This paper concerns the licensing of Polarity Items (PIs) in English and Japanese, especially, expressions with any and some and wh-MO (e.g. naNI-MO 'what-MO') and wh-ka (e.g. nani-ka 'what-ka'). It is argued that their occurrence is explained in a uniform way by the framework in which the licensing is accomplished through checking of PIs' intrinsic feature \([+/-\alpha]\) and movement for the checking is restricted by the chain uniformity condition proposed by Chomsky and Lasnik (1993). The difference in the distribution of the PIs between English and Japanese is attributed to the difference in the status of the PIs (argument/adjunct) and L-relatedness property \((A/A'-position)\) of the Spec of Neg(\(\Sigma\)P).*

1. Introduction

This paper presents a syntactic analysis of the licensing of polarity items (PIs), under which the licensing of PIs falls under the theory of feature checking proposed by Chomsky and Lasnik (1993) and Chomsky (1993). I assume that PIs have \([+/-\alpha]\) feature as in (1) and the feature is checked off in the checking domain of the heads with \([+/-\alpha]\) feature.

(1) a. Negative polarity items (NPIs) have \([+\alpha]\).
   b. Positive polarity items (PPIs) have \([-\alpha]\).

The basic structure of the clause assumed throughout the paper is the one shown in (2).

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This structure is based on Chomsky (1993), although the projection of Σ between TP and AgroP and the projection of Pol between CP and AgrsP are added along the suggestion of Laka (1990) and Culicover (1991), respectively.\(^1\) ΣP and PolP are assumed to represent broad categories which include the phrases headed by negation and affirmation markers, whether they are overt or covert.\(^2,3\) I also assume the

\(^1\) Pollock (1989) and Chomsky (1991) assume NegP between AgrP, which corresponds to AgroP in (2), and TP. Culicover (1991) argues that PolP exists external and internal to IP (AgrsP).

\(^2\) Laka (1990) proposes ΣP to cover both negation and affirmation phrases, assuming that the head of ΣP includes *not* and [aff] which are responsible for (i) and (ii) below, respectively.

(i) Mary didn’t leave.
(ii) Mary did leave. (emphatic use)

I assume, extending Laka’s ideas, that the head of ΣP also includes null head only
free (optional) assignment of the \([+/-\alpha]\) feature.

(3) a. \([+\alpha]\) is freely assigned to the head of \(\Sigma P\), PolP or CP with \([+A(f)\text{fective}])\.

b. \([-\alpha]\) is freely assigned to the head of \(\Sigma P\), PolP or CP without \([+A]\).

\([+A]\) represents \([+Neg]\), \([+Q(uestion)]\), \([+\text{Conditional}]\), etc., the set of which is semantically restricted (cf. Klima (1964), Ladusaw (1979), Progovac (1993), Kadmon and Landman (1993)). (3a) works to license NPIs. In the examples below, the \([+\alpha]\) feature is assigned to \(\Sigma\), Pol or C because of their \([+A]\) feature.

(4) a. John did \([\not\exists] \text{not}\) see anyone.

b. Lee said that at no time \([\text{Pol would}]\) she agree to visit any relative.

c. I doubt \([\text{C that}]\) Mary trusts anyone.

d. \([\text{C Does}]\) Mary see anyone?

e. \([\text{C If}]\) John subscribes to any newspaper, he gets well informed.

On the other hand, (3b) works to license PPIs. In the examples below, \([-\alpha]\) is assigned to \(\Sigma\), Pol or C because they have no \([+A]\) feature.

(5) a. John \([\not\exists \phi]\) saw someone.

b. I doubt that \([\text{Pol } \phi]\) someone trusts Mary.

c. \([\text{Pol } \phi]\) John didn’t see someone.

d. John said \([\text{C that}]\) only with great difficulty did someone pass the exam.

Note that the assignment of \([+/-\alpha]\) feature itself can be free (optional) since only the derivation with the correct assignment will converge with \([+/-\text{Neg}]\) feature, which are responsible for (iii) and (iv).

(iii) Mary never ate anything. \(([+\text{Neg}])\)

(iv) Mary ate something. \(([-\text{Neg}])\)

I will use the term NegP to refer to the negative realization of \(\Sigma P\).

3 PolP is proposed in Culicover (1991) to accommodate the data as below, in which Negative elements are preceded by C and are followed by inverted Aux.

(i) a. Lee said that at no time would she agree to visit Robin.

b. It is apparent that only on Fridays will the traffic be too heavy to get there in time.

The above data suggest the existence of PolP with \([+\text{Neg}]\) at the head since two fronted elements (Neg element and Aux) cannot be topics (adjoined to AgrsP). In the same manner as \(\Sigma P\), I assume that the head of PolP includes the affirmative counterpart of \([+\text{Neg}]\) or \([-\text{Neg}]\) null head.
at LF. The indirect licensing mechanism via \([+/-\alpha]\) is required under the feature checking assumption since \([+A]\), which has semantic import, is independently given apart from the licensing of NPIs (as is seen in grammatical sentences with \([+A]\) and without NPIs) and cannot disappear after checking NPIs.

Thus the analysis to be presented crucially relies on the assumption that the inherent feature of PIs is checked off in the Spec of \(\Sigma P\), PolP or CP with the corresponding feature of the head. Sentences with an unchecked \([+/-\alpha]\) feature are ungrammatical, just as sentences with unchecked Case or agreement features are ungrammatical: the derivation will crash, violating Full Interpretation (FI) at LF as argued in Chomsky (1993).

The paper is organized as follows. In the next section, I will consider what constitutes (im)proper movement under the chain uniformity condition proposed by Chomsky and Lasnik (1993). My analysis of PIs crucially relies on the legitimacy of chains formed by movement for feature checking. In section 3 and 4, I will examine the movement of PIs to check the \([+/-\alpha]\) feature in different sentence types, and demonstrate that the present approach can explain the differences between English and Japanese in a uniform fashion. Specifically, section 3 will take up the problems of NPIs (any and \(wh-MO\)): the subject-object asymmetry, the difference in the licensors between English and Japanese and the problem of locality. Section 4 will discuss the problems of PPIs (some and \(wh-ka\)): the scope interpretation of PPIs and the more limited distribution of the Japanese PPI than the English counterpart.

2. Improper movement

Chomsky and Lasnik (1993) propose the chain uniformity condition as in (6) as a condition on legitimate LF objects by which the chain \(C\) of (7) is allowed as a legitimate LF object only if \(C\) is uniform.\(^4\)

\[
\begin{align*}
(6) \quad & \text{Chains must be uniform} \\
(7) \quad & C=(\alpha_1, \ldots, \alpha_n)
\end{align*}
\]

\(^4\) Chomsky and Lasnik (1993: 546-547) add that the only other legitimate LF objects are operator-variable constructions \((\alpha, \beta)\), where \(\alpha\) is in an \(A'\)-position and \(\beta\) heads a legitimate (uniform) chain.
L-relatedness, which distinguishes between A- and A'-positions, is a relevant property to the definition of uniformity. That is, a chain is uniform if each element of the chain has the same property with respect to L-relatedness (A- or A'-position). Taking the operation of deletion as a “last resort”, Chomsky and Lasnik (1993) argue that deletion is impermissible in a uniform chain since it is already legitimate, whereas deletion is permissible “for \( a_i \) in an A'-position, where \( n > i > 1 \) and \( a_n \) is in an A-position; that is, the case of successive-cyclic movement of an argument” (Chomsky and Lasnik (1993: 547)).

This proposal can provide a new account for the argument-adjunct asymmetry with respect to the Empty Category Principle (ECP) and subjacency. The movement of an adjunct over a barrier is more deviant than the corresponding movement of an argument.

(8) *howi do you wonder \([CP\) whether \([IP\) John said \([CP t_i' [C e] [IP Mary solved the problem t_i]]])

(9) ??whoi do you wonder \([CP\) whether \([IP\) John said \([CP t_i' [C e] [IP t_i solved the problem]]])

Both of the above examples involve a subjacency violation. On the assumption that a chain link is formed by movement, the intermediate trace \( t_i' \) is the offending (starred) trace since a barrier is crossed as it is created. If the starred trace remains at LF, the additional effect of an ECP violation results. In (8), \( t_i' \) remains at LF since deletion is impermissible because the chain \( C=(howi, t_i', ti) \) is a uniform chain with all the members of the chain in A'-position and (8) exhibits the ECP violation. In contrast, in (9) the starred trace \( t_i' \) is deleted since the chain \( C=(whoi, t_i', ti) \) is not uniform because \( t_i' \) is in an A'-position though \( ti \) is in an A-position. As a result, (9) does not involve the ECP violation.

However, as Fukui (1993) argues, this line of explanation faces a difficulty with the following examples.

(10) *Johni was decided \([CP e [IP t_i to leave at noon]])

(11) whoi did you say \([CP t_i' e [IP t_i left yesterday]])

Chomsky and Lasnik (1993) attribute the difference in grammaticality to the fact that \( t_i \) in (10) is starred when it is created since it violates the economy principle *Minimize chain links* whereas no such violation is involved in (11). Note that the starred trace \( t_i \) in (10) cannot be deleted as the chain is uniform (both \( Johni \) and \( ti \) are in A-position). The crucial assumption here is that there is no derivation similar to (11) available for (10), in which no violation of the economy principle is in-
Chomsky and Lasnik (1993) claim that it is because movement to an A-position cannot proceed through the Spec of CP since such "improper movement" results in an illegitimate A-bound variable (here $t_i$) in violation of Condition C of the Binding Theory. Fukui (1993) points out the deletability of $t_i'$ in (12) since the chain $C= (John_i, t_i', t_i)$ is not uniform (only $t_i'$ is in an A'-position). If $t_i'$ is deleted, as he argues, on the assumption that the Binding Theory applies at LF (Chomsky (1993)), there is no way to rule out a derivation like (12) in terms of the Binding Theory.5

To handle the problem, we need a more restricted theory of deletion. In the above discussion, it is assumed that intermediate traces in non-uniform chains must be deleted to derive legitimate chains (that is, uniform chains or operator-variable chains (see footnote 4)) at LF. Suppose, instead, that there is a distinction in deletability among intermediate traces of chains involving the chain uniformity violation. I suggest the following principle.

(13) An intermediate trace can be deleted to make a non-uniform chain legitimate only if it has the same property as the head of its chain with respect to L-relatedness (A or A'-position).

For example, the intermediate trace in (14) can be deleted whereas that in (15) cannot be. (Only the L-relatedness property (A/A' distinction) is shown below for the sake of convenience, that is, the chain represents L-relatedness property of the head, the intermediate trace and the initial trace from the left.)6

(14)  a. $C= (A', A', A)$
    b. $C= (A, A, A')$
(15)  a. $C= (A', A, A')$
    b. $C= (A, A', A)$
    c. $C= (A, A', A')$

The intuition behind the suggestion is this: if the property of the land-

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5 This argument presupposes that the status of traces is decided representationally at LF.

6 Another logical possibility of (15) $C= (A', A, A)$ is a legitimate chain in which the head and the intermediate trace constitute an operator-variable construction and the intermediate trace heads a uniform chain. See footnote 4.
ing site of the moved category is the same whether or not the chain takes the intermediate step (as in (14)), the intermediate trace can be regarded as if it had not existed from the beginning and can be deleted. Otherwise, (as in (15)), the intermediate trace cannot be deleted. In other words, if a different property has been introduced in the chain by taking the intermediate step, it must be retained, which seems to be a reasonable assumption in terms of a general idea of recoverability.

If my suggestion on the deletability of the illegitimate intermediate trace is correct, the chains in (14) will be legitimate after the deletion of the intermediate traces on the assumption that the chains in (16) are legitimate whereas the ones in (15) will never be legitimate since their intermediate traces remain at LF in violation of (6) and the derivation will crash in violation of Full Interpretation (FI) because of the existence of an illegitimate LF object (non-uniform chain).

\[
\begin{align*}
(16) & \quad \text{a. } C=(A', A) \\
& \quad \text{b. } C=(A, A')
\end{align*}
\]

Under the suggested idea, the derivation in (12) is not a problem anymore since the intermediate trace in (12) cannot be deleted: it is the pattern of (15b), and the derivation crashes at LF in violation of (6) (FI).\(^7\)

Fukui (1993) independently proposes to exclude the initial trace (the tail of a chain in his term) from those contributing to the uniformity status of the chain in order to accommodate the operator-variable construction, which is treated as an exception to (6) in Chomsky and Lasnik (1993) (see footnote 4), in the same way as other chains. Note, however, that if we stand on his proposal, the distinction between (14) and (15) naturally follows without recourse to the deletion of the intermediate trace.\(^8\) The chains in (14) are uniform as they stand if the initial traces are not counted, whereas the chains in (15) are not uniform even if the initial traces are not counted. Moreover, if we accept his proposal, the chain in (16b) is added to the set of chains formed by

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\(^7\) (12) can also be ruled out by Condition C if, as I suggest, the intermediate trace is not deleted.

\(^8\) In Fukui (1993), the chains in (15) cannot be formed since he assumes (i).

(i) The Uniformity Condition on Form-Chain

Form-Chain must apply to form a uniform chain.

In the arguments to follow, I will not take (i) but maintain that the chains in (15) can be formed as illegitimate chains.
proper movement as well as the chain in (16a), even though the head and the trace do not have the same property in each chain, which is consistent with my assumption given above.

Note, however, that by adopting Fukui's proposal mentioned above, as he himself points out, the difference between (8) and (9) remains unexplained, since the intermediate trace cannot be deleted in (9): the chain is already uniform if the initial trace is ignored. He needs a different explanation for this difference. Therefore, without going further into the problem, I take the position in which the initial trace must be counted in deciding the uniformity of the chain, taking (16) as exceptions just as operator-variable chains are exceptions in Chomsky and Lasnik (1993).9

In sum, chain legitimacy with respect to L-relatedness is exemplified as follows.10

(17) Legitimate Chains
a. \( C = (A, (A), A) \) (uniform chain)
b. \( C = (A', (A'), A') \) (uniform chain)
c. \( C = (A', A', A) \) \((=14a))\)
d. \( C = (A, A, A') \) \((=14b))\)
e. \( C = (A', A, A) \) (see footnotes 6, 9)
f. \( C = (A', A) \) \((=16a))\)
g. \( C = (A, A') \) \((=16b))\)

(18) Illegitimate Chains
a. \( C = (A', A, A') \) \((=15a))\)
b. \( C = (A, A', A) \) \((=15b))\)
c. \( C = (A, A', A') \) \((=15c))\)

3. Checking of \(+\alpha\)

Let us now consider how checking of NPIs proceeds. Specifically, I will examine the distributional differences between any in English and wh-MO such as daRE-MO 'who-MO' and naNI-MO 'what-MO' in Japanese in clausemate negative sentences, non-negative sentences which have \(+\alpha\) (questions, complement clauses of adversative predi-

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9 \( C = (A', A, A) \) is also an exception, which cannot be accommodated by Fukui's proposal mentioned above. See footnote 6.

10 The intermediate trace is meant to include multiple occurrences.
cates and so on), and non-clausemate negative sentences.\textsuperscript{11}

3.1. Clausemate Negation: Subject-Object Asymmetry

(19) a. *Anyone didn’t come.
   b. Mary did not eat anything.

(20) a. daRE-MO ko-na-katta.
     anyone come-NEG-Past
     ‘No one came.’
   b. Mary-ga naNI-MO tabe-na-katta.
     -NOM anything eat-NEG-Past
     ‘Mary did not eat anything.’

(19) demonstrates the subject-object asymmetry of NPI licensing in English. NPIs cannot appear as the subject in English clausemate negative sentences though they can appear as the object. In contrast, no such asymmetry can be seen in Japanese, which is demonstrated in (20).

It is assumed that English has the following structure.

\textsuperscript{11} The upper case will be used to indicate the location of a high-pitch tone in \textit{wh-mo}. If a high-pitch tone is placed on wh-stem such as \textit{DAre-mo(-ga)} ‘everyone(-NOM)’, the expression functions as a universally quantified expression as is indicated in the English gloss. Cf. McGloin (1976), Kato (1985), Homma (1991), Aoyagi and Ishii (1993).
Chomsky (1993) argues that in English the subject moves to the Spec position of AgrsP overtly to get the associated Case and agreement features (nominative and $\phi$-features, respectively) checked by the corresponding features of the head, and the object moves to the Spec position of AgroP at LF to get the associated Case and agreement features (accusative and $\phi$-features) checked by the corresponding features of the head. It can be assumed that Japanese has a similar structure except that the heads of the phrases appear phrase-finally and the subject, as well as the object, raises at LF to get the associated features checked off, observing *Procrastinate*\(^{12}\).

\(^{12}\) *Procrastinate*, which is an economy condition, can be stated informally as fol-
To explain (19) and (20), let us see how the \([+\alpha]\) feature of the NPI is checked off in each case. In clausemate negative sentences such as (19) and (20), the only possible position to check off \([+\alpha]\) is the Spec of Neg(Σ)P since its head is the only place to carry \([+A]\) (that is, it is the only place to be assigned \([+\alpha]\)). The English subject NPI in (19a) has only two possibilities to enter that position to have its \([+\alpha]\) checked off if LF lowering is not admitted. One is to drop by at that position on the way from the underlying position to the Spec of AgrsP to have its Case and agreement features checked off. This is schematically represented in (22).

\[
(22) \quad \left[\text{AgrsP anyone}_i \text{ Agrs } [\text{TP } T [\text{Neg(Σ)P } t'_i \text{ not } [\text{VP } t_i \text{ come}]]]\right]
\]

The other is to raise the tail of the subject chain to the Spec of NegP at LF.

\[
(23) \quad \left[\text{AgrsP anyone}_i \text{ Agrs } [\text{TP } T [\text{Neg(Σ)P } t'_i \text{ not } [\text{VP } t_i \text{ come}]]]\right]
\]

Neither derivation is allowed. Note that the Spec of Neg(Σ)P in English is an A'-position since verbs have no inflection with Neg in

lows (Chomsky (1993: 30)): LF movement is “cheaper” than overt movement (and therefore preferred).

13 It has been proposed in the literature to explain the subject-object (a)symmetry by a S-structure condition using the notion of c-command or government (cf. Klima (1964), Laka (1990), Takahashi (1990), Kato (1991)). However, in the minimalist view that “all conditions express properties of the interface levels” (Chomsky (1993: 44)), no S-structure conditions are possible.


(i) The Proper Binding Condition
Traces must be bound.

15 In light of Procrastinate, it is not adequate to assume that checking \([+\alpha]\) drives overt movement. However, the economy principle does not seem to exclude the possibility that \([+\alpha]\) is checked off on the way to check the Case and agreement features, which drives overt movement of the subject in English. I am not sure whether “a principle of Greed: self-serving Last Resort” (Chomsky (1993: 33)) excludes this possibility or not. Just suppose here that it does not for the sake of the argument.

16 In the representations of derivation to follow, only the relevant movement is shown, ignoring the movement of the heads (T and V).
Thus the movement in (22) forms the chain $C=(A, A', A)$, which is illegitimate ((18b)). On the other hand, each chain in (23) is legitimate: $C=(A, A)$ and $C=(A', A)$ ((17a, f)). However, the resultant "linked chain" (Chomsky and Lasnik (1993)) is illegitimate: $C=(A, A', A)$ ((18b)). (In other words, the combined movement in (23) is improper even if each movement is proper.) Note that the linked chain must be restricted by the chain uniformity condition (6) to be a legitimate LF object. Therefore, the English subject NPI has no way to have its $[+\alpha]$ feature checked off, which is the reason for the ungrammaticality of sentences like (19a).

The English object NPI in (19b) can have the $[+\alpha]$ feature checked off successfully. It raises from the underlying position to the Spec of AgroP and then to the Spec of Neg($\Sigma$)P. Each chain formed by the movement ($C=(A, A)$ and $C=(A', A)$) and the linked chain ($C=(A', A, A)$) are all legitimate ((17a, e, f)).

(24) \[ \text{[AgroP Mary, Agrs [TP T [Neg($\Sigma$)P anythingj not [AgroP t\text{'j Agro} \]

\[ [VP t_i eat t_j]]]]} \]

To consider the Japanese examples in (20), it is important to note that Japanese has different properties from English. Note first that the Spec of Neg($\Sigma$)P is an A-position in Japanese since Verbs inflect with Neg in Japanese (see footnote 17). Note next that the Japanese subject or object NPI is not an argument but an adjunct. 18 This is evidenced by the fact that the Japanese NPI bears no overt Case-markers ((25)), and can cooccur with the overt subject or object ((26)), which reminds us the behavior of floating quantifiers (FQ) ((27)). 19

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17 Inflection serves as evidence to see whether a position is an A- or A'-position. If a verb inflects with some functional category, the form should be checked with the inflectional feature of the functional head and the Spec of it is a L (V)-related position, that is, an A-position (Chomsky (1993: 28)).

18 There are no argument NPIs in Japanese. See McGloin (1976) and Kato (1985) for a list of Japanese NPIs. Thus the analysis to be presented applies to all Japanese NPIs.

19 Homma (1991) and Aoyagi and Ishii (1993) assume that Japanese NPIs are a class of FQs. Fujita (1993) argues that FQs are VP-modifiers. Kawashima and Kitahara (1992) assume that Japanese NPIs are expressions which modify arguments.
   anybody-Nom apple-Acc eat-Neg-Past
   ‘Nobody ate apples.’
b. *John-ga naNI-MO-o tabe-na-katta
   -Nom anything-Acc eat-Neg-Past
   ‘John did not eat anything.’
(26) a. gakusei-ga daRE-MO ko-na-katta
   student-Nom anybody come-Neg-Past
   ‘No students came.’
b. John-ga kudamono-o naNI-MO tabe-na-katta
   -Nom fruit-Acc anything eat-Neg-Past
   ‘John did not eat any fruit.’
(27) a. gakusei-ga 3-nin okurete ki-ta
   student-Nom -CL late come-Past
   ‘Three students came late.’
b. John-ga ringo-o 3-ko tabe-ta
   -Nom apple-Acc -CL eat-Past
   ‘John ate three apples.’

Sentences involving the NPI without the Case-marked subject or object may be taken as those involving empty NPs (pro’s) (cf. Homma (1991), Kawashima and Kitahara (1992)) and these empty NPs get the associated Case and agreement features checked off. Thus the clausal structure involving the NPI in Japanese can be assumed as follows.20

20 There is no independent evidence to assume the projection of Pol in Japanese. However, I assume the comparable structure for Japanese to English, supposing the minimal parametric differences. The non-existence of the projection of Pol in Japanese does not crucially affect the argument to be presented.
Therefore, the movement of Japanese NPIs from the underlying positions to the Spec of Neg(Σ)P to check the [+α] feature is proper (C=(A, A')) ((17g)) and the feature is successfully checked off. This is the case of both (20a) and (20b).

Thus the feature-based analysis can successfully account for the difference between the English and Japanese NPIs in the case of the clausemate negation.21

Incidentally, the licensing of the adverbial NPI in English is trivially explained by the movement from the underlying position to the Spec of Neg(Σ)P to form C=(A', A') ((17b)).

(i) John did not go anywhere last Sunday.
3.2. Questions, Adversative Predicates and Others

The English NPI, *any* can appear not only in negative sentences but in many other constructions with [+A] such as in questions, complement clauses of adversative predicates, conditional clauses and so on, whereas the Japanese NPI, *wh-MO* can only appear in negative sentences. In this subsection I will show that the present analysis can account for the difference systematically.

(29) a. Does anyone come?
   b. Does John eat anything?

(30) a. *daRE-MO ki-ta-ka
   anyone come-Past-Q
   ‘Does anyone come?’
   b. *John-ga naNI-MO tabe-ta-ka
   -Nom anything eat-Past-Q
   ‘Does John eat anything?’

(31) a. I doubt that anyone has come.
   b. John denied that he ate anything.

(32) a. *daRE-MO ki-ta-koto-o utagau
   anyone come-Past-Comp-Acc doubt
   ‘I doubt that anyone has come.’
   b. *John-ga naNI-MO tabe-ta-koto-o hiteisi-ta
   -Nom anything eat-Past-Comp-Acc deny-Past
   ‘John denied that he ate anything.’

(33) a. If anyone comes, let me know.
   b. If he takes her anywhere, she will be happy.

(34) a. *daRE-MO ki-ta-nara watasi-ni si-rase-te
   anyone come-Past-if me-Dat know-let-Imp
   ‘If anyone comes, let me know.’
   b. *kare-ga kanozyo-o doKOE-MO tsureteiku-nara
   he-Nom her-Acc anywhere take-if
   kanozyo-wa yorokobu daroo
   she-Top be pleased will
   ‘If he takes her anywhere, she will be pleased.’

The English NPI appears freely as the subject or the object (argument), or as an adverb (adjunct) in these constructions whereas the Japanese counterparts do not.22 These constructions are assumed to

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22 As argued earlier, the Japanese NPI is neither the subject nor the object, but a
have [+A] in the head of CP. According to the free assignment hypothesis (3a), [+α] can be assigned to that head.  

The NPI subject in English in these cases raises overtly from the underlying position to the Spec of AgrsP to have its Case and agreement features checked off, forming the chain C=(A, A), and further raises through the Spec of PolP to the Spec of CP to have the [+α] feature of the NPI checked at LF, forming C=(A', A', A'). This is illustrated in (35).

(35) \[CP \text{ anyone}_{i} C \left[\text{PolP } t''_{i} \phi \left[\text{AgrsP } t'_{i} \text{ Agrs } \left[\text{TP } T \left[\Sigma P \phi \left[\text{VP } t_{i} \left[\text{come}]]]]]]\right]\right]\right] \]

Recall that the subject does not go through the Spec of ΣP since if it did, the illegitimate chain C=(A, A', A) ((18b)) would result. The chains including the linked chain C=(A', A', A, A) are all legitimate ((17a, c, e)) and the [+α] feature is successfully checked off. The NPI object in English moves from the underlying position to the Spec of AgroP to have its Case and agreement features checked (C=(A, A)), and then through the Spec of ΣP and the Spec of PolP to the Spec of CP to have its [+α] feature checked (C=(A', A', A', A)).

subject modifier and an object modifier. However, in what follows, it is referred to as the subject and the object, respectively unless any confusion arises.

23 That the assignment of [+α] involves Comp also in the case of adversative predicates can be shown by the fact that the NPI does not appear in sentences without Comp even in the same predicates. Cf. Laka (1990), Progovac (1993).

(i) a. *The professor doubts any explanation.
b. *The witnesses denied anything.

It can be assumed that the Comp selected by adversative predicates has [+Neg], which triggers the assignment of [+α]. Note that the subject-object asymmetry of the English NPI seen in clausemate negative sentences does not arise in the complement of adversative predicates though the NPI is also licensed by [+Neg].  

24 The Spec of PolP is supposed to be an A'-position as well as the Spec of CP in both English and Japanese since the heads have no inflectional features of verbs (see footnotes 17 and 20).

25 C=(A', A', A, A) is legitimate since it is reduced to C=(A', A, A) (17e) by deleting the intermediate trace (t''_{i}) which has the same status as the head as I suggested in section 2.
The chains including the linked chain $C = (A', A', A', A')$ are all legitimate (17a, c, e (see footnotes 10, 25)). The English adverbial NPI as in (33b) moves from the underlying position through the Spec of ΣP and the Spec of PolP to the Spec of CP to form a legitimate chain $C = (A', A', A', A')$ (17b).

Thus the derivations converge at LF in the constructions which have $[+A]$ at C like (29), (31) and (33). Note that I crucially assume (38) in the above explanation.

The movement to check the $[+/−α]$ feature cannot skip any possible checking position of $[+/−α]$ on the way. This seems to be a natural reflection of Minimize chain links. One might then wonder why the Spec of ΣP can be skipped by the subject NPI in English. This is because the driving force of the movement in this case is the need to check the Case and agreement features, not the $[+α]$ feature (see footnote 15) and in terms of the principle of Greed, the mission other than checking the Case and agreement features is not 26 It might be argued, as pointed out by Yasuhiko Kato (p.c.), that this analysis has counterexamples involving until since if until is an NPI as assumed by Lineberger (1980), Progovac (1993) and Kato (1994), the chain formed to check its $[+α]$ in these constructions should be legitimate $C = (A', A', A', A')$, which is the same as (37), contrary to fact.

(i) a. *Did John arrive until 7 o'clock?
   b. *Peter denied that John arrived until 7 o'clock.

However, (i) can be explained, without assuming that until is a NPI, by a semantic condition on until which requires a durative predicate as opposed to a punctative one as the host (modifiee) of until. Compare (i) with (ii).

(ii) a. Did John sleep until noon?
   b. Peter denied that John slept until noon.

A punctative verb cooccurs with until in a clausemate negative sentence because negating a punctative verb creates a durative predicate.

(iii) John did not arrive until 7 o'clock.
significant. (That is, it may or may not be fulfilled.) It seems to be a reasonable assumption that if syntactic movement is driven by the need to check some feature, the movement must be sensitive to every position related to that feature.\(^{27}\)

The Japanese NPIs in these constructions, in every occurrence, raise from the underlying positions through the Spec of $\Sigma P$ (and the Spec of PolP) to the Spec of CP to get their $[+a]$ feature checked off, satisfying (38) (see footnote 20). This derivation is similar to (37). Recall that the seeming subject and object NPI in Japanese are not the true subject and object (i.e. not arguments) but adjuncts and the Spec of $\Sigma P$ in Japanese is an A-position. Thus this movement forms a chain $C=(A', (A'), A, A')$. This is an illegitimate chain which contains (18a), which runs against the chain uniformity condition (6). Therefore, the NPI in Japanese cannot be licensed by $[+A]$ at C in these constructions.\(^{28}\)

3.3. Locality

To capture the fact that Japanese NPIs cannot undergo long-distance licensing, of which each sentence in (39) is a case, the clausemate condition like (40) has been proposed in the literature (McGloin (1976), Muraki (1978), Kato (1985)).

   shira-na-katta
   know-Neg-Past
   ‘John did not know that anyone came.’

   iwa-na-katta
   say-Neg-Past
   ‘Mary did not say that John ate anything.

\(^{27}\) The same idea of Minimize chain links is independently argued for in Ferguson and Groat (1994).

\(^{28}\) Notice that a checking analysis which does not assume the projection(s) of $\Sigma$ (and Pol) in non-negative sentences unlike my analysis and/or assumes that the Spec of NegP in Japanese is an A'-position (Kawashima and Kitahara (1992)) cannot explain these facts because it predicts proper movement of the Japanese NPI in these constructions just like the English adverbial NPI ($C=(A', (A'), (A'), A')$ ((17b))).
An NPI must be a clausemate of Neg.

(cf. Aoyagi and Ishii (1993))

However, (40), which is a simple stipulation, can be explained under the present analysis. As is seen in the English translation in (39), the English counterparts are grammatical. That the English long-distance licensing involves the [+Neg] feature of C is suggested by the following contrast.29

(41) a. That anyone might do anything like that did not occur to John.
   b. *Any idea did not occur to John.

(42) a. That he had stolen anything was not proved.
   b. *Any theory of Case checking was not proved.

The NPI cannot be licensed in the subject position of English clausemate negative sentences for the reason which I have explicated in 3.1., while if it is in the sentential subject, it can be licensed because the NPI is licensed by [+Neg] in C. Given no independent evidence to the contrary, just suppose that Japanese also has [+Neg] in C.30

Then the difference between English and Japanese seen in the long-distance NPI licensing can be attributed to the difference observed in 3.2.: the [+α] feature of the English NPI can be checked at the Spec of CP whereas that of the Japanese NPI cannot be checked anywhere other than the Spec of NegP, because through the movement to the Spec of CP, the former can form a proper chain whereas the latter cannot.31

29 I adopt the idea that “complement selection must be viewed as a compositional process, one where not only the matrix verb, but also the inflectional elements of the matrix sentence play a role” (Laka (1990:200)).


31 (40) has a counterexample involving a “bridge verb”.

(i) John-ga [daRE-MO paati-ni sasoow to] omottei-nai
   -Nom anyone party-to invite Comp think-Neg
   ‘John is not thinking of inviting anyone to the party.’

Kato (1993) assumes condition (ii) to deal with the NPI licensing in the complement clause of a bridge verb.

(ii) In configuration (i), where V* is a bridge verb, α is accessible to β:
   (i) [...]v'[cp... α ...] V*] ... β]

In our terms, the condition should read:

(iii) CP (and PolP) of the complement clause of a bridge verb is (are) invisible to movement.

Through (iii), the NPI in (i) raises from the underlying position through the Spec of ΣP of the complement clause to the Spec of Neg(Σ)P in the matrix clause to form a legitimate chain C=(A, A, A') ((17d)). Thus sentences like (i) are grammatical.
4. Checking of \([-\alpha]\)

Let us move to the cases of PPIs and see how the present analysis applies to them. The corresponding expressions with *any* and *wh-MO* are *some* and *wh-ka* (such as *nani-ka* ‘what-ka’ or *dare-ka* ‘who-ka’), respectively, in English and Japanese. The checking analysis of \([-\alpha]\), which PPIs are assumed to have intrinsically, can correctly capture the interpretation and the grammaticality of sentences involving the PPIs in English and Japanese.

4.1. Clausemate Negation

The PPIs are forced to have a wide scope interpretation over Neg involved in the clausemate negation in both English and Japanese. (# indicates the sentence has no Neg>PPI interpretation.)

(43) a. # Someone did not come.
    b. # John did not eat something.

(44) a. # dare-ka(?/??/*)(-ga) ko-na-katta.
     someone(-Nom) come-Neg-Past
     ‘Someone did not come.’
    b. # John-ga nani-ka(?/??/*)(-o) tabe-na-katta
     -Nom something(-Acc) eat-Neg-Past
     ‘John did not eat something.’

The \([-\alpha]\) feature of the PPIs cannot be checked off at the Spec of Neg(Σ)P in clausemate negative sentences since the Neg head cannot be assigned \([-\alpha]\) ((3b)). Thus the PPIs must raise beyond the Spec of Neg(Σ)P and find the place to check the feature at a higher polarity checking place. This is why the PPIs must have a wide scope interpretation with respect to Neg.

The English subject PPI in (43a) raises from the underlying position to the Spec of AgrsP to have its Case and agreement features checked and raises further to the Spec of PolP, where \([-\alpha]\) has been freely assigned ((3b)), to have its \([-\alpha]\) feature checked. This is illustrated in (45). Recall that the English subject does not drop by at the Spec of ΣP on its way to the Spec of AgrsP since then an illegitimate chain C=(A, A′, A) ((18b)) would result.
The chains are all legitimate: $C=(A, A)$ and $C=(A', A)$ or the linked chain $C=(A', A, A)$ ((17a, e, f)). The English object PPI in (43b) raises from the underlying position to the Spec of AgroP for the Case and agreement features and further through the Spec of Neg($\Sigma$)P to the Spec of PolP, observing (38), for $[-\alpha]$. The chains are all legitimate: \( C=(A, A) \) and \( C=(A', A', A) \) or the linked chain \( C=(A', A', A, A) \) ((17a, c, e (see footnote 25))).

The Japanese examples in (44) are more delicate. These sentences are perfectly grammatical with the Case-markers of \textit{wh-ka}. However, without the Case-markers, the judgments of the sentences vary. The PPI bearing the Case-markers is certainly an argument (cf. the NPI in (25)). Thus the subject and object PPI move to get their Case and agreement features and $[-\alpha]$ feature checked in the same way as the English subject and object PPI do((45) (46)). Note, however, that the Japanese sublect PPI may drop by at the Spec of Neg($\Sigma$)P on the way to the Spec of AgroP (if \textit{Greed} does not exclude the possibility (see footnote 15)) since the chain formed by the movement is not illegitimate \( C=(A, A, A) \), although $[-\alpha]$ cannot be checked off there and further movement from the Spec of AgroP to the Spec of PolP (or CP if Japanese does not have PolP (see footnote 20)) is required. Thus the chains formed by the Japanese subject PPI are: \( C=(A, (A), A) \) and \( C=(A', A) \). The linked chain is \( C=(A', A, (A), A) \). The chains of the Japanese object PPI are: \( C=(A, A) \) and \( C=(A', A, A) \) or the linked chain \( C=(A', A, A, A) \). All chains are legitimate ((17a, e, f)).

Without the Case-markers in (44), it is not clear whether the PPI is an argument on which an optional deletion operates to produce the forms without the Case-markers or an adjunct. The following data, in which the PPI can cooccur with the overt subject or object, suggest the status of adjunct (cf. (26)).
(47) a. (shiranai hito-ga) dare-ka ki-ta
   (strange person-Nom) someone come-Past
   ‘Some stranger came.’

   b. John-ga (kudamono-o) nani-ka ka-tta
      -Nom (fruit-Acc) something buy-Past
   ‘John bought some fruit.’

However, if the PPI is an adjunct, it is predicted that negative sentences involving the PPI should be ungrammatical since the movement to check $[-\alpha]$ should be from the underlying position through the Spec of Neg($\Sigma$)P to the Spec of PolP (or CP), resulting in an illegitimate chain $C=(A', A, A')$ ((18a)). This is borne out by the negative sentences in which the overt subject or object excludes the possibility that $wh$-$ka$ is an argument with a deleted Case-marker.32,33

32 The corresponding questions are grammatical. Take the example of (48a).

(i) (ginkoo-no hito-ga) dare-kakanakatta no
    bank-Gen person-Nom someone come-Neg-Past Q
    ‘Did someone of the bank not come?’

I do not have a complete explanation for this matter. Sentences like (i) seem to express the speaker’s surprise or suspicion at the negative propositions, which in turn implies the speaker’s strong expectation or belief of the positive contents. This positive implicature in which the $[-\alpha]$ feature of the PPI is successfully checked off might be responsible for the fact. With the predicates which explicitly express the speaker’s belief in the positive contents, sentences like (48) are perfectly grammatical.

(ii) ginkoo-no hito-ga dare-ka ko-na-katta no-wa hen da
    bank-Gen person-Nom someone come-Neg-Past Comp-Top strange is
    ‘It is strange that someone of the bank did not come.’

Hasegawa (1991) argues the head-movement of Neg into Comp at LF to accommodate sentences like (i). However, the movement does not seem to be justified in terms of Greed in Chomsky (1993). If the movement is somehow justified, (i) is explained syntactically in the present analysis. The PPI moves from the underlying position directly to the Spec of PolP in (i) to check $[-\alpha]$, not violating (38), since the Spec of NegP and the Spec of PolP are equidistant from the underlying position of the PPI because of the head-movement. The chain is $C=(A', A')$, which is legitimate. Note that if this analysis is valid, it argues for the existence of PolP in Japanese (see footnote 20). I leave this problem for further research.

33 Note that the English counterpart of (48c), which is expressed in the English translation, is grammatical. The PPI in English forms a legitimate chain $C=(A', A', A')$ ((17b)) by the movement from the underlying position through the Spec of NegP to the Spec of PolP.
(48) a. *ginko-no hito-ga dare-ka ko-na-katta
   bank-Gen person-Nom someone come-Neg-Past
   ‘# Someone of the bank did not come.’
b. *John-ga kudamono-o nani-ka tabe-na-katta
   -Nom fruit-Acc something eat-Neg-Past
   ‘# John did not eat some fruit.’
c. *John-ga konomaeno nitiyoubi-ni doko-ka-e
   ika-na-katta
   -Nom last Sunday-on somewhere
   go-Neg-Past
   ‘# John did not go somewhere last Sunday.’

Thus it is suggested that at least for the speakers who accept wh-ka in
(44) without the Case-markers, it is an argument and there is an
optional deletion operation of Case-markers which is responsible for
the forms. For those who find wh-ka without the Case-markers less
acceptable, the deletion operation is more restricted. In any event,
the PPI in Japanese cannot be an adjunct in clausemate negative sen-
tences (which do not express the speaker’s belief of positive contents
(see footnote 32)).

Incidentally, the PPI can be an adjunct in a non-clausemate negative
sentence, even with a bridge verb (cf. footnote 31).

(49) John-wa [tomodati-o dare-ka paatii-e sasoo to]
   Top friend-Acc someone party-to invite Comp
   omowa-na-katta
   think-Neg-Past
   ‘John did not think that he would invite some friend to the
   party.’

The PPI is checked off successfully at the Spec of $\Sigma P$ in the embedded
clause and the narrow scope interpretation of the PPI with respect to
Neg is possible.

4.2. Sentences without [+A] and Questions, Adversative Predicates
and Others

In sentences without [+A], that is, those involving no negation,
questions, conditionals, adversative predicates, and so on, the PPIs
appear freely both in English and in Japanese.

(50) a. Someone came.
b. John ate something.
c. John went somewhere.
Sentences with [+A] other than clausemate negation also allow free occurrence of PPIs.

(52) a. Did someone come?
    b. Did John see someone at the conference?

(53) a. dare-ka(-ga) ki-ta ka
    someone(-Nom) past see-Past Q
    ‘Did someone/anyone come?’
    b. John-ga kaigi-de dare-ka-ni at-ta ka
    -Nom conference-at -Dat past see-Past Q
    ‘Did John see someone/anyone at the conference?’

(54) a. I doubt that John went somewhere.
    b. John denied that he ate something.

(55) a. John-ga doko-ka-e i-tta koto-o utagau
    -Nom somewhere go-Past Comp-Acc doubt
    ‘I doubt that John went somewhere/anywhere.’
    b. John-ga nani-ka(-o) tabe-ta-koto-o hiteisi-ta
    -Nom something eat-Past-Comp-Acc deny-Past
    ‘John denied that he ate something/anything.’

(56) a. If someone comes, let me know.
    b. If you go to N.Y. someday, I will go with you.

Moreover, in these cases the PPI need not have a wide scope interpretation with respect to the operators (the elements with [+A]) unlike the case of the clausemate negation.

The [−α] feature of the PPI subject in English as in (50a), (52a) and (56a) can be checked off through LF movement from the Spec of AgrsP to the Spec of PolP in a Spec-head relation with Pol, where
\[\neg \alpha \] can be freely assigned by (3b) since it does not have \([+\text{Neg}] ([+\text{A}])\). This is illustrated in (58).

(58) \text{ [PolP someone}_i \phi \text{ [AgrsP t'}_i \text{ Agrs [TP T [\Sigma P \phi [VP t_i came]]]]]}

The chains are all legitimate: \(C=(A, A), C=(A', A) (C=(A', A, A) \text{ (linked chain)}) ((17a, e, f))\). Recall that the English PI subject never has a chance to get its \([\neg \alpha]\) feature checked at the Spec of \(\Sigma P\), since a movement by which it drops by that position on the way to the Spec of AgrsP is improper \((C=(A, A', A) ((18b)))\). In contrast, the \([\neg \alpha]\) feature of the object in English as in (50b), (52b) and (54b) is checked off at the Spec of \(\Sigma P\), the head of which has no \([+\text{Neg}]\) and can be assigned \([\neg \alpha]\). The chains are all legitimate \((C=(A, A), C=(A', A) \text{ and } C=(A', A, A) \text{ (linked chain)}) ((17a, e, f))\).

(59) \text{ [AgrsP John}_i \text{ Agrs [TP T [\Sigma P t''j something}_j \text{ [AgroP t'}_j \text{ Agro [VP t_i ate t_j]]]]]}

The adverb moves from the underlying position to the Spec of \(\Sigma P\) to form a legitimate chain \(C=(A', A') ((17b))\).

(60) \text{ [AgrsP John}_i \text{ Agrs [TP T [\Sigma P somewhere}_j \text{ [VP t_i went t_j]]]]]}

Both the Japanese subject and object PPI can appear with or without the Case-markers. With the Case-markers, the PPI is an argument. The \([\neg \alpha]\) feature of the subject PPI as in (51a), (53a) and (57a) is checked off either at the Spec of \(\Sigma P\) on its way to the Spec of AgrsP (on the chain \(C=(A, A, A)\)), or at the Spec of PolP where it moves at LF from the Spec of AgrsP like (58), depending on whether \textit{Greed} allows an element to have its features checked even on its way to have other features checked (see footnote 15). The \([\neg \alpha]\) feature of the object PPI ((51b) (53b) (55b)), on the other hand, is checked at the Spec of \(\Sigma P\) at LF as in (59). The chains in this case are: \(C=(A, A), C=(A, A, A) \text{ or } C=(A, A, A) \text{ (linked chain)}) ((17a))\). Recall that the Spec of \(\Sigma P\) in Japanese is an A-position.

It is not clear whether a given PPI is an argument without the Case-markers or an adjunct if it lacks a Case-marker. Note that unlike the case of the clausemate negation discussed in 4.1., even when the \([\neg \alpha]\) feature is carried by an adjunct, it is successfully checked at the Spec of
ΣP through the proper movement forming C=(A, A') ((17g)).

In all of these cases both in English and Japanese, the [−α ] of the PPIs is checked off either at the Spec of ΣP or at the Spec of PolP, and the PPIs do not raise beyond the checking domain of the operators (the Spec of CP). This is why the PPIs do not need to have a wide scope interpretation over the operators (the elements with [+A]) in (52)–(57), unlike the case of the clausemate negation.34

5. Conclusion

In this paper, I have attempted to explain the behavior of the PIs in English and Japanese—any, some, wh-MO, wh-ka—in terms of the feature checking and the legitimacy of chains formed by movement. Assuming that the [+/-α ] feature, which PIs intrinsically have, must be properly checked, I have proposed three different checking positions in a clause: the Spec's of Σ(Neg)P, PolP and CP, which cannot be skipped under the economy principle (38) (Minimize chain links) if movement is driven by the need of checking [+/-α ]. I have also proposed a new view of proper movement based on the chain uniformity condition (6), suggesting a principle of deletion of intermediate traces in non-uniform chains ((13)). In light of these proposals, I have examined and explained the differences between the English and Japanese PIs, attributing them to the difference in the status of the PIs (any, some, wh-ka: argument/adjunct, wh-MO: adjunct) and the L-relatedness property (A/A' distinction) of the Spec of Σ(Neg)P (A' in English; A in Japanese).

34 This analysis leaves open the question of how the PPIs may take a wide scope (specific) interpretation over the operators in (52)–(57). Notice, however, the PPIs have that interpretation irrespectively of the existence of the operators, which is suggested by an interpretation of (50) and (51). It seems that the PPIs are potentially ambiguous and a wide scope interpretation is freely given to the PPIs just like a non-coreferential interpretation is freely given to pronouns. Cf. Progovac (1993). Therefore, I tentatively assume the following asymmetric assignment of the interpretations.

(i) In order for PPIs to take a narrow scope interpretation with respect to an operator, they must be in the domain of the operator. A wide scope interpretation is freely given to PPIs.
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