

Gapping in Japanese as Coordinate + Dependent Ellipsis

This paper proposes a new analysis of gapping in Japanese that draws on Williams' 1997 anaphoric theory of deletion. The analysis not only derives core properties of this construction noted by Jackendoff 1972, Kuno 1976, Sag 1976 and subsequent work but correctly predicts important characteristics of this construction that remain mysterious under previous accounts in terms of Right Node Raising/RNR (Saito 1987), LF Copy (Abe & Hoshi 1997), and PF String Deletion (Mukai 2003).

Gapping in Japanese, illustrated in (1), is best analyzed as the product of the Coordinate and Dependent Ellipsis within the anaphoric theory of deletion presented in Williams. According to this theory, a coordinate structure arises from the projection of a bivalent lexical item of the form $[X, X] P = XP$ and XP ; Gapping is an instance of projection of a bivalent item, one of whose heads is null, as in (1) (*Coordinate Ellipsis/CE*). The null head, in turn, licenses the (head of) the dependent to be null (*Dependent Ellipsis/DE*). The contrast between (2a) and (2b) shows that the indirect object in the gapped conjunct can be elided as long as CE has applied. Williams proposes the *Disanaphora Law*, which states that a null element in an incomplete clause must be *anaphoric* to the parallel element in the full conjunct whereas its overt counterpart must be *disanaphoric* in the same configuration. In (2a), the null indirect object must be anaphoric to the corresponding dependent of *gave* in the first conjunct. In (2c), which is minimally different from (2a) in that DE has not applied, *her* is *disanaphoric* to the corresponding dependent in the first conjunct. The CE + DE analysis derives core properties of gapping. First, it is known since Jackendoff that gapping is only found in parallel clauses connected by coordinate conjunctives. This is also true in Japanese, as in (3a, b), but it has received no attention in the literature. This characteristic follows as the natural consequence of the projection of a bivalent lexical item ($[0, X] P = 0P$ and XP). Second, Kuno and Sag noted that material left in the gapped conjunct must contribute new/contrastive information with respect to the correspondent in the full clause, which is also reflected by contrastive stress, as shown in (4a, b). This effect follows from the Disanaphora Law: a lexical element in a gapped clause, being *disanaphoric* to the corresponding dependent of the full clause, always contributes new/contrastive information.

More importantly, the proposed analysis yields correct predictions about gapping that cannot be made under earlier accounts of this construction. First, Saito 1987 argues that gapping in Japanese arises as the result of the RNRing the verb into the T. This analysis cannot account for the P-stranding pattern first noted by Abe and Hoshi 1997. (5a) shows that the P in the gapped clause, unlike that in the full clause, can be omitted. Saito incorrectly predicts that the P-drop in the gapped clause should be impossible since the P+N should not be able to undergo RNR, in violation of the constituency requirement on this operation, as illustrated in (5b). It also has nothing to say about why there is an asymmetry between the gapped and full conjunct in terms of P-drop. These observations are exactly what the proposed analysis predicts; the first head of the bivalent head is 0V: this null head, in turn, licenses the head of its dependent to be null via the application of DE, in the same way as in English gapping (5c). By contrast, the same P in the second conjunct cannot be dropped because there is no application of CE in this conjunct. Second, Abe & Hoshi propose an LF Copy account of gapping in Japanese that builds on the LF leftward movement of the remnants in a gapped conjunct and their correspondents in a full-fledged conjunct. Under their analysis, the P-less gapping construction in (5a) is analyzed as in (6a) under the assumption that P-stranding is tolerated at LF. In (6a), *ano riyuu* undergoes LF movement, leaving *de* 'for' behind, and adjoins to the I'. The lower I' in the second conjunct is then copied at LF onto that of the first conjunct designated here by *e*. A major problem with this analysis concerns subjacency. Under the assumption that not only syntactic movement but also LF movement obeys subjacency, Abe & Hoshi predict that gapping should show island effects. However, Mukai 2003 discusses data as in (6b) and reports that 37 out of her 43 native consultants judged this sentence acceptable. My analysis provides a natural explanation for the lack of subjacency violations here because the contrasted elements do not need to move at all either in syntax or at LF to be licensed as remnants of gapping. Mukai, in turn, proposes that gapping is derived by PF String Deletion that applies to a continuous phonetic string under PF identity, regardless of its syntactic constituency. Under this analysis, (6b) is analyzed as in (7a), in which the double struck-out portion of the first conjunct undergoes String Deletion under PF identity with the underlined portion of the second conjunct. This analysis not only accounts for the absence of subjacency effects but also for the optional P-drop pattern. This analysis, however, has two problems that are successfully resolved under the present analysis. First, it overgeneralizes in that it does not explain why gapping is found only in coordinate/parallel structures, as illustrated in (3a, b). This is a natural consequence of the proposed analysis that views gapping as the product of the bivalent lexical item, one of whose head remains unpronounced. Second, if PF identity were a sufficient condition for String Deletion, Mukai's analysis would wrongly predict that gapping involving homonyms such as *kumo* 'spider, cloud' yields four interpretations shown in (7b), only two of which are acceptable. By contrast, this constraint is what we expect under the Disanaphora Law, which requires that the elided element (*kumo*) in the gapped clause be anaphoric to its corresponding overt element in the full clause.

Our analysis derives not only core characteristics of gapping but also more subtle properties that are unpredictable under earlier analyses from general rules such as CE and DE. This analysis is successfully multi-modular, unlike earlier modular-specific analyses, in that the application of a syntactic rule (CE/DE) is not at random but closely tied with a particular semantic and phonological interpretation (focus, new information, anaphor, stress) along the lines of the Minimalist Program.

- (1) Takesi-ga zassi-o 0_V, (sosite) Kaori-ga hon-o katta.
 Takesi-Nom magazine-Acc and Kaori-Nom book-Acc bought
 ‘(Lit.) Takesi (bought) a magazine, and Kaori bought a book.’
- (2) a. John gave Mary a book today and 0_V 0_{NP} a record yesterday.
 b. * John gave Mary a book today and gave 0_{NP} a record yesterday.
 c. * John gave Mary_i a book today and 0_V her_i a record yesterday.
- (3) a. * Takesi-ga zassi-o 0_V kara, Kaori-ga hon-o katta.
 Takesi-Nom magazine-Acc because Kaori-Nom book-Acc bought
 ‘(Lit.) Because Takesi (bought) a magazine, Kaori bought a book.’
 b. ?* Takesi-ga zassi-o sikasi Kaori-ga hon-o katta.
 Takesi-Nom magazine-Acc but Kaori-Nom book-Acc bought
 ‘(Lit.) Takesi (bought) a magazine, but Kaori bought a book.’
- (4) a. * **Takesi-ga** zassi-o, (sosite) **Takesi-ga** hon-o katta.
 Takesi-Nom magazine-Acc and Takesi-Nom book-Acc bought
 ‘Lit. Takesi (bought) a magazine, and Takesi bought a book.’
 b. * Takesi-ga **zassi-o**, (sosite) Kaori-ga **zassi-o** katta.
 Takesi-Nom magazine-Acc and Kaori-Nom magazine-Acc bought
 ‘Lit. Takesi (bought) a magazine, and Kaori bought a magazine.’
- (5) a. John-ga kono riyuu(-**de**), sosite Mary-ga ano riyuu*(-**de**) kubininatta.
 John-Nom this reason-for and Mary-Nom that reason-for was-fired
 ‘(Lit.) John (was fired) this reason, and Mary was fired for that reason.’ (modified from Abe and Hoshi 1997: 112)
 b. * He tried to persuade, but he couldn’t convince, them that he was right. (Bresnan 1974: 615)
 c. John saw pictures of Mary on Tuesday and [0_V [_{PP} 0_N of Sue] on Wednesday] (Ackema and Szendrői 2002: 7).
- (6) a. [_{IP} John-ga [_Γ kon riyuu [_Γ e]]]] sosite
 [_{IP} Mary-ga [_Γ ano riyuu₁ [_Γ [_{PP} t₁-de] kubininatta]]]] **Copy at LF**
- b. *Mike-ga raion-ni, Tom-ga kuma-ni* osowareta otoko-o tasuketa.
 Mike-Nom lion-Dat Tom-Nom bear-Dat was attached man-Acc saved
 ‘Mike saved the man who was being attached by a lion, and Tom a bear.’ (Mukai 2003: 210)
- (7) a. 1st conjunct: Mike-ga raion-ni ~~osowareta otoko-o~~ tasuketa
 2nd conjunct Tom-ga kuma-ni osowareta otoko-o tasuketa
 b. John-ga Mary-ni, Bill-ga Susan-ni kumo-o miseta.
 John-Nom Mary-Dat Bill-Nom Susan-Dat spider/cloud-Acc showed
 ‘John showed Mary a spider/a cloud, and Bill showed Susan a spider/cloud.’
 → John showed Mary a spider, and Bill showed Susan a spider.
 → John showed Mary a cloud, and Bill showed Susan a cloud.
 → * John showed Mary a spider, and Bill showed Susan a cloud.
 → * John showed Mary a cloud, and Bill showed Susan a spider.

Selected References

- [1] Abe, J., and H. Hoshi. 1997. Gapping and P-stranding. *JEAL* 7. [2] Jackendoff, R. 1972. Gapping and related rules. *LI* 2. [3] Kuno, S. 1976. Gapping: A functional analysis. *LI* 7 [4] Mukai, E. 2003. On verbless conjunction in Japanese. *NELS* 33. [5] Sag, I. 1976. *Deletion and logical form*. Doctoral dissertation. MIT [6] Saito, M. 1987. Three notes on syntactic movement in Japanese. In: T. Imai & M. Saito (eds.) *Issues in Japanese Linguistics*. [7] Williams, E. 1997. Blocking and anaphora. *LI* 28.