

Scope and Disjunction Feed an Even More Argument for Argument Ellipsis in Japanese

Synopsis: This paper provides novel data on null arguments in Japanese and argues that they can only be handled by Argument Ellipsis (AE). Specifically, it maintains that the interpretation produced by the interaction of null arguments with scope and disjunction strongly favors the AE analysis over empty pronouns (*pro*) or V-stranding VP-Ellipsis (VPE), and necessitates the availability of AE in Japanese.

Introduction: Though Kuroda (1965) and Hoji (1998) analyze Japanese null arguments as *pro*, Takahashi (2008a, b) shows they cannot always be pronominal [1]. [1b] is ambiguous in that the set of the teachers Taroo respects can be either identical to the set of the teachers Hanako respects (E(-type) reading) or different from it (Q(-quantificational) reading). However, if we replace the null object in [1b] by an overt pronoun *karera* 'they,' the Q-reading becomes impossible [1c]. Therefore, the *pro* analysis cannot explain the Q-reading. By contrast, Otani & Whitman's (1991) V-stranding VPE [2a] and Oku's (1998) AE [2b] can yield the Q-reading in [1b], since the ellipsis site in [2a-b] includes *three teachers*.

Subject Ellipsis and V-stranding VPE : Takahashi (2008b) notes that null subjects can also yield the Q-reading [3], which seems to favor AE over V-stranding VPE since subjects are in general outside of the VPE domain, i.e., in [Spec, TP]. However, Kuroda (1988), a.o., argues that Japanese subjects can remain within VP because of the lack of obligatory subject agreement. Given the possibility of subjects in-situ and object scrambling, V-stranding VPE can feed the subject ellipsis configuration, i.e., [_{TP} Obj_i [_{VP} Subj_i t_v] [V+T]]. Therefore, the Q-reading of the null subject does not necessarily favor AE over V-stranding VPE. To attest the availability of AE in Japanese, we then have to seek a null argument which is located outside of the VPE domain and cannot be analyzed as *pro*.

New Data (Scope): Saito (2009) shows that a quantified subject can take scope over negation and vice versa under an appropriate context [4]. [4a] is ambiguous under the context where students have choice of taking an exam or submitting a paper to receive credit for a course. This ambiguity is kept in a sequential sentence with a null subject [4b]. What is of interest is the interpretation where the null subject takes scope over negation and yields the Q-reading simultaneously. The *pro* analysis is excluded since it cannot handle the Q-reading. V-stranding VPE also seems to be unable to derive such a null subject since the subject occupies a higher position than negation in terms of scope, i.e., it is outside of the VPE domain. However, if we assume with Han, Storoshenko & Sakurai (2004) that Japanese NegP is located between vP and VP, the embedded null subject in question can in principle be derived via V-stranding VPE [5]. [5], nevertheless, incorrectly predicts that quantified subjects should always take scope over negation. Therefore, [Spec, vP], the original position of subjects, must be lower than NegP, and V-stranding VPE is then still excluded. AE, however, can derive the null subject in question [6]. [6] can correctly capture both the wide scope of the null subject over negation and the Q-reading, which in turn provides a pure evidence for the existence of AE in Japanese.

New Data (Disjunction): The disjunction *-ka* in Japanese behaves as if it is a positive polarity item because it always takes scope over negation [7a&8a] (cf. Goro 2007). Interestingly, this holds also for a sequential sentence with an anaphoric null argument that has a disjunction as an antecedent [7b&8b]. V-stranding VPE cannot derive the null arguments in [7b&8b] since given their scope, the null arguments must occupy a higher position than the VPE domain. The *pro* strategy is also excluded since the interpretation of the null arguments in [7b&8b] is different from the interpretation of pronouns that have a disjunction as an antecedent [9-10]. The subject pronoun in [9b] is only interpreted as the one who John thinks speaks Spanish (disjunctive E-type reading), but not the disjunctive NP as a whole, i.e., either Mary or Nancy (disjunctive reading). Similarly, the object pronoun in [10b] is only interpreted as the language John speaks, but not the disjunctive NP as a whole, i.e., either Spanish or French. By contrast, the null arguments in [7b&8b] can be assigned a disjunctive reading, respectively. Specifically, [7b] can mean that Ziroo thinks that either Kanako or Ayaka does not speak French, and [8b] can mean that Hanako either does not speak Spanish or does not speak French. Therefore, the null arguments in question cannot be pronominal. AE, however, can correctly capture the interpretation of [7b&8b], since it allows the disjunctive argument to undergo AE in the higher position than negation [11]. The ellipsis site in [11a-b] includes the disjunctive NP, so the disjunctive reading in [7b&8b] is also

explained. Therefore, AE is the only strategy that can correctly derive the null arguments in [7b&8b]. This in turn provides a novel evidence for the availability of AE in Japanese.

- [1] a. Hanako-wa [**sannin-no sensei**]-o sonkeisiteiru. b. Taroo-mo [*e*] sonkeisiteiru.
Hanako-TOP three-GEN teacher-ACC respects Taroo-also respects
'Hanako respects three teachers.' 'Taroo also respects *e*.'
c. Taroo-mo [**karera**]-o sonkeisiteiru. [1b]: \sqrt{E} -reading/ \sqrt{Q} -reading
Taroo-also they-ACC respects [1c]: \sqrt{E} -reading/* \sqrt{Q} -reading
'Taroo also respects them.' (cf. Takahashi 2008a, b)
- [2] a. [_{TP} Taroo [_{VP} ~~three teachers~~ _v] [_V(respects)+T]] b. Taroo [_{NP} ~~three teachers~~] respects
- [3] a. Yamada sensei-wa [[**sannin-no gakusei**]-ga eigo-o hanasu to] omotteiru.
Yamada teacher-TOP three-GEN student-NOM English-ACC speak C think
'Prof. Yamada thinks that three students speak English.'
b. Tanaka sensei-wa [*e*] huransugo-o hanasu to] omotteiru.
Tanaka teacher-TOP French-ACC speak C think \sqrt{E} -reading/ \sqrt{Q} -reading
'lit. Prof. Tanaka thinks that *e* speak French.' (cf. Takahashi 2008b)
- [4] a. Yamada sensei-wa [[**zyuunin-izyou-no gakusei**]-ga siken-o erabanai to] omotteiru.
Yamada teacher-TOP ten-or.more-GEN student-NOM exam-ACC not.choose C think
'lit. Prof. Yamada thinks that ten or more than ten students will not choose an exam (over a paper).'
- b. Tanaka sensei-wa [*e*] peepaa-o erabanai to] omotteiru.
Tanaka teacher-TOP paper-ACC not.choose C think \sqrt{E} -reading/ \sqrt{Q} -reading
'lit. Prof. Tanaka thinks that *e* will not choose a paper (over an exam).' (subj > neg / neg > subj)
- [5] ... [_{TP} exam_i [_{VP} ~~ten or more than ten students~~] [_{NegP} [_{VP} ~~t_i~~] [_{Neg} t_i] [_V(choose)+Neg+v+T]] ...
- [6] ... [_{TP} ~~ten or more than ten students~~]_i [_{NegP} [_{VP} t_i [_{VP} exam V(choose)] v] [_{Neg} T]] ...
- [7] a. Taroo-wa [[**Kanako ka Ayaka**]-ga supeingo-o hanasanai to] omotteiru.
Taroo-TOP Kanako or Ayaka-NOM Spanish-ACC not.speak C think
'Taroo thinks that Kanako or Ayaka does not speak Spanish.' (subj > neg / *neg > subj)
b. Ziroo-wa [*e*] huransugo-o hanasanai to] omotteiru.
Ziroo-TOP French-ACC not.speak C think
'lit. Ziroo thinks that *e* does not speak French.' (subj > neg / *neg > subj)
- [8] a. Taroo-wa [**supeingo ka huransugo**]-o hanasanai.
Taroo-TOP Spanish or French-ACC not.speak
'Taroo either does not speak Spanish or does not speak French.' (obj > neg / *neg > obj)
b. Hanako-mo [*e*] hanasanai.
Hanako-also not.speak
'lit. Hanako does not speak *e*, either.' (obj > neg / *neg > obj)
- [9] a. John thinks that **either Mary or Nancy** speaks Spanish. b. Bill thinks that **she** speaks French.
- [10] a. John speaks **either Spanish or French**. b. Mary speaks **it**, too.
- [11] a. ... [_{TP} [**Kanako or Ayaka**] [_{NegP} [_{VP} French V(speak)] Neg] T] ... (= [7b])
b. [_{TP} [**Spanish or French**]_i [_{TP} Hanako [_{NegP} [_{VP} t_i V(speak)] Neg] T]] (= [8b])

References: Goro, T. 2007. *Language-specific constraints on scope interpretation in first language acquisition*. UMD diss.. Han, C.-H., D. R. Storošenko, and Y. Sakurai. 2004. Scope of negation and clause structure in Japanese. *Proceedings for Berkley Linguistics Society* 30, 118-129. Hoji, H. 1998. Null object and sloppy identity. *LI* 29, 127-152. Kuroda, S.-Y. 1965. *Generative grammatical studies of the Japanese language*. MIT diss.. Kuroda, S.-Y. 1988. Whether we agree or not. *Linguisticae Investigations* 1, 1-47. Oku, S. 1998. *A theory of selection and reconstruction in the minimalist program*. UConn diss.. Otani, K. & J. Whitman. 1991. V-raising and VP-ellipsis. *LI* 22: 345-358. Saito, M. 2009. Optional A-scrambling. In *Proceedings for JK* 16, 44-63. Takahashi, D. 2008a. Quantificational null objects and argument ellipsis. *LI* 39, 307-326. Takahashi, D. 2008b. Noun Phrase Ellipsis. In *The Oxford Handbook of Japanese Linguistics*, 394-422. Oxford University Press.