HEAVY NP SHIFT IN ENGLISH AND A-MOVEMENT IN SUBJECT-PROMINENT LANGUAGES

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According to Miyagawa’s (2005, 2007, 2010, etc.) view that human languages are divided into two types with regard to the way that the requirement of the EPP on T is satisfied, English is a Subject-prominent language. In this type of language, the EPP on T works in tandem with a φ-feature and always triggers the A-movement of an XP that establishes an Agree relation with T through the φ-feature (i.e. a subject DP). Given this parameterization, even ‘stylistic inversion’ constructions in English, which are considered marked constructions because of their deviant word orders, are proven to be unmarked constructions that involve only this type of A-movement. This paper focuses on a Heavy NP Shift sentence as a case study to argue that Miyagawa’s parameterization of the EPP, together with the copy theory of movement, is highly promising with regard to research that examines the universality and diversity of human languages.*

Keywords: heavy NP shift, A-movement, EPP, Subject-prominent Language, copy theory of movement

1. Introduction

The EPP, which is a structural requirement that the specifier position (henceforth, Spec) of functional projections must be filled by certain elements (cf. Chomsky (2000, 2001)), has played a major role in the development of theoretical syntax and many theoretical studies have been done with the notion. In particular, Miyagawa (2005, 2007, 2010, etc.) argues that human languages are divided into two types according to the way that they satisfy the requirement of the EPP on T, and attempts to attribute long-observed asymmetries between Subject-prominent languages and Focus-
prominent languages (cf. Fukui (1986), Kuroda (1988), etc.) to the parameterization of the EPP.\(^1\) \(^2\) According to his parametric variations, English is classified as a Subject-prominent language. In this type of language, in which a φ-feature percolates down from C to T, the EPP on T works in tandem with the inherited φ-feature and always triggers the A-movement of an XP that establishes an Agree relation with T through the φ-feature (i.e. a subject DP), as illustrated in (1):

\[
\text{(1)}
\]

In contrast, in a Focus-prominent language like Japanese, a focus-feature percolates down from C to T. Thus, the EPP on T works in tandem with the focus-feature and triggers the A-movement of an XP that establishes an Agree relation with T through the focus-feature (i.e. a specially-focused XP), irrespective of its grammatical function, as illustrated in (2):

\[
\text{(2)}
\]

Reconsidered from this perspective, in English, a Subject-prominent language, even if a subject DP is realized in a non-canonical position in ‘stylistic inversion’ constructions, which are considered marked constructions because of their deviant word orders, the DP is required to undergo A-

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\(^1\) In this paper, following Miyagawa (2005, 2007, 2010, etc.), I use the term Focus-prominent language. This term is almost identical to the more conventional terms of Topic-prominent language and Discourse-related language.

\(^2\) One might wonder whether a φ-feature and a focus-feature constitute a natural class. Miyagawa (2005, 2007, 2010, etc.) asserts that a link between agreement and focus is adequate from a historical perspective, using Simpson and Wu’s (2001) argument that agreement in a variety of languages develops from a focus structure.
movement to its canonical position for the properties of the EPP in the type of language. Mikami (2010) attempts to reconsider the Locative Inversion Construction (LIC) from this parametric perspective:

(3) a. In the corner was a lamp.
   b. Into the room walked John.

In these sentences, the subject DP is realized in the sentence-final position, but in the paper, I argue that this type of A-movement should occur even in this marked construction for the properties of the EPP in Subject-prominent languages. That is, I prove that this construction is an unmarked construction that merely involves the A-movement of the subject DP to the Spec of TP.

In this paper, from the same perspective, I examine a Heavy NP Shift (HNPS) sentence, which is another type of ‘stylistic inversion’ construction, as shown in (4):

(4) John sent to his mother [the money you had wanted him to give to us]. (McCawley (1988: 511))

This sentence has also been considered an exception because of its deviant word order when formulating linguistic theory (cf. Emonds (1976), Rochemont (1978)). I show that an HNPS sentence such as (4) is also an unmarked construction that involves only the A-movement of the object DP to the “object position,” just like the Prepositional Dative Construction (PDC), as shown in (5), in which the Theme DP must precede the Goal PP as a result of the A-movement of the DP across the PP (cf. Takano (1996, 1998)).

   b. *John sent to his mother [money]. (McCawley (1988: 511))

More specifically, extending Mikami’s (2010) analysis of the LIC under the copy theory of movement, I argue that an HNPS sentence can be analyzed in a such a way that the ‘shifted’ object DP, like the non-shifted DP,

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Many of the previous studies of HNPS have assumed the rightward movement of the shifted DP, because in this phenomenon, the DP appears to be shifted rightward from its canonical position. For example, Nishikawa (1990) considers HNPS as the rightward A-movement of the shifted DP to the Spec of AgrO, whereas Nishihara (2005) treats the phenomenon as the rightward A’-movement to the v*P domain for checking a strong focus feature. However, given Miyagawa’s parametric variations, these approaches are untenable because they assume the movement of the object DP to its non-canonical position. In addition, the approaches might also be problematic with regard to Kayne’s (1994) Linear Correspondence Axiom (LCA), given that only leftward movement is permitted under the axiom (cf. Fukui and Takano (1998)).
actually undergoes A-movement to the Spec of AspP at narrow syntax (cf. Hiraiwa (2005)), although the lower copy is pronounced at PF because of the status of the DP as a focused XP. From a theoretical perspective, this argument indicates that the analysis based on Miyagawa’s parameterization of the EPP works in \( v^* \)-Asp phases as well as in C-T phases.\textsuperscript{4} Furthermore, this consideration of HNPS also empirically demonstrates that Miyagawa’s parameterization, together with the copy theory of movement, is highly promising with regard to research examining the universality and diversity of human languages.

The organization of this paper is as follows. Section 2, as a theoretical background, briefly reviews the copy theory of movement and Mikami’s (2010) analysis of the LIC under the movement theory. Section 3, extending Mikami’s analysis of the LIC, provides an analysis of HNPS in accord with Miyagawa’s parametric variations. Section 4 demonstrates that the current analysis is also strongly supported by empirical evidence. Section 5 offers some concluding remarks.

2. Theoretical Background

In this section, before presenting a detailed discussion of HNPS, I briefly introduce the copy theory of movement and its theoretical consequence. Then, I review Mikami’s (2010) analysis of the LIC under the movement theory, which is an attempt to reconsider ‘stylistic inversion’ constructions from Miyagawa’s (2005, 2007, 2010, etc.) parametric view.

2.1. The Copy Theory of Movement and the Pronunciation of the Lower Copy

The copy theory of movement, which was originally proposed by Chomsky (1995), is an alternative to the trace theory of movement, which has been traditionally adopted in the study of generative grammar. In contrast with the trace theory, the copy theory considers movement to be an operation that does not introduce a trace but merely leaves behind a com-

\textsuperscript{4} In this paper, following Hiraiwa (2005), I simply assume that the phase head \( v^* \) selects Asp as its complement, but not V. Given this assumption, in the \( v^* \)-Asp phase, the \( \varphi \)-feature of \( v^* \) is passed down to Asp, and the EPP on Asp, which works in tandem with the inherited \( \varphi \)-feature, triggers the A-movement of the object DP to the Spec of AspP. For a more detailed discussion of the validity of the functional head, see Hiraiwa (2005).
plete copy of the moved element, which is not a newly introduced entity in the course of the derivation.\(^5\) Thus, if an element \(X\) moves from \(\alpha\) to \(\beta\), then \(X\) occurs in \(\beta\) through internal-Merge, with its copy left behind in \(\alpha\). The copy left behind is, of course, normally deleted in the phonological component, given that overt movement must have a PF effect (cf. Chomsky (1995)). As a consequence of this theory, however, it is in principle possible for the lower copy to be pronounced rather than the higher copy.\(^6\) This possibility is not predicted in the trace theory of movement, in which the lower position of the moved element is occupied by a trace, which is generally assumed to be a phonologically null element, but the pronunciation of the lower copy is indeed supported by many empirical arguments (cf. Fujii (2006), Potsdam (2006), Yang (2006), Shimada (2008), etc.).\(^7\)

2.2. Mikami’s (2010) Analysis of the LIC

In English, it is generally assumed that a higher copy is pronounced, as is clear from the presence of overt \(wh\)-movement. Takano (1996, 1998) and Mikami (2010), however, argue that a lower copy can alternatively be pronounced in English if a marked interpretation is necessary for both the LF and PF interfaces. In this subsection, I briefly review Mikami’s analysis of the LIC under the copy theory of movement and confirm that the pronunciation of the lower copy enables the capturing of the ‘marked’ status of stylistic inversion constructions under Miyagawa’s (2005, 2007, 2010, etc.)

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\(^5\) Chomsky (2004, 2008, etc.) proposes as a natural requirement for efficient computation the no-tampering condition, which states that the Merge of \(X\) and \(Y\) leaves the two syntactic objects unchanged (Chomsky (2008: 138)). This condition has always been assumed without question for external Merge. However, when extended to internal Merge (i.e. movement), the condition automatically yields the copy theory of movement, because it bans leaving a newly introduced element like a trace.

\(^6\) Bobaljik (2002) suggests that there is a four-way typology of movement operations: (i) The higher copy is interpreted at LF and pronounced at PF; (ii) the higher copy is interpreted, but the lower copy is pronounced; (iii) the higher copy is pronounced, but the lower copy creates the interpretation; and (iv) both pronunciation and interpretation target the lower copy. For more details, see Bobaljik (2002).

\(^7\) Recently, the pronunciation of the lower copy has been used in the explanation of a variety of linguistic phenomena. For example, adopting the movement theory of control (cf. Hornstein (1999)), Fujii (2006) and Potsdam (2006) analyze backward control phenomena as established through the pronunciation of the lower copy of a chain that is created by A-movement from a \(\theta\)-position to another \(\theta\)-position. Thus, the pronunciation of the lower copy is considered to be a topic that is worthy of study in the minimalist syntax.
parameterization of the EPP.

The LIC, an example of which is repeated here as (6), has generally been considered an exception because of its deviant word order when formulating linguistic theory (cf. Emonds (1976), Rochemont (1978)):

(6) a. In the corner was a lamp.
   b. Into the room walked John. (= (3))

To explain this deviant word order, many previous analyses of this construction have argued that in the LIC, the Location PP rather than the subject DP satisfies the EPP on T (cf. Nishihara (1999, 2005), Doggett (2004), Rizzi and Shlonsky (2006), etc.).8

In contrast with these analyses, Mikami (2010) proposes under the copy theory of movement that the ‘shifted’ subject DP undergoes A-movement to the Spec of TP to satisfy the requirement of the EPP on T, although the lower copy of the DP is pronounced in its original position at PF. More specifically, in the paper, I focus on the observation that the construction is licensed only when the ‘shifted’ subject DP functions as a focused XP (cf. Rochemont (1978)), and I argue that the ‘shifted’ subject DP, like the non-shifted subject DP, undergoes A-movement to the Spec of TP at narrow syntax for the properties of the EPP on T, and then the lower copy in its original position is pronounced with a focus stress at PF because of the status of the DP as a focused XP, and at the same time, the lower copy can be interpreted as a focused XP at LF, as schematized below:9, 10

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8 Strictly speaking, Rizzi and Shlonsky (2006) assume that in English-like languages, a locative phrase has a feature that renders Fin nominal, and argue that in the LIC, the Fin head with this special nominal feature satisfies the requirement of the EPP on T (more precisely, the Subject Criterion). For a brief review of this analysis, see Endo (2007).

9 The status of the subject DP in the LIC as a focused XP is supported by the appropriate paraphrase into a cleft sentence: In the LIC, only the shifted subject DP can occupy the so-called “focus position,” as in (i):

   (i) a. At the foot of the stairs was his mother.
   b. It was his mother that was at the foot of the stairs.
   c. #It was at the foot of the stairs that his mother was. (Rochemont (1978: 30))

In (ib), which is an appropriate paraphrase of (ia), the focus position in the cleft sentence is filled by the shifted subject DP his mother. In (ic), on the other hand, the preposed Location PP at the foot of the stairs occupies the focus position. According to Rochemont (1978), however, this sentence is not an appropriate paraphrase of (ia). This contrast suggests that in the LIC, the shifted DP can be interpreted as a focused XP.

10 This does not mean that it is only the pronounced lower copy to be interpreted, but that it is in principle possible not only for the pronounced copy but also for the unpronounced higher copy to be interpreted properly. According to Mikami (2010), the interpretation of the unpronounced higher copy can be supported by the following fact
In this analysis, as illustrated in the above structure, the ‘shifted’ subject DP undergoes A-movement to the “subject position” to satisfy the requirement of the EPP on T, whereas the Location PP only undergoes A′-movement to sentence-initial position. That is, the analysis can consider the LIC as an unmarked construction that merely involves the A-movement of the subject DP. Therefore, the analysis is desirable from Miyagawa’s (2005, 2007, 2010, etc.) parameterization of the EPP, according to which the properties of the EPP on T in Subject-prominent languages enable the subject DP to always occupy the Spec of TP, as schematized in (1).

In this subsection, I have reviewed Mikami’s analysis of the LIC under the copy theory of movement, which provides us an insight to analyze ‘stylistic inversion’ constructions as unmarked constructions that involve only A-movement to canonical positions under Miyagawa’s parameterization.

3. The Extension of Mikami’s (2010) Analysis to HNPS

In section 2, I have introduced the copy theory of movement, which theoretically suggests that either the higher copy or lower copy may be pronounced. Subsequently, I have reviewed Mikami’s (2010) analysis of the LIC under the movement theory, which attempts to reconsider the LIC as an

regarding the binding of the reciprocal pronoun each other: In the LIC, the reciprocal contained in the Location PP can be bound by the ‘shifted’ subject DP, as shown in (i):

(i) Beside each other, sat two young boys quietly. (Mikami (2010: 316))
In (i), the subject DP two young boys serves as the antecedent of the reciprocal in the Location PP. As is well known, Condition A of the binding theory (cf. Chomsky (1981), etc.) requires a reciprocal pronoun to be bound in its domain. Thus, sentence (i) strongly suggests that in the LIC, the subject DP A-binds the reciprocal contained in the Location PP at a point in the derivation (see also footnote 19). Under my analysis of the LIC, when T is introduced by Merge, the subject DP, which is an XP that establishes an Agree relation with T, undergoes A-movement across the Location PP to the Spec of TP, although the higher copy is deleted at PF, as shown below:

(ii)  

At this point in the derivation, the higher copy of the subject DP, which occupies the Spec of TP (i.e. A-position), A-binds the Location PP in its original position. Thus, this configuration satisfies the requirement for anaphor binding. This fact could not be explained under the assumption that only the pronounced lower copy can be interpreted.
unmarked A-movement construction under Miyagawa’s (2005, 2007, 2010, etc.) parameterization of the EPP. In this section, extending Mikami’s analysis, I provide an analysis of the PDC and its HNPS version in accord with Miyagawa’s parametric variations.

3.1. The Derivation of the PDC

In this paper, following Takano (1996, 1998), I propose that the derivation of the PDC converges in the following fashion. A Theme DP and a Goal PP are base-generated in the Comp and the Spec of VP, respectively. When \( v^* \) is introduced by Merge, the \( \varphi \)-feature on \( v^* \) is passed down to Asp, a functional head that is selected by \( v^* \) (cf. Hiraiwa (2005)). Then, Asp searches down the tree for a goal and enters into an Agree relation with the Theme DP across the Goal PP; consequently, the \( \varphi \)-feature on Asp and the Case-feature on the DP are deleted, and the DP undergoes A-movement to the Spec of AspP to satisfy the requirement of the EPP on Asp. Furthermore, when the \( \varphi \)-feature on C percolates down to T, T establishes an Agree relation with an Agent DP, which is base-generated in the Spec of \( v^*P \), and the DP moves to the Spec of TP to satisfy the requirement of the EPP on T. At this point in the derivation, all of the features that require agreement for convergence can be properly deleted; consequently, the derivation converges, as illustrated in the tree structure in (8):

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11 In this paper, contrary to previous approaches like Kayne (1994) and Nishihara (2005), I assume the three-layered VP-shell for the underlying structure of ditransitive verbs that select Agent, Goal, and Theme, as shown in (i):

\[
(\ i \ ) \ [v^*P \ \text{Agent} \ [v^* \ [AspP \ [Asp \ [VP \ \text{Goal} \ [V \ \text{Theme} \ ]]]]]]
\]

In (i), \( v^* \) is a type of light verb with the ability to assign Agent, and Goal and Theme are base-generated in the Spec and the Comp of VP, respectively. This structure is in accord with the thematic hierarchy proposed in Jackendoff (1972), and is well-supported by a variety of c-command phenomena, as independently discussed by Aoun and Li (1989), Hoji (1985), Pesetsky (1995), and Takano (1996, 1998), among others.

12 In this derivation, the establishment of an Agree relation between Asp and the Theme DP across the Goal PP causes no locality violation, because the Goal PP, which need not be assigned any structural Case because of its inherent nature, does not function as the goal of an Agree relation with Asp, given the general assumption that probe and goal must be active (Chomsky (2000: 122)).
In this derivation, the Theme DP (i.e. an object DP) undergoes A-movement to the Spec of AspP to satisfy the requirement of the EPP on Asp in a similar way that the subject DP moves to the Spec of TP. Hence, this construction demonstrates a relatively strict word order, as shown in (5).

3.2. The Derivation of the HNPS Version of the PDC

In this paper, I argue that the HNPS version is derived in a similar fashion despite the surface difference in word order between the PDC and its HNPS version. The relevant part of the derivation is as follows. When the φ-feature on \( v^* \) is passed down to Asp, Asp enters into an Agree relation with the Theme DP across the Goal PP, and the DP undergoes A-movement to the Spec of AspP to satisfy the requirement of the EPP on Asp. This derivational step is identical to that of the non-shifted PDC in (8). However, once the derivation is transferred to the two interfaces, the lower copy of the Theme DP is pronounced with a focus stress at PF and can be properly interpreted at LF because the DP must be properly interpreted as a focused
This derivation is illustrated below:

(9)

More specifically, I argue that the shifted DP in an HNPS sentence is associated with an identificational focus in the sense of Kiss (1998), which has an exhaustive interpretation and occupies the Spec of a functional head. This is argued for by the following sentence:

(i) He gave to her [a REPORT], but not a letter or anything else.  
(Shiobara (2002: 278))

In this sentence, the shifted DP is contrastively focused and hence carries obligatory prosodic prominence (cf. Guasti and Nespor (1999)). According to Kiss (1998), this is a property of an identificational focus DP and is not observed in the case of an information focus, which merely conveys new information and involves no syntactic reordering.

An HNPS sentence also shows the same behavior as the LIC with respect to the appropriate paraphrase into a cleft sentence, as in (i):

(i) a. John wants to give to Mary a gift of inestimable value.
    b. It’s a gift of inestimable value that John wants to give to Mary.
    c. #It’s Mary that John wants to give a gift of inestimable value.

(Rochemont (1978: 33))

According to Rochemont (1978), sentence (ib) is an appropriate paraphrase of (ia), in which the focus position in the cleft sentence is filled by the shifted DP *a gift of inestimable value*. In sentence (ic), the indirect object DP *Mary* occupies the focus position, but the sentence is not an appropriate paraphrase. Therefore, this contrast strongly suggests that in the HNPS sentence, the shifted DP is interpreted as a focused XP (see also footnote 9).
In this derivation of the HNPS version of the PDC, although the ‘shifted’ object DP is realized in a non-canonical position because of the pronunciation of the lower copy at PF, the DP undergoes A-movement to the “object position” at narrow syntax to satisfy the requirement of the EPP. That is, this analysis can consider an HNPS sentence to be an unmarked construction that contains only the A-movement of the object DP to the “object position,” which is triggered by the properties of the EPP in Subject-prominent languages, based on the parametric variations of the EPP explored by Miyagawa (2005, 2007, 2010, etc.). Furthermore, the analysis is also desirable in terms of the parallelism between CP phase and v*-P phase (cf. Chomsky (2008), Hiraiwa (2005)), because it clarifies that Miyagawa’s parameterization of the EPP works in v*-Asp phases as well as in C-T phases.

In this subsection, extending Mikami’s analysis of the LIC under the copy theory of movement, I have provided an approach to HNPS that is consistent with Miyagawa’s parameterization of the EPP.

4. Empirical Support

In section 3, I have provided an analysis of an HNPS sentence that is desirable from Miyagawa’s parameterization of the EPP, which can reconsider the “marked” construction as an unmarked construction that only involves the A-movement of the object DP to its canonical position. In this section, I demonstrate that the proposed analysis also receives adequate empirical support by providing a natural explanation for the essential properties of the construction and for the inapplicability of HNPS to the indirect object DP in the Double Object Construction (DOC).

4.1. The Local Application of HNPS

First, HNPS obeys strict locality in that its application is bound clause-internally, as illustrated in the following contrast:

(10) a. \([\text{CP That John sent to his mother } [\text{DP the money you wanted him to give to us}]]\) is understandable.

b. \(*[\text{CP That John sent to his mother}]\) is understandable \([\text{DP the money you wanted him to give to us}].\)

(McCawley (1988: 510–511))

In (10a), the Theme DP in the PDC is shifted rightward within the embedded CP; in (10b), the DP cannot move to sentence-final position across the CP. This fact has been explained in terms of a special type of assumption, such as Ross’s (1967) Right Roof Constraint (RRC), which prohibits an ele-
ment from moving rightward out of the clause in which it originates. However, this explanation fails to resolve a fundamental question regarding why such a restriction is imposed only on HNPS.\textsuperscript{15}

In contrast, my analysis provides a principled explanation for the (un-)grammaticality of (10). In the proposed analysis, an HNPS sentence is derived by both the leftward A-movement of the shifted DP to the Spec of AspP and the pronunciation of its lower copy, as illustrated in (9). Thus, in the HNPS version of the PDC, the ‘shifted’ Theme DP only undergoes A-movement to the Spec of AspP across the Goal PP at narrow syntax, thereby remaining within the VP domain (more precisely, the AspP domain) throughout the derivation. Consequently, the ‘shifted’ DP can be realized in the position immediately following the PP because of the pronunciation of the lower copy in its original position, as shown in (10a), but the DP cannot be realized in the sentence-final position across a clause-boundary, as shown in (10b), because there is no copy of the DP outside the VP domain.\textsuperscript{16}

Indeed, the fact that the shifted DP occupies the VP-internal position is further argued for based on the following examples of VP-preposing and VP-deletion, which are widely accepted criteria for VP constituency:

\textsuperscript{15}This fact could be explained using Nishihara’s (2005) analysis, given that the shifted DP undergoes rightward A’-movement to the v*P domain to check the strong focus feature. However, his analysis would also fail to answer a fundamental question regarding why it is only the type of A’-movement in HNPS that cannot be applied successive-cyclically. In his analysis, the rightward A’-movement is motivated for the checking of a certain feature, like other types of A’-movement, such as Topicalization, which allows successive-cyclic application, as in (i):

(i) [This book\textsubscript{i}], I think [CP that \textsubscript{t} you should read \textsubscript{t}]. (Lasnik and Saito (1992: 80))

In this example of Topicalization, the embedded object DP this book undergoes successive-cyclic A’-movement into the main clause through the embedded CP domain. If Topicalization is also analyzed as a type of A’-movement that is triggered for the checking of a certain feature, then Nishihara’s analysis could not prevent the successive-cyclic application of the rightward movement in HNPS without adding assumptions to capture the idiosyncratic nature of the movement.

\textsuperscript{16}This does not mean that in my analysis, the “pseudo” rightward movement of the shifted DP does not form any type of chain. In this paper, I assume that the occurrence of the shifted DP in a non-canonical position creates some type of chain at least at PF. This PF chain causes a “crossing effect,” as discussed later in 4.3.
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(11)  
   a.  I said I would give to John everything that he demanded and give to John everything that he demanded I will.
   b.  *I said I would give to John everything that he demanded and give to John I will everything that he demanded.

   (Nishihara (2005: 13–14))

(12)  John gave to Mary a picture of Lyndon Johnson, and Bill did too.

   (Rochemont and Culicover (1990: 118))

When VP-preposing is applied to an HNPS sentence, the fronted VP constituent must contain the shifted DP, as shown in (11a). Thus, if the shifted DP is stranded, the sentence becomes ungrammatical, as in (11b). Similarly, the VP-deletion that is applied to an HNPS sentence must eliminate all of the elements within the VP domain in the second conjunct, including the shifted DP, as shown in (12). These facts can be properly explained if the shifted DP remains within the VP domain throughout the derivation, as expected in the proposed analysis.

In summary, unlike the previous approaches, this analysis captures the locality restriction that is observed in HNPS without the need for additional assumptions, such as Ross’s (1967) RRC.

4.2. The Behaviors of the Shifted DP Concerning C-Command Phenomena

As noted in the introduction, HNPS has been treated as a type of ‘stylistic inversion.’ This treatment predicts that a shifted DP would exhibit the same behaviors as a non-shifted DP with respect to “c-command phenomena,” including the licensing of a negative polarity item (NPI) and anaphor binding, because ‘stylistic inversion’ is considered to be a transformation that effects only the string linear properties of the output, as its name indicates. However, contrary to this prediction, the shifted DP shows behaviors that differ from those of the non-shifted DP.

Let us start by considering the following contrast with respect to the licensing of an NPI:

(13)  
   a.  I showed [none of the pictures of John’s mother] to anyone.

   (Takano (2003: 522))
   b.  *I showed to anyone [none of the pictures of John’s mother].

   (Nishihara (2005: 32))

In the PDC, the Neg-element in the Theme DP can license the NPI in the Goal PP, as shown in (13a); however, when the Theme DP is shifted to sentence-final position through HNPS, the Neg-element in the shifted DP cannot license the NPI in the PP, as shown in (13b). Since Klima (1964), it has been argued that an NPI must be c-commanded by the Neg-element
at LF. Under this general view, the ungrammaticality of (13b) strongly suggests that in the HNPS version of the PDC, the shifted Theme DP cannot c-command the Goal PP at LF. Following Mikami’s (2010) approach to the LIC (cf. (7)), I argue that an HNPS sentence is also derived through the pronunciation of the lower copy of the shifted DP at PF and the interpretation of the copy at LF, as illustrated in (9). Thus, the relevant part of the LF representation of the HNPS version is as follows:

(14) the LF representation: … [VP Goal(NPI) [ V Theme(Neg)

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[Focus] ]
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c-command

In (14), the Goal PP asymmetrically c-commands the focused Theme DP. Given Klima’s (1964) condition for the licensing of an NPI, this configuration cannot meet the requirement for licensing, because the Goal PP that contains an NPI fails to be c-commanded by the Neg-element in the Theme DP at LF.\(^{17}\)

The LF configuration in (14) can also be used to explain other data concerning the c-command phenomena. For example, consider the NPI licensing in the following sentence:

(15) I gave to no one’s parents any indication that anything was amiss. (Williams (1994: 190))

In this sentence, the NPI is contained in the shifted Theme DP, in contrast with (13b), and the NPI can be licensed by the Neg-element in the Goal PP. In my analysis, as confirmed in (14), the Goal PP asymmetrically c-commands the focused Theme DP at LF as a result of the reconstruction of the DP to its original position. Consequently, the Neg-element in the Goal PP c-commands the NPI in the shifted DP at LF, which satisfies the requirement for the licensing of an NPI.\(^{18}\) Moreover, this explanation can be extended to the following examples with respect to anaphor binding:

\(^{17}\) Given the LF licensing of an NPI, the proposed analysis can also explain the grammaticality of (13a). In the derivation of the non-HNPS version of the PDC, the non-shifted Theme DP undergoes A-movement to the Spec of AspP across the Goal PP, as illustrated in (8). Consequently, the Neg-element in the Theme DP asymmetrically c-commands the NPI in the Goal PP throughout the derivation because A-movement does not exhibit a reconstruction effect. Hence, the NPI is properly licensed.

\(^{18}\) In (15), although the Neg-element in the Goal PP does not strictly c-command an NPI in the Theme DP because of the presence of the PP projection, the Neg-element can properly license the NPI. This type of phenomenon is observed in certain cases when computing command relations for binding (cf. Pesetsky (1995)). Thus, with regard to anaphor binding, the (un-)grammaticality of the sentences in (16) independently supports
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(16) a. *We gave to himi on Friday [Johni’s brand-new toy].
    b. We gave to themi at the interview [copies of reports on each
       otheri].
       (Pesetsky (1995: 266))
Sentence (16a) represents a standard violation of Condition C of the binding
theory, which requires an R-expression to be free, whereas sentence (16b)
satisfies Condition A, in which a reflexive pronoun and a reciprocal pronoun
must be bound in their domain (cf. Chomsky (1981), etc.). These instances
can be properly explained if the shifted Theme DP remains in its original
position at LF and the DP is c-commanded by the Goal PP, as shown in
(14).19
Thus far, I have provided a unified explanation for some properties of
HNPS with respect to standard c-command phenomena, using the LF con-
figuration in (14). Note that these properties can be explained by the inter-
pretation of the pronounced lower copy of the shifted DP at LF. In other
words, all of the properties constitute the ‘lower’ behavior of the shifted
DP. In the proposed analysis of HNPS, following Mikami’s (2010) analysis
of the LIC (cf. footnote 10), I argue that both the pronounced lower copy of
the ‘shifted’ DP and the unpronounced higher copy can be interpreted in the
course of the derivation. Let us turn to considering the ‘higher’ behavior
of the shifted DP.
According to Belletti and Rizzi (1988), Condition A is an anywhere
condition, as noted in footnote 19. Given this assumption, the proposed
analysis predicts that in an HNPS sentence, when a reflexive pronoun is
contained in the Goal PP, the pronoun can be understood as identical to the
shifted Theme DP because the DP can c-command the PP at a point in the
derivation, as schematized in (17):

(17) … \[vP \text{Agent } [v* [Asp <Theme> [Asp [VP Goal [V Theme ]]]]]] \]
\[\text{A-movement} \]
\[\text{c-command} \]
This prediction is indeed borne out, as illustrated by the grammaticality of
the following sentence containing anaphor binding:

the view that the Goal PP is transparent and the DP in the PP c-commands the Theme DP
in an HNPS sentence.
19 In this paper, following Belletti and Rizzi (1988), I assume that Condition A is an
anywhere condition, which has to be satisfied at some point in a derivation but can be
violated at earlier or later stages (cf. Saito (2003)). Condition C is an LF condition,
which applies after chain interpretation.
(18) I describe $t_i$ to himself$_i$ [the victim whose sight had been impaired by the explosion]. (Baltin and Postal (1996: 129))

In this sentence, the shifted Theme DP can function as a binder of the reflexive pronoun in the Goal PP because the unpronounced higher copy of the DP c-commands the anaphor in the course of the derivation.\(^ {20} \)

In this manner, the proposed analysis provides an explanation for both the ‘higher’ and ‘lower’ behaviors of the shifted DP with respect to the c-command phenomena.

4.3. Island Effects in HNPS

In an HNPS sentence, the shifted DP forms an ‘island,’ which is a certain syntactic configuration that resists extraction, such as $\mathbf{w} h$-movement, as shown in (19):

(19) *[How many of the children]$_i$ did Fred send to the School Board [DP accurate reports on $t_i$]? (Culicover and Wexler (1977: 21))

In (19), the $\mathbf{w} h$-element how many of the children cannot be extracted from within the shifted DP through overt $\mathbf{w} h$-movement.\(^ {21} \) In rightward $\mathbf{A'}$-movement analyses like Nishihara (2005), this behavior of the shifted DP is used as a piece of evidence for the $\mathbf{A'}$-properties of the DP, given that this

\(^ {20} \) As pointed out by an EL reviewer, Pesetsky (1995) argues that in an HNPS sentence, a reflexive pronoun in the Goal PP cannot be understood as identical to the shifted Theme DP, providing the following example:

(i) *The social worker described $t_i$ to themselves$_i$ [the members of the gang]. (Pesetsky (1995: 267))

According to his explanation, this ungrammaticality arises due to a violation of Condition C because the Goal PP c-commands the shifted Theme DP. Thus, the sentence in (i) may serve as a counterexample to my analysis. However, I currently cannot offer a good solution to the treatment of this sentence under the proposed analysis, and in this paper, I leave this issue open for future research.

\(^ {21} \) In this paper, following many previous approaches like Ross (1967), Culicover and Wexler (1977), Rochemont (1978), and Lasnik and Saito (1992), I argue that in an HNPS sentence, the shifted DP exhibits an island effect, as indicated by the ungrammaticality of (19). However, this behavior of the shifted DP in an HNPS sentence is not necessarily uncontroversial in the literature. For example, Kayne (1994) argues that a ‘heavy’ DP does not constitute an island by providing the following example:

(i) the problem which I explained to John only part of (Kayne (1994: 74))

In this sentence, the $\mathbf{w} h$-element can be extracted out of the shifted DP, in contrast with (19). Here, a reasonable question arises with regard to why these sentences differ with respect to the possibility of extraction from the shifted DP. I cannot currently provide an adequate answer to this question. In this paper, I leave this unresolved question for future research.
type of phenomenon is also observed in the instances of extraction from adjuncts, as shown in (20).

(20)*Which book, did John go to class [after he read $t_1$]?

This ungrammaticality has often been explained in terms of the Condition on Extraction Domain (CED), as proposed by Huang (1982), which bans movement out of non-complements, such as adjuncts. Given this similarity, the ungrammaticality of (19) may also result from a violation of the CED.\footnote{More specifically, on the basis of the similarity between (19) and (20), Nishihara (2005) argues that the derivation of an HNPS sentence involves the rightward $A'$-movement of the shifted DP. However, as observed by Lasnik and Saito (1992), it is not necessarily impossible to be extracted out of constituents in $A'$-positions:}

In contrast, the proposed analysis cannot attribute the ungrammaticality of (19) to a violation of the CED, because in the analysis, the ‘shifted’ object DP only undergoes the same type of A-movement as the non-shifted DP, although the lower copy in its original position is pronounced at PF. Therefore, similar to Lasnik and Saito (1992), I argue that the ungrammaticality of (19) is due to a “crossing effect” in the sense of Baker (1977) and Pesetsky (1982). This effect forbids the crossing of association chains and can be observed in a variety of environments in English. For example, consider the case of $wh$-islands in English:

(21) a. ?[What subject], do you know [who$_j$ [PRO to talk to $t_j$ about $t_j$]]?

b. *Who$_j$ do you know [[what subject], [PRO to talk to $t_j$ about $t_j$]]?

(Pesetsky (1982: 268): with slight modifications)

According to Pesetsky (1982), when the $wh$-element what subject moves to sentence-initial position across the other element who, the sentence is not perfectly unacceptable, as shown in (21a), because of the dependencies that

\footnote{More specifically, on the basis of the similarity between (19) and (20), Nishihara (2005) argues that the derivation of an HNPS sentence involves the rightward $A'$-movement of the shifted DP. However, as observed by Lasnik and Saito (1992), it is not necessarily impossible to be extracted out of constituents in $A'$-positions:}

In these examples, the $wh$-element who is extracted out of the topicalized element and the $wh$-element in the embedded clause, respectively, although the acceptability of these sentences is marginal because of a weak Subjacency violation. Both Topicalization and $wh$-movement are widely considered to be types of $A'$-movement that are triggered for the checking of certain features. Therefore, Nishihara (2005) must provide an adequate answer to the question regarding what is responsible for the difference between HNPS and the other $A'$-movement phenomena (see also footnote 15).
are nested between the *wh*-elements and their traces. In contrast, when the two association chains intersect with one another, the sentence is perfectly unacceptable, as shown in (21b).\(^{23}\) Thus, sentence (19) is considered a case of crossing according to both Baker’s (1977) and Pesetsky’s (1982) formulations, and the sentence is found to be ungrammatical.\(^{24}\)

As just described, along the lines discussed by Baker (1977), Pesetsky (1982), and Lasnik and Saito (1992), the proposed analysis attempts to explain the island effect in an HNPS sentence in terms of a crossing effect. Thus, it is suggested that the island effect does not necessarily serve as strong evidence for the A’-properties of the shifted DP.

### 4.4. The Non-Licensing of Parasitic Gaps by the Shifted DP

It has often been pointed out in the literature that in an HNPS sentence, the shifted DP can license parasitic gaps (PG). Consider the following sentence:

\[(22)\quad \text{John put } t_i \text{ on the table without reading } pg_i [\text{DP a recent article about global warming}]. \]

(Nissenbaum (2000: 46))

\(^{23}\) This type of crossing effect is also found in Japanese. Consider the following examples, which include the licensing of an NPI in Japanese:

(i) a. Nani-ga Tokyo-kara-sika todok-ana-katta-no?
   what-Nom Tokyo-from-only arrive-Neg-Past-Q
   ‘What arrived only from Tokyo?’

b.?* Hon-sika doko-kara todok-ana-katta-no?
   book-only where-from arrive-Neg-Past-Q
   ‘Where did only books arrive from?’

As can be seen in these examples, when the *sika*-phrase, which is considered to be an NPI in Japanese, co-occurs with a *wh*-element, the former cannot precede the latter. This contrast has also been explained in terms of the crossing effect (cf. Takahashi (1990), Tanaka (1997), etc.), as schematized in (ii):

\[(ii) \quad *[\ldots \text{XP-sika} \ldots [\ldots \text{wh} \ldots ] \ldots \text{Neg} \ldots ]\ Q \]

In this illicit configuration of (ib), the dependency between the NPI and its licenser crosses the dependency between the *wh*-element and the Q-morpheme.

\(^{24}\) The nature of a crossing effect has been a controversial issue in linguistic theory; thus, many attempts have still been made to clarify this issue (cf. Baker (1977), Pesetsky (1982), etc.). In this paper, I cannot identify the nature of this effect, but along the lines discussed by Baker (1977), I assume that this constraint is applied at PF, given that the constraint is sensitive to the string linear properties of the output. This assumption may be consistent with the view that some types of island effects are PF-constraints (cf. Merchant (2001), Fox and Lasnik (2003), etc.). Thus, I leave the detailed discussion of this assumption and its theoretical implication for future research.
It appears that in this sentence, the Theme DP is realized in a sentence-final position as a result of HNPS and the PG in the without-clause is properly licensed. In the rightward A'-movement analyses of HNPS, this behavior of the shifted DP has also been used as a piece of evidence for the A'-properties of the DP, because PGs are licensed by A'-chains but not by A-chains, as the following contrast from Engdahl (1983) illustrates:

(23) a. Which articles, did John file \(t_i\) [without reading \(pg_i\)]?  
b. *John, was killed \(t_i\) [by a tree falling on \(pg_i\)].  
   (Engdahl (1983: 5, 13))

In (23a), the wh-object which book undergoes overt wh-movement to the Spec of CP, and the A'-chain that is created by this movement licenses the PG, whereas in (23b), the chain that is formed by the passivization of the object DP cannot license the PG, because this chain is an A-chain. Given this, the behavior of the shifted DP would be problematic for my analysis because I do not assume any type of A'-movement in the derivation of an HNPS sentence.

However, whether HNPS licenses a PG has been a controversial issue in the literature. In this paper, following Postal (1994), I argue that the sentence in (22) is not derived by HNPS from the object position of the finite verb put; rather, this sentence is derived by applying Right Node Raising (RNR) to the direct object of put and the direct object of reading in the adjunct clause, as schematized below (cf. Williams (1990, 1994), Nishikawa (1990), etc.):

(24) John put \(e_i\) on the table without reading \(e_i\) [DP a recent article about global warming].

On the basis of this explanation, the sentence in (22) does not necessarily provide strong evidence for the A'-movement of the shifted DP. That is, the sentence does not serve as a counterexample to my analysis.

Indeed, this argument is supported by the applicability of the operations to the objects of prepositions:

(25) a. *John looked [\(pp\) at \(t_i\)] very often [DP the woman that he loved].  
   (Johnson (1985: 86))  
b. I talked to \(e_i\) without actually meeting \(e_i\) [DP all the members who voted against Hinkly].  
   (Williams (1990: 267))

(26) John spoke to \(e_i\), but Mary ignored \(e_i\), [the new boss].  
   (McCloskey (1986: 186))

As is well known, HNPS is not applicable to the objects of prepositions, as shown in (25a). However, in the sentence that I consider to be an example of RNR, the object of the preposition can be shifted to sentence-final posi-
tion across the adjunct clause, as shown in (25b). This behavior can also be observed in the case of RNR, as shown in (26). Thus, this similarity suggests that the operation that is applied to the sentence-final element in (22) cannot be HNPS, but RNR.  

In this manner, the sentences that are considered to be examples of PGs can be explained without assuming the A’-movement of the shifted DP.

4.5. The Inapplicability of HNPS to the Indirect Object in the DOC

Thus far, I have provided an analysis of HNPS that is consistent with Miyagawa’s parametric variations of the EPP and have illustrated that this analysis can provide an adequate explanation for the essential properties of the phenomenon. In this subsection, I consider HNPS in the English DOC, and show that this analysis also provides a principled explanation for the inapplicability of HNPS to the indirect object DP in the DOC.

As pointed out by many previous studies since Ross (1967), HNPS is not always applied. In the DOC, for example, the indirect object DP cannot be shifted to sentence-final position across the direct object DP in any case, as shown in (27):

\[
\text{(27)} \quad \text{who does Mary buy and Bill sell, [pictures of } t_i] ? \quad (Nishihara (2005: 24))
\]

According to his explanation, sentence (ia) is an example of HNPS and the \textit{wh}-element cannot be extracted from the shifted DP, whereas sentence (ib) shows an example of RNR, in which the extraction of the \textit{wh}-element out of the shifted DP creates no problems. This argument is inadequate, however. Wexler and Culicover (1980) propose that in RNR sentences, the shifted elements remain in their original position without undergoing any type of rightward movement (cf. Abe and Hornstein (2010)). In this analysis, the ungrammaticality of (ia) results from a violation of the adjunct condition because the \textit{wh}-element is extracted out of the element that remains in the adjunct clause. In (ib), by contrast, the extraction of the \textit{wh}-element out of the shifted DP does not violate the coordinate structure constraint due to an across-the-board application of RNR. Thus, the contrast in (i) can be explained without any problem, even if the derivations of both of the sentences are assumed to involve RNR.

To explain the inapplicability of HNPS to the indirect object DP in the DOC, Fukuchi (1977) proposes the following thematic constraint (cf. Hirose, Koizumi and Fukuyasu (1983), etc.):

\[
\text{(i) Complex NP Shift (= HNPS) can move the NP working as Theme but it cannot operate on the NP working as Goal or Source.}
\]

(Fukuchi (1977: 8): with slight modifications)
(27) a. John gave the girl who was studying linguistics a book.
b. *John gave a book the girl who was studying linguistics.
   (Fukuchi (1977: 10))
My analysis can properly explain the ungrammaticality of (27b). In discussing the
details, I assume the derivation of the DOC as schematized in (28), on the basis of
the well-known examples of standard c-command phenomena that have been
provided by Barss and Lasnik (1986):²⁷

(28) \[ ... [v^P \text{Agent} [ v^* [AspP \text{Goal} [ \text{Asp} [ \text{VP Goal(DP)} [ V \text{Theme} ]]]]]]] \]

In this structure, the direct object DP (i.e. a Theme DP) and the indirect object
DP (i.e. a Possessor DP) are base-generated in the Comp and the Spec of VP,
respectively. Then, the indirect object DP undergoes A-movement to the Spec of
AspP to satisfy the requirement of the EPP on Asp because the DP is closer to
Asp than the direct object DP (cf. Takano (1996, 1998)). Bear in mind that in my
analysis, HNPS consists of both the leftward A-movement of the ‘shifted’ DP at
narrow syntax and the pronunciation of its lower copy at PF. Thus, in the DOC, it
is in principle impossible for the indirect object DP to be shifted across the direct
object DP to According to this constraint, the direct object DP in the PDC (i.e. a Theme DP)
can be shifted via HNPS, whereas the indirect object DP in the DOC cannot,
because the DP is assigned a Goal (more specifically, a Possessor). However, a
reasonable question arises here: Why is HNPS applied only to the Theme DP?
Fukuchi attempts to confirm the validity of this constraint from a functional
perspective; however, his argument is not sufficiently persuasive. Thus, the
constraint should be viewed as merely a descriptive generalization, unless a
plausible explanation is provided supporting the constraint.

²⁷ Barss and Lasnik (1986) argue that the indirect object DP occupies a higher
position than the direct object DP throughout the derivation of the DOC, providing
a variety of data pertaining to standard c-command phenomena. For example,
consider the following examples of anaphor binding and the licensing of an NPI:

(i) a. I showed the professors each other’s students.
b. *I showed each other’s students the professors.

   (Barss and Lasnik (1986: 347))

(ii) a. I gave no one anything.
b. *I gave anyone nothing.

   (Barss and Lasnik (1986: 350))

In (i), the indirect object DP can bind the reciprocal pronoun in the direct
object DP, whereas the direct object DP cannot bind the pronoun in the indirect
object DP. Similarly, in (ii), the Neg-element in the indirect object DP can license
the NPI in the direct object DP. When the NPI is contained in the indirect object
DP, the NPI cannot be licensed by the Neg-element in the direct object DP. These
facts can be explained if the indirect object DP asymmetrically c-commands the
direct object DP throughout the derivation. For further evidence, see Barss and
Lasnik (1986).
sentence-final position, because there is no copy of the indirect object DP in the domain following the direct object position, as illustrated in the derivation in (28).

As just described, the proposed analysis can explain the inapplicability of HNPS to the indirect object DP in the DOC without assuming any additional constraints. Therefore, this analysis is also strongly supported by empirical evidence in that the analysis provides an adequate explanation for the essential properties of HNPS and predicts the distribution of the phenomenon properly.

5. Conclusion

In this paper, given Miyagawa’s (2005, 2007, 2010, etc.) parameterization of the EPP, I have reconsidered HNPS in English, which has been considered an exception when formulating linguistic theory due to its deviant word order, and I have proven that the “marked” construction is an unmarked construction that merely involves the A-movement of the object DP to its canonical position. This analysis clarifies that Miyagawa’s parameterization of the EPP works in v*-Asp phases as well as in C-T phases and empirically illustrates that Miyagawa’s parameterization, together with the copy theory of movement, is highly promising with regard to research that examines the universality and diversity of human languages.

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HEAVY NP SHIFT IN ENGLISH AND A-MOVEMENT IN SUBJECT-PROMINENT LANGUAGES


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