TWO TYPES OF MAIN VERB INVERSION

AKIHIKO ARANO
Tohoku University

This paper presents hitherto unnoticed contrasts between Locative Inversion and Quotative Inversion relating to the realization of pronouns in tag questions, the distribution of post-nominal alone, and intervention effects induced by experiencer arguments. To account for these differences, I argue that Locative Inversion and Quotative Inversion are derived in different fashions. In the former, post-verbal DPs stay in their original position, with locative prepositional phrases occupying [Spec, TP]. On the other hand, post-verbal DPs in Quotative Inversion are moved ‘covertly’ to [Spec, TP]. I show that the possibility of ‘covert’ movement to [Spec, TP] arises as a consequence of the proposal that Number-features originate in T heads, whereas Person-features and Tense-features originate in C heads.*

Keywords: Locative Inversion, Quotative Inversion, covert A-movement, Feature Inheritance, intervention

1. Introduction

This paper investigates syntactic properties of Locative Inversion (henceforth LI) and Quotative Inversion (henceforth QI) constructions, as illustrated in (1) and (2) respectively.

(1) Locative Inversion
Down the hill rolled John (Collins (1997: 10))

* This is an extensively revised version of the paper that appeared in JELS 30 (Arano (2013a)), which was presented at the 30th meeting of the English Linguistic Society of Japan, held at Keio University on November 10–11, 2012. I am very grateful to Yoshiaki Kaneko, Etsuro Shima, and anonymous reviewers for their invaluable comments and suggestions. I am also indebted to Shin-Ichi Kitada, Taichi Nakamura, Hiroyuki Nawata, Takashi Shizawa, Kensuke Takita, Tozawa Takahiro, and Keiichi Yamanaka for their helpful comments and discussions. My special gratitude goes to my informants. All remaining errors and inadequacies are of course my own.
TWO TYPES OF MAIN VERB INVERSION

(2) Quotative Inversion
   “I’m so happy,” thought Mary. (Collins (1997: 11))

They are similar in their surface forms and instantiate Main Verb Inversion constructions in English, within which elements are ordered roughly as ‘XP V DP.’

The aim of the paper is to argue that LI and QI should be analyzed differently, contra some authors who have given a similar treatment to these constructions (Collins (1997) and Wu (2008) among many others). I show that the LI and QI constructions differ as to how pronouns are realized in tag questions, whether post-nominal alone can modify post-verbal DPs, and how sensitive they are to experiencer arguments selected by raising verbs. To account for these disparities, I propose that Number-features originate in T heads, whereas Person-features and Tense-features originate in C heads. With the mechanism of Feature Inheritance (Chomsky (2008)), Person-features and Tense-features are generally lowered to T heads.

Along the lines of Hoekstra and Mulder (1990), Bresnan (1994), Collins (1997), and Wu (2008), among many others, I argue that, in the derivation of LI, locative PPs are moved to [Spec, TP] and post-verbal DPs remain in their base position. On the other hand, I argue that QI is derived when Inheritance is not deployed, and that post-verbal DPs in QI undergo ‘covert’ A-movement to [Spec, TP] (Bobaljik (2002), Potsdam and Polinsky (2012), Polinsky and Potsdam (2013)).

This paper is organized as follows. Section 2 presents the three types of contrast between LI and QI. Section 3 puts forward my proposal to provide an account of the differences. Section 4 examines two previous studies of QI (Collins (1997), Gyoda (1999)) and shows that both of these analyses are empirically inadequate. Section 5 concludes the paper.

2. Empirical Facts

This section gives three kinds of new evidence showing that LI and QI behave differently.

2.1. Fact 1: The Realization of Pronouns in Tag Questions

As Bowers (1976) observes, tag pronouns in LI are realized as there.

(3) In the garden is a beautiful statue, isn’t there/*it?
   (Adapted from Bowers (1976: 237))

This is not true of QI, where tag pronouns must correspond to post-verbal DPs, as shown in (4).
(4) “Never!” cried a strange man, didn’t he/*there/*it/*so?

2.2. Fact 2: Post-nominal *Alone*

The second difference is concerned with the cases where *alone* appears after DPs in the sense of ‘only.’ When inversion is induced, post-verbal DPs can end with this expression in Quotative but not in Locative constructions.

(5) a. John alone is standing on the wall.
    b. ??On the wall is standing John alone.
    c. On the wall is standing only John.

    b. “Look at me!” shouted John alone.

2.3. Fact 3: Intervention Effects Caused by Experiencers

The past literature has shown that both LI and QI can be embedded under raising verbs, as exemplified in (7) and (8) (Postal (1977), Kathol and Levine (1993), Wu (2008)).

(7) Near the fountain seem to have been found two purple bananas and a peach.  
    (Postal (1977: 148))

(8) “Leave me alone!” seemed to shout the little girl.  
    (Wu (2008: 100))

What has remained unobserved so far is the way these constructions respond with intervening experiencer arguments.

When an experiencer occurs just before *to*-infinitives, default (3sg) agreement arises in LI.

(9) a. *?On the wall seem to Mary to be standing many men.
    b. On the wall seems to Mary to be standing many men.
    c. On the wall seemed to Mary to be standing many men.
    d. *?On the wall seems to be standing many men.
    e. On the wall seem to be standing many men.

The examples in (9) indicate that the experiencer prevents the agreement relation between the matrix T and the post-verbal DP, and, as a result, default agreement surfaces.

QI, on the other hand, is incompatible with experiencer arguments even in the past tense, where the matter of default agreement is irrelevant. Note also that its non-inverted counterpart can co-occur with experiencer arguments.
TWO TYPES OF MAIN VERB INVERSION

(10) a. “Look at me. I’m still here!” seemed to shout the barn.
b. *“Look at me. I’m still here!” seemed to Mary to shout the barn.
c. “Look at me. I’m still here!” the barn seemed to Mary to shout.

Thus, LI and QI are similar in that they show intervention effects induced by experiencer arguments. However, they differ in how they react: LI leads to default agreement, while QI leads to ungrammaticality.

Summarizing this section, we have seen the three contrasts between LI and QI. They differ in the realization of pronouns in tag questions, the distribution of alone-final DPs, and intervention effects caused by the addition of an experiencer argument.

3. Proposal

This section presents my proposal and shows how it accounts for the characteristics of LI and QI we have seen in the last section.

Chomsky (2008) argues that C is the locus where Tense- and Agree-features originate. He further argues that they are lowered to T by the mechanism of Feature Inheritance.

(11) $C \rightarrow C \rightarrow C \rightarrow T$

$[\text{Tense, Agree}] [\text{Tense, Agree}] [\text{Tense, Agree}]$

As for inheritance of Agree-features, i.e. $\varphi$-features, this paper proposes that Number-features originate in T, whereas Person-features originate in C and may be inherited by T (cf. Hiraiwa (2005)).

(12) $C \rightarrow C \rightarrow C \rightarrow T$

$[P, \text{Tense}] [N] [P, \text{Tense}] [P, N, \text{Tense}]$

1 Not all kinds of intervening phrase show intervention effects. In contrast to experiencer arguments, adjuncts do not show such effects.

(i) a. On the wall seem on some occasions to be standing many men.
b. “Look at me. I’m still here!” seemed on some occasions to shout the barn.

This fact indicates that the intervention effects in (9) and (10) cannot be explained solely in terms of word order restrictions such that a raising verb and a to-infinitive be adjacent (cf. Bruening (2012)).

In section 3, I argue that these intervention effects arise because of a violation of Relativized Minimality (Rizzi (1990)). Experiencers act as an intervener for A-dependency between the matrix T and the post-verbal DP. On the other hand, adjuncts in general do not count as interveners for A-dependency because of their $A'$-status.
The origin of Person-features in C heads has a conceptual basis. As Hornstein et al. (2008: 204) note, the feature Person “endows a given probe with Case-valuation properties, if it is [−interpretable]. For instance, the φ-set of a finite T, which has a [−interpretable] Person feature, enables it to value a given Case feature (as nominative), as opposed to the φ-set of a participial head, which does not have this feature, and cannot by itself empower the participial head with Case-valuation properties.” Thus, Person-features are given a privileged status in driving computation. Given that phases play a prominent role in the current minimalist theorizing, it is natural that Person-features originate in phase heads.

Empirical evidence for my proposal comes from ellipsis phenomena. Lobeck (1990) claims that functional heads can license ellipsis of their complement only when they are in spec-head agreement relations, i.e., when they share some kind of feature with their specifier. For example, tensed I,’s, and [+wh] C can elide their complement, whereas the nonagreeing heads such as the and that cannot (see Fukui and Speas (1986)).

(13) a. John liked Mary and [IP Peter, [D′ did [T like Mary]]] too.
   b. John’s talk about the economy was interesting but [DP Bill [D′ ’s talk about the economy]] was boring.
   c. *A single student came to the class because [DP [D′ the student]] thought that it was important.
   d. John met someone but I don’t know [CP who [C John met t]].
   e. *John believes C/that Peter met someone but I don’t think [CP [C C/that Peter met someone]]. (Bošković (2007: 596))

Given this generalization, consider the following example.

(14) The printer works, but the copier doesn’t seem to.

(Wurmbrand (2012: 4))

Example (14) shows that VP-ellipsis is possible in infinitives selected by seem, and suggests that to’s in raising infinitives undergo spec-head agreement. Then, it is reasonable to assume that T heads in raising infinitives have φ-features that agree with relevant noun phrases.

The presence of φ-features in raising infinitives follows from my proposal that Number-features originate in T. Even if T is not selected by C, T contains a Number-feature, as illustrated in (15).

(15) C …. T (finite) …. T (raising) → C …. T (finite) …. T (raising)

\[
\begin{array}{cccc}
\text{[P]} & \text{[N]} & \text{[N]} & \text{[P]} & \text{[P, N]} & \text{[N]}
\end{array}
\]

On the other hand, if we assume both Person- and Number-features to be inherited from C to T, it is unexpected that raising infinitives contain
\[ \text{TWO TYPES OF MAIN VERB INVERSION} \]

\[ \varphi\text{-features.} \]

(16) \[ C \ldots T \text{ (finite)} \ldots T \text{ (raising)} \rightarrow C \ldots T \text{ (finite)} \ldots T \text{ (raising)} \]

\[ \{P, N\} \quad \{P, N\} \quad \{P, N\} \]

Therefore, the acceptable status of example (14) shows that my proposal is superior to full \( \varphi \)-features Inheritance.\(^2\)

An EL reviewer notes that the argument for my proposal on the basis of (14) is not so convincing, because typical raising predicates like \textit{seem} are in fact ambiguous between raising and control (Lasnik and Saito (1992), Martin (1996)). One way to eliminate this confounding factor is to use an idiomatic expression which is incompatible with control predicates.

(17) \*Advantage wants to be taken of John.

(Lasnik and Saito (1992: 141))

Since we can eliminate a control parse by using idioms, \textit{seems} in (18) must be a true raising predicate.

(18) I don’t know if the shit really does hit the fan every Monday around here, but it sure seems to. (Richards (2003: 223, fn. 1))

Then, example (18) verifies that the raising infinitive can license VP-ellipsis (Richards (2003)), and the validity of my argument is maintained.\(^3\)

Under the present implementation of Feature Inheritance, I argue that C heads send Person-features and Tense-features to T heads, except in the derivation of QI. Let us first consider the derivation of subject-raising constructions and \textit{there} constructions, such as shown in (19).

---

\(^2\) See Arano (2013b) for further consequences of Number-features in raising infinitives.

\(^3\) Another way to force a raising structure is to use a \textit{there} construction.

(i) \*There tried to be a riot. (Lasnik and Saito (1992: 141))

An EL reviewer asks why (ii) is bad if the T in the raising context enters into a spec-head agreement.

(ii) \*John doubts that there will be a riot but I think there is likely to. It appears to suggest that a genuine raising infinitive cannot license VP-ellipsis. However, it is unclear that a forced raising structure is responsible for the ill-formedness of (ii) because VP-ellipsis of \textit{be} is impossible even with control infinitives, which are generally believed to be able to license VP-ellipsis.

(iii) a. \*John is trying to be happy, but Mary isn’t trying to. (Richards (2003: 223, fn. 1))

b. Kim isn’t sure she can’t solve the problem but she will try to. (Wurmbrand (2012: 3))

Therefore, the ungrammaticality of (ii) would be accounted for by a specific property of \textit{be}. 

(19) a. John seems to be the best.
   b. There seems to be a man in the room.

Since Chomsky (2000), agreement dependencies have been assumed to be formed via the mechanism of Agree, a feature-valuation operation under closest c-command. Agree creates a relationship between probes and goals without movement, and overt movement is regarded as a consequence of the EPP property. Therefore, subject-raising constructions are derived as follows.

(20) a. \([TP \ T \ [\_p \ seemed \ [TP \ to \ [\_p \ be\ John \ the \ best]]]]\]
    Agree

b. \([TP \ John \ T \ [\_p \ seemed \ [TP \ to \ [\_p \ be\ John \ the \ best]]]]\]
   Overt movement

First, Person- and Number-features create a link between the matrix T and John via Agree. Then, the movement of John is triggered by the EPP property of T.

The derivation of there constructions is illustrated in (21).

(21) \([TP \ there \ T \ [\_p \ seemed \ [TP \ to \ [\_p \ be\ a \ man \ in \ the \ room]]]]\]
    Merge
    Agree

In (21), an expletive there is inserted into [Spec, TP]. I argue that it plays two roles in the derivation. First, it satisfies an EPP property of T, and makes DP associated with T stay in its original position (see den Dikken (1995) and Lasnik (2003)). Second, it deletes or shifts to default a Person-feature of T (Chomsky (2000: 149, fn. 90)), and, as its consequence, T’s probing only involves Number. This point is empirically motivated. Let us consider the contrast between (22) and (23).

(22) a. I \{am/is\} here.
   b. We are here. (Kobayashi (2013: 8))

(23) a. There \{is/am\} only me.
   b. There are only us. (Kobayashi (2013: 8, 9))

The examples in (22) show that when overt movement is induced, the noun phrases and T’s agree in Person and Number. In contrast, we see from (23) that, in there constructions, T’s match with the noun phrases in Number, but not in Person. This contrast directly follows from the present analysis.

As for LI, I argue that it is a construction in which a locative phrase is moved to [Spec, TP] and a post-verbal DP stays in-situ. Its derivation pro-
ceeds in the following way. First, T agrees with a locative PP. Second, an EPP property of T is satisfied by the locative phrase. Third, T agrees with a post-verbal DP.

(24) Under the bridge lived a troll.

(25) a. \([TP \ T [v \ P \ lived \ [VP \ a \ troll \ V \ [PP \ under \ the \ bridge]]]]\)

b. \([TP \ [PP \ under \ the \ bridge] \ T [v \ P \ lived \ [VP \ a \ troll \ V \ [PP \ under \ the \ bridge]]]]\)

c. \([TP \ [PP \ under \ the \ bridge] \ T [v \ P \ lived \ [VP \ a \ troll \ V \ [PP \ under \ the \ bridge]]]]\)

This derivation is feasible under two assumptions. The first is the notion of minimal domain (Chomsky (1995)). Specifically, I assume that elements within the same immediate maximal projection are equidistant for purposes of minimality (Collins (1997), Hornstein (2009)). Since a troll and under the bridge are within the same VP, they are equidistant from T, and can be a target of Agree at (25a) and (25c).

Second, I assume following Wu (2008: 36, 37) that locative prepositional phrases are special in that they are ‘semi-lexical’ categories (van Riemsdijk (1990)) and are equipped with defective φ-feature(s), which allow them to be in an agreement relationship with T. Though Wu (2008) does not specify which kind of φ-feature(s) locative phrases have, I would like to suggest that they possess a Person-feature and can delete or shift to default a Person-feature of T.4 A piece of evidence for this assumption comes from agreement.

(26) a. On the wall \{is/*am\} standing only me.

b. On the wall are standing only us.

The examples in (26) indicate that T’s agree with the noun phrases only in Number in LI. This fact is straightforwardly accounted for under the present analysis.

Non-inverted counterparts of LI are derived when T first agrees with a

---

4 In this respect, locative prepositional phrases have the same characteristic as an expletive there. Given that there has a usage of locative pro-form, this coincidence is unsurprising.
noun phrase within VP.

(27) (Under the bridge) a troll lived (under the bridge).
(28) a. \([\text{CP} \ (\text{PP}) \ [\text{TP} \ T \ [\text{vP} \ \text{lived} \ [\text{vP} \ \text{a troll} \ V \ (\text{PP})]]]]\]

   Agree

b. \([\text{CP} \ (\text{PP}) \ [\text{TP} \ \text{a troll} \ T \ [\text{vP} \ \text{lived} \ [\text{vP} \ \text{a troll} \ V \ (\text{PP})]]]]\]

Overt movement

Thus, inversion in locative constructions is optional because T can agree with either of the elements within VP (Collins (1997)).

Finally, let us turn to the derivation of QI. So far, we have seen cases where Feature Inheritance occurs. Contrary to these, I argue that QI is derived when Feature Inheritance is not induced, and that its derivation involves ‘covert’ movement of post-verbal subjects to [Spec, TP]. Without inheritance, C retains a Person-feature and a Tense-feature, and T has a Number-feature and an EPP property. The derivation of QI is illustrated below.5

(29) “Look at me. I’m still here!” shouted the barn.
(30) a. \([\text{CP} \ \text{Quote} \ C \ [\text{TP} \ [\text{XP} \ \text{shout} \ [\text{vP} \ \text{the barn} \ V \ [\text{vP} \ \text{V}_{\text{Quote}}]]]]]]\]

   Agree

b. \([\text{CP} \ \text{Quote} \ C \ [\text{TP} \ \text{the barn} \ T \ [\text{XP} \ \text{shout} \ [\text{vP} \ \text{the barn} \ V \ [\text{vP} \ \text{V}_{\text{Quote}}]]]]]]\]

‘Covert’ movement

In (30a), C and T have acted as independent probes because the former has a Person-feature and the latter has a Number-feature. Moreover, the post-verbal DP has been moved to [Spec, TP] in syntax to satisfy the EPP property of T, and has created two copies. I argue that this movement becomes ‘covert’ in terms of the copy theory of movement (Chomsky (1995)), which states that movement leaves behind full copies of the moved element. Under this theory, all copies exist in narrow syntax. However, they are selectively deleted at the phonological interface. Overt movement is the option of pronouncing the highest copy. Covert movement, on the other

5 I assume that the verb precedes the base position of subjects via short verb movement, and that the verb is not raised to T. The identity of its landing site is irrelevant for the present discussion. See Collins and Branigan (1997), Suñer (2000), Collins (2005), and Kitahara (2011) for various possibilities.
hand, involves the pronunciation of the lowest copy, which is possible when pronunciation of the higher copy is prohibited by a requirement imposed at the PF interface (Bobaljik (2002), Bošković (2002), Nunes (2004)). I argue that the latter option is taken in the derivation of QI. Since the Tense-feature stays on C in (30b), it is reasonable to assume that a tense affix is on C. Being a bound morpheme (Chomsky (1957)), it must come together with some verbal element via PF-/morphological merger. If the higher copy of DP were pronounced, however, this requirement would not be satisfied.6 Therefore, the lower copy of DP in its base position is given a pronunciation in the derivation of QI.7

(31)  

6 An EL reviewer asks why V-to-C movement or do-support cannot take place to save a stranded affix. First, I assume that V-to-C movement through T is impossible because main verbs in English never move to T (Pollock (1989)) (see section 4 for an empirical problem with this approach). Second, English has a rule of do-support, which applies to stranded affixes as a last resort (Chomsky (1957)). If this rule were applicable in the derivation of QI, sentences like (i) would be acceptable, contrary to fact.

(i) *“I lost my key,” did John say.

I argue that do-support is inapplicable in the derivation of QI because Person- and Number-features are scattered on different heads, as shown in (ii).

(ii)  

7 An EL reviewer raises a question about copies in a chain. Specifically, he or she asks what prevents an intermediate copy (i.e. the one in the spec of the raising TP) from being pronounced.

(i) *“Look at me …,” seemed the barn to shout.

I leave this question for future research.
heritance applies.

(33) ("Look at me. I’m still here!") the barn shouted ("Look at me. I’m still here!")

(34) a. $[CP \text{ (Quote)} [TP T [vP the barn shout [VP V (Quote)]]]]$

Agree

b. $[CP \text{ (Quote)} [TP the barn T [vP the barn shout [VP V (Quote)]]]]$

Overt movement

Thus, I argue that the optionality of QI is reduced to that of Feature Inheritance. Note that quotative constructions involve unergative verbs, where a noun phrase originates in [Spec, vP], while a quote originates within VP. Therefore, the former is closer to T than the latter, which makes it impossible for QI to be derived in the same way as LI.

EL reviewers ask why quotative constructions are special in that they allow Feature Inheritance to be optional. I argue that this feature of quotative constructions is related to properties of C. Rizzi (1997) characterizes the complementizer as the interface between a propositional content and the superordinate structure, and says that complementizers express the following kinds of information.

(35) Complementizers express the fact that a sentence is a question, a declarative, an exclamative, a relative, a comparative, an adverbial of a certain kinds, etc. (Rizzi (1997: 283))

Given this characterization of C heads, I argue following Gyoda (1999) that there is a distinctive clause type “Quotative,” which requires a quote to be in [Spec, CP]. This claim has a firm basis. For instance, Gyoda (1999: 287, 288) lists five points where sentences starting with quotes are different from indirect speech: “(a) a subordinating conjunction (e.g. that) cannot introduce the quote; (b) the verbs of the quote do not undergo a sequence of tenses rule, that the tense of a verb in a matrix clause place [sic] constraints on the tense of a finite verb in a subordinate clause; (c) the personal pronouns with the same referent in the matrix and subordinate clauses of indirect speech is [sic] identical; (d) the deictic elements which refer to the time or place or the demonstratives of the quoted speech act does [sic] not change according with the matrix clause; and (e) the quote is a root sentence and it is possible to quote anything that someone says.” From these considerations, I assume there to be a clause type “Quotative,” which is different from other declarative sentences that we have seen above. Then it is natural that C heads in quotative constructions show a distinct property, es-
especially in the context of the phase theory, where phase heads, like C, play an important role in the derivation.

Summarizing, I have argued that LI and QI are derived in an essentially different way. In LI, post-verbal DPs remain in their original position, and locatives are moved into [Spec, TP]. By contrast, post-verbal DPs in QI are moved to [Spec, TP] in syntax, but are pronounced at their base position. Based on these analyses, the following subsections account for the facts seen in section 2. I also show that a fact noted in the past literature supports my proposal.

3.1. Fact 1

In tag questions, a pronoun in the tag generally must agree with the syntactic subject, i.e. an element sitting in [Spec, TP] (Culicover (1992)).

(36) a. John has bought a new car, hasn’t he/*it?
b. There’s a gas station ahead, isn’t there/*it?

(Adapted from McCawley (1998: 251))

Given this, my analysis predicts that LI and QI should behave differently with respect to the realization of pronouns in the tag. The specifier of TP in LI is occupied by a locative phrase. In contrast, this position is occupied by a post-verbal subject in QI. Therefore, it is predicted that a pronoun in the tag corresponds to a locative phrase in LI, but corresponds to a semantic subject in QI. This explains the first disparity, repeated in (37).

(37) a. In the garden is a beautiful statue, isn’t there/*it?

(Adapted from Bowers (1976: 237))
b. “Never!” cried a strange man, didn’t he/*there/*it/*so?

3.2. Fact 2

The distribution of alone-final DPs is not free. Simplifying somewhat, only DPs sitting in the subject position can be modified by post-nominal alone (see Postal (1974: 99–102)). Thus, alone can follow DPs in [Spec, TP], but it fails to modify objects or associates in there constructions.

(38) a. Jones alone knows the secret formula. (Postal (1974: 99))
b. *Jim proved that result alone. (Postal (1974: 100))
c. Jim proved only that result. (Postal (1974: 100))
d. *There arrived few people alone.
e. There arrived only few people.

Given this restriction, the contrast between (39a) and (39c) is expected under my analysis.
Post-verbal DPs in LI do not move to [Spec, TP] due to the presence of locative phrases, and therefore cannot license alone. In contrast, semantic subjects in QI are moved to [Spec, TP] in syntax, and the modification by alone is allowed.

3.3. Fact 3

In this subsection, I account for the contrast between LI and QI on intervention effects by experiencer arguments. In so doing, I rely on the feature-based version of Relativized Minimality by Starke (2001), essentially following Boeckx (2008). So, I begin this subsection by introducing his analysis.

As is well known, raising across experiencers is licit in English, i.e., there are no intervention effects in overt movement.

(40) a. John seems to Mary to be the best.
    b. John and Bill/The men seem to Mary to be the best.

Boeckx (2008) shows that Agree involved in there constructions is subject to a different restriction by presenting the following paradigm.8

(41) a.*?There seem to Mary to be men in the room.
    b. There seems to Mary to be men in the room.
    c.*?There seems to be men in the room.

The examples in (41) show that when experiencers intervene, they prevent the agreement relation between matrix T’s and associates, and default agreement arises. Thus, in (41a), the matrix verb cannot show plural agreement. The source of singular agreement in (41b) cannot be the experiencer argument, because default agreement arises even when an experiencer argument is plural, as shown in (42).

(42) There *seem/seems to two women to be several men in the room.

We thus face a case of defective intervention in the sense of Chomsky (2000). This is a situation where some head seeks a matching DP to be

8 The observation in (41) is attributed to Howard Lasnik (personal communication).
in an agreement relationship, but there is some other intervening DP. This additional DP is inert for agreement or movement, because it has already had its features checked by some other element. In (41a, b), the matrix T tries to agree with the associate in the embedded clause, but the agreement is prevented due to the presence of the experiencer, which is not eligible for agreement because its features have been checked by the preposition.

Boeckx (2008) accounts for the contrast between subject-raising constructions and there constructions by relying on the following assumptions.

(43)  
   a. Agree forcing overt movement involves Person and Number.
   b. Agree deployed in there constructions only involves Number.

(44)  
   Experiencers are not eligible for Person-feature checking.\(^9\)

He analyzes blocking effects by experiencer as Relativized Minimality effects (Rizzi (1990)). Relativized Minimality forbids the situation illustrated in (45).

(45)  
   \([\alpha\ldots\gamma\ldots\beta\ldots]]\)
   where \(\gamma\) c-commands \(\beta\), \(\alpha\) c-commands \(\gamma\), and \(\alpha\) matches both \(\beta\) and \(\gamma\)

Boeckx adopts the feature-based version of Relativized Minimality by Starke (2001). In this version, the dependency shown in (46a) is excluded as a Relativized Minimality violation. On the other hand, the dependency in (46b) is regarded as legitimate because of the presence of \(\beta\), which is absent in an intervener.

(46)  
   a. \(*\alpha\ldots\alpha\ldots\alpha\)
   b. \(\alpha\beta\ldots\alpha\ldots\alpha\beta\) \((\alpha\ and\ \beta\ express\ a\ feature\ type)\)

A concrete example of (46a) is given by a Superiority Condition such as in (47).

(47)  
   \(*\text{What}_i\ did\ who\ buy\ \text{t}_i\) \quad (Boeckx (2008: 158))

(48)  
   \([C\ [\text{who}\ T\ [\text{buy}\ \text{what}]]]\)
   \(\alpha\ \alpha\ \alpha\)
   \(+\text{wh}\ +\text{wh}\ +\text{wh}\) \quad (Boeckx (2008: 158))

A case of (46b) is exemplified by weak islands, which are selective in the sense that only certain elements can be extracted from them (Cinque (1990),

\(^9\) Boeckx (2008) motivates this assumption by proposing that Case-checking by prepositions makes Person-features transparent. He notes that when prepositions show ‘concord’ effects, agreement is limited to Number, and never involves Person.
Rizzi (1990), Szabolchi and Zwarts (1993)). The examples in (49) show a D-linked/non D-linked contrast with regard to extraction from wh-islands.

(49)  
a. *What do you wonder whether Mary read?  
b. Which book do you wonder whether Mary read?  

(Boeckx (2008: 158))

Starke (2001) argues that (49a) corresponds to the situation in (46a), and (49b) is relatively better because the moved element is β-related because of D-linking.

Boeckx (2008) argues that the contrast in (46) is also instantiated in (50).

(50)  
a. John and Bill/The men seem to Mary to be the best.  
b. There seems/*?seem to Mary to be men in the room.  

(Boeckx (2008: 151))

The derivation of overt movement involves Person- and Number-feature agreement ((43a)), and Person-features of experiencers are inert ((44)). Therefore, the following relation is created in overt movement involved in subject-raising constructions.

(51)  
\[ \begin{array}{c} T \medexp \DP \\ [P, N] [N] [P, N] \end{array} \]

The matrix T and the subject agree in Person and Number. Since the syntactically visible feature of the experiencer is the Number-feature, (51) is licit. In contrast, Agree deployed in there constructions only involves the Number-feature ((43b)). Therefore, the dependency is excluded when there is an intervening experiencer, as shown in (52).\(^\text{10}\)

(52)  
\[ \begin{array}{c} *T \medexp \DP \\ [N] [N] [N] \end{array} \]

\(^\text{10}\) I assume that experiencer arguments c-command elements outside a PP node throughout the derivation. This assumption is motivated by the tests of Condition C, NPI licensing, bound variable licensing, and Superiority effects.

(i)  
a. *They seem to him, to like John.  
b. John seems to nobody to like anything.  
c. John seems to every boy, to like him.  
d. *What, does John seem to whom to like t?  

(Chomsky (1995: 304))  
(Storoshenko (2006: 262))  
(Storoshenko (2006: 262))  
(Storoshenko (2006: 262))

Example (id) is especially important because it shows that experiencer arguments block overt A′-movement, but not overt A-movement in the same configuration. It is excluded because it instantiates a case of (46a) (see (48)). To the best of my knowledge, the feature-based version of Relativized Minimality is the only one to account for the contrast between A-movement and A′-movement.
I follow Boeckx (2008) in claiming that the contrast between subject-raising constructions and *there* constructions is reduced to the difference in features involved, and make the following analyses under my proposal. I have argued that Person-features in \( C \) are lowered to \( T \) in the derivation of subject-raising constructions and *there* constructions. Therefore, when overt movement occurs, probing by \( T \) involves Person-features and Number-features, and its EPP property is satisfied by concomitant movement. As seen above, the intervention effect does not arise here.

(53) **Subject-raising constructions**

\[
\begin{array}{c}
C \ldots T \ldots \text{exp} \ldots \text{DP} \\
\{P, N, \text{EPP}\} \quad [N] \quad [P, N]
\end{array}
\]

As for *there* constructions, I have argued that only the Number feature is involved when \( T \) and an associate are in an agreement relationship, due to the presence of expletives that are responsible for checking of the Person-feature and the EPP property of \( T \) (Chomsky (2000)). Therefore, intervening experiencers block the dependency, and default agreement arises.

(54) **There constructions**

\[
\begin{array}{c}
C \ldots \text{there} \ldots T \ldots \text{exp} \ldots \text{DP} \\
\{P, N, \text{EPP}\} \quad [N] \quad [N]
\end{array}
\]

Default agreement

Recall that I have argued that locative phrases have the ability to check the Person-feature and the EPP property of \( T \), as an expletive *there*. Hence, LI is predicted to behave in the same way as *there* constructions with respect to agreement.

(55) **LI**

\[
\begin{array}{c}
C \ldots \text{PP} \ldots T \ldots \text{exp} \ldots \text{DP} \\
\{P, N, \text{EPP}\} \quad [N] \quad [N]
\end{array}
\]

Default agreement

(56) a.*?On the wall seem to Mary to be standing many men.

b. On the wall seems to Mary to be standing many men.

Let us turn to the derivation of QI, which results in ungrammaticality when there is an intervening experiencer.
(57) a. “Look at me. I’m still here!” seemed to shout the barn.
    b. *“Look at me. I’m still here!” seemed to Mary to shout the barn.

I have proposed that in the derivation of QI, the Person-feature stays on C, and C and T act as an independent probe. In this case, intervening experiencers are predicted to block the probing by the Number-feature in T, as shown in (58). Furthermore, let us assume that the satisfaction of the EPP by movement requires Agree as its prerequisite (Chomsky (2000)). Then, failure to agree implies that EPP is not satisfied.

(58) QI

\[
\begin{array}{c}
\text{C} \\
\text{T} \\
\text{exp} \\
\text{DP}
\end{array}
\]

\[
\begin{array}{c}
\text{[N, EPP]} \\
\text{[N]} \\
\text{[P, N]}
\end{array}
\]

Thus, QI and LI have a different status when the Number-feature probing is prohibited: only the former involves a violation of the EPP requirement. I argue that this is a source of contrast between the two constructions.

Some notes on consequences of intervention are in order here. I assume along with Preminger (2009) that the failure to Agree will not lead the derivation to crash, and it only assigns default values to features involved. Thus, default agreement, not ungrammaticality, arises in there constructions and LI. Note that this strategy is available as long as features have values. As Lasnik (2001) emphasizes, an EPP in the Agree-framework is not a feature in the technical sense. It just demands that “certain functional heads must have a specifier (Lasnik (2001: 357)).” Put differently, the EPP has neither values nor default options. Therefore, the failure to satisfy the EPP leads the derivation to crash. That is why QI results in ungrammaticality.

In summary, I have shown that my proposal accounts for the newly reported contrasts between LI and QI. The first and second contrasts are direct consequences of my proposal that only post-verbal DPs in QI are moved to [Spec, TP]. I have analyzed the third difference in terms of the feature-based version of Relativized Minimality, following Boeckx (2008). Both of these constructions show intervention effects with experiencers. I have captured this similarity by arguing that agreement between T’s and post-verbal DPs in these constructions only involves Number. However, they differ how they respond when experiencers block probing by T. I have related this difference to EPP satisfaction in these constructions.
3.4. A Further Consequence

My proposal makes a prediction that LI’s and QI’s post-verbal DPs are interpreted in different positions: The former are interpreted in the base position and the latter in [Spec, TP]. This prediction is supported by control phenomena (Postal (1977), Gyoda (1999)). The examples in (59) and (60) show whether post-verbal DPs in these constructions can be an antecedent of PRO in the adjunct phrase.

(59) a. “Ah, Pam,” said Sarahi, PROi waving her hand in disgust.

(Gyoda (1999: 278))

b. “Indeed,” said Johni without PROi smiling.

(60) a. Near the oasis two sheiks lay without PROi talking.

b. *Near the oasis (there) lay two sheiks without PROi talking.

c. Under the bridge two trolls seem to have been sitting without PROi breathing.

d. *Under the bridge (there) seem to have been sitting two trolls without PROi breathing.

(Postal (1977: 150))

This contrast indicates that the post-verbal DP is interpreted higher in QI than in LI, which follows from the present analysis.

4. Previous Analyses of QI

This section shows that covert A-movement approach to QI is superior to the previous analyses proposed by Collins (1997) and Gyoda (1999).11

Collins (1997) proposes that the post-verbal subject in QI remains in its base position and does not move to [Spec, TP]. He further argues that the EPP property of T is satisfied by the quotative operator, which is an empty category that eventually is related anaphorically to the actual quote. His analysis is problematic in that it cannot deal with the facts on the realization of tag pronouns, the distribution of post-nominal alone, and control into adjuncts. These facts strongly suggest that the post-verbal subject in QI is moved to [Spec, TP].

Gyoda (1999), on the other hand, proposes that the matrix subject in QI

11 This section concentrates on the discussion related to the status of subjects in QI. Therefore, we will not discuss other well-discussed topics of QI, such as the status of quotes, the transitivity restriction, and the incompatibility with the complex tense. For these issues, see Branigan and Collins (1993), Collins and Branigan (1997), Collins (1997), Gyoda (1999), Suñer (2000), Alexiadou and Anagnostopoulou (2001, 2007), Stepanov and Stateva (2004), Wu (2008) and Richards (2010).
is overtly raised to [Spec, TP]. His proposal resolves the problems with Collins (1997). To derive correct word orders in which the main verb precedes the subject, he further proposes that the matrix verb in QI moves to C through T. One problem with this latter proposal is posed by the fact that QI may be embedded under raising verbs.

(61)  
(a) “Leave me alone!” seemed to shout the little girl.  
(Wu (2008: 100))  
(b) “We’re innocent,” began to plead the terrified members of the executive council.  
(Kathol and Levine (1993: 210))

If the verb in QI were moved up to T, the sentences in (61) would be predicted to be ungrammatical contrary to the fact, because the embedded T position is occupied by to. The acceptable status of (61) suggests that the verb in QI does not move to T, much less to C. The covert A-movement approach, on the other hand, is not beset by this problem, because the post-verbal DP is realized in its base-generated position (see note 5).

It is worth noting that the covert A-movement approach fits well with the argument that Collins (1997) makes when he supports the in-situ status of subjects in QI. Let us consider the paradigm illustrated in (62).

(62)  
(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.

12 Gyoda (1999) offers two pieces of additional evidence for movement to [Spec, TP], other than control phenomena. Nevertheless, neither of them is compelling.

First, he argues that post-verbal subjects move to [Spec, TP] based on the fact that there is agreement for number and Case between subjects and verbs.

(i)  
(a) “Well,” says/*say John.  
(b) “OK,” said he/*him.  
(Gyoda (1999: 278))

Once we assume the mechanism of Agree, however, the agreement relationship can be captured without movement. Therefore, the facts in (i) cannot be solid evidence for movement of post-verbal noun phrases.

Second, he presents the acceptability of (ii) as supporting evidence.

(ii)  
(a) “Very well, on this occasion,” said Thomas, and lapsed into an understanding silence.  
(b) “Fiona’s out,” said the voice and gave a little breathless giggle.  
(Gyoda (1999: 278))

In (ii), the post-verbal DPs in the first conjuncts act as the subjects of the second conjuncts. Assuming that and conjoins two verb phrases, it is natural, he argues, to explain that the noun phrases undergo movement from [Spec, vP], a base-generated position. However, the acceptable status of (iii) clearly shows that this type of coordinate structure is possible even when there is no movement of noun phrases.

(iii) Then there arrived a hunter and shot the rabbit dead.
It is shown that floating quantifiers are disallowed when inversion is induced in quotative constructions. Assuming the stranding approach to floating quantifiers (Sportiche (1988)), we may assume that the subject strands a quantifier when it undergoes overt movement to [Spec, TP]. Then example (62c) suggests that the subject does not move overtly. However, this argument does not exclude the possibility that the subject moves covertly. Therefore, the facts in (62) are consistent with the covert A-movement approach.

Summing up, I have pointed out empirical problems with Collins (1997) and Gyoda (1999), and have shown that QI is best explained under the covert A-movement approach.

5. Conclusion

This paper has given three pieces of new evidence showing disparities between LI and QI, which look alike on a superficial level. I have proposed that Number-features originate in T heads, whereas Person-features and Tense-features originate in C heads. With the mechanism of Feature Inheritance (Chomsky (2008)), those features on C heads are generally lowered to T heads. I have argued that post-verbal DPs in LI remain in their original position due to the presence of locative phrases in [Spec, TP]. By contrast, I have argued that QI is derived when Inheritance is not induced, and that post-verbal DPs in QI undergo covert A-movement to [Spec, TP]. Finally, I have shown that the covert A-movement analysis of QI has broader empirical coverage than previous analyses.

REFERENCES

Arano, Akihiko (2013a) “Two Types of Main Verb Inversion in English,” *JELS* 30, 10–16.
Arano, Akihiko (2013b) “Uninterpretable Features and the Immobility of Constitu-


Hornstein, Norbert, Ana Maria Martins and Jairo Nunes (2008) “Perception and
Zabala, Anne Rimrott and Dennis Ryan Storoshenko, 257–265, Linguistics Graduate Student Association, Burnaby.

[received April 1, 2013, revised and accepted October 17, 2013]

Department of English Linguistics
Tohoku University
Kawauchi, Aoba-ku, Sendai-shi
Miyagi 980–8576
e-mail: b1ld1005@tohoku.ac.jp