

Wh-in-situ and Scrambling in the Context of Comparative Altaic Syntax*

Opening Remarks

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1. Introduction

The idea for WAFL came about through a series of conversations that Jaklin Kornfilt and I have had over the past ten years. As we looked at constructions in Japanese, Turkish, and related languages, it became apparent that an analysis of a particular construction in Japanese could be confirmed, extended, or even questioned by comparing it to Turkish, and vice versa. Of course, one can always make comparison of any two languages, but there is a sense that comparing Japanese and Turkish had a special meaning because they share so many basic properties. The similar nature of these two languages led to two sorts of questions: what is the nature of the similarities?; and what is the nature of the differences? Examples of similarities include wh-in-situ, scrambling, head finalness, and presence of morphological case marking. Examples of differences include the agreement system -- Japanese doesn't evidence any overt agreement while Turkish has a rich system of agreement, and the way the case system is implemented in a variety of syntactic environments. The similarities gave us assurance, possibly not always to be trusted, that we were making meaningful comparisons -- oranges to oranges, an assurance that is not always there when comparing such vastly different languages as English and Japanese. It recalls Richie Kayne's work on Romance, in which he exploits small differences between languages that are otherwise quite similar to try to get at some deep observation. In the brief remarks to follow, I will give concrete

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examples of comparative Altaic syntax as an illustration of the potential of working in this family of languages. I will, in particular, look at two phenomena, *wh-in-situ* and scrambling, both of which are typically found across Altaic languages. I will begin by discussing two influential proposals, by Fukui and by Kuroda, that attempt to derive the appearance of these two and other phenomena in Japanese, and the lack of appearance of them in English. I make a simple point that data from Turkish/Turkic, which they do not consider, question their overall approach. I will then take up each construction – *wh-in-situ* and scrambling -- and look at recent developments that bear on how we might approach these constructions in the context of comparative Altaic syntax.

Before proceeding, a word about our use of “Altaic.” Our intention in bringing together the languages of this conference under the Altaic label is not to assert that they all share a common genesis. Rather, with this conference we wish to encourage comparative work among languages that share numerous and significant typological traits. But are these languages, for example, Japanese and Turkish, historically related? Based on textual sources, archeological findings, and the comparative method, one can ascertain to a great degree the historical relation among most, perhaps all, of the languages represented at WAFL1.¹ The “original Altaic speakers” lived in the Transcaspian steppe some nine thousand years ago. Some four thousand years ago, in response to Indo-Europeans moving into this area, they migrated to Central Asia, to the region of the Altai Mountains, thus the name “Altaic.” Later, in part due to the aggressive movement of the Huns, the Altaic people began their second great migration, this time spreading throughout the Asian continent, from present-day Turkey on the west to the Pacific coast on the east, including Japan. While I am not prepared to defend the genetic relation of, for example, Japanese and Turkish, I am hoping that the readers of this volume will appreciate the potential for doing comparative work among languages that share a combination of significant properties, a combination that may be due to a common genesis, but that is not so crucial. Too, this is our first meeting, and the proportion of papers that attempt a comparative Altaic study is not large. We hope that in WAFL2, planned to be held in Istanbul in October 2004, more such studies will appear.

2. Scrambling, Wh-in-situ

In a series of works Fukui (1986, 1988, 1989, 1995) and Kuroda (1988) put forth similar proposals within the principles-and-parameters framework (e.g., Chomsky 1981) to deal with certain differences between English and Japanese. They identify a range of differences between the two languages which, for them, indicates typological variations that derive from some deep universal element. Fukui, for example, observes the following differences.

| | | | |
|-----|---|---------|----------|
| (1) | | ENGLISH | JAPANESE |
| | a. obligatory syntactic <i>wh</i> -movement | yes | no |

¹ The information about the history of the Altaic people is taken from Miller (1980: 48-56).

| | | |
|-------------------------------------|-----|-----|
| b. overt 'expletive' elements | yes | no |
| c. subject-AUX inversion | yes | no |
| d. multiple 'subject' constructions | no | yes |
| e. scrambling | no | yes |
| f. 'complex predicate' formation | no | yes |

In my remarks, I will focus on (a), wh-movement, and (e), scrambling; these characteristically occur in combination in Altaic. They are illustrated below for English and Japanese.

- (2) a. What did John buy? (obligatory syntactic wh-movement)

| | | | |
|----------|----------|--------|-------------------|
| Taroo-wa | nani-o | katta | no? (no movement) |
| Taro-TOP | what-ACC | bought | Q |

- b. *That book, to Hanako, John gave. (no scrambling)

| | | | |
|---------------|-----------|----------|---------------------|
| Sono hon-o | Hanako-ni | Taroo-ga | yatta. (scrambling) |
| that book-ACC | HanakoDAT | Taro-NOM | gave |

Fukui and Kuroda both invoke the notion of “agreement,” although they use it in different ways, and attempt to derive these and the other differences from the presence or the absence of some defined notion of agreement. Fukui makes a very specific proposal, namely, Japanese lacks the class of functional categories (1988: 259).² The presence of wh-movement in English and its absence in Japanese follow under his system on the assumption that functional heads project specifier positions, and the specifier must be filled by an element that fulfills the agreement relation between the head and the specifier. It is also crucial to assume that these “agreement relations must be satisfied at S-structure” (Fukui 1989). What this boils down to is that if a language evidences overt agreement, it has the class of functional categories that project specifiers that, in turn, enter into the agreement relation with its head. Fukui (1989: 101) notes that English has subject-verb agreement, which leads him to postulate that English has the category of functional heads, including C, which projects the specifier into which a wh-phrase moves. Hence English has overt wh-movement. But Japanese lacks anything that resembles agreement; it has no subject-verb agreement, for example. Japanese therefore lacks the category of functional categories, hence lacks wh-movement.

² Fukui (1988) considers the possibility that Japanese has the full slate of functional heads, but that they are all inactive, a possibility he does not pursue since it is difficult to distinguish the predictions between this approach and the one he does pursue. In Fukui (1995), he develops an articulated theory of phrase structure and a more nuanced approach to functional categories, allowing languages such as Japanese to have functional heads that must be present in LF for interpretation, namely, T and D. The predictions, however, are essentially the same as before, in that he focuses on the lack of agreement (“AGR”), a notion that he carries over from Fukui (1986, 1988, 1989). I will not attempt to summarize the newer version in my remarks.

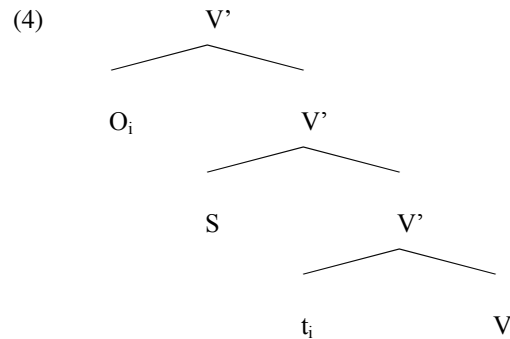
Kuroda (1988) has a similar proposal, although he assumes that Japanese has functional heads and specifiers that project from them. Kuroda introduces a parameter based on the notion of what he calls “X-Agreement.”

(3) Kuroda’s parameter (1988: 10)

Languages are parametrized as to whether X-Agreement is forced or not.

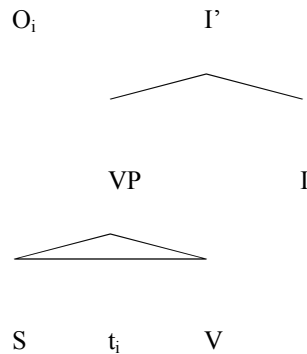
He suggests that English is a forced Agreement language while Japanese is not a forced Agreement language. English therefore requires wh-movement, as part of the agreement between the relevant feature on C and its specifier, while in Japanese the wh-phrase need not move.

Turning to scrambling, Fukui suggests that the absence of scrambling in English, and its presence in Japanese, can be explained by the assumption that English has the category of functional heads, in this case, INFL, while Japanese doesn’t. The presence of INFL, and the concomitant agreement with its specifier, requires the subject to raise to this specifier position. In most cases subject is the only element that can raise there, resulting in word-order rigidity. In Japanese, the subject, with nominative case marking, is licensed independently from INFL; it simply stays put in its original position under the projection of V. Objects (and PPs), which are likewise licensed by particles, hence also not dependent on functional heads, move freely above this subject. This is illustrated below.



For Kuroda, the possibility of scrambling in Japanese arises from the fact that the specifier of IP need not be filled due to the non-forced agreement nature of the language. If it is vacant, you get the SOV order, with the subject in its original position. The object is free to move optionally to the specifier of IP, in which case you get the OSV order. This latter configuration is shown below (I have used different labelings for nodes from Kuroda’s).





2.1. Empirical Challenge from Turkish/Turkic

Fukui's and Kuroda's approaches seem quite promising, and even elegant in parts, and they have had a major impact on how we think particularly about Japanese, including in my own work (see later). However, Fukui's approach in particular faces direct empirical challenges from a variety of languages. Turkish and much of Turkic constitute straightforward counterexamples, for example. The following is a Turkish example.

- (6) Doktor-lar ne bul-du-lar?
 doctor-PL what find-PAST-3PL
 'What did the doctor find out?'

Turkish has the characteristic Altaic trait of *wh-in-situ*.³ And, it has a robust subject-verb agreement system as shown. In Fukui's approach, this subject-verb agreement should indicate that Turkish has the category of functional heads, hence, by implication, it should require *wh*-movement, which it clearly does not.

For scrambling, too, Turkish provides a straightforward counterexample. The following is from Erguvanlı (1984) as quoted in Shibatani (1990).

- (7) a. Murat bu adam-a para-yı ver-di.
 this man-DAT money-ACC give-PAST-3SG
 'Murat gave the money to this man.'
 b. Para-yı Murat bu adam-a ver-di.

³ *Wh-in-situ* is not limited to Altaic; Sino-Tibetan, which includes Chinese, is typically *wh-in-situ*, as is Arabic and Hindi. Within Turkic, Gagauz and Kraim are exceptions in that they have overt *wh*-movement (Jaklin Kornfilt, personal communication). Interestingly, these two languages share a property, unusual in Altaic, that the complementizer comes at the beginning of the clause instead of at the end. This recalls Hindi, which is *wh-in-situ*, except in the complement clause, where the *wh*-phrase must move (or some other measure taken - see Mahajan 1990). The complement clause in Hindi also has clause-initial complementizer. Thanks to Norvin Richards for bringing my attention to the possible correlation between *wh*-movement and the position of the complementizer.

c. bu adam-a Murat para-yı ver-di.

As shown, despite the presence of subject-verb agreement, we find free word order that is a hallmark of scrambling.

These counterexamples from Turkish, which directly contradict Fukui's approach, do not necessarily contradict Kuroda's. The reason is that Kuroda is more cautious about what counts as *X-Agreement*. He "suspend[s] judgment...as to whether or not, or how, *X-Agreement* is conceptually combined with phenomena of agreement in the more usual sense of the term, for example, gender and number agreement between a noun (subject) and a (finite) verb" (Kuroda 1988: 10). By not committing to the idea that the typical form of subject-verb agreement does not necessarily constitute *X-Agreement*, Kuroda avoids a direct challenge from examples such as what we observed from Turkish. However, as Shibatani (1990: 403) points out, "if we divorce the notion of *X-Agreement* from actual verbal agreement, Kuroda's notion of Agreement not only loses its empirical underpinning, rendering the entire argument abstract and theory dependent, but we are also put in a curious position regarding some languages that actually exhibit verbal agreement." In languages such as Turkish, the "garden-variety verbal agreement" would have to be excluded from the (*X*)-Agreement system. Other languages include Arabic, Nepali, and Veta (Shibatani 1990). It may turn out that not all "garden-variety" agreements are the same relative to the kinds of phenomena we are observing, but until we have a better hold on such a hypothetical distinction, it becomes difficult to accept Kuroda's approach at face value.⁴

The idea of discovering a parameter in the domain of agreement seemed promising at the time Fukui and Kuroda proposed it.⁵ However, once we expand the data coverage to include Turkish/Turkic, which, after all, have more similarities to Japanese than English, we can see that their approaches face serious empirical problems in their present form. As Shibatani (1990: 398) puts it, typological studies like theirs that are based on a "limited range of language types are often misguided or at best inclusive." Time will tell if their theoretical intuitions can overcome the empirical hurdles.

In the remainder of these remarks, I will first review some recent developments in the grammar of *wh-in-situ*, then introduce my own work on scrambling that builds in part on Kuroda's notion that the object, for example, can move into the specifier of IP, an approach that receives empirical support from both Japanese and Turkish although the motivation for it turns out to be exactly opposite of Kuroda's original line of analysis.

⁴ Fukui's and Kuroda's analyses differ from the traditional assumption about "agreement": it has been believed that agreement markings on the NPs allow a language to have flexible word order (thanks to Sabine Iatridou for noting this point).

⁵ See Shibatani (1990) for a point by point rebuttal of the account given by Fukui and also Kuroda.

3. Wh-in-situ

In a wh question, the root C carries the question force, and this C, or more precisely, the relevant feature on this C, is associated with the wh-phrase to form an information question. One view is that this “association” in a wh-movement language is accomplished by moving the wh-phrase into the specifier of CP headed by the “question” C. What about wh-in-situ languages? How can the wh-phrase, sitting presumably inside the TP, get associated with the root C? The first attempt at answering this question is Huang (1982), who made the important proposal that the wh-phrase in a wh-in-situ language moves at LF, so the movement is not phonologically detected. Below, I will call this approach “LEVEL,” because it appeals to different levels of representation at which wh-movement occurs.

At this point we need to pause for a moment to ponder the motivation for wh-movement. In Huang’s approach, there is an assumption that the wh-phrase in any language must ultimately move into the specifier of the root CP. The reason, as far as I can tell, is semantic. Ultimately, the LF of a wh-question such as *Who did you see?* must presumably have the logical form, stated informally, which x, x a person, you saw x. This sort of logical form implies that the wh-phrase must be at the left edge. But is that really necessary? If the answer is yes, we can conclude that something like the LEVEL approach must be correct, and the wh-phrase as a whole moves to the specifier of CP **always**. However, that is not so clear. We cannot depend just on semantics to tell us precisely where the wh-phrase must ultimately end up. There are approaches to the semantics of questions that in fact do not assume the necessity of wh-movement. For example, in the first treatment of questions in Montague grammar, Hamblin (1973: 48) notes that “[a]lthough standard English word-order places the interrogative word or phrase ... first, with inversion of the verb, there is no real need for an order different from that appropriate to indicatives.” Then in a footnote that follows this statement, he goes on to observe that “[i]n many languages, for example all Melanesian ones, word-order is always that of the corresponding indicative and there is not even a distinct inflexion.” What he suggests is that the wh-in-situ languages reflect directly the semantic representation of questions, and that the overt wh-movement found in English is, from this point of view, superfluous. It is important to point out that his approach includes mechanisms that may, for others, seem superfluous. I mention Hamblin’s analysis simply to demonstrate that there is no definitive explanation for why a wh-phrase moves in languages such as English, and that we cannot simply depend on semantics to tell us at this point, although ultimately, whatever syntactic analysis we construct should have a direct reflection in semantics. Who is wearing the “real” semantic representation on its sleeve, the wh-movement languages or the wh-in-situ languages? It is something we cannot answer today, as there are many questions that remain with our understanding of wh-question formation, both overt movement and wh-in-situ. Below, I summarize the various approaches in the literature to wh-in-situ.

3.1. Approaches to Wh-in-situ

- (8) LEVEL: the difference is keyed to the level at which wh-movement applies, either at SS (wh-movement) or LF (wh-in-situ). In this approach, the wh-in-situ undergoes *covert phrasal movement*.⁶ Representative works include Huang (1982), Lasnik and Saito (1984).
- (9) PRONUNCIATION: the wh-phrase moves at the same level uniformly in all languages; the difference arises from whether one pronounces the head of the chain (overt movement) or the tail of the chain (wh-in-situ). In this approach, wh-in-situ is exactly the same as overt movement, except in the position of the chain that is pronounced. Representative works include Groat and O’Neil (1996).
- (10) MOVE vs. NON-MOVE: Q on the root C licenses the wh-in-situ without movement by some sort of “binding.” In this approach, the wh-phrase in a wh-in-situ language simply does not move. Representative works include Reinhart (1993) and Tsai (1994).
- (11) FEATURE MOVEMENT: in a wh-in-situ language, the relevant wh feature contained in the wh-phrase can separate morphologically from the rest of the wh-phrase and moves at overt syntax to C. What remains is the wh-phrase minus this feature, possibly something like the semantic restriction. In wh-movement languages, such a morphological separation is impossible, thus the entire wh-phrase pied-pipes with the wh feature. This approach assumes that wh-movement occurs in all languages, and it does so at overt syntax. It just so happens that in some languages, morphology allows a piece to separate from the rest of the phrase to fulfill this requirement for movement. Watanabe (1992), who first introduced this approach, suggests that what is moving is a phonologically null wh operator, while Hagstrom (1998) suggests that the question particle, found often in wh-in-situ languages, is generated with the wh-phrase and it is this particle that moves to C.

Which of these is correct? As I mentioned earlier, we cannot necessarily count on semantics to provide the answer. We must show empirically that one or other seems most plausible. In the remainder of this section, I will summarize some recent studies on wh-in-situ. Due to a lack of

⁶ As Norvin Richards has pointed out to me, the LEVEL approach does not exclude a “feature” movement analysis – that is, that under this approach, what moves at LF is a feature, and not the entire phrase. For simplicity’s sake, I will not entertain this option.

space, my treatment will be brief and not comprehensive. I will try to show some of the leading ideas and how we might choose, or not choose, between them. To keep the discussion as simple as possible, I will limit the possible analyses of wh-in-situ somewhat arbitrarily to two: covert phrasal movement (LEVEL of Huang, for example) and overt FEATURE movement (Watanabe 1992, Hagstrom 1998). The question at hand is, which of these approaches to wh-in-situ is correct? As we will see, it appears that both exist, but not always in the same syntactic contexts.

3.2. Intervention Effect (Beck 1996, Rizzi 1992)

A good place to start is with an example of “intervention effect,” a term I owe to Hagstrom (1998).⁷ In German, if the wh-phrase originates in a complement clause, there is a way to construct a wh-question by merging an “expletive” wh-phrase in the specifier of the root CP, and move the “real” wh-phrase only to the specifier of the complement CP.

- (12) Was glaubt Hans, wen Karl gesehen hat
 what believes Hans whom Karl seen has
 ‘Who does Hans believe that Karl saw?’

Was normally means ‘what’, but in this example it is an expletive that plays the role of a placeholder for the real wh-phrase below. The real wh-phrase *wen* ‘who(m)’ moves into the specifier of the complement CP although it is clear that it has matrix scope. This type of example gives rise to an intervention effect when a negative element intervenes between the root C and the “real” wh-phrase.

- (13) *Was glaubt **niemand**, wen Karl gesehen hat
 what believes **nobody** whom Karl seen has
 ‘Who does nobody believe that Karl saw?’

The negative item **niemand** ‘nobody’ somehow blocks the wh-phrase *wen* from taking matrix scope, leaving the root “question” C without a real wh-phrase to get associated with, with the result that this example is not associated with any proper interpretation.

There are generally two approaches to the intervention effect. In the earliest work on the topic, Rizzi (1992) suggests that what is going on in a sentence such as (12), where there is no intervention, is that a piece of the wh-phrase has split off and has moved to the matrix specifier of CP. This recalls Watanabe’s (1992) FEATURE approach to wh-in-situ. Rizzi then makes the observations that, although the movement involves an object wh-phrase, which is properly governed, the fact that only a piece of it moves renders the movement equivalent to adjunct movement. As such, it is subject to weak

⁷ See papers by Meltem Keleşir and Heejeong Ko in this volume for studies of intervention effects in some Altaic languages.

islands such as the negative island, an instance of Relativized Minimality (Rizzi 1990). This, according to Rizzi, is the nature of the intervention effect invoked by a negative element as observed in (13).

Beck (1996) arrives at a different conclusion based on an additional fact. She observes that we can overcome an intervention effect by overtly moving, by scrambling, the *wh*-phrase to a position above the intervenor. For example, the following Korean example taken from Beck and Kim (1997) shows a typical intervening effect involving an NPI.

- (14) *Amuto mwues-ul ilk-ci-an-ass-ni?
 anyone what-ACC read-CI-NEG-PAST-Q
 ‘What did no one read?’

Here *amuto* ‘anyone’ is an NPI that serves as the intervenor for the *wh*-in-situ *mwues-ul* ‘what-ACC’. If this *wh*-phrase is scrambled to the left of the NPI, the sentence becomes perfect.

- (15) Mwues-ul_i amuto t_i ilk-ci-an-ass-ni?
 what-ACC_i anyone t_i read-CI-NEG-PAST-Q

For Beck, what is crucial is that this overt movement (scrambling) is not blocked by the intervenor. She concludes that the difference between this grammatical example and the ungrammatical one in (14) has to do with the difference in the level at which movement occurs. The intervention effect in (13) is one in which the *wh*-in-situ undergoes *covert* phrasal movement, following the analysis of Huang (1982). In Beck’s analysis the level at which movement occurs is crucial; only LF movement is subject to intervention.

To summarize, Rizzi argues for a FEATURE movement of *wh*-in-situ based on the intervention effect while Beck argues for a LEVEL analysis, meaning that *wh*-in-situ undergoes LF phrasal movement. Below, I will give arguments by Pesetsky (2000) to demonstrate the possibility that *both* of these types of movement exist in the grammar of *wh*-in-situ.

3.3. Both Covert Phrasal and Overt Feature Movements Exist?

Pesetsky (2000) begins with an earlier work of his (Pesetsky 1987) in which he noticed the following distinction.

- (16) a. Who bought what?
 b. *What did who buy?
- (17) a. Which person bought which book?
 b. Which book did which person buy?

(16b) is a straightforward Superiority violation, but in (17b), the same apparent violation does not lead to ungrammaticality. As Pesetsky (1987) has noted, (17)

contains instances of D-linked wh-phrases. Why can a D-linked wh-phrase apparently violate Superiority and still be grammatical? An interesting outcome of Pesetsky (2000) is that, if he is right, we, in fact, don't need to assume that Superiority is being violated in (17b). Such an analysis is made possible by the existence of both feature and covert-phrasal movements of wh-in-situ, as we will see below.

We begin with intervention effect. While both examples of D-linked wh-phrases in (17) are grammatical, a sharp contrast obtains when negation is inserted into a certain position (cf. É. Kiss (1986), Hornstein (1995)).

- (18) a. Which person ___ did not read which book?
b. Which person ___ didn't read which book?
c. Which book did which person not read ___?
d. *Which book didn't which person not read___?

In a/b, Superiority is not violated, and as shown, negation does not affect grammaticality regardless of the position it occurs in. In c/d, which are the Superiority "violation" cases, placing negation after the subject wh-in-situ does not alter the grammatical judgment ((c)). In contrast, placing the negation between the wh-in-situ and C renders the example ungrammatical. Let us compare the minimal pair, (b) and (d). Pesetsky (2000) assumes that the wh-in-situ in all cases must undergo some sort of movement. He takes the contrast in this minimal pair to be indicating that in (b), a covert *phrasal* movement has taken place, while in the ungrammatical (d), feature movement is the only option, and it is blocked by the negative intervenor. His analysis of intervention effect is in line with the tradition of Rizzi/Watanabe's feature analysis. Following is Pesetsky's rendition of intervention effect (p. 67).

- (19) Intervention effect (universal characterization)
A semantic restriction on a quantifier (including *wh*) may not be separated from that quantifier by a scope-bearing element.

We can understand the "quantifier" here to be the relevant feature that undergoes movement, and the "semantic restriction" as the rest of the wh-phrase that remains in-situ.

Why is feature movement the only possibility in the Superiority "violation" environment in (18c/d)? Here, there are two assumptions, both of which are consonant with the two possible analyses of wh-in-situ we are comparing. Feature movement occurs at overt syntax, while covert phrasal movement does not. And here, Pesetsky is able to address the mystery of the lack of a Superiority effect with D-linked wh-phrases. Why isn't the example *which book did which person buy?* ungrammatical as a Superiority violation? The answer is that it is NOT a Superiority violation. The subject wh-phrase, which is the in-situ phrase, first undergoes *feature* movement; this is followed by the overt phrasal movement of the object wh-phrase. It is, thus, the availability of feature movement with D-linked wh-phrases that makes it

possible for the object wh-phrase to undergo overt phrasal movement over the subject wh-phrase without violating Superiority. In the example where Superiority is not an issue (*Which person bought which book?*), the object wh-phrase need not “move” first under Superiority, hence it is able to undergo LF phrasal movement. This, in turn, makes it possible to circumvent an intervention effect, as we saw in (18b). The question remains as to why in English, feature movement is only available to D-linked wh-phrases, an issue which I will not take up in my remarks.

Pesetsky gives further evidence for the feature/phrasal distinction from Antecedent-Contained Deletion (ACD) (Sag 1976, May 1985, Larson and May 1990, Fiengo and May 1994). Note the sentence below, which has an elided VP.

(20) Nigel likes to perform in every city that David does [_{VP} Δ].

If we are to fill in the ellipsis in a mechanical way, we would pick the next higher VP as the antecedent, but as shown below, this results in infinite regress, which incorrectly characterizes this sentence as uninterpretable.

(21) Nigel likes to perform in every city that David does [_{VP} likes to perform in every city that David does...]]

The solution is QR, which creates the appropriate VP antecedent (e.g., May 1985).

(22) [every city that David does [_{VP} Δ]] [Nigel [_{VP} likes to perform in x]]

By copying this newly created VP ([_{VP} likes to perform in x]) to Δ, we get the right LF.

(23) [every city x that David [_{VP} likes to perform in x]] [Nigel [_{VP} likes to perform in x]]

A crucial component of ACD resolution is that the entire PHRASE undergoes movement and not just some feature that represents the phrase. ACD provides support to the kind of bifurcation of movement, feature and cover-phrasal movements, associated with wh-in-situ.

As Pesetsky observes, in D-linked environments, we don't always find ACD resolution, a sign that we don't always have PHRASAL movement. Note that the following ACD example is grammatical, although admittedly, it is a bit difficult to interpret.

(24) I need to know which girl ___ ordered [which boy that Mary (also) did Δ] to congratulate Sarah.

In this example, the higher wh-phrase, *which girl*, has moved into the appropriate specifier, leaving the lower wh-phrase, *which boy*, to undergo the

second movement. The fact that this wh-phrase achieves ACD resolution suggests that the entire wh-phrase (*which boy that Mary (also) did*) covertly moves. This is consistent with what we observed for intervention. In contrast, the following is ungrammatical.

- (25) *I need to know which girl Sue ordered [which boy that Mary (also) did Δ] to congratulate ____.

Here the lower wh-phrase moves to the specifier first, leaving the “higher” wh-phrase in-situ. Because the wh-phrases are D-linked, Superiority per se should not deem this example ungrammatical. What we saw from intervention effects is, again, consistent with this judgment. In this example, which is an apparent Superiority violation, feature movement is the only option, because it can occur at overt syntax, to conform to Superiority. It comes at the price of not being able to offer ACD resolution.⁸

4. Scrambling

We have seen that neither Fukui’s nor Kuroda’s approach to scrambling satisfactorily captures cross-linguistic facts about scrambling once we take into account languages such as Turkish. As Shibatani (1990) has shown, Turkish demonstrates that scrambling occurs freely even with subject-verb agreement, a fact that directly challenges Fukui’s approach. While the same fact also calls into question Kuroda’s approach, the situation is somewhat vague because he defines his X-Agreement in a way that makes it difficult to see exactly what constitutes X-Agreement. If he is right, English subject-verb agreement is an instance of X-Agreement but Turkish subject-verb agreement would not be. It is possible that there is some fundamental distinction, but at this point, it isn’t clear what that might be.

There is one aspect of Kuroda’s approach which find independent empirical justification from Japanese and Turkish, although, as we will see, the analysis turns out to be essentially the opposite of his approach. He claims that in a non-forced Agreement language such as Japanese, the specifier of TP can stay vacant, or it can be filled, and what fills it need not be the subject. The OSV order comes about by the object moving into this specifier while the subject stays in-situ. In Miyagawa (2001, 2003), I give evidence for such a configuration, with the object in the specifier of TP, and the subject in-situ in the specifier of vP. Unlike Kuroda, I assume that the specifier of TP must always be filled.

⁸ Nussenbaum (2002) gives evidence counter to Pesetsky (2000) that even those cases Pesetsky characterizes as involving feature movement in fact involve full phrasal movement.

Cole and Harmon (1998) give arguments from Malay that there are three types of wh-movement: overt movement to the specifier of root CP, partial overt movement followed by covert movement to the specifier of root CP (similar to the German case in (12) earlier); and no movement. The latter two are distinguished by the fact that the former observes islands while the latter does not.

4.1. Miyagawa (2001, 2003)

The universal quantifier *zen'in* 'all' in the object position may occur inside the scope of sentential negation.

- (26) Taroo-ga zen'in-o sikara-nakat-ta.
 Taro-NOM all-ACC scold-NEG-PAST
 'Taro didn't scold all.'
 not > all, all > not⁹

However, as Kato (1988) has noticed, when a universal quantifier occurs in the subject position, it is outside the scope of negation.

- (27) *Zen'in-ga* sono tesuto-o uke-nakat-ta.
all-nom that test-ACC take-NEG-PAST
 'All did not take that test.'
 *not > all, all > not

For most speakers, this sentence only has the total negation interpretation of "all > not."¹⁰ It fails to have the partial negation interpretation of "not > all." In contrast, we obtain partial negation if the object is scrambled (Miyagawa 2001, 2003).

- (28) Sono tesuto-o_i zen'in-ga t_i uke-nakat-ta.
 that test-Acc_i all-Nom t_i take-Neg-Past
 'That test, all didn't take.'
 not > all, all > not

How does negation take scope over "all" to achieve the partial negation interpretation? Following a long tradition, starting with Klima (1964), I assume the following.

- (29) A quantifier is in the scope of negation iff it is c-commanded by negation (cf. Klima 1964).

In (27), in which the subject "all" is outside the scope of negation, "all" begins in the specifier of *vP*, but moves to a position outside the c-command domain of negation. A reasonable assumption is that it moves to the specifier of *TP*, as shown below. (The position of negation is roughly as proposed by Laka (1990), Pollock (1989).)

⁹ See Miyagawa (2001, 2003) for discussion of the availability of this second interpretation. I suggest there that it is possibly due to a group reading of 'all'.

¹⁰ As expected, the data is not simple. In certain "subjunctive" environments, 'all' appears to be able to take scope under negation, possibly showing that the subjunctive verb raises to C. See Miyagawa (2001, 2003) for discussion.

[insert tree 30]

In (28), in which the subject "all" occurs in the "scrambled" order of OSV, it is able to be interpreted inside the scope of negation. The simplest assumption to make here is that this subject "all" stays in-situ in the specifier of *vP*, without moving to the specifier of TP. This is apparently made possible by the fact that the object, "that test," has moved to the specifier of TP.

[insert tree 31]

This structure for OSV reflects exactly Kuroda's proposal for the scrambling of the object; the object is in the specifier of TP, and the subject stays in-situ in the *vP* specifier. The difference, though, is the following. Unlike Kuroda, who does not assume that the specifier of TP needs to be filled, due to the property of being "non-forced," what I have observed suggests that there is forced filling of the specifier of TP. If the object does not fill it, then the subject must, which gives rise to the SOV order and, as we saw, the subject is necessarily outside the scope of sentential negation. This appears to be a case of "forced" agreement of some sort, although Japanese does not evidence overt agreement. I suggested that this requirement is the EPP on T, which requires that T have a specifier. On this account, SOV and OSV are equivalent; in either case, something (S or O) moves into the specifier of TP to fulfill the EPP requirement of T. There is a bit of an irony here. I furnished empirical evidence for a configuration that Kuroda predicted for Japanese, namely, the object in the specifier position and the subject in-situ. However, I did so in the context of an approach that requires that the Japanese T have a specifier that is filled, something that directly contradicts Kuroda's approach.

4.2. Turkish

The subject in Turkish tends to be interpreted as definite/specific/presuppositional (Erguvanlı-Taylan 1987; cf. also Enç 1991). Thus, an inherently indefinite phrase is at best awkward in the subject position, unless it can be interpreted as specific.

- (32) (*)Bir adam kitab -ı oku-du.
a man book-ACC read-PAST
'A man read the book.'

A number of linguists have proposed that Diesing's (1992) Mapping Hypothesis can derive this fact (Aygen-Tosun 1999, Kennelly 1997, Keleşir 2001), if we assume that the subject is outside the nuclear scope, i.e., in the specifier of TP. What has also been noted is that if, for example, the object scrambles to the left of the indefinite subject, this subject can easily be interpreted as non-specific/non-presuppositional (Erguvanlı-Taylan 1987).

- (33) Kitab -ı bir adam oku-du.
 book-ACC a man read-PAST

The Mapping Hypothesis together with the EPP analysis of scrambling can explain this observation. As in Japanese, the subject can meet the EPP (SOV), or the object can (OSV). In the latter order, the subject stays in the specifier of ν P, allowing it to remain in the nuclear scope, underneath existential closure, where it is interpreted as non-presuppositional.

[insert tree (34)]

In Turkish, the EPP can be met not just by subjects and objects, but apparently also by (certain) locatives.¹¹ The following is taken from Erguvanlı-Taylan (1987).

- (35) *Bir adam bizim kapı-nın ön-ü-nde durmuyor.
 a man our door-3gGen front-3Poss-Loc is.not.standing
 'A man is not standing in front of the door.'

- (36) Bizim kapı-nın ön-ü-nde bir adam durmuyor.
 our door-3gGen front-3Poss-Loc a man is.not.standing

This is apparently a case of locative inversion.

What exactly is the condition that allows scrambling? It is clearly not a case of absence of agreement since Turkish has robust agreement. The analysis of Erguvanlı-Taylan (1987) is suggestive. She calls scrambling in Turkish “topicalization.” Could it be that the parameter at play here is some sort of a topic/focus requirement on the specifier of TP in the scrambling languages, a requirement that can be met by a host of elements that can qualify as a topic (or focus – see Miyagawa (1997) among others). The problem, at least at the outset, is that this does not seem to be true in Japanese. Thus, for example, it is possible to scramble an idiom chunk (Miyagawa 1997), something unexpected under topicalization. Although the parameter is not clear, what we appear to observe in Japanese and Turkish at least in the range of data I have introduced is that there is some sort of “forced” strategy to fill the specifier of TP, a condition that, if it turns out to be true, directly challenges Fukui’s and Kuroda’s intuition about scrambling languages.

5. Conclusion

In conclusion, I attempted to show in these remarks the potential for doing cross-linguistic analysis within the Altaic family of languages. The simple act

¹¹ See Yamashita (2001), who argues that even in Japanese, elements other than subject and object can fulfill the EPP requirement of T in Japanese.

of looking at examples from Turkish called into question two influential approaches to Japanese, one by Fukui, the other by Kuroda. Their approaches still might turn out to be on the right track, but the seriousness of the empirical challenge makes one wonder whether their programs are simply misguided. It is certainly true that if we limit our data to, say, Japanese, these kinds of concerns would not arise, a sign that a more rigorous empirical work is in order for future work on typology within the principles-and-parameters framework, something that Shibatani (1990) makes a compelling case for. It is in this spirit that I suggest that comparative Altaic syntax will help us to attain a deeper understanding of human language.

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