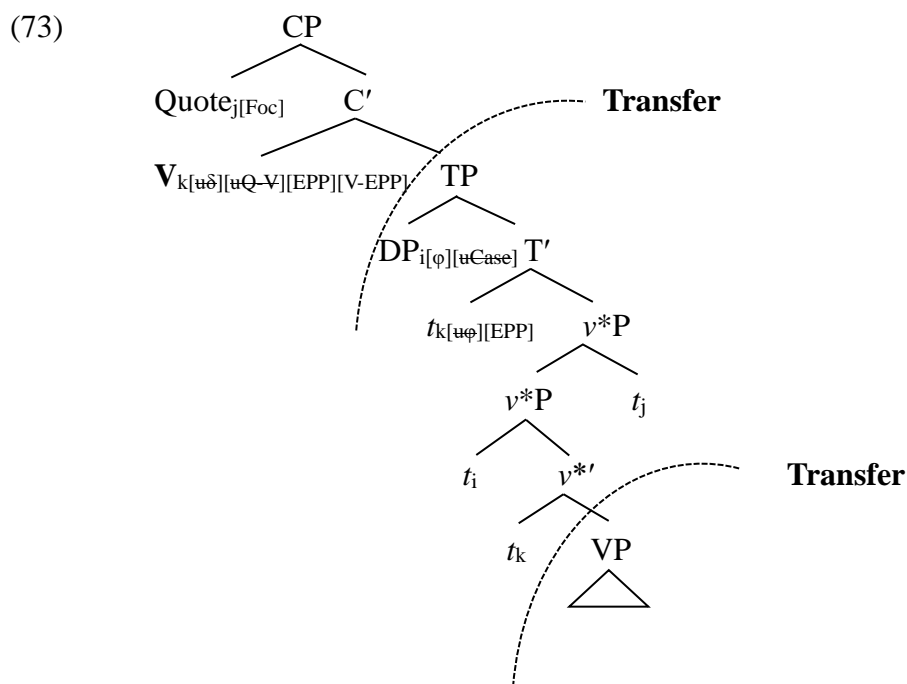
In (73), at the v^*P phase, the subject DP is merged in the specifier of v^*, while the quote is Pair-Merged on the right side of v^*P. The domain of v^* is transferred to the S-M and C-I Interfaces as soon as all the operations within the v^*P have been completed. Then, at the CP phase, C is introduced into the derivation with the five types of features ([uφ], [uδ], [uQ-V], [EPP] and [V-EPP]) and [uφ] is inherited by T. φ-features on the subject DP enter into an Agree relation with [uφ] that T bears, with the subject DP raising to the specifier of T in order to meet the requirement of the EPP feature on T. On the other hand, [uQ-V] on C enters into an Agree relation with the main verb, making up for the meaning of *say*. The verb then raises to C via T so as to satisfy the requirement of [V-EPP].[41] [uδ] on C also agrees with the focus feature on the quote and gets assigned a value and then it raises from the right adjoined position of the specifier of v^* to the specifier of C by the attraction of the EPP feature on C. Once all the operations within the CP phase have been completed, the domain of C is transferred to the Interfaces. In (73), the quote and the main verb are in the specifier of C and the head C, respectively. Hence, this configuration satisfies the licensing condition of

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[41] Verb movement of R2 verbs to T is driven as a Last Resort to satisfy the EPP requirement.

the modification relation between them.[42]   Since all the features are assigned appropriate values, the derivation converges and the main verb precedes the subject DP in the specifier of T, which results in the inverted word order.

Now let us consider how QCs containing an R2 verb in non-inverted order is derived.   As assumed in (67), the head C does not have a [V-EPP] in this type of QCs, so that the same derivational process as in (73) is made except for verb movement.   The relevant example and its syntactic structure are shown in (74) and (75), respectively.

(74)   "I don't know," he shrugged.   (Yamaguchi (2009: 222))

(75)
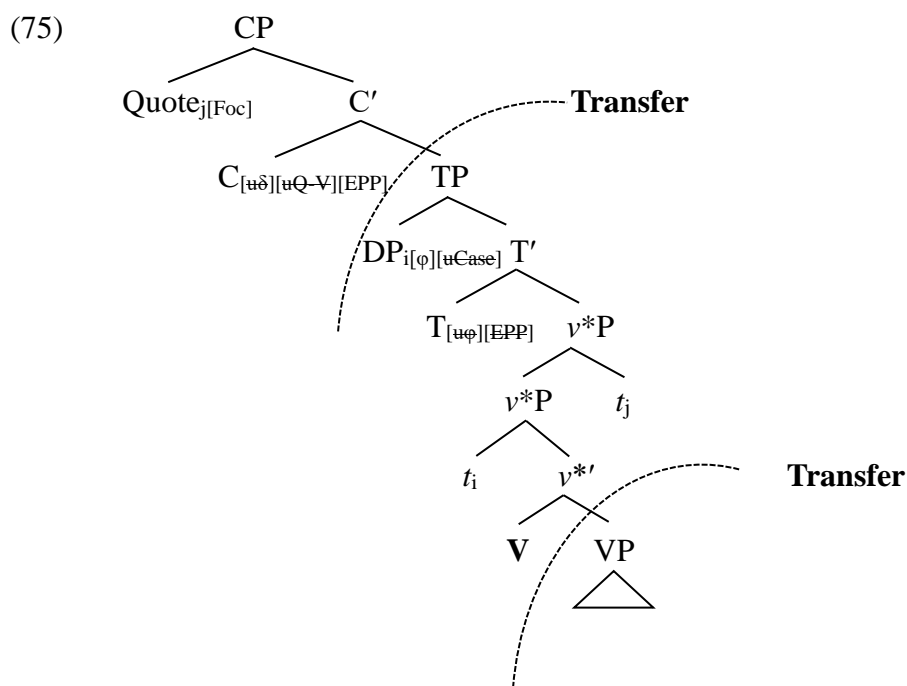
The derivation of (75) is apparently problematic since the quote and the main verb are not included within the same transferred domain, which induces the violation of the licensing condition of (71).   However, this is not the case because the copy of the quote left on the right side of v*P can properly establish the modification relation with the main verb in v*.

---

[42] CP is transferred at the end of the derivation, which is considered default Transfer.

Generally, A′-copies, unlike A-copies, retain the semantic content of the moved element, as suggested by Chomsky (1995). The relevant example is illustrated in (76).

(76)   **Of which car** was [the driver _____] awarded a prize? (Chomsky (2008: 147))

In the configuration of (76), while the *wh*-phrase has raised to the specifier of C, the modification relation between the *wh*-phrase and the subject DP is formed in their base-generated positions, not in the derived positions. This indicates that the copy of the *wh*-phrase left in its base-generated position is entitled to participate in the modification relation. Therefore, this thesis assumes that the modification relation between the main verb in v* and the copy of the quote left on the right side of v*P can be properly established when Transfer applies to the domain, deriving the relevant interpretation at the C-I Interface.

To sum up this section, it has been shown that there are two types of QCs and each type has both SV and VS orders. C heads in QCs systematically have the four types of features ([uφ], [uδ], [uQ-V], and [EPP]). In addition to them, [V-EPP], which induces verb movement, is introduced in the case of QI. In QCs with R1 verbs, the quote undergoes Set-Merge in the complement of V and raises to the specifier of C via the edge of v*P. On the other hand, in QCs with R2 verbs, the quote is Pair-Merged on the right side of v*P, and then raises to the specifier of C. The latter type of the quote establishes the modification relation with the main verb via the operation of Transfer.

2.4.3. Explaining the Properties of QCs

In this section, we account for some properties of QCs discussed in the previous studies and

section 2.3.1.　It is shown that some of them cannot be captured by the previous studies.[43]

2.4.3.1.　Auxiliary Restriction

Let us first consider the auxiliary restriction.　Some relevant examples are given in (77).

(77)　　a.　"Where is my key?" asked John.

　　　　b. * "Where is my key?" has John asked.

　　　　c. * "Where is my key?" has asked John.

　　　　c. * "Where is my key?" was asking John.

　　　　d. * "Where is my key?" would ask John.　　　　(Wu (2008: 81))

As illustrated in (77), if inversion takes place in a sentence containing an auxiliary (*have*, *be*, and *would* in this case), the sentence is not acceptable.[44]　However, this auxiliary restriction holds only when inversion takes place: if inversion does not occur, the sentence will be grammatical.　Compare the examples in (77) with (78).

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[43] The explanations in this section are given with the analysis proposed for QCs with R1 verbs.　This is because no matter which analysis is adopted, there is no difference in the explanation for the empirical facts observed in any types of QCs.

[44] There is a discrepancy in judgements about grammaticality of QI sentences in which a main verb follows an auxiliary *have*.　While Collins and Branigan (1997) give two question marks to an example with auxiliary *have,* Quirk et al. (1985) and Bruening (2016) one question mark.　The relevant examples of each are shown in (ia) and (ib), respectively.

(i)　a.　?? "What time is it?" had asked Pety of Mons.　　(Collins and Branigan (1997: 13))
　　b.　? "Yippee!" has said Gil on more than one occasion.　　(Bruening (2016: 124))

This thesis, following the judgement by Wu (2008), considers such sentences as ungrammatical because their judgements are not enough to admit that the sentences in (i) are fully grammatical.

(78) a. "Where is my key?" John asked.

   b. "Where is my key?" John has asked.

   c. "Where is my key?" John was asking.

   d. "Where is my key?" John would ask.   (Wu (2008: 82))

This auxiliary restriction in QI can be accounted for by the analysis proposed in the previous section. Let us first consider the structure of (77b) as an example.

(79) $[_{CP}$ Quote$_{j[Foc]}$ has$_{k[u\delta][uQ\text{-}V][EPP][V\text{-}EPP]}$ $[_{TP}$ John$_{i[\phi][uCase]}$ $t_{k[u\phi][EPP]}$ $[_{v*P}$ t_j

   $[_{v*P}$ t_i asked $[_{VP}\ldots]]]]]$

In (79), the derivation proceeds in the same fashion as in (65). As discussed in the previous section, C in QI is introduced into the derivation with the five types of features: $[u\phi]$, $[u\delta]$, $[uQ\text{-}V]$, $[EPP]$ and $[V\text{-}EPP]$. In this case, one of the features, $[V\text{-}EPP]$, which is satisfied by the movement of a main verb, not an auxiliary, induces a problem in the derivation: all of the other features are properly assigned values and deleted, but $[V\text{-}EPP]$ is not. That is to say, in (79), the auxiliary *have* occupies the head T, which makes it impossible for the main verb to raise to C since skipping intermediate head positions induces the violation of HMC. The requirement of $[V\text{-}EPP]$ is not satisfied even if the auxiliary *have* raises to C instead of the main verb, as shown in (79), and hence this derivation does not converge.

 Let us next consider the derivation of (78b) in which inversion does not occur. Its relevant structure is shown in (80).

(80) $[_{CP}$ Quote$_{j[Foc]}$ C$_{[u\delta][uQ\text{-}V][EPP]}$ $[_{TP}$ John$_{i[\phi][uCase]}$ has$_{[u\phi][EPP](T)}$ $[_{v*P}$ t_j

   $[_{v*P}$ t_i asked $[_{VP}\ldots]]]]]$

The derivational process of (80) is the same as that of (67). In this structure, C does not have [V-EPP], so that the movement of the main verb is not triggered. Therefore, the derivation converges, with all the features properly valued.

2.4.3.2. Clausal Negation

As mentioned in section 2.2, the use of negation is not allowed in QI. In addition, QI also disallows the application of *do*-support with negation. The relevant examples are repeated here as (81).

(81)　　a. * "Let's eat," not said John just once.

b. * "Let's eat," said not John just once.

c. * "Let's eat," didn't John say just once.　　　　　(Collins (1997: 34))

This thesis adopts here the standard assumption that the negative *not* is merged as a head and a negative phrase (henceforth, NegP) is located immediately above *v**P (cf. Pollock (1989)). Recall that this thesis assumes that the subject DP in QI does not remain in its base-generated position but raises to the specifier of T. Taking these assumptions above into consideration, we obtain the following syntactic structure of QI with NegP.

(82)　　*Syntactic structure of QI with NegP*

[$_{\text{CP}}$ Quote$_{\text{j[Foc]}}$ V$_{\text{k[}u\delta\text{][}uQ\text{-V][EPP][V-EPP]}}$ [$_{\text{TP}}$ John$_{\text{i[}\varphi\text{][}u\text{Case]}}$ $t_{\text{k[}u\varphi\text{][EPP]}}$ [$_{\text{NegP}}$ Neg [$_{v\text{*P}}$ t_{j} [$_{v\text{*P}}$ t_{i} t_{k} [$_{\text{VP}}$…]]]]]]]

With this structure in mind, let us consider (81). In (81a), it is reasonable to regard the

subject DP to remain in the specifier of *v** because it linearly follows the negative *not*. It follows from this that the canonical subject position, namely the specifier of T, is empty, with the result that the EPP-feature on T has not checked off. In English, the specifier of T must be occupied by some element in order to meet the requirement of the EPP-feature. Therefore, the derivation of (81a) does not converge by virtue of the failure to check the EPP-feature on T.[45] (81b) can be accounted for along the same lines: the EPP-feature on T is not satisfied. Since the subject DP linearly follows the negative *not*, it is valid to regard it as being within *v**P, which means that there is no element occupying the specifier of T. Thus (81b) results in the derivational crash. In addition, the derivation of (81b) also induces the violation of HMC on the grounds that the verb has raised past the negative *not*. Thus, the ungrammaticality of (81b) can be attributed to the two factors: the failure of checking off EPP-feature and the violation of HMC. In regard to (81c), the same explanation as the auxiliary restriction can be applicable to this sentence. Since *do* occupies T, the main verb cannot raise to C via T, which means that the requirement of [V-EPP] cannot be satisfied, with the result that the derivational crash takes place.[46]

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[45] The syntactic position of the verb in (81a) is unclear. Since it does not past the *not*, it must be within the *v**P, but there is no room for its landing site between *not* and the copy of the subject DP. However, it is safe to say that this does not become a problem to account for the reason why the derivation of (81a) does not converge because the EPP-feature on T is not satisfied at any event.

[46] According to Gyoda (1999), negation can be used in QCs if the existence of the quote is not negated. Consider the contrast shown in (i) below.

(i) a. "I am so happy," Mary didn't deny. (Branigan and Collins (1993))
    b.* "Let's eat," John didn't say. (Gyoda (1999: 285))

As illustrated in (ia), the use of negation is possible in non-inverted word order. Gyoda (1999) argues that the speech act represented by the quote is guaranteed by its speaker *Mary*, so that (ia) is grammatical. On the other hand, the use of negation is impossible in (ib) because the existence of the quote is negated by its speaker *John*. Based on the facts above, Gyoda (1999) concludes that certain semantic restriction holds in QCs that prohibits negating the existence of the quote. This cannot be captured by the proposed account, but at least it can be said that QI does not allow the use of negation, which can be attributed to the syntactic reasons.

2.4.3.3. Adverbs

As shown in section 2.2, it seems that adverbs may not appear between the subject DP and the verb in QI, as illustrated in the following paradigm.

(83)   a.   "I finally quit this job," John murmured happily.

           b.   "I finally quit this job," murmured John happily.

           c. ? "I finally quit this job," happily murmured John.

           d. * "I finally quit this job," murmured happily John.   (cf. Collins (1997: 36))

In regard to the modification by adverbs, this thesis adopts the Adjunct Projection Principle of (84) proposed by Sportiche (1988).

(84)   Adjunct Projection Principle

           If some semantic type *X* "modifies" some semantic type *Y*, and *X* and *Y* are

           syntactically realized as *a* and *b*, *a* is projected as adjacent either to *b* or to

           the head of *b*.   (Sportiche (1988: 429))

This principle directly connects the lexical meaning of modifiers with the syntactic configuration in which they appear. Sportiche assumes that manner adverbs can be subcategorized by verbs and are often incorporated into meanings of verbs: they can adjoin to categories (*v*P/VP) or heads *v*/V.[47] In general, while manner adverbs must appear on the right side of a verb in a sentence without an object, they cannot appear on the right side of a verb in a sentence with an object. They appear in the sentence-final position or on the left

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[47] McCawley (1988) also assumes that a modifier forms an expression of the same category as an element which it modifies. That is, it is assumed that an adverb can be adjoined to a head V.

side of a verb when a sentence includes an object.   Given these facts, this thesis assumes that manner adverbs are adjoined to the right side of *v*P when a sentence does not include an object, while they are adjoined either to a head (*v*/V) or to the right side of a *v*P when a sentence includes an object.

Taking the discussion above into consideration, let us consider (83).   In this discussion, we presuppose that *happily* is a VP adverb.   (83a) and (83b) can be explained in terms of (84): the adverb *happily* adjoins to the right side of *v*P.   In (83c), it seems that the adverb is not adjoined to the category *v*P, but to the head V which moved to C.   If this conjecture is on the right truck, the grammaticality of (83c) follows from the interpretive perspective: its ungrammaticality is caused by the adjunction of *happily* as a VP adverb to V on CP-domain. Finally, regarding (83d), the manner adverb should precede the verb when it is adjoined to a head, but this is not the case in the sentence (83d): the adverb follows the verb and therefore it is ungrammatical.

2.4.3.4.　Particles

In QI, a subject and a verb must be adjacent with nothing between them.   However, particles can intervene between the subject and the verb in QI, as shown in (85).

(85)　　　a.　"Where do you want the concrete?" called up Fanny to Max.

b.　"Don't drop the bricks!" shouted out Trudy to Carl.

(Collins and Branigan (1997: 4))

In (85), the particles appear between the verbs and the subjects, so adjacency is not satisfied. This can be accounted for by assuming the External Pair-Merge of heads advocated by Epstein et al. (2016).   In the recent Minimalist framework, there are four types of application

of Merge in theoretical terms; External or Internal Set-Merge, and External or Internal Pair-Merge. Epstein et al. (2016) assume that External Pair-Merge of heads (two lexical items) are available, which is a morphological operation creating an X°-level amalgam presyntactically. With this operation, a verb and a particle are incorporated before being introduced into the derivation, resulting in forming an amalgamated head. Thus, a verb and a particle are of the form that they are adjacent. Its application to QI is supported by the following example.

(86)　　　*"Back to the bunker!" yelled right out the captain to the troops.

(Collins and Branigan (1997: 5))

As illustrated in (86), an adverb *right* cannot intervene between the verb *yelled* and the particle *out*. This suggests that External Pair-Merge of heads applies to them, so that an amalgamated head is formed.[48]

2.4.3.5. Floating Quantifier Constraint

As we have already seen in section 2.2.1, it appears that subject-oriented floating quantifiers are not allowed in QI. The relevant examples are repeated here as (87).

(87)　　　a. "We must do this again," the guests all declared to Tony.

b. "We must do this again," declared all the guests to Tony.

c. * "We must do this again," declared the guests all to Tony.

---

[48] Collins and Branigan (1997) assume the incorporation of a particle with a verb in the same fashion proposed here. However, it is assumed that this operation is adopted in syntactic component: the particle and the verb get together and consist a single head before the verb raises out of VP, leaving the copy or trace of them in their base-generated positions.

Collins and Branigan (1997) attribute the ungrammaticality of (87c) to the subject DP not being raised from its base-generated position. However, it has been shown in section 2.2.1.6 that their argument is not considered as valid because Sportiche's (1988) stranded analysis of floating quantifiers confronts some empirical problems. Moreover, as illustrated in section 2.3.1, the subject DP in QI actually raises overtly to the specifier of T. The ungrammaticality of (87c) therefore need to be explained under an alternative assumption. Then, this paper adopts the following constraint proposed by Takami (1998), along the same lines as in Gyoda (1999).

(88)   The Predication Constraint on Floated Quantifiers:

Since floated quantifiers function as (secondary) subjects, they must be

followed by their (semantically appropriate) predicates.

(Takami (1998: 155))

Takami (1998) analyzes the quantifier floating from the perspective on predication relation and proposes this constraint on the basis of the assumption that a floating quantifier functions as a secondary subject. For example, consider the following sentence where the quantifier is floated from the subject.

(89)   The students   all   came to the party.   (Takami (1998: 150))

In (89), the subject DP *the students* establishes the predication relation with the predicate VP *came to the party*. In addition to this primary predication relation, the floated quantifier *all*

also establishes another predication relation with the predicate VP, which is called secondary predication. Based on this constraint, let us consider the problem of floating quantifier in QI observed in (87). The quantifier *all* in (87a), floated from the subject DP, is followed by the predicate, so that the proper secondary predication relation between the main verb and the floated quantifier can be established. Thus, (87a) meets the condition and therefore is grammatical. On the other hand, the floated quantifier *all* in (87c) is not followed by any appropriate predicate because of the subject-verb inversion. Hence, it cannot establish a proper predication relation with the main verb, inducing the violation of the constraint of (88), and hence (87c) is ungrammatical.

This analysis on floating quantifiers is compatible with the proposed analysis. In the analysis here, the subject DP and the verb in QI overtly raise to the specifier of T and to C, respectively, so that the requirement of the EPP-feature on T and [V-EPP] on C are satisfied. In the proposed analysis, (87c), where inversion takes place, has the following structure.

(90) $[_{CP}$ Quote$_{k[Foc]}$ declared$_{i[u\delta][uQ\text{-}V][EPP][V\text{-}EPP]}$ $[_{TP}$ the guests$_{j[\varphi][uCase]}$ $t_{i[u\varphi]}$

$[_{v*P}$ t_k $[_{v*P}$ t_j all $[_{VP}\dots]]]]]]$

This configuration does not enable the floated quantifier to establish the secondary predication with the predicate (raised verb), as discussed above. Therefore, this analysis of floating quantifier is compatible with the proposal here.

2.4.3.6. HNPS of the Subject

As mentioned in section 2.2.1, Collins and Branigan (1997) claim the availability of HNPS of subjects in QI as supporting evidence for their argument that heavy NPs can remain in their base-generated position. The relevant examples are repeated here as (91).

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(91)   a.   "Where to?" asked of us the balding driver with a blond mustache.

b.   "The strudel is rather dry," whispered to Joan the woman sitting at the

end of the counter.

c.   "Their food is expensive," said of the hotel the manager of our

guesthouse.   (Collins and Branigan (1997: 5))

The subject DPs in (91) appear on the sentence-final position, illustrating the possibility that they may undergo HNPS.   This thesis assumes the following syntactic structure of QI with HNPS of the subject DP.

(92)   *Structure of QI with HNPS of the Subject*
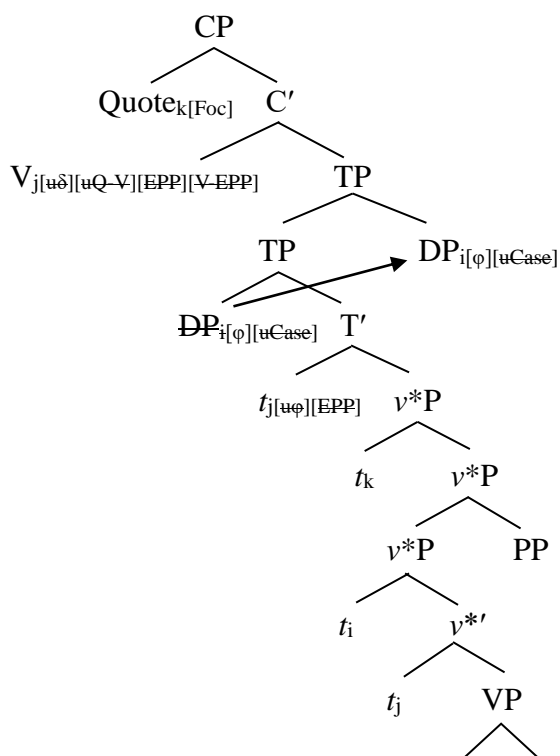
In (92), once all the operations within the v*P phase have been completed, the transferred domain of v* is sent off to the S-M and C-I Interfaces.   Then, at the CP phase, C is

introduced into the derivation with the features: [uφ], [uδ], [uQ-V], [EPP] and [V-EPP].
[uφ] inherited from C to T enter into an Agree relation with the φ-features on the subject DP
and it raises from the specifier of *v** to that of T to have the EPP feature on T checked. Then,
the raised subject DP undergoes HNPS to be adjoined on the right side of TP. [uQ-V] enters
into an Agree relation with the main verb and [V-EPP] are satisfied by its movement to C.
[uδ] on C and the focus feature on the quote enter into an Agree relation and then the quote
raises from the outer specifier of *v** to the specifier of C by the attraction of the EPP feature
on C. Since the main verb located in C precedes the subject DP on the right side of TP, the
inverted word order is derived.

Applying HNPS to the subject in the specifier of T is observed in LICs with unergative
verbs. Culicover and Levine (2001) show that the post verbal subject DP in LICs with
unergative verbs has to be relatively heavy because it requires some modification to be
accepted. Some relevant examples are shown in (93).

(93) a. * In the room [TP [TP___ slept fitfully] Robin].

   b. In the room [TP [TP ____ slept fitfully] the students in the class who had

      heard about the social psych experiment that we were about to perpetrate].

(cf. Culicover and Levine (2001: 293))

As shown in (93), it is only when the subject is relatively heavy that HNPS can apply to it.
The same requirement holds in QI, as illustrated in (94).

(94)   a.   "Where to?" asked the driver of his passenger.

         b. * "Where to?" asked of his passenger the driver.

         c.   "Where to?" asked of us the balding driver with a blond mustache.

(Collins and Branigan (1997: 4-5))

Thus, this thesis argues, following Culicover and Levine (2001), that HNPS from the specifier of T to its right side can also apply to the subject DP in QI.   It should be noticed that this derivation is the only way to derive a QI with HNPS of its subject DP.   Recall that tag pronouns in QI correspond to its subjects, as illustrated in (43), which is repeated here as (95).

(95)   a.   "Hello," said the prettiest woman you ever did see, didn't she?

              (*didn't there / it)

         b.   "Yes," answered men and women, didn't they? (*didn't there / it)

(Bruening (2016: 118))

In the proposed analysis, subject DPs in QI occupy the specifier of T.   In the derivation of this sort of QI, the subject DP that has raised to the specifier of T leaves its copy when HNPS applies, as a result of which it corresponds to a tag pronoun.   Therefore, this derivation does not contradict the fact of tag pronouns in QI.[49]

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[49] One might assume that the subject DP can undergo HNPS from its base-generated position to the right side of v*P if it is possible for the other elements to satisfy the EPP-feature on T.   In QCs, it might be possible for the quote to occupy the specifier of T, as assumed in Collins (1997).   A relevant example is illustrated in (i).

(i)   "John called us," was repeated over and over by Max.

(Collins and Branigan (1997: 42))

This sentence shows that the quote can function as a subject, because there are no other possible elements that can occupy the specifier of T.   This is supported by the following example in a tag question.

In section 2.4.3, it has been shown that the analysis proposed here can capture a number of properties of QCs, some of which cannot be accounted for by the previous studies, where subjects in QI are assumed to remain in-situ. In addition, we have shown that the proposed analysis can also give principled explanations to the data that the previous studies provide as evidence for subjects in QI staying in-situ. Thus, the proposed analysis has broader empirical coverage than the previous studies, and hence it is more persuasive.[50]

2.5. Conclusion

This chapter has investigated the syntactic structures of QCs, especially focusing on QI, within the framework of the Minimalist Program. It has been argued that the subject DP in QI, in fact, raises from the specifier of $v*$ to the specifier of T. In the previous studies overviewed in section 2.2, the subject DP in QI remains in its base-generated position, or the specifier of $v*$ (under the current theory). However, it has been shown that this argument is untenable, given the more detailed empirical data provided in section 2.3.1. Furthermore,

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    (ii)   "Liar!" was shouted more than once, wasn't it?   (Bruening (2016: 119))

In (ii), it is likely that the tag pronoun corresponds to the quote, which suggests that it occupies the specifier of T. One possibility for the quote to occupy the specifier of T is to inherit [uδ] from C to T as in [uφ], triggering its movement to that position to satisfy the EPP-feature on T. However, one problem arises concerning [uφ]. Since quotes don't have a complete set of φ-features (Collins (1997) and Wu (2008)), it is unclear whether they can enter into an Agree relation with [uφ]. If they cannot, [uφ] remain unchecked, which causes the derivational crash. We have no idea about how this sort of sentence is derived, and hence leave this topic open.

[50] There is another property in QI, transitivity constraint, as shown in (i).

    (i)   a. *"Where is my key?" asked John Mary.
           b. "Where is my key?" asked John of Mary.   (Wu (2008: 107))
    (ii)   "What's on?" John asked Mary.   (Collins and Branigan (1997: 20))

(i) shows that an indirect object is not allowed in QI, while a PP can follow the subject in QI. It should be noticed that this constraint does not hold when inversion does not take place, as in (ii). This property might be attributable to the specific nature of double object constructions. Gyoda (1999) suggests the adjacency condition on the indirect DP: it must be adjacent to the main verb for its PF feature [+clitic] to be checked. Under this condition, the ungrammaticality of (ia) follows from the verb movement to C in QI, which leads to the violation of the adjacency condition. For another analysis on the transitivity condition, see Richards (2010) in terms of Distinctness.

the properties of the other essential elements, that is, verbs and quotes, in QCs have been provided in order to clarify their detailed syntactic structures.

Main verbs in QI raises to C via T due to the presence of the quote, the role of which is to compensate an action of communication. It has been assumed that quotes themselves can license certain syntactic operations and constitute an argument or an adjunct depending on how they are merged (Set-Merge or Pair Merge).

There are two types of QCs and each type has both SV and VS orders. It has been proposed that C heads in QCs systematically have the four types of features ([uφ], [uδ], [uQ-V], and [EPP]) and that an additional feature [V-EPP], which is the driving force of verb movement, is introduced in the case of QI. In QCs with R1 verbs, the quote is Set-Merged in the complement of V and undergoes successive cyclic movement to the specifier of C. On the other hand, in QCs with R2 verbs, the quote is Pair-Merged on the right side of v*P, and then moves to the specifier of C. The latter type of the quote establishes the modification relation with the main verb via the operation of Transfer in order to satisfy its licensing condition. Furthermore, it has been shown that the analysis proposed here can account for some empirical facts of QCs.

Chapter 3

A Diachronic Aspect of Quotative Constructions

3.1. Introduction

QCs are already attested in Old English (henceforth, OE), and they have maintained the same form as in Present-day English (henceforth, PDE): a quote is located in the sentence-initial position and a reporting clause, which includes a subject and a verb, follows it.[51] [52]   Some relevant examples are shown in (96).

(96)   a.   Iacob,   cwæð he.

              Jacob,   said   he.

           ' "Jacob," said he.'   (cootest,Gen:32.27.1336)

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[51] The historical periods of English are standardly assumed as follows: Old English: OE (700-1100), Middle English: ME (1100-1500), (Early Middle English: EME (1100-1300), Late Middle English: LME (1300-1500)), Modern English: ModE (1500-1900), (Early Modern English: EModE (1500-1700), Late Modern English: LModE (1700-1900)), Present-day English: PDE (1900-).

[52] The trend of QCs in OE seems to be strikingly different compared to that of PDE; while the pattern like (96) is the most common form in PDE, OE had the pattern like (i) as the most common form for QCs, where the reporting clause is located in the sentence-initial position.

(i)   Cwæþ se godspellere, Hæalend   ferde   þær   forþ,
       said   the evangelist, Harland   went   there forward
       'The evangelist said, "Harland went forward"'   (coblick,HomS_8_[BlHom_2]:19.85.246)

This type of QCs tends to be restricted to written journals and is almost obsolete for some speakers due to its archaic flavor.   This chapter does not deal with the detail of this.

    b.   Ongitaþ, mine þa leofestan bearn,   cwæð Sanctus Isodorus

        Consider, my   the dearest   children , said Saint   Isidore

   ' "Consider, my dearest children," said Saint Isidore.'

                (coverhom,HomU_7_[ScraggVerc_22]:20.2824)

It has been well-known since van Kemenade (1987) that verb movement to the inflectional domain is systematically observed especially in main clauses in OE and ME, but it was mostly lost by 1500s (Fisher et al. (2000) and Haeberli and Ihsane (2016)). Moreover, when some particular elements like a *wh*-phrase occupy the clause-initial position, a finite verb obligatorily raises to the higher head C, which is so-called verb second (henceforth, V2) phenomena.[53] With the loss of verb movement, the large part of inversion phenomena with a main verb in declarative clauses was lost and most inversion phenomena are restricted to auxiliaries in modern English. However, QI, which includes subject-verb inversion, not SAI, has been attested regardless of its subject type throughout the history of English even after the periods when verb movement was lost. This fact suggests that QCs have obtained some particular characteristics in the course of their development and maintained them until now.

As has been overviewed in chapter 2, there has been a lot of literature on QCs in PDE (Collins and Branigan (1997), Collins (1997), Gyoda (1999), Wu (2008), Bruening (2016) among others). However, there is little literature that provides an investigation on the historical development of QCs except for Cichosz (2019), especially from a syntactic perspective. The aim of this chapter is to investigate the historical development of QCs on the basis of the corpus research, with special focus on the word order variation between SV and VS and their subject type, in order to clarify the overall picture of their peculiar characters. Then, given the empirical research and evidence, this chapter provides the constructions with

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[53] We will briefly overview the syntax of early English in section 3.2.

a principled explanation in terms of the Minimalist framework originating with Chomsky (1995) and his subsequent works (Chomsky (2000, 2001, 2004, 2008)).

The organization of this chapter is as follows. Section 3.2 first gives a general overview of the syntax of early English, in which overt verb movement to higher functional heads was systematically observed, which is no longer observed in PDE. Section 3.3 presents the quantitative result of the corpus research throughout the history of English, the data of which will be shown for each period separately. Section 3.4 is dedicated to the discussion on the expansion of the repertory of reporting verbs in QCs. The history of the two major reporting verbs (*quoth* and *say*) is first introduced along the argument by Cichosz (2019) and then another discussion on other verbs is provided. Section 3.5 elaborates on the analysis based on the empirical evidence given in sections 3.3 and 3.4 and gives a principled explanation to the constructions in terms of the framework of the Minimalist Program. Section 3.6 is the conclusion of this chapter.

3.2. The Syntax of Early English

This section presents some basic facts illustrating the characteristics of OE and early ME (henceforth, EME) syntax. OE and EME have V2 order, but their system is not entirely systematic compared to rigid V2 languages like modern German (Haeberli et al. (2020)). The environment where V2 order occurs in main clauses is restricted and dependent on two factors: the first constituent and the subject type. When the first constituent is a subject, a finite verb tends to follow it, regardless of the rest of the elements. This word order was frequently observed in OE syntax, where subjects play a role which is something like a topic. A relevant example is shown in (97).[54]

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[54] All of the examples shown in this section are cited from Fisher et al. (2000).

(97)   Se Hælend wearð þa   gelomlice ætiwed his leornung-cnihtum

       the Lord   was   then frequently shown his disciples-DAT

       'The Lord then frequently appeared to his disciples'

(ÆCHom I, 15.220.21)

In contrast, the situation is different when the fist constituent is not a subject: a finite verb frequently follows the element in the clause-initial position. In particular, when the first constituent is considered as an operator such as a *wh*-phrase, negative adverbial *ne* 'not', and short adverbial *þa* 'then', verb movement to the second position is obligatorily triggered without any exception, and therefore the subject type does not have any influence on the word order. The relevant examples of each case are shown in (98).

(98)   a. Hwi wolde God swa lytles þinges him forwyrnan?

          why would God so   small thing   him   deny

          'Why should God deny him such a small thing?'   (*ÆCHom* I, 1.14.2)

      b. Ne   sceal he naht   unaliefedes don

          not   shall he nothing unlawful   do

          'He shall not do anything unlawful'   (*CP* 10.61.14)

      c. Þa   wæs þæt folc   þæs micclan welan

          then was the people the   great   prosperity-GEN

          ungemetlice   brucende …

          excessively   partaking

        'Then the people were partaking excessively of the great prosperity.'

(Or 1.23.3)

When elements other than above ones are in the clause-initial position, the word order changes depending on the subject type: if a nominal phrase is the subject, the finite verb precedes it, and hence the canonical V2 order is derived. In contrast, if a pronoun is the subject, the finite verb follows it, leading to the word order in which the finite verb is located in the third position. The relevant examples are shown in (99), where it is evident that the finite verbs have raised because their positions are different from those of the non-finite verbs.

(99)   a.   On twam þingum hæfde God þæs mannes sawle gegodod

in   two   things   had   God   the   man's   soul   endowed

'With two things God had endowed man's soul'

(*ÆCHom* I, 1.20.1)

b.   Forðon we sceolan mid ealle mod & mægene to

therefore   we   must   with   all   mind   and   power   to

Gode   gecyrran

God   turn

'Therefore we must turn to God with all our mind and power'

(*HomU*19 (BlHom 8) 26)

c.   Be ðæm we magon suiðe swutule oncnawan ðæt …

by that   we   may   very   clearly   perceive   that

'By that, we may perceive very clearly that …'   (*CP* 26.181.16)

The rules reviewed above are mainly observed in main clauses, but there are some exceptions to be noted, in which subject-verb inversion is optional regardless of the subject type. As illustrated by the contrast in (100), a pronominal subject precedes or follows the finite verb.

(100)   a. Nu   we   sculon   eft   cwæð Orisius, hwierfan   near   Roma

                Now   we   shall   again said Orosius, turn   nearer Rome

                'Now we should turn again nearer Rome, said Orosius'   (*Or* 2.5.49.10)

    b. Nu   hæbbe   we   gereaht   be   welan 7   be   anwalde

                now   have   we   discussed about wealth and about power

                'Now we have discussed wealth and power'   (*ÆCHom* I, 20.276.10)

On the other hand, even in cases where the subject is a nominal phrase, subject-verb inversion does not always take place, as shown in (101).

(101)   Nu ealle ðas ðing   synd mid anum naman genemnode, gesceaft.

           now all   these things are   with one   name named   creature

         'Now all these things are called with one name: creature.'

                                          (*ÆCHom* I, 20.276.10)

The word order patterns shown above were continuously attested until EME, but the frequency of V2 phenomenon gradually began to decline in late ME (henceforth, LME) (Fischer et al. (2000)).　In addition, verb movement to the inflectional domain, that is T, also subsequently declines from LME (in the middle of the 15th century) onwards and its loss was almost completed in the middle of 16th century due to the development of *do*-support (Ellegård (1953), Roberts (1985) and Haeberli and Ihsane (2016)).　At the same time, it should also be noticed that it is only the word order pattern in (99a), where a topic element is in the clause-initial position with a subject following a finite verb, that underwent a visible change at the surface order in the history of English (Nawata (2009)); the other word order patterns are still observed in the same way in PDE, at least at the surface word order level.

Moreover, of the cases with obligatory inversion, the case with adverb *þa* was lost in ME, but the other case, including a *wh*-phrase or a negative element in the sentence-initial position remains observed in PDE. In such cases, SAI, not subject-verb inversion, is obligatorily triggered, which is considered as residual V2.

3.3 Corpus Research

3.3.1. Methodology

Before moving on to the discussion on the result of the corpus research on QCs, let us first explain the methodology that this thesis takes. The research was conducted on the basis of the following historical corpora: *The York-Tronto-Helsinki Parsed Corpus of Old English Prose* (YCOE), *The Penn-Helsinki Parsed Corpus of Middle English, 2nd Edition* (PPCME2), *The Penn-Helsinki Parsed Corpus of Early Modern English* (PPCEME), and *The Penn-Helsinki Parsed Corpus of Modern British English* (PPCMBE).[55] In order to reveal the development of QCs throughout the history of English, we first extract all sentences from the corpora which are tagged with "SPE," indicating a sentence with a direct speech complement of a verb of saying and with "PRE," indicating a sentence with a parenthetical (Cichosz (2019)).[56] Then, we go through all the results manually to distinguish sentences which can be included into the dataset from ones which cannot. In particular, all sentences with an overt subject are initially included in the dataset, and then they are classified into four different groups with respect to their subject type and word order, i.e., SV or VS. This is

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[55] The texts in the historical corpora used in this research are distributed over the following periods: OE1 (-850), OE2 (850-950), OE3 (950-1050), OE4 (1050-1150), ME1 (1150-1250), ME2 (1250-1350), ME3 (1350-1420), ME4 (1420-1500), EModE1(1500-1569), EModE2 (1570-1639), EModE3 (1640-1710), LModE1 (1710-1779), LModE2 (1780-1849), and LModE3 (1850-1920).

[56] According to Cichosz (2019), any types of reporting clauses, regardless of clause-medial and clause-final, are annotated in the corpora as parenthetical. However, this thesis does not treat the clause-medial type of QCs like (27b) and hence such sentences are excluded from the research result. Although we partly follow the research method of Cichosz (2019), it should be noticed that some reporting clauses are tagged with "SPE," not "PRE," and the corpus research conducted by her does not include the data extracted by the tag "SPE".

because nominal subjects and pronominal subjects occupy different syntactic positions in early English (Kemenade (1997), Fischer et al. (2000), Kemenade (2011) and Haeberli and Ihasane (2016)). We maintain this research method throughout all the historical periods.

On the other hand, all sentences that do not have an overt subject due to coordination and those that contain a direct speech which is not accompanied by verbs of saying are excluded from the dataset. Moreover, subordinate clauses are also excluded since they show a different word order pattern from main clauses, especially during the periods where the V2 was still observed. Furthermore, this thesis does not consider punctuation marks in the analysis because their use in various texts in early English periods is not consistent, so they cannot be a reliable indicator to identify whether a sentence is an example of QCs.

3.3.2. Old English

Let us first look at the quantitative result of QCs in OE, which is summarized in table1 below. Some relevant examples are shown in (102).[57]

Table1: The Quantitative Results of QCs in OE (Based on YCOE)

	Nominal Subject		Pronominal Subject	
	SV	VS	SV	VS
OE1・2	0 (0)	1 (3.3)	2 (6.7)	0 (0)
OE3	0 (0)	3 (3.6)	2 (2.43)	4 (4.8)
OE4	0 (0)	1 (2.9)	3 (8.9)	1 (2.9)

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[57] The number on the right side of the survey results shows the frequency of QCs (per 1 million words).

(102) a. Iacob, cwæð he.

　　　　Jacob, said　he.

　　　' "Jacob," he said.'　　　　　　　　　　　　　　(cootest,Gen:32.27.1336)

　　　b. Bidaþ　ge　　her,　he cwæð,

　　　　Wait　　you　here　he said

　　　' "Wait you here," he said.'

　　　　　　　　　　　　　　　　　(coverhomE,HomS_24.1_[Scragg]:65.31)

　　　c. Ongitaþ, mine þa　leofestan　bearn,　　cwæð　Sanctus　Isodorus,

　　　　Consider, my　the　dearest　　children　said　　Saint　　Isidore

　　　' "Consider, my dearest children," said Saint Isidore.'

　　　　　　　　　　　　　　(coverhom,HomU_7_[ScraggVerc_22]:20.2824)

As shown in table 1, the total number of QCs is very low in OE. The examples above indicate that QCs in OE have the same form as in PDE: a quote is in the sentence-initial position and a reporting clause follows it. One thing we can observe from table 1 is that inversion invariably takes place in QCs with nominal subjects, but not with pronominal subjects: QCs with pronominal subjects allow both inversion and non-inversion order. Considering the syntax of early English reviewed in the previous section, it is plausible to suppose that V-to-C movement applies to QCs, as in canonical OE sentences, and hence the tendency to inversion is remarkable in OE. There are only one reporting verb used in the QCs in OE. All of the instances attested in this period include the verb *cweþan* 'say' as their reporting verb.[58]

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[58] Cichosz (2019) finds occurrences of another reporting verb *secgan*, which is the ancestor of *say* in PDE and comes to be used frequently from ME. However, no instances with this verb are found in the QCs that this thesis is concerned with.

3.3.3.   Middle English

Let us next see the quantitative result of QCs in ME.   The result is summarized in table 2. Some relevant examples of each period, which are obtained from PPCME2, are shown in (103) in order.

Table 2: The Quantitative Result of QCs in ME (Based on PPCME2)

	Nominal Subject		Pronominal Subject	
	SV	VS	SV	VS
ME1	0 (0)	16 (61.9)	10 (38.7)	6 (23.2)
ME2	0 (0)	5 (53.1)	0 (0)	0 (0)
ME3	0 (0)	16 (39.7)	1 (2.4)	48 (119)
ME4	1 (2.4)	205 (509)	5 (12.4)	7 (17.3)

(103)   a. Ga   into þe stan   seið   þe prophete.

Go   into   the stone   says   the prophet

' "Go into the stone," says the prophet.'   (CMANCRIW-1,II.215.3108)

b. Y   shal heue to þe vnderstondyng, seid   our Lord

You   shall have to the understanding   said   our Lord

' "You will have to understand," said our Lord.   (CMEARLPS,36.1500)

c. "What is that?"   quod   I.

What is that,   said   I.

' "What is that," said I.'   (CMBOETH,430.C2.102)

d. "Where is he?" said　the　kyng.

Where is he,　said　the　king

' "Where is he," said the king.' (CMMALORY,3.64)

The result in table 2 shows that QCs continue to keep their tendency observed in OE throughout ME: inversion almost obligatorily occurs with nominal subjects, except one example attested in ME4 shown below, but this is not the case with pronominal subjects.[59]

(104)　　　'Now　woll　I　departe,' sir　Galahad　seyde,

Now　will　I　depart　sir　Galahad　said.

' "Now I will depart," sir Galahad said.' (CMMALORY,646.4148)

Taking the historical observation in early English into account, V2 system started to decline in the middle of 14th century and at the same time the distinction of subject positions also disappeared. In addition, it should be noticed that most of the cases with verb movement to the inflectional domain also began to decline in the middle of 15th century (ME4). Nevertheless, QCs continue to show inverted word order, regardless of the subject type, and this tendency is especially remarkable with nominal subjects, as table 2 shows.

As in the example (103c), a new reporting verb *quethen* began to be used in ME. This reporting verb is a direct descendant of *cweþan* and inversion is obligatory when this verb is used in QCs, irrelevant to whether the subject is nominal or pronominal (Cichosz (2019)). On the other hand, another reporting verb *seien*, the descendant of *secgan*, does not show such tendency and the same pattern as in OE continues to be observed: both SV and VS order are

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[59] We regard this example as a kind of grammatical error, considering the research result of EModE and LModE.

observed with pronominal subjects, while inverted order is remarkable when nominal subjects are used.[60]

3.3.4. Early Modern English

Let us next take a look at the quantitative result of QCs in EModE. The result is summarized in table 3 and some relevant examples of each period, which are obtained from PPCEME, are shown in (105) to (107).

Table 3: The Quantitative Result of QCs in EModE (Based on PPCEME)

	Nominal Subject		Pronominal Subject	
	SV	VS	SV	VS
EModE1	1 (1.7)	46 (81)	1 (1.7)	91 (160)
EModE2	0 (0)	98 (155)	4 (6.3)	90 (143)
EModE3	0 (0)	18 (33.2)	4 (7.38)	9 (16.6)

(105) a. But only he would be mayster of his horsses, the Scripture sayeth,

(LATIMER-E1-H,32L.240)

b. "I know nott," sayde I.   (UNDERHILL-E1-P2,144.146)

(106) a. "And God is he," I aunswere.   (BOETHEL-E2-P1,18.154)

b. Are you my uncle? says Will.   (ARMIN-E2-H,43.304)

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[60] We will give a detailed discussion of verbs mentioned above in section 3.4.1, where it is revealed that the tendency observed from corpus research is dependent on which verb is used, not on the subject type.

(107)   a.   "It is doubtful," said he,   (DRUMMOND-E3-P1,2.4,204.52)

        b.   My face is used to it, said the Athenian.   (LOCKE-E3-P1,35.37)

As table 3 illustrates, QCs with pronominal subjects also show the remarkable tendency to inversion, which was observed only in the case with nominal subjects until ME. This suggests that the trend was expanded to the cases with pronominal subjects. The reporting verb *quoth*, derived from *quethen* in ME, still shows inverted word order, regardless of whether the subject is nominal or pronominal. It is interesting that this increasing tendency to inversion was also observed in the case of the other reporting verb *say*, suggesting the incorporation of the same trend as *quoth,* which was not observed in the ME period (Cichosz (2019)). It should also be noticed that although not being in the status like these two major reporting verbs, a few more new reporting verbs are introduced into QCs: *answer*, *tell*, and *reply*.

    Furthermore, what is interesting is that the tendency to inversion, irrelevant to the subject type, remains observed throughout EModE. This is because verb movement to the inflectional domain was almost lost in the middle of 16th century, though short verb movement to lower functional heads than T are still attested (Haeberli and Ihsane (2016)). Considering the standard assumption that pronominal subjects, which typically show old information, do not remain in their base-generated position but raise to the specifier of T, it is reasonable to regard that main verbs occupy a higher position than the specifier of T at least in QI. Thus, the result in table 3 suggests that the diachronic trend identified in the previous periods, including verb movement, continues in EModE.

3.3.5.   Late Modern English

    Finally, we look at the quantitative result of QCs in LModE, whose result is summarized in

table 4.   Some relevant examples of each period, which are obtained from PPCEMBE, are

shown in (108) to (110).

Table 4: The Quantitative Result of QCs in LModE (Based on PPCMBE)

	Nominal Subject		Pronominal Subject	
	SV	VS	SV	VS
LModE1	0 (0)	12 (40.1)	1 (3.34)	2 (6.69)
LModE2	0 (0)	71 (192)	11 (29.8)	58 (157)
LModE3	8 (28.4)	44 (156)	24 (85.3)	18 (63.9)

(108)   a.   "I am glad I know your Mind," answered the Squire.

(FIELDING-1749,2,10.177)

b.   he would go, he said,   (DEFOE-1719,216.397)

(109)   a.   Attend, said she,   (BOETHRI-1785,116.156)

b.   "He must be a first-rater," said Sam.   (DICKENS-1837,546.56)

(110)   a.   "In what way, pray?," said I.   (BOETHJA-1897,103.112)

b.   "You 're heavy on it with Brailstone?" said Mallard.

(MEREDITH-1895,19,161.622)

As illustrated in table 4, QCs still maintain higher frequency of inversion than that of

non-inversion, especially in cases with nominal subjects, but the number of SV order rises in

LModE3.   At the same time, in cases with pronominal subjects, the frequency of

non-inversion outnumbers that of inversion around the end of the LModE. Nevertheless, considering the historical development of the English language itself (see the discussion in section 3.2), it is curious that the tendency to inversion in QCs is still retained in large part even in modern English. What's more, it should be noticed that all the cases of inversion obtained from the corpora include subject-verb inversion, not SAI. Thus, it is plausible to assume that main verbs in QCs are highly likely to undergo overt movement to the inflectional domain or higher positions, as in the cases in early English.[61]

In addition, there is a substantial expansion of the repertory of verbs in this period: while there were not many verbs used in the constructions in the earlier periods, about 30 kinds of verbs were attested in LModE. Some relevant examples are shown in (111).

(111) a. "You see how these fellows drink, and smoke, and roar," **replied**

   Mr Pickwick.   (DICKENS-1837,547.72)

   b. "I only wish she could help looking like a girl of seventeen," **sighed**

   Mrs. Curtis.   (YONGE-1865,172.348)

   c. "This comes of being the youngest of the family," **observed** Colin

   meditatively.   (YONGE-1865,177.485)

3.4. The Historical Development of QCs

3.4.1. The Expansion of Verbs

The corpus research has revealed that QCs expanded the repertory of verbs in the course of their development. As discussed in the previous sections, only a few verbs were used in OE

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[61] One might assume that if the subject remains in its base-generated position, the main verb does not have to move to the inflectional domain. In all the historical periods, however, almost all the verbs attested from the corpus research are transitive verbs. Transitive verbs have their external argument and it is merged in a higher position than them. Thus, even if the subject remains in situ, the verb has to pass it so as to derive the inverted word order.

and ME: *cweþan* (the ancestor of *quoth*) and *seien* (the ancestor of *say*). However, the repertory of verbs that can occur in QCs got some expansion from EModE and a variety of verbs were found in LModE onward. This is also pointed out by Cichosz (2019), but she does not give any detailed observation of what this expansion suggests. This section is devoted to a detailed discussion on the expansion of the repertory of verbs occurring in QCs, which plays an important role to clarify overall pictures of the modern QCs. First of all, we briefly summarize the history of the oldest English reporting verb *quoth* and the most frequently used one *say* in order, both of which are given in Cichosz (2019).

3.4.1.1. The History of *quoth*

As mentioned in section 3.3, only *cweþan* (the ancestor of *quoth*) is included in QCs in the period of OE, whose rate of frequency is, regardless of the subject type, 100% in my corpus research. The most remarkable point to be noticed is that this verb tends to occur with inverted word order, which is obligatory with nominal subjects, but not with pronominal subjects. This trend is not observed in the other verb: inversion does not take place with pronominal subjects, so that they are always followed by a main verb. Thus, *cweþan* was the only verb that derives the inverted word order even when the subject is pronominal. According to the *Oxford English Dictionary* (OED), the verb *quoth* functioned as an invariant quotative marker for all persons and did not bear any present time reference in EModE. On the other hand, Cichosz (2019) points out an interesting fact about the use of this verb: there already existed a restriction on the use of *quoth* in the present tense in the OE period. This argument is also the case with the conducted research here. There are no instances obtained from the YCOE in which the use of *cweþan* in the present tense are contained, and hence the attested examples are all in the past tense. In addition, it is pointed out from the result of the corpus research that its fixed past form *cwæþ* already established the status as the sign of

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quotation in the first and third person singular, as indicated by its dominant use (the usage rate of which is 100% in my research). There is no instance with *cweþan* with the plural form. The relevant examples are shown in (112).

(112)   a. Gea   cwæð he

           yes   said   he

          ' "Yes", he said.'   (coeuphr,LS_7_[Euphr]:67.64)

          b. Gyse, cwæð ic

           yes   said   I

          ' "Yes", I said.'   (coboeth,Bo:34.87.12.1666)

Thus, these facts mentioned above suggest that in OE the verb *quoth* already started to play a functional role as an invariant quotation marker, as indicated by its dominant use of morphologically fixed form.

In ME, the verb *quethen*, which has *cweþan* as its ancestor, exhibited the tendency to inversion regardless of the subject type. Cichosz (2019) points out that its use is restricted only to its past form (*quod / quoþ(th)*) and only one instance with the plural form is found from the PPCME. In my research, the plural form is not obtained, but it is true that the construction containing this verb shows the remarkable tendency to inversion and it occurs in its past form. This verb explicitly displayed in ME that it was functionally used as an invariant quotative marker, which is because the same past form was used in any case, irrespective of number and person of the subject. Let us consider the contrast, shown in (113), which indicates this fact. (113a) is cited from Cichosz (2019), though this type of QCs is not concerned with in this thesis.

(113)   a. A, lady, **quod they**, 'ye   han   shewed   unto   us   the   blessynge

                Oh   lady said   they you   have showed   unto   us   the   blessing

                of swetnesse, after the   sawe   of David the   prophete

                of sweetness after the   example of David the   prophet

         ' "Oh lady," they said, "you have shown us the blessing of sweetness like

                David the prophet" '   (CMCTMELI–M3,236.C2.762)

    b. "This is a consequence," **quod I**.

        This is a consequence said I

     ' "This is a consequence," I said.'   (CMBOETH,429.C2.44)

In both instances of (113), as indicated in boldface, the verb is of the form *quod,* though the grammatical property of the subject *they* is third person plural and *I* first person singular. This suggests that a morphologically fixed form, which functions as an invariant quotation marker, is already established in ME.

In EModE, the tendency to obligatory inversion with this verb still remains observed: inversion occurred regardless of the subject type and its use was restricted to the morphologically fixed past form, as shown in (114).

(114)   a. "What is that?" quoth shee.   (ROPER-E1-H,83.63)

       b. "We must se more," quoth they,   (HARMAN-E1-P2,54.330)

However, this verb gradually lost its dominant position as a quotation marker and finally became obsolete in LModE.   Thus, this verb is no longer used in modern English.

3.4.1.2. The Development of *say*

We are now in a position to describe the development of the major reporting verb *say*.   As discussed in the previous section, the most frequently used reporting verb was not *say* but *quoth* in OE.   The use of *say* became popular in ME and the dominant position in which *quoth* occupies was replaced with it over time.   In the previous section, it has been shown that *quoth* already became the morphologically fixed invariant quotative marker which was used only in the past tense.   Taking this fact into consideration, Cichosz (2019) argues that the rise of *say* took place because of a necessity for a new reporting verb which can be more flexible, that is, has a complete set of grammatical properties: number, person and tense.   As demonstrated in section 3.3, the verb *say* in fact was used not only in the past tense but also in the present tense in ME, contrary to *quoth*, the relevant example of which is repeated here as (115), with the verb in boldface.

(115)   Ga   into   þe stan   **seið**   þe   prophete.

           Go   into   the stone   **says**   the   prophet

         ' "Go into the stone," says the prophet.'   (CMANCRIW-1,II.215.3108)

Thus, it is plausible to assume that the fact that *quoth* was used only in the specific context due to its incomplete grammatical property led to the gradual increase of the frequency of *say* because it could be used flexibly in any environment owing to its complete set of grammatical properties, yielding the situation where the use of *quoth* started to decline.

In EME, the verb *say* did not exhibit the tendency toward inversion as in the verb *quoth*, especially in the case with pronominal subjects, but it gradually started to show the inverted word order, irrelevant to the subject type in LME.   In EModE, then, the inverted order is regularly, not obligatorily, derived when the verb *say* is contained in QCs.   This seems to be

reminiscent of the trend which was shown by *quoth* in the same period, ME. This change can be considered as natural transition because the two verbs have the same core meaning, and hence it is reasonable to assume that the same function as the *quoth* was also taken over by the verb *say*.

To sum up, the peculiar development of the two verbs, *quoth* and *say*, in QCs explicitly shows that the constructions have undergone their own development, which can be considered as deviant from the development of the English language itself in that they exhibit inversion regardless of the subject type even after the ME period, in which the verb movement to the inflectional domain was almost never observed. It seems that the form of QCs developed in the way that they have the inverted word order as default and this tendency continued to be regarded as a functional property, yielding the situation where the configuration is taken as a distinctive clause type. This thesis assumes this development to be completed by the beginning of EModE, in which the frequency of inversion overwhelmingly outnumbers that of non-inversion in both of the subject types.

3.4.1.3.   The Rise of Other Verbs

As discussed in section 3.3, QCs started to show the rise of the repertories of verbs from EModE and there were about 30 kinds of verbs attested in LModE, though their tokens were not frequent as *quoth* and *say*. The list of reporting verbs which are attested from the corpus research here is summarized in each historical period in table 5 below.

Table 5: The Rise of Various Kinds of Reporting Verbs in QCs

OE	cweþan (quoth), secgan (say)
ME	seien (say), quethen (quoth), crien (cry)
EModE	say, quoth, cry, answer, tell, reply
LModE	add, answer, ask, begin, chime in, cry, declare, enquire, exclaim, explain, falter, inquire, interpose, murmur, observe, order, preach, propose, quoth, rejoin, repeat, reply, request, resume, return, say, sigh, tell, think, utter, venture, whisper

This historical change indicates that the repertories of verbs in QCs have risen along the lines of the observation by Uchida (1979). As, discussed in section 2.3.2. in chapter 2, the verbs related to the quote have to satisfy the requirement to comprise the communicative meaning [*say* + α]. Uchida (1979) categorizes the relevant verbs into the following two types; (i) verbs that themselves can convey the meaning of [*say* + α]; (ii) verbs that just convey the meaning of α of [*say* + α], which are called R1 and R2, respectively. The list of verbs that can occur in QCs is repeated below as table 6.

Table 6: The List of Verbs in QCs

R1	answer, beg, declare, demand, explain, insist, promise, recommend, shout (out), suggest, whisper, etc.
R2	burp, giggle, groan, growl, laugh, shriek, sing, sob, weep, etc.

Considering this categorization, the verbs obtained from the corpus research is classified into the following groups.

Table 7: The Classification of the Verbs in LModE into R1 and R2

R1	add, answer, ask, cry, declare, enquire, exclaim, explain, inquire, murmur, observe, order, preach, propose, quoth, rejoin, repeat, reply, request, return, say, tell, think, utter, venture, whisper
R2	begin, chime in, falter, interpose, resume, sigh

It can be said from table 7 that the repertories of verbs in QCs were first expanded in EModE for R1 and next in LModE for more R1 and R2. This process of development can be regarded as follows: verbs which intrinsically have the meaning of *say* were first incorporated into QCs because their meaning covers that of the most typical reporting verbs, *say* and *quoth*. Then, as the same configuration continued to be used, the other type of verb R2, which only shows the communicative manner of a speaker, was next incorporated into QCs. However, why do R2 verbs, which do not have the meaning of *say* or are intransitive verbs, occur in QCs?

This thesis then assumes that this expansion of the repertories of verbs has something to do with the establishment of a functional role that the quote plays: the meaning of *say* is conveyed when a quote is fronted to the sentence-initial position (cf. Gyoda (1999)), as discussed in chapter 2. This assumption is highly natural, considering the fact that QCs have continued to maintain the same configuration since OE and the two typical reporting verbs, *say* and *quoth*, have been most frequently used in QCs. Given that the repertories of verbs broadened in two stages, i.e. EModE and LModE, it seems that in the course of development of QCs, two different semantic effects were triggered by the quote fronting: the semantic reduction of verbs in EModE and the semantic complementation to verbs in LModE. In particular, the former took place when an R1 verb came to be used in QCs, where the quote fronting enables the meaning of verbs to be reduced, with a consequence of which their main

role became something like a functional one, thereby making it possible for verbs to raise to the inflectional domain, (see the detailed discussion in section 2.3.2 in chapter 2). On the other hand, the latter occurred when an R2 verb came to be used in QCs, in which the quote fronting compensated the meaning of *say* in order to establish the core meaning of QC, [*say* + α], because R2 verbs only have the meaning of α of [*say* + α].

As discussed in chapter 2, this assumption is empirically supported by the following contrast, repeated here as (116) and (117), where the verb *giggle* is contained, which is categorized into R2 in table 6.

(116)   a.   He giggled and said, "Cochon"

            b. * He giggled, "Cochon"   (Uchida (1979: 24))

(117)   a.   "He worked hard," Madame Volet said and giggled.

            b.   "He worked hard," Madame Volet giggled.   (Uchida (1979: 24))

As (116) illustrates, with a quote in the sentence final-position, the sentence is not acceptable without the verb *say*, while as illustrated in (117), with a quote in the sentence initial position, the sentence in (117b) is acceptable even if it does not contain the verb *say*. The contrast between them indicates that the quote in the sentence-initial position conveys the meaning of *say*, so that sentences with the main verb without the meaning of saying something aloud are acceptable.

In short, the functional role of the quote, conveying the meaning of *say* when it is fronted to the sentence-initial position, started to be observed in EModE and that developmental process was completed by the beginning of LModE. Consequently, a variety of verbs, including ones which do not have the meaning of *say*, began to appear in QCs.

3.4.2.   The Two Roles of the Quote

The previous section has shown that in their historical development, QCs expanded the repertories of verbs, which took place for R1 in EModE and for more R1 and R2 in LModE. With the expansion of verbs, especially for R2 verbs, there arose a possibility that a quote did not function as an argument.   It is traditionally assumed that a quote is base-generated as an argument of a transitive verb because of its selectional relation to be satisfied (Collins and Branigan (1997)).   However, as discussed in section 2.3.3 in chapter 2, a closer observation clarifies that it is possible for quotes to be merged without building a selectional relation with verbs.   The relevant examples given in chapter 2 are repeated here as (118).

(118)　　a.　"I don't know," he shrugged.　　　　　　　(Yamaguchi (2009: 222))

　　　　　b.　"Right," nodded Henry.　　　　　　　　　　(Uchida (1979: 24))

The main verbs in these examples are both intransitive verbs, so it should be impossible for them to select the quote as their objects.   The same kind of examples are found from the corpus research here, some relevant examples of which are shown in (119).   The examples are all from LModE and contain intransitive verbs which are categorized into R2 verbs, indicated in boldface.

(119)　　a.　"And stand a gallon of beer down," **chimed in** Mr Simpson.

　　　　　　　　　　　　　　　　　　　　　　　　　(DICKENS-1837,562.465)

　　　　　b.　"I do not mean to conceal," **faltered** Fanny,　　(YONGE-1865,178.500)

　　　　　c.　"I only wish she could help looking like a girl of seventeen," **sighed**

　　　　　　Mrs. Curtis.　　　　　　　　　　　　　　(YONGE-1865,172.348)

Moreover, as shown in the following examples, the repetition of (59) in chapter 2, some transitive verbs can take their direct object, not a quote, in their complement positions, suggesting that the quote is not selected by the main verb.

(120)   a.   That's not my fault," Charlie shook his head.   (Yamaguchi (2009: 222))

        b.   "We're just friend, Mother," she gave that little laugh and smiled the

               charming smile that hid the pure will.   (BNC, A6N 702 n/a)
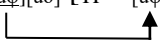
Given the facts above, this thesis argues that quotes have acquired two roles in the course of development of QCs: argument and adjunct.   With the establishment of the constructions and the concomitant completion of the functional role of the quote, some verbs, which do not bear the meaning of *say*, came to occur in QCs.   Accompanying with this change, any verbs came to be used as long as they are related to the communicative manner of a speaker.   This opened up the floor for intransitive verbs with such a meaning to occur in QCs.   Intransitive verbs do not take an argument in their complement position, so in such cases a quote comes to be introduced as an adjunct.

   In short, if a quote is introduced as an argument, it builds a selectional relation with a main verb (transitive verbs in this case) and hence is licensed by it.   On the other hand, if it is introduced as an adjunct, it constructs the modification relation, not selectional relation, with a main verb (intransitive verbs or some transitive verbs, as shown in (119)).   In such cases, a quote enters into a semantic relation with a main verb on the basis of Transfer operation within the same domain (Kobayashi (2019)) and therefore is licensed (see the discussion in chapter 2).

3.5. Analysis

3.5.1. Theoretical Backgrounds

This section gives a principled explanation to the historical development of QCs. Let us first overview some theoretical assumptions adopted here. First, as outlined in chapter 1 and along with the same line with chapter 2, the phase-based derivational model and Feature Inheritance are adopted here (Chomsky (2000) and his subsequent works (Chomsky (2001, 2004. 2008, 2013, 2015, 2019)))). In the phase theory, CP and v*P constitute phases and their relevant parts are sent off in a cyclic fashion to the S-M and C-I Interfaces by the operation of Transfer. It applies to the complements of the phase heads and the domains become inaccessible for further syntactic operations. The phase-based derivation illustrated in chapter 2 is reproduced here as (121), where the irrelevant operation, V-to-v*/ T-to-C movements, are omitted just for expository purposes).

(121)   What did John buy?

a. $[_{v*P}$ what$_{i[Q]}$ $[_{vP*}$ John$_{[\varphi][uCase]}$ v* $[_{VP}$ buy $t_i]]]$

b. $[_{CP}$ C$_{[u\varphi][u\delta]}$ $[_{TP}$ T$_{[u\varphi][EPP]}$ $[_{v*P}$ what$_{i[Q]}$ $[_{v*P}$ John$_{[\varphi][uCase]}$ v* $[_{VP}$ buy $t_i]]]]]$

Feature Inheritance

c. $[_{CP}$ what$_{i[Q]}$ C$_{[u\delta]}$ $[_{TP}$ John$_{j[\varphi][uCase]}$ T$_{[u\varphi][EPP]}$ $[_{v*P}$ t_i $[_{vP*}$ t_j v* $[_{VP}$ buy $t_i]]]]]$

Second, it is assumed, following the discussion in chapter 2, that the syntactic position of the subject is the specifier of T. Chapter 2 argued with some pieces of empirical evidence that whether inversion takes place or not, the subject in QCs does not remain its base-generated position but raises to the canonical subject position, namely the specifier of T. According to the observation by Tanaka (2002), transitive subjects obligatorily raise to the specifier of T throughout the history of English, contrary to unaccusative ones. Thus, it is

reasonable to postulate that the subjects in QCs also occupy the specifier of T in early English.

Third, we assume that the quote occupies the specifier of C, as assumed in chapter 2. The corpus research here has revealed that QCs have maintained almost the same configuration since OE. Although the repertories of the reporting verbs expanded to some extent, it is natural to assume that some properties that QCs have in modern English are also observed in those in early English. Considering the facts that quotes do not coincide with *wh*-phrases and they exhibit new information in terms of information structure (see chapter 2), we assume them to have the property of Focus and their syntactic position to be the specifier of C throughout the history of English. For a quote to be fronted to the clause-initial position, we assume, as discussed in the previous chapters, that C has [uδ] that is related to A′-property such as Topic, Focus, and Q. This feature enters into an Agree relation with any element which has a valued A′-related feature, whereby resulting in the valuation of it. Thus, its value is dependent on the feature of an element which enters into an Agree relation with it. Adopting this system to the case of QCs, we assume that a quote, related to a focus property, enters into an Agree relation with [uδ], and that it is attracted by an EPP feature related to it, as a result of which it occupies the specifier of C.

Forth, we adopt an Agree-based analysis of verb movement along the lines of Haeberli and Ihsane (2016) to verb movement in QCs. As overviewed in chapter 2, they propose that [uV] on functional heads enters into an Agree relation with a verb, as a result of which the requirement of its valuation is satisfied. After the valuation, if the functional head has an EPP-feature in addition to [uV], verb raising is triggered in order to meet its requirement. Extending this assumption to verb movement in QCs, it is assumed that an unvalued Quotative-V feature, namely [uQ-V], is introduced into the derivation with a phase head C and that it enters into an Agree relation with a main verb in QCs, getting assigned a value.

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From the observation of the corpus research in section 3.3, this Agree-based system can be assumed to be established in incremental stages: first in QCs with *quoth* and second in those with *say*. It can be predicted from the discussion in section 3.4 that the former development already started in OE and was completed by the beginning of ME, while the latter started in ME and was completed by the beginning of EModE.

This subsection has overviewed a number of theoretical assumptions adopted here. With the discussion above in mind, the next section provides the derivation of QCs according to each historical period.

3.5.2. The Derivation of QCs in OE

We are now in a position to account for the syntactic derivations of QCs in terms of their historical development. Let us first consider the derivation of (96b) with a nominal subject, reproduced here as (122), whose syntactic structure is illustrated in (123).[62]

(122)   Ongitaþ, mine þa leofestan bearn,   cwæð Sanctus Isodorus,

           Consider, my   the dearest   children said   Saint   Isidore

          ' "Consider, my dearest children," said Saint Isidore.'

                                                    (coverhom,HomU_7_[ScraggVerc_22]:20.2824)

---

[62] Following the representational way in chapter 2, an EPP feature driving verb movement is represented as [V-EPP] in order to distinguish it from another EPP feature that requires some nominal element to occupy the specifier of T.

(123)   a. $[_{v*P}$ Quote$_{[Foc]}$ $[_{v*P}$ Subj$_{[\varphi][uCase]}$ $v*$ $[_{VP}$V $t_{Quote}]]]$

            b. $[_{CP}$ C$_{[u\delta][EPP][uV][V\text{-}EPP][u\varphi]}$ $[_{TP}$ Subj$_{[\varphi][uCase]}$ T$_{[u\varphi][EPP][uV][V\text{-}EPP]}$ $[_{v*P}$ Quote$_{[Foc]}$

               $[_{v*P}$ t_{subj} $v*$+V $[_{VP}$ t_V $t_{Quote}]]]]]$

            c. $[_{CP}$ Quote$_{[Foc]}$ V$_{[\cancel{u}\delta][EPP][\cancel{uV}][V\text{-}EPP]}$ $[_{TP}$ Subj$_{[\varphi][uCase]}$ $t_{V[\cancel{u}\varphi][EPP]\ [\cancel{uV}][V\text{-}EPP]}$

               $[_{v*P}$ t_{Quote} $[_{v*P}$ t_{subj} t_V $[_{VP}$ t_V $t_{Quote}]]]]]$

As shown in (123a), a base-generated structure, we assume that the quote is merged in the complement position of V (Collins and Branigan (1997)). It should be noted that we do not assume a null quotative operator due to the reasons mentioned in chapter 2. On the other hand, the subject DP, an external argument, is merged in the specifier of *v**. The quote undergoes movement to the outer specifier of *v** so that it can escape from the transferred domain of *v**, whereby it can be accessible for further syntactic operations. Once all the operations within the *v**P phase have been completed, VP is sent off to the S-M and C-I Interfaces by the operation of Transfer. Next, in (123b), at the CP phase, T and C are introduced into the derivation in order. T has [uV] and two types of EPP features, an [EPP] feature for the subject position to be occupied and an [V-EPP] feature driving the verb movement (Haeberli and Ihsane (2016)). In contrast, C has the following features: [uδ], [EPP], [uV], [V-EPP], and [uφ]. Feature Inheritance then applies and [uφ] is transmitted from C to T (Chomsky (2008)). The subject DP in the specifier of *v** enters into an Agree relation with T with respect to φ-features and raises to the specifier of T in order to meet the requirement of the EPP feature on T. On the other hand, the A′-related feature [uδ], acting as a probe, enters into an Agree relation with a goal, or the focus feature on the quote in the outer specifier of *v**, and the EPP-feature on C triggers the movement of the quote to the specifier of C. Then, the main verb undergoes movement to C via T because the V2 phenomenon systematically occurs in OE syntax, as overviewed in section 3.2. This verb movement is

driven by the Agree-based system: [uV] features on T and C enter into Agree relations with the main verb and [V-EPP] features on T and C contribute to successive verb movement to C via T.   Since all the features get valued and the main verb located in C precedes the subject in the specifier of T, the derivation successfully converges and results in the inverted word order.

   Let us next consider the derivation of QCs with a pronominal subject.   As discussed in section 3.3.2, inversion optionally takes place in such cases.   This can be attributed to the status of pronominal subjects.   Kemenade (1997) argues that pronouns in OE behaved as a clitic and that how they are attached to a main verb makes a difference of word order: if a pronoun as a clitic is attached on the left side of a verb, SV order is derived, while if it is on the right side of a verb, VS order is derived.   Following this assumption, we propose that each example of QCs with a pronominal subject, repeated below as (124), has the syntactic structure illustrated in (125).

(124)   a.   Iacob, cwæð he.

             Jacob, said   he.

             ' "Jacob," he said.'   (cootest,Gen:32.27.1336)

      b.   Bidaþ ge   her,   he cwæð,

             Wait   you   here   he said

             ' "Wait you here," he said.   (coverhomE,HomS_24.1_[Scragg]:65.31)

(125)   a. $[_{CP}$ Quote$_{[Foc]}$ V-Pro$_{[u\text{ð}][EPP][uV][V\text{-}EPP]}$ $[_{TP}$ tSubj$_{[\varphi][uCase]}$ tV$_{[u\varphi][EPP][uV][V\text{-}EPP]}$

             $[_{v*P}$ tQuote $[_{v*P}$ $t$subj tV $[_{VP}$ tV tQuote$]]]]]$

      b. $[_{CP}$ Quote$_{[Foc]}$ Pro-V$_{[u\text{ð}][EPP][uV][V\text{-}EPP]}$ $[_{TP}$ tSubj$_{[\varphi][uCase]}$ tV$_{[u\varphi][EPP][uV][V\text{-}EPP]}$

             $[_{v*P}$ tQuote $[_{v*P}$ $t$subj tV $[_{VP}$ tV tQuote$]]]]]$

In (125), the derivation proceeds in the same way as in (123). What makes a difference is the way that a pronominal element is attached to a verb. In (125a), a pronominal element, functioning as a clitic, is attached on the right side of the verb, hence deriving the VS order. On the other hand, in (125b), a pronominal element as a clitic is attached on the left side of a verb, thereby deriving the SV order. That is why inversion is optional in cases of QCs with a pronominal subject.

3.5.3. The Derivation of QCs in ME

Let us next consider the derivation of QCs in the period of ME. It has been discussed in section 3.4.1.1 that in this period, the verb *quethen* exhibited the obligatory inversion regardless of the subject type and its use was restricted only to its past form (*quod / quoþ(th)*), suggesting that *quethen* was functionally used as an invariant quotative marker (Chichosz (2019)). This trend is curious considering the historical fact overviewed in section 3.2: the frequency of V2 phenomenon gradually began to decline in LME and even the verb movement to T subsequently declines at the same time. In addition, it is said that the distinctive property of pronominals was also lost in EME. Then, we take this peculiar development of QCs as the following way: the process to establish the configuration as a distinctive clause type was completed (especially in the case of *quoth*) by the beginning of ME and a particularly unique feature [uQ-V] and another [V-EPP], irrelevant to a normal one, began to originate on C. As mentioned in chapter 2, [uQ-V] enters into an Agree relation with a main verb and corresponding [V-EPP] triggers its movement. Attributing such features to C is based on the argument by Chomsky (1995) and Rizzi (1997). Chomsky argues that clause type is determined by the functional category C, and Rizzi also claims the following characteristics of complementizers:

(126)   Complementizers express the fact that a sentence is a question, a declarative,

an exclamative, a relative, a comparative, an adverbial of a certain kind, etc.,

and can be selected as such by a higher selector.   (Rizzi (1997: 283))

It is widely assumed in the recent minimalist framework that C in interrogative sentences including a *wh*-phrase has a feature [uQ] which contributes to the interpretation in a relevant question (Chomsky (2013, 2015)).   In the same way, we propose that there is a distinctive clause type "Quotative," and some features characterizing its property originate on C (cf. Gyoda (1999)).[63]   Moreover, this assumption corresponds to the phase theory.   In current minimalism, it is suggested that unvalued features mark phases (Chomsky (2013, 2015)), so assuming such a feature to be on C is not implausible.

With the discussion above in mind, let us begin by considering the derivation of QCs with *quoth*.   We propose the syntactic structure shown in (128) for an example (127).   It should be noted that this type of QCs is not influenced by the subject type, though in EME there still existed a distinction of subject position between nominal elements and pronominal ones.

(127)   "Who are þou," quod þe   kyng.

Who are you   said   the king

' "Who are you," said the king.'   (CMPOLYCH,VI,375.2747)

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[63] Gyoda (1999) also argues the existence of the unique clause type "Quotative."   He recites a great variety of examples that can be empirical supports for his argument.   See Gyoda (1999) for the detail.

(128)   a.   [$_{v*P}$ Quote$_{[Foc]}$ [$_{v*P}$ Subj$_{[\varphi]}$ $v*$ [$_{VP}$V t_{Quote}]]]

            b.   [$_{CP}$ C$_{[u\delta][EPP][uQ\text{-}V][V\text{-}EPP][u\varphi]}$ [$_{TP}$ Subj$_{[\varphi][uCase]}$ T$_{[u\varphi][EPP][uV][V\text{-}EPP]}$

                [$_{v*P}$ Quote$_{[Foc]}$ [$_{v*P}$ t_{subj} $v*$+V [$_{VP}$ t_V t_{Quote}]]]]]

            c.   [$_{CP}$ Quote$_{[Foc]}$ V$_{[\cancel{u\delta}][EPP][\cancel{uQ\text{-}V}][V\text{-}EPP]}$ [$_{TP}$ Subj$_{[\varphi][\cancel{uCase}]}$ $t_{V[\cancel{u\varphi}][EPP][\cancel{uV}][V\text{-}EPP]}$

                [$_{v*P}$ t_{Quote} [$_{v*P}$ t_{subj} t_V [$_{VP}$ t_V t_{Quote}]]]]]

We take (128a) as a base-generated structure of (127), in which the subject and the quote are merged in the specifier of $v*$ and the complement position of V, respectively. The quote undergoes movement to the outer specifier of $v*$ in order to get out of the transferred domain of $v*$, circumventing the violation of PIC. As a result, the quote can be accessible for further syntactic operations. Once all the operations within the $v*P$ phase have been completed, VP is transferred to the S-M and C-I Interfaces. In (128b), at the CP phase, T and C are introduced into the derivation in order. T is accompanied by two types of EPP features, the EPP-feature for the subject and the [V-EPP] for verb movement (Haeberli and Ihsane (2016)), while the following features are on C: [uφ], [uδ], [EPP], [uQ-V], and [V-EPP]. [uφ] is then transmitted from C to T by the operation of Feature Inheritance. The subject DP in the specifier of $v*$ enters into an Agree relation with T in terms of φ-features and raises to the specifier of T in order to have the EPP feature on T checked. On the other hand, the A′-related feature [uδ] enters into an Agree relation with the focus feature on the quote in the outer specifier of $v*$, so that the EPP-feature on C triggers its movement to the specifier of C. Finally, the main verb undergoes movement to C via T under the Agree-based system: Verb movement is driven in the way that [uV] on T and [uQ-V] on C both enter into Agree relations with the main verb and then [V-EPP] features on T and C trigger its movement in a successive cyclic fashion. All the processes of feature valuation have been completed, and therefore

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(128) results in the derivational convergence and the inverted word order.[64]

Let us next account for the derivation of QCs with *seien* (an ancestor of *say* in modern English). In the case of QCs with *seien*, inversion was not obligatory, as discussed in section 3.4.1.2. Thus, QCs with *seien* display both SV and VS order in any subject type (all the SV examples attested from the corpus research contain *seien*). We argue that in EME they undergo the same derivational process as the ones in OE, which have been illustrated in (125). This follows from the two reasons: (i) *seien* is on the way of its development and therefore has not yet completely become like the cases of *quethen*, and (ii) the clitic-like status of pronominals is still maintained in EME. However, in LME, where the reason (ii) does not constitute an argument anymore, SV order was still attested, as shown in table 2. We assume then that the two patterns of word order can be attributed to this type of QCs being on the way of its development: there existed two cases of QCs, that is, one with [uQ-V] and the other one without it. The former induces inversion regardless of the subject type, while the latter does not, hence following the canonical grammar rule in ME. This means that some number of SV order are derived in the latter cases after the V2 phenomena and the distinctive property of pronominals were lost. Taking the discussion above into consideration, an example with VS order, shown in (129), is derived in the same way as (128).

(129)   Ga   into þe stan   seið   þe   prophete.

               Go   into   the stone   says   the   prophet

               ' "Go into the stone," says the prophet.'   (CMANCRIW-1,II.215.3108)

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[64] One question arises concerning about why pronominal subjects are not attached on the left side of the main verb on C in cases of *quoth*. It is impossible for the proposed analysis to account for this problem. One theoretical possibility is that the main verb actually moves to a higher head, such as Foc in the Split-CP (Rizzi (1997)). According to Nawata (2009) who adopts the Split-CP, in early English, nominal subjects and pronominal subjects occupy the specifier of T and that of the lower Top, respectively. If the main verb undergoes movement to Foc, the inverted word order is derived regardless of subject type because the Foc head is higher than the lower TopP. We leave this theoretical possibility for future research.

On the other hand, an example with SV order, shown in (130) follows the canonical grammar rule in EME and is derived as shown in (131).

(130) "Thenne is he a bastard," they said al.

  Then   is he a bastard they said all

  ' "Then he is a bastard," they all said.'   (CMMALORY,12.351)

(131) a. $[_{v*P}$ Quote$_{[Foc]}$ $[_{v*P}$ Subj$_{[\varphi][uCase]}$ $v*$ $[_{VP}$V $t_{Quote}]]]$

  b. $[_{CP}$C$_{[u\delta][EPP][uV][u\varphi]}$ $[_{TP}$ Subj$_{[\varphi][uCase]}$ T$_{[u\varphi][EPP][uV][V\text{-}EPP]}$ $[_{v*P}$ Quote$_{[Foc]}$

  $[_{v*P}$ t_{subj} $v*$+V $[_{VP}$ t_V $t_{Quote}]]]]]$

  c. $[_{CP}$ Quote$_{[Foc]}$ C$_{[u\delta][EPP][\cancel{uV}]}$ $[_{TP}$ Subj$_{[\varphi][\cancel{uCase}]}$ V$_{[\cancel{u\varphi}][EPP][\cancel{uV}][V\text{-}EPP]}$ $[_{v*P}$ t_{Quote}

  $[_{v*P}$ t_{subj} t_V $[_{VP}$ t_V $t_{Quote}]]]]]$

Following the argument of Haeberli and Ihsane (2016) that the loss of the asymmetry between main and subordinate clause and the decline of subject-verb inversion in 14th century render the evidence for [V-EPP] on C weak, we assume that the canonical [V-EPP] on C is absent in LME. This follows from the hypotheses on an acquisitional bias toward a simpler structure, shown in (132), which is proposed by Roberts (2007).

(132) a. Language learners prefer simpler representations to more complex ones.

  b. Given two structural representations R and R′ for a substring of input text S, R is simpler than R′ if R contains fewer features than R′.

  (Roberts (2007: 233, 235))

In terms of (132) and due to the facts above, the structure which has fewer features are preferred by language learners when there are two ambiguous representational structures. Namely, the structure without [V-EPP] is simpler and therefore preferred to the one with it. Thus, in the derivation in (131), which does not contain [V-EPP] on C, the main verb undergoes movement no further than T under the Agree-based system, with the subject preceding the main verb.

3.5.4.　The Derivation of QCs in EModE

It is time to account for the derivation of QCs in EModE. In this period, the tendency to obligatory inversion in *quethen* still remained observed and its use was restricted to the morphologically fixed past form, which means that the trend in the last period still continued in EModE, as mentioned in section 3.4.1.1. It should be pointed out that also in the cases of *say*, the strong tendency to inverted order started to be observed in this period, though inversion was not completely but almost obligatory. This change can be considered as the function of *quethen* having influence on the verb *say* due to the similarity of their meaning.

Another point that should be noted is that the repertory of reporting verbs was expanded in this period. In particular, verbs categorized into R1 started to appear in QCs (see the discussion in section 3.4.1.3). We take this historical change as the development that quotes started to obtain the functional role to convey the meaning of *say*. The reporting verbs used in QCs were originally only two kinds (*quethen* and *seien*) and their meanings were quite simple, just conveying a speech act. The two verbs having been used continuously in the same configuration since OE, a new function of quotes was created, making it possible to open up a new floor for other reporting verbs which are related to a speech act and have some additional meanings. In the minimalist perspective, we attribute this new function of quotes to the unique feature [uQ-V] acquiring another role in addition to its valuation. Thus, we

make a following assumption on Agree:

(133)   As a consequence of [uQ-V] entering into an Agree relation with a main verb,

the meaning of *say* is bleached.

We also assume, as discussed in chapter 2, that this semantic bleaching makes the role of a verb something like a functional one, which enables it to undergo movement to the inflectional domain, as in the light verb *have* and *be*. That is why overt verb movement remains observed in QCs even after the period when the V-to-T movement was lost. The establishment of this system prevents the rise of *do*-support in QCs, which started to develop in the middle of 16th century (Ellegård (1953), Roberts (1985), Haeberli and Ihsane (2016)).

With the assumption above in mind, we propose the following syntactic structure shown in (135) for the example (106b), repeated here as (134). In (135), we assume, following Haeberli and Ihsane (2016), that T has lost [V-EPP] on the course of the historical development of the English language.

(134)   Are you my uncle? says Will.   (ARMIN-E2-H,43.304)

(135)   a.   [$_{v*P}$ Quote$_{[Foc]}$ [$_{v*P}$ Subj$_{[\varphi][Case]}$ v^* [$_{VP}$V t_{Quote}]]]

          b.   [$_{CP}$ C$_{[u\delta][EPP][uQ-V][V-EPP][u\varphi]}$ [$_{TP}$ Subj$_{[\varphi][uCase]}$ T$_{[u\varphi][EPP][uV]}$ [$_{v*P}$ Quote$_{[Foc]}$

                [$_{v*P}$ t_{subj} v^*+V [$_{VP}$ t_V t_{Quote}]]]]]

          c.   [$_{CP}$ Quote$_{[Foc]}$ V$_{[u\delta][EPP][uQ-V][V-EPP]}$ [$_{TP}$ Subj$_{[\varphi][uCase]}$ $t_{V[u\varphi][EPP][uV]}$

                [$_{v*P}$ t_{Quote} [$_{v*P}$ t_{subj} t_V [$_{VP}$ t_V t_{Quote}]]]]]

As in the derivations shown in the previous sections, in (135a), the subject DP and the quote

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are merged in the specifier of v* and the complement position of V, respectively. The quote raises to the outer specifier of v* so as to get out of the transferred domain, as a consequence of which it can be accessible for further syntactic operations. VP is then transferred to the S-M and C-I Interfaces as soon as all the operations within the v*P phase have been completed. In (135b), at the CP phase, T and C are introduced into the derivation in order. T only has one EPP feature which is for the subject to occupy its specifier position, while C has the following features: [uφ], [uδ], [EPP], [uQ-V], and [V-EPP]. Then, [uφ] are inherited by T by the operation of Feature Inheritance and then enter into an Agree relation with the φ-features on the subject DP in the specifier of v*. The subject DP then raises to the specifier of T in order to satisfy the requirement of the EPP feature on T. On the other hand, the A′-related feature [uδ] on C enters into an Agree relation with the focus feature on the quote in the outer specifier of v*, and then the [EPP] on C triggers its movement to specifier of C. Finally, [uQ-V] on C enters into an Agree relation with the main verb, so that its meaning is bleached and therefore it can undergo movement to T as in the light verb.[65] The verb which moved to T then undergoes further movement to satisfy the [V-EPP] features on C, as a result of which a successive cyclic verb movement takes place. Since all the processes of feature valuation have been completed, the derivation successfully converges, leading to the inverted word order.

3.5.5. The Derivation of QCs in LModE and beyond

3.5.5.1. The Rise of Non-inverted Word Order

Let us finally explain the derivation of QCs in LModE and beyond. In this period, *quoth* gradually lost its dominant position as a quotation marker and at last became obsolete, and

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[65] It should be noticed that this agree relation makes it possible for the verb to move to T due to the semantic reduction, but this does not mean that the verb is obliged to raise to T.

hence is no longer used in modern English. On the other hand, *say* still maintained its property until LModE 2, but the frequency of SV order started to increase in LModE 3 in both subject types, especially in cases with pronominal subjects, as shown in table 4. Thus, we argue that QCs with inversion, namely QI, proceed the same derivational process as in EModE, which has just been accounted for in (135). As for the increase of the frequency of SV order, we assume that this is because assigning the [V-EPP] on C, accompanied with [uQ-V], has become optional. However, one question arises concerning why assigning the [V-EPP] has become optional. One possibility is that expanding the repertory of reporting verbs and their increasing frequency had some influence on the word order of QCs in terms of informational structure (Cichosz (2019)). Verbs incorporated into QCs on their course of development contain higher information value than the simplest reporting verb *say*. This expects that QCs with the verb *say* shows higher frequency of inversion due to its low information value. In fact, Quirk et al. (1985) give an observation that inversion most frequently occurs when the verb *say* is used. Hence, as argued in chapter 2, this thesis follows the observation by Cichosz (2019) that the choice between SV and VS in QCs is determined on the basis of the pragmatic motivation. Following Biber's (1999: 922) argument that what comes second is more prominent, Cichosz (2019) claims that the information value of subject and verb has influence on the word order: if a subject has higher information value than a verb, VS order is derived, and vice versa. That is why more SV order is attested when its subject is pronominal subject, whose information value is relatively low. Reducing this idea to the proposed analysis here, we argue that [V-EPP] is assigned on C in order to avoid the unfavorable word order with respect to information structure.[66]

To sum up the discussion above, the derivation of QCs with SV order, whose example is shown in (136), follows as in (137).

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[66] This argument on information structure is of course in need of further research to be confirmed.

(136)   "You will leave it to me," his uncle said: (MEREDITH-1895,19,133.29)

(137)   a.   [$_{v*P}$ Quote$_{[Foc]}$ [$_{v*P}$ Subj$_{[i\phi]}$ $v*$ [$_{VP}$V t_{Quote}]]]

b.   [$_{CP}$C$_{[u\delta][EPP][uQ-V][u\phi]}$ [$_{TP}$ Subj$_{[i\phi]}$ T$_{[u\phi][EPP][uV]}$ [$_{v*P}$ Quote$_{[Foc]}$

[$_{v*P}$ t_{subj} $v*$+V [$_{VP}$ t_V t_{Quote}]]]]]

c.   [$_{CP}$ Quote$_{[Foc]}$ C$_{[\text{u}\delta][EPP][\text{uQ-V}]}$ [$_{TP}$ Subj$_{[i\phi]}$ T$_{[\text{u}\phi][EPP][\text{uV}]}$

[$_{v*P}$ t_{Quote} [$_{v*P}$ t_{subj} $v*$+V [$_{VP}$ t_V t_{Quote}]]]]]]

The derivation in $v*$P phase proceeds in the same fashion as accounted for in the previous sections. In (137b), at the CP phase, T and C are merged in order. T only has one EPP feature which requires a subject to occupy its specifier position. C lacks the [V-EPP], related to the verb movement in QCs, in this derivation and therefore contains the following features: [uδ], [EPP], [uQ-V], and [uϕ]. Feature Inheritance applies and C transmits [uϕ] onto T, which enter into an Agree relation with ϕ-features on the subject DP in the specifier of $v*$. The subject then raises to the specifier of T so as to have the EPP-feature checked. On the other hand, the A′-related feature [uδ] enters into an Agree relation with the focus feature on the quote in the outer specifier of $v*$, and then the EPP-feature on C triggers its movement to the specifier of C. Finally, [uQ-V] on C and [uV] on T enter into Agree relations with the main verb. As a result of the former Agree relation, its meaning is bleached and therefore it is eligible to undergo movement to T as in the light verb. However, in this case, there is no [V-EPP] contained in the derivation, so the verb does not raise no further than $v*$. Since all the processes of feature valuation have been completed, the derivation successfully converges, leading to the non-inverted word order.

3.5.5.2.   The Derivation of QCs with R2 verbs

The most remarkable change in LModE was that the repertory of reporting verbs was drastically expanded, as summarized in table 5, and some of which are verbs categorized into R2.   As discussed in section 3.4.1.3, we take this historical change as the quote coming to play another functional role in LModE: the complementation of the meaning of *say* to a main verb.   R1 verbs intrinsically have the meaning of *say*, while R2 verbs do not, just conveying the communicative manner of a speaker.   Furthermore, some R2 verbs are intransitive verbs, so they are not able to select a quote, and hence the meaning of *say* have to be somehow compensated.   In the minimalist point of view, we again attribute this to the unique feature [uQ-V] and make the following assumption:

(138)   As a consequence of [uQ-V] entering into an Agree relation with a main verb (R2), the meaning of *say* is complemented.

Thanks to building an Agree relation with [uQ-V], R2 verbs obtain the meaning of *say*, but there remains one problem: how can they connect with the quote in spite of their deficiency in ability to select it?   In such cases, we assume, as discussed in chapter 2, that a quote is introduced as an adjunct as a modifier and constructs the modification relation with a main verb.   In particular, we make the assumption below, following Kobayashi (2019).

(139)   The main verb and the quote must be within a single transferred domain.

(Kobayashi (2019: 26))

(139) states that the main verb and the quote must be transferred in the same domain in order

to establish the proper modification relation between them.[67]   With the assumptions in mind,

the derivation of QI with an R2 verb, shown in (111b) which is repeated here as (140),

proceeds as illustrated in (141).

(140)   "I only wish she could help looking like a girl of seventeen," **sighed**

Mrs. Curtis.   (YONGE-1865,172.348)

(141)   a. $[_{v*P} [_{v*P} \text{Subj}_{[i\varphi]} v* [_{VP}V]] \text{Quote}_{[Foc]}]$

b. $[_{CP}C_{[u\delta][EPP][uQ-V][V-EPP][u\varphi]} [_{TP} \text{Subj}_{[i\varphi]} T_{[u\varphi][EPP][uV]} [_{v*P}$

$[_{v*P} t_{subj} v*+V [_{VP} t_V]] \text{Quote}_{[Foc]}]]]]$

c. $[_{CP} \text{Quote}_{[Foc]} V_{[\cancel{u\delta}][EPP][\cancel{uQ-V}][V-EPP]} [_{TP} \text{Subj}_{[i\varphi]} t_{V[\cancel{u\varphi}][EPP][\cancel{uV}]}$

$[_{v*P} [_{v*P} t_{subj} t_V [_{VP} t_V] t_{Quote}]]]]$

In (141a), at the $v*$P phase, the subject DP is merged in the specifier of $v*$, while the quote is

merged as an adjunct on the right side of $v*$P.   The domain of $v*$ is transferred to the S-M

and C-I Interfaces as soon as all the operations within the $v*$P have been completed.   Then,

at the CP phase, C is introduced into the derivation with five types of features ([uδ], [EPP],

[uQ-V], [V-EPP], [uφ]) and [uφ] is inherited by T.   [uφ] on T enter into an Agree relation

with φ-features on the subject DP, with it raising to the specifier of T in order to meet the

requirement of the EPP-feature on T.   On the other hand, [uQ-V] on C enters into an Agree

relation with the main verb, complementing the meaning of *say*.   The main verb then raises

to C via T so as to meet the requirement of [V-EPP].   [uδ] on C also enters into an Agree

relation with the focus feature on the quote and the EPP-feature on C drives its movement

from the right adjoined position of the specifier of $v*$ to the specifier of C.   As soon as all the

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[67] See chapter 2 for the theoretical background that this assumption is based on.

operations within the CP phase have been completed, the domain of C is transferred to the S-M and C-I Interfaces.   In (141c), the quote and the main verb are in the specifier of C and C, respectively, so that this configuration satisfies the licensing condition on the modification relation between them.   Since all the features are assigned appropriate values and the main verb precedes the subject DP in the specifier of T, the inverted word order is successfully derived.

Now we turn to the explanation of the derivation of non-inverted versions.   As assumed in chapter 2, we assume that the SV order of QCs with an R2 verb is derived when C does not have a [V-EPP], and therefore all the derivational processes are same except for verb movement.   The relevant example and its syntactic structure are shown in (142) and (143), respectively.

(142)　　　"I don't know," he shrugged.　　　　　　　(Yamaguchi (2009: 222))

(143)　　a.　$[_{v*P} [_{v*P} \text{Subj}_{[i\phi]} \, v* [_{VP}V]] \, \text{Quote}_{[Foc]}]$

　　　　b.　$[_{CP}C_{[u\delta][EPP][uQ\text{-}V][u\phi]} [_{TP} \text{Subj}_{[i\phi]} \, T_{[u\phi][EPP][uV]} [_{v*P}$

　　　　　　$[_{v*P} \, t_{subj} \, v*\text{+}V [_{VP} \, t_V]] \, \text{Quote}_{[Foc]}]]]]$

　　　　c.　$[_{CP} \, \text{Quote}_{[Foc]} \, C_{[\cancel{u\delta}][EPP][\cancel{uQ\text{-}V}]} [_{TP} \text{Subj}_{[i\phi]} \, T_{[\cancel{u\phi}][EPP][\cancel{uV}]}$

　　　　　　$[_{v*P} [_{v*P} \, t_{subj} \, v*\text{-}V [_{VP} \, t_V] \, t_{Quote}]]]]$

In this derivation, as mentioned in chapter 2, the licensing condition of (139) is satisfied by the copy of the quote, which is left behind on the right side of *v**P, and the main verb.   It is assumed under the copy theory of movement (Chomsky (1995)) that A′-copies, unlike A-copies, retains the semantic content of the moved element, the relevant example of which is repeated here as (144).

(144)   **Of which car** was [the driver _____] awarded a prize? (Chomsky (2008: 147))

In the configuration of (144), the modification relation is formed between the copy of the *wh*-phrase and the subject DP, though it has raised to the clause-initial position. This suggests that the copy of the *wh*-phrase left in its base-generated position is eligible to take part in the modification relation. Therefore, this thesis assumes that the modification relation between the main verb in *v** and the copy of the quote left on the right side of *v**P can be appropriately established when Transfer applies to the domain, yielding the relevant interpretation at the C-I Interface.

3.6. Conclusion

This chapter has attempted to account for the historical development of QCs within the framework of the Minimalist Program. Based on the investigation with the historical corpora, it has been revealed that the constructions were already attested in OE and have maintained almost the same configuration since OE, with verb movement remaining even after the period when it is widely assumed to have been lost, though their feature composition slightly has been changed over time.

It has been shown that QCs first developed with the two verbs, *quoth* and *say*, and underwent unique development, which can be regarded as deviant from the development of English language itself because of the fact that they displayed inversion regardless of the subject type even after the ME period, when the V-to-T movement was almost never observed. QCs were developed with the default inverted form, yielding a distinctive clause type, Quotative, as a consequence of which the unique feature [uQ-V] originated. It has been argued that this feature induces the two sematic effects under the Agree relation with a main

verb: semantic reduction of a main verb or semantic complementation to a main verb. This change occurred in two stages, first in EModE and second in LModE, resulting in a variety of verbs, including ones which do not have the meaning of *say*, appearing in QCs.

There have been two types QCs developed in the course of their historical development toward PDE: QCs with an R1 verb and QCs with an R2 verb. It has been assumed that C heads in QCs systematically have four types of features ([uφ], [uδ], [EPP], and [uQ-V]). In addition to them, an additional feature is contained in the case of QI: [V-EPP], which is optionally assigned in terms of information structure and triggers verb movement. When QCs include an R1 verb in their derivation, a quote is merged as an argument in the complement of V and undergoes successive cyclic movement to the specifier of C under the Agree relation with [uδ] on C. On the other hand, when QCs contain an R2 verb, a quote is merged as an adjunct on the right side of *v**P, and then raises to the specifier of C as well. The latter type of the quote, not being selected by a main verb, is licensed by establishing the modification relation with it via the operation of Transfer under the proposed condition based on the phase theory.

Chapter 4

Locative Inversion Constructions
and
Preposing Around **Be**

4.1. Introduction

This chapter is concerned with LICs and PAB such as (5) and (6) shown in chapter 1, reproduced here as (145) and (146).

(145)   *Locative Inversion Constructions*

a.   In the corner was a lamp.

b.   Into the room walked John.   (Mikami (2010: 298))

(146)   *Preposing Around* Be

a.   Less fortunate was the girl in the backseat.   (Rochemont (1978: 30))

b.   Found at the scene of the crime was an axe.

(Rochemont and Culicover (1990: 69))

c.   Joining the chorus of political figures was former Georgia Sen. Sam

Nunn.   (Samko (2014: 373))

In (145) and (146), the preposed elements (the locative PP in LICs and the AP or PartP in

PAB) occupy the clause-initial position. On the other hand, the subject DPs occur post-verbally; they are in the clause-final position. It is widely accepted that the locative PP in LICs and the preposed elements in PAB bear a mixed property of the subjecthood and topichood, which suggests that they display both A- and A′-properties. Accordingly, revealing this peculiar property of LICs and PAB has been the main topic of the debate, though the number of literature on PAB is little, which is probably because PAB shares some similarities with LICs, as will be discussed in this chapter. We can find that the standpoint of previous studies varies with respect to the syntactic position of the fronted elements. Collins (1997) argues that the locative PP moves to the canonical subject position, the specifier of T, in order to satisfy the EPP-feature on T. Kitada (2011) also assumes the locative PP to raise to the specifier of T by postulating that EF inherited by T attracts it, triggering A′-movement to the position. In contrast, Bresnan (1994) and Mikami (2010) claim that the locative PP moves to the specifier of C, not the specifier of T. As for the subject DP in LICs, most of the literature (Collins (1997), Wu (2008), Kitada (2011), Koike (2013), Arano (2014)), although the details of their analyses vary with regard to the exact syntactic position or movement of the locative PP, argue that it remains in situ and does not undergo movement to the specifier of T.

The aim of this chapter is to clarify the syntactic structure of LICs and PAB in detail and to propose a unified analysis to them in terms of LA advocated by Chomsky (2013, 2015). In particular, it is proposed that a phase head C, introduced into the derivation with two types of unvalued features, namely [uφ] and [uδ], inherits those features to T. The inherited [uφ] enter into an Agree relation with φ-features on the subject DP remaining in its base-generated position, while the inherited [uδ] agrees with the topic feature on the fronted element which occupies the specifier of T, and the label of the set is determined as <Top, Top> via feature sharing of the A′-related features. In addition, it is argued that the dual property of the

preposed elements in the constructions follows from the proposal on the A- and A′-distinction based on the featural approach (van Urk (2015)).

The organization of this chapter is as follows. Section 4.2 outlines some basic properties of LICs and PAB which are pointed out in previous studies. Section 4.3 reviews some previous studies of LICs (which argue that their analysis also can capture the properties of PAB). Section 4.4 introduces some theoretical backgrounds of this chapter: LA (Chomsky (2013, 2015)) and the featural approach to the A- and A′-distinction. Taking the discussions in the previous sections into account, section 4.5 offers an alternative analysis of LICs and PAB. Section 4.6 shows that the proposed analysis can account for some pieces of empirical data in LICs and PAB. Section 4.7 is the conclusion of this chapter.

4.2. Some Basic Facts of LICs and PAB

4.2.1. The Properties of the Postverbal DP

This section shows some empirical facts that illustrate basic properties of postverbal DPs in LICs and PAB. First of all, as is well-known, postverbal DPs in LICs trigger agreement with finite verbs. Let us consider the following examples.

(147)   a.   In the swamp {**was** / *were} found a child.

        b.   In the swamp {*was / **were**} found two children.   (Ura (2000: 170))

In (147a), *be* is realized in the singular form *was*, while in (147b), it is realized in the plural form *were*. Given the standard assumption that this type of verb agreement is triggered by a subject, the contrast shows that the postverbal DP, not the PP in the sentence-initial position, functions as the subject in LICs.

As pointed out by Mikami (2009), Kitada (2011) and Samko (2014), this is also the case

with PAB, as illustrated in the following examples.

(148)   a.   More effective and certainly more interesting, however, **is** a structure

                      recently demonstrated by the team at the Bell Telephone Laboratories,

                      using magnetostrictive materials.

          b.   More important **are** some of the problems implicit in it.

                                            (cf. Mikami (2009: 208))

(149)   a. * Joining the chorus of political figures **was** five former Georgia senators.

          b.   Joining the chorus of political figures **were** five former Georgia senators.

                                          (cf. Samko (2014: 374))

In (148), PAB with a preposed AP, the copular verb *be* is realized in the singular form *is* and the plural form *are*, respectively. This indicates that the it corresponds to the number value of post-verbal DP. Similarly, (149), PAB with a preposed PartP, shows that the copular verb *be* must agree with the postverbal DP, not the preposed element. This contrast shows that the verb agrees with the postverbal DP on its right side, not with the AP or PartP in the sentence-initial position, which suggests that agreement is triggered by the postverbal DP in the sentence-final position and it functions as the subject in PAB.

Secondly, postverbal subject DPs in LICs and PAB must be interpreted as a sentential focus. This is supported by its paraphrase as a cleft sentence, as shown in the following examples, all of which are cited from the Rochemont (1978).

(150)   a.   At the foot of the stairs was his mother.

          b.   It was his mother that was at the foot of the stairs.

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(151)　　a.　Less fortunate was the girl in the back seat.

　　　　　b.　It was the girl in the back seat who was less fortunate.

(152)　　a.　Standing in the doorway was John.

　　　　　b.　It was John that was standing in the doorway.

Rochemont (1978) argues that the elements in the sentence-initial position, namely, a PP in (150), an AP in (151) and a PartP in (152), are also able to occupy the focus position in cleft sentences, but (150b), (151b), and (152b) are the only appropriate paraphrase of (150a), (151a) and (152a) to a cleft sentence. Furthermore, phonological stress, which is generally put on the element showing new information in terms of information structure, is assigned to sentence-final subjects in LICs and PAB. Therefore, pronominal subjects, which typically denote old information, cannot appear in LICs and PAB in general, regardless of their Case form, as the following examples illustrate.[68]

(153)　　a. * At the foot of the stairs was she / her.

　　　　　b. * Less fortunate was she / her.

　　　　　c. * Standing in the doorway was he / him 　　　　(Rochemont (1978: 31))

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[68] However, Mikami (2010) points out that nominative pronouns are available in LICs, as shown in (i).

　(i)　　In the garden sat {they / *them}!　　　　　　　　　(Levine (1989: 1045))

In (i), the postverbal pronoun displays the nominative form *they*. If it is realized as the accusative form *them*, the sentence is regarded as ungrammatical. Although this example can also be a support for the argument that the postverbal DP functions as the subject, we put this fact aside and follow the observation of Rochemont (1978).

4.2.2.   The Dual Property of the Preposed Elements

This subsection reviews the well-known observation that the fronted elements, namely the locative PP in LICs and the AP and PartP in PAB, exhibit both subjecthood and topichood, suggesting that they have both A- and A′-properties.   As mentioned in section 4.1, this is pointed out by many previous studies (Bresnan (1994), Nishihara (1999), and, Wu (2008), Mikami (2009, 2010), Kitada (2011) Koike (2013), Samko (2014)).   Let us first consider some pieces of empirical evidence illustrating the subjecthood of fronted elements.

4.2.2.1.   The Subjecthood

It is observed that LICs can be embedded in the raising construction, where the locative PP may undergo raising from the embedded infinite clause to the sentence-initial position.   A relevant example is shown in (154).

(154)   [On that hill]$_i$ appears t_i to be located a cathedral.   (Doggett (2004: 29))

In (154), the locative PP *on that hill* undergoes raising from the embedded subject position to the matrix subject position, while the subject DP *a cathedral* is located in the sentence-final position.

The same kind of examples are observed in PAB, as shown in (155), where the AP *more important* in (155a) and the PartP *undermining Abbey's confidence* in (155b) undergo raising and then occupy the matrix subject position.   As in the case of LICs in (154), the subject DPs in (155) are located in the post-verbal position, remaining in their base-generated positions.

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(155)   a.   [More important]ᵢ seems [*t*ᵢ to be a visceral yearning for change], […]

(Mikami (2009: 209))

b.   [Undermining Abbey's confidence]ᵢ seemed *t*ᵢ to be the decline in value

of Lyoyds' shares.   (cf. Samko (2014: 372))

The applicability of raising has been accepted as a diagnostic for an A-property by some previous studies (Bresnan (1994), van Urk (2015), among others) since the raising phenomenon, or movement from the embedded subject position to the matrix subject position, is derived via A-movement.   Thus, these cases can be regarded as one piece of evidence that suggests the subjecthood of the fronted elements.

  Further empirical evidence to show the subjecthood of the preposed elements is that they exhibit so-called *that*-trace effect.   It is a constraint that the extraction of an element occupying the embedded specifier of T is prohibited when the complementizer *that* appears. As illustrated in (156), the DP *a child* cannot be extracted from the embedded subject position, namely the specifier of T, when *that* occurs.[69]

(156)   It's [a child]ᵢ we all believe (*that) *t*ᵢ was found in the park.

(Doggett (2004: 29))

  The *that*-trace effect is observed in LICs, as shown in (157) in which the extraction of the locative PP in the embedded clause is banned due to the presence of *that*.

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[69] It should be noted that this effect is not observed when non-subject constituents are extracted, as the contrast below illustrates (Bresnan (1994)).

  (i)   a.   It's in these villages that we all believe the finest examples of this cuisine
            can be found.
         b.   It's in these villages that we all believe that the finest examples of this cuisine
            can be found   .   (Bresnan (1994: 97))

(157) a. It's in these villages that we all believe __ can be found the best

examples of this cuisine.

b.* It's in these villages that we all believe that __ can be found the best

examples of this cuisine. (Bresnan (1994: 97))

The fronted elements in PAB also exhibit the *that*-trace effect. A relevant example is illustrated in (158).

(158) [How much important]$_i$ do you believe (*that) t_i is the establishment of

legal services? (Ono et al. (1982:185))

As shown in (158), it is impossible for the embedded AP to be extracted from the clause-initial position when the complementizer *that* shows up.

Taking the examples above into consideration, these cases in LICs and PAB can be regarded as one piece of evidence that suggests the subjecthood of the fronted elements.

4.2.2.2. The Topichood

We are now in a position to consider the topichood of the preposed elements. According to Bresnan (1994), Nishihara (1999), Wu (2008), Mikami (2010), there are some pieces of empirical evidence which suggest that the fronted locative PP in LICs shares some common pragmatic and syntactic properties with topicalized elements. First of all, the locative PP in LICs must refer back to the coreferential expression in the preceding context. Let us consider the following example, which is cited from Mikami (2010), with a slightly modified font.

(159)   He unscrews the plate and removes it from the door.

   Behind the plate is a chiselled cavity.   (cf. Mikami (2010: 301))

In (159), *the plate* in the locative PP, indicated in boldface, has already appeared in the preceding context.   It is obvious that this type of behavior is also observed in sentences with topicalization, in which topicalized elements, which have to denote old information, must be coreferential with some other element in the preceding context.

   This is also the case with PAB, as pointed out by Mikami (2009) and Samko (2014).   As well as the locative PP in LICs, the preposed elements in PAB must refer back to the coreferential expression in the preceding context.   Some relevant examples are shown in (160).

(160)   a.   It is **well known** that Columbus made his first voyage to America in
               1492. But less **well known** is his last voyage．   (Fukuchi (1985: 114))

         b.   "We came here to defend the right of our parliamentarians to enter their
               own house" said Guillermo **Arocha**, 34, a lawyer and sympathizer of
               Accion Democratica, the more left-leaning of the two parties.
               "We elected them with our votes, and no one has the right to remove them
               through a coup," Standing next to **Arocha** was Mannuel Contreras […].

                                                                      (Samko (2014: 27))

In the same way as the locative PP in (159), the preposed AP *well known* in (160a) and *Arocha* in the preposed PartP in (160b) have appeared in the preceding context.   Thus, preposed elements in LICs and PAB exhibit the same properties as topicalized elements,

which suggests that they are interpreted as the topic of the sentence.

Second, it is pointed out by Stowell (1981), Rizzi and Shlonsky (2006), Wu (2008), and Mikami (2010) that the preposed locative PP creates an island; that is, extracting a *wh*-element across the clause-initial locative PP in LICs is not permitted. Some relevant examples are illustrated in (161).

(161) a. * I wonder how$_i$ [into the room walked John t_i]?

(Rochemont and Culicover (1990: 93))

b. * I wonder who$_i$ [under the bed hid t_i]　　　　(cf. Wu (2008: 43))

As illustrated in (161), it is impossible for the *wh*-elements to move across the preposed locative PPs in the clause-initial position.

The preposed elements in PAB also display the same behavior when the extraction of a *wh*-element applies across them in the clause-initial position, as illustrated in (162), where the *wh*-elements cannot move across the preposed AP and PartP.

(162) a. * [Which fact]$_i$ do you think [most surprising of all is t_i] ?

(Iwakura (1978: 327))

b. * Who$_i$ [sitting at the table was t_i]　　　　(Rochemont (1978: 40))

Just like the examples discussed above, this behavior is also observed in sentences containing topicalization. Consider the following contrast.

(163) a. * Which books$_i$ did Lee say that [$_{CP}$ with great difficulty, she can carry t_i]?

b. 　Which book$_i$ did Mary say that [$_{TP}$ her brother read t_i]?

(Nakamura (1996: 288))

(163a) shows that the topicalized phrase *with great difficulty* constitutes a topic-island and hence the extraction of the *wh*-phrase is prohibited.   On the other hand, in (163b), in which topicalization is not included, such an island constraint is not observed.   Therefore, the examples in (161) and (162) suggest that the preposed elements in LICs and PAB form topic-islands.   Given the discussions in this subsection, it is plausible to assume that the preposed elements in LICs and PAB indicate the topicality.

4.3.   Previous Studies

This section reviews two previous studies on LICs and PAB (Mikami (2010) and Kitada (2011)) within the framework of the Minimalist Program and points out their problems.   The two studies both propose the unified analysis of LICs and PAB, in which the subject DP stays in its base-generated position.   However, the two previous studies make a different argument for the syntactic position of the fronted element.   Let us first overview the analysis of Mikami (2010).
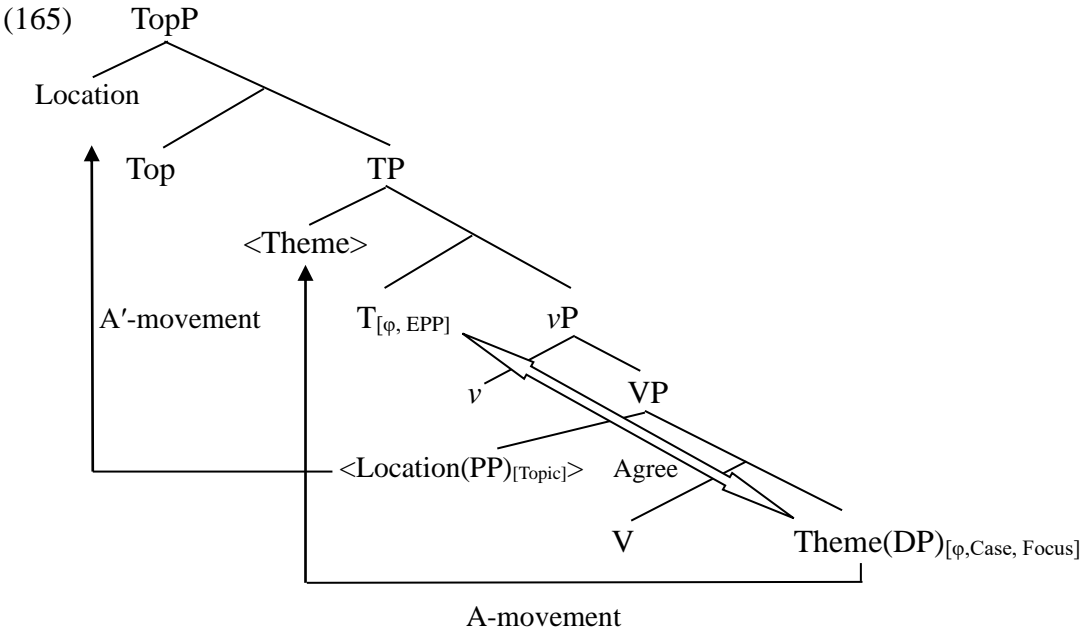
4.3.1.   Mikami (2010)

According to the copy theory of movement (Chomsky (1995)), a copy created by movement retains the same syntactic, semantic, and phonological information as the original one.   The copy left behind is normally deleted at the S-M Interface, considering that overt movement has to induce some phonological effect.   However, it is predicted in principle that any copy can be the target of pronunciation at the S-M Interface if all copies created in the course of the derivation have the identical information.[70]   Given this theoretical possibility,

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[70] According to Bobaljik (2002), there are four theoretical possibilities for the interpretation of a copy

Mikami (2010) argues that the subject DP in LICs undergoes movement to the specifier of T to satisfy the EPP-feature on T, but its lower copy is chosen as the target of pronunciation at the S-M Interface, which leads to the surficial inverted word order in LICs. Taking this argument into account, Mikami (2010) proposes the following syntactic structure for the LICs such as (145b), which is repeated here as (164):[71]

(164)   Into the room walked John.   (Mikami (2010: 298))

(165) TopP

Location

Top   TP

A′-movement   <Theme>

T$_{[φ, EPP]}$ vP

v′   VP

<Location(PP)$_{[Topic]}$>   Agree

V   Theme(DP)$_{[φ,Case, Focus]}$

A-movement

(Mikami (2010: 313))

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created as a consequence of movement operation. Suppose that a syntactic object X undergoes movement and two copies are created; that is, one is α in the raised position and the other is β left in its base-generated position. Then, we can obtain the following ways of interpreting copies.

(i)   α is interpreted and pronounced at the Interfaces
(ii)   α is interpreted at the C-I Interface, but β is pronounced at the S-M Interface.
(iii) β is interpreted at the C-I Interface, but α is pronounced at the S-M Interface.
(iv)   β is interpreted and pronounced at the Interfaces.

[71] Mikami (2010) does not give any discussion on PAB, but he argues in his paper that his analysis can accommodate its structure as well.

In this structure, the subject DP, or the theme DP, and the locative PP are merged in the complement position and the specifier position of V, respectively. Next, *v* is merged and V raises to it. T is then introduced into the structure and enters into an Agree relation with the subject DP in terms of φ-features, with the result that the two unvalued features are deleted: [uφ] on T and [uCase] on the subject DP.[72] The subject DP then raises to the specifier position of T so as to meet the requirement of the EPP-feature on T. The Top(ic) head is merged and the locative PP, which is assigned a topic feature, undergoes A′-movement to the specifier of Top. After these operations, the structure is transferred to the S-M and C-I Interfaces, in which the lower copy of the subject DP, not the higher copy in the specifier of T, is chosen as the target of pronunciation with a focus stress and is appropriately interpreted as a focus element. Since all the features have been properly assigned values and deleted, the derivation successfully converges.

Under the assumption that the locative PP has only topichood, Mikami (2010) gives an explanation to examples of LICs involving with raising, repeated here as (166a), from the point of view of the pronunciation of the lower copy. According to his analysis, the derivation of the example (166a) proceeds as shown in (166b).

(166)　a.　[On that hill]$_i$ appears t_i to be located a cathedral.　(Doggett (2004: 29))

　　　　b.　[$_{TopP}$ Loc [$_{TP}$ <The> … [$_{TP}$ <The> … [$_{vP}$ <Loc> [V The]]]]]

　　　　　　A′-movement

　　　　　　　　　　A-movement　　　　A-movement　　　(Mikami (2010: 317))

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[72] Mikami (2010) argues that this agree relation across the locative PP does not induce any locality problem because it does not have matching φ-features. Therefore, there is no element that induces intervention effects, and hence the appropriate agree relation is built between the subject DP and T. In contrast, there are some studies which argue that the locative PP has some φ-features as a consequence of inheritance from the embedded DP headed by P and therefore more referential than other PPs (Huang (1982) and Rizzi (1990)). This thesis follows the former argument that the locative PP has no matching φ-features.

(The = Theme DP   Loc = Location PP)

In this derivation, the locative PP undergoes topicalization to the specifier of the matrix Top, while the Theme DP, namely the subject DP, raises to the specifier of the matrix T through the intermediate position, the specifier of the embedded T.   At the S-M interface, the lowest copy of the Theme DP is chosen as the target of pronunciation and the other copies are deleted. In this analysis, as illustrated in (166), it is the subject DP that enters into an Agree relation with T and undergoes raising.   Thus, the locative PP merely undergoes overt movement to the sentence-initial position via topicalization after the subject DP raises.   Consequently, the derivation converges without recourse to the raising of the locative PP.

   However, this analysis has some empirical problems.   As pointed out by Koike (2013), the assumption that the lower copy of the subject DP is chosen at the S-M Interface makes it impossible to account for the grammatical difference of the following examples.

(167)   a. * Rolled the baby carriage down the hill.

          b.   Down the hill rolled the baby carriage.   (Coopmans (1989: 730))

In (167a), where the locative PP is not preposed, it is expected along the same lines of Mikami's analysis that the lower copy of the subject DP is chosen at the S-M interface. However, this leads to a wrong prediction, as the grammaticality of (167a) shows.   In his analysis, the EPP-feature on T can be satisfied by the higher copy of the subject DP, so the ungrammaticality of (167a) should be explained without recourse to its requirement.   It might be assumed that the pronunciation of a lower copy is possible only when the locative PP is preposed to the clause-initial position, but such an assumption is ad hoc and hence requires an independent motivation to support it (Koike (2013)).

Another empirical problem of Mikami's analysis is that it cannot account for the fact that tag pronouns are realized as *there* in LICs, as discussed in chapter 2.   The relevant examples are repeated here as (168).

(168)　　a. In the garden is a beautiful statue, isn't there/*it?　　(Bowers (1976: 237))

　　　　　b. Out of that cave stormed the fiercest dragon you ever did see,

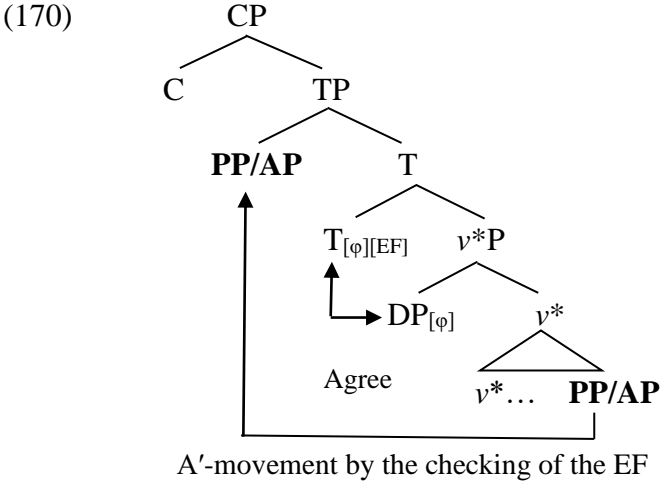　　　　　　didn't there? (??didn't it?)　　　　　　　　　　　(Bruening (2016: 118))

In tag questions, tag pronouns correspond to an element that occupies the specifier of T.   If the subject DP in LICs is located there, tag pronouns will be realized as ones corresponding to the grammatical property of the subject DP.   However, this is not the case, as illustrated in (168) in which tag pronouns are realized as *there*.   Since Mikami (2010) assumes the copy of the subject DP to be in the specifier of T, the examples in (168) cannot be explained.   Thus, it is clear that the analysis proposed by Mikami (2010) is not plausible.[73]

4.3.2.　Kitada (2011)

Kitada (2011) proposes the following syntactic structure of LICs and PAB under the assumption shown in (169).

(169)　　The Inheritance of the EF is possible when the φ-features of T do not trigger

　　　　　the A-movement of the agreeing DP.　　　　　　　(Kitada (2011: 87))

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[73] See Koike (2013) for another empirical problem of Mikami's (2010) analysis.

(170)

PP/AP — structure tree diagram

CP
├── C
└── TP
    ├── **PP/AP**
    └── T
        ├── T$_{[\varphi][EF]}$
        └── *v**P
            ├── DP$_{[\varphi]}$
            └── *v**
                └── *v**… **PP/AP**

Agree

A′-movement by the checking of the EF

(Kitada (2011: 93))

(169) states that EF on C can be inherited by T when [uφ] on T, inherited from C, do not trigger A-movement of the DP that enters into an Agree relation with them. Kitada (2011) assumes that an element attracted by EF, which is also inherited by T, undergoes A′-movement, not A-movement, to the specifier of T because of the property of EF (Chomsky (2008)). From this perspective, Kitada (2011) argues that the specifier of T is defined as an A′-position because the C-I interface does not permit a position which is interpreted as both A- and A′-positions at the same time.[74]

Under this assumption, let us consider the syntactic structure in (170), where both [uφ] and EF are inherited from C to T. [uφ] enter into an Agree relation with φ-features on the subject DP, but this does not trigger its A-movement to the specifier of T. On the other hand, the inherited EF on T attracts the locative PP in LICs (or the AP in PAB), inducing its A′-movement to the specifier of T. With this analysis, Kitada argues that the dual property of the preposed elements in LICs and PAB, the subjecthood and topichood, is accounted for; namely the fronted element with a topicality occupies the canonical subject position, which is

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[74] There is a counter argument that one position displays both A and A′-properties, such as the specifier of C in Dinka (van Urk (2015)). As we will discuss in the next section, we follow this argument and argue that the specifier of T shows both A- and A′-properties.

interpreted as an A′-position in the C-I Interface due to the attraction by EF.

In terms of the assumption of (169), Kitada explains the absence of weak cross-over (hereafter, WCO) effects in the locative PP in LICs, which is normally considered as the evidence of an A-property (Culicover and Levine (2001), Mikami (2010), and Tim Chou (2020)).[75]   A relevant example is shown in (171).

(171)   [In every dog$_i$'s cage] peered its$_i$ owner.   (Culicover and Levine (2001: 289))

(171) shows that the locative PP with a quantified phrase can move across the coreferential pronoun contained within the post-verbal subject DP.   Kitada (2011) argues, contrary to the structure illustrated in (170), that the locative PP can also be merged in a higher position than that of the subject DP, as assumed in Mikami (2010).   Then, the locative PP attracted by the inherited EF raises to the specifier of T via A′-movement without crossing over the subject DP, with the result that no WCO effect takes place.   This argument gains a further support by the following example, where the *wh*-movement of *out of which* does not induce the strong violation of superiority.

(172)   (?) Out of which room came who?   (Culicover and Levine (2001: 306))

(172) indicates that the locative PP is originally merged in a higher position than the subject DP and then undergoes movement to the sentence-initial position, so that there is no strong

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[75] The WCO effect is the constraint on the coreference between a pronoun and a quantified phrase which moves across a DP with the pronoun.   It is not observed if the quantified phrase moving across a DP containing a pronoun which is coreferential with it undergoes A-movement, as shown in (ia). On the other hand, if such a movement is A′-movement like *wh*-movement, The WCO effect is induced, as shown in (ib).
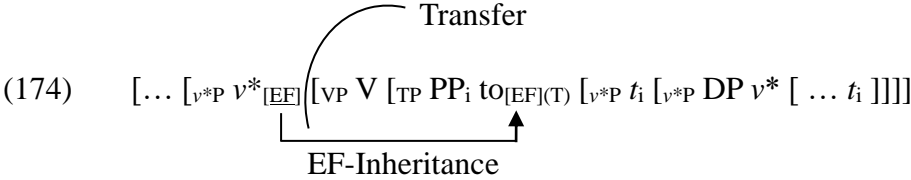
(i)   a.   Every girl$_i$ seemed to her$_i$ friend [___] to be generous.
       b. * Who$_i$ does her$_i$ friend like ___ ?   (Tim Chou (2020: 776))

superiority violation.

However, this analysis has an empirical problem: it cannot account for the following interesting contrast of LICs in ECM contexts.[76]

(173)   a. * I wouldn't expect [behind the trees] to stand a large building of some

kind.   (Levine (1989: 1037))

b.   [On this wall]$_i$ I expect t_i to be hung a portrait of our founder.

(Bresnan (1994: 106))

(173a) shows that the locative PP cannot occur in the complement position of ECM verbs. On the other hand, (173b) shows that the grammaticality of sentences such as (173a) is ameliorated by raising the locative PP from the embedded specifier of T to the sentence-initial position.   The predictable structure of (173b) under Kitada's (2011) analysis is illustrated in (174).

(174)   [… [$_{v*P}$ $v*_{[EF]}$ [$_{VP}$ V [$_{TP}$ PP$_i$ to$_{[EF](T)}$ [$_{v*P}$ t_i [$_{v*P}$ DP $v*$ [… t_i]]]]

Transfer

EF-Inheritance

By postulating that EF on $v*$ can be inherited by the embedded T, Kitada argues that the locative PP raises from the outer specifier of $v*$ to the embedded specifier of T.[77] However, this assumption renders the further movement of the locative PP impossible.   Since the matrix $v*$ no longer has EF due to the inheritance, it cannot trigger the movement of the

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[76] Kitada assumes that people who cannot use the strategy of EF-inheritance from a matrix $v*$ to an infinitival T judge the sentence in (173a) to be ungrammatical.

[77] Note that Kitada (2011) assumes phases in any type of structure including sentences with unaccusative verbs.

locative PP to its outer specifier.　　Thus, the locative PP in the embedded specifier of T has no choice but being transferred after the operations in the matrix *v**P phase have been completed, so that applying further movement to the locative PP is prohibited due to the PIC.　　Therefore, Kitada (2011) wrongly predicts that (173b) is ungrammatical.

　　There are also some theoretical problems for Kitada (2011) from the point of view of the current minimalist framework.　　One is that Kitada assumes the existence of EF on a phase head.　　EF has been abandoned since Chomsky (2013) and so it is no longer assumed in the current minimalism.　　Thus, his analysis cannot be maintained in the current theory. Another is that Kitada's analysis cannot account for why the fronted locative PP in LICs or the preposed AP in PAB should be interpreted as a topic element.　　Although he gives principled explanations to some empirical facts in LICs and PAB under the assumption of (169), it seems that his analysis does not provide the reason why particular constructions such as LICs and PAB require that assumption.　　Hence, it lacks a theoretical adequacy.[78]

4.4.　Theoretical Backgrounds

　　This section introduces some of the core theoretical assumptions adopted here.　　First, as outlined in chapter 1 and adopted in chapters 2 and 3, the phase-based derivational model, advocated by Chomsky (2000) and his subsequent works (Chomsky (2001, 2004. 2008, 2013, 2015, 2019)), is also adopted here.

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[78] There is another type of analysis of LICs in which the locative undergoes two-step movement: the first movement is to the specifier of T and the second one is to the specifier of C (Stowell (1981), Nishihara (1999), and Wu (2008)).　　The former is induced by the EPP-feature of T and the latter is by topicalization.　　Samko (2014) also proposes this two-step movement for the derivation of PAB with PartP preposing.　　However, this type of analysis including vacuous subject topicalization is not plausible.　　As the example (i) illustrates, English does not allow such a vacuous movement from the ordinary subject position (Lasnik and Saito (1992)).　　Thus, we argue that such an analysis of LICs is untenable.

   (i)   a. * [$_{CP}$ John, [$_{TP}$ <John> likes Mary]].
          b. * I think [$_{CP}$ that John, [$_{TP}$ <John> likes Mary]].

Second, we adopt LA advocated by Chomsky (2013, 2015). As overviewed in chapter 1, in the current minimalist framework, Merge is considered as just an operation to combine one element with another and label determination is conducted by an independent computational system called LA. In LA, labels of syntactic objects are identified via minimal search: choosing the closest head within a relevant syntactic constituent as its label. Under LA, label determination proceeds in the following ways. First of all, when a head H and a phrase XP are merged, as in the case of (175a), the head H is chosen as the label of the set via minimal search. On the other hand, when a phrase XP and another phrase YP are merged, as in the case of (175b), the label of the set cannot be determined because both heads of the phrases are equidistant, which makes it impossible for the minimal search to choose a unique head.

(175)   a. $\alpha = H$ b. $\alpha = ?$

                    H   XP   XP   YP

For such a complicated structure to be given a proper label, two solutions are proposed: (i) moving out either of the elements comprising the relevant structure and (ii) sharing prominent features under an agree relation which the heads of both phrases possess. In the former, the label of α in (175b) can be appropriately determined as Y by moving XP, under the assumption that a copy of the moved element becomes invisible to labeling computation. This is illustrated in (176a). In the latter, the label of α in (175b) can be determined as <F, F> by sharing the prominent features under an Agree relation that both XP and YP have, as shown in (176b).

(176)　　　a.　　　　α = Y　　　　　　　　　b.　　　　α = <F, F>

```
       /\                              /\
     t_XP   YP                     XP_[F]   YP_[F]
```

As explained in chapter 1, a typical case of labeling via feature sharing is φ-feature agreement between DP and TP, which is based on the assumption that T is too "weak" to serve as a label in English (Chomsky 2015).

Although adopting the framework of LA, we partly depart from the original one advocated by Chomsky (2013, 2015). In particular, we assume that R is not too weak to serve as a label (Abe (2016)). What's more, Chomsky suggests the possibility that LA applies at the timing of Transfer, but this thesis assumes, following Bošković (2016), that there is a difference in the timing of labeling. Bošković (2016) proposes that labeling determination occurs at the timing of merger in cases where a head H and a XP are merged (cf. (175a)), while it does at the timing of Transfer in cases where two phrases are merged (cf. (175b)). This thesis follows this proposal by Bošković (2016).

Third, given some pieces of empirical evidence reviewed in section 4.2, we assume that in LICs and PAB, preposed elements and C bear a topic feature and the A′-related feature [uδ], respectively. As discussed in chapter 1 and adopted in chapters 2 and 3, this thesis follows van Urk (2015) in assuming that [uδ] enters into an Agree relation with any element which has a valued A′-related feature, such as Topic or Focus, and then it gets assigned a value of its counterpart. Thus, the value of [uδ] is dependent on the feature of an element which enters into an Agree relation with it. Adapting this system to the case of LICs and PAB, we postulate that a topic feature which preposed elements have enters into an Agree relation with [uδ]. With respect to this agreement, this thesis proposes that Feature Inheritance applies to [uδ], along with the inheritance of [uφ].[79]

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[79] This assumption is along the same lines with Kitada (2011) reviewed in the previous section, though

Finally, we adopt the featural approach to the A- and A′-distinction (Obata and Epstein (2011), van Urk (2015), Mizuguchi (2019), Tim Chou (2020)), contrary to the traditional positional approach, in which the distinction follows from general properties of the head that accommodates a phrase which undergoes movement (Chomsky (1981, 1995, 2008)). Under the featural approach, the A- and A′-distinction is not defined by syntactic positions but derived from the type of features. Van Urk (2015) argues that A- and A′-properties are derived from properties of the attracting feature. Specifically, A-properties are derived from the properties of φ-features, whereas A′-properties are derived from those of features other than φ-features, namely δ-features (Topic, Focus, Q, etc.).[80] There seems to be a consensus in the literature that φ-features play a key role in defining an A-property in the featural approach. However, in the current minimalist framework since Chomsky (2013), van Urk's argument cannot be maintained because Merge can apply freely and no driving force is required to induce it, including Internal Merge. Thus, we modify such a proposal for the A- and A′-distinction to the following one.

(177)   If φ-features are involved in Agree or contained in the head, A-properties

are derived, whereas if δ-features are, A′-properties are derived.

This assumption under the featural approach deduces A- and A′-properties from properties of the feature involved in Agree or of the one on the head that hosts the phrase that undergoes movement. In order to explain how this assumption works, let us take φ-features as an example and suppose the following structure.

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we assume a different framework. However, it will be argued that the proposed analysis is superior to Kitada's analysis, which is because it has a broader empirical coverage and theoretical adequacy.

[80] According to van Urk (2015), this featural approach is empirically supported by the fact that all instances of movement to the left periphery, such as topicalization, in Dinka shows the agreement of Case and φ-features. See van Urk (2015) for the detailed discussion in Dinka.

(178)   [$_{CP}$ C [$_{TP}$ Subj$_i$ T$_{[u\phi]}$ [$_{v*P}$ t_i v [$_{VP}$ V Obj]]]]

In (178), [uϕ] on T enter into an Agree relation with ϕ-features on the subject DP in the

specifier of v^*.   This agree relation in terms of ϕ-features defines the position at which the

subject DP was located as an A-position.   In addition, the specifier of T which hosts the

raised subject DP is also defined as a position with A-property because its head T has

ϕ-features.[81]   With the theoretical assumptions above in mind, we propose analyses of LICs

and PAB.

4.5. The Derivations of LICs and PAB

Taking the discussions above into account, this section provides alternative analyses of

LICs and PAB in order.   It is argued that the proposed syntactic derivation is the only way to

derive the constructions and that the proposal can account for some empirical facts of them.

Let us first consider the derivation of LICs.

4.5.1.   The Derivation of LICs

The basic example of LICs shown in (179), the repetition of (145b) is derived as illustrated

in (180).

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[81] One might argue that this assumption along the lines of featural approach of A- and A′-distinction
predicts that the phase edge of the embedded CP exploited for an escape hatch is not defined as either
of them.   A relevant example is shown in (i), where the embedded C is expected not to have any
feature.

    (i)   What$_i$ do you think [$_{CP}$ t_i that [$_{TP}$ Mary bought t_i]]?   (cf. Boškovic (2007: 592))

However, in the current minimalist framework since Chomsky (2013), it is assumed that the
phasehood of C can also be inherited by deleting C after Feature Inheritance of its features to T.
Thus, it might be impossible to define the status of phase edge without any exception.   This is a so
complicated issue and beyond the scope of this thesis.   Hence, we put this issue aside.

(179)   Into the room walked John.   (Mikami (2010: 298))

(180)   a. $[_{vP} \, v \, [_\alpha \, PP_{[Top]} \, [_{RP} \, R \, DP_{[\varphi][uCase]}]]]$

      b. $[_\beta \, PP_{i[Top]} \, T \, [_{vP} \, v \, [_\alpha \, t_i \, [_{RP} \, R \, DP_{[\varphi][uCase]}]]]]$

      c. $[_\gamma \, C_{[u\varphi][u\delta]} [_\beta \, PP_{i[Top]} \, T_{[u\varphi][u\delta]} \, [_{vP} \, v \, [_\alpha \, t_i \, [_{RP} R \, DP_{[\varphi][uCase]}]]]]]$

         Feature Inheritance

         Feature Sharing

      d. $[_\gamma \, C \, [_\beta \, PP_{i[Top]} \, T_{[u\varphi][u\delta]} [_{vP} \, v \, [_\alpha \, t_i \, [_{RP} \, R \, DP_{[\varphi][uCase]}]]]]]$

      → $\alpha = R$ $\beta = <Top, Top>$ $\gamma = C$

Following Mikami (2010), we assume that LICs take (180a) as their underlying structure: the subject DP and the locative PP are merged in the complement of R(oot)(= V) and the specifier of R, respectively, and *v* undergoes External Merge with the created set α.   It is presupposed that R is not too weak for labeling and hence can serve as a label (Abe (2016)) and that label determination occurs at the timing of merger in cases where a head H is merged with a phrase XP (Bošković (2016)).   Hence, the set, composed of R and the subject DP, is given R as its lablel.   It should be noted that the set α in (180a) is composed of PP and RP, so-called {XP, YP} structure, so its label cannot be determined at this timing of the derivation.   In (180b), T is introduced into the derivation via External Merge and the locative PP undergoes Internal Merge to the specifier of T, which makes it possible for the set α to be given a proper label because a copy of the moved element becomes invisible to LA (Chomsky (2013)). Consequently, the label of the set α will be identified as R via minimal search at the timing of Transfer.   In (180c), then, a phase head C undergoes External Merge with [uφ] and the A′-related feature [uδ], and both of which are inherited by T.   The former enter into an Agree

relation with φ-features on the subject DP, while the latter agrees with the topic feature on the fronted locative PP in the specifier of T. Since T in English is too weak to serve as a label (Chomsky (2015)), the label of β is identified by sharing prominent features, or A′-related features, and hence the label <Top, Top> is given to the set β. All the unvalued features have been deleted and the labels of all the sets are determined, so that the derivation successfully converges.

4.5.2. Other Derivational Possibilities of LICs

This thesis argues that the derivation with the inheritance of the two types of unvalued features, or [uφ] and [uδ], is the only way to derive LICs. Let us consider the other derivational possibilities: (i) the case where [uδ] is not inherited by T and (ii) the case where [uδ] is not inherited by T and the subject DP remains in its base-generated position.[82] The relevant derivation in the former case is shown in (181).

(181) a. $[_{vP} v [_\alpha PP_{[Top]} [_{RP} R DP_{[\varphi][uCase]}]]]$

b. $[_\beta DP_{i[\varphi][uCase]} T [_{vP} v [_\alpha PP_{[Top]} [_{RP} R t_i]]]]$

c. $[_\gamma C_{[u\varphi][u\delta]} [_\beta DP_{i[\varphi][uCase]} T_{[u\varphi]} [_{vP} v [_\alpha PP_{[Top]} [_{RP} R t_i]]]]]$

Feature Inheritance

Feature Sharing   Feature Sharing

d. $[_\gamma PP_{j[Top]} C_{[u\delta]} [_\beta DP_{i[\varphi][uCase]} T_{[u\varphi]} [_{vP} v [_\alpha t_j [_{RP} R t_i]]]]]$

→   α = R   β = <φ, φ>   γ = <Top, Top>

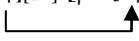[82] This thesis assumes that the inheritance of [uφ] systematically occurs because there is no empirical evidence in English that suggests a possibility that C manifests the φ- or Case-agreement. In addition, note that even if C inherits both of [uφ] and [uδ] to T and the subject DP raises to the specifier of T, the derivation does not converge unless the locative PP raises because the label of the set α cannot be determined due to {XP, YP} structure.

In (181a), the subject DP and the locative PP are merged in the same way as (180), creating the set α that is {XP, YP} structure composed of PP and RP. In (181b), T undergoes External Merge with *v*P and the subject DP raises from the complement of R to the specifier of T, creating the unlabelable set β. In (181c), then, a phase head C is introduced into the derivation with the two unvalued features, [uφ] and [uδ]. [uφ] enter into an Agree relation with φ-features on the subject DP, as a result of which they are assigned a value and [uCase] on the subject DP is deleted. Suppose then that T inherits only [uφ] and [uδ] remains on C. In this case the label of the set β is identified by sharing the prominent features, or φ-features, and hence is determined as <φ, φ>. On the other hand, [uδ] on C agrees with the topic feature on the locative PP and it undergoes Internal Merge to the specifier of C, which enables LA to provide the set α with a legitimate label because its copy has become invisible to LA. Consequently, its label is identified as R.[83] The label of the set γ, {XP, YP} structure, is also determined via feature sharing of the prominent features, namely the A′-related features, as the result of which the label <Top, Top> is given to the set γ. There are no unvalued features and unlabeled sets left, so this derivation converges. Although this derivation does not result in LICs, but it can successfully derive a grammatical sentence, as shown in (182). We argue that this derivation is a case of a canonical sentence with a simple topicalization.

(182)   To the platform a train came.   (Koike (2013: 571))

Let us consider the second case where [uδ] is not inherited by T and the subject DP remains in its base-generated position. The relevant derivation is shown in (183).

---

[83] Raising of R to *v*, though that process is omitted in (182), does not induce a labeling failure with respect to (191), which will be discussed in section 4.5.4. This thesis follows Bošković (2016) in assuming that the label of a set composed of a head H and a Phrase XP is determined at the timing of merger of them. Thus, the label of the relevant set has been determined before the raising of R to *v*.

(183)   a. $[_{vP} v [_\alpha PP_{[Top]} [_{RP} R DP_{[\varphi][uCase]}]]]$

b. $[_\beta T [_{vP} v [_\alpha PP_{[Top]} [_{RP} R DP_{[\varphi][uCase]}]]]]$

c. $[_\gamma C_{[u\varphi][u\delta]} [_\beta T_{[u\varphi]} [_{vP} v [_\alpha PP_{[Top]} [_{RP} R DP_{[\varphi][uCase]}]]]]]$

       Feature Inheritance

      Feature Sharing

d. $[_\gamma PP_{i[Top]} C_{[u\delta]} [_\beta T_{[u\varphi]} [_{vP} v [_\alpha t_i [_{RP} R DP_{[\varphi][uCase]}]]]]]$

→   α = R   β = ??   γ = <Top, Top>

The derivation proceeds as shown in (183a) and (183b). In (183c), then, a phase head C with the two unvalued features is merged with the set β. Suppose that [uδ] remains on C. [uφ] and [uδ] enter into Agree relations with φ-features on the subject DP and the topic feature on the locative PP, respectively, getting assigned legitimate values and deleted. It should be noted that in this case the locative PP raises to the specifier of C, not that of T. This movement enables the set α to be given a proper label because of its copy having been invisible to LA. Consequently, its label is identified as R. On the other hand, the set γ is of the form of {XP, YP} structure which consists of the preposed PP and the CP. Therefore, the feature sharing applies, with the label <Top, Top> provided to the set γ. There are no unvalued features left, but one problem arises concerning about the label of β. Since T is too weak to serve as a label, it needs some syntactic object at its specifier to determine the relevant label via feature sharing. However, in the derivation (183), the subject DP remains in its base-generated position. Thus, feature sharing with respect to φ-features is not an available option, so the label of β cannot be determined, which leads to the derivational crash. Therefore, the derivation that successfully derives LICs is the one with Feature Inheritance of the two types of unvalued features.

4.5.3. The Derivation of PAB

4.5.3.1. The Derivation of PAB with AP Preposing

The derivation of PAB exemplified in (146a), repeated here as (184), proceeds as schematized in (185).

(184)   Less fortunate was the girl in the back seat.   (Rochemont (1978: 30))

(185)   a.   [$_{vP}$ v [$_{VP}$ be [$_α$ DP$_{[φ][uCase]}$ AP$_{[Top]}$]]]

        b.   [$_β$ AP$_{i[Top]}$ T [$_{vP}$ v [$_{VP}$ be [$_α$ DP$_{[φ][uCase]}$ t_i]]]]

        c.   [$_γ$ C$_{[uφ][uδ]}$ [$_β$ AP$_{i[Top]}$ T$_{[uφ][uδ]}$ [$_{vP}$ v [$_{VP}$ be [$_α$ DP$_{[φ][uCase]}$ t_i]]]]]

                Feature Inheritance

               Feature Sharing

        d.   [$_γ$ C [$_β$ AP$_{i[Top]}$ T$_{[uφ][uδ]}$ [$_{vP}$ v [$_{VP}$ be [$_α$ DP$_{[φ][uCase]}$ t_i]]]]]

    →   α = D   β = <Top, Top>   γ = C

In this derivation, we assume, following Guéron (1994), Mikami (2009) and Samko (2014), that *be* in PAB takes a small clause as its complement and that the preposed element in PAB bears a topic feature, as well as the locative PP of LICs.   First, in (185a), the subject DP and AP are externally merged, creating a small clause, whose structure is of the form of {XP, YP}, hence not being able to be labeled at this point.   Then, *be* undergoes External Merge with the set α and the merger of *v* to the created set follows.   In (185b), T is externally merged with *v*P, and the AP undergoes Internal Merge to the specifier of T.   This movement allows the label of α to be determined as D because the copy of the moved element becomes invisible to LA.   Next, in (185c), a phase head C is introduced into the derivation via External Merge not only

with [uφ] but also with the A′-related feature [uδ], and both of which are inherited by T. [uφ] enter into an Agree relation with the φ-features on the subject DP remaining in situ and are deleted with valuation. On the other hand, [uδ], which is also inherited by T, agrees with the topic feature of the AP in the specifier of T, and the label of β is determined via feature sharing of the A′-related features, resulting in <Top, Top>. Since all of the unvalued features have been deleted and there are no undetermined labels, the derivation successfully converges.

4.5.3.2. The Derivation of PAB with PartP Preposing

The derivation of PAB with past PartP preposing shown in (146b), repeated here as (186), is shown in (187).

(186)   Found at the scene of the crime was an axe.

(Rochemont and Culicover (1990: 69))

(187)   a. $[_{vP}$ be $[_\alpha$ DP$_{i[\varphi][uCase]}$ $[_{v*P(PartP)[Top]}$ $[_{v*P(PartP)}$ $v*$-R $t_i]$ PP$]]]$

b. $[_\beta$ $v*P(PartP)_{j[Top]}$ T $[_{vP}$ be $[_\alpha$ DP$_{i[\varphi][uCase]}$ $[t_j]]]]$

c. $[_\gamma$ C$_{[u\varphi][u\delta]}$ $[_\beta$ $v*P(PartP)_{j[Top]}$ T$_{[u\varphi][u\delta]}$ $[_{vP}$ be $[_\alpha$ DP$_{i[\varphi][uCase]}$ $[t_j]]]]]$

Feature Inheritance

Feature Sharing

d. $[_\gamma$ C $[_\beta$ $v*P(PartP)_{j[Top]}$ T$_{[u\varphi][u\delta]}$ $[_{vP}$ be $[_\alpha$ DP$_{i[\varphi][uCase]}$ $[t_j]]]]]$

→   α = D   β = <Top, Top>   γ = C

As in the derivation in (185a), *be* takes a small clause, which consists of DP and *v*P(PartP), as its complement. This small clause is created as follows. With respect to the creation of

v*P, we assume along the lines of Epstein et al. (2016) that *v** is externally Pair-Merged with R before being introduced into the derivation, and its phase head status is cancelled. Then, the resulting amalgam *v**-R takes the subject DP as its complement, with a PP externally Pair-Merged. Next, the subject DP undergoes Internal Merge to the specifier of *v** and the created set is selected by *be*, which is assumed here to be merged as *v* (Samko (2014)), resulting in the form of the small clause, as shown in (187a). At this point of the derivation, the label of the created set α cannot be determined due to its {XP, YP} structure. In (187b), then, T is externally merged with the upper *v*P, and *v**P, which is a member of the set α, undergoes Internal Merge to the specifier of T. Consequently, the label of α can be determined as D by virtue of the invisibility of the lower copy. In (187c), a phase head C with [uφ] and [uδ] is introduced into the derivation, both of which are inherited by T. The former enter into an Agree relation with the φ-features on the subject DP and get valued and deleted. On the other hand, the latter, which has been inherited by T as well, agrees with the topic feature that the preposed *v**P bears, and the label of β is determined via feature sharing of their prominent features. Thus, the label of β is determined as <Top, Top>. All of the unvalued features have been deleted and there are no undetermined labels, so that (187) results in the derivational convergence.

Next, let us consider the derivation of PAB with present PartP preposing, shown in (188) which is the repetition of (146c). The relevant derivation is shown in (189).

(188)   Joining the chorus of political figures was *former Georgia Sen. Sam Nunn.*

(Samko (2014: 373))

(189)   a. $[_{AspP}$ be $[_\alpha$ DP$_{subj[\phi][uCase]}$ $[_{v*P(PartP)[Top]}$ $v*$ $[_{RP}$ R DP$_{obj[\phi][\text{uCase}]}]]]]]$

           b. $[_\beta$ $v*P(PartP)_{i[Top]}$ T $[_{AspP}$ be $[_\alpha$ DP$_{subj[\phi][uCase]}$ t_i $]]]$

           c. $[_\gamma$ C$_{[u\phi][u\delta]}$ $[_\beta$ $v*P(PartP)_{i[Top]}$ T$_{[u\phi][u\delta]}$ $[_{AspP}$ be $[_\alpha$ DP$_{subj[\phi][uCase]}$ t_i $]]]]$

Feature Inheritance

Feature Sharing

           d. $[_\gamma$ C $[_\beta$ $v*P(PartP)_{i[Top]}$ T$_{[u\phi][\overline{u\delta}]}$ $[_{AspP}$ be $[_\alpha$ DP$_{subj[\phi][\text{uCase}]}$ t_i $]]]]$

    $\rightarrow$ $\alpha = D$ $\beta = <Top, Top>$ $\gamma = C$

First, in (189a), R is externally merged with an object DP. Then, the created set is merged with $v*$ and R undergoes Internal Pair-Merge with it.[84] Then, the merger of the subject DP with $v*$P applies, constructing the set α, or a small clause, which is of the form of {XP, YP}. Thus, at this point of the derivation, its label cannot be determined. Then, *be* is externally merged with α. We assume, following Samko (2014), that *be* is merged as an Asp head in this case. Next, in (189b), T undergoes External Merge with AspP, and the raising of $v*$P to the specifier of T occurs, which results in the creation of the set β. This movement enables the label of α to be identified as D owing to the invisibility of the lower copy to LA. In (189c), then, a phase head C with [uϕ] and [uδ] is externally merged with the set β and Feature Inheritance applies, transmitting the two unvalued features on C to T. In (189d), [uϕ] are deleted and valued by entering into an Agree relation with the ϕ-features on the subject DP, whereas [uδ], also inherited by T, agrees with the topic feature of the preposed $v*$P. As a result, it is assigned a value and deleted. The label of β is determined as <Top, Top>

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[84] Chomsky (2015) assumes that Internal Pair-Merge of R makes $v*$ invisible, so that its phasehood status, which is inherited to R along with the inheritance of [uϕ], activates in R, and the transfer domain is changed into its complement. We put this point aside here because this assumption is irrelevant to the proposed analysis.

via feature sharing of the A′-related features.　All of the unvalued features have been deleted and there are no undetermined labels, with the result of the derivational convergence.

4.5.4.　Other Derivational Possibilities of PAB

　This subsection shows that the derivation with the inheritance of the two types of unvalued features is the only option to derive PAB, as well as the case of LICs.[85]　We will consider the same derivational possibilities as we have discussed in section 4.5.2: (i) the case where only [uφ] is inherited by T and (ii) the case without the inheritance of [uδ] and the raising of the subject DP.　Let us first consider the case (i).　The relevant derivation is shown in (190).

(190)　　a.　$[_{vP}\ v\ [_{VP}\ \text{be}\ [_\alpha\ \text{DP}_{[\varphi][uCase]}\ \text{AP}_{[Top]}\ ]]]$

　　　　b.　$[_\beta\ \text{DP}_{i[\varphi][uCase]}\ \text{T}\ [_{vP}\ v\ [_{VP}\ \text{be}\ [_\alpha\ t_i\ \text{AP}_{[Top]}]]]]$

　　　　c.　$[_\gamma\ \text{C}_{\mathbf{[u\varphi][u\delta]}}\ [_\beta\ \text{DP}_{i[\varphi][uCase]}\text{T}_{\mathbf{[u\varphi]}}\ [_{vP}\ v\ [_{VP}\ \text{be}\ [_\alpha\ t_i\ \text{AP}_{[Top]}]]]]]$

　　　　　　　　Feature Inheritance

　　　　　Feature Sharing　　　Feature Sharing

　　　　d.　$[_\gamma\ \text{AP}_{i[Top]}\ \text{C}_{[u\delta]}\ [_\beta\ \text{DP}_{[\varphi][uCase]j}\ \text{T}_{[u\varphi]}\ [_{vP}\ v\ [_{VP}\ \text{be}\ [_\alpha\ t_j\ t_i\ ]]]]]$

　　　　→　　α = ?　　β = <φ, φ>　　γ = <Top, Top>

Along the same way as in (185), we assume the underlying structure of PAB with AP preposing to be (190a).　Then, as shown in (190b), T is externally merged with *v*P, and the subject DP undergoes Internal Merge to the specifier of T.　Next, a phase head C with [uφ] and [uδ] is externally merged.　In (190c), the φ-features on the subject DP enter into an Agree relation with [uφ] on C and then Feature Inheritance takes place, transmitting [uφ] to T.

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[85] In this subsection, we only show the derivations of PAB with AP preposing, because the other PAB examples are also underivable for the same reason explained here.

Consequently, the label of β is determined as <φ, φ> through feature sharing of the φ-features. On the other hand, AP undergoes Internal Merge to the specifier of C and its topic feature enters into an Agree relation with [uδ] remaining on C, and then the label of γ is determined as <Top, Top> via feature sharing.

However, one problem arises in this derivation: the label determination of α. In (190), both of the members that constitute the set α have undergone Internal Merge, so that they have become copies, and hence they are invisible to LA. According to Narita (2014), a syntactic object cannot be given a legitimate interpretation when the two members are both copies, as stated below.

(191)　　★{t, t}:

　　　　　　C-I cannot assign a legitimate interpretation to an SO (Syntactic Object)

　　　　　　whose two members are both copies / traces created by Internal Merge.

　　　　　　　　　　　　　　　　　　　　　　　　　　　(cf. Narita (2014: 112))

That is, in the derivation (190), the C-I Interface cannot assign a legitimate interpretation to the set α because its members have become copies. Thus, (190) results in the derivational crash. In fact, sentences which involve such a derivational process are not acceptable, as shown in (192). Thus, this type of derivation is ruled out.

(192)　　a.　*Sitting on the dock the man in the blue suit was.

　　　　　b.　*Beaten to death in the park Mary was

　　　　　c.　*Bigger than a mountain King Kong was.　　　(Rochemont (1978: 32))

Let us next consider the other derivational possibility: the case without the inheritance of

[uδ] and the raising of the subject DP.   The relevant derivation is shown in (193).

(193)   a.   [$_{vP}$ *v* [$_{VP}$ be [$_\alpha$ DP$_{[\phi][uCase]}$ AP$_{[Top]}$]]]

         b.   [$_\beta$ T [$_{vP}$ *v* [$_{VP}$ be [$_\alpha$ DP$_{[\phi][uCase]}$ AP$_{[Top]}$]]]]

         c.   [$_\gamma$ C$_{\mathbf{[u\phi]}[u\delta]}$ [$_\beta$ T$_{\mathbf{[u\phi]}}$ [$_{vP}$ *v* [$_{VP}$ be [$_\alpha$ DP$_{[\phi][uCase]}$ AP$_{[Top]}$]]]]]

               Feature Inheritance

               Feature Sharing

         d.   [$_\gamma$ AP$_{i[Top]}$ C$_{[u\delta]}$ [$_\beta$ T$_{[u\phi]}$ [$_{vP}$ *v* [$_{VP}$ be [$_\alpha$ DP$_{[\phi][uCase]}$ *t*$_i$]]]]]

         →   α = D   β = ?   γ = <Top, Top>

As discussed earlier, the derivation proceeds along the same line as (185), resulting in (193a). Then, in (193b), T is externally merged with *v*P, and in (193c) the merger of a phase head C follows, with only [uφ] inherited by T.   The inherited [uφ] enter into an Agree relation with the φ-features on the subject DP, getting assigned a value and deleted.   On the other hand, the AP, which is a member of α, undergoes Internal Merge to the specifier of C, as a result of which the label of α can be determined because a copy of the moved element becomes invisible to LA.   Then, the topic feature of the AP agrees with [uδ] on C and the label of γ is determined as <Top, Top> through feature sharing.   In this derivation, feature valuations have successfully done, but one problem arises concerning the labeling of the set β.   As mentioned in section 4.4, T head in English is too weak to serve as a label and therefore it needs some syntactic object at its specifier to determine the label via feature sharing. However, in the derivation (193), feature sharing regarding φ-features is not an available option because the subject DP remains in its base-generated position.   Thus, the label of β cannot be determined, which leads to the derivational crash.   Therefore, the derivation that successfully derives PAB is the one with the inheritance of the two unvalued features.

It should be emphasized that the proposed analysis based on LA can account for why the preposed PP has to be interpreted as a topic element, as compared to Kitada (2011). In LICs and PAB, the subject DP remains in its base-generated position and the preposed elements do not have φ-features, and therefore another type of feature has to be introduced into the derivation in order to reinforce the weakness of T for labeling. That is why the preposed elements obligatorily have a topic feature. Thus, the necessity of the topic feature follows from the requirement of labeling, because an SO should be given a label for a legitimate interpretation at the C-I Interface.

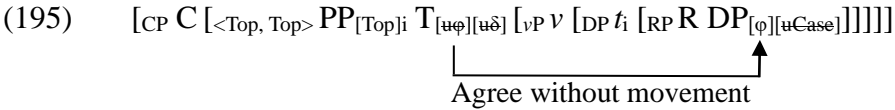## 4.6. Explanation of the Properties of LICs and PAB

This section demonstrates that the analysis proposed here can provide principled explanations with some empirical facts of LICs and PAB. Let us first consider the properties of LICs.

4.6.1. The Properties of the Postverbal Subject in LICs

We begin by explaining the fact that the postverbal DP, not the fronted locative PP, agrees with the verb. The relevant example is repeated here as (194).

(194)   a.   In the swamp {**was** / *were} found a child.

        b.   In the swamp {*was / **were**} found two children.   (Ura (2000: 170))

This is straightforwardly explained under the proposed analysis. In LICs, the subject DP, which is merged in the complement position of R, enters into an Agree relation with T in terms of φ-features, but it does not undergo Internal Merge, remaining in its base-generated position, as illustrated below.

(195) $[_{CP} \text{ C } [_{<\text{Top, Top}>} \text{PP}_{[\text{Top}]i} \text{ T}_{[u\phi][u\delta]} [_{vP} v [_{DP} t_i [_{RP} \text{R } \text{DP}_{[\phi][u\text{Case}]}]]]]]$

Agree without movement

As a consequence, it follows that the verb manifests an agreement in accordance with the grammatical property of the subject DP in the postverbal position.

Second, the fact that the postverbal subject DP is interpreted as a focus follows as a consequence of the proposal here. Under the present analysis, the locative PP raises to the specifier of T for labeling via feature sharing, so that the subject DP remains in-situ, that is, within RP (=VP) in the course of the derivation. According to the Mapping hypothesis by Diesing (1992), elements within the vP/VP are mapped onto the nuclear scope of a sentence and assigned a focus interpretation. If this hypothesis is on the right truck, it follows that the postverbal subject DP in LICs is given a focus interpretation.[86]

Third, the present analysis can capture the contrast that the postverbal subject DP in LICs cannot control PRO in adjunct clauses, while the subject DP in the canonical subject position, the specifier of T, can. The relevant example and its structure are shown in (196a) and (197), respectively.

(196)   a.   *Near the oasis lay [two sheiks]$_i$ without PRO$_i$ talking.   (LICs)

(Postal (1977: 150))

b.   [Two sheiks]$_i$ lay near the oasis without PRO$_i$ talking.

(Nishihara (1999: 393))

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[86] Goto (2017) argues under LA that the DP label in the final position of the structure leads to a focus interpretation. However, he does not give any argument of why such an interpretation follows from the label. Hence, this thesis follows the Mapping Hypothesis rather than Goto (2017)'s argument.

(197)   *… [$_{vP}$ [$_{vP}$ v [$_{RP}$ (PP) [$_{RP}$ R two sheiks$_i$ …]] without PRO$_i$ talking]]

This thesis postulates that adjunct clauses which contains PRO controlled by matrix subjects are adjoined to *v*P (cf. Nissenbaum (2000), Hornstein and Nunes (2002)) and that obligatorily controlled PRO must be c-commanded by its antecedent in an A-position (Safir (2004)).[87]   In the present analysis, the postverbal subject DP enters into an Agree relation with T with respect to φ-features, as the result of which it is defined as being in an A-position, based on the featural definition of A and A′-properties shown in (177).   Considering these things, (196a) is ungrammatical because the subject DP, which remains in its base-generated position, cannot c-command PRO in the adjunct clause which is in a higher position than it, as illustrated by the structure in (197).

Forth, the proposed analysis can account for the empirical fact that is problematic for the analysis proposed by Mikami (2010).   The relevant example is repeated here as (198a) and its structure is shown in (198b).

(198)   a.   *Rolled the baby carriage down the hill.   (Coopmans (1989: 730))

b.   [$_{CP}$ C [$_β$ T$_{[u\phi][u\eth]}$][$_{vP}$ v [$_α$ PP [$_{RP}$ R DP$_{[\phi][uCase]}$]]]]]

In the proposed analysis, the ungrammaticality of (198a) follows from the label of β being not able to be determined.   As mentioned in section 4.4, it is assumed that T is too weak to serve as a label in English.   Therefore, T requires that some element which can construct an agreement relation with T be in its specifier position in order to reinforce its weakness for labeling and determine the label via feature sharing.   As shown in (198b), however, both the

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[87] It is assumed here, following Chomsky (2013, 2015), that an element which undergoes External Pair-Merge becomes invisible to LA.

subject DP and the locative PP remain in their base-generated positions, and therefore the specifier of T is empty.   This means that the label of β cannot be determined, which leads to the derivational crash.

4.6.2.   The Properties of the Preposed Locative PP

Let us next consider the properties of the preposed locative PP.   As mentioned in section 4.2.2, it is well-known that the preposed locative PP shows the dual property: the subjecthood and topichood, which correspond to the A- and A′-property, respectively.   We first tackle with the former.   In the present analysis, what occupies the canonical subject position, or the specifier of T, is the preposed locative PP, not the subject DP.   This accounts for the fact that raising operation is applicable to the locative PP in LICs.   The relevant example shown in (154) is reproduced here as (199a) and its derivation is illustrated in (199b).

(199)   a.   [On that hill]$_i$ appears t_i to be located a cathedral.   (Doggett (2004: 29))

b.   [$_{CP}$ C [$_{<Top, Top>}$ PP$_{i[Top]}$ T$_{[u\phi][u\delta]}$ [$_{vP}$ v [$_{RP}$ R [$_{TP}$ t_i to [$_{vP}$ …t_i]]]]]]
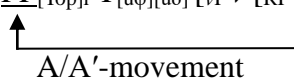
raising of the locative PP

In (199b), the locative PP, which is base-generated within the embedded *v*P, undergoes raising to the specifier of T in the matrix clause via an intermediate position, or the specifier of infinitival T.[88]   Then labeling via feature sharing occurs between [uδ] and the topic feature of the locative PP.   Thus, the label <Top, Top> is provided, as illustrated in (199b).

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[88] One might wonder how the label of the set containing the infinitival T (= *to*) is determined if its head is too weak for labeling just like the finite T.   One possible strategy is to apply External Pair-Merge of T to C and reinforce its weakness (Sugimoto (2020)).   Along the same lines with Chomsky (2015) in that the amalgamated head composed of R and *v** can serve as a label, but R cannot, Sugimoto (2020) proposes that the amalgam <T, C> can serve as a label and this is phonologically realized as *to* in English.   We do not go into the detail of this because it is beyond the scope of this thesis.   See Sugimoto (2020) for the discussion on this topic.

Furthermore, the present analysis can capture the fact that the preposed locative PP does not show the WCO effect, which is regarded as one of the phenomena of A-movement, as mentioned in section 4.3.2. The relevant example is repeated here as (200a) and its structure is illustrated as (200b).

(200)   a.   [In every dog$_i$'s cage] peered its$_i$ owner. (Culicover and Levine (2001: 289))

     b.   [$_{CP}$ C [$_{<Top,Top>}$ $\underline{PP}_{[Top]i}$ T$_{[u\varphi][u\partial]}$ [$_{vP}$ v [$_{RP}$ t_i [$_{RP}$ R DP]]]]]]

               A/A′-movement

    (PP = In every dog's cage   DP = its owner)

T head hosting the moved locative PP has both φ-features and A′-related feature, defining its specifier as a position with the A- and A′-property in accordance with the definition (177). With the standard assumption that a bound variable must be bound by an element in an A-position (cf. Reinhart (1983)), the grammaticality of (200a) can be accounted for.   Since the moved locative PP has undergone A- and A′-movement to the specifier of T, it can show both of the A and A′-property, functioning as an element binding a bound pronoun contained within the subject DP, so that (200a) is grammatical.[89]

It follows from the present analysis that tag pronouns are realized as *there* in the case of

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[89] Strictly speaking, the quantified phrase in the locative PP, *every dog*, does not c-command the possessive pronoun *its*.   However, this does not induce a problem if we adopt a condition proposed by Hornstein (1995) shown in (i).

  (i)   A pronoun P may be linked to a variable V iff V almost c-commands P.
      (A almost c-commands B =$_{def}$ A c-commands B or the projection C that dominates A
       c-commands B.)

Under this condition, the projection C (= the locative PP) that dominates A (= *every dog*) c-commands B (= *its*), so that *its* can be linked to *every dog* contained in the locative PP.   Thus, the problem of c-commanding relation can be solved.   We argue that this condition can be applied to the explanation of (202), where the negative element contained in the preposed locative PP seems to c-command negative polarity items in the subject DP.

LICs.   The relevant examples are repeated here as (201).

(201)　　a.　In the garden is a beautiful statue, isn't there/*it?　　(Bowers (1976: 237))

　　　　b.　Out of that cave stormed the fiercest dragon you ever did see,

　　　　　　didn't there? (??didn't it?)　　　　　　　　(Bruening (2016: 118))

Since the locative PP, not the subject DP, occupies the specifier of T under the proposed analysis, this empirical fact is straightforwardly explained.　In contrast, the analysis proposed by Mikami (2010) cannot capture this fact because he assumes that the locative PP and the copy of the subject DP occupies the specifier of C and that of T, respectively.　This wrongly predicts that tag pronouns correspond to the grammatical property of the subject DP. Therefore, the proposed analysis is more plausible.

　The present analysis can also explain the empirical data of LICs with respect to negative polarity items (henceforth, NPIs).　The locative PP in LICs can license NPIs contained in the subject DP.　As shown in the example of LICs in (202a), *any* is licensed by *none* in the locative PP in the sentence-initial position.　On the other hand, in (202b), which involves a simple topicalization, the preposed locative PP cannot license *any* contained in the subject DP.

(202)　　a.　In none of the concerns stands any of the structurers.

　　　　　　(cf. None of the students walked into any of the classrooms.)

　　　　b. * Into none of the classrooms any of the students walked.

　　　　　　　　　　　　　　　　　　　(Nishihara (1999: 389-390))

Given that topicalization, or assignment of a topic feature ([uδ] in the proposed analysis), is an optional operation and Merge can apply freely, the syntactic structures of each sentence in

(202) correspond with (203).

(203)   a.   [$_{CP}$ C [$_{<Top,Top>}$ PP$_{i[Top]}$ T$_{[u\phi][u\delta]}$ [$_{vP}$ v [$_{RP}$ t_i [$_{RP}$ R DP$_{[\phi][uCase]}$]]]]]

                (the locative PP is in the A- and A′-position)

     b.   [$_{<Top,Top>}$ PP$_{i[Top]}$ C$_{[u\delta]}$ [$_{<\phi,\phi>}$ DP$_{j[\phi][uCase]}$ T$_{[u\phi]}$[$_{vP}$ v [$_{RP}$ t_i [$_{RP}$ R t_j]]]]]

                (the locative PP is in the A′-position)

Note that the two derivations have no problem in labeling because the labels of all the sets are successfully determined under LA. Thus, it is impossible to attribute the ungrammaticality of (202b) to the labeling failure. Then, what seems to have an influence on grammaticality is that NPIs are not properly licensed. Following Nishihara (1999) and Koike (2013), this thesis assumes that NPIs are required to be licensed by c-commanding affective elements in an A-position. Taking the definition of A- and A′-distinction in (177) into consideration, the preposed locative PP in (203a) can be considered to occupy an A- and A′-position because the head hosting it, or T, has both φ-features and the A′-related feature. Consequently, the locative PP properly c-commands *any* in the subject DP within *v*P, satisfying the licensing condition on NPIs. On the other hand, in (203b), the preposed locative PP occupies the specifier of C, which is defined as an A′-position by the definition in (177) because C does not have φ-features which play a key role to derive A-properties. As a result, the preposed locative PP cannot appropriately c-command *any* from an A′-position, which leads to the violation of the licensing condition on NPIs. Thus, (202b) is ungrammatical, though all the sets are successfully labeled.

Let us next consider the topichood of the locative PP. We first address the example showing that the locative PP induces an island effect. The relevant example is repeated here

as (204a) and its syntactic structure is shown in (204b).[90]

(204)   a. * I wonder how$_i$ [into the room walked John t_i]?

(Rochemont and Culicover (1990: 93))

b.   I wonder [$_α$ how$_{j[Q]}$ C [$_β$ into the room$_{i[Top]}$ T$_{[u\varphi][u\delta]}$ [$_{vP}$ v [$_{RP}$ t_i

[$_{RP}$ walked John$_{[\varphi][uCase]}$] t_j]]]]

→ α = ?   β =   <Top, Top>

We attribute the ungrammaticality of (204a) to the unlabelability of the set α which is of the form of {XP, YP}.   In (204b), the two types of unvalued features, [uφ] and [uδ], are inherited from C to T.   The inherited [uδ] enters into an Agree relation with the topic feature on the locative PP and gets assigned a value.   Consequently, the label of the set β is determined as <Top, Top> via feature sharing.   On the other hand, one problem arises concerning the labeling of the set α; that is, the *wh*-element undergoes movement to the specifier of C, but there is no feature left on C to contribute to labeling due to the inheritance of [uφ] and [uδ]. This situation leads to a labeling failure because the feature sharing is the only option for the set to be assigned a legitimate label because of its {XP, YP} structure.   Even if [uδ] remains on C to determine the label of α via feature sharing, that makes it impossible for the set β to be given a label because the preposed locative PP does not bear matching φ-features in order to participate in labeling via feature sharing.   Therefore, in any event, some problems on labeling are induced in the derivation, leading to the derivational crash.[91]

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[90] In the structure, verb movement to *v* is omitted because it is an irrelevant operation to the explanation here.

[91] This analysis predicts that the grammaticality of sentences such as (204a) is improved if a *wh*-element on the specifier of embedded C raises to that of matrix C.   However, this is not the case as shown in (i), where the *wh*-phrase raises to the sentence-initial position.

(i)   ?*What kind of mushroom do you think that on these trails can be found?

Furthermore, the present analysis can accommodate the observation that the locative PP in LICs cannot occur in the complement position of ECM verbs. The relevant example is repeated here as (205a). This behavior aligns with that of ordinary topicalized element, as illustrated in (205b). The structure of (205a) is schematized in (206).

(205) a. * I wouldn't expect [behind the trees] to stand a large building of some

    kind.   (Levine (1989: 1037))

  b. * I expect [[this book], Bill to like].   (Stowell (1981: 271))

(206) … expect [$_\alpha$ PP$_{i[Top]}$ T [$_{vP}$ v [$_{RP}$ t_i [R DP$_{[\varphi][uCase]}$]]]]

Given the well-accepted assumption that verbs in ECM constructions take TP, not CP, as its complement (Bošković (1997) and Chomsky (2001)), this fact is straightforwardly explained. That is, the derivation does not include C with unvalued features, or [uφ] and [uδ]. This leads to a labeling failure because feature sharing is the only option for the set α, which is of the form of {XP, YP}, to be labeled since T is too weak to serve as a label. That is why LICs cannot occur in the complement of ECM verbs.[92]

(Bresnan (1994: 87))

This problem might be solved by assuming that operations can be free (Chomsky (2015)). Suppose that the derivation reaches the v*P phase level. If Transfer applies to the complement of the phase head before the *wh*-element raises to the phase edge, the application of any syntactic operation to it will be banned owing to the PIC. Hence, the extraction of the *wh*-element is not applicable. However, we have no choice but to admit that this is an ad hoc assumption, so we leave this issue for future research. For minimalist analyses of such island constraints, see Boeckx (2012), Douglas (2016), and Koike (2016).

[92] No problem arises when C is contained in the derivation because the two unvalued features are introduced with it. In (i), C (= *that*) is merged and hence feature sharing is available between the inherited [uδ] on T and a topic feature on the locative PP, yielding the label <Top, Top>. Thus, the derivation successfully converges.

(i) I expect that on this wall will be hung a picture of Leonard Pabbs. (Bresnan (1994: 108))

Moreover, the proposed analysis can account for the interesting fact that the grammaticality of sentences such as (205a) is ameliorated by topicalization of the locative PP in the complement of an ECM verb to the matrix clause-initial position.　The relevant example is repeated here as (207a) and its syntactic structure is schematized in (207b).

(207)　　a.　[On this wall]$_i$ I expect t_i to be hung a portrait of our founder.

(Bresnan (1994: 106))

　　　　b.　$[_\beta$ PP$_{i[Top]}$ C$_{[u\delta]}$ $[_{<\varphi,\varphi>}$DP$_{j[\varphi][uCase]}$ T$_{[u\varphi]}$ $[_{vP}\,t_i$ $[_{vP}\,t_j$ v $[_{RP}$ R$(= expect)$

　　　　$[_\alpha\,t_i$ T$(= to)$ $[....]]]]]]]]$

　　　　→　α = T　β = <Top, Top>

In (207b), the set α is of the form of {XP, YP}, where its label cannot be determined because of the unavailability of feature sharing since C is not introduced into the derivation.　This problematic situation for labeling can be resolved by applying topicalization to the locative PP. This operation leaves its copy left behind and enables the label of the set α to be identified since it becomes invisible to LA.　Then, the preposed locative PP in the specifier of matrix C, which has a topic feature, enters into an Agree relation with the matrix C with respect to the A′-related feature and the feature sharing applies.　Consequently, the label of β is determined as <Top, Top>.[93]

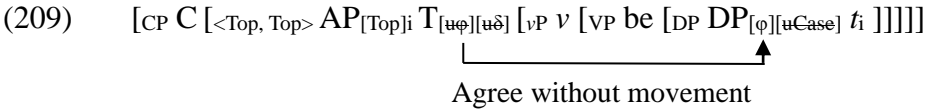### 4.6.3.　The Properties of the Postverbal Subject in PAB

We move on to the discussion of the properties of PAB.　Let us first tackle with the property of the postverbal subject DP.　In PAB, the postverbal DP, not the fronted AP or

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[93] In this derivation, [uCase] on the embedded subject DP is assigned a value and deleted by Agree between the φ-features on the subject DP and [uφ] on the matrix v^*.

PartP, manifests an agreement with *be*. The relevant examples are repeated here as (208).

Taking (208a) as an example, we illustrate its structure as (209).

(208) a. More important **are** some of the problems implicit in it.

b. * Joining the chorus of political figures {*was / **were**} five former Georgia

senators.

(209) [$_{CP}$ C [$_{<Top, Top>}$ AP$_{[Top]i}$ T$_{[u\phi][u\delta]}$ [$_{vP}$ *v* [$_{VP}$ be [$_{DP}$ DP$_{[\phi][uCase]}$ t_i]]]]]

Agree without movement

The same explanation as in LICs holds in the case of PAB. The φ-features on the

postverbal subject DP, which stays in its base-generated position, enter into an Agree relation

with [uφ] on T, but it does not undergo movement. As a consequence, it follows that *be*

shows an agreement corresponding to the grammatical property of the postverbal subject DP.

Moreover, since it remains within *v*P, it can be given a phonological stress and interpreted as a

focus element.

Next, the present analysis can accommodate the fact that the postverbal subject DP in PAB

is also not able to control PRO in adjunct clauses, while the subject DP in the specifier of T

can. Relevant examples are shown in (210) and the structure of (210b) is schematized in

(211).

(210) a. John$_i$ was standing behind the tree to PRO$_i$ keep himself away

from Mary.

b. * Standing behind the tree was John$_i$ to PRO$_i$ keep himself away

from Mary.   (informant)

(211)　　　*… [$_{AspP}$ be [$_{DP}$ John$_i$ [$_{vP}$ …]] to PRO$_i$ keep himself …]]

As discussed in section 4.6.1, we presuppose that adjunct clauses including PRO controlled by matrix subjects are adjoined to *v*P (cf. Nissenbaum (2000), Hornstein and Nunes (2002)). In the proposed analysis, the postverbal subject DP in PAB enters into an Agree relation with T with respect to φ-features, which defines the subject DP as being in an A-position, based on the featural definition of A- and A′-properties in (177).　　Obligatorily controlled PRO must be c-commanded by its antecedent in an A-position (Safir (2004)), but the postverbal subject DP in an A-position is not entitled to c-command PRO in the adjunct clause because it is in a higher position than the subject DP.[94]　　Thus, the subject DP cannot c-command PRO, and hence the sentence (210b) is ungrammatical.

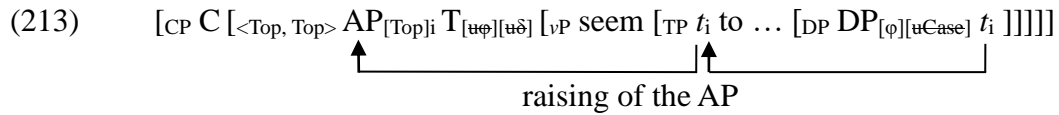## 4.6.4.　The Properties of the Preposed Elements in PAB

In this section, it is shown that the present analysis can accommodate some pieces of empirical evidence with respect to the dual status of the preposed elements in PAB.　　First, the proposed analysis is able to account for the fact that PAB can occur in raising constructions.　　The relevant example of them is repeated here as (212).　　We take (212a) as an example and illustrate its syntactic structure as (213).

(212)　　　a.　[More important]$_i$ seems [t_i to be a visceral yearning for change], […].

(Mikami (2009: 209))

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[94] In (210), the interpretation of PRO is nothing other than obligatory control because the infinitival clause contains a reflexive *himself*, which has to follow the Binding Condition A.　　That is, the candidate of PRO must be an element that can satisfy the condition.　　Such an element does not exist except for *John*, and therefore PRO must obtain the interpretation of obligatory control.
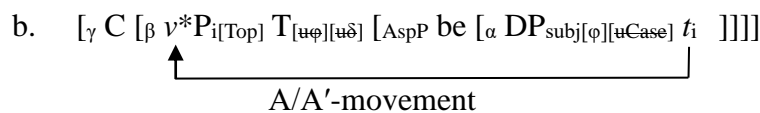
b. [Undermining Abbey's confidence]$_i$ seemed t_i to be the decline in value

of Lyoyds' shares. (cf. Samko (2014: 372))

(213) $[_{CP}$ C $[_{<Top, Top>}$ AP$_{[Top]i}$ T$_{[u\phi][u\delta]}$ $[_{vP}$ seem $[_{TP}$ t_i to … $[_{DP}$ DP$_{[\phi][uCase]}$ t_i $]]]]]$

raising of the AP

In the present analysis, the preposed element, not the subject DP, occupies the specifier of T, as well as the locative PP in LICs. In (213), the AP, which is first merged within the embedded *v*P as an element constituting a small clause, undergoes raising to the specifier of T in the matrix clause via the intermediate position, the specifier of infinitival T. Then, labeling via feature sharing takes place between [uδ] on the matrix T, which is inherited from the matrix C, and the topic feature of the AP, so the label <Top, Top> is provided, as illustrated in (213).

Second, the present analysis can explain the fact that the preposed element in PAB does not exhibit the WCO effect. A relevant example and its structure are illustrated in (214a) and (214b), respectively.

(214) a. Undermining John$_i$'s confidence was his$_i$ mother. (Sugiura (2015: 52))

b. $[_{\gamma}$ C $[_{\beta}$ *v**P$_{i[Top]}$ T$_{[u\phi][u\delta]}$ $[_{AspP}$ be $[_{\alpha}$ DP$_{subj[\phi][uCase]}$ t_i $]]]]$

A/A′-movement
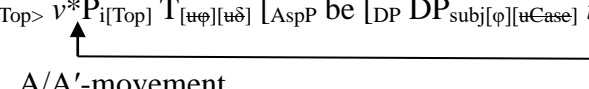
$\rightarrow$ α = D   β = <Top, Top>   γ = C

(*v**P = undermining John's confidence   DP = his mother)

Since T hosting the moved element bears both φ-features and the A′-related feature, the specifier of T is defined as an A- and A′-position, based on the definition in (177). The

preposed *v**P (= PartP) has undergone A-and A′-movement, and hence it can show both of the A- and A′-properties. This means that it can function as an element binding a bound pronoun contained within the subject DP. It should be noted that its A′-property does not cause any problem with the WCO effect because *v**P and the subject DP are equidistant before the movement of the former takes place. Thus, *v**P has raised without crossing across the subject DP. As a result, no WCO effect is observed and hence (214a) is grammatical.

Third, it follows from the present analysis that NPIs in the postverbal subject DP can be licensed by the fronted element in PAB. As illustrated in (215a), the preposed PartP in PAB can license *any*, which is contained in the subject DP remaining in its base-generated position. We assume its structure to be (215b) shown below.[95]

(215)   a.   Lacking from the discussion is any civility   (Sugiura (2015: 52))

        b. $[_{CP}$ C $[_{<Top, Top>}$ *v**P$_{i[Top]}$ T$_{[u\phi][u\delta]}$ $[_{AspP}$ be $[_{DP}$ DP$_{subj[\phi][uCase]}$ t_i $]]]]$

            A/A′-movement

        (*v**P = lacking from the discussion   DP = any civility)

Given the featural definition in (177), the preposed *v**P in (215a) occupies an A- and A′-position because T has both φ-features and the A′-related feature. Thus, it can satisfy the licensing condition on NPIs, which is that they are required to be licensed by c-commanding affective elements in an A-position (Nishihara (1999) and Koike (2013)). Hence, *any* in the postverbal subject DP is properly licensed in (215a).

Let us next consider the topicality of the preposed elements in PAB. First, the present

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[95] (215) suggests that *any* can be licensed by *lack* contained in the preposed element because of its negative meaning.

analysis can account for the observation that PAB cannot occur in ECM contexts, as exemplified in (216). The structure of (216a) is illustrated in (217) as an example.

(216) a. * I believe less fortunate to be the girl in the black seat. (informant)

  b. * I believe anchoring their prize to be pictures of former dictators.

(Samko (2014: 378))

(217) … believe [$_\alpha$ AP$_i$ to [$_{vP}$ v [$_{VP}$ be [$_{DP}$ DP$_{[\varphi][uCase]}$ t_i]]]] (= (216a))

Following the standard assumption that ECM complement is not CP, but TP, this fact can be explained as in the case of LICs. That is, the structure shown in (217) does not include C, and therefore no unvalued features, or [uφ] and [uδ], are introduced into the derivation. Thus, this results in a labeling failure because the feature sharing to strengthen the weakness of T cannot apply for the set α, which is of the form of {XP, YP}, to be labeled. This means that the set cannot be given a legitimate interpretation at the C-I Interface. That is why PAB cannot occur in the complement of ECM verbs.[96]

Second, the analysis can capture the prohibition of the extraction of *wh*-elements in PAB. The relevant example is repeated here as (218a) and its structure is illustrated as (218b).

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[96] What is mentioned for LICs in the footnote 92 is also the case in PAB: the derivation converges when C is contained in the embedded clause because the two unvalued features, [uφ] and [uδ], are introduced. In the examples shown in (i), C (= *that*) is merged and hence feature sharing is available between the inherited [uδ] on T and the topic feature on the preposed element. Thus, the relevant label can be identified as <Top, Top>, so that the derivation successfully converges.

(i) a. A thick, delicious book, James H. Austin's Zen and the Brain, states that more important
    than the alpha state is synchronicity. (COCA: 2010, ACAD)
  b. I believe that anchoring their prizes were pictures of former dictators.

(Samko (2014: 378))

(218)   a. * [Which fact]$_i$ do you think [most surprising of all is t_i] ?

(Iwakura (1978: 327))

b.   Which fact$_i$ … think [$_{CP}$ C [$_{<Top, Top>}$ AP$_j$ T$_{[u\delta][u\phi]}$ [$_{vP}$ v [$_{VP}$ be [$_\alpha$ t_i t_j]]]]]

In (218b), both of the elements creating the small clause, or the *wh*-element and the AP, undergo movement, yielding their copies in their base-generated positions.   Then, one problem arises concerning the label of the set α.   As mentioned in the section 4.5.4, a syntactic object cannot be given a legitimate interpretation when the two members making up the set are both copies, as defined in (191), which is reproduced here as (219).

(219) *\{t, t\}:

C-I cannot assign a legitimate interpretation to an SO (Syntactic Object) whose two members are both copies / traces created by Internal Merge.

(cf. Narita (2014: 112))

In (218b), both of the members that comprise the set α are copies, so no elements are detected by minimal search under LA.   Thus, its label cannot be determined and hence a legitimate interpretation cannot be assigned to it.   Therefore, sentences like (218a) are excluded.

4.7. Conclusion

This chapter has provided an analysis of LICs and PAB under LA.   It has been proposed that in their derivations, a phase head C is introduced into the derivation with the two types of unvalued features, namely [uφ] and [uδ], both of which are inherited to T.   The former enter into an Agree relation with the φ-features on the subject DP remaining in situ and get valued.

On the other hand, the latter agrees with the topic feature on the preposed elements (the locative PP in LICs and the AP or *v*P (= PartP) in PAB), which move to the specifier of T. Then, the label of this so-called {XP, YP} structure is determined via feature sharing, resulting in <Top, Top>.   It has been shown that some empirical facts illustrating the dual properties of the preposed elements in LICs and PAB can be accounted for by adopting the featural approach to A- and A′-distinction.   We have proposed that A- and A′-properties are derived from features involved in an Agree or contained in the head that hosts the moved phrase.   In LICs and PAB, by virtue of Feature Inheritance, T has both φ-features and [uδ], which define A-properties and A′-properties, respectively.   Consequently, it follows that the preposed elements in the specifier of T exhibit the dual properties.

Chapter 5

So-*inversion Constructions*
and
Neither-*inversion Constructions*

5.1. Introduction

This chapter is concerned with so-called SICs and NICs in English, as illustrated in the second conjunct in the examples below, which are the repetition of (7) in chapter 1.

(220)   So-*inversion Constructions and* Neither-*inversion Constructions*

    a.   John can speak French, and so can Mary.   (Toda (2007: 188))

    b.   I didn't say anything else and neither did he.   (COCA: 2018, FIC)

The examples show that SAI is triggered when *so* and *neither*, which bear some additive meaning, occur in the clause-initial position.[97]   Quirk et al. (1972, 1985) propose an analysis in which SICs are simply derived via SAI (or T-to-C movement of an auxiliary), and this line of analysis is also adopted by Huddleston and Pullum (2002).   However, the SAI analysis of SICs is somewhat controversial.   Although admitting the necessity of SAI, Toda (2007) begs some questions on the simple SAI analysis because it cannot account for examples such as (221).

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[97] We put the discussion of NICs aside until section 5.5.

(221)　a.　Bill must be a genius and so must be Ann.　　　(Toda (2007: 190))

　　　b.　But the main elements have been retained and so, more importantly,

　　　has been the standard.　　　　　　　　　　　　(Toda (2007: 189))

In the second clause in (221), the two auxiliaries, *must* and *be* in (221a) and *have* and *be* in (221b), are adjacent, preceding the subject DP in the sentence-final position. If SICs only included SAI, the surface word order of the second clause would be *so must Ann be* in (221a) and *so had Sandy been* in (221b), in which only one auxiliary precedes the subject DP. Therefore, Toda maintains that it is necessary to postulate some additional operations, such as subject postposing, in order to derive SICs.

On the other hand, contrary to Toda's argument, Hatakeyama et al. (2010) simply adopt the original SAI analysis proposed by Quirk et al. (1972, 1985) and provide the construction with a principled explanation by adding another assumption to the original. According to their proposal, amalgam head movement of auxiliaries can apply in SICs like (221). Hatakeyama et al. (2010) also argue that *so* in SICs plays a role as a positive polarity adverb, which is a counterpart of negative polarity adverb, such as *never* and *only*.

Dealing with *so* as an affirmative polarity particle along the same line with Hatakeyama et al. (2010), Wood (2008) proposes a different analysis of SICs from the two studies above. Wood claims that SICs are a polarity focus construction and two kinds of polarity phrase are involved. It is argued that the inversion of SICs is triggered in the same way of other sentences which have something to do with polarity, though he does not explicitly give any concrete mechanism of the inversion. We will return to the discussion of these previous studies in section 5.2.

The aim of this chapter is to present some counterexamples to the previous analyses and

give an alternative one of SICs in terms of the recent Minimalist framework (Chomsky (2000, 2001, 2004, 2008, 2013, 2015, 2019)).   The alternative analysis proposed by this chapter partly follows the argument of Wood (2008) that *so* in SICs is an affirmative polarity particle and triggers SAI as in sentences involved with polarity.   In order to elaborate his abstract idea from theoretical perspectives, this chapter proposes an analysis under the idea of combining LA with the system of polarity determination advocated by Holmberg (2012) and his subsequent studies (Holmberg (2013, 2014, 2016)).   In particular, SICs involve the fronting of PolP to the clause initial position, which contains *so* as a polarity head with an affirmative polarity feature and *too* as a focus particle in its internal structure.   The fronted PolP contributes to the labeling determination via feature sharing of polarity features, as a result of which the label of the set is determined as <Pol, Pol>.

The organization of this chapter is as follows.   Section 5.2. overviews three previous studies which focus on SICs (Toda (2007), Wood (2008) and Hatakeyama et al. (2010)) and points out their empirical and theoretical problems.   Section 5.3. is dedicated to reviewing the theoretical backgrounds adopted in this chapter.   Section 5.4. proposes an alternative analysis to the construction without assuming any construction-specific stipulations: subject postposing (Toda (2007)) and amalgam head movement (Hatakeyama et al. (2010)).   In addition, it is demonstrated that the proposed analysis can account for some empirical facts in SICs.   Section 5.5. argues that the proposed analysis can be extended to the explanation of the negative counterpart of SICs, or NICs.   Section 5.6. is the conclusion of this chapter.

5.2.   Previous Studies

In this section, we outline three previous studies on SICs: Toda (2007), Wood (2008) and Hatakeyama et al. (2010).   It is pointed out that all of them have empirical and theoretical problems in their analysis.   Let us first overview Toda's (2007) analysis.

5.2.1. Toda (2007)

Rejecting the argument made by Quirk et al. (1985) that the derivation of SICs simply involves T-to-C movement of an auxiliary, Toda (2007) claims that SICs cannot be derived by assuming only SAI. This claim is based on the following examples, in which multiple auxiliaries, which are illustrated in boldface, precede the subject DP in the clause-final position.

(222)   a.   If the necessity for the agreement is overlooked, then so **will be** the necessity of the child's having been trained to react to certain things in a certain way for it to mean anything by 'It is red'.

         b.   In the museum field, the equity is different, and so **must be** their approach.

         c.   The results of education are long term and far reaching and so **must be** our commitment.   (Toda (2007: 189))

All of the examples above show that an analysis simply involving only SAI is not reasonable in accounting for the derivation of SICs; if SAI literally takes place, the surface string will be like *so* + modal + subject + *be*.

Considering these empirical facts, Toda (2007) proposes that SICs is derived by applying multiple operations in order: VP preposing, T-to-C movement, subject postposing, obligatory proverbalization. With these operations, the simple example of SICs in (220a) is derived as in (223).

(223)   John can speak French, and so can Mary.

    a.   [$_{TP}$ Mary [$_{T'}$ [T can] [$_{VP}$ speak French]]]

    b. i. *VP-preposing*

       [$_{CP}$ [$_{VP}$ speak French]$_i$ C [$_{TP}$ Mary [$_{T'}$ can t_i]]]

     ii. *T-to-C movement*

       [$_{CP}$ [$_{VP}$ speak French]$_i$ [$_{C'}$ [C can]$_j$ [$_{TP}$ Mary [$_{T'}$ t_j [$_{VP}$ t_i]]]]]

     iii. *Subject postposing*

       [$_{CP}$ [$_{VP}$ speak French]$_i$ [$_{C'}$ [C can]$_j$ [$_{TP}$ [$_{TP}$ t_k [$_{T'}$ t_j [$_{VP}$ t_i]]] Mary$_k$]]]

     iv. *Obligatory proverbalization*

       so can Mary   (cf. Toda (2007: 191))

(223a) illustrates the syntactic structure of the second clause before the derivation of SICs proceeds.   According to Toda's (2007) argument, in (223bi), VP is first preposed (or topicalized) to the specifier of C.   Toda assumes that this VP preposing triggers SAI; that is, the auxiliary *can* undergoes head movement from T to C, as shown in (223bii).   Then, in (223biii), subject postposing applies, so that the subject DP is displaced from the canonical subject position, or the specifier of T, to the right adjoined position of TP.   In this operation, the subject DP moves across the entire VP, appearing in the sentence-final position.   Finally, as illustrated in (223biv), obligatory proverbalization applies to the fronted VP, replacing it with the pro-form *so*.   Consequently, the inverted word order is successfully derived.

As for the SICs with multiple auxiliaries, Toda (2007) proposes the following derivation:

(224)   Bill must be a genius and so must be Ann.   (= 221a)

      a.   [$_{TP}$ Ann [$_{T'}$ [$_T$ must] [$_{VP}$ be a genius]]]

      b. i. *VP-preposing*

         [$_{CP}$ [$_{VP}$ a genius]$_i$ C [$_{TP}$ Ann [$_{T'}$ [$_T$ must] [$_{VP}$ be t_i]]]]

        ii. *T-to-C movement*

         [$_{CP}$ [$_{VP}$ a genius]$_i$ [$_{C'}$ [$_C$ must]$_j$ [$_{TP}$ Ann [$_{T'}$ t_j [$_{VP}$ be t_i]]]]]

        iii. *Subject postposing*

         [$_{CP}$ [$_{VP}$ a genius]$_i$ [$_{C'}$ [$_C$ must]$_j$ [$_{TP}$ [$_{TP}$ t_k [$_{T'}$ t_j [$_{VP}$ be t_i]]] Ann$_k$]]]

        iv. *Obligatory proverbalization*

         so must be Ann   (cf. Toda (2007: 192))

(224a) shows the syntactic structure before the derivation of SICs. First, in (224bi), VP, except for *be*, undergoes topicalization to the specifier of C, which causes the head movement of *can* from T to C to take place, as shown in (224bii). Next, in (224biii), subject postposing applies, resulting in the subject DP moving from the specifier of T to the right adjoined position of TP. Through this operation, the subject DP comes to show up in the sentence-final position. Finally, as illustrated in (224biv), the obligatory proverbalization applies to the preposed VP, replacing it with the pro-form *so*. Consequently, the inverted word order is successfully derived.

   However, this analysis has some empirical and theoretical problems. As pointed out by Hatakeyama et al. (2010), the assumption that VP-preposing triggers T-to-C movement is not tenable due to the following contrast.

(225)   a.   John wanted to win the race, and win the race he did.

          b. * John wanted to win the race, and win the race did he.

(Hatakeyama et al. (2010: 27))

As illustrated in the second conjunct in (225a), where VP *win the race* is fronted to the clause initial position, VP preposing, in general, does not trigger T-to-C movement.   Furthermore, it should be noticed that the sentence is considered as ungrammatical when T-to-C movement is applied along with VP-preposing, as shown in (225b), where the pronominal subject *he* follows the auxiliary *did*.   Therefore, it is not valid that the assumption that VP-preposing triggers T-to-C movement.

Assuming subject postposing is also unacceptable.   Toda (2007) claims that SICs are similar to LICs, which is reproduced here as (226), and assumes that subject postposing applies to both of the constructions.

(226)   *Locative Inversion Constructions*

          a.   In the corner was a lamp.

          b.   Into the room walked John.   (Mikami (2010: 298))

(227)   Into the room walked {John / *he}   (Hatakeyama et al. (2010: 28))

As mentioned by Hatakeyama et al. (2010), however, pronominal subjects are not allowed to occur in LICs, as exemplified in (227).   This behavior in LICs is different from that in SICs in which any type of subject, including pronominal ones, can occur.   The example in (228) shows that both nominal and pronominal subjects can be used in SICs.   Thus, it is clear that subjects of the two inversion constructions behave differently, and therefore analyzing them in

the same way is not reasonable.

(228)   John can speak French, and so can {Ann / she}.

(Hatakeyama et al. (2010: 28))

Furthermore, although Toda (2007) assumes subjects in SICs to undergo rightward movement, this proves disconfirmed by the following examples.

(229)   a.   A: Tom is very nervous.

B: So would you be in his position.

(Huddleston and Pullum (2002: 1539))

b.   *So would be in his position you.   (Hatakeyama et al. (2010: 33))

If the subject underwent rightward movement in SICs, it would follow elements in VP. However, this is not the case.   The example (229aB) shows that in SICs the subject *you* intervenes between the two auxiliaries *would* and *be*.   On the other hand, the example (229b) shows that it is impossible for the subject to appear in the clause-final position, which is considered as the consequence of the postposing operation.   This fact exemplifies that rightward movement, or subject postposing, does not apply to the subject of SICs.

Finally, as pointed out by Wood (2008), the assumption that *so* is a pro-form of VP is also unreasonable owing to the following examples, which indicate that VPs are not replaced by *so*.

(230)   a.   Just as some children ignore their parents, so do some parents [$_{VP}$ ignore

their children].

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b.   Just as we keep our promise to the next generation here at home, so

must we keep [_{VP} America's promise abroad].

(cf. Wood (2008: 305-306))

In both of the examples above, SICs are derived in the second clause, but the VP following

the subject DP, indicated by brackets, is not replaced with *so*, remaining there independently.

Therefore, it is obvious that *so* in SICs does not play a role as a pro-form of VP because the

two distinct VPs remain undeleted.   Thus, it follows that treating *so* as a pro-form is not

appropriate.[98]

5.2.2.   Wood (2008)

Wood (2008) assumes *so* in SICs to be an affirmative polarity particle.   This assumption is

based on some pieces of empirical evidence.   Let us first consider the following examples.

(231)   a.   John plays guitar and so do I.

b.   I also play guitar.

c.   I play guitar too.   (Wood (2008: 304))

(231) indicates that SICs in the second conjunct in (231a) has the meaning which is

something like *also* in (231b) and *too* in (231c).   Wood (2008) calls this property

"additivity."   Although these three sentences have a similar meaning in common, *so* in SICs

shows a different behavior from the others with respect to polarity.   There is no restriction on

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[98] It is clearly argued in Toda (2007) that the argument that *so* functions as a pro-form has nothing to do
with the pro-form *do so*.   However, he assumes the same derivational process as the pro-formalization
in *do so* because the whole VP is replaced by *so* as a pro-form, as outlined in (223).   His analysis does
not gain any support in any case, because pro-forms do not coincide with the constituents that are
supposed to be replaced by them (Wood (2008)).

circumstances where *also* and *too* occur. On the other hand, SICs generally require an affirmative antecedent (Klima (1964)) and the clause including *so*-inversion itself is also obligatorily affirmative. Some relevant examples are illustrated in (232) and (233).

(232)   a. * John does not play guitar and so do I not (play guitar).

           b. * John doesn't play guitar and so do I.

           c.   John does not play guitar and I also do not (play guitar).

                                                     (Wood (2008: 304))

(233)   a. * John plays guitar but so don't I

           b. * John plays guitar but so do I not.

           c.   John plays guitar but I don't < also > play guitar < also >

                                                     (Wood (2008: 305))

(232a) and (232b) show that SICs are not allowed when its antecedent exhibits a negative polarity, and this is the case even if SICs exhibit the same negative polarity as their antecedent. In contrast, as shown in (232c), *also*, which has the same additive meaning as *so* in SICs, does not require such a polarity restriction. In addition, (233a) and (233b) indicate that SICs cannot be negative even when their antecedent meets the requirement to exhibit a positive polarity. On the other hand, (233c) shows that there is no such polarity restriction in the case of *also* and that it can appear in any position. Taking the discussion above into account, Wood (2008) claims that it is valid to deal with *so* as an affirmative polarity particle.

   Wood (2008) also points out interesting empirical evidence showing that the focus particle *too*, which also has an additive meaning, can occur in the position immediately lateral to *so* in SICs without adding any extra meaning. Some relevant examples are shown in (234), in which the focus particle *too* is in boldface.

(234)   a.   John plays guitar, but so **too** does Mary.

          =   John plays guitar, but so does Mary.

          b.   Just as some children ignore their parents, so **too** do some parents

               ignore their children.

          =   Just as some children ignore their parents, so do some parents

               ignore their children.   (Wood (2008: 305))

In both of the SICs examples with *too*, their meaning is the same as the ones without *too*. These two particles with additive meaning, *so* and *too*, can co-occur in SICs, but they display an interesting complementary distribution.   The focus particle *too* cannot appear alone in the clause initial position, while *so* with additive meaning can, as shown in the following contrast.

(235)   a.   So do I.

          b. * Too do I.   (Wood (2008: 305))

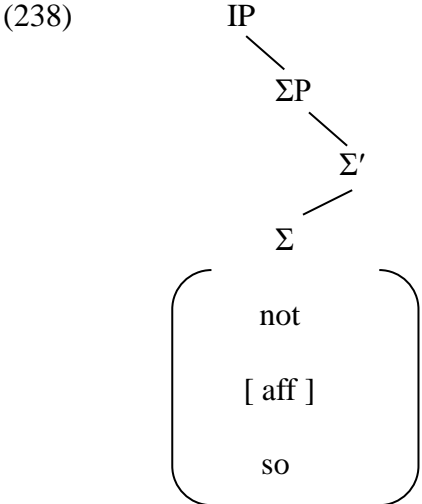
(236)   a.   I do too.

          b. * I do so.   (ungrammatical on relevant reading)

                                                                         (Wood (2008: 305))

    As for the derivation of the SICs, Wood (2008) proposes that SICs are a polarity focus construction, adopting the idea of ΣP (or Pol(arity) Phrase), which involves a polarity focus projection.[99]   Two conceptions of ΣP are proposed in the literature:

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[99] For the discussion of presence of ΣP across various languages, see Rosenkvist (2007) for Oevdalian, Laleko (2006) for Russian, Liptak (2003) for Hungarian, and van Craenenbroeck (2004) for Dutch.

(237)　　a.　ΣP is a Polarity Phrase, which can be Affirmative, Negative or Emphatic.

　　　　　b.　ΣP is a Polarity Focus Phrase, which either attracts the PolP to its

　　　　　　　specifier or generates a particle there.　　　　(cf. Wood (2008: 307))

The first conception is originally proposed by Laka (1990), who assumes ΣP in English to be located below the inflectional domain.　The syntactic structure that Laka (1990) proposes is illustrated in (238).[100]

(238)　　　　　IP
　　　　　　　　　＼
　　　　　　　　　　ΣP
　　　　　　　　　　　　＼
　　　　　　　　　　　　　Σ′
　　　　　　　　　　　　／
　　　　　　　　　　Σ

$$\begin{pmatrix} \text{not} \\ [\,\text{aff}\,] \\ \text{so} \end{pmatrix}$$

(Laka (1990: 106))

The second one is, on the other hand, proposed by Holmberg (2001) and others, who assume that ΣP dominates the inflectional domain.　Adopting these assumptions, Wood (2008) proposes the following underlying structure for SICs such as (239a):
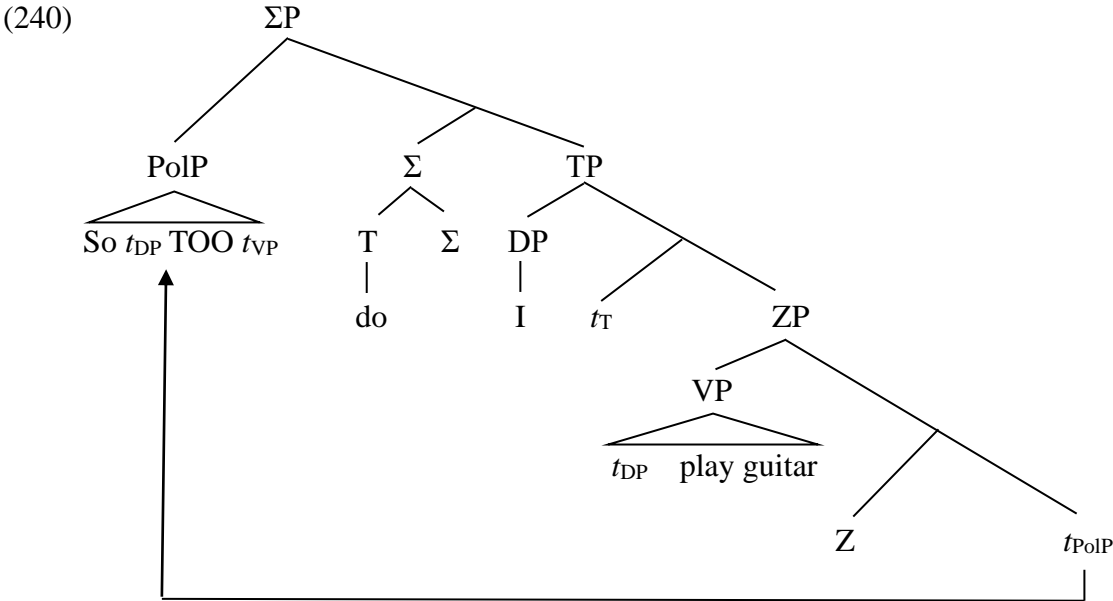
---

[100] Laka (1990) argues that unlike English, Σ head in Basque is merged with IP and ΣP is projected above it.

(239)   a.   John plays guitar and so do I.   (Wood (2008: 304))

   b.
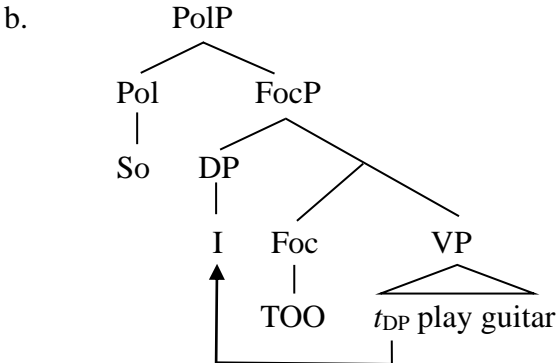
                                                              (Wood (2008: 308))

Following the analysis of focus particles by Kayne (1998), Wood (2008) assumes that the focus particle *too* is merged as a focus head in the left periphery of the extended VP and that its pronunciation can be optional. Foc requires a focused element to be in its specifier, attracting the subject DP within VP. Then, *so* as an affirmative polarity particle is introduced into the derivation as a Pol(arity) head and creates PolP. This PolP undergoes merger with Z and VP evacuates to its specifier, with the ZP created above it (Baltin (2006)). After other derivational operations, including subject raising and merger of T and Σ, have been conducted, PolP moves to the specifier of Σ in order to emphasize the polarity and this movement triggers T-to-C movement, successfully deriving the inverted word order *So* + Auxiliary + Subject. The relevant derivational processes are illustrated in (240).

(240)

```
                         ΣP
            ┌─────────────┴──────────┐
          PolP              ┌────────┴────────┐
        ┌──┴──┐             Σ                 TP
    So t_DP TOO t_VP     ┌──┴──┐         ┌─────┴──────┐
                         T     Σ         DP           
                         |               |     ┌──────┴──────┐
                        do               I    t_T           ZP
                                                        ┌─────┴──────┐
                                                       VP            
                                                    ┌───┴────┐   ┌───┴────┐
                                                 t_DP  play guitar Z    t_PolP
```

(cf. Wood (2008: 308))

However, this analysis confronts an empirical problem: it cannot account for the empirical fact of SICs with multiple auxiliaries, which is repeated here as (241).

(241)   Bill must be a genius and so must be Ann.   (Toda (2007: 190))

In the proposed structure, the subject DP, which evacuated from VP, has to raise to the specifier of T in order to satisfy the EPP requirement of T.[101]   If it did not, the derivation would not be convergent due to EPP being not satisfied and the inverted word order would not be derived.   This is because it is predicted that the surface string would be like *So* + Subject + (TOO) + Auxiliary.   Therefore, this analysis of SICs is problematic.

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[101] Wood (2008) does not give any argument on this predictable problem.   However, his analysis is proposed under the Minimalist framework proposed by Chomsky (1995, 2008), so that it is expected that the EPP requirement of T must be satisfied.

5.2.3. Hatakeyama et al. (2010)

Let us next overview the analysis of SICs proposed by Hatakeyama et al. (2010). They make two theoretical assumptions to derive SICs: VP-ellipsis and *so* as a polarity adverb. As for the evidence supporting the first assumption, Hatakeyama et al. (2010) point out that a "sloppy identity" reading is observed when VP-ellipsis applies to SICs. According to Williams (1977), in general, the sloppy identity reading can come under observation when VP is elided. Consider the following example, where VP ellipsis applies to the SICs in the second clause.

(242)   John loves his mother, and so does Bill [$_{VP}$ Ø]. (Hatakeyama et al. (2010: 30))

In (242), two interpretations are obtained from the elided VP: strict and sloppy reading. (243a) and (243b) illustrate the strict and sloppy reading of the sentence, respectively.

(243)   a.   Bill loves John's mother.   (strict reading)

           b.   Bill loves Bill's mother.   (sloppy reading)

(Hatakeyama et al. (2010: 30))

It is evident from the discussion above that SICs exhibit the sloppy reading, which means that VP-ellipsis is indeed involved in SICs.

Let us move on to the discussion of the second assumption that *so* functions as a polarity adverb. Hatakeyama et al. (2010) claim that the adverb *so* plays a role to trigger T-to-C movement. This follows from the fact that inverted word order can be derived by preposing some kinds of adverbs like *never* and *only,* which are considered as negative polarity adverbs. Some relevant examples are shown in (244).

(244)   a.   Never have I heard such awful news.

         b.   Only reluctantly will Mary eat seafood salad.

(Hatakeyama et al. (2010: 31))

Taking the discussion above into consideration, Hatakeyama et al. (2010) assume that *so* in

SICs is a positive counterpart of negative polarity adverbs, and hence triggers T-to-C

movement in the same fashion as the case of them; that is, the positive polarity adverb *so* in

the clause-initial position drives T-to-C movement as do negative polarity adverbs.   Thus,

there is no need to assume the operation of *so*-replacement contrary to Toda's (2007) analysis.

   With the assumptions mentioned above, Hatakeyama et al. (2010) propose that the

derivation of SICs illustrated in (245a) proceeds as shown in (245b).

(245)   a.   John can speak French, and so can Mary.

         b.   … and [$_{CP}$ so can$_i$ [$_{TP}$ Mary$_j$ t_i [$_{vP}$ t_j [$_{VP}$ Ø]]]].

In (245b), VP undergoes deletion and *so* as a positive polarity adverb is externally merged in

the specifier of C, which induces SAI, namely the movement of the modal *can* from T to C.

Note that in this analysis the subject DP is assumed to be in the canonical subject position, the

specifier of T.   Hatakeyama et al. (2010) argue that this assumption can account for the fact

that any type of subject is allowed to be present in SICs.[102]

---

[102] Hatakeyama et al. also argue that this assumption can capture the fact that heavy subjects tend to be
avoided in SICs.   See the following examples in which the figure in the square bracket shows the
acceptability of the sentence on the scale of 1 to 5, where 1 represents the worst and 5 the best.

(i)   a.   John is a genius and so is Mary.   [5]
       b.   John is a genius and so is the woman who is standing over there with a big smile
             on her face.   [4]

As for the controversial case where multiple auxiliaries occur, which is reproduced here as (246a) and its syntactic structure is illustrated as (246b), Hatakeyama et al. make an additional assumption shown in (247).

(246)   a.   Bill must be a genius and so must be Ann.   (Toda (2007: 190))

   b.   [CP so must-be$_i$ [TP Ann t_i [VP Ø]]]]]   (cf. Hatakeyama et al. (2010: 32))

(247)   Amalgam head movement is allowed in SICs.

It is assumed that the auxiliary *be* undergoes movement to T and gets amalgamated with the modal *must*, as a result of which the amalgam head *must-be* is created.   Then, this amalgam head raises to C, which is triggered by External Merge of the positive polarity adverb *so* into the specifier of C.   After all the other operations have been done, VP undergoes deletion in the end of the derivation.   Then, the inverted word order of SICs is successfully derived, with *so* and the amalgam head preceding the subject DP that occupies the specifier of T.[103]

However, the assumption that amalgam head movement is possible in SICs is, as admitted by the authors, clearly ad hoc to account for examples such as (246a).   Hatakeyama et al. (2010) do not present any reasonable argument to support this assumption except for the only one example.[104]   Moreover, it is unclear under what circumstances an amalgam head can be

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(i) shows that when HNPS applies to the subject in SICs, the acceptability is degraded a little.   On the basis of this fact and the comparison of this to LICs, Hatakeyama et al. claim that SICs do not involve subject-postposing.   This thesis does not go into the detail of this fact.   See Hatakeyama et al. (2010) and Culicover and Levine (2001) for the detail of this discussion.

[103] Hatakeyama et al. (2010) do not illustrate the detailed underlying structure within VP.

[104] The example presented in the article in order to support the amalgamation is below.

   (i)   a. * Bill must be a genius, and so must *surely* be Ann.
       b.   Ann must *surely* be a genius.   (Hatakeyama et al. (2010: 31))

(ia) exemplifies that an adverb *surely* cannot intervene between auxiliaries as in a normal sentence in (ib).   We put aside the detail of this example.

formed and directly merged in T, not in V, and the other projections. Hence, the mechanism of amalgam head movement is unobvious.

The most crucial problem with their assumption is that there are counterexamples which suggest that ordinary T-to-C movement, not an amalgam head movement, takes place even when multiple auxiliaries are contained in SICs. That is, the surface string is *so must John be*. We found 44 examples as such in terms of the Corpus of Contemporary American English (COCA). Some relevant examples found from this research are shown below.

(248)   a.   If our culture is noble, so will our art be.   (COCA, 1999, NEWS)

           b.   Human beings are individuals with their own psyches, personalities and imperfections; so must characters be.   (COCA, 2009, ACAD)

As illustrated in the examples, the subject DP intervenes between a modal and *be*. Thus, it is obvious from the surface string of them that auxiliaries do not form an amalgam, occupying different syntactic positions. This empirical fact suggests that SICs include simple T-to-C movement, not an amalgam head movement.

In section 5.2, we have outlined the three previous studies. It has been shown that all of them have empirical and theoretical problems. In the next section, adopting some parts of the analysis of Wood (2008) and Hatakeyama et al. (2010), we first outline some theoretical backgrounds employed in this chapter.

5.3.   Theoretical Backgrounds

First, as outlined in chapter 1 and adopted throughout the chapters in this thesis, we assume the phase-based derivational model, advocated by Chomsky (2000) and his subsequent works

(Chomsky (2001, 2004. 2008, 2013, 2015, 2019)).

Second, we postulate LA advocated by Chomsky (2013, 2015), which has been adopted in chapter 4. Let us briefly review how a label of a syntactic object is determined. Under the framework of LA, there are three ways of label determination, as illustrated in (249).

(249) a. $\{_\alpha \text{ H, XP}\}$ $(\alpha = \text{H})$

       b. $\{\text{XP}_i \{_\alpha t_i \text{ YP}\}\}$ $(\alpha = \text{Y})$

       c. $\{_\alpha \text{ XP}_{[F]}, \text{YP}_{[F]}\}$ $(\alpha = <\text{F, F}>)$

First of all, in (249a), in which a head H and a phrase XP are merged, the head H is detected via minimal search and chosen as the label of the set. On the other hand, when a phrase XP and another phrase YP are merged, the process of label determination cannot be so simple because both heads of the phrases are equidistant, which prevents the minimal search from detecting a unique head. In such a complicated case, the label of the set is determined in either of the following two ways: (i) moving out either of the elements building the relevant structure and (ii) sharing prominent features which the heads of both phrases have. In the former case shown in (249b), under the assumption that a copy of the moved element becomes invisible to labeling computation, the label of α can be properly determined as Y by displacing XP out of the set. In the latter case shown in (249c), the label of α can be determined as <F, F> by sharing the prominent features [F] that both XP and YP have.

Third, following the arguments made by Wood (2008) and Hatakeyama et al. (2010), we presuppose that *so* in SICs functions as a positive (affirmative) polarity adverb. In contrast to the argument in the two previous studies, however, we propose that *so* is contained in the following structure of PolP, which is a modified version of Wood's proposal.

(250) PolP = [$_{PolP}$ SO$_{[+Pol](Pol)}$ too]

In (250), *so* as a polarity head with a positive polarity feature ([+Pol]) undergoes merger with the focus particle *too*, which can be realized optionally (Wood (2008)). We also argue, following Laka (1990) and Radford (2009), that this PolP is merged immediately below the inflectional domain. This is supported by the following empirical evidence, which is originally presented by Klima (1964).[105]

(251)   a. The writers could so believe the boy.

        b. The writers did so believe the boy.   (Klima (1964: 257))
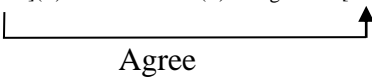
(251) shows that *so* appears between an auxiliary and a main verb, which suggests that it is merged immediately below TP.

   Wood (2008) and Hatakeyama et al. (2010) also assume, as reviewed in sections 5.2.2 and 5.2.3, that the Internal or External Merge of *so* to the specifier of C triggers T-to-C movement. However, both of them do not provide its concrete mechanism at all. Wood (2008) just argues that this type of trigger for inversion is the same one observed in other sentences involved in polarity. Although agreeing with the assumption made by Wood (2008), this thesis provides the concrete mechanism of the trigger of SAI by extending the analysis of polarity determination proposed by Holmberg (2012) and his subsequent works (Holmberg (2013, 2014, 2016)). According to Holmberg (2016), every finite sentence has an unvalued polarity feature (henceforth, [±Pol]) merged as the highest head in the TP-domain.[106]

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[105] Laka (1990) assumes *so* to be merged as a Pol head, while Radford (2009) deals with *so* as a phrase merged into the specifier of Pol. See also Haddican (2004) for the discussion on the possibility that *so* is merged in the specifier position.

[106] This thesis follows Holmberg (2016) with respect to the notation of this polarity feature: [±Pol]

Holmberg (2016) proposes that this feature is assigned its value only in the course of its syntactic derivation by entering into an Agree relation with a matching category which has a valued polarity feature. For the sake of concreteness, let us consider one example. Suppose that a declarative sentence contains a negative element, as shown in (252).

(252)   a.   Mary should not buy this book.

       b.   [$_{TP}$ Mary $_{[\pm Pol](T)}$ [$_{TP}$ should$_{(T)}$ [$_{NegP}$ not$_{[NEG]}$ [$_{vP}$ <Mary> buy this book]]]]

                       Agree

   →   [$_{TP}$ Mary $_{[\textbf{-Pol}](T)}$ [$_{TP}$ should$_{(T)}$ [$_{NegP}$ not$_{[NEG]}$ [$_{vP}$ <Mary> buy this book]]]]

(cf. Holmberg (2016: 39))

[±Pol] on the TP-domain enters into an Agree relation with the matching category Neg with respect to polarity and copies the negative polarity value of the negation, so that this sentence is regarded as a negative. In contrast, if a declarative sentence does not contain a negative element, [±Pol] is assigned an affirmative value by default, resulting in [+Pol]. Consequently, the sentence is marked as an affirmative sentence (see also Chomsky (1957) and Laka (1990)).

Adopting this mechanism of polarity valuation, Holmberg (2016) proposes that T-to-C movement in yes-no questions is accompanied by the movement of the polarity feature. According to Holmberg, the movement of the question variable, or the [±Pol] feature, gives it the sentential / propositional scope and makes it the Centre of Attention.[107]   Then, Holmberg

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[107] According to Holmberg (2016), the raising of the variable to the CP-domain has the influence of formally and unambiguously identifying it as the object of "Tell me the value of". Holmberg calls this state as being "the Centre of Attention" and defines it as follows.

(i)   a. α is the Centre of Attention (CoA) of a question if and only if α is subjacent to Q-force (direct questions) or to the matrix predicate (embedded questions).
      b. α is the Centre of Attention (CoA) of a declarative (including answers) if it is merged with

(2016) proposes the following syntactic structure of yes-no questions in English.

(253)   a. Do you like this book?

b.

CP
Q-force   C′
C   PolP
[±Pol]   DP   Pol′
do   [±Pol]   TP
you   <do>   T   *v*P
like this book
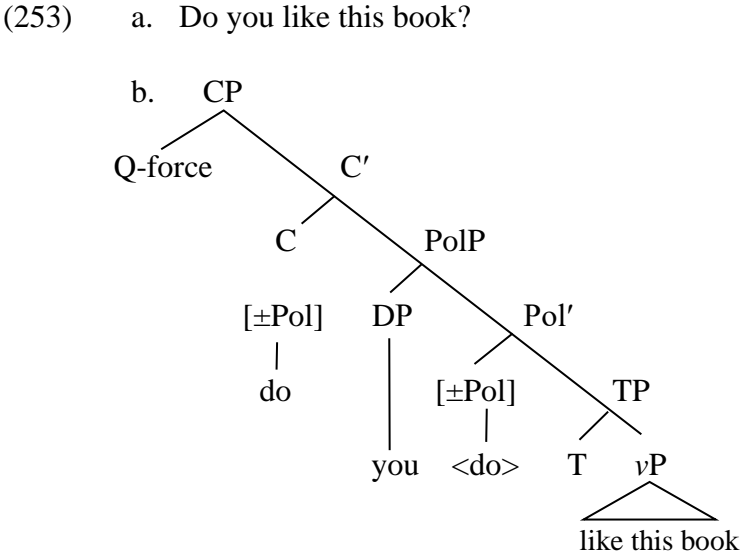
(Holmberg (2016: 34))

In (253), it is assumed along the same line with Finnish yes-no questions that the Pol head with [±Pol] is merged immediately above the TP, occupying the highest position of TP-domain, not the CP-domain.   The auxiliary *do* is inserted to Pol and undergoes movement with its feature [±Pol] to the CP-domain in order to be assigned the sentential / propositional scope and be the Centre of Attention (see the footnote 107).   SAI follows from this movement.

   Extending Holmberg's mechanism of polarity valuation to the present analysis of SICs, this thesis proposes that T-to-C movement is deduced from the requirement of labeling.   It is presupposed that *so* (PolP) with an affirmative polarity feature enters into an Agree relation with [±Pol] on T and that T raises to C together with the feature.[108]   In SICs, *so* undergoes movement to the clause-initial position, so that it and the raised feature share the matching

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FocP.   (Holmberg (2016: 33))

[108] Although adopting the system of polarity valuation proposed by Holmberg (2016), this thesis assumes that [±Pol] is introduced into the derivation with T, not with a Pol head.

polarity feature, as a result of which the set is given the label <Pol, Pol>.

The fourth assumption this chapter adopts is that deletion operation applies on the basis of identity with the antecedent context, as assumed in Hatakeyama et al. (2010). We assume that this operation is optional, except for cases where there is a fatal problem that prevents the derivation from being convergent. In particular, the relevant case is the one that induces the labeling failure. Following Saito (2020) and Maeda (2021), we postulate that the labeling problem caused by the {XP, YP} structure can be solved by deletion operation. Maeda (2021) proposes another strategy to resolve the unlabelable situation where syntactic objects are of the form of {XP, YP}. She argues that the ellipsis of a member of {XP, YP} can also avoid the labeling problem. For example, if the YP, which is a member of the set, undergoes deletion, it can no longer be a candidate for the target of minimal search, and hence the head of XP is detected.[109] Consequently, the label of the set results in X, as illustrated in (254), in which the strikethrough indicates the ellipsis site.

(254)　　{~~α~~ XP, ~~YP~~}　　(α = X)　　　　　　　　　　　　　(Maeda (2021: 94))

This section has overviewed main theoretical assumptions employed by this chapter. In the next section, we propose an alternative analysis of SICs under LA and show that it can overcome the problems with the previous studies.

5.4. Analysis

5.4.1. The Derivation of SIC

Taking into consideration the theoretical assumptions discussed in the previous section, this

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[109] Maeda (2021) argues that the invisibility of elided elements to LA is deduced from the elimination of phonological features. She leaves it open when this operation applies, but suggests the two possibilities. One is that the elimination of phonological features occurs at syntax. The other is that it takes place at the timing of Spell-Out. This thesis tentatively assumes that this operation applies at the timing of Spell-Out.

thesis proposes the following syntactic structure of the simple example of SICs, which is reproduced here as (255).[110]

(255)   John can speak French, and so can Mary.   (Toda (2007: 188))

(256)   a. $[_\beta$ PolP$_{[+Pol]}$ $[_\alpha$ Mary$_{[\phi][uCase]}$ $v^*[_{RP}$ speak French]]]

         b. $[_\gamma$ Mary$_{i[\phi][uCase]}$ can$_{[\pm Pol](T)}$ $[_\beta$ PolP$_{[+Pol]}$ $[_\alpha$ t_i $v^*[_{RP}$ speak French]]]]

         c. $[_\delta$ C$_{[u\phi]}$ $[_\gamma$ Mary$_{i[\phi][uCase]}$ can$_{[\pm Pol](T)}$ $[_\beta$ PolP$_{[+Pol]}$ $[_\alpha$ t_i $v^*[_{RP}$ speak French]]]]]

         d. $[_\delta$ PolP$_{k[+Pol]}$ can$_{j[\pm Pol](C)}$ $[_\gamma$ Mary$_{i[\phi][uCase]}$ $t_{j[u\phi](T)}$ $[_\beta$ t_k $[_\alpha$ t_i v^*

               $[_{RP}$ speak French]]]]]

               (PolP = $[_{PolP}$ so$_{[+Pol](Pol)}$ too])

               $\alpha = v^*$ $\beta = v^*$ $\gamma = <\phi, \phi>$ $\delta = <Pol, Pol>$

In (256a), the merger of a main verb and its object results in the creation of RP and the created set is merged with a phase head v^*.   Then, the subject DP undergoes External Merge with the set.   After the completion of all the operations within the v^*P phase, the complement of v^*, or RP, is transferred to the S-M and C-I Interfaces.   It should be noted that this configuration leads to the labeling failure in the next phase because the created set α, whose members are the subject DP and v^*P, is of the form of {XP, YP} structure.   Next, PolP is merged with the set α, forming the set β, or {XP, YP} structure again.   After that, in (256b), T bearing [±Pol] is merged with the set β and the auxiliary *can* is inserted there.   This feature enters into an Agree relation with the affirmative polarity feature on PolP (= *so*), copying an affirmative polarity value of it.   The subject DP undergoes movement to the specifier of T, which

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[110] Note that this thesis assumes, as discussed in chapter 4, that R can serve as a label (Abe (2016)) and that labeling occurs at the timing of merger when a head and a phrase are merged (Bošković (2016)).

enables the labeling problem of the set α to be resolved because a copy of the moved element becomes invisible to LA. Hence, the label of α is determined as *v**. In (256c), a phase head C is introduced into the derivation with [uφ], which enter into an Agree relation with the φ features on the subject DP in the specifier of T, resulting in its valuation. Then, the valued φ-features undergo Feature Inheritance from C to T and participate in the labeling determination of the set γ via feature sharing with respect to the φ-features. Consequently, the label of γ is determined as <φ, φ>. In (256d), PolP with the affirmative polarity feature raises to the specifier of C in order to emphasize the polarity (Wood (2008) and Hatakeyama et al. (2010)), creating the set δ, {XP, YP} structure, which induces a labeling problem.[111] To circumvent the derivational crash due to an undetermined label, T to C movement of the auxiliary *can* is triggered together with [±Pol] on T (cf. Holmberg (2016)). Then, the raised PolP and T contribute to the labeling determination of the set δ. That is, its label is determined as <Pol, Pol> by sharing the polarity features. In addition, the movement of PolP makes it possible for the label of β to be identified owing to the same reason as in the case of α: the lower copy becomes invisible to LA. Thus, the label of the set β is determined as *v**. Finally, at the S-M Interface, *v**P is deleted under the identity with the precedent context. Since all the unvalued features have been assigned values and there are no undetermined label, the derivation successfully converges, resulting in the inverted word order.

Let us next consider the derivation of SICs which involves *be* and does not contain any other auxiliary. A relevant example and its derivation are illustrated in (257) and (258), respectively.

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[111] The examples in (251) might be problematic with the present analysis if *so* is not displaced because the problem regarding the {XP, YP} structure is not resolved. There are two theoretical possibilities to avoid the unlabelable situation. One is to assume that only *so* as a Pol head is merged with *v*P, which enables the label of the relevant set to be determined as Pol. The other is to postulate the inheritance of [±Pol] to *v* to determine the relevant set as <Pol, Pol> via feature sharing.

(257)   John is a genius and so is Mary.   (Hatakeyama et al. (2010: 31))

(258)   a. $[_\beta \text{PolP}_{[+\text{Pol}]} [_{vP} v [_{VP} \text{is} [_\alpha \text{Mary}_{[\phi][u\text{Case}]} \text{DP}]]]]$

          b. $[_\gamma \text{Mary}_{i[\phi][u\text{Case}]} \text{is}_{j[\pm\text{Pol}](T)} [_\beta \text{PolP}_{[+\text{Pol}]} [_{vP} t_j [_{VP} t_j [_\alpha t_i \text{DP}]]]]]$

          c. $[_\delta \text{C}_{[u\phi]} [_\gamma \text{Mary}_{i[\phi][u\text{Case}]} \text{is}_{j[\pm\text{Pol}](T)} [_\beta \text{PolP}_{[+\text{Pol}]} [_{vP} t_j [_{VP} t_j [_\alpha t_i \text{DP}]]]]]]$

          d. $[_\delta \text{PolP}_{k[+\text{Pol}]} \text{is}_{j[\pm\text{Pol}](C)} [_\gamma \text{Mary}_{i[\phi][u\text{Case}]} t_{j[u\phi](T)} [_\beta t_k \overline{[_{vP} t_j [_{VP} t_j [_\alpha t_i \text{DP}]]]}]]]$

          (PolP = $[_\text{PolP} \text{so}_{[+\text{Pol}](\text{Pol})} \text{too}]$ DP = a genius)

          $\alpha = D$ $\beta = v$ $\gamma = <\phi, \phi>$ $\delta = <\text{Pol}, \text{Pol}>$

This thesis assumes, as in the case of PAB discussed in chapter 4, that *be* takes a small clause as its complement (Moro (2000)).   In (258a), the subject DP *Mary* and the complement DP *a genius* are merged, creating a small clause, the set α, which is unlabelable at this timing of the derivation because it is of the form of {XP, YP} structure.   Then, the set α is merged with *be* and *v* in order.   Since *be* does not constitute a phase, no element is transferred to the S-M and C-I Interfaces upon the completion of all the operations within the *v*P.   Next, in (258b), T with [±Pol] and the set β are merged and *be* undergoes movement there.   T enters into an Agree relation with PolP (= *so*) with respect to the polarity features, so that [±Pol] gets assigned an affirmative polarity value of it.   The subject DP, then, raises to the specifier of T, which resolves the unlabelable situation of the set α on the grounds that its copy has become invisible to LA.   Thus, the label of α is determined as D.   In (258c), a phase head C with [uφ] undergoes External Merge with the set γ.   [uφ] enter into an Agree relation with the φ features on the subject DP in the specifier of T, resulting in their valuation.   Then, the valued φ-features are inherited by T and take part in the label determination of the set γ via feature sharing, as a consequence of which its label is determined as <φ, φ>.   In (258d), PolP

containing [+Pol] moves to the specifier of C so as to emphasize the polarity, which creates the set δ, or {XP, YP} structure. For the set δ to be given a legitimate label, T to C movement of the auxiliary *be* is triggered together with the polarity feature on T, which ensures that the label of the set δ is determined via feature sharing, so that <Pol, Pol> is provided as its label. Furthermore, the movement of PolP plays an important role to determine the label of the set β. Since the lower copy of PolP has become invisible to LA, minimal search can detect a unique head *v*. Thus, the label of the set β is properly determined as *v*. At the end of the derivation, *v*P undergoes deletion under the identity with the precedent context at the S-M Interface. Consequently, the inverted word order of SICs is successfully derived.

5.4.2. Explanation of the Data

This section demonstrates that our analysis can properly account for some empirical facts of SICs. Let us first consider the examples suggesting that the subject postposing is not available in the derivation of SICs. The relevant examples are reproduced here as (259).

(259)   a.   A: Tom is very nervous.

B: So would you be in his position. (Huddleston and Pullum (2002: 1539))

b. *So would be in his position you.   (Hatakeyama et al. (2010: 33))

The proposed analysis has no trouble explaining these examples. Let us first explain (259aB), whose syntactic structure is shown in (260).

(260)   a.   [β PolP[+Pol] [*v*P *v* [VP be [α you[φ][uCase] very nervous]]] PP]

b.   [γ you$_i$[φ][uCase] would[±Pol](T) [β PolP[+Pol] [*v*P be$_j$ [VP t_j

[α t_i very nervous]]] PP]]

c. [$_\delta$ C$_{[u\varphi]}$ [$_\gamma$ you$_{i[\varphi][uCase]}$ would$_{[\pm Pol](T)}$ [$_\beta$ PolP$_{[+Pol]}$ [$_{vP}$ be$_j$ [$_{VP}$ t_j

[$_\alpha$ t_i very nervous]]] PP]]

d. [$_\delta$ PolP$_{k[+Pol]}$ would$_{j[\pm Pol](C)}$ [$_\gamma$ you$_{i[\varphi][uCase]}$ $t_{j[u\varphi](T)}$ [$_\beta$ t_k [$_{vP}$ be$_j$ [~~$_{VP}$~~~~t_j~~–

~~[$_\alpha$~~ ~~t_i very nervous~~]]] PP]]

(PolP = [$_{PolP}$ so$_{[+Pol](Pol)}$ too]   PP = in his position)

α = A β = v γ = <φ, φ> δ = <Pol, Pol>

The derivation begins at (260a), which is the underlying structure of (259aB), the same as that of (258), except for the merger of PP.   In (260b), T with [$\pm$Pol] undergoes External Merge with the set β and *would* is inserted there.   [$\pm$Pol] enters into an Agree relation with [+Pol] on PolP, with the result that its affirmative polarity value is assigned to [$\pm$Pol].   Then, the subject DP moves to the specifier of T, leaving its copy left behind.   This operation contributes to avoiding the labeling failure of the set α because a copy of the moved element becomes invisible to LA.   Therefore, the label of α is determined as A.   In (260c), a phase head C with [uφ] is externally merged with the set γ.   [uφ] enter into an Agree relation with the φ features on the subject DP in the specifier of T, so that their valuation proceeds.   Then, the valued φ-features are inherited by T and it follows that the label determination of the set γ via feature sharing with respect to φ-features, as a consequence of which its label is determined as <φ, φ>.   In (260d), then, PolP undergoes movement to the specifier of C in order to emphasize the polarity, so that the set δ is created.   The auxiliary *be* raises to C accompanied with the valued polarity feature on T in order to circumvent the labeling failure of the set δ.   Thanks to this movement, its label can be determined via feature sharing of the polarity features, resulting in <Pol, Pol>.   As discussed in the previous section, since the lower copy of PolP has become invisible to LA, the label of β can also be given a legitimate label as v.   Then, at the S-M Interface, VP is elided under the identity with the precedent

context, as illustrated in (260d), so that SICs are successfully derived and hence (259aB) is grammatical.

The proposed analysis can also account for the ungrammatical sentence in (259b), which suggests that subject postposing is not applicable. The relevant derivation is illustrated in (261).

(261) a. [$_\delta$ PolP$_{k[+Pol]}$ would$_{j[\pm Pol](C)}$ [$_\gamma$ you$_i$ $t_{j[u\phi](T)}$ [$_\beta$ t_k [$_{vP}$ be$_j$ [$_{VP}$ t_j [$_\alpha$ t_i …]]] PP]]

   b. [$_\delta$ PolP$_{k[+Pol]}$ would$_{j[\pm Pol]](C)}$ [$_\gamma$ **you** $t_{j[u\phi](T)}$ [$_\beta$ t_k [$_{vP}$ be$_j$ [$_{VP}$ t_j [$_\alpha$ …]]]] PP] **you**]]

   postposing

   (PolP = [$_{PolP}$ so$_{[+Pol](Pol)}$ too$_{[Foc]}$]   PP = in his position)

   $\alpha = D$ $\beta = v$ $\gamma = ?$ $\delta = $ <Pol, Pol>

The ungrammaticality of (259b) straightforwardly follows from a labeling failure of the set γ. Suppose that the derivation proceeds to the stage shown in (261a). Then, the subject DP, which has raised to the specifier of T, undergoes the rightward movement, or subject postposing, as illustrated in (261b). This operation renders the label of the set γ undetermined. Since T in English is too weak to serve as a label, it needs an element at its specifier to strengthen its weakness in order to be given a legitimate label. However, the copy of the subject DP, which is left in the specifier of T, becomes invisible to LA, so there is no way for T to be reinforced for labeling. Hence, this derivation does not result in convergence, so that the sentence in (259b) is ungrammatical.

Let us next observe the contrast between the following two examples of SICs with multiple auxiliaries, both of which consist of the same kind of elements.

(262) a. Bill must be a genius and so must be Ann.   (Toda (2007: 190))

b.   If our culture is noble, so will our art be.   (COCA, 1999, NEWS)

We begin by accounting for the example (262a), in which the two auxiliaries are adjacent. Its syntactic structure is illustrated in (263).

(263)   a.   [$_{v}$P PolP$_{[+Pol]}$ [$_{v}$P be$_i$ [$_{VP}$ t_i [$_\alpha$ Ann$_{[\phi]}$ a genius]]]]

b.   [$_\gamma$ PolP$_{k[+Pol]}$ must$_{[\pm Pol](T)}$ [$_\beta$ t_k [$_{v}$P be$_i$ [$_{VP}$ t_i [$_\alpha$ Ann$_{[\phi]}$ a genius]]]]]

c.   [$_\delta$ C$_{[u\phi]}$ [$_\gamma$ PolP$_{[+Pol]}$ must$_{[\pm Pol](T)}$ [$_\beta$ t_k [$_{v}$P be [$_{VP}$ t_j [$_\alpha$ Ann$_{[\phi]}$ a genius]]]]]]

d.   [$_\delta$ C [$_\gamma$ PolP$_{[+Pol]}$ must$_{[\pm Pol][u\phi](T)}$ [$_\beta$ t_k [$_{v}$P be [$_{VP}$ t_j [$_\alpha$ Ann$_{[\phi]}$ ~~a genius~~]]]]]]

(PolP = [$_{PolP}$ so$_{[+Pol](Pol)}$ too])

α = D β = v γ = <Pol, Pol> δ = C

(263a) represents the underlying structure of (262a).   In (263b), T, which has [±Pol], and the set β are merged and the insertion of *must* to T follows.   [±Pol] enters into an Agree relation with [+Pol] on PolP, getting assigned an affirmative polarity value of it.   We then argue that in this derivation PolP, not the subject DP, undergoes movement to the specifier of T.   This movement enables the set β to be given a proper label due to the invisibility of the lower copy to LA.   Thus, the label of β is determined as *v*.   In (263c), a phase head C with [uφ] undergoes External Merge with the set γ and the operation of Feature Inheritance applies. The inherited [uφ] enter into an Agree relation with the φ features on the subject DP remaining in its base-generated position, with the result that they are valued and deleted. Since the subject DP does not raise to the specifier of T, the label of γ cannot be determined by sharing φ-features.   However, T in English must be strengthened to be given a proper label since it is too weak to serve as a label.   We propose that in this case, the label determination of the set γ proceeds by sharing the polarity features between the preposed PolP

in the specifier of T and the valued [±Pol] on T. Thus, its label is determined as <Pol, Pol>. It should be noticed that PolP has raised to the specifier of T, not that of C. As discussed in section 5.4.1, recall that T-to-C movement is deduced from the labeling requirement for {XP, YP} structure to be given a legitimate label. In this derivation, there is no such requirement for the auxiliary to raise because labeling via feature sharing of the polarity features is conducted not in the CP-domain but in the TP-domain. Thus, T-to-C movement is not triggered in this case.

However, one problem arises concerning the label of the set α: it is of an unlabelable form, {XP, YP} structure, because the subject DP remains in its base-generated position. This problematic situation can be circumvented by the copy deletion of one member of the set. Following the assumption proposed by Maeda (2021) that ellipsis of a member of {XP, YP} results in the invisibility of the elided one to LA, this thesis argues that a member of the small clause, *a genius*, undergoes deletion, so that it can no longer be a possible candidate for minimal search. Thus, the label of the set α is determined as D. Since all the labels are properly determined and no unvalued features are left, the derivation successfully converges.

Note that the proposed analysis of the derivation of SICs with multiple auxiliaries does not contain any construction-specific operation, such as the amalgam head movement assumed in Hatakeyama et al. (2010). In (263), the subject DP remains in situ as a member of the small clause, so that it appears in the clause-final position. In a similar fashion, auxiliaries occur in their first-merged position and any movement operation does not apply to them. The consequence of these merger processes directly leads to the surface word order of SICs with multiple auxiliaries. Thus, there is no need to assume amalgam head movement.

Let us move on to the discussion on the derivation of the example (262b), in which the two auxiliaries are not adjacent. Its syntactic structure, which is illustrated in (264), shows that it is derived in the same derivational process as the example of (259aB), except for the merger

of PP.

(264)   a. $[_\beta \text{PolP}_{[+\text{Pol}]} [_{vP} v [_{VP} \text{be} [_\alpha \text{Our art}_{[\varphi][u\text{Case}]} \text{noble}]]]]$

          b. $[_\gamma \text{Our art}_{i[\varphi][u\text{Case}]} \text{will}_{[\pm\text{Pol}](\text{T})} [_\beta \text{PolP}_{[+\text{Pol}]} [_{vP} \text{be}_j [_{VP} t_j [_\alpha t_i \text{noble}]]]]]$

          c. $[_\delta \text{C}_{[u\varphi]} [_\gamma \text{Our art}_{i[\varphi][u\text{Case}]} \text{will}_{[\pm\text{Pol}](\text{T})} [_\beta \text{PolP}_{[+\text{Pol}]} [_{vP} \text{be}_j$

                $[_{VP} t_j [_\alpha t_i \text{noble}]]]]]]$

          d. $[_\delta \text{PolP}_{k[+\text{Pol}]} \text{will}_{j[\pm\text{Pol}](\text{C})} [_\gamma \text{Our art}_{i[\varphi][\text{uCase}]} t_{j[u\varphi](\text{T})} [_\beta t_k [_{vP} \text{be}_j$

                $[_{VP} t_j [_\alpha t_i \text{noble}]]]]]]$

                $(\text{PolP} = [_\text{PolP} \text{so}_{[+\text{Pol}](\text{Pol})} \text{too}])$

                $\alpha = \text{D} \quad \beta = v \quad \gamma = <\varphi, \varphi> \quad \delta = <\text{Pol}, \text{Pol}>$

It should be worth mentioning that this analysis is compatible with the Mapping Hypothesis proposed by Diesing (1992). As discussed in chapter 4, Diesing (1992) argues that a subject DP remaining within the base-generated position, or VP / *v*P, is mapped onto the nuclear scope of the sentence, with the result that it obtains a focus interpretation at the C-I Interface. If this hypothesis is on the right truck, it will be predicted that pronominal subjects, which are typically interpreted as a topic, namely old information, cannot stay in their base-generated position in SICs because of their incompatibility of focus interpretation. In fact, this prediction is borne out: the subject in SICs, in which multiple auxiliaries are observed, is interpreted as a focus element, as illustrated in (265).

(265)   Leslie had been there, and so had been *I / Sandy.

                                    (Culicover and Winkler (2008: 651))

(265) shows that only nominal subjects can appear in the clause-final position, which suggests that the subject remaining in situ is given a focus interpretation. If this line of analysis is on the right track, it is also expected that pronominal subjects cannot appear in its base-generated position but can in the position between a modal and *be*. Indeed, this prediction is supported by the examples shown in (266).

(266) a. And so should **he** be, if he knew what was best for him.

<div align="right">(COCA, 2008, FIC)</div>

    b. If your parents were poor, so would **you** be. (COCA, 2012, WEB)

In (266), pronominal subjects occur between two auxiliaries, a modal and *be*, which suggests that they obligatorily undergo overt movement in order to avoid getting an illegitimate interpretation. Given some pieces of empirical evidence shown above, we argue that the proposed analysis of SICs gains a further support from the empirical aspect.

In addition, our analysis does not induce any conflict with the empirical fact shown in (230), which is repeated here as (267). The syntactic structure of (267a) is shown in (268).

(267) a. Just as some children ignore their parents, so do some parents ignore their children.

    b. Just as we keep our promise to the next generation here at home, so must we keep America's promise abroad. (Wood (2008: 305-306))

(268) $[_\delta \text{PolP}_{k[+\text{Pol}]} \text{do}_{j[\pm\text{Pol}](C)} [_\gamma \text{ some parents}_{i[\varphi][u\text{Case}]} \, t_{j[u\varphi](T)} [_\beta \, t_k \, [_\alpha \, t_i \, v^*$

    $[_{RP} \text{ignore DP}]]]]]$

    $(\text{PolP} = [_{\text{PolP}} \text{so}_{[+\text{Pol}](\text{Pol})} \text{too}]$ $\text{DP} = \text{their children})$

$$\alpha = v^* \qquad \beta = v^* \qquad \gamma = <\varphi, \varphi> \qquad \delta = <\text{Pol, Pol}>$$

Just as in the analysis proposed by Hatakeyama et al. (2010), we assume the deletion operation, not VP replacement by *so* as in Toda (2007). Since it is implemented under the identity with the precedent context, VP (= RP) remains undeleted if such identity is not observed; that is, two distinct VPs are involved in a sentence. In (268), the content of the two VPs are different, so that the VP (= RP) in the second clause, which involves SICs, does not undergo deletion. This fact cannot be captured by assuming proverbalization by *so*.[112]

This section has demonstrated that the proposed analysis can account for some pieces of empirical evidence of SICs, some of which cannot be captured by the previous studies. In the next section, we show that the present analysis can be extended to NICs, which are regarded as the negative counterpart of SICs.

5.5. *Neither*-inversion Constructions

5.5.1. Basic Properties

Let us begin by overviewing some basic properties of NICs. NICs are considered as the negative counterpart of SICs because of their similarities to SICs. Some typical examples of NICs are shown in (269).

(269)   a.   I didn't dissuade anybody of that notion, and neither did John.

(COCA: 2010, FIC))

   b.   I didn't say anything else and neither did he.   (COCA: 2018, FIC))

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[112] Although this thesis adopts the theoretical assumption of labeling by ellipsis proposed by Maeda (2021), she argues that ellipsis obligatorily applies in SICs. As the empirical fact in (267) shows, however, such an argument is not valid because VPs are not always elided in SICs. Thus, we argue, in contrast to Maeda (2021), that deletion operation is optional in SICs except for the case in which a label cannot be determined unless such an operation applies.

It is well known that *neither* in NICs also has an additive meaning, just as *so* in SICs. Hence, the interpretation of NICs is supplemented by the preceding context. In other words, to take (269b) as an example, the second clause including NICs means *he did not say anything else, either*. In addition, it is obvious from the examples above that any type of subject, regardless of nominal or pronominal subject, can appear in NICs.

The polarity restriction is also observed in NICs. As the contrast in the following examples illustrates, NICs require an antecedent with a negative polarity, just as SICs do with a positive polarity.

(270) a. John doesn't play guitar and neither do I.

    b. * John plays guitar and neither do I (play guitar) (Wood (2008: 305))

However, NICs show a different behavior from SICs in cases with multiple auxiliaries. Toda (2007) observes an interesting empirical fact which shows that NICs do not permit the occurrence of multiple auxiliaries if they precede the subject DP.[113] A relevant example is shown in (271).

(271) a. * Bill mustn't be a gossip and neither must be Ann.

    b. Bill mustn't be a gossip and neither must Ann be. (Toda (2007: 190))

(271a) is ungrammatical, in which the two auxiliaries precede the subject DP in the clause-final position. In contrast, (271b) is grammatical, in which the subject DP intervenes between the two auxiliaries.

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[113] Toda (2007) only presents this empirical fact and does not present an analysis of NICs.

5.5.2.   Analysis

This section provides an analysis of NICs by extending the proposal of SICs discussed in section 5.4.1.   Before moving on to the details of the derivation of NICs, let us first add another assumption with respect to *neither*.   Following Wood (2008), this thesis assumes that *neither* is a negative polarity adverb and is decomposed into *n-* and *either*, which represent a negative polarity marker and a focus particle, respectively.   Then, it is proposed that *neither* is merged as PolP with the following internal structure, which is the negative counterpart of *so* in SICs.

(272)   PolP = [$_{PolP}$ n-$_{[-Pol](=Pol)}$ either$_{[Foc]}$]

Just like *so* in SICs, *n-* is merged as a Pol head and has a negative polarity feature ([-Pol]). On the other hand, *either* is merged in its complement position and characterized as a focus particle with a focus feature.   This is because NICs also have an aspect of negative inversion constructions, in which it is widely accepted that the negative element in the sentence-initial position has undergone focalization in order to emphasize the negative meaning of the sentence (Nakamura (1994), Haegeman (1995), Koike (2016), among others).   The inversion in the constructions only takes place when the negative element showing sentence negation, not constituent negation, raises to the sentence-initial position via focalization, as the contrast below exemplifies.

(273)   a.   Not long ago it rained.

b.   Never have I seen so much rain.   (Klima (1964: 300))

In (273a), inversion is not induced because the preposed adverbial phrase *not long ago* shows constituent negation, while in (273b) it is because the preposed adverb *never* means sentence-negation. *Neither* in NICs may also be regarded as an adverb which means sentence-negation, just like *never* in (273b), in addition to its additive meaning similar to *so* in SICs. Thus, this thesis proposes that *neither* in NICs undergoes focalization, namely the movement to the specifier of C, as the negative element in negative inversion constructions.

With the discussion so far in mind, we propose the following syntactic structure of the simple example of NICs in (269b), which is repeated here as (274).[114]

(274)   I didn't say anything else and neither did he.   (COCA: 2018, FIC))

(275)   a. $[_\beta \text{PolP}_{\text{[-Pol][Foc]}} [_\alpha \text{he}_{\text{[φ][uCase]}} v^*[_\text{RP} \ldots]]]$

          b. $[_\gamma \text{he}_{\text{i[φ][uCase]}} \text{did}_{\text{[±Pol](T)}} [_\beta \text{PolP}_{\text{[-Pol][Foc]}} [_\alpha t_\text{i} v^*[_\text{RP} \ldots]]]]$

          c. $[_\delta \text{C}_{\text{[uδ][uφ]}} [_\gamma \text{he}_{\text{i[φ][uCase]}} \text{did}_{\text{[±Pol](T)}} [_\beta \text{PolP}_{\text{[-Pol][Foc]}} [_\alpha t_\text{i} v^*[_\text{RP} \ldots]]]]]$

---

[114] Wood (2008) assumes that *neither* is first merged into Foc in *v*P-domain and undergoes head movement to Neg. If *neither* has a property as a head, it would block the application of Affix hopping (Chomsky (1957)), but this is not the case. Consider the contrast between negative elements shown in (i).

(i)   a. * John not baked cakes.
        b.   John never baked cakes.   (Hornstein (2009: 98))
        c.   This resolution neither brings remediation to an end nor reduces the amount required
             and offered.   (COCA: 1999, ACAD)

Given the standard assumption that NegP between T and $v^{(*)}$ prevents Affix hopping (cf. Pollock (1989) and Bobaljik (2002) and Hornstein (2009)), it is clear that (ic) with *neither* does not block its application, which suggests that NegP does not exist. Thus, this thesis assumes it to be merged as a phrase in the same way as *never* in (ib).

    d. $[_\delta \text{ PolP}_{k[\text{-Pol}][\text{Foc}]} \text{ did}_{j[\pm\text{Pol}][\text{u}\delta](C)} [_\gamma \text{ he}_{i[\varphi][\text{uCase}]} t_{j[\text{u}\varphi](T)} [_\beta t_k [_\alpha t_i v^* [_{RP} \ldots]]]]]$

           $(\text{PolP} = [_{\text{PolP}} \text{ n-}_{[\text{-Pol}](\text{Pol})} \text{ either}_{[\text{Foc}]}])$

           $\alpha = v^* \quad \beta = v^* \quad \gamma = <\varphi, \varphi> \quad \delta = <\text{Pol}, \text{Pol}>, <\text{Foc}, \text{Foc}>$

This derivation proceeds in almost the same fashion as in the SICs in (256) (see the discussion in section 5.4.1). In (275a), RP is formed as a result of merger of a main verb and its object and the created set is merged with a phase head v^*. Then, the subject DP is externally merged with the v^*P. Once all the operations within the v^*P have been done, Transfer operation applies to the complement of v^*. Note that this situation results in a labeling failure in the next phase because the set α is of the form of {XP, YP} structure. Then, PolP (= *neither*) undergoes External Merge with the set α, with the set β formed. In (275b), T with [$\pm$Pol] and the set β are merged and the auxiliary *do* is inserted there. [$\pm$Pol] enters into an Agree relation with [-Pol] on the PolP, copying a negative polarity value of it. The subject DP, then, raises to the specifier of T, which makes it possible to determine the label of the set α; that is, the problematic situation for labeling is circumvented because the copy of the subject DP has become invisible to LA. Therefore, the label of α is determined as v^*. Next, in (275c), it is assumed that a phase head C is merged with the two types of unvalued features, [$u\varphi$] and [$u\delta$], as in the case of LICs and PAB (see the discussion of chapter 4 in this thesis). [$u\varphi$] enter into an Agree relation with the φ-features on the subject DP in the specifier of T, resulting in its valuation. Then, they are inherited by T and participate in the label determination of the set γ via feature sharing. As a result, the label of γ is determined as $<\varphi, \varphi>$. On the other hand, [$u\delta$], which is related to A′-properties, enters into an Agree relation with the focus feature on the PolP. The PolP with the two features, the negative polarity feature and the focus feature, raises to the specifier of C in order to emphasize the polarity, which results in the creation of the set δ. For it to be given a legitimate label, T to C

movement of the auxiliary *do* is triggered together with the valued polarity feature on T, which ensures the label determination via feature sharing. In this case, it should be noted that the two types of features, polarity and focus, involve the labeling of the set δ. As discussed in the beginning of this section, NICs also have an aspect of negative inversion constructions: they are involved in focalization of the negative element. We reduce this focus property to the information of the provided label. Specifically, the preposed PolP shares its features with the element on C with respect to polarity and focus, and therefore the label of δ is determined as <Pol, Pol> and <Foc, Foc>. The movement of PolP also enables the label of β to be identified because of the same reason as in the case of α: the lower copy of PolP has become invisible to LA. Thus, the label of the set β is determined as *v**. Then, at the S-M Interface, *v**P undergoes deletion on the basis of the identity with the preceding context. The subject DP in the specifier of T follows PolP and the auxiliary. Thus, NICs are successfully derived.

5.5.3. Explanation of the Data

Given the analysis in the previous section, let us consider the interesting contrast shown in (271), which is observed by Toda (2007). The relevant examples are repeated here as (276). We begin by accounting for the ungrammatical case in (276a), whose syntactic structure is illustrated in (277).

(276) a. * Bill mustn't be a gossip and neither must be Ann.

  b. Bill mustn't be a gossip and neither must Ann be. (Toda (2007: 190))

(277) $[_\delta \text{PolP}_{k[-\text{Pol}][\text{Foc}]} \text{ must}_{j[\pm\text{Pol}][u\delta](C)} [_\gamma \emptyset \; t_{j[u\phi](T)} [_\beta t_k [_{vP} v [_{VP} \text{be } [_\alpha \text{Ann}_{[\phi][u\text{Case}]} \text{DP}]]]]]]$

  $(\text{PolP} = [_{\text{PolP}} \text{n-}_{[-\text{Pol}](\text{Pol})} \text{either}_{[\text{Foc}]}] \quad \text{DP} = \text{a gossip})$

$$\alpha = D \qquad \beta = v \quad \gamma = ? \quad \delta = <\text{Pol, Pol}>, <\text{Foc, Foc}>$$

The ungrammaticality of (276a) straightforwardly follows from the unlabelability of the set γ, which is attributable to the weakness of T for labeling. In (277), the subject DP remains in-situ, so the canonical subject position, or the specifier of T, is empty. In addition, the PolP (= *neither*) raises to the specifier of C due to the application of focalization to it. Thus, there is no way to reinforce the weakness of T, so that this derivation results in a crash owing to the presence of the unlabeled set. Hence, the example (276a) is ungrammatical.

A question that may arise here is that the labeling problem can be solved if it is assumed that the PolP moves to the specifier of T and Feature Inheritance of the [uδ] from C to T applies so as to determine the label of the set γ via feature sharing along the same line with the derivation of (263) in SICs. In fact, this prediction is the case, as illustrated in the following derivation, in which the unlabelable situation in the label of the set γ becomes no longer problematic because it is determined by sharing the two kinds of features, polarity and focus.

(278) $[_\delta \text{ C } [_\gamma \text{ PolP}_{k[-\text{Pol}][\text{Foc}]} \text{ must}_{j[\pm \text{Pol}][u\delta][u\phi](T)} [_\beta t_k [_{vP} v [_{VP} \text{ be } [_\alpha \text{ Ann}_{[\phi][u\text{Case}]} \text{DP}]]]]]]$

(PolP = $[_{\text{PolP}}$ n-$_{[-\text{pol}](\text{Pol})}$ either$_{[\text{Foc}]}]$ DP = a gossip)

$$\alpha = D \qquad \beta = v \quad \gamma = <\text{Pol, Pol}>, <\text{Foc, Foc}> \quad \delta = C$$

However, one interpretive problem arises in terms of focus in any event. According to Rizzi (1997), a focus head takes a focus element and a presupposition as its specifier and complement, respectively. This configuration is illustrated as follows.

(279)   FocP
            ⟋ ⟍
        ZP   Foc′   ZP : Focus
              ⟋ ⟍
          Foc°   WP   WP: Presupposition

(Rizzi (1997: 296-297))

In the proposed analysis, we can comprehend that the FocP, ZP and Foc° above correspond to the label of <Foc, Foc>, PolP and T in the structure of (278), respectively. Against this background, the elements following the focused PolP should be interpreted as the presupposition. However, the subject DP remaining in its base-generated position is also given a focus interpretation from the perspective of Mapping Hypothesis (see the discussion in section 5.4.2). Therefore, the interpretation of the focused subject DP does not match with the presupposition derived from the configuration, which leads to the interpretive incoherence. Thus, the derivation in (278) does not result in convergence in any event.

On the other hand, the example (276b) does not induce any syntactic and semantic problem. The relevant derivation is illustrated in (280).

(280) $[_\delta \text{PolP}_{k[\text{-Pol}][\text{Foc}]} \text{must}_{j[\pm\text{Pol}][u\delta](C)} [_\gamma \text{Ann}_{i[\varphi][u\text{Case}]} t_{j[u\varphi](T)} [_\beta t_k [_{vP} \text{be}$

$[_{\text{VP}} t_l [_\alpha t_i \text{DP}]]]]]$

(PolP = $[_{\text{PolP}} \text{n-}_{[\text{-Pol}](\text{Pol})} \text{either}_{[\text{Foc}]}]$ DP = a gossip)

$\alpha = \text{D}$ $\beta = v$ $\gamma = <\varphi, \varphi>$ $\delta = <\text{Pol, Pol}>, <\text{Foc, Foc}>$

In this derivation, the subject DP, which is a member of the small clause, does not remain in-situ but undergoes movement to the specifier of T, leaving its copy behind. Since lower copies are invisible to LA, the label of the set α can be determined as D. Furthermore, the raised subject DP participates in the label determination of the set γ via feature sharing with respect to φ-features, so that it is determined as $<\varphi, \varphi>$. The PolP moves to the specifier of C via focalization, and T also raises to C in order to prevent the set δ from being unlabeled. The preposed PolP and T enter into an Agree relation and share their two kinds of features,

polarity and focus, as a consequence of which the label of the set δ is provided with the two labels: <Pol, Pol>, <Foc, Foc>.　At the S-M Interface, the VP undergoes deletion under the identity of the preceding context.　There is no undetermined label, unvalued features and interpretive conflicts in this derivation, so that the example of NICs in (276b) is successfully derived and hence grammatical.

Finally, the present analysis can capture the fact that the deletion operation is optional in NICs, just as in SICs.　A relevant example and its structure are illustrated in (281) and (282), respectively.

(281)　　Protestants can not make this claim against Catholics without having it

backfire on themselves.　Neither can Catholics make such a charge against

Protestants.　　　　　　　　　　　　　　　　　(COCA: 2012, WEB))

(282)　　[$_\delta$ PolP$_{k[\text{-Pol}][\text{Foc}]}$ can$_{j[\pm\text{Pol}][u\delta](C)}$ [$_\gamma$ Catholics$_{i[\varphi][u\text{Case}]}$ $t_{j[u\varphi](T)}$ [$_\beta$ t_k [$_\alpha$ t_i make$_l$

[$_{RP}$ t_l DP]]]]]

(PolP = [$_{PolP}$ n-$_{[\text{-Pol}](\text{Pol})}$ either$_{[\text{Foc}]}$]　　DP = such a charge against Protestants)

α = v*　　　β = v*　　γ = <φ, φ>　　δ = <Pol, Pol>, <Foc, Foc>

Just as in the similar case of SICs, it is assumed that the deletion operation optionally applies and requires the identity with the preceding context.　In (282), RP (=VP) remains undeleted because such an identity is not observed; that is, the VP in NICs is different from that in the preceding sentence, so that the RP (=VP) in NICs does not undergo deletion.

5.6.　Conclusion

This chapter has attempted to account for the derivation of SICs under LA.　It has been assumed that *so* in SICs is an affirmative polarity adverb and moves to the clause-initial

position to emphasize its polarity. Combining the framework of LA with the mechanism of polarity valuation by Holmberg (2012) and his subsequent works (Holmberg (2013, 2014, 2016)), this chapter has proposed that SAI is triggered by the requirement of labeling via feature sharing with respect to the polarity features. Then, it has been shown that the proposed analysis can provide principled explanations with some empirical facts of SICs, including the ones that previous studies cannot account for. Furthermore, we have shown that the proposed analysis can be extended to the explanation of the negative counterpart of SICs, namely NICs.

Chapter 6

Concluding Remarks

This thesis has investigated some inversion constructions in English and provided them with principled explanations under the framework of Minimalist Program. This chapter is devoted to the summary of the discussion so far.

Chapter 1 has introduced main theoretical backgrounds that this thesis adopts in the following chapters: the phase-based derivational model, Feature Inheritance, LA (Chomsky (2001, 2004, 2008, 2013, 2015, 2019)) and the A′-related feature (van Urk (2015)).

Chapter 2 has investigated the synchronic aspect of QCs, especially focusing on QI. Unlike the two previous studies (Collins and Branigan (1997) and Collins (1999)), it has been argued with some pieces of empirical evidence that the subject DP in QI raises to the specifier of T. We have claimed that there are two types of QCs and each type has both SV and VS orders. C heads in QCs systematically possess four types of features ([uφ], [uδ], [EPP], and [uQ-V]), while QI has an additional feature: [V-EPP], which functions as the driving force of verb movement. In QCs with R1 verbs, the quote is Set-Merged in the complement of V and undergoes successive cyclic movement to the specifier of C. On the other hand, in QCs with R2 verbs, the quote is Pair-Merged on the right side of v(*)P, and then moves to the specifier of C. The latter type of the quote establishes the modification relation with the main verb via the operation of Transfer in order to satisfy its licensing condition.

Chapter 3 has addressed the diachronic aspect of QCs. Based on the corpus research, it

has been revealed that QCs have maintained almost the same configuration since OE, with verb movement remaining attested even after the period when it was lost, though their feature composition was slightly changed over time. In particular, QCs first developed with the two verbs, *quoth* and *say*, and they underwent unique development, which can be regarded as deviant from the development of the English language itself on the grounds that inversion took place regardless of the subject type even after ME, when V-to-T movement was almost never observed. The fact that QCs had the inverted word order as their default form yielded a distinctive clause type, Quotative, with the unique feature [uQ-V] originated on C, which induces either of the two semantic effects under an Agree relation with a main verb: the semantic reduction of a main verb or the semantic complementation to a main verb. This historical change took place in the two phases, first in EModE and second in LModE, leading to the occurrence of a variety of verbs in QCs, including ones which do not have the meaning of *say*. As the consequence of the distinct historical development mentioned above, two types of QCs came to be attested in PDE.

Chapter 4 has examined the derivations of LICs and PAB under LA. It has been proposed that in their derivations, the two types of unvalued features, [uφ] and [uδ], are introduced with the merger of C and both of them are inherited by T. The former enter into an Agree relation with φ-features on the subject DP remaining in its base-generated position and get assigned their value. On the other hand, the latter agrees with the topic feature on the preposed elements (the locative PP in LICs and the AP or *v*P(= PartP) in PAB), which undergo movement to the specifier position of T. Then, the label of the created set, which is {XP, YP} structure, is determined via feature sharing of A′-related features, resulting in <Top, Top>. We then have shown that some empirical facts illustrating the dual properties of the preposed elements in LICs and PAB can be captured by adopting the featural approach to A- and A′-distinction. It has been proposed that A- and A′-properties are derivative property and

deduced from features involved in an Agree relation or contained in the head that hosts the moved phrase.   In LICs and PAB, due to Feature Inheritance, T head has both φ-features and [uδ], which define A- and A′-property, respectively.   Consequently, it follows that the preposed elements in the specifier of T show the dual properties of A and A′.

Chapter 5 has explicated the derivation of SICs under LA.   It has been assumed that *so* in SICs is an affirmative polarity adverb with the feature [+Pol] and moves to the clause-initial position.   Combining the framework of LA with the mechanism of polarity valuation proposed by Holmberg (2012) and his subsequent works (Holmberg (2013, 2014, 2016)), this thesis has proposed that the trigger of SAI, or T-to-C movement, is attributed to the requirement of labeling via feature sharing with respect to the polarity features and that the set, whose members are CP and PolP (= *so*), is determined as <Pol, Pol>.   Then, it has been demonstrated that the proposed analysis can provide principled explanations with some empirical facts of SICs, including the ones that are problematic for previous studies. Furthermore, we have shown that the proposed analysis can be extended to the explanation of the negative counterpart of SICs, namely NICs.   In NICs, *neither* functions as a negative polarity adverb and has two features, [-Pol] and [Foc], because it also has an aspect of negative inversion constructions.   The raised PolP (= *neither*) enters into an Agree relation with C with respect to the two features and the two types of labels are provided: <Pol, Pol> and <Foc, Foc>.

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