

Squibs and Discussion

MULTIPLE NOMINATIVE
CONSTRUCTIONS IN JAPANESE
AND ECONOMY
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In a derivational theory of syntax, problems of choice arise when there are two or more potentially possible steps at a single stage of a derivation. Chomsky (1995, 2000) proposes that, if Attract/Move and Merge are both possible, Merge is chosen (*Merge-over-Move*). It is also assumed in the literature that, where there are two or more elements that can potentially be moved, the one closest to the target is moved (*Attract/Move Closest*). Discussing multiple-nominative constructions in Japanese, I argue that among the principles of this kind, there is one that minimizes the size of the element to be moved, and I show a new piece of evidence for Merge-over-Move.

A simple clause in Japanese can contain more than one nominative DP. Here, for simplicity, I consider only sentences with two nominative DPs, referring to them as the NDP₁ and the NDP₂. Multiple-nominative constructions (MNCs) are of at least two types: those that involve a relation of inalienable possession between the nominative DPs ((1), the MNC₁) and those that do not ((2), the MNC₂) (Takahashi 1994, Tateishi 1994).

- (1) a. Taro-ga te-ga naga-i.
TARO-NOM arm-NOM long-PRES
'Taro's arms are long.'
- b. Taro-ga mabuta-ga hare-ta.
TARO-NOM eyelid-NOM swell-PAST
'Taro's eyelids swelled.'
- c. Taro-ga imooto-ga byooki-de {nakunat-ta/sin-da}.
TARO-NOM sister-NOM illness-by {die-PAST/die-PAST}
'Taro's sister died of illness.'

Earlier versions of this squib were presented at a monthly meeting of the Tokyo English Linguistics Circle and at the 17th Pacific Asia Conference on Language, Information, and Computation. I am grateful to the audiences at these presentations—especially Akira Ikeya, Masaru Kajita, Koji Kamada, Yasuhiko Kato, and Takao Yagi—for their valuable comments. Anonymous *LJ* reviewers also provided a number of helpful and insightful comments on earlier drafts. In addition, I have benefited from discussing the subject matter of this squib with Ken-ichi Ariji and Jun Sasaki. The remaining inadequacies are my own.

- (2) a. Haru-ga tai-ga uma-i.
 spring-NOM sea bream-NOM tasty-PRES
 'Sea breams are tasty in spring.'
- b. Nihon-de itiban Tokyo-ga kootuu-jiko-ga
 Japan-LOC first Tokyo-NOM traffic accident-NOM
 oo-i.
 many-PRES
 'In Japan, traffic accidents most often occur in Tokyo.'
- c. Kono bangumi-ga yuumei-na haiyuu-ga yoku
 this program-NOM famous actor-NOM often
 shutuen-su-ru.
 appearance-do-PRES
 'Famous actors often make their appearances on this program.'

I assume that the MNC_1 is derived from a source in which the NDP_1 is contained in Spec,D of the NDP_2 , as the possessor of the latter, and that the MNC_2 is derived by inserting each NDP into a different position (Takahashi 1994, Tateishi 1994). I will make a specific proposal about the overt structure of both the MNC_1 and the MNC_2 , and I will consider why only the proposed structures can be derived, other possible options being blocked.

1 The MNC_1 and Attract/Move Smallest

1.1 The Positions of the Two $NDPs$

$NDPs$ in the MNC_1 have been shown to be subjects (Doron and Heycock 1999, Heycock 1993, Kuno 1978, Ura 1996). Here, I show a piece of evidence for this that has not been discussed in the literature. The subject of the matrix predicate can control the embedded *pro* while a genitive *DP* usually cannot (3a). In the MNC_1 , both the NDP_1 and the NDP_2 can do so, thus showing themselves to be subjects (3b–c).

- (3) a. [[Taro-no_i] musuko]-ga_j [[pro_{*i/j}]
 [Taro-GEN son]-NOM
 ryuugaku-si-tei-ru] aida-ni] sin-da.
 study abroad-do-ASP-PRES while die-PAST
 'Taro's son_j died while he_j was studying abroad.'
- b. Taro-ga_i musuko-ga_j fukoo-ni-mo [[pro_{?i/j}]
 Taro-NOM unfortunat ely
 ryuugaku-si-tei-ru] aida-ni] sin-da.
 'Unfortunately, Taro's_i son_j died while he_{i/j} was studying abroad.'
- c. Taro-ga_i fukoo-ni-mo [[pro_{i/j} ryuugaku-si-tei-ru] aida-ni] musuko-ga_j sin-da.¹

¹ One of the *LI* reviewers suggests that the choice of the controller in examples like (3a) is affected by pragmatic/discourse factors, referring to the following example:

Given the subjecthood of the NDPs, previous studies (Kuno 1978, Tateishi 1994, Ura 1996) propose that the NDPs are both immediately dominated by S or a projection of T/Agr. I make a different proposal: that only the NDP₁ overtly occupies Spec,T, while the NDP₂ overtly occupies the predicate-internal (subject) position (4).²

(4) [_T NDP₁-ga [_T[_{VP/AP} NDP₂-ga . . . V/A] T]]

The evidence for this comes from facts about VP-preposing and the predicate proform *soo*. In Japanese, a VP (or vP) can be preposed if it is followed by a focus particle and the light verb *suru* 'do' is inserted to support T (5b).

- (5) a. Taro-ga [_{VP} okasi-o tabe]-sae {su-ru/si-ta}.
 Taro-NOM sweets-ACC eat-even {do-PRES/do-PAST}
 'Taro even eats/ate sweets.'
 b. (?) [_{VP} Okasi-o tabe]-sae Taro-ga t_{VP} {su-ru/si-ta}.

VP-preposing is marginal when the subject left behind is not an agent (6). I refer to this as the Agent-Subject Constraint (Ohkado 1991).

- (6) ?? [_{VP} Eigo-ga hanas-e]-sae Taro-ga si-ta.
 English-NOM speak-can-even Taro-NOM do-PAST
 'Taro was even able to speak English.'

In the MNC₁, VP-preposing cannot leave behind the two NDPs, but it can marginally pied-pipe the NDP₂.

- (7) a. [_T[_{NDP₁} Taro]-ga [_T[_{VP}[_{NDP₂} imooto]-ga byooki-de
 Taro-NOM sister-NOM illness-by
 nakunari]-sae si-ta]].
 die-even do-PAST
 'Taro's sister even died of illness.'
 b. *Byooki-de nakunari-sae Taro-ga imooto-ga si-ta.
 c. ??Imooto-ga byooki-de nakunari-sae Taro-ga si-ta.

My proposal that the NDP₁ occupies Spec,T and the NDP₂ is in the predicate phrase (i.e., VP) correctly predicts the contrast between (7b) and (7c). Since the NDP₂ is contained in VP, VP-preposing cannot strand it (7b). Although (7b) violates the Agent-Subject Constraint, its complete unacceptability cannot be attributed solely to that con-

(i) [[Taro-no_i] musuko]-ga_j [[pro]_[i/j] ryuugaku-si-tei-ru] aida-ni sin-da
 node, Taro-wa_i ryuugaku-kara kaet-te-ki-ta.
 since Taro-TOP study abroad-from return-NONFINITE-COME-PAST
 'Since Taro's son died while Taro studied abroad, Taro came back in
 the middle of studying abroad.'

The reason why *Taro* can control the pro in (i) is that it is the subject of the matrix clause. In (3a), *Taro* simply is the possessor of the subject; it does not c-command the pro. For this reason, the predominant interpretation of (3a) is the one in which the entire matrix subject controls the embedded pro.

² Sakai (1994) suggests the same conclusion without showing evidence for it.

straint, as shown by the mild deviance of (6). The NDP_2 contained in VP can be pied-piped by VP-preposing (7c). The mild deviance of (7c) is due to the Agent-Subject Constraint, because the NDP_1 is the possessor of the NDP_2 but not an agent.

The proform *soo* 'so' (followed by the copula *da* if tense is required) can replace a predicate headed by an A ((8ai), (8bi)), an adjectival noun (AN) ((8aii), (8bii)), or a predicative N (8c). In (8a), *soo* replaces the A(N)P complement of the verb *naru* 'become'; in (8b–c), it replaces the A(N)P/NP complement of T.

- (8) a. Mary-ga [_{A(N)P} {i. *utukusi-ku/i. kirei-ni*}]_{-nat-ta},
 Mary-NOM {beautiful_A/beautiful_{AN}}-become-PAST
 dare-mo [[Mary-ga *soo-naru*] to] omow-anakat-ta-
 anyone Mary-NOM so-become C think-NEG-PAST-
 keredo.
 though
 'Mary became beautiful, although no one thought that she would.'
- b. Honto-wa Mary-ga {i. [_T[_{AP} *itiban utukusi*]-i]/ii.
 in fact Mary-NOM first beautiful_A-PRES
 [_T[_{ANP} *itiban kirei*]-da]}, dare-mo [[Mary-ga
 first beautiful_{AN}-COPULA anyone Mary-NOM
soo-da] to] omot-tei-na-i-keredo.
 SO-COPULA C think-ASP-NEG-PRES-though
 'In fact, Mary is the most beautiful, although no one thinks that she is.'
- c. Zitu-wa Mary-wa *gakusei-da*,
 in fact Mary-TOP student-COPULA
 dare-mo [Mary-ga *soo-da*] to] omot-tei-na-i-keredo.
 anyone
 'In fact, Mary is a student, although no one thinks that she is.'

In the MNC_1 , the replacement of AP by *soo* cannot strand the two $NDPs$ unless the NDP_2 is marked by a pitch rise (see footnote 3); but it is possible to strand the NDP_1 only.

- (9) Saikin-no choosa-ni yor-eba, [_{TP} dansei-ga
 recent research-DAT according male-NOM
 [_{AP} jumyoo-ga naga]-i] rasi-i-ga ...
 life span-NOM long-PRES seem-PRES-though
 'Although recent research says that males' life span is long ...'
 a. ?*... [[dansei-ga jumyoo-ga *soo-da*] to] dare-mo
 SO-COPULA C anyone
 omot-tei-nakat-ta.
 think-ASP-NEG-PAST
 '... no one thought that males' life span is so.'
 b. ... [[dansei-ga *soo-da*] to] dare-mo omot-tei-nakat-ta.

The contrast between (9a) and (9b) supports my analysis, under which only the NDP_1 is overtly moved to Spec,T and the NDP_2 is in the predicate phrase: *soo* must replace the entire AP containing the NDP_2 .³

Assuming a split-I analysis where TP dominates $Agr_S P$, Tateishi (1994:190–191) suggests that the NDP_1 in the MNC_1 can be overtly moved to Spec,T through an adjoined position (or a specifier position) of $Agr_S P$ and that the NDP_2 occupies an adjoined position (or a specifier position) of $Agr_S P$, as shown in (10).

$$(10) [TP NDP_1\text{-ga} [T' [Agr_S P \text{ } t_{NDP_1} [Agr_S P/Agr_S' [NDP_2 \text{ } t_{NDP_1} ND']\text{-ga} [Agr_S' [VP/A(N)P \text{ } t_{NDP_2} \dots V/A(N)] Agr_S]]] T]]$$

³ Three remarks are in order here.

First, examples like (9a) become acceptable if the NDP_2 is focused and/or marked by a pitch rise (i). Given Takezawa and Whitman's (1998:142) observation that focusing in general affects constituency, this can be explained if a focused element is moved to a clause-internal focus position (Yanagida 1996).

- (i) Taro-ga te-ga naga-i.
 Taro-NOM arm-NOM long-PRES
 Jiro- $\{wa/?ga\}$ $\{asi/ASI\}$ -ga soo-da.
 Jiro- $\{TOP/NOM\}$ leg-NOM so-COPULA
 'Taro's arms are long. Jiro's legs are long.'

Second, one of the *LI* reviewers points out that *soo* can replace phrasal categories other than A(N)P/NP. In fact, it can replace the embedded clause in (9).

- (ii) ... dare-mo soo omot-tei-nakat-ta.
 anyone so think-ASP-NEG-PAST
 '... no one thought so.'

The absence of the tensed copula in (ii) suggests that the entire embedded CP is replaced by *soo*. This does not undermine my argument, although I cannot specify exactly what categories can be replaced by *soo*. Given the analysis of small clauses by Kikuchi and Takahashi (1991), (8a) clearly shows that an A(N)P can be replaced by *soo*. (9a) shows that, even when *soo*-replacement is applied to the predicate AP in the MNC_1 , it cannot strand the NDP_2 . The NDP_2 is thus predicate-internal.

Similarly, as another *LI* reviewer suggests, *soo* followed by the copula and the complementizer can appear in (9) without being preceded by any NDP.

- (iii) [soo-da to] dare-mo omot-tei-nakat-ta
 so-COPULA C anyone think-ASP-NEG-PAST

(iii) can be analyzed in either of the following ways: *soo-da* as a whole replaces the entire embedded TP; *soo* replaces the embedded AP and a *pro* appears as the NDP_1 . Although I leave open the question of which of these is adequate, the grammaticality of (iii) does not affect the argument in the text.

Third, my claim that the NDP_2 occupies its predicate-internal position suggests that the structure of an MNC_1 sentence is similar to that of a sentence like (iv), in which the object of a stative predicate is nominative-marked.

- (iv) Taro-ga eigo-ga $\{deki\text{-ru/uma-i}\}$.
 Taro-NOM English-NOM $\{can\text{-PRES/good-PRES}\}$
 'Taro $\{can\text{ use/is good at}\}$ English.'

That the nominative object in (iv) is contained in the predicate phrase is shown by the fact that its case marker can be dropped (va) (Takezawa 1987). The

A noun phrase (DP₁ in (14a)) contained in a genitive possessor (DP₂) cannot be coreferential with the entire *possessum* noun phrase (DP₃). The ungrammaticality of (14a) under coindexation of DP₁ and DP₃ can be explained by the *i*-within-*i* Condition (Chomsky 1981:212), because the DP₃ dominates the DP₁. With this in mind, consider (14b), in which DP₂ and DP₃ in (14a) appear as the NDP₁ and the NDP₂, respectively, in the MNC₁. In (14b) also, DP₁ and DP₃ cannot be coreferential. This can be explained by the *i*-within-*i* Condition with recourse to the claim that the NDP₁ in the MNC₁ was dominated by the NDP₂ at early stages of the derivation.

My observations partially fall into place in the following way: (a) the entire NDP₂, the thematic subject, is merged into the predicate-internal subject position; (b) the NDP₁ is overtly moved to Spec,T to satisfy the EPP requirement (15); (c) the NDP₂ overtly remains in situ, because the EPP has already been satisfied.⁵

$$(15) [{}_{\text{T}}\text{NDP}_1 [{}_{\text{T}}[{}_{\text{XP}}[{}_{\text{NDP}_2} \text{t}_{\text{NDP}_1} [{}_{\text{ND}'_2} \dots]] \dots \text{X}] \text{T}]$$

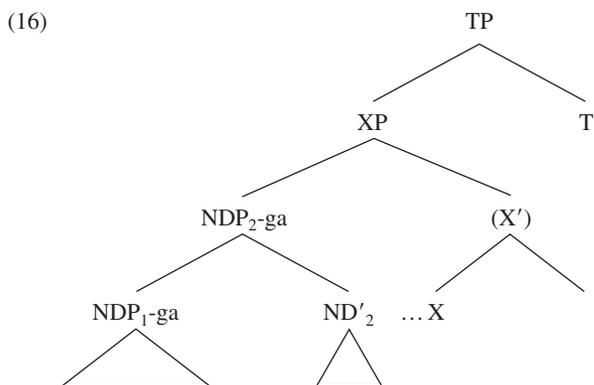
What remains unanswered is the following question: why is overt movement of the entire NDP₂ containing the NDP₁ impossible? Since the entire NDP₂ can satisfy the EPP, there is no reason that it must be blocked. What is responsible for this choice?

1.3 Attract/Move Smallest

The above question is an instance of a more general one. The MNC₁ is a specific case of the general situation where there are two or more elements that can be moved for the same reason at a single stage of a derivation. It is well known that in many such cases, choices are made by Attract/Move Closest (Chomsky 1995). Is that principle responsible for the preference for movement of the NDP₁ in the MNC₁ (16)?

⁵ I propose that the NDP₂ is covertly moved, for Case reasons, to Spec,T (the inner Spec,T under Richards's (1999) analysis of multiple specifiers). The evidence for this comes from the relative scope of the NDP₂ and sentential negation. Most negative sentences in Japanese are marked by the negative marker (*ana*(*k*), which immediately follows a V or an A and immediately precedes the tense ending. This suggests that the negative marker selects a VP or an AP and heads a NegP projection selected by T (i). Suppose that, if A asymmetrically c-commands B, A takes scope over B in the predominant reading. Because the NDP₂ is covertly moved to Spec,T, where it asymmetrically c-commands Neg, it is predicted to take scope over negation in the predominant reading. In (ii), the reading in which the NDP₂ takes scope over negation is salient.

- (i) [_{TP} . . . [_{NegP} . . . [_{VP/AP} . . . V/A] (*ana*(*k*))] {*i*/atta}]
 (ii) Taro-ga [subete-no yubi]-ga Ziro-yori nagaku-na-i.
 Taro-NOM [all-GEN finger]-NOM Ziro-than long-NEG-PRES
 'All Taro's fingers are not longer than Ziro's fingers.'



Under the definitions of *closer* that have been proposed, in order for A to be closer to the target than B, A must (asymmetrically) c-command B (Chomsky 1995, 2000). Since the NDP₁ is dominated by the NDP₂ in (16), neither of them c-commands the other. Therefore, Attract/Move Closest cannot block the movement of the NDP₂ in (16). Then what makes the decision?

An answer comes from the fact that, other things being equal, natural languages tend to minimize moved elements (Bošković 1997, Stateva 2002). I assume that Universal Grammar contains the local economy principle (17) and that *smaller* is defined as in (18).

(17) *Attract/Move Smallest (A/MS)*

A target T can attract α if there is no β , β smaller than α , such that T attracts β .

(18) β is smaller than α , if α contains β . (Stateva 2002)

When there are two or more elements that can potentially be moved for feature checking, and one of them is contained in the other(s) and is, in this sense, smaller than the other(s), A/MS chooses the movement of the smaller/smallest element. In the underlying structure of the MNC₁ (16), the NDP₁ is contained in the NDP₂ and in this sense is smaller than the NDP₂. Therefore, A/MS chooses the movement of the NDP₁.⁶

⁶ The fact that the NDP₁ in the MNC₁ can be associated only with the subject can be explained if Attract/Move Closest is taken into consideration. The possessor contained in the direct or indirect object cannot be attracted by T, even if it is nominative-marked, because it is asymmetrically c-commanded by the subject (i).

(i) [_T[_{vP/VP} Subj ... [_{Obj} Possessor ...] ... v/V] T]

I would speculate that every application of Attract/Move must satisfy both Attract/Move Closest and A/MS (Akiyama, forthcoming). The movement of the possessor to Spec,T in (i) will satisfy A/MS if it does not contain any element that can be attracted by T. However, it violates Attract/Move Closest, because the subject is closer to T. In usual cases of the MNC₁, movement of the NDP₁ from within the subject NDP₂ does not violate Attract/Move Closest, because there is no c-command relation between them.

2 The MNC₂ and Merge-over-Move

Let us finally turn to the MNC₂. I assume that the NDP₁ and the NDP₂ in the MNC₂ are each inserted into different syntactic positions. In some cases, the NDP₂ in the MNC₂ can be moved by short-distance scrambling (19). This shows that, unlike the NDP in the MNC₁ in (11a) and (12a), the NDP₂ in the MNC₂ does not contain the trace of the A-moved NDP₁.⁷

- (19) a. Tai-ga haru-ga uma-i. (cf. (2a))
 b. ?Kootuu-jiko-ga Tokyo-ga oo-i. (cf. (2b))

I propose that, in the MNC₂ also, the NDP₁ is in Spec,T while the NDP₂ is in the predicate-internal (subject) position (20). The evidence for this comes again from facts about VP-preposing and *soo*-replacement.

- (20) [_{T'} NDP₁-ga [_{T'} [_{VP/AP} NDP₂-ga . . . V/A] T]]

First, consider the examples in (21).

- (21) a. ?[_{TP} Kono bangumi-ga [_{T'} [_{VP} yuumei-na
 this program-NOM famous-COPULA
 haiyuu-ga yoku shutuen-si]-sae su-ru]].
 actor-NOM often appearance-do-even do-PRES
 'Even famous actors often make their appearances on
 this program.'
 b. ?*Yoku shutuen-si-sae kono-bangumi-ga yuumei-na hai-
 yuu-ga su-ru.
 c. ??Yuumei-na haiyuu-ga yoku shutuen-si sae kono ban-
 gumi-ga su-ru.

VP-preposing cannot leave behind both NDPs (21b), whereas it can marginally pied-pipe the NDP₂ (21c). The mild deviance of (21c) is due to the Agent-Subject Constraint. My proposal that the NDP₂ in the MNC₂ is overtly predicate-internal (i.e., contained in VP) correctly predicts the ungrammaticality of (21b). Because the subject of the verb *shutuen-suru* 'make one's appearance' is agentive, the complete ungrammaticality of (21b) is not due to the Agent-Subject Constraint.

⁷ One *LI* reviewer poses the question whether sentences like (ia), where the NDP₁ is a locative phrase and the NDP₂ is a theme, should be analyzed as an instance of the MNC₁. I consider that (ia) is instead an instance of the MNC₂, in which the NDP₂ does not contain the trace of the NDP₁. Evidence for this view comes from the fact that, in (ib), short-distance scrambling of the NDP₂ is more acceptable than in MNC₁ sentences like (11a) and (12a).

- (i) a. Nyuu-yooku-ga koosoo-kentiku-ga oo-i.
 New York-NOM tall building-NOM many-PRES
 'There are many tall buildings in New York.'
 b. ?Kosoo-kentiku-ga Nyuu-yooku-ga oo-i.

Second, consider the examples in (22).

- (22) Nihon-de-wa Tokyo-ga kootuu-jiko-ga oo-i
 Japan-LOC-TOP Tokyo-NOM traffic accident-NOM many-PRES
 rasi-i-ga . . .
 seem-PRES-though
 ‘Although I heard that in Japan traffic accidents often occur
 in Tokyo . . .’
- a. * . . [Tokyo-ga kootuu-jiko-ga soo-da to] dare-mo
 SO-COPULA C anyone
 omot-tei-nakat-ta.
 think-ASP-NEG-PAST
- b. . . [Tokyo-ga soo-da to] dare-mo omot-tei-nakat-ta.
 ‘ . . . no one thought that traffic accidents most often
 occur in Tokyo.’

Soo-replacement cannot strand the two NDPs (22a), whereas it is possible to strand the NDP₁ only (22b). The proposal that the NDP₂ in the MNC₂ is contained in the predicate phrase (AP) and the NDP₁ occupies Spec,T correctly explains this contrast.

Let us consider the derivation of the MNC₂. Because the NDP₂ is the (external) argument of the predicate, it is merged in the predicate-internal position (23). The NDP₁ is formed by Merge independently of (23). After T is introduced, the EPP must be satisfied. There are two options that meet this requirement: the movement of the NDP₂ (24a) (which will be followed by the insertion of the NDP₁), and the insertion of the NDP₁ (24b). (21) and (22) show that (24b) is chosen. But why is the movement of the NDP₂ prohibited? An answer comes from Merge-over-Move: Attract/Move is blocked in favor of Merge.

- (23) [_{AP}[_{NDP₂} kootuu-jiko]-ga . . . oo]
- (24) a. [_{T'}[_{NDP₂} kootuu-jiko]-ga [_{T'}[_{AP} t_{NDP₂} . . . oo] i]]
 b. [_{T'}[_{NDP₁} Tokyo]-ga [_{T'}[_{AP}[_{NDP₂} kootuu-jiko]-ga . . . oo]
 i]]

3 Conclusion

I have considered two types of multiple-nominative constructions in Japanese. In both, only the NDP₁ is overtly located in Spec,T and the NDP₂ is predicate-internal. This asymmetry is attributed to A/MS (17) in the MNC₁ and to Merge-over-Move in the MNC₂. Thus, I (a) have proposed that A/MS is a member of the set of principles that choose among the possible steps at a single derivational stage and (b) have shown further evidence for Merge-over-Move.⁸

⁸ Some questions arise about A/MS: its interaction with Attract/Move Closest remains largely unclear in the present squib; it is unclear whether it can cope with the optionality of pied-piping (e.g., in *wh*-movement); and so on. However, I leave these questions open here. See footnote 6 and Akiyama, forthcoming.

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SEMILINEARITY IS A SYNTACTIC
INVARIANT: A REPLY TO
MICHAELIS AND KRACHT 1997
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1 Introduction

How fast do sentences of a language grow? If we arrange the sentences of a language in order of increasing length, then how rapidly can the sentence lengths grow? One simple hypothesis is that the growth is bounded by a constant; that is, for all i , $|S_{i+1}| - |S_i|$ is bounded by a constant, say, C , where $|S_k|$ is the length of the sentence S_k . The basic intuition is that a sentence of length l can be lengthened by some fixed set of lengths corresponding to the lengths of minimal clauses or phrases, whose lengths are bounded. This is the constant growth property (CGP) that Joshi (1985) first proposed in his paper on the amount of context-sensitivity needed for sentence description. In that paper, Joshi proposed the CGP as one of the properties that the class of grammars adequate for natural languages should possess, along with some other properties, which together led to his characterization of the class of mildly context-sensitive languages (grammars). Here, we are only interested in the CGP. The CGP is a weaker case of the well-known semilinearity property (SP) that holds for context-free languages.¹ The SP requires the length of a sentence to be a linear combination of some fixed set of lengths. (Although Michaelis and Kracht refer to the SP in the paper we will be discussing (Michaelis and Kracht 1997), they are really arguing against the CGP. Neverthe-

¹ The SP holds for the languages generated by tree-adjoining grammars (TAG), certain versions of combinatory categorial grammars (CCG), head grammars (HG) (Joshi, Vijay-Shanker, and Weir 1991), Stabler's (1997) version of minimalist grammars (Michaelis 2001), and Frank's TAG formulation of minimalist grammars (Frank 2002)