Proceedings of the Forth Tokyo Conference on Psycolinguistics.
Hituzi Syobo Publishing Company

On the Distribution and Licensing of Negative Polarity Items in Japanese and the Phase-Impenetrability Condition*

Hideaki Yamashita

YOKOHAMA NATIONAL UNIVERSITY

1. Introduction

Among the many findings discovered by the generative approach to syntax is that syntactic dependencies are subject to locality conditions. The notion of locality has attracted much attention and prompted much research, and has played a pivotal role in syntactic theorizing. In his latest development of the Minimalist approach to syntactic research, Chomsky (2000, 2001) introduces the notion of "phase," and advances a phase-based model of syntactic computation, where it is hypothesized that derivations proceed cyclically phase-by-phase. In so doing, Chomsky advances a phase-based theory of the locality of syntactic dependencies, in particular, those involving the feature-checking operation Agree, arguing that they are constrained by the Phase-Impenetrability Condition (PIC). One interesting property of "PIC-constrained Agree" is that, as schematically shown in (1)a, a "cross-clausal" (or "cross-phasal") Agree relation can be established between an element in CP2 (the "probe" X) and one in CP1 (the "goal" YP) only if the goal YP is in the "edge" (=specifier) of CP1, but such a relation cannot be established when YP is not in the edge position, as in (1)b (for the moment, v*P phases are ignored; a formal description concerning PIC will be provided in Section 3).

(1) a. $[_{CP2} \ldots X_{(Probe)} \ldots [_{CP1} YP_{(Goal)} C [_{TP} \ldots]]]$ ^{ok}Agree (X; YP)[1]

b. $[_{CP2} \ldots X_{(Probe)} \ldots [_{CP1} C [_{TP} \ldots YP_{(Goal)} \ldots]]]$ *Agree (X; YP)

Since the phase-model of syntax was put forth by Chomsky, various studies (Bruening 2001, Polinsky and Potsdam 2001, and Wurmbrand and Bobaljik 2002, to name a few) have appeared showing that the locality condition imposed on Agree is indeed phase-based and that cross-clausal/phasal Agree can be established only if the goal is in the edge position. This paper, couched under the phase theory of Chomsky 2000, 2001, is yet another attempt to elucidate the nature of locality conditions on syntactic dependencies by looking at the dependency relation exhibited with the negative polarity item (NPI) licensing in Japanese, where NPI requires a negation (Neg) marker as its licenser. (I will call the dependency relation of Neg and NPI the "Neg-NPI dependency.")[2,3]

The paper is organized as follows. In Section 2, I provide the basic data involving NPIs in Japanese that we will address. I first introduce the standard paradigm that led previous researchers (Oyakawa 1975, Muraki 1978, Kato 1985, among many others) to propose the well-known "Clause-mate Condition (CMC)" on NPI licensing. Then I provide data that indicates that the distribution of NPIs in Japanese cannot be handled by the CMC. In Section 3, I pursue an alternative account of the distribution and licensing of NPIs in Japanese. I argue, following ideas independently entertained by Yoshida (1999) and Maeda (2002), that the mechanism responsible for NPI licensing is the feature-checking operation Agree and that the distribution of NPIs should hence be constrained by the PIC. In so doing, it is demonstrated that the locality condition on NPI licensing provides further empirical support for the version of the PIC formulated in Chomsky 2001. Section 4 concludes the paper.

2. The Distribution of NPIs in Japanese

As (2) shows, NPIs in Japanese require a negative (Neg) marker; since (2)b does not contain Neg, the NPI cannot be licensed, and hence the sentence is ungrammatical.[4]

(2) a. John-ga Mary-to-*sika* awa-*nakat*-ta.
John-NOM Mary-with-*NPI* meet-*NEG*-TNS
'John $_{(Neg)}$ met [$_{(NPI)}$ only Mary].'

b. *John-ga Mary-to-*sika* at-ta.
John-NOM Mary-with-*NPI* meet-TNS
'John met [$_{(NPI)}$ only Mary].'

A well-known restriction on the "Neg-NPI dependency" is that it generally cannot be cross-clausal. (3) shows that Neg in the matrix clause cannot license an NPI in the subordinate ("indicative") clause.[5]

(3) *Bill-ga Pam-ni [John-ga Mary-to-*sika* atta to]
Bill-NOM Pam-DAT John-NOM Mary-with-*NPI* met C
tutae-*nakat*-ta.
tell-*NEG*-TNS
'Bill $_{(Neg)}$ told Pam [John met [$_{(NPI)}$ only Mary]].'

Based (in part) on the contrast between (2) and (3), the long-standing analysis of NPI licensing in Japanese has been that NPIs must be licensed by Neg in the same clause (Oyakawa 1975, Muraki 1978, Kato 1985, among others), the so-called Clause-mate Condition (CMC) in (4).[6]

(4) Clause-mate Condition (CMC): (Muraki 1978, etc.)
NPI must be clause-mate with Neg.
(cf. adapted from Muraki 1978: (4))

It should be noted, however, as already pointed out by Muraki (1978), and also discussed by Nemoto (1993), Kato (1994), Uchibori (2000), among others, that there are cases where an NPI can be licensed by Neg that is not in the same clause. For example, such licit cross-clausal NPI licensing can be seen when the clause is not "indicative" (cf. (3)). One set of examples involve "subjunctive" complements, as illustrated by (5) (the judgment reported here is mine; Uchibori (2000) marks it as perfect. See note 8 and 19 for a discussion of this point and related issues).

(5) ?? Bill-ga [John-ga Mary-to-*sika* au yoo(ni)]
Bill-NOM John-NOM Mary-with-*NPI* meet C
nozoma-*nakat*-ta.
hope-*NEG*-TNS
'Bill $_{(Neg)}$ hoped [John meet [$_{(NPI)}$ only Mary]].'
(adapted from Uchibori 2000: Ch.5; Appendix 2.2, (16))

In order to account for this (and other) licit instances of cross-clausal NPI licensing involving non-indicative complements under the CMC, Muraki (1978) proposed several transformations, the effect of which is to turn a bi-clausal structure involving a non-indicative subordinate clause into a mono-clausal structure.[7] He argued that the effect of these transformations is to make the Neg and NPI clause-mates, which renders NPI licensing possible under the CMC.[8,9]

The validity of the CMC must nonetheless be called into question on empirical grounds, once we consider an example such as (6), where the otherwise unlicensed NPI in (3) can be licensed if it is scrambled to the pre-subject position of the embedded clause.[10]

(6) ? Bill-ga Pam-ni [Mary-to-*sika*$_i$ John-ga t_i atta to]
Bill-NOM Pam-DAT Mary-with-*NPI* John-NOM met C
tutae-*nakat*-ta.
tell-*NEG*-TNS
'Bill $_{(Neg)}$ told Pam [[$_{(NPI)}$ only Mary]$_i$ John met t_i].'

Assuming the fairly uncontroversial observation that scrambling out of the indicative CP cannot target the matrix vP/VP (Saito 1985: Ch.3, Fn.34, Sakai 1994), the highest possible position for the scrambled NPI in (6) is the embedded CP-Spec, in which case Neg and NPI cannot be considered to be in the same clause. Thus, the amelioration in (6) cannot be captured by the CMC.

3. PIC-constrained Agree Analysis

Given that the CMC fails to fully explain the distribution of NPIs, the immediate task for us is to come up with an account that does not resort to the notion of "clause," but still captures the locality conditions on NPI licensing in Japanese. I show that the notion of "phase" elaborated in Chomsky 2000, 2001 plays a pivotal role in accounting the distribution of NPIs in Japanese. Specifically, following ideas independently pursued in Yoshida 1999 and Maeda 2002, where it is argued that NPI licensing in Japanese is an instance of the (feature-checking) operation Agree holding between Neg (licenser/"probe") and

NPI (licensee/“goal”) under the phase theory developed in Chomsky 2000, 2001,[11] I show that Neg and NPI must be “phase-mates” in order for Agree to take place, and argue that whether a probe and a goal are phase-mates is derivationally determined by the Phase-Impenetrability Condition (PIC). Thus, NPI licensing in Japanese, being an instance of Agree, is not subject to the CMC, but rather a sort of “phase-mate condition.” Since the Neg-NPI dependency is a probe-goal relation mediated by Agree, it is predicted that NPI licensing is subject to the PIC. I show that the paradigm we have seen above indicates that this is indeed the case. Interestingly, the “PIC-constrained Agree” analysis of the distribution and licensing of NPIs to be developed here has an interesting theoretical implication in that it gives support for Chomsky’s (2001) formulation of PIC in (8) below as opposed to his previous formulation in Chomsky 2000 as seen in (7). Hereafter, for the sake of exposition, the version of the PIC formulated in Chomsky 2000 and Chomsky 2001 are dubbed PIC_{MI} (the “original” PIC) and PIC_{DbP} (the “relaxed” PIC),[12] respectively.

(7) PIC_{MI}: Chomsky 2000: p.108, (21) [cf. Chomsky 2001: p.13, (7)]

The domain of H is not accessible to operations outside HP; only H and its edge are accessible to such operations.

(8) PIC_{DbP}: Chomsky 2001: p.14, (7)

The domain of H is not accessible to operations at ZP; only H and its edge are accessible to such operations.

As Chomsky (2001: p.14) argues, the crucial distinction between the formulation of the PIC_{DbP} in (8) and the PIC_{MI} in (7) is that in the configuration (9), a probe X (e.g., T, Neg) can Agree with an element(s) within YP under PIC_{DbP}, as illustrated in (11) but not under PIC_{MI}, as in (10); the closed box indicates the "accessible domain" of a probe X, and ~~the single strikethrough~~ designates the "inaccessible domain."

(9) $[_{ZP(=CP)}\ Z\ [_{(TP)}\ \ldots\ X\ \ldots\ [_{HP(=v^*P)}\ \alpha\ [H\ [_{YP(=VP)}\ Y\ [_{WP(=CP)}\ \beta\ [W\ [_{UP(=TP)}\ ]]]]]]]]$

(where ZP, HP, and WP are (strong) phases)

(10) PIC_{MI} (the "original" PIC):

$[_{ZP(=CP)}\ Z\ [_{(TP)}\ \ldots\ X\ \boxed{\ldots\ [_{HP(=v^*P)}\ \alpha\ [H\ \sout{[_{YP(=VP)}\ Y\ [_{WP(=CP)}\ \beta\ [W\ [_{UP(=TP)}\ ]]]]]}\ ]}\ ]]$

(11) PIC_{DbP} (the "relaxed" PIC):

$[_{ZP(=CP)}\ Z\ [_{(TP)}\ \ldots\ X\ \boxed{\ldots\ [_{HP(=v^*P)}\ \alpha\ [H\ [_{YP(=VP)}\ Y\ [_{WP(=CP)}\ \beta\ [W\ \sout{[_{UP(=TP)}\ ]}]]]]]}\ ]]$

The key point for the following discussion of the distribution of NPIs in terms of the PIC is that while the probe X in PIC_{MI} (10) cannot search into YP, the probe X in PIC_{DbP} (11) can access a goal contained in YP, but cannot search into UP, the complement of phase-head W. This follows from the difference in the timing of when a domain becomes inaccessible for Agree. Under PIC_{MI}, the complement of phase-head H of HP becomes an inaccessible domain upon the "completion" of a given phase. Suppose the completion takes place upon merger of another head γ with HP, forming $\gamma P = \{\{\gamma, HP\}\}$.[13] Then, in the configuration (10), YP becomes an inaccessible domain as soon as γ is merged. Hence, even when γ = X, X cannot probe into YP, given that YP has already become an

inaccessible domain. The situation is different in the case of PIC_{DbP}, as illustrated in (11); the complement of phase-head H of HP under PIC_{DbP} does not become an inaccessible domain until the merger of the next higher strong phase-head Z, where strong phase-heads are assumed to be v* and C. Hence, X can probe into YP. However, prior to the merger of X, the strong-phase head H is already merged, and there is another phase-head W beneath it. Thus, at the point where H is merged, the complement of the strong phase-head W becomes an inaccessible domain, rendering X unable to probe into UP.

Bearing in mind the distinction between PIC_{MI} and PIC_{DbP}, let us consider what motivated Chomsky (2001) to relax the PIC, namely quirky Nominative object agreement in Icelandic, as schematically shown in (12).

(12) $[_{CP}$ John (DAT) ***T*** $[_{v*P}$ v* $[_{VP}$ like (PL) the books (***NOM***, PL)]]]

Here it is assumed that the Nominative Case-feature of *the books*, which is contained in VP, is checked via Agree with T. As shown in (13) and (14), Agree can be established under the PIC_{DbP}, but not under the PIC_{MI}.

(13) $[_{CP}$ John (DAT) ***T*** $[_{v*P}$ v* $[_{VP}$ ~~like (PL) the books (***NOM***, PL)~~]]]

<PIC_{MI}-constrained Agree (T; NOM) not established>

(14) $[_{CP}$ John (DAT) ***T*** $[_{v*P}$ v* $[_{VP}$ like (PL) the books (***NOM***, PL)]]]

<PIC_{DbP}-constrained Agree (T; NOM) established>

Although the relaxation of PIC from PIC_{MI} to PIC_{DbP} seems less attractive on conceptual grounds, in that the latter is less restrictive, I show that

the distribution of NPIs in Japanese reported in Section 2 (cf. (2)a, (3), (5), and (6)) presents compelling evidence that the relaxation is nonetheless empirically motivated. Consider first the paradigm illustrated by the examples in (2)a, (3), and (6), which are reproduced here as (15), (16), and (17), respectively.

(15) John-ga Mary-to-*sika* awa-*nakat*-ta.
John-NOM Mary-with-*NPI* meet-*NEG*-TNS
'John $_{(Neg)}$ met [$_{(NPI)}$ only Mary].'

(16) * Bill-ga Pam-ni [John-ga Mary-to-*sika* atta to]
Bill-NOM Pam-DAT John-NOM Mary-with-*NPI* met C
tutae-*nakat*-ta.
tell-*NEG*-TNS
'Bill $_{(Neg)}$ told Pam [John met [$_{(NPI)}$ only Mary]].'

(17) ? Bill-ga Pam-ni [Mary-to-*sika*$_i$ John-ga t_i atta to]
Bill-NOM Pam-DAT Mary-with-*NPI* John-NOM met C
tutae-*nakat*-ta.
tell-*NEG*-TNS
'Bill $_{(Neg)}$ told Pam [[$_{(NPI)}$ only Mary]$_i$ John met t_i].'

3.1 PIC$_{MI}$-constrained Agree

Let us see first whether PIC$_{MI}$-constrained Agree can capture the paradigm. Note, first, that the grammatical (15)(=(2)a) is problematic under PIC$_{MI}$. This is so, since, as shown in (18), NPI is not in the accessible domain of Neg, and hence Agree cannot be established.[14]

(18) John-ga [$_{v*P}$ ($t_{John-ga}$) [$_{VP}$ ~~Mary-to-*sika*$_{\underline{\mathbf{NPI}}}$ awa~~]]-*nakat*$_{\underline{\mathbf{Neg}}}$-ta

<^{ok}(15): PIC_{MI}-constrained Agree (Neg; NPI) not established>

This may not be a crucial problem, however, as it can potentially be resolved by claiming that the NPI has been dislocated to the edge of v*P as in (19).

(19) John-ga [$_{v*P}$ Mary-to-*sika*$_{\underline{\mathbf{NPI}}}$ ($t_{John-ga}$) [$_{VP}$ ~~$t_{M.\text{-}to\text{-}sika}$ awa~~]]-*nakat*$_{\underline{\mathbf{Neg}}}$-ta

<^{ok}(15): PIC_{MI}-constrained Agree (Neg; NPI) established>

However, the PIC_{MI}-constrained Agree analysis shares the same problem with the CMC account in that it cannot account for (17)(=(6)). Recall that the otherwise unlicensed NPI in (16)(=(3)) can be licensed when it is scrambled to the pre-subject position of the embedded clause. Also recall that the highest position the scrambled NPI in (17) could have possibly moved to is the embedded CP-Spec. Under the PIC_{MI} (10), a goal in this position is not accessible to a probe, i.e., Neg, that is outside the (matrix) v*P phase, as shown in (20).

(20) B.-ga [$_{v*P}$ ($t_{B.-ga}$) [$_{VP}$ ~~P.-ni [$_{CP}$ M.-to-*sika*$_{\underline{\mathbf{NPI}}}$ [$_{TP}$ …] to] tutae~~]] -*nakat*$_{\underline{\mathbf{Neg}}}$-ta

<^{ok}(17): PIC_{MI}-constrained Agree (Neg; NPI) not established>

3.2 PIC_{DbP}-constrained Agree

PIC_{DbP}-constrained Agree, on the other hand, can correctly capture the distribution of NPIs in (15), (16), and (17). Most importantly, it provides an account for (17), which neither the CMC nor the PIC_{MI}-constrained Agree was able to do. As illustrated in (21) through (23), under the PIC_{DbP}, Neg (which is

located outside v*P) can see the NPI in (15)=(21) and (17)=(23), but not in (16)=(22).

(21) John-ga [$_{v*P}$ (t$_{John-ga}$) [$_{VP}$ M.-to-*sika*$_{\underline{\textbf{NPI}}}$ awa]]-*nakat*$_{\underline{\textbf{Neg}}}$-ta

<^{ok}(15): PIC$_{DbP}$-constrained Agree (Neg; NPI) established>

(22) B.-ga [$_{v*P}$ [$_{VP}$ P.-ni [$_{CP}$ ~~[$_{TP}$ J.-ga M.-to-*sika*$_{\underline{\textbf{NPI}}}$-atta]~~ to] tutae]]

-*nakat*$_{\underline{\textbf{Neg}}}$-ta

<*(16): PIC$_{DbP}$-constrained Agree (Neg; NPI) not established>

(23) B.-ga [$_{v*P}$ [$_{VP}$ P.-ni [$_{CP}$ M.-to-*sika*$_{\underline{\textbf{NPI}}}$ ~~[$_{TP}$ …]~~ to] tutae]]-*nakat*$_{\underline{\textbf{Neg}}}$-ta

<^{ok}(17): PIC$_{DbP}$-constrained Agree (Neg; NPI) established>

(21) corresponds to the pattern of Icelandic Nominative object agreement; an NPI located inside VP can be licensed by a Neg outside the v*P phase. The NPI in (22), which appears to the right of embedded subject, however, is not within the accessible domain of Neg (the embedded TP, which is a complement of C, has become as inaccessible domain upon the merger of the matrix v*), hence a probe-goal relation between Neg and NPI cannot be established. On the other hand, in the case of (23), given that NPI is moved to a position to the left of the subject, which can arguably be considered CP-Spec, NPI can enter into Agree with Neg; CP-Spec is the edge of the phase and hence is accessible to a probe that is located outside of the next higher strong phase (v*P) but contained in the still next higher strong phase (CP) (cf. see the (in)accessible domain of the probe X in the PIC$_{DbP}$ in (11)).[15]

Let us now turn to the remaining data in (5), reproduced here as (24), which is a case of licit cross-clausal NPI licensing discussed by Uchibori (2000).

(24) ?? Bill-ga [John-ga Mary-to-*sika* au yoo(ni)]
Bill-NOM John-NOM Mary-with-*NPI* meet C
nozoma-*nakat*-ta.
hope-*NEG*-TNS
'Bill $_{(Neg)}$ hoped [John meet [$_{(NPI)}$ only Mary]].'

On the assumption that subjects cannot undergo scrambling (Saito 1985), hence the highest position they can occupy is TP-Spec (cf. Miyagawa 2001), the surface word order in (24) clearly shows that the NPI, which is to the right of the embedded subject, cannot be in the CP-Spec position, the edge position accessible to Neg. Then, configurationally, (24) is same as (16), where NPI cannot be licensed by Neg in the next higher clause (cf. (22)). If so, (24) is a potential counter-example to the current proposal that the NPI licensing is established via Agree and that the distribution of NPIs is phase-bound. However, (24) can be captured under the PIC_{DbP}-constrained Agree. In fact, such licit Neg-NPI dependencies crossing subjunctive complements is what led Maeda (2002) to propose that the distribution of NPIs in Japanese is regulated by the PIC_{DbP}. Maeda (2002) argues that the cross-clausal NPI licensing in (24) can be given an account under the PIC_{DbP}-constrained Agree, if we assume that (i) subjunctive complements are, following Uchibori 2000, weak phases (cf. "$C^{\#}P$" = weak CP phases)[16,17] and (ii) NPIs can be (string-vacuously) dislocated to the edge of (embedded) v*P, an option available within the phase-model of syntax developed by Chomsky via the optional assignment of an EPP-feature to v*.[18]

Given these assumptions, as Maeda (2002) argues, (24) can be analyzed as shown in (25); the domain that becomes inaccessible upon the merger of the matrix v* is the complement of the embedded v* (i.e., the embedded VP), and not the complement of $C^{\#}$ (i.e., the embedded TP).

(25) B.-ga [$_{v*P}$ [$_{VP}$ [$_{C\#P}$ [$_{TP}$ J.-ga [$_{v*P}$ M.-to-*sika*$_{\underline{\textbf{NPI}}}$ ($t_{J.-ga}$)] [$_{VP}$ $t_{M.\ to\ sika}$ au]] yoo(ni)] nozoma]]-*nakat*$_{\underline{\textbf{Neg}}}$-ta

<PIC_{DbP}-constrained Agree (Neg; NPI) established>

(Maeda 2002; cf. adapted from Maeda 2003: (31))

Since Neg can search down to the embedded v* and NPI sits in the edge of a embedded v*P, PIC_{DbP}-constrained Agree can properly take place between the matrix Neg and the NPI within the subjunctive complement.[19,20]

Having extended the notion of weak phases to certain CPs in order to account for licit Neg-NPI dependencies crossing a subjunctive complement, as in (24), we predict that if the matrix vP in (16)(=(3)) becomes a weak phase due to passivization, as in (26), NPI licensing should become licit.[21]

(26) * Pam-ga [John-ga Mary-to-*sika* atta to]
Pam-NOM John-NOM Mary-with-*NPI* met C
tutae-rare-*nakat*-ta.
tell-PSV-*NEG*-TNS
'Pam $_{(Neg)}$ was told [John met [$_{(NPI)}$ only Mary]].'

This should be the case because (26) can presumably have the structure in (27); since the matrix v is weak phase-head (cf. "$v^{\#}$" = weak v phase heads), the

embedded TP does not become inaccessible upon the merger of $v^{\#}$, and NPI can be in the accessible domain of Neg by virtue of moving to the embedded v*P-Spec.

(27) P.-ga [**v#P** [VP [C*P [TP J.-ga [v*P M.-to-*sika*$_{\underline{\textbf{NPI}}}$ ($t_{J.-ga}$) ~~[VP $t_{M.\text{-}to\text{-}sika}$ atta]~~]] to] tutae]]-rare-*nakat*$_{\underline{\textbf{Neg}}}$-ta

<PIC_{DbP}-constrained Agree (Neg; NPI) established>

As it turns out, this prediction is not borne out; passivization does not improve (16), and (26) is still ungrammatical. This fact, however, does not constitute counter evidence to our analysis if, as Legate (to appear) has argued, passives (and unaccusatives) also constitute strong phases.[22] Assuming this, (26) has the structure in (28), rather than (27).

(28) P.-ga [**v*P** [VP [C*P ~~[TP J.-ga [v*P M.-to-*sika*$_{\underline{\textbf{NPI}}}$ ($t_{J.-ga}$) [VP $t_{M.\text{-}to\text{-}sika}$ atta]]]~~ to] tutae]]-rare-*nakat*$_{\underline{\textbf{Neg}}}$-ta

<PIC_{DbP}-constrained Agree (Neg; NPI) not established>

As shown in (28), the NPI is not in the accessible domain of Neg, thus Agree fails, on par with the case in (16), i.e., (22). In other words, (26) can be said to constitute further evidence for Legate's proposal.

To summarize, I have shown that the NPI licensing in Japanese, which I argued to be an instance of Agree, is constrained by the PIC_{DbP} (Maeda 2002, cf. Yoshida 1999). In particular, I showed that licit Neg-NPI dependencies are established by Agree as long as Neg and NPI are in a phase-mate relation, which is derivationally determined on the basis of PIC_{DbP} (8).[23] It should be noted that the well-formedness of (17)(=(6)), where the otherwise unlicensed NPI in

(16)(=(3)) is scrambled to the edge of a CP phase, provides crucial empirical support for the PIC_{DbP}-constrained Agree analysis of NPI licensing over the long-standing analysis based on the CMC; the latter fails to explain the NPI licensing in (17) simply because Neg and NPI are not in a "clause-mate" relation, and hence the CMC (on NPI licensing) can be eliminated from grammar.[24] This is a desirable result under the phase theory since, unlike a theory referring to clauses, this theory attempts to capture a cross-clausal relations in terms of the notion of phase-edge.

4. Concluding Remarks

In this paper, I have argued that the distribution and licensing of NPIs in Japanese is regulated by Agree constrained by the PIC_{DbP} ("PIC_{DbP}-constrained Agree"), and that the relaxation of the PIC in Chomsky 2001 is empirically supported. This does not, however, necessarily mean that all the possible Agree relations (e.g., ϕ/Case agreement, Wh-agreement, and so on) are PIC_{DbP}-constrained; it remains possible that the (in)accessible domain for Agree is relativized (cf. Wurmbrand and Bobaljik 2002) and/or parameterized. Furthermore, it is also possible that the determination of the (in)accessible domain for Agree is not determined solely by the PIC; there may be other factors involved as well.[25] Only further research can reveal the exact nature of these issues. Notwithstanding, I believe that I have shown that the phase-based theory of the locality of syntactic dependencies in human language advocated in Chomsky (2000, 2001) opens up a new perspective to better understand the nature of syntactic locality conditions.

Notes

* A portion of this paper was presented at the 4th Tokyo Conference on Psycolinguistics (March 15, 2003; Keio University), the North American Syntax Conference (May 4, 2003; Concordia University), and the Ling-Lunch at MIT (May 8, 2003). I wish to thank the audiences of these academic meetings for their comments and questions. I would like to thank Duk-Ho An, Mark Baker, Rajesh Bhatt, Jonathan Bobaljik, Yoshio Endo, Danny Fox, Naomi Harada, Hironobu Kasai, Heejeong Ko, Youngjoo Lee, Yoshimi Maeda, Shigeru Miyagawa, Hajime Ono, David Pesetsky, Norvin Richards, Koji Sugisaki, Shogo Suzuki, Shoichi Takahashi, Asako Uchibori, Susi Wurmbrand, Tomoyuki Yoshida, and especially Masakazu Kuno, Roger Martin, and Akira Watanabe for rewarding discussions. I regret that I was not able to fully reflect many of the comments and suggestions I received from these people in this paper (a substantially longer version of this work is available as Yamashita 2003). As is usually the case, the grammatical judgments in this paper are intended to illustrate contrasts that I believe are significant, and are not meant to be absolute. All remaining errors are, of course, solely my own.

[1] "Agree (X; YP)" is used as the notation to indicate the probe-goal relation mediated by Agree, where the items to the left and right of the semicolon (;) correspond to the probe and goal, respectively.

[2] There are two types of NPIs in Japanese. One consists of an XP marked by *-sika* 'only' (XP-*sika*), and the other an indeterminate pronoun (InP) marked by the quantifier-like particle *-mo* (InP-*mo*), meaning 'any' (e.g., *dare-to-mo,* InP-DAT-MO 'anyone'). Although I only discuss the former type of NPI here, the effects (to be) witnessed carry over to the latter type as well (see Yamashita 2003).

[3] Based on a detailed cross-linguistic study, Watanabe (2002a, 2002b) argues that characterizing Negation-dependent items in Japanese (cf. see note 2) as "NPIs" is misguided and that they should instead be characterized as "negative concord items

(NCIs).” In a nutshell, according to him, an NCI is licensed by a feature-checking operation whereas an NPI is not. Thus it may be more appropriate to use the term NCI. However, here I will follow most of the previous literature and refer to Negation-dependent items in Japanese as NPIs for the sake of convenience.

[4] All the Japanese examples are transcribed in *Kunrei*-style romanization. The English “translations” in single quotes are to help the reader understand the rough structure of Japanese examples, and are not intended to be “correct translations.”

[5] Tanaka (1997: pp.147-149) reports that cross-clausal NPI licensing invoving indicative complements as in (3) is possible, and furthermore observes that Neg-NPI dependencies are unbounded. Tanaka’s judgment, however, has not received a consensus (see, for example, Yoshida 1999, among many others). In fact, virtually every native speaker I have consulted with disagrees with his judgment.

[6] See Muraki 1978, Kato 1985: Ch.8, Sec.2, Yamashita 2003, and references cited therein for a richer paradigm on the distribution of NPIs in Japanese that is not discussed here. I also note here that, as far as I have checked, Korean exhibits more or less the same pattern of distribution of NPIs as in Japanese reported in this paper (Duk-Ho An, Heejeong Ko, and Youngjoo Lee, p.c., May 2003).

[7] The proposed transformations (later collectively referred to as the “restructuring” analysis) were, namely, “Predicate Restructuring” and “Predicate Raising”; see Muraki 1978, as well as Nemoto 1993 and Kato 1994, for the mechanics.

[8] I should note that the example that corresponds to (5) was discussed by Muraki (1978) (his (66)), but he judged the sentence as ungrammatical, marking it “?*.” For him, the deviance results from a violation of the “Constraint on Predicate Raising” (Muraki 1978: (28)), which prohibits the application of Predicate Raising when there is a Nominative Case-marked subject in the embedded clause. It can perhaps be said that the constraint in question is not operative for those who accept (5), meaning that Muraki’s transformational analysis extends

to these speakers. See also note 19, as well as Sano 2002, for remarks on the acceptability of the NPI licensing crossing the subjunctive complements.

[9] Muraki (1978) and Kato (1994) show that these transformations can take place only when the subordinate clause and the matrix predicate is string adjacent, and it is blocked when there is an intervening phrase between the two. I will not deal with this effect in this paper, but see note 23 for related discussion.

[10] To the best of my knowledge, which I owe to Akira Watanabe, p.c., Dec., 2002, effects of this sort, which show the movement of NPI to the periphery position of a clause makes it possible to establish a syntactic relation with the Neg in the next higher clause, were first noted by Kurata (1986: Sec.3). It should also be noted here that the amelioration seen in (6) is not crystal-clear for all of the speakers I consulted, though they all reported some degree of contrast with (3).

[11] As far as I know, Yoshida 1999 is the first attempt to analyze NPI licensing in Japanese in terms of Agree under the phase theory, though he does not make reference to the PIC. See note 24 and Section 3.2 below for the analysis in Maeda 2002.

[12] Thanks go to Akira Watanabe, p.c., March, 2003, for suggesting me the term the “relaxed PIC” for Chomsky’s (2001) PIC.

[13] Chomsky (2000) does not specify explicitly when and how the “completion” of a phase takes place.

[14] Although the “representations” given to show the (in)accessible domain of Neg include subjects and tense morphemes, they are just included for convenience; I assume that NPI licensing in Japanese is entirely derivational.

[15] It is worth pointing out that not all the instances of NPI that appear to the left of embedded subject in the indicative CP can be licensed cross-clausal; for example, as schematically shown in (i)a, the NPI must be in the highest position, and when there is another XP in front of NPI as in (i)b, it cannot enter into Agree (cf. the base-generated position of NPI and XP are irrelevant; see Yamashita 2002: Fn.15).

(i) a. $^{ok}[_{CP2}$ … ***Neg*** … $[_{CP1}$ ***NPI*** XP $[_{C'}$ $[_{TP}$ SUB … t_{NPI} t_{XP} …]]]]

b. * $[_{CP2}$ … ***Neg*** … $[_{CP1}$ XP ***NPI*** $[_{C'}$ $[_{TP}$ SUB … t_{NPI} t_{XP} …]]]]

The precise account of these very intriguing facts concerning the contrast in (i) is beyond the scope of this paper and I leave it for future investigation.

[16] Uchibori (2000) argues that whether a given CP constitutes a strong or weak phase is determined by the nature of tense features of T which C selects. Technical details aside, Uchibori claims that CP counts as a strong phase when C selects TP which has "complete" tense features (such as the indicative clause) whereas CP counts as a weak phase when C selects TP which has "defective" tense features; she claims that subjunctive complements are of the latter type.

[17] I use "#" as a notation for weak phases (e.g., $C^{\#}P$, $v^{\#}P$). In the case when the weak/strong distinction is crucial, I use, following Chomsky 2000, 2001, "*" for strong phases (e.g., C*P, v*P; cf. note 19, 21).

[18] Chomsky (2001: pp.34-35) claims that such an operation is allowed if and only if it has "an effect on outcome." In the case of (25), I assume that the dislocation of NPI to the v*P-Spec is allowed since this has an effect on NPI licensing.

[19] Though it is the case such that a Neg-NPI dependency crossing a ("non-control type") subjunctive complement, as in (24)(=(5)), is somewhat better than the one crossing an indicative complement, as in (16)(=(3)), the judgments are subject to considerable variation. In fact, as far as I have been able to check, with the exception of Asako Uchibori and Yoshimi Maeda, all of the speakers I consulted found the relevant example marginal, and there are many speakers who do not accept long-distance Neg-NPI dependency crossing non-control type subjunctive complements in (24) at all. What is interesting to note is that even for these speakers, (24) improves when the embedded subject is (pro) dropped as in (i)a or when the NPI is scrambled to a position above the subject as in (i)b.

(i) a. ?(?) Bill-ga [pro Mary-to-*sika* au yoo(ni)]
Bill-NOM Mary-with-*NPI* meet C
nozoma-*nakat*-ta.
hope-*NEG*-TNS
'Bill $_{(Neg)}$ hoped [pro meet [$_{(NPI)}$ only Mary]].'

b. ?(?) Bill-ga [Mary-to-*sika*$_i$ John-ga t_i au yoo(ni)]
Bill-NOM Mary-with-*NPI* John-NOM meet C
nozoma-*nakat*-ta.
hope-*NEG*-TNS
'Bill $_{(Neg)}$ hoped [[$_{(NPI)}$ only Mary]$_i$ John meet t_i].'

Following the insight of Muraki (1978), who argues that cross-clausal NPI licensing involving non-indicative complements can be licit when there is no embedded Nominative subject (cf. Muraki 1978: (28)), I speculate that for these speakers, the CP which has T that assigns Nominative Case overtly functions as a strong phase (cf. "C*P" = strong CP phases). Thus, for them, (24) has the representation shown in (ii) (rather than (25)), where the NPI is not in the accessible domain of Neg (note that the NPI cannot be considered to be located in CP-Spec, given that the subject occupies TP-Spec position), and hence the sentence is ungrammatical.

(ii) B.-ga [$_{v*P}$ [$_{VP}$ [$_{\mathbf{C*P}}$ ~~[$_{TP}$ J.-ga [$_{v*P}$ M.-to-*sika*$_{\mathbf{NPI}}$ ($t_{J.-ga}$) [$_{VP}$ $t_{M.-to-sika}$ au]]]~~ yoo(ni)] nozoma]]-*nakat*$_{\mathbf{Neg}}$-ta
<PIC$_{DbP}$-constrained Agree (Neg; NPI) not established>

(i)a and (i)b are acceptable for the speakers in question, since they can have the structures in (iii)a and (iii)b respectively, where NPI is located in the accessible domain of Neg.

(iii) a. B.-ga [$_{v*P}$ [$_{VP}$ [$_{\mathbf{C\#P}}$ [$_{TP}$ pro [$_{v*P}$ M.-to-*sika*$_{\mathbf{NPI}}$ ~~[$_{VP}$ t$_{M.\text{-}to\text{-}sika}$ au]~~]]] yoo(ni)] nozoma]]-*nakat*$_{\mathbf{Neg}}$-ta

<PIC$_{DbP}$-constrained Agree (Neg; NPI) established>

b. B.-ga [$_{v*P}$ [$_{VP}$ [$_{\mathbf{C*P}}$ M.-to-*sika*$_{\mathbf{NPI}}$ ~~[$_{TP}$ J.-ga [$_{v*P}$ (t$_{J.\ ga}$) [$_{VP}$ t$_{M.\ to\ sika}$ au]]]~~ yoo(ni)] nozoma]]-*nakat*$_{\mathbf{Neg}}$-ta

<PIC$_{DbP}$-constrained Agree (Neg; NPI) established>

It should also be noted that these speakers readily allow long-distance Neg-NPI dependencies crossing "control-type" subjunctive complements, as in (iv), which do not have Nominative subjects.

(iv) Bill-ga Pam-ni [PRO Mary-to-*sika* au yoo(ni)]
Bill-NOM Pam-DAT Mary-with-*NPI* meet C
motome-*nakat*-ta.
ask-*NEG*-TNS
'Bill $_{(Neg)}$ asked Pam [PRO to meet [$_{(NPI)}$ only Mary]].'
(adapted from Nemoto 1993: Ch.4, (79))

This is expected under the current speculation since, due to the lack of a Nominative subject, control-type subjunctive complements function as weak phases ($C^{\#}P$), and hence (iv) can have the representation in (v), under which Agree can be established.

(v) B.-ga [$_{v*P}$ [$_{VP}$ P.-ni [$_{\mathbf{C\#P}}$ [$_{TP}$ PRO [$_{v*P}$ M.-to-*sika*$_{\mathbf{NPI}}$ ~~[$_{VP}$ t$_{M.\text{-}to\text{-}sika}$ au]~~]]] yoo(ni)] nozoma]]-*nakat*$_{\mathbf{Neg}}$-ta

<PIC$_{DbP}$-constrained Agree (Neg; NPI) established>

[20] Another point worth mentioning here is that, for most speakers, the long-distance Neg-NPI dependency crossing subjunctive complements (as in

(24)(=(5)), and (i) and (iv) of note 19) becomes worse if the (declarative) complementizer *to*, which can optionally appear at the rightmost peripheral position of the subjunctive complements, as in *-yoo (ni(to))*, is present (cf. Nemoto 1993: Ch.4, Sec.7, pp.226-227). (However, there are speakers, such as Uchibori (2000) and Maeda (2002), who allow Neg-NPI dependencies despite the presence of *to*. See Uchibori 2000: Ch.5, Fn.20 for her remark on this point.) Though I have nothing to say about it at the moment, the fact that the "edge" effects observed in the examples in note 19 is cancelled by the mere presence of complementizer *to* in the case of subjunctive complements is very interesting.

[21] Chomsky (2000, 2001) postulates the notion of strong versus weak phases for vP phases. He claims that transitive vPs are strong phases (v*P) whereas passive and unaccusative vPs are weak phases (cf. notated as "$v^{\#}$P" in this paper).

[22] Thanks go to Norvin Richards, p.c., May, 2003, for leading me to Legate 2003.

[23] Due to the lack of space, I have refrained from discussing the fact that the licit instances of cross-clausal NPI licensing (such as (5)(=(24)), (6)(=(17)), and the examples reported in note 19, as well as other cases not discussed here) become illicit when there is an intervening XP between the matrix predicate and the complement clause. See Yamashita 2003 for an extensive discussion on this issue (cf. also Muraki 1978 and Kato 1994).

[24] In this sense, although Maeda (2002) was the first to claim that NPI licensing in Japanese is subject to PIC_{DbP}-constrained Agree, her argument based on Uchibori's (2000) data (24)(=(5)) does not constitute decisive and crucial evidence in favor of the PIC_{DbP}-constrained Agree-based analysis over the CMC. This is because, as noted in the discussion following (5) and in note 8, the relevant data can be treated under the CMC by resorting to Muraki's (1978) transformational operations. If this is indeed the case, Maeda's argument does not ultimately succeed in providing crucial evidence for the PIC_{DbP}-constrained Agree and hence loses much of its force. It is data like (17)(=(6)) that provide

the knock-down argument against the CMC, and for the PIC_{DbP}-constrained Agree. However, for the sake of fairness, it should be noted here that in a later work (Maeda 2003), Maeda discusses an example similar to (17) (her (37c); Maeda (2003: Fn.6) acknowledges that an anonymous reviewer pointed out the data to her) and reaches a more or less similar conclusion about the licensing mechanism of NPIs developed in this paper (but there are still non-trivial differences; see Yamashita 2003).

[25] In fact, in Yamashita 2003, building on the phenomena which I coined as "cross-clausal NPI licensing riddle" (cf. note 23), I argue that Agree is responsible for NPI licensing in Japanese, but that it is sometimes constrained by means other than the PIC_{DbP}.

References

Bruening, Benjamin (2001). *Syntax at the Edge: Cross-Clausal Phenomena and the Syntax of Passamaquoddy.* Doctoral dissertation, MIT.

Chomsky, Noam (2000). Minimalist Inquiries: the Framework. In Roger Martin, David Michaels, and Juan Uriagereka (eds.), *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, pp.89-155. Cambridge, Mass.: MIT Press.

Chomsky, Noam (2001). Derivation by Phase. In Michael Kenstowicz (ed.), *Ken Hale: A Life in Language*, pp.1-52. Cambridge, Mass.: MIT Press.

Kato, Yasuhiko (1985). Negative Sentences in Japanese. *Sophia Linguistica* 19. Tokyo: Sophia University.

Kato, Yasuhiko (1994). Negative Polarity and Movement. In Masatoshi Koizumi and Hiroyuki Ura (eds.), *Formal Approaches to Japanese Linguistics* 1, pp.101-120. Cambridge, Mass.: MITWPL.

Kurata, Kiyoshi (1986). Asymmetries in Japanese. Ms., University of Massachusetts, Amherst.

Legate, Julie Anne (to appear). Some Interface Properties of the Phase. *Linguistic Inquiry* 34(3).

Maeda, Yoshimi (2002). Phase, Agree, and Licensing of Wh+*Mo* in Japanese. Paper presented at the 124th meeting of the Linguistic Society of Japan at Tokyo University of Foreign Studies, June 16, 2002.

Maeda, Yoshimi (2003). Reducing the Clause-mate Condition of a Negative Concord Item and Neg to the Phase Impenetrability Condition. *Proceedings of Sophia Linguistic Society*, pp.81-99. Tokyo: Sophia University.

Miyagawa, Shigeru. (2001). The EPP, Scrambling, and *Wh*-in-situ. In Michael Kenstowicz (ed.), *Ken Hale: A Life in Language*, pp.293-338. Cambridge, Mass.: MIT Press.

Muraki, Masatake (1978). The *sika nai* Construction and Predicate Restructuring. In John Hinds and Irwin Howard (eds.), *Problems in Japanese Syntax and Semantics*, pp.155-177. Tokyo: Kaitakusha.

Oyakawa, Takatsugu (1975). On the Japanese *sika nai* Construction. *Gengo Kenkyu* (Journal of the Linguistic Society of Japan) 67, pp.1-20.

Polinsky, Maria and Eric Potsdam (2001). Long-Distance Agreement and Topic in Tsez. *Natural Language and Linguistic Theory* 19(3): pp.583-646.

Nemoto, Naoko (1993). *Chains and Case Positions: A Study from Scrambling in Japanese*. Doctoral dissertation, University of Connecticut.

Saito, Mamoru (1985). *Some Asymmetries in Japanese and their Theoretical Implications*. Doctoral dissertation, MIT.

Sakai, Hiromu (1994). Derivational Economy in Long Distance Scrambling. In Masatoshi Koizumi and Hiroyuki Ura (eds.), *Formal Approaches to*

Japanese Linguistics 1, pp.295-314. Cambridge, Mass.: MITWPL.

Sano, Masaki (2002). Hitei-sûryôshi to Modaritii [Negative Quantifiers and Modality]. *The Rising Generation* CXLVIII(8): pp.506-507.

Tanaka, Hidekazu (1997). Invisible Movement in *Sika-Nai* and the Linear Crossing Constraint. *Journal of East Asian Linguistics* 6(2): pp.143-178.

Uchibori, Asako (2000). *The Syntax of Subjunctive Complements: Evidence from Japanese*. Doctoral dissertation, University of Connecticut.

Watanabe, Akira (2002a). Feature Checking and Neg-factorization in Negative Concord. In Yasuhiko Kato (ed.), *Proceedings of the Sophia Symposium on Negation*, pp.51-77. Tokyo: Sophia University.

Watanabe, Akira (2002b). The Genesis of Negative Concord. Ms., University of Tokyo.

Wurmbrand, Susi and Jonathan D. Bobaljik (2002). Relativized Phases. Paper presented at the linguistic colloquium at Tübingen University, June 6, 2002.

Yamashita, Hideaki (2002). On the Distribution of Negative Polarity Items in Japanese and the Phase-Impenetrability Condition. Ms., Yokohama National University.

Yamashita, Hideaki (2003). Phase Theory and the Locality Condition of NPI Licensing in Japanese. Paper presented at Ling-Lunch at MIT, May 8, 2003. [a revised version of this paper to appear in *Working Papers in Biolinguistics* vol.2.]

Yoshida, Tomoyuki (1999). Agree and Two Types of Syntactic Dependencies. *ICU Language Research Bulletin* 14, pp.127-138. Tokyo: International Christian University.

(**d01tc007@ynu.ac.jp**, **d01tc007_ynu@hotmail.com**)