WANNA-CONTRACTION AND VERB INCORPORATION

Hisao Tokizaki

0. Introduction

The purpose of this article is to explore the hypothesis that wanna-contraction can occur only if abstract Verb Incorporation, in the sense of Baker 1988, applies to make want govern to. In section 1, I review Goodall's 1991 argument that the government condition on contraction, proposed by Aoun and Lightfoot 1984, has a problem in the framework of Chomsky 1986b. In section 2, I give a solution to this problem on the assumption that want triggers the abstract Verb Incorporation. Section 3 shows that this analysis explains the unacceptable cases of contraction in terms of government theory and the empty category principle (ECP). In section 4, I argue that the adjacency condition on contraction is reducible to the ECP and case theory, and that it is not necessary to stipulate the visibility of case-marked elements (cf. Jaeggli 1980 and Chomsky 1981).*

1. A problem of government condition

Let us consider the following examples by Postal and Pullum 1982, where wanna-contraction of italicized want to is impossible:

(1) a. I don't want to flagellate oneself in public to become standard practice in this monastery.
    b. It seems like to want to regret that one does not have.
c. I don’t want anyone who continues to want to stop wanting.

d. One must want (in order) to become an effective overconsumer.

Aoun and Lightfoot 1984 argues that in these examples want does not govern to, and they propose the government condition on contraction to the effect that to may adjoin to want only if governed by want.\(^1\) Goodall 1991, however, argues that, given the framework of Chomsky 1986b, the government condition is untenable (cf. also Postal and Pullum 1986). Consider the following sentence in which contraction can occur:

\[(2) \quad a. \quad \text{I want to meet Bill.} \]

Here, as Goodall 1991 argues, minimality prevents government of to by want, because of the intervening governor C. He also argues that this must be the case, or else want governs PRO: this is an undesirable consequence. In the next section, I will give a solution to this problem, which is based on the incorporation theory of Baker 1988, and will show that want governs to in the appropriate S-structure of (2a).
2. *Want* as a 'reanalyzer'

Baker 1988 argues that a type of verb incorporation (his Rule 3) can be analyzed as the result of VP-to-Comp movement plus incorporation:

(3) a. *Ndī-ka-pemp-a pamanga.*
   lsS-go-beg-ASP maize
   'I am going to beg maize.' (Chichewa)

b. 

Here, first the VP 'beg maize' moves to the specifier of C' position (i.e., Comp), and then the verb 'beg' incorporates into the matrix verb 'go'. Baker illustrates this type of incorporation with the examples from various languages:

(4) a. *Kuttikkā uraŋŋ-aŋam.*
   child-DAT sleep-want
   'The child wants to sleep.' (Malayalam)

   man-ERG woman (ABS) see-want-3sS/3sO
   'The man wants to see the woman.' (Labrador Inuttut Eskimo)
c. *Li ho voluto leggere e.*

them have **wanted** read

'I have wanted to read them.'  

(I Italian)

Each of these examples has an equivalent verb of *want*. Note that 'want' and the lower verb become a single word morphologically in (4a) and (4b), but not in (4c). Baker 1988, however, claims that Romance causatives are cases of 'incorporation' without the incorporation, and that this abstract Incorporation (Reanalysis) is the process that can coindex two lexical nodes if and only if the first governs the second. Thus, we can say that *volere* in (4c) is a 'reanalyzer' which triggers VP-to-Comp movement and coindexing with the lower verb under government.

Let us assume here that English *want* is also a 'reanalyzer' and triggers VP-to-Comp movement plus abstract Verb Incorporation (Reanalysis). I adopt the clause structure of Chomsky 1989, in which 'Infl' is decomposed into Agr-S (I) and F (±finite). I also assume that the infinitival *to* is a [−finite] element, the head of FP, and that FP instead of VP moves to the specifier of C' position (i.e., Comp) in the embedded clause. After this FP-to-Comp movement applies, the lower verb abstractly incorporates first into the F *to* and then into the matrix *want*. The following shows this Reanalysis process:
Intuitively, in (5b), the matrix verb *want* forms ‘complex semantic predicates’ with the infinitival *to* and the lower verb (cf. Baker 1988).

Let us now make sure that (5b) is a legitimate S-structure. Baker 1988 defines *c-command*, *government*, *barrier* and *distinctness* as in (6)-(9), respectively:

(6) A c-commands B iff A does not dominate B and for every maximal projection C, if C dominates A then C dominates B.

(7) A governs B iff A c-commands B and there is no category C such that C is a barrier between A and B.

(8) Let D be the smallest maximal projection containing A. Then C is a barrier between A and B if and only if C is a maximal projection that contains B and excludes A, and either:
   (i) C is not selected, or
   (ii) the head of C is distinct from the head of D and selects some WP equal to or containing B.
(9) X is distinct from Y only if no part of Y is a member of a (movement) chain containing X.

Since we have been assuming the clause structure of Chomsky 1989, we should slightly revise Baker's definition of selection to (10):\(^4\)

(10) A selects B if and only if:
   (i) A assigns a theta role to B, or
   (ii) A is of category C and B is its IP, or
   (iii) A is of category I and B is its FP, or
   (iv) A is of category F and B is its VP.

With these definitions in mind, let us first make sure that the matrix want governs to in the S-structure (5b). Neither the embedded CP nor the FP in Comp is an adjunct barrier (8i) between want and to, because they are selected by the matrix V and the embedded I, respectively (cf. Baker 1988). Clearly, neither the CP nor the FP is a minimality barrier (8ii). Thus, the government relation holds between want and to. Similarly, to governs the lower verb in (5b). The VP dominated by FP is neither an adjunct barrier nor a minimality barrier, given the definitions of barrier (8) and selection (10). Thus, the abstract incorporation of the lower verb first into to and then into want is legitimate.\(^5\)

To sum up, want does not govern to in (2b) or the D-structure of (5a) because the minimality barrier intervenes, but it does in the S-structure (5b) after FP-to-Comp movement applied. In other words, the government condition predicts that contraction can occur only if the abstract Verb Incorporation has occurred.\(^6\) In this way, we can give a solution to the problem reviewed in section 1. For completeness, (11) makes explicit the Wanna-Contraction which I have been assuming:
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(11) want to $\rightarrow$ wanna
only if want governs to.

Note here that this PF rule is defined as optional, as the condition 'only if' indicates. Thus, want to need not be contracted into wanna even when the abstract Verb Incorporation has applied.^

3. Unacceptable contractions

I have argued so far that want is a trigger of abstract Verb Incorporation, and that we can maintain the government condition in our incorporation analysis of contraction. In this section, I show that our analysis naturally explains three cases of unacceptable contraction. First, let us reconsider the examples (1). Suppose that FP-to-Comp movement occurs in these sentences, we have the following S-structures:

(12) a. I don't [\textit{vp} want [\textit{cp} C [\textit{ip} [\textit{cp} [\textit{fpi} to flagellate oneself in public] C [\textit{ip} PRO I t_1]]] I [\textit{fp} to become standard practice in this monastery]]]]

b. It seems like to [\textit{vp} want] [\textit{cp} [\textit{fpi} to regret that one does not have] C [\textit{ip} PRO I t_1]]

c. I don't want anyone who continues to [\textit{vp} want] [\textit{cp} [\textit{fpi} to stop wanting] C [\textit{ip} PRO I t_1]]

d. One must [\textit{vp} want] [\textit{cp} [\textit{fpi} to become an effective overconsumer] C [\textit{ip} PRO I t_1]]

In (12a), the higher CP is a minimality barrier between want and to, since the distinct head C intervenes.^
In (12b-d), the VP prevents the italicized want from c-commanding to. Then, want does not govern to in all cases of (12), so neither the abstract incorporation (i.e., coindexing) nor Wanna-
Contraction can apply to (12).

One might argue that there is another possibility: in (12), if the lower verb incorporates first into F to and then into the matrix want in syntax, then we have the following S-structures:

\[(13)\]
\[
a. \ldots [\text{vp} \ [v \ \text{want} \ [\text{fjk} \ \text{to}_j \ \text{flagellate}_k]]] \ [\text{cp} \ [\text{c} \ [\text{ip} \ [\text{cp} \ [\text{fpi} \ \text{t}_j \ [\text{vp} \ \text{t}_k \ldots] \ldots \text{t}_i] \ldots]]]]
\]
\[
b. \ldots [\text{vp} \ [v \ \text{want} \ [\text{fjk} \ \text{to}_j \ \text{regret}_k]]] \ [\text{cp} \ [\text{fpi} \ \text{t}_j \ [\text{vp} \ \text{t}_k \ldots] \ldots \text{t}_i]]
\]
\[
c. \ldots [\text{vp} \ [v \ \text{want} \ [\text{fjk} \ \text{to}_j \ \text{stop}_k]]] \ [\text{cp} \ [\text{fpi} \ \text{t}_j \ [\text{vp} \ \text{t}_k \ldots] \ldots \text{t}_i]]
\]
\[
d. \ldots [\text{vp} \ [v \ \text{want} \ [\text{fjk} \ \text{to}_j \ \text{become}_k]]] \ [\text{cp} \ [\text{fpi} \ \text{t}_j \ [\text{vp} \ \text{t}_k \ldots] \ldots \text{t}_i]]
\]

Here, want governs to, and Wanna-Contraction (11) can apply. This derivation, however, violates the empty category principle (ECP), since \( t_j \) can not be properly governed by the antecedent \( F_{jk} \); in (13a) the higher CP is a minimality barrier, and in (13b–d) the matrix VP blocks c-command, as we saw in (12). In this way we can rule out the contracted forms of 1 in terms of the ECP, an independent principle.

Second, wanna-contraction is impossible in case of the noun want, as in 14, cited from Postal and Pulman 1982 and Goodall 1991:

\[(14)\]
\[
a. \text{We cannot expect [np that want] to be satisfied.}
\]
\[
b. \ [\text{np} \ \text{The want to eat}] \ is felt by all.
\]

In (14a), as Aoun and Lightfoot 1984 argues, want does not c-command to, so the government relation does not hold. In (14b), want does not govern to at D-structure (15a), but it does at S-structure (15b) if FP-to-Comp movement applies:

\[(15)\]
\[
a. \ [\text{np} \ \text{The want [cp c [ip pro [i, i [fpi to eat]]]]}]]
\]
\[
b. \ [\text{np} \ \text{The want [cp [fpi to eat] c [ip pro [i, i t_i]]]}]
\]
It seems reasonable, however, to assume that the noun want, unlike the verb want, does not trigger the abstract Verb Incorporation. The noun want is not a 'reanalyzer', so FP-to-Comp movement can not apply to derive (15b), given that movement is a last resort along with the least effort guideline of Chomsky 1989. Thus, want does not govern to in (14b), as well as in (14a). The government condition in (11) correctly predicts the impossibility of contraction in these sentences.

Third, Postal and Pullum 1982 point out that contraction is impossible in coordinate structures:¹⁰

(16)  a. I want to dance and to sing.
    b. I don’t need or want to hear about it.

In (16a), FP-to-Comp movement can apply either to the whole FP or to a conjunct FP to give (17a) and (17b), respectively:

(17)  a. I [\textit{vp want} [\textit{cp [\textit{fp to dance} and \textit{fp to sing}]}] \textit{cp} [\textit{ip \textit{pro i t}_i]}]

    b. I [\textit{vp want} [\textit{cp [\textit{fp to dance} \textit{cp \textit{ip \textit{pro i f_p t}_i and \textit{fp to sing}}]}] \textit{cp} [\textit{ip \textit{pro i t}_i}]]]

In (17a) and (17b), the embedded I selects the whole FP, but not the conjunct FPs. Thus, the conjunct FP immediately dominating the italicized to is an adjunct barrier, and blocks the government of to by want. In (16b), on the other hand, if FP-to-Comp movement applies, want governs to, as shown in (18):

(18) I don’t [\textit{vp [v [v need] or [v want]] [cp [fp to hear about it] \textit{cp} [\textit{ip \textit{pro i t}_i}}]]
Our analysis, then, predicts that contraction can occur in (16b) and not in (16a). In fact, Aoun and Lightfoot 1984 note that the contracted form of (16b) might occur in their dialects and elsewhere. Alternatively, we can argue that, in (18), want does not govern to and contraction is unacceptable, if we adopt not (6), but another definition of c-command in which all categories that contain the 'commander' must also contain the 'commandee'. With this definition, in (18), want does not c-command to because of the V node domination conjuncts. Since the acceptability judgement is not so clear, however, I will leave the matter open.

Thus, given the Incorporation analysis, we can naturally explain unacceptable contractions in (1), (14), and (16) in terms of the government condition in rule (11) together with the ECP.

4. On the adjacency condition and the visibility hypothesis

Let us now turn to the fundamental problem of the contraction debate. Why is wanna permitted in (19a), but not in (19b)?

(19)  a. Who do you wanna meet?
   b. *Who do you wanna meet Bill?

Before answering this question, let us first consider the possibility of contraction in the following examples, which are parallel to (19) but have no who:¹¹

(20)  a. I want [PRO to meet Bill]  (=2a)
   b. I want [(for) Mary to meet Bill]

In order for Wanna-contraction (11) to apply to (20), FP-to-Comp movement has to apply so that want governs to. Then we have the S-structures (21a) and (21b), and the PF representations (22a) and (22b), respectively:
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(21) a. I want_{j [CP [_{FP1 to_j meet_j Bill} [C. C [_{IP PRO [I, I t_i]]]]] \ (\sim 5b)}
   
   b. *I want_{j [CP [_{FP1 to_j meet_j Bill} [C. for [_{IP Mary [I, I t_i]]]]]}

(22) a. I wanna meet Bill
   
   b. *I wanna meet Bill (for) Mary

Clearly, it is the FP-to-Comp movement that makes (21b) and (22b) unacceptable. What then prevents the movement from applying to (20b) to give (21b)?

As I mentioned in note 5, I assume that in (21a) I moves to C at LF so that the embedded IP is not a barrier between FP and its trace. If this is the case, then we may attribute the unacceptability of (21b) to the failure of I-to-C movement. Let us assume here that I-to-C movement applies only if C has no overt element, as in (21a). Then, in (21b), where C has an overt complementizer *for, I-to-C movement can not apply, and the trace of FP, t_i, violates the ECP because the embedded IP is a barrier.\(^{12}\)

Let us consider the other case in (20b). If the complementizer *for is not present at D-structure and S-structure, we have (23) after FP-to-Comp movement applied:

(23) I want_{j [CP [_{FP1 to_j meet_j Bill} [C. C [_{IP Mary [I, I t_i]]]]]}

Here, I-to-C movement can apply, and, since the embedded IP is no longer a barrier, FP-to-Comp movement is possible. In this case, however, the embedded subject Mary can not receive Case. The matrix verb want does not govern it, and the lower verb meet assigns Case only to the embedded object Bill. Thus, (23) is ruled out by case theory.

I have shown so far that (21b) and (23), which are the possible input to Wanna-Contraction (11), are ruled out by the ECP and case theory, respectively. Again, the rule (11) can not apply directly to (20b), rather
than (21b) and (23), because (20b) does not satisfy the government condition in (11). On the other hand, (11) may apply to (21a), derived from (20a), to give (22a).

Now return to the question put at the beginning of this section: why is wanna permitted in (19a), but not in (19b)? (19a) can be derived from (20a) with who in place of Bill. The derivation is shown in (24):

(24)  a. I want [PRO to meet who]
     b. Who\(_k\) do you want\(_j\) [\(\text{CP} \ [\text{FP}\_i \ \text{to}\_j \ \text{meet}\_j \ t_k]\) [c. C [\(\text{IP} \ \text{PRO} \ [i. \ I t_i]\)]]]
     c. Who do you wanna meet \(=19a\)

On the other hand, (19b) could be derived from (20b) with who in place of Mary, if the derivation did not violate any principles:

(25)  a. I want [(for) who to meet Bill]
     b. *Who\(_k\) do you want\(_j\) [\(\text{CP} \ [\text{FP}\_i \ \text{to}\_j \ \text{meet}\_j \ \text{Bill}]\) [c. (for) [\(\text{IP} \ t_k \ [i. \ I t_i]\)]]]
     c. *Who do you wanna meet Bill \(=19b\)

In (25b), however, \(t_i\) violates the ECP as in (21b) if for is present, or the variable \(t_k\) can not receive Case as in (23) if it is not.\(^{13}\) Thus, we conclude that the unacceptability of (19b) is due to the violation of the ECP or case theory, and not of the adjacency condition to the effect that want and to may be contracted only if they are not separated by any Case-marked elements, i.e., overt NPs and variables (cf. Jaeggli 1980 and Chomsky 1981).

It is important to note that in this incorporation analysis all empty categories are irrelevant to Wanna-Contraction (11). That is, in the S-structures (24b) and (25b), want and to are strictly adjacent with no empty categories (PRO, variable and non-Case-marked trace) intervening between
WANNA-CONTRACTION AND VERB INCORPORATION (Hisao Tokizaki) them. Thus, we might maintain either that all empty categories are 'visible' to Wanna-Contraction (cf. Pesetsky 1982), or that only Case-marked elements are 'visible' to it (cf. Chomsky 1981). The optimal hypothesis that we can make in this analysis, however, is that all empty categories are 'invisible' to all rules in PF, because they have no phonological features and are 'empty' in an intuitive sense. This hypothesis can be supported by Nespor and Scorretti's 1984 argument that empty categories have no effect on the various PF rules including Wanna-Contraction.

Finally, let us consider here the problem of liberal dialects in which (19b), as well as (19a), is acceptable. Nespor and Scorretti 1984 suggest that Wanna-Contraction in these dialects does not require restructuring, or abstract Verb Incorporation in our terms. If this suggestion is on the right track, we can say that these dialects have Wanna-Contraction (11) without the government condition. Then, this rule may apply to the S-structure without FP-to-Comp movement as in (26a), where want and to are not in the government relation, giving (26b):

(26) a. Who$_i$ do you want [$_{CP}$ t$_i$ C [$_{IP}$ t$_i$ I [$_{FP}$ to meet Bill]]]

   b. Who do you wanna meet Bill?

In (26b), want and to are separated by a non-Case-marked trace and a variable. Then, empty categories must be 'invisible' to Wanna-Contraction at least in these dialects. Again, the optimal hypothesis is that all empty categories are 'invisible' to all PF rules in all dialects. The dialectal variation between (19b) and (26b) is due to the presence or absence of the government condition in Wanna-Contraction (11).

If this line of consideration is on the right track, we need not, or should not, stipulate the visibility of Case-marked trace at PF and the adjacency condition on Wanna-Contraction.
5. Conclusion

In this paper, I have shown that wanna-contraction (in nonliberal dialects) requires abstract Verb Incorporation to make want govern to. The analysis presented here has the advantage of maintaining the government condition and of reducing the adjacency condition to the ECP and case theory. I have also argued that the visibility of Case-marked trace at PF is not necessary in this analysis, and that, in all dialects, all empty categories are invisible to Wanna-Contraction as well as the other PF rules.

Notes

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1 Bouchard 1984 and Lobeck and Kaise 1984 also propose the government condition on contraction, independently.

2 According to Baker 1988, VP-to-Comp movement also gives rule 1 type causatives, while V-to-C movement, another possibility, gives rule 2 type causatives.

3 As Goodall 1987 points out, the evidence for Reanalysis is difficult to find in English, which lacks clitics, for example (cf. (4c) in Italian).

4 Baker’s 1988 definition of selection is (a):

(a) A selects B if and only if:
   (i) A assigns a theta role to B, or
   (ii) A is of category C and B is its IP, or
   (iii) A is of category I and B is its VP.
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Both (aii–iii) and (10ii–iv) mean that the functional heads select their complements. Thus, this revision of definition does not affect Baker’s 1988 original argument in its basic points.

5 Note that in (5b), the embedded IP would be a barrier between FP and its trace, unless we assume, as Baker 1988 does, that I moves to C at LF so that I and C may not be distinct. We return to this topic in section 4.

6 Notice that the abstract Verb Incorporation by Baker 1988 is a formalization of the ‘clause union’ in Relational Grammar and the ‘restructuring’ in a GB tradition. See Frantz 1979, who argues that wanna-contraction occurs only if Equi-subject Clause Union applies (cf. also Postal and Pullum 1982, 1986, Pullum 1982). Recently, Goodall 1991 claims that it may apply, only when restructuring already has. See also Nespor and Scorreretti 1984 and Goodall 1987, who analyze wanna-contraction as syntactic Restructuring, not as a PF phenomenon.

7 Incidentally, we might analyze the ‘aspectual come and go’, discussed by Jaeggli and Hyams 1989, as another instance of abstract Verb Incorporation in English:

(a) Come talk to me.

(b) Go climb a rock.

Note that the Chichewa example (3) containd ‘go,’ and the following example, also from Chichewa, contains ‘come’ (cf. Baker 1988):

(c) Kati madzi banu dza-man-e-ni ine.
    if water your come-refuse-ASP-IMPER me
    ‘if it is your water, come (and) refuse me.’

I thank Kaoru Fukuda for pointing out this fact to me.

8 In (12a), however, if the FP further moves into the Comp of the
higher CP, the CP is no longer a barrier. I simply assume that this movement is impossible for some reason.

9 I assume here that, in (13a), F_{jk} does not incorporate into C in the way to the matrix V.

10 Chomsky 1986a ascribes the impossibility of contraction in (16) to the government condition, though Aoun and Lightfoot 1984 explain it in terms of the set union approach.

11 I assume that the complementizer for in (20b) is present at S-structure to assign Case to the lower subject, and may be deleted at PF (cf. Chomsky 1981).

12 I am indebted to Yoshihiro Yamada for discussion of this point. Alternatively, we might argue that the overt NP in the embedded subject position blocks FP-to-Comp movement for some reason. See Rizzi 1990, who notes that, in VP-to-Comp movement cases, (b) is significantly more degraded than (a):

(a) ... and [_{vp} fix the car], he tried [PRO to t_i]
(b) *... and [_{vp} know the answer] I believe [Bill to t_i]

13 Furthermore, in (25b), the movement of who into the matrix Comp violates Subjacency, because the embedded Comp is filled by the moved FP.

14 This rule, however, also permits contraction in the examples (1), (14) and (16) in these dialects, probably an undesirable consequence. A possibility to rule out contraction in these examples is to assume that Wanna-Contraction in these dialects has not the government condition but the c-command condition (cf. Lobeck and Kaisse 1984, Kaisse 1985). This explains (2b–d), (14a) and (16b), but leaves (2a), (14b) and (16b) unexplained, however. We might argue that other conditions are also involved in these sentences.
Bouchard 1986 argues that a filter with the government condition can account for Italian double infinitives, which have been claimed to be an independent evidence for the visibility of Case-marked trace (cf. Longobardi 1980 and Chomsky 1981).

References


