

Reexamining Condition C Effects

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# Reexamining Condition C Effects\*

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## 0. Introduction

This paper reexamines Binding Condition C effects and shows that Binding Condition C is not a reliable diagnostic for the distribution of nominal phrases. The main claim of this paper is that Condition C effects should be captured in terms of a condition on anaphoric dependence (“General Patterns of Anaphoric Dependence” in Williams 1997), not by a structural condition on coreference (“Binding Theory Condition C” in Chomsky 1981).

## 1. Condition C effects as anaphoric dependence effects

When a sentence contains an R-expression that serves as the antecedent of another NP, the distribution of the NPs is constrained in a certain way. For example, the sentences in (1) are acceptable when the R-expression *his term paper* precedes the pronoun *it* as in (1a)-(1b), but when the pronoun follows the R-expression, the sentence is acceptable only if the pronoun is within a subordinate clause as in (1c). If the pronoun is within a matrix clause, the sentence is unacceptable as in (1d).<sup>1</sup>

- (1) a. Anyone [who has written **his term paper**] can turn *it* in to me now.  
b. Anyone can turn **his term paper** in to me now [who has written *it*].  
c. Anyone [who has written *it*] can turn **his term paper** in to me now.  
d. \*Anyone can turn *it* in to me now [who has written **his TERM PAPER**].  
(Williams 1997:587)

Binding Theory Condition C (BT-C), defined as in (2), attributes the unacceptability of the sentence in (1d) to the R-expression *his term paper* which is illegitimately bound by (i.e. c-commanded by and coindexed with) the pronoun *it*.

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<sup>1</sup>Throughout the paper, the XP which serves as an antecedent of a proform is **bolded**, the proform is in *italics*, and the word(s) with main sentence stress is/(are) in UPPER CASE LETTERS.

- (2) Binding Theory Condition C (BT-C)  
 An R-expression is free. (Chomsky 1981:188)

On the other hand, Williams (1997) takes the pattern in (1) as an instance of the General Patterns of Anaphoric Dependence (GPAD) which is illustrated as follows:

- (3) General Patterns of Anaphoric Dependence (GPAD, based on Williams 1997:588)
- |                            |   |                                      |
|----------------------------|---|--------------------------------------|
| <u>forward dependence</u>  | A. [...antecedent...] <sub>subord</sub> | [...pro...] <sub>matrix</sub>        |
|                            | B. [...antecedent...] <sub>matrix</sub> | [...pro...] <sub>subord</sub>        |
| <u>backward dependence</u> | C. [...pro...] <sub>subord</sub>        | [...antecedent...] <sub>matrix</sub> |
|                            | D. * [...pro...] <sub>matrix</sub>      | [...antecedent...] <sub>subord</sub> |

The (3A)-(3D) patterns correspond to the (a)-(d) examples in (1). The GPAD says that anaphoric dependence can be forward as in (3A-B), or backward and down as in (3C). The dependence of a pronoun on its antecedent NP in (1) is not the only paradigm governed by the GPAD and examples that involve a null VP and its antecedent are also subject to the GPAD:

- (4) a. Anyone [who wants to **see the doctor**] can  $0_{VP}$ .  
 b. Anyone can **see the doctor** [who wants to  $0_{VP}$ ].  
 c. Anyone [who wants to  $0_{VP}$ ] can **see the doctor**.  
 d. \*Anyone can  $0_{VP}$  [who wants to **see the doctor**]. (cf. Williams 1997:591)

The GPAD is designed to rule in an acceptable sentence such as (5), where the putative antecedent does not have main sentence stress and the antecedent itself becomes anaphoric:

- (5) [Context: I assume you recall that this course requires **a term paper**.]  
 Anyone can turn *it* in to me now [who has WRITTEN his term paper].  
 (Williams 1997:588)

In this case, the pronoun *it* is dependent not on the following NP *his term paper*, but on the preceding NP *a term paper* in the context, thereby canceling the illegitimate backward-up pattern in (3D) (cf. compare with (1d)). Note further that c-command is not the relation governing the paradigm in (1), and the BT-C does not predict the unacceptability of (6):

- (6) \*Anyone can try [to hand *it* in to me] [who has written **HIS TERM PAPER**].  
 (Williams 1997:588)

In (6), the pronoun *it* is embedded more deeply than in (1d) and the R-expression cannot be c-commanded by the pronoun. Still, the sentence is unacceptable. The GPAD correctly excludes the sentence in (6) because this is the illegitimate backward-up pattern.

In the next section, I will show that Condition C effects in general are better captured in terms of the GPAD than the BT-C.

## 2. Deriving Condition C effects

### 2.1. Forward dependence: wh-movement

An apparent problem for the GPAD is found in wh-movement examples:

- (7) a. Which claim [that offended **John**] was *he* willing to talk about \_?  
 b. \*Which claim [that **John** was wrong] was *he* willing to talk about \_?

The contrast between a wh-phrase with an adjunct relative clause and a wh-phrase with a complement clause with respect to the interpretational possibilities of the name *John* is observed in e.g. Riemsdijk and Williams (1981), Lebeaux (1988,1991): if the name is contained in an adjunct as in (7a), the name can refer to the same entity as the following pronoun *he*, but this interpretation is not available if the name is contained in a complement as in (7b). That is to say, "Condition C effects are abrogated when the fronted name is contained in an adjunct" (Lebeaux 1991:212).

Before looking at the proposed analysis of this contrast, let me talk about the empirical issues regarding the contrast. First, the contrast in (7) is not as clear as it was originally claimed, which is suggested by acceptability judgments by three native speakers I consulted:

- (8) Acceptability of the sentences in (7)

	Speaker A	B	C
(7) a.	√	√	??
b.	?	?	?*

Furthermore, Speaker A notes that the sentence in (7b) is as good as (7a) if there is a preceding context that "several people made a claim that John was wrong". Also, the contrast in (7) is questioned in the literature and there are more than a few acceptable wh-movement sentences with a complement clause, two of which are presented in (9).

- (9) a. Which piece of evidence [that **John** was guilty] did *he* successfully refute?  
 (Lasnik 1999:209)  
 b. Whose claim [that **the Senator** has violated the campaign finance regulations] did *he* dismiss as politically motivated?  
 (Kuno 1997)

With this in mind, let us look at the analyses.

#### 2.1.1. GPAD

The GPAD predicts that all the wh-movement sentences in (7) and (9) are acceptable because they all show the legitimate forward-down pattern in (3A).

- (7') a. ... [...**John**...] ...*he*... : GPAD (3A)  
 b. \*... [...**John**...] ...*he*... : GPAD (3A)  
 (9') a. ... [...**John**...] ...*he*... : GPAD (3A)  
 b. ... [...**the Senator**...] ...*he*... : GPAD (3A)

Since the GPAD is not sensitive to the distinction between adjunct and complement clauses, it does not predict the contrast in (7). Given that (7b) is not as bad as claimed and



also (7b) when it is acceptable with an appropriate context. Theoretically, Lebeaux's rationale for exceptional behavior of adjuncts is not available in the standard Minimalist framework (Chomsky 1995) where D-structure and the Projection Principle are abandoned. Furthermore, the late-merge operation does not satisfy the Extension Condition on structure-building in that an adjunct is embedded within another syntactic object.

## 2.2. Backward dependence: extraposition from NP

Fox and Nissenbaum (1999) argue that there is a contrast with respect to Condition C effects between extraposition of an adjunct and extraposition of a complement:

- (11) a. I gave *him* an argument yesterday [that supports **John's** theory].  
 b. ??/\*I gave *him* an argument yesterday [that this sentence supports **John's** theory].  
 (Fox and Nissenbaum 1999:138)

Their generalization is that "extraposition of adjuncts bleeds Binding Condition C" (p.139). As is the case with *wh*-movement sentences, however, the contrast between adjunct and complement cases is subtle if any, and three native speakers I consulted find the sentence in (11b) as bad as the sentence in (11a). Furthermore, both (11a) and (11b) become acceptable when the putative antecedent *John* is distressed and used anaphorically in an appropriate context:

- (12) [Context: **John** has been facing lots of counterexamples to his theory and is quite disappointed at that. But finally...]  
 a. ?I gave *him* an argument yesterday [that SUPPORTS **John's** theory].  
 b. ?I gave *him* an argument yesterday [that THIS SENTENCE supports **John's** theory].  
 b'. ?I gave *him* an argument yesterday [that this sentence SUPPORTS **John's** theory].

With these data in mind, let us turn to the analysis.

### 2.2.1. GPAD

The GPAD predicts that the extraposition from NP sentences in (11) are unacceptable because they represent the illegitimate backward-up pattern in (3D).

- (11') a. ...*him*... [...**John's**...] : GPAD \*(3D)  
 b. ??/\* ...*him*... [...**John's**...] : GPAD \*(3D)

Given that the acceptability of (11a) is dubious, it does not constitute a counterexample to the GPAD.

The improvement of the sentences in an appropriate context, illustrated in (12), is exactly what the GPAD predicts.

- (12') a. ?**John**... ...*him*... [...**John's**...] : GPAD \*(3D) cancelled  
 b. ?**John**... ...*him*... [...**John's**...] : GPAD \*(3D) cancelled  
 b'. ?**John**... ...*him*... [...**John's**...] : GPAD \*(3D) cancelled



an appropriate context as is shown in (12b), there are conceptual and theoretical problems with Fox and Nissenbaum's explanation. First, the QR operation of a host NP in extraposition of adjuncts is not independently motivated.<sup>3</sup> Moreover, nothing guarantees that QR should be "rightward" (as is pointed out in Chomsky 2001:18-19). Their explanation also carries over Lebeaux's theoretical problem that late-merge is an extraordinary structure-building operation in that it does not satisfy the Extension Condition.

### 2.3. Another argument against Binding Theory Condition C: *as*-parentheticals

It is observed that Condition C effects in sentences with *as*-parentheticals are far from clear:

- (14) a. ?*She* owns, as **Sue** told us, a dozen or so unicycles.  
b. \**He* told *his* mom that, as **Julio** had promised, the dishes were done.  
(Potts 2002:666fn)

The variation in acceptability is independent of the issue of adjunct vs complement distinction, because there is an agreement that *as*-parentheticals are not complements to any head no matter how they are represented in syntax. The dependence pattern in the sentences in (14) is backward, and whether it is up or down depends on how *as*-parentheticals are analyzed syntactically. The GPAD predicts that the sentence in (14b) improves if the pronouns (*he* and *his*) take an antecedent from the preceding context, thereby achieving forward dependency. This prediction is borne out to a certain extent:

- (15) [Context: **Julio** does not do the dishes and is always scolded by his mom.  
Yesterday his mom had to stay at work until late and made **Julio** promise her to do the dishes by the time she comes back home. When she got home...]  
?/\**He* told *his* mom that, as Julio had promised, the dishes were done.

Among two native speakers who did not accept the sentence in (14b), one of them accepted the sentence in the context in (15), but the other did not. To interpret this individual variation, more examples from *as*-parentheticals should be checked with native speakers, which I leave for future research.

## 3. Consequences of the proposal

### 3.1. Eliminating "late-merge" from the computational component

By having the Binding Theory Condition C (BT-C) being replaced with the General Patterns of Anaphoric Dependence (GPAD) in explaining Condition C effects, the computational component does not have to resort to the late-merge operation any more. This is a welcome consequence theoretically (cf. Chomsky 2001:19) because late-merge departs from the Minimalist way of structure-building (i.e. Merge) in that it does not satisfy the Extension Condition on structure-building. The elimination of late-merge was made possible only after reexamining the alleged contrast between adjunct and

<sup>3</sup>Fox and Nissenbaum (1999) show that presence and absence of QR in adjunct extraposition and complement extraposition, respectively, *can predict* their difference in scope-marking, but still fail to *motivate* QR in adjunct extraposition.

complement displacement cases by embedding them in appropriate contexts and abandoning the significance of those contrasts (e.g. wh-movement in (7) and extraposition from NP in (11)).<sup>4</sup>

### 3.2. Loose ends

Although the GPAD is designed to apply generally to any anaphoric dependence, it is too weak in that it wrongly allows unacceptable dependence cases. For example, nothing should be wrong with the unacceptable sentences in (16) as far as the GPAD is concerned because they establish legitimate forward-down (3A) and backward-down (3C) patterns, respectively:

- (16) a. \*[Which claim [that offended **everyone**]] was *he* willing to talk about [~~which claim [that offended everyone]~~]?  
 a'. \*[…**everyone**…] …*he*… : GPAD (3A)  
 b. [Which claim [that offended *him*]] was \***everybody**/??**every man/each man** willing to talk about [~~which claim [that offended him]~~]?  
 b'. \*/??/√[…*him*…] …QP… : GPAD (3C)

I argue here that the sentence in (16a) is excluded by the c-command condition on bound variables, independently of the GPAD: the pronoun *he* is not bound by the quantifier phrase (QP) *everyone* at any point of the derivation, and hence cannot have a bound variable reading. Now that we abandon late-merge of adjuncts, nothing prevents the existence of the adjunct clause in base position. However, the QP within the adjunct in the base position does not c-command the pronoun either. On the other hand, the acceptability of the sentence in (16b) varies depending on the type of the antecedent QP. The acceptability of the sentence with the QP *each man* is compatible with the GPAD, and I argue that the unacceptability of the sentences with the QPs *everybody* and *every man* is due to a condition other than the GPAD (the nature of which is still to be examined).

Related to the empirical coverage of GPAD, it is worth noting here the theoretical issues and problems regarding the nature of GPAD. The first problem is that the GPAD is too weak in the sense that we have just seen and needs to be supplemented by other conditions on the distribution of NPs, for example, the c-command condition on bound variable pronouns.

Another major issue is why the GPAD is stated the way it is. Unless we answer this question, the GPAD is merely a description of linguistic phenomena, not an explanation. The GPAD consists of two cross-cutting notions: forward vs backward and up vs down. My speculation is that these notions are motivated by the properties of human cognitive processes, in particular, sentence processing. For example, it is easier to process the dependence relation if the antecedent with an independent semantic content precedes its dependent than the opposite pattern (cf. Hawkins 2002) and the opposite pattern is possible to the extent that the structural relation between an antecedent and its dependent

<sup>4</sup> When it comes to PP complements and adjuncts, things are even less clear. (See e.g. Reinhart 1983 and Speas 1990 for Condition C effects observed in fronted PPs.) Shaer (p.c.) notes that in German, fronted PPs, whether they are adjuncts or complements, usually show Condition C effects (i.e. no anti-reconstruction effects).

is compatible with a certain cognitive (processing) domain (cf. Reinhart 1983:ch10, Deane 1992). This issue remains to be further explored.

#### 4. Summary

The General Patterns of Anaphoric Dependence (GPAD) proposed in Williams (1997) captures Condition C effects better than the Binding Condition C (BT-C), in that the former (i) rules in acceptable examples which the latter would wrongly rule out, and (ii) predicts variations in acceptability judgments. A welcome consequence of replacing the BT-C with the GPAD is that the theoretically problematic operation, late-merge, can be eliminated. The GPAD, however, lacks explanatory power at the moment.

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