

Object movement and its implication for A-scrambling in Japanese

Introduction: In Japanese, object quantifier phrases (QPs) can take scope either over or under negation [1], which contrasts with English [2], where the universal object QP is trapped inside the scope of the negation:

- [1] Taro-wa gakusee-zen'in-o/go-nin-o sikar-anakat-ta. (obj.>neg; neg>obj.)
 Taro-TOP student-all-ACC/5-CL-ACC scold-NEG-PAST
 'lit. Taro didn't scold all/five students.'

- [2] John didn't scold every student. (*obj.>neg; neg>obj.)

As Japanese is assumed to lack optional quantifier raising, 'obj.>neg' reading has led to assuming Japanese negation is different from English one. Authors like Han et al. (2004), Kataoka (2006) assume there are several positions for negation; in one of them, negation is below objects. I claim the difference in [1-2] is not the position of negation but the existence of object movement in [1], which provides a new account for Japanese A-scrambling.

Scope relation with negation: English QP subjects are scopally ambiguous with respect to negation [3]:

- [3] All/A student(s) didn't come. (subj.>neg; neg>subj.)

When focused or disjunctive phrases appear in subject position, they must scope over negation [4]:

- [4] Only John/John or Tom didn't come. (subj.>neg;*neg>subj.)

The same thing happens in Japanese; focused or disjunctive phrases in subject position allow only wide scope [5]:

- [5] a. [Subete-no/Go-nin-izyoo-no gakusee-ga] ko-nakat-ta.
 all-GEN/5-CL-or.more-GEN student-NOM come-NEG-PAST (subj.>neg; neg>subj.)
 'lit. All/Five or more students didn't come.'
 b. [Taro-mo/dake] / [Taro-ka Ziroo-ga] ko-nakat-ta.
 Taro-also/only Taro-or Ziro-NOM come-NEG-PAST
 'lit. [Also/Only Taro]/[Taro or Ziro] didn't come.' (subj.>neg;*neg>subj.)

Thus, I propose the generalization [6] regarding the scope of focused and disjunctive phrases:

- [6] Focused and disjunctive phrases allow only surface scope.

Object position in Japanese: Significantly, when focused or disjunctive phrases are placed in object position in Japanese, the availability of 'neg>obj.' reading disappears [7]:

- [7] Taro-wa [yasai-mo/dake] / [yasai-ka kudamono]-o tabe-anakat-ta.
 Taro-TOP vegetable-also/only / vegetable-or fruit -ACC tabe-NEG-PAST
 'lit. Taro didn't eat [only/also vegetable] / [vegetable or fruit]. (obj.>neg;* neg>obj.)

Note that these phrases do not seem to be positive polarity items (PPIs) (contra Hasegawa 1991 and Goro 2007). PPIs can scope under local negation when another downward-entailing (DE) operator is added [8], while Japanese focused and disjunctive phrases in object position still cannot scope under local negation in such contexts [9]:

- [8] I don't think that John didn't call someone. (ok: neg>neg>some)
 [9] John-wa [Taro-ga pan-mo/dake / [pan-ka-kome-o] tabe-nakat-ta to] omowa-nakat-ta
 John-TOP Taro-NOM bread-also/only/[bread-or-rice-ACC] eat-NEG-PAST that think-NEG-PAST
 'lit. John didn't think Taro didn't eat also/only bread/[bread or rice].' (*neg>neg>obj.; neg>obj.>neg)

Nor these phrases seem to undergo some focus movement to the higher domain (contra Aoyagi 1999, Miyagawa 2010), for adding a focus particle does not affect the scope relations among arguments [10]:

- [10] a. Taro-ga [san-nin-izyoo-no sensee-ni] [yo-nin-izyoo-no dansi gakusee-o] syookaisi-ta.
 Taro-NOM 3-CL-or.more-GEN teacher-DAT 4-CL-or.more-GEN male student-ACC introduce-PAST
 'lit. Taro introduces four or more male students to three or more teachers.' (dat.>acc.;??acc.>dat.)
 b. Taro-ga [san-nin-izyoo-no sensee-ni] [yo-nin-izyoo-no dansi gakusee-mo] syookaisi-ta.
 Taro-NOM 3-CL-or.more-GEN teacher-DAT 4-CL-or.more-GEN male student-also introduce-PAST
 'lit. Taro introduced also four or more male students to three or more students.' (dat.>acc.;??acc.>dat)

If the generalization [6] is correct, these phrases reflect their surface scope, and it follows that the objects are in fact above negation in the syntax in [7]. Thus, I argue that Japanese objects must move above NegP.

Why objects move? I argue that objects move for formal licensing reasons. Assume that NegP is above vP, which means objects move into the TP-domain. I assume that this is related to case particles. In Japanese, case particles affect the distribution of objects; without a case particle, objects must be adjacent to the verb (i.e. Case-drop), while with it, they can appear even above subjects (i.e. scrambling). Thus, I claim that objects with a case particle have an uninterpretable 'particle' feature besides abstract Case feature, and that although abstract Case is checked within vP, objects with a particle still need to move into the TP-domain for licensing case particle. (This means case particles are not a mere morphological realization of abstract Case.) I assume the particle licensing head X is above NegP:

- [11] [_{IP} ... [_{XP} X_[Case,prt]] [_{NegP} Neg] [_{vP} v [_{VP} V Obj.-O_[-Case,prt]]](())]

This predicts that when a case particle is absent, objects stay inside the vP-domain, so the scope relation with

negation should be opposite of the cases of objects with a case particle. Surprisingly, this seems correct [12]:

- [12] a. Taroo-wa [san-nin-izyoo-no gakusee]-o sir-anakat-ta.
 Taro-TOP 3-CL-or.more-GEN student-ACC know-NEG-PAST (prominent reading: obj.>neg)
 b. Taroo-wa [san-nin-izyoo-no gakusee] sir-anakat-ta.
 Taro-TOP 3-CL-or.more-GEN student know-NEG-PAST (prominent reading: neg>obj.)
 ‘lit. Taro didn’t know three or more students.’

With an accusative case particle, the prominent reading is ‘obj.>neg’ (cf. Han et al. 2004), while without it, the prominent reading is reversed. The prominence of ‘obj.>neg’ in [12a] can be explained straightforwardly under the current analysis since these objects undergo movement above NegP, hence ‘obj.>neg’ reading is a surface scope reading (note that surface scope readings are often stronger than inverse scope ones). By contrast, since objects without a case particle do not have the motivation for movement into the TP-domain, they stay low, so the ‘neg>obj.’ becomes strong. (Why ‘obj.>neg’ reading is still weakly possible in [12b] seems related to the fact that Case-drop is marginally possible in non-adjacent-to-verb contexts, that is, there seems to be a distinction between cases where case particles are absent from the beginning of the derivation and cases where case particles are present in the syntax but deleted at PF.) Thus, I argue that objects with a case particle move for particle licensing.

A-scrambling: This provides a new account for why object scrambling over subjects can be A-movement in Japanese. In Japanese, objects can be scrambled over subjects without Weak Crossover (WCO) violations [13]:

- [13] [mi-tu-izyoo-no kaisya-o]_i [soko_r-no ookuno zyuugyooin-ga] _{t_i} hihansi-ta.
 3-CL-or.more-GEN company-ACC it-GEN many employee-NOM criticize-PAST
 ‘lit. Three or more companies, many of its employees criticized.’ (bound variable reading of *soko* is ok)

The status of Japanese A-scrambling is unclear; it is scrambling, so it seems optional, but in general, A-movement is obligatory. Also, if all A-related features of objects are checked within vP, why can object movement above subjects be A-movement? This can be explained under the current analysis. I adopt Bošković (2007, 2008), where elements requiring checking must function as a probe, which deduces generalized EPP effects. He claims that XP with an uninterpretable feature (uF) moves, to probe down a head with the relevant interpretable feature (iF) [14]:

- [14] $\begin{array}{c} \downarrow \\ [_{YP} \ Y \ [_{ZP} \ \dots \ XP \ \dots]] \end{array}$ (XP with uF moves, to probe down Y with iF)
 $\begin{array}{c} iF \\ uF \end{array}$

Then, a hint to solve Japanese A-scrambling puzzle is obtained from West Ulster English (WUE):

- [15] a. Who_i was arrested all _{t_i} in Duke Street? b. *They_i were arrested all _{t_i} last night. (McCloskey 2000)

In WUE, *wh*-movement allows Q-float but movement to [Spec,TP] does not. Bošković (2008) argues that in [15a], *who* directly moves to [Spec,CP] and probes both C and I, checking both its Case and Op-features; otherwise, [15a] should be ill-formed on a par with [15b]. I claim that Japanese A-scrambling over subjects is basically the same as [15a]. Objects move to a position above subjects, and from there, probe heads with the relevant features. Since this involves case particle licensing, which I assume is A-related, the movement can be A-movement. Note that this differs from Miyagawa (1997), where A-scrambling involves IP-adjunction for accusative Case checking with I. The current approach claims that A-scrambling involves multiple-feature-checking. Then, as for another head above subjects, I argue that it is related to topicality/definiteness. As evidence, I provide [16], which has been unnoticed in the literature. In Japanese, NPs are basically ambiguous regarding specificity/definiteness, but in the form ‘[NP-Case-Numeral-CL]’, only non-specific/indefinite reading is possible. Surprisingly, when scrambled objects occur in this form, scrambling cannot be A-movement, hence the WCO effect is observed:

- [16] *?[Kaisya-o mit-tu-izyoo]_i [soko_r-no ookuno zyuugyooin-ga] _{t_i} hihansi-ta.
 company-ACC 3-CL-or.more it-GEN many employee-NOM criticize-PAST
 ‘lit. Three or more companies, many of its employees criticized.’ (bound variable reading of *soko* is bad)

Thus, I propose [17] for the mechanism enabling object scrambling over subjects to be A-movement:

- [17] $\begin{array}{c} \downarrow \\ [_{YP} \ \text{Obj.}-o \ Y_{[\text{topic/definite}]} \ \dots \ [_{TP} \ \text{Subj.} \ \dots \ [_{XP} \ X_{[\text{Case-prt}]} \ \dots] \end{array}$ *Movement*
 $\begin{array}{c} \nearrow \\ \nearrow \end{array}$ *probe both features*

This means that A-scrambling is not optional; rather, A-scrambling is a feature-driven movement. It moves above subjects to check its [topic/definite] feature (say, in TopP) and from there, it also checks its case particle feature. In [16], as the object is indefinite, i.e., lacks a [topic/definite] feature, the movement in [17] cannot be applied. Thus, the current study not only resolves the scope issue of objects but eliminates optionality in Japanese A-scrambling.

Selected References: Bošković, Ž. 2007. On the locality and motivation of Move and Agree: An even more minimal theory, *LI* 38. Han, C.-H., D. R. Storošenko, and Y. Sakurai. 2004. Scope of negation, and clause structure in Japanese. *Berkeley Linguistics Society* 30. Miyagawa, S. 1997. Against optional scrambling. *LI* 28.