SOME CONSEQUENCES OF SIMPLEST MERGE AND Φ-DEFECTIVENESS IN JAPANESE*

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1 Introduction

It is well attested that Japanese does not exhibit the classic *Subject Condition Effect* (a subcase of Huang's 1982 Condition on Extraction Domain). Consider the examples (1a) and (1b).

(1) *No Subject Condition Effect in Japanese*

a. ?? Dono hon-o$_1$ Mary-ga [John-ga t_1 katta koto]-ga mondai-da to
which book-Acc Mary-Nom [John-Nom bought fact]-Nom problem-Cop C
omotteiru no.
think Q
'Which book is it that Mary thinks that the fact that John bought it is a problem?'

b. ?? Dono hon-o$_1$ Mary-ga [John-ga t_1 katta koto]-o mondai-ni
which book-Acc Mary-Nom [John-Nom bought fact]-Acc problem-to
siteru no.
making Q
'Which book is it that Mary is calling the fact that John bought it into question?'
(Lasnik & Saito 1992: 42-43)

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In the examples (1a-b), the DP *dono hon-o* 'which book-Acc' is scrambled out of the complex DP headed by *koto* 'fact' and, as a result, these examples are both degraded. Notice that in (1a), this complex DP is the subject of the embedded clause, and accordingly, the extraction under question is from the subject position. If Japanese exhibited the Subject Condition effect, (1a) should be worse than (1b). Therefore, the fact that no significant contrast is observed between these two examples indicates that no Subject Condition effect is observed in Japanese.

Moreover, the traditional *Comp-Trace Effect* is not observed in Japanese either, as explicitly pointed out by Ishii (2004). Consider the following example (2).

(2) *No Comp-Trace Effect in Japanese*

OP_1 John-ga	[t_1 Mary-ni	hanasi-kaketa	to]	omotteiru	yorimo	harukani	ookuno	
John-Nom	Mary-Dat	talked to	C	think	than	far	more	
hito-ga	Susy-ni	hanasi-tagatte-ita.						
people-Nom	Susy-Dat	wanted to talk						

'Far more people wanted to talk with Susy than John thinks talked to Mary.'

(Ishii 2004: 212)

In example (2), under Kikuchi's (1987) analysis of comparative deletion, the empty operator *OP* moves from the subject position of the embedded clause across the overt complementizer *to* 'that', which is, in turn, expected to create the Comp-Trace configuration. Thus, the fact that this example is perfectly acceptable shows that Japanese lacks the Comp-Trace effect.

The absence of the Subject Condition effect has attracted much attention in the literature. Under the VP-internal subject hypothesis, Lasnik & Saito (1992) propose that Japanese subjects can remain inside VP (Fukui 1986; Kuroda 1988) and, consequently, they are properly governed by INFL, so that extraction is permitted from within. In contrast, English subjects must move to [Spec, IP] and, accordingly, they are not properly governed by INFL based on the c-command (not m-command) definition of government, so that extraction is prohibited from within. In the same vein, Ishii (2004) also argues that the absence of the Comp-Trace effect derives from the VP-internal nature of Japanese subjects. Under these views, the absence of Subject Condition/Comp-Trace effects entails that Japanese subjects stay within VP.

However, various pieces of evidence have recently converged on the hypothesis that Japanese subjects are inside CP (Ueda 2003; Hasegawa 2005; Miyagawa 2010; Saito 2011). If this is correct, we can no longer maintain the "VP subject hypothesis" on the absence of Subject Condition/Comp-Trace effects in Japanese. In this paper, we show that the "CP subject hypothesis" can successfully explain the lack of the relevant effects. Specifically, it will be shown that, in conjunction with the simplest formulation of Merge (i.e. Merge (α, β) = {α, β}) advocated by Epstein, Kitahara & Seely (EKS 2012, 2013), φ-feature agreement serves as an important macro-parameter to deduce cross-linguistic variations in Subject Condition/Comp-Trace effects.

This paper is organized as follows. In Section 2, we introduce EKS's simplest formulation of Merge and their deductive analysis of Subject Condition/Comp-Trace effects in English. In Section 3, given EKS's system, we show that the absence of Subject Condition/Comp-Trace effects in Japanese naturally follows under the CP subject hypothesis. In Section 4, we extend the proposal to Altaic languages such as Mongolian and Turkish. Section 5 contains our concluding remarks.

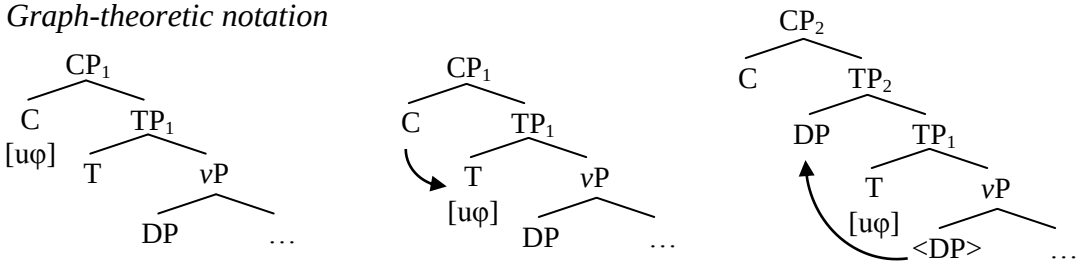
2 Acyclic Raising to [Spec, TP] and "Two-Peaked" Structure

In this section, we first review EKS's (2012, 2013) main proposal that, given φ-feature inheritance (Chomsky 2008), acyclic raising to [Spec, TP] inevitably generates a "two-peaked" structure (Section 2.1). Then, EKS's deductive approach to the Subject Condition effect (Section 2.2) and the Comp-Trace effect (Section 2.3) in English is introduced.

2.1 Review of EKS (2012, 2013)

Chomsky (2008) assumes that, after the phase head C is introduced into the derivation and an uninterpretable φ-feature [uφ] in C is inherited by T, subject raising to [Spec, TP] can apply counter-cyclically. This is graph-theoretically shown in (3).

(3) *Graph-theoretic notation*



From a set-theoretic perspective, this counter-cyclic raising amounts to "replacement" (Collins 1997; Freiden 1999) of "Specless" TP_1 in CP_1 with "Specful" TP_2 to create a new CP_2, as in (4).

(4) *Set-theoretic notation*

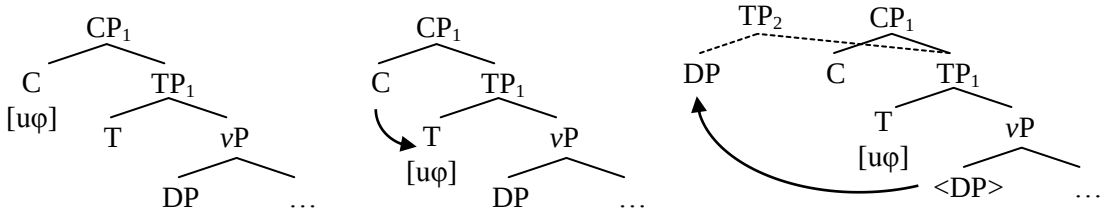
External Merge (C, TP_1):	{C, {T, {DP, {*v*, VP}}}}	= CP_1
Internal Merge (DP, TP_1):	{DP, {T, {DP, {*v*, VP}}}}	= TP_2
Replacement (TP_1, TP_2):	{C, {DP, {T, {DP, {*v*, VP}}}}}	= CP_2

However, EKS (2012, 2013) argue that "replacement" is impossible with the simplest formulation of Merge: Merge (α, β) = {α, β}. That is, all Merge can do is combine two syntactic objects, and crucially nothing more. Collins (1997) originally makes this stance explicit, as in (5).

(5) "A provision would have to be added to the effect that if Merge (α, β) = γ, where α is embedded in another constituent, α must be replaced by γ. Since this provision complicates the definition of Merge and prevents us from accounting for the cycle in terms of the independently needed LCA, ***there is no reason to believe that replacement is possible***." (Collins 1997: 84, emphasis ours)

Alternatively, given the simplest formulation of Merge, EKS propose that acyclic subject raising to [Spec, TP] in English necessarily generates a "two-peaked" structure. The following derivation (6) is proposed by EKS.

(6) *Graph-theoretic notation* ("two-peaked")



External Merge (C, TP_1) C-T Feature Inheritance Internal Merge (DP, TP_1)

Set-theoretically speaking, this derivation creates intersecting sets, according to EKS (2012, 2013). In this case, the sets C_1 and TP_2 are intersected, so that TP_1 is shared as their subset (7).

(7) *Set-theoretic notation* (set-intersection)
External Merge (C, TP_1): {C, {T, {DP, {*v*, VP}}}} = CP_1
Internal Merge (DP, TP_1): {DP, {T, {DP, {*v*, VP}}}} = TP_2

Notice here in (7), unlike (4), that without recourse to "replacement" there is no integration of two independently-created peaks (CP_1 and TP_2) into one peak (CP_2). The creation of a "two-peaked" structure is used by EKS to explain Subject Condition/Comp-Trace effects in English.

2.2 Subject Condition Effect Deduced

Unlike Japanese, extraction is not allowed out of subjects in English, as exemplified in (8).

(8) *Subject Condition Effect in English*
*Who$_1$ does [the claim that Mary likes t_1] upset Bill?

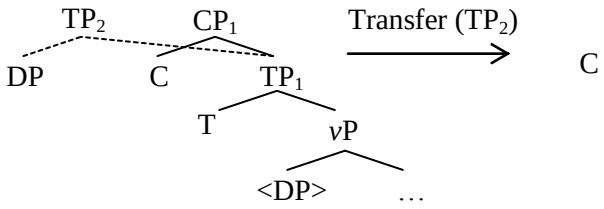
EKS (2012) argue that "two-peaked" structures are problematic syntactically. Specifically, EKS assume the *Label Accessibility Condition* borrowed from Chomsky (2000).

(9) *Label Accessibility Condition* (LAC)
Only the label of an entire syntactic object, the root, is accessible to narrow syntax.

(10) a. K is the root if:
for any Z, Z a term of K, every object that Z is a term of is a term of K.
b. For any structure K,
(i) K is a term of K, and
(ii) if L is a term of K, then the members of L are terms of K.

Importantly for our purpose, the root of a "two-peaked" structure is undefined based on the definition of root and term in (10). For example, in (7), CP_1 cannot be the root because for TP_1, a term of CP_1, TP_2 that TP_1 is a term of is not a term of CP_1. Also, TP_2 cannot be the root either because for TP_1, a term of TP_2, CP_1 that TP_1 is a term of is not a term of TP_2. Therefore, according to LAC, a "two-peaked" structure is never accessible to narrow syntactic operations (Merge, in this case). To solve this problem, EKS propose that one of the two peaks has to be removed via Transfer as soon as possible for the derivation to continue, as in (11).

(11) a. *Graph-theoretic notation*



b. *Set-theoretic notation*

{C, ~~{T, {DP, {*v*, VP}}}~~} = CP_1

~~{DP, {T, {DP, {*v*, VP}}}}~~ = TP_2

Therefore, the subject DP at [Spec, TP] becomes inaccessible to narrow syntax as soon as subject raising applies and a "two-peaked" structure is generated. In this way, the Subject Condition effect is deduced.

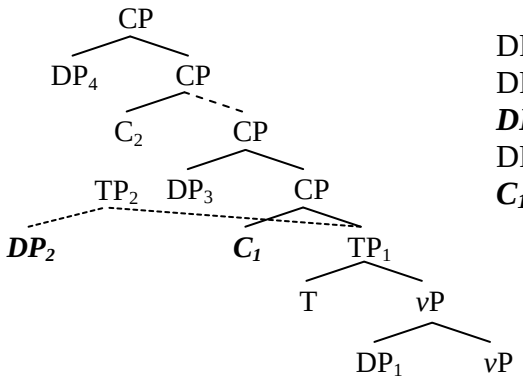
2.2 Comp-Trace Effect Deduced

It is also well attested that the Comp-Trace effect is operative in English, but not in Japanese, as shown in (12).

(12) *Comp-Trace Effect in English*
*Who$_1$ do you think [that t_1 saw Bill]?

EKS (2013) point out that, given the definition of occurrences based on a derivational sister, DP_2 at [Spec, TP_2] and C_1 are defined to be exactly the same; i.e. a derivational sister of TP_1. This can be seen both graph-theoretically and set-theoretically in (13).

(13) a. *Graph-theoretic notation*



b. *Set-theoretic notation*

DP_4: {C_2, {…, {DP_3, {C_1, {T, {DP_1, *v*P}}}}}}

DP_3: {C_1, {T, {DP_1, vP}}}

DP_2: {T, {DP_1, vP}}

DP_1: {vP}

C_1: {T, {DP_1, vP}}

EKS then assume the independently-motivated principle *Minimal Computation* ("pronounce at most one copy"). Minimal Computation requires that every non-highest occurrence be deleted at the phonological component, where an occurrence α of X is highest iff a derivational sister of α is contained in a derivational sister of another occurrence β of X. Notice crucially here that when DP_2 at [Spec, TP_2] is not highest and thus phonologically deleted, C_1 must be deleted as well because, as mentioned above, DP_2 at [Spec, TP_2] and C_1 share the same derivational sister (i.e. TP_1) and cannot be distinguished at the phonological component. Therefore, the case in which DP_2 at [Spec, TP_2] is unpronounced while C_1 is pronounced is ruled out. In this way, the Comp-Trace effect is deduced.

3 Cyclic Raising to [Spec, CP] and "One-Peaked" Structure

In this section, we turn to Japanese, bearing EKS's proposal in mind. The purpose of this section is to show that the CP subject hypothesis in Japanese (Section 3.1) can provide a straightforward explanation for the absence of the Subject Condition (Section 3.2) and the Comp-Trace effect (Section 3.3).

3.1 CP Subject Hypothesis in Japanese

According to Miyagawa (2001), the universal quantifier necessarily takes scope over negation in the SOV order (14a), whereas either one takes scope over the other in the OSV order (14b).

(14) a. *SOV*
Zen'in-ga sono-tesuto-o uke-nakat-ta. √∀ > ¬ / *¬ > ∀
all-Nom that-exam-Acc take-Neg-Past
'All didn't take that exam.'
b. *OSV*
Sono-tesuto-o$_1$ zen'in-ga t_1 uke-nakat-ta. √∀ > ¬ / √¬ > ∀
that-exam-Acc all-Nom take-Neg-Past
'That exam, all didn't take.'

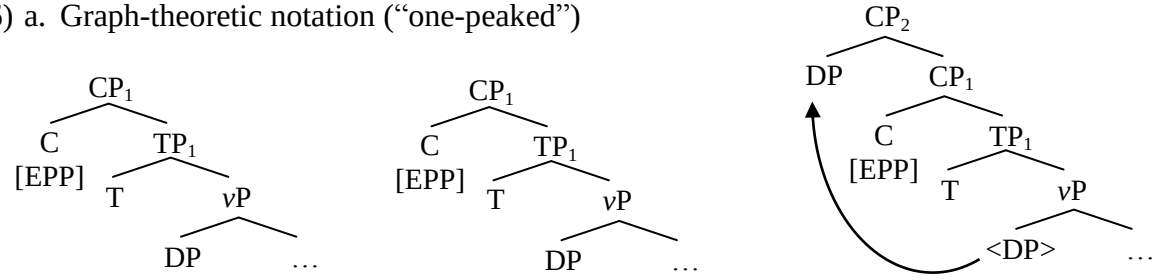
In (14a), the subject universal quantifier is raised to [Spec, TP], satisfying the EPP. Given the assumption that the trace left in-situ does not count for the purpose of the scope calculation, Miyagawa claims that unambiguity results, with the universal quantifier taking scope over negation in this example. In (14b), on the other hand, the object DP can be scrambled to [Spec, TP] via A-scrambling and satisfies the EPP feature. Consequently, the subject universal quantifier can stay in-situ. In this case, negation can take scope over the subject universal quantifier. Alternatively, the object DP can be scrambled to a position higher than [Spec, TP] via A'-scrambling and the subject universal quantifier still needs to be raised to [Spec, TP] to satisfy the EPP. If this option is taken, the subject universal quantifier takes scope over negation. Accordingly, the intended ambiguity results in (14b).

However, a potential problem arises when we turn our attention to English. Saito (2011) points out that the scope ambiguity illustrated in (14b) also obtains in (15).

(15) *Scope ambiguity in English*
Everyone didn't take the exam. √∀ > ¬ / √¬ > ∀

Given that subjects should be raised to [Spec, TP] in English, the ambiguity of this example indicates that the universal quantifier in [Spec, TP] can still interact with negation in terms of scope computation. Now, the unambiguity of (14a) must mean that the subject universal quantifier in this example is located higher than [Spec, TP]. The most plausible candidate is [Spec, CP]. Under the assumption that Japanese lacks φ-feature agreement, Saito (2011) argues that an EPP feature at C is not subject to feature inheritance to T, which is assumed to be triggered by φ-features. Consequently, the EPP feature in C is satisfied by the raising of the subject DP to [Spec, CP] in Japanese, as illustrated in (16).

(16) a. Graph-theoretic notation ("one-peaked")



External Merge (C, TP_1) No C-T Feature Inheritance Internal Merge (DP, CP_1)

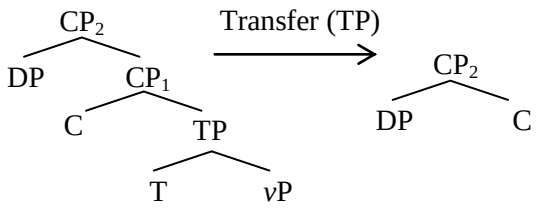
b. *Set-theoretic notation* (no set-intersection)
External Merge (C, TP_1) = {C, {T, {DP, {*v*, VP}}}} = CP_1
Internal Merge (DP, CP_1) = {DP, {C, {T, {DP, {*v*, VP}}}}} = CP_2

Remember that, if the Japanese subject is raised to [Spec, CP], we can no longer maintain the traditional analysis for the absence of Subject Condition/Comp-Trace effects in this language. Crucially, the previous analysis is based on the assumption that Japanese subjects remain inside VP, which we now have to reject. In the next two sections, we will show that the absence of the effects under consideration is a natural consequence of EKS's simplest formulation of Merge.

3.2 No Subject Condition Effect

Recall that the Subject Condition effect emerges in English because acyclic subject raising to [Spec, TP] generates a "two-peaked" structure. The essence of our proposal is that subject raising to [Spec, CP] in Japanese is cyclic, generating a "one-peaked" structure. Under EKS's framework, since no C-T Feature Inheritance takes place, no acyclic subject raising applies and no "two-peaked" structure is formed in Japanese. Consequently, even if the complement of C undergoes Transfer due to acyclic V-T head movement (EKS 2013; Kishimoto 2008), the subject DP remains visible because it is the edge of the phase C, as in (17).

(17) a. *Graph-theoretic notation*



b. *Set-theoretic notation*
{DP, {C, ~~{T, {DP, {*v*, VP}}}~~}} = CP_2

Thus, the subject DP at [Spec, CP] remains accessible to narrow syntax. No Subject Condition effect is expected correctly.

The question naturally arises here as to why [Spec, CP] is transparent in Japanese, but opaque in English, as shown in (18a-b).

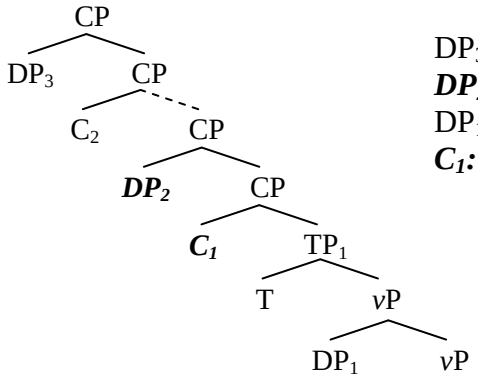
(18) *Opacity of [Spec, CP] in English*
a. *Who$_2$ do you wonder [$_{CP}$ [how many pictures of t_2]$_1$ [$_{TP}$ John saw t_1]]?
b. *Who$_2$ do you wonder [$_{CP}$ [how many pictures of t_2]$_1$ [$_{TP}$ t_1 are on sale]]?

We tentatively suggest that the *Generalized A-over-A Principle* is in force (Chomsky 1973; Kitahara 1997). In English, where movement to [Spec, CP] is triggered by a *wh*-feature on the top of an EPP-feature, *wh*-movement out of [Spec, CP] is prohibited by the *wh*-over-*wh* principle. In Japanese, where movement to [Spec, CP] is purely EPP-driven, *wh*-movement out of [Spec, CP] is not blocked.

3.3 No Comp-Trace Effect

Let us turn to the absence of the Comp-Trace effect. Since no "two-peaked" structure is generated in Japanese, occurrences of the subject DP at [Spec, CP] and C are defined to be different with respect to their derivational sisters. This is summarized in (19).

(19) a. *Graph-theoretic notation*



b. *Set-theoretic notation*

DP_3: {C_2, {…, {DP_2, {C_1, {T, {DP_1, *v*P}}}}}}
DP_2: {C_1, {T, {DP_1, vP}}}
DP_1: {*v*P}
C_1: {T, {DP_1, vP}}

Even when DP_2 is not highest and phonologically deleted, given that now DP_2 and C_1 have different occurrences, Minimal Computation does not force C_1 to be deleted at the phonological component. Therefore, the case in which DP_2 at [Spec, CP] is unpronounced and C_1 is pronounced is allowed. Again, no Comp-Trace effect is expected correctly.

4 Extensions to Mongolian and Turkish

In this section, after briefly describing the predictions of the current proposal and the typological summary (Section 4.1), we examine the absence of Subject Condition/Comp-Trace effects in Mongolian (Section 4.2) and Turkish (Section 4.3).

4.1 Predictions

The predictions of our proposal are that (i) the presence of subject φ-feature agreement directly predicts the presence of Subject Condition/Comp-Trace effects, whereas (ii) the lack of subject φ-feature agreement means the absence of these two effects in question. Taking Mongolian and Turkish into consideration, we have the following typological summary (20).

(20) *Typological Summary*

	Subject φ-feature agreement	Subject Condition Effect	Comp-Trace Effect
English	Yes	Yes	Yes
Japanese	No	No	No
Mongolian	No	No	No
Turkish	Yes	No	No

As seen in the table above, Mongolian, which lacks subject φ-feature agreement, behaves exactly like Japanese, providing straightforward support for our proposal. On the other hand, Turkish is a challenge for us. Turkish appears to have subject φ-feature agreement, but it exhibits neither the Subject Condition effect nor the Comp-Trace effect. We will show below that Turkish turns out not to be an actual counterexample, but rather offers interesting support for our proposal.

4.2 Mongolian: a supporting example

Mongolian has no subject φ-feature agreement, as exemplified in (21).

(21) *No Subject φ-Feature Agreement in Mongolian*
Bi/Chi/Ter/Bid/Tanar/Ted Bat-ig har-san.
I/You/He/We/You/They Bat-Acc see-Perf
'I/You/He/We/You/They saw Bat.' (Sakamoto 2012)

Under EKS's proposal, since Mongolian lacks subject φ-feature agreement, no C-T feature inheritance takes place, EPP remains at C, subjects are raised to [Spec, CP], and a "one-peaked" structure is generated. Thus, subjects are predicted to be accessible to narrow syntax in Mongolian. This prediction is borne out. No Subject Condition effect seems to be present in Mongolian. Example (22) is a case in point.

(22) *No Subject Condition Effect in Mongolian*
Yaɣu-gi$_1$ Baɣatur-ø [Ulaɣan-ø t_1 qudaldun-abu-ɣsan učir-bol] asaɣudal
what-Acc Bagatur-Nom [Ulagan-Nom buy-take-Past thing-Top] problem
gejü boduju baiqu boi?
C think be Q
'What does Baɣatur think that Ulaɣan bought is a problem?' (L. Bao, p.c.)

In the same vein, no Comp-Trace effect is predicted in Mongolian. This prediction is also borne out, as shown in (23).

(23) *No Comp-Trace Effect in Mongolian*
OP$_1$ [John-ø [t_1 Mary-tai üge_kelelče-jei gejü] bodu-ɣsan eče]
[John-Nom [Mary-with talk-past C] think-Past than]
qola olan toɣan-nu kümün-ø Suzie-tai kelelčejü bai-jai.
far many number-Gen people-Nom Suzie-with talk be-past
'More people wanted to talk with Susy than John thinks talked to Mary.' (L. Bao, p.c.)

In short, Mongolian provides direct support for the present proposal. In the next section, we turn to Turkish, which exhibits subject φ-feature agreement but lacks Subject Condition/Comp-Trace effects.

4.3 Turkish: an apparent counterexample

Parallel to Japanese and Mongolian, Turkish exhibits no Subject Condition effect, as in (24).

(24) *No Subject Condition Effect in Turkish*
[OP_1 [Ahmet-in t_1 git-me-si]-nin ben-i üz-dü-ğ-ü] ev.
[[Ahmet-Gen go-Inf-3SG]-Gen I-Acc sadden-Past-C-3SG] house
'the house that Ahmet went to saddened me' (Kural 1997)

Furthermore, no Comp-Trace effect is attested in Turkish, as shown in (25).

(25) *No Comp-Trace Effect in Turkish*
Kim-in_1 Cem [t_1 Mary-yi gor-dug-u]-nu düsün-üyor?
who-Gen Cem [Mary-Acc see-C-3SG.Poss]-Acc think-Pres.Prog
'Who does Cem think that saw Mary?' (D. Ozyildiz, p.c.)

Nonetheless, Turkish has subject φ-feature agreement, as exemplified in (26).

(26) *Subject φ-Feature Agreement in Turkish*
a. (Ben) bu makale-yi yavaş_yavaş oku-yacağ-***ım***.
(I) this article-Acc slowly_slowly read-Fut-1SG
'I will read this article slowly.'
b. (Biz) her hafta sinema-ya gid-er-***iz***.
(we) every week movies-Dat go-Aor-1PL
'We go to the movies every week.' (Şener & Takahashi 2010)

Given that the absence of the two effects under consideration entails no φ-feature agreement, we appear to face a problem now. In other words, Turkish is a counterexample to the current proposal. As pointed out by C. Halpert (personal communication), however, notice crucially that the φ-feature agreement morphology in Turkish is outside C in (27), as well as (24) and (25).

(27) *φ-Feature Agreement Morphology outside C*
Ev-in-i sat-acak ol-ur-sa-n ...
house-2SG.POSS-ACC sell-FUT AUX-AOR-COND-2SG
"If you are [ever] about to sell your house..." (Göksel & Kerslake 2005)

We would like to interpret this fact to suggest that φ-features in Turkish remain at C, not subject to feature inheritance by T. This reminds us of Miyagawa's (2010) proposal of agreement-based and discourse-configurational languages. Miyagawa argues that in discourse-configurational languages like Japanese, discourse-related features such as focus or topic are inherited by T, while φ-features, if they are present at all, may remain at C. We suggest that Turkish is an

instance of discourse-configurational languages in this sense. If this suggestion is correct, Turkish does not count as a counterexample anymore. That is, even though Turkish has subject φ-feature agreement, as long as φ-features remain at C and subjects are raised to [Spec, CP], neither the Subject Condition effect nor the Comp-Trace effect is expected.

5 Concluding Remarks

In this paper, we have shown that cross-linguistic variations of Subject Condition/Comp-Trace effects in various languages such as English, Japanese, Mongolian, and Turkish can be derived from the interaction of the simplest formulation of Merge and φ-feature agreement. The main points of this paper are listed below.

(28) *Main points of this paper*
a. English has φ-feature agreement, but Japanese does not.
b. English subjects are within TP, while Japanese ones within CP.
c. In English, acyclic subject raising to [Spec, TP] results in a "two-peaked" structure.
d. In Japanese, cyclic subject raising to [Spec, CP] results in a "one-peaked" structure.
e. The Subject Condition effect is a consequence of a "two-peaked" structure.
f. The Comp-Trace effect is a consequence of a "two-peaked" structure.
g. Mongolian facts are predicted straightforwardly.
h. Turkish facts also follow given φ-feature agreement in CP.

There remain many things to be explored. First, another subcase of Huang's (1982) Condition on Extraction Domain, the Adjunct Condition effect, is untouched. Given that adjuncts have been captured in terms of the counter-cyclic operation Late-Merge (Lebeaux 1988), our proposal may directly extend to the Adjunct Condition effect. Second, we put aside non-Altaic languages such as Navajo, Hungarian, and Russian in which the Subject Condition effect is absent (Stepanov 2007). In this context, O. Preminger (personal communication) pointed out that Hebrew does exhibit φ-feature agreement and the Subject Condition effect, but no Comp-Trace effect. Finally, argument ellipsis has been associated with φ-feature agreement (Saito 2007; Şener & Takahashi 2010). Elucidation of the full typological correlations is left for future investigation.

References

Chomsky, Noam. 1973. Conditions on Transformations. In *A festschrift for Morris Halle*, ed. Stephen Anderson & Paul Kiparsky, 232–286. New York: Rinehart and Winston.

Chomsky, Noam. 2000. Minimalist Inquiries: The Framework. In *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, eds. Roger Martin, David Michaels, & Juan Uriagereka, 89–155. Cambridge, MA: MIT Press.

Chomsky, Noam. 2008. On Phases. In *Foundational Issues in Linguistic Theory*, eds. Robert Freidin, Carlos Otero, & Maria Luisa Zubizarreta, 133–166. Cambridge, MA: MIT Press.

Collins, Chris. 1997. *Local Economy*. Cambridge, MA: MIT Press.

Epstein, Samuel David, Kitahara, Hisatsugu, & Seely, Daniel. 2012. Structure Building That Can't Be. In *Ways of Structure Building*, eds. by Myriam Uribe-Etxebarria & Vidal Valmala, 253-270. Oxford: Oxford University Press.

Epstein, Samuel David, Kitahara, Hisatsugu, & Seely, Daniel. 2013. Simplest Merge Generates Set Intersection: Implications for Complementizer 'Trace' Explanation. *The Proceedings of GLOW in Asia IX*: 77-92.

Freidin, Robert. 1999. Cyclicity and Minimalism. In *Working Minimalism*, eds. by Samuel David Epstein & Nobert Hornstein, MIT, 95-126. Cambridge, MA: MIT Press.

Fukui, Naoki. 1986. *A Theory of Category Projection and its Applications*. Doctoral Dissertation, MIT.

Göksel, Asli & Kerslake, Celia. 2005. *Turkish: A Comprehensive Grammar*. London: Routledge.

Hasegawa, Nobuko. 2005. EPP Materialized First, Agree Later: Wh-Questions, Subjects and MO-Phrases. *Scientific Approaches to Language* 4: 33-80. Center for Language Sciences, Kanda University of International Studies.

Ishii, Toru. 2004. The Phase Impenetrability Condition, the Vacuous Movement Hypothesis, and *That-t* Effects. *Lingua* 114: 183-215.

Kishimoto, Hideki. 2008. On Verb Raising. In The Oxford Handbook of Japanese Linguistics, eds. by Shigeru Miyagawa & Mamoru Saito, 105–140. Oxford: Oxford University Press.

Kitahara, Hisatsugu. 1997. *Elementary Operations and Optimal Derivations*. Cambridge, MA: MIT Press.

Kural, Murat. 1997. Postverbal Constituents in Turkish and the Linear Correspondence Axiom. *Linguistic Inquiry* 28: 498-519.

Kuroda, Sige-Yuki. 1988. Whether We Agree or Not: A Comparative Syntax of English and Japanese. In *Papers from the Second International Workshop on Japanese Syntax*, ed. William J. Poser, 103-143. Stanford, California: CSLI Publications.

Lasnik, Howard & Saito, Mamoru. 1992. *Move-Alpha: Conditions on Its Application and Output*. Cambridge, MA: MIT Press.

Lebeaux, David. 1988. *Language Acquisition and the Form of the Grammar*. Doctoral Dissertation, University of Massachusetts Amherst.

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

Miyagawa, Shigeru. 2010. *Why Agree? Why Move? Unifying Agreement-based and Discourse Configurational Languages*. Cambridge, MA: MIT Press.

Saito, Mamoru. 2007. Notes on East Asian Argument Ellipsis. *Language Research* 43: 203-227.

Saito, Mamoru. 2011. Two Notes on Feature Inheritance: A Parametric Variation in the Distribution of the EPP. *Nanzan Linguistics* 7: 43-61.

Sakamoto, Yuta. 2012. *A Study of Sluicing and Cleft in Mongolian: A Comparison with Japanese*. MA Thesis, Tohoku University.

Şener, Serkan & Takahashi, Daiko. 2010. Ellipsis of Arguments in Japanese and Turkish. *Nanzan Linguistics* 6: 79-99.

Stepanov, Arthur. 2007. The End of CED? Minimalism and Extraction Domains. *Syntax* 10: 80-126.

Ueda, Yukiko. 2003. Subject Positions in Japanese. *Japanese/Korean Linguistics* 11: 529–542.