REVIEW ARTICLE


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1. **Introduction.** This bulky volume, a revised version of B’s 1985 MIT dissertation, is an important contribution to both the principles-and-parameters theory of grammar and general studies on language universals. Its ambitious (perhaps overambitious) goals are aptly epitomized in the main and subtitles: Incorporation and grammatical function (GF) changing. Thus, by drawing data from genetically and typologically diverse languages, B attempts to unify a wide range of GF-changing rules as postulated in relational grammar (RG) under a single underlying concept called Incorporation and dispense with all GF changes as automatic side effects of the interactions of Incorporation and existing subtheories such as Case theory and government theory.

A few illustrative examples in English will give the reader a general idea of what GF-changing phenomena are and how they are analyzed in RG (for expository purposes, relational analyses are stated in ordinary prose rather than in RG’s Relational Networks: cf. Perlmutter 1983, Perlmutter and Rosen 1984).

(1) Passive: Joe kicked Bill. → Bill was kicked by Joe.
   [Direct object is promoted to subject, whereby the original subject becomes a ‘chômeur’, here marked with by.]
Dative Shift: Harry gave a van to his son. → Harry gave his son a van. [Indirect object is promoted to direct object, and the original direct object becomes a chômeur, here with a zero marking.]
Possessor Raising: Joe patted Mary’s back. → Joe patted Mary on the back. [The possessor NP on the object is raised to direct object, and the remaining head noun is put en chômage.]

B’s program of reducing these and other GF-changing rules to the single

* In preparing this review, I benefited from discussion with Masayoshi Shibatani.
rule Incorporation echoes the current trend in generative grammar to disintegrate individual rules into more basic principles of Universal Grammar. In addition to the unification of the relevant rules, however, B's attempt involves the knotty problem of accounting for the distribution of what relational grammarians call 'chômeurs' (=NPs which are deprived of their argument status by other NPs). Since GB theory takes no cognizance of this RG notion (and other GFs for that matter), we can safely say that the success or failure of B's whole work hinges crucially on how he can dispose of it.

2. **Formal Theory of Incorporation** (Chap. 2). At a pre-theoretical level, the term 'noun incorporation' has been used to designate a process that combines nouns and verbs in a sentential structure in American Indian and other languages (Mithun 1984). The well-known phenomenon of verb raising, typically associated with causative formation, is a case of verb incorporation.

In stark contrast to strong versions of the lexicalist hypothesis, B proposes to locate such incorporation operations in the syntax, based on the following hypothesis.

(2) **The Uniformity of Theta Assignment Hypothesis (UTAH)**

Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure. (46)

With the expression 'items' referring to both phrases and words/morphemes, this hypothesis provides an initial motivation to generate even bound morphemes as syntactically independent units at the level of D-structure.

Observe Possessor Raising in Mohawk (48).

(3) a. Ka-rakv \[NP \text{ ne sawatis hrao-nuhs-a?}\].

3N-be.white John 3M-house-SUF

'John's house is white.'

b. Hrao-nuhs-rakv \[NP \text{ ne sawatis}\].

3M-house-be.white John

lit. 'John is house-white.'

Since the noun root *nuhs* 'house' bears the same thematic relation to the predicate 'be-white' in both sentences, says B, the UTAH requires that it be represented in the same configuration at D-structure, i.e. something like 3a. B's reasoning here is not adequate, however. The identical thematic relation between 'be-white' and 'house', by itself, does not con-
stitute a particularly strong basis for postulating an identical D-structure, for the same criterion would make the unwarranted entailment that taxi-driver and driver of a taxi, for example, should take the same D-structure—I believe B would derive taxi-driver lexically. What is really compelling about the Mohawk example is not so much the thematic relationship between 'house' and 'white' as that between 'John' and 'house'. Since it is generally impossible for a syntactically independent phrase to refer to an element inside a word, 'John' and 'house' in 3b must make up a syntactic unit at D-structure. The stranding of the possessor phrase here poses an insurmountable problem for a lexicalist analysis.

Given a D-structure like 3a, sentence 3b is derived by moving the head noun 'house' to the verb 'be-white'. The derived structure looks like 4 (50).

The process whereby the head noun is Chomsky-adjoined to the main verb is termed 'Incorporation'. Since it maps D-structure to S-structure in the syntax, this movement is subject to the Projection Principle and therefore must leave a trace. In this way, the UTAH and the Projection Principle jointly set the proper basis on which to develop a syntactic analysis of Incorporation.

Incorporation, B maintains, is a natural extension of Move α: the value of α is extended from the conventional 'maximal projection' to the 'minimal projection', namely X0. (This characterization will need further elaborations because almost all examples B adduces in the text involve affixes and roots rather than full-fledged X0s.) B then assumes that the presence or absence of X0 movement constitutes a parameter that brings about the superficial distinction between so-called polysynthetic and analytic languages. If this process is really a subcase of Move α, then its traces should obey the Empty Category Principle (ECP). B thus takes great pains to show that their occurrences are entirely reducible to the ECP. Specifically, he argues that Travis's Head Movement Constraint falls out from the ECP (53).
(5) The Head Movement Constraint (HMC)

An X₀ may only move into the Y₀ which properly governs it.

The standard version of the ECP requires that an empty category be
governed either by its theta-coindexed head or by its chain-coindexed
antecedent. For Incorporation, B drops the first option on the grounds
that θ-assignment holds between a θ-assigner and its sister XP and the θ-
index thus assigned does not percolate down to the head X₀. This leaves
B with the second option: An X₀ must govern its trace (54).

B goes on to discuss two conditions on antecedent-government: (i) the
antecedent must c-command its trace, and (ii) there must be no barrier
category between them. Take the abstract incorporation structure 6 for
example.

(6)

Given Aoun & Sportiche's definition of c-command, the incorporated
element Xᵢ c-commands tᵢ, since Y* is not a maximal projection. Prob-
lems will arise if XP makes up a barrier. B proposes an improvement
over Chomsky's definition of barrierhood by utilizing the notion of 'se-
lection'—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 its VP.

(7) 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 maxi-
mal 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 se-

lects some WP equal to or containing B. (56)

7i corresponds to Chomsky's 'L-mark' condition, and 7ii to Chomsky's
Minimality Condition.

The definition in 7 sanctions the government relation in 8a but rules
out those in 8b and 8c, where I give abstract patterns together with hypo-
thesetical noun incorporation examples dubbed in English. (The links
indicate selection relations, and t stands for the trace of an element in-
corporated in Y*.)

(8) a. OK [YP Y* [XP t ZP]]

    e.g. [VP eat [NP ten bananas]] → [V banana-eat] ten
In effect, X can incorporate into Y if Y selects XP, the projection of X. B’s ECP account is accompanied by the auxiliary device in 9.

(9) The Government Transparency Corollary (GTC)

A lexical category which has an item incorporated into it governs everything which the incorporated item governed in its original structural position. (64)

To illustrate with the structure 6 above, after the head X is incorporated, the XP becomes ‘transparent’ or invisible for the purposes of government and as a result, the stranded ZP comes to function as the direct dependent of the verb. An actual example of this was already given in 3. In 3a, the verb with the neuter agreement marker ka- governs and hence agrees with the head noun ‘house’ (neuter), whereas in 3b, the masculine agreement marker hrao- indicates that the government relation has shifted to ‘John’. (Still it is quite strange that the predicate ‘be-white’, an unaccusative in B’s analysis, should show an object marking, and that the subject position in 4 should remain unfilled.) The GTC is thus intended to effect a change in the government relation without altering the syntactic configuration. This ingenious maneuver turns out to play an extensive role in B’s theory of GF-changing.

3. Noun Incorporation (Chap. 3). We now look into individual cases of Incorporation. Noun Incorporation (NI), spread among world languages, is known to have an asymmetric distribution (Mithun 1984): Direct objects undergo NI most readily, whereas transitive subjects always resist it, and intransitive subjects, especially ‘unaccusatives’, may incorporate in some languages. B claims that this distribution is fundamentally a syntactic one, determined by the ECP. The NP in the subject position serves as a barrier for the government relation between verbs and subject nouns, whereas no problem arises with direct objects and unaccusatives, which are properly governed.

It must be noticed, however, that lexically derived verbal compounds such as bike-riding are also known to have much the same restrictions (cf. Kageyama 1985 and references cited there). If one were to pursue B’s
claim, then one would have to conclude that the ECP is operative in the lexicon as well—a conclusion which B would not possibly accept. Furthermore, there are a group of N-V compounds in Japanese, discovered by Shibatani and Kageyama 1988, which are supposed to obtain after S-structure (probably in PF) rather than in the syntax. Such ‘postsyntactic compounds’ also exhibit the same distribution, even though the ECP is not considered to apply in PF. These facts cast serious doubt on B’s ECP approach, calling for a deeper explanation presumably from a semantic point of view. A purely syntactic approach could not explain why direct objects incorporate more frequently than unaccusatives, or why some languages additionally incorporate oblique objects such as instruments and locatives (Mithun 1984).

4. VERB INCORPORATION (Chap. 4). Verb Incorporation (VI) associated with causatives has been investigated intensively by non-GB linguists (cf. Shibatani 1976), by relational grammarians in terms of Clause Union, and most recently by Marantz 1984 in terms of Merger. B’s ultimate goal in this chapter is to present a unified analysis of the two major types of causative construction recognized in these previous works.

The two types of causative are distinguished according to the surface manifestations of the embedded subject and object, as summarized in the following schemata.

(10) Causative Rule 1 (p. 162): e.g. Malayalam

\[
\text{embedded clause} \quad \text{surface clause}
\]

- transitive SU → oblique (indirect obj.)
- tr. DO & intr. SU → direct object

(11) Causative Rule 2 (p. 164): e.g. Japanese

\[
\text{embedded clause} \quad \text{surface clause}
\]

- tr. & intr. SU → direct object
- direct object → ‘2nd object’

They are analyzed as in 12 and 13, respectively.
Since the embedded verb cannot incorporate in one swoop into the main verb because of CP (a Minimality Condition barrier), it must first move to a position directly governed by ‘cause’. Rule 1 exploits Comp as an escape hatch: The whole VP\textsubscript{j} first moves there by way of substitution, and then V\textsubscript{i} is given an opportunity to incorporate into the main verb (171). The other plausible alternative to Comp substitution is ‘successive cyclic’ movement of the lower verb. Thus in Rule 2, the embedded verb moves step by step from I to C to the main verb (175). Note that movement to I and C is allowed by the Head Movement Constraint.

An independent confirmation of these two structures, B claims, is found in the binding possibilities of reflexive pronouns in Japanese and Malayalam. It is well known that Japanese zibun ‘self’ takes only subject as its antecedent but does not show the ‘opacity’ effects. The ambiguity of the reflexive in 14 can be accounted for by a structure like 13.
(14) Titi-oya wa kodomo o zibun no heya de nak-aseta.

father TOP child ACC self GEN room in cry-make
‘Father made his child cry in his room.’

Malayalam (213, 416) presents a marked contrast to Japanese in that the corresponding reflexive cannot refer to the embedded subject but only to the matrix subject. According to B’s analysis, this fact follows from the structure in 12, where the reflexive pronoun has moved to the Comp position, which lies outside the binding domain of the embedded subject. This seemingly elegant analysis, however, will not go through. B’s argument holds good only if it is shown that an adjunct phrase like ‘in his room’ is inside VP; if it is located outside VP as is commonly believed, then it does not move along and should be bound by the embedded subject.

B further argues that his proposed structures automatically account for the case markings on the embedded subject and object. Consider first Causative Rule 1. In 12, the derived complex verb V* governs NP₂, but not NP₁ (causee) because IP is a Minimality Condition barrier. (Notice that ‘flattening’ of structures as assumed in the traditional Verb Raising and Clause Union analyses cannot occur at this stage because of the Projection Principle.) Now B sets up the following principle of Case assignment.

(15) The Case Frame Preservation Principle (CFPP)

A complex X⁰ of category A in a given language can have at most the maximal Case assigning properties allowed to a morphologically simple item of category A in that language. (122) The term ‘Case’ refers to structural Cases. Since a verb usually assigns only one such Case (accusative), the languages with Causative Rule 1 assign that Case to NP₂, leaving NP₁ to other ways of passing the Case filter such as insertion of a Case-assigning preposition or introduction of a special Case (192)—this ‘special Case’ is to be replaced by abstract Incorporation later.

In 13 for Causative Rule 2, on the other hand, both NP₁ and NP₂ are governed by V* and therefore assigned structural Cases by it. Languages like Kinyarwanda which allow two accusative objects with morphologically simple verbs like ‘give’ also assign two accusative Cases in the causative construction. In the case of Japanese, B contends that dative and accusative are the two structural Cases, so that causative sentences are also marked with them. It is questionable, however, whether the ‘agentive’ ni is really the same as the ordinary dative ni.
Now, it is well known that in Japanese causative constructions, passivization fails to apply to the lower object (NP₂).

(16) a. Seito ga sensei ni hon o yom-ase-rareta.
   ‘The pupils were made to read a book by the teacher.’

   b. *Sono hon ga sensei ni (yotte) seito ni yom-ase-rareta.
   ‘The book was by the teacher made to be read by the pupils.’

The ungrammaticality of 16b appears to conflict with the fact that the lower object is governed and Case-marked by the causative verb complex. B tries to get around this problem by invoking Binding theory (179): If NP₂ moves to the matrix subject position in 13, its trace fails to be bound in the domain of the c-commanding subject, thus violating Binding Theory A. This account lacks generality, however. Aspectual verbs like -tuzukeru ‘continue’ and -hazimeru ‘begin’, also involving VI, allow passivization of a lower object, as in 17a, although the version with downstairs passive as in 17b sounds better.

(17) a. Kono hon wa kodomo-tati ni yomi-tuzuke-rareru desyoo.
   lit. ‘This book will be continued reading by children.’

   b. Kono hon wa kodomo-tati ni yom-are-tuzukeru desyoo.
   ‘This book will continue to be read by children.’

5. PREPOSITION INCORPORATION (Chap. 5). B’s motivation for PI comes primarily from applicatives in Bantu languages. This phenomenon, similar to the English Dative Shift construction, is analyzed in RG as an advancement of indirect/oblique object to direct object with a concomitant demotion of the original direct object to a chômeur. B proposes to turn attention to the function of prepositions. Consider Chichewa examples (229).

   zebras SP-PAST-hand-ASP trap to fox
   ‘The zebras handed the trap to the fox.’

   b. Mbidzi zi-na-perek-er-a nkhandwe msampha.
   zebras SP-PAST-hand-to-ASP fox trap
   ‘The zebras handed the fox the trap.’

The thematic relatedness between these sentences leads B to analyze the applicative suffix -er- ‘to’ in 18b as having a lexical specification like 19:

(19) -er: category: P
    subcategorization: \v

Namely, -er is inserted under a P node at D-structure, but its subcatego-
rization demands obligatory incorporation into a verb.

B takes examples like 18b as evidence to hypothesize an invisible preposition in English Dative Shift sentences as well.

(20) Joe [v gave-P] Nancy a computer.

B is ambiguous as to exactly what preposition is incorporated. At one place (286) he talks of a 'null preposition', and at another place (288) he says that the lexical item give is the morphological form for both 'give' and 'give-to', suggesting that the preposition 'to' is incorporated. In the light of the fact that Dative Shift crucially refers to the particular prepositions to and for, the latter seems to be the valid analysis. In order to make this analysis feasible, however, it is necessary to assume late lexicalization, namely to insert the lexical item give after to is incorporated. Indeed, the hypothesis that morphology is not limited to the lexicon but goes hand in hand with syntax—called the Mirror Principle—is another major claim of this work.

Unlike the phonological merger of Marantz 1984, B's syntactic incorporation of prepositions leaves a trace, as in 21.

(21) Joe [v gave-toi] [PP ti Nancy] [NP a computer]
The fact that Nancy gets Case-marked and undergoes passivization (Nancy was given a computer by Joe) is said to follow from the GTC. Here, however, B foregoes the oft-cited complications surrounding for-datives. Sentences like 22 (Stowell 1981), unacceptable in most dialects, should be acceptable in B's system.

(22) a. *His mother was baked a birthday cake.
   b. *Janice was got a new dress by Paul.
The impossibility of applying wh-movement to the 'first object' (*Who did you say Joe gave a computer?) is another old problem. While most of the previous studies (Jackendoff & Culicover, Oehrle, Kayne, Hornstein & Weinberg) attributed the ungrammaticality in some way or other to the occurrence of two bare NPs, B argues (296) that a similar result obtains even if there is only one NP. In 23, the verb write incorporates to in a structure without a theme object, yet wh-movement is hard to apply.

(23) a. Britta wrote her mother last week < wrote to her mother
   b. ??Who do you hope that Britta wrote last night?
Based on this and similar observations on Chichewa, B stipulates the following filter, the nature of which is obscure, however.

(24) The Non-Oblique Trace Filter (somewhat simplified, 299)
   * [Oi ... Xj ... [[P t_j] t_i] ...] at S-structure

As mentioned above, the NP stranded by PI receives accusative Case
from the base verb. This leads B to predict that PI should be impossible with intransitive verbs, because intransitive verbs do not have Case-assigning properties, so that the remaining NP becomes Caseless in violation of the Case filter. B goes on to claim that apparent cases of PI with intransitive verbs as discussed by Gruber 1976 (e.g. enter ← 'go into', leave ← 'go from') are lexical, not syntactic. Outright counterexamples, however, are found in the incorporation of postpositions in languages of Native America (Craig & Hale 1988).

(25) Naing taata sumuu yu-i-siik-u. (Rama, Nicaragua)
my father banana with-3-come-ASP
'My father brings bananas.'

6. PASSIVE INCORPORATION (Chap. 6). B advances the novel claim that passive is a nominal element that is generated under the Infl node and receives the external θ-role of a verb. The D-structure of a passive sentence My wife was stolen (by Joe), with links representing the θ-assignment relations, looks like 26.

I should first point out that this structure runs counter to the UTAH, because the thematic relations between it and its corresponding active sentence are not directly captured at the level of D-structure. Also, one might well question B's identification of PASS as a noun, since the passive morphemes in a majority of languages in the world are verbal rather than nominal, and there are even languages like Chinese that do not have any particular passive morpheme. By way of replying to this question, B (314) cites the Austronesian language Chamorro, which exhibits different passive morphemes depending on whether the agent is singular (in-) or plural (ma-). While B interprets these morphemes as direct reflexes of PASS, it would be no less plausible to identify them as agreement markers of 'initial subjects' or agents.

B goes on to argue that V incorporates into PASS, rather than the other
way around. This is because downward movement results in an ECP violation. Thus, V-to-PASS Incorporation is a more felicitous nomenclature than Passive Incorporation. Turning to the adjunct PP by Joe, it is generated under I' rather than under VP and gets coindexed with the PASS morpheme, yielding the effect of the agent role duplication.

This chapter concludes with an interesting analysis of language variation on personal, impersonal, and reflexive passives in terms of Case on passive morphemes.

7. ABSTRACT INCORPORATION. The various instances of Incorporation discussed so far involve overt morphological combinations. B proposes to extend the notion of Incorporation to intangible cases which do not exhibit overt morphological effects. The reanalysis of verbs and prepositions in English pseudopassives is a good example (261).

(27) a. My bed was slept in last night.
   b. e slepti [PP ini [NP my bed]] last night.

Such Reanalysis is defined as abstract Incorporation, i.e. a process that coindexes two lexical nodes if and only if the first governs the second. The structure of 27a after the application of abstract Incorporation looks like 27b. The coindexing relationship between the verb and the preposition is to be interpreted in the same way as that between a complex word with an overtly incorporated element and the trace of the incorporate with respect to such principles as the GTC. Consequently, the preposition in 27b behaves as if it were not there, putting the NP my bed under government by the verb, as desired. Moving on to V Incorporation, B cites the causative reanalysis in the Romance languages as its abstract counterpart (201).

These two instances of abstract Incorporation could be accepted without much difficulty. The remaining possibility, namely the abstract counterpart of NI will pose problems, however. B's examples of this category are divided into two groups: (i) Possessor Raising and (ii) the creation of chômeurs in PI and VI.

Possessor Raising can be illustrated by Chichewa examples. (In B's text, the gloss for -er- in 28b is omitted (or overlooked). The appearance of this morpheme poses a serious problem for B, because he explicitly identifies it as a bound preposition.)

(28) a. Fisi a-na-dy-a nsomba z-a kalulu.
  hyena SP-PAST-eat-ASP fish AGR-of hare
  'The hyena ate the hare's fish.'
b. Fisi a-na-dy-er-a kalulu nsomba.
   hyena SP-PAST-eat-APP-ASP hare fish
   lit. 'The hyena ate the hare the fish.'

In GB theory, it is impossible to relate 28a and 28b by means of 'raising', solely because such movement, exactly parallel to Subject-to-Object Raising, causes a direct violation of the Projection Principle. B's analysis of 28b goes as follows. First, the head noun is reanalyzed with (abstractly incorporated in) the verb by way of coindexing.

(29) hyena ate_i [fish_i [of hare]]

As usual, the GTC makes the head noun 'fish' invisible for government, with the result that the possessor 'hare' is assigned accusative Case. (We are not told how the possessive marker 'of' disappears, though.) The putatively incorporated 'fish', on the other hand, is not assigned Case in the usual sense of the word. To escape a Case filter violation, B proposes to generalize the domain of the Case filter in such a way that the co-indexes induced by Incorporation (overt and covert alike) count for the purposes of the Case filter. The Case filter is now reduced to a licensing condition at PF: An N(P) is licensed (or 'PF-identified') if it has an index of any kind (Case index or Incorporation index) in PF. This does not explain, however, why some languages additionally provide the reanalyzed nouns with various oblique markers such as the English preposition on in Joe hit Bill on the back. The constituency of Bill on the back is also dubious.

The other group of N Reanalysis concerns antipassive and causative constructions. Let me illustrate them with the Dative Shift construction in English.

(30) a. Joe gave a computer to his girlfriend.
   b. Joe gave-to_i a computer [ti his girlfriend]
   c. Joe gavej-to_i a computerj [ti his girlfriend]

Application of PI first turns 30a into 30b. Note that the order of the two objects is not reversed at this stage because of the Projection Principle (in fact, B does not impose any adjacency condition on Incorporation). Since B wants to assign accusative Case to his girlfriend, he proposes that N Reanalysis (abstract NI) applies to a computer, as in 30c. This enables the remaining bare NP his girlfriend to get the accusative, as desired. This analysis raises a number of questions, however. Why must N Reanalysis occur in the first place? In RG, the case marking on a computer automatically results from the Chômeur Law. Or, why must the order of the two objects get reversed on the surface (cf. 21)? B claims that
accusative Case is simply an index which in English has a positional (i.e. postverbal) realization in PF. This, however, contradicts the usual assumption that reanalyzed elements must stick together on the surface. (Compare this with Stowell's (1981) analysis in which (to) his girlfriend would be incorporated (in a different sense than B's).)

8. INCORPORATION INTERACTIONS (Chap. 7). Here a principle is explored which distinguishes between possible and impossible interactions of various Incorporation processes. Three fundamental types of complex incorporation structure are laid down.

(31) a. cyclic combination          b. separate combination

```
        XP
       /\  
    YP   ZP
   /   /   /
X  Y   t_i  Z_j
  /     /     /
Y_i  t_j  Z_j
```

(c. acyclic combination

```
       *XP
       /  
    YP   ZP
   /   /   
X  Z_j  t_j
  /     /     
X  Y_i  t_j
```

The cyclic or 'bottom-up' application should be familiar from the transformational analysis of Japanese complex predicates, and the separate combination was illustrated above by English Dative Shift. B adduces a number of examples conforming to these two combinative patterns involving VI + VI, VI + NI, VI + PI, etc.

Now, B maintains that no examples are known to him that follow the acyclic combination pattern in 31c, where the topmost head Y (t_i) is first incorporated, and then the lower head Z (t_j). From the viewpoint of the GTC, this is a curious result: Once the topmost head is incorporated, the lower NP becomes governed and should thus be amenable to Incorporation. To remedy this situation, B endeavors to revise the ECP in such a way that t_j in 31c is left ungoverned. Rather than examining this quirky revision in detail (see p. 481 n. 2 for B's own discussion on the complications it entails), I will here suggest an alternative view; namely, it will be more profitable to shift our attention from the traces to the structure of derived verbs. Let me illustrate with Japanese. The schematic representations of the cyclic and acyclic combinations for the complex pre-
dicate *tabe-sase-ta(i)* ‘want to make eat’ look like 32a and 32b, respectively.

(32) a. cyclic

\[ \text{tabe sase ta(i)} \]

b. acyclic

\[ \text{tabe sase ta(i)} \]

It is immediately noticed that the cyclic combination gives rise to a structure that properly reflects the scope relationships among the three predicates, whereas the acyclic application yields a structure which contradicts semantic compositionality, and should therefore be ruled out. This suggested solution notwithstanding, it is still an empirical question whether acyclic combinations are really impossible. Shibatani (p.c.) informs me that Ainu appears to have PI and NI applying in acyclic fashion. I myself have noted the following example of incorporation of a possessor phrase in Stoney (Siouan) (Frantz 1981).

(33) a. ma-thiha n-uzazach.

*my-foot 2s-wash* ‘You washed my foot.’

b. thiha ma-n-uzazach.

*foot 1s-2s-wash* lit. ‘You me-washed the foot’

9. General problems with B’s theory. In the foregoing sections, I have examined B’s major claims and proposals chapter by chapter. I will now discuss general problems recurring throughout the book. Among B’s most important methodological principles are the UTAH and the ECP. As mentioned earlier, the UTAH suffers not only from vagueness of contents but also from inconsistent applications. Violations of this hypothesis are patently seen in B’s analyses of passives (chap. 6) and antipassives (sec. 3.5.1.).

A problem arising from excessive adherence to the ECP was also pointed out in connection with the distribution of NI: The predominance of direct object incorporation and the lack of transitive subject incorporation are not peculiar to syntactic NI but are common to N-V compounds derived at all levels of the grammar. There must be some deeper (probably semantic) reason than a purely formal principle like the ECP. If this is the case, then one of B’s conclusions (427) that the languages in the world, irrespective of their word order patterns and syntactic configurations, all have the same English-type D-structure will lose ground. In fact, the significance of semantic/thematic factors is often suggested by B himself. For example, in order to accommodate the fact that applicatives in Bantu apply quite productively to instrumentals,
benefactives, and locatives, B (240) is forced to maintain that these ‘adjunct’ PPs are theta-marked by the verb. But such θ-marking of PPs outside VP would run afoul of the Sisterhood Condition. I will thus conclude that B’s policy of deductively showing the syntactic nature of Incorporation on the sole basis of the ECP does not seem very successful.

These remarks have been addressed to the main title of the book. What about the subtitle, then? The question will be restated as follows: Is B’s treatment of chômeurs more illuminating than that in RG? Appendix B of this book is a useful summary of B’s analyses of sixteen representative languages, where one can check how these languages handle chômeurs (‘marked Cases’ in B’s terminology): Some languages use P insertion, others N Reanalysis, and still others N Incorporation. Perhaps B can claim superiority in that while RG has three separate markings, B has two—P insertion and NI (overt and abstract). But the margin is minuscule. Since N Reanalysis shows up as a deus ex machina whenever an NP faces a danger of having no Case, one might even say that B’s theory is a notational variant of RG.

Perhaps an improvement on B’s analysis could be made by refining the Case Frame Preservation Principle (15 above). This principle only sets the maximal number of Cases a complex verb can assign, without specifying exactly what Cases, and as such is clearly violated in causative constructions. Consider 34 with a triadic verb in the lower clause.

(34) Sensei wa Taroo ni ryoosin ni tegami o kak-aseta.

  teacher top Taro dat parents dat letter acc write-make

‘The teacher made Taro write a letter to his parents.’

No simplex verbs in Japanese can take the case frame -ni -ni -o.

These problems are ascribed to B’s reluctance to recognize the fact that some instances of Incorporation have the effects of increasing the valence of a verb. The notion of the increase of valence will be formally expressed by a percolation convention of Case-assigning properties. In 34, we can assume that kak- ‘write’ has its Case frame ‘-ni (parents) and -o (letter)’ while -sase ‘cause’ has the Case frame ‘-ni (Taro)’, and that these two frames are amalgamated in the verb complex kak-ase. The same analysis will apply to PI with intransitive verbs (see 25 above), where P will be held responsible for the accusative marking on object NPs.

However, my critical comments above should not overshadow the fresh insights of B’s work, among which the most important is the clarification of the place of morphology in the grammatical system. The syntactic arguments B advances, albeit not flawless, are still powerful enough to
undermine strong versions of the lexicalist hypothesis as vindicated by Di Sciullo & Williams 1987. It is thus shown that morphological operations are not the privileges of the lexical component alone. On the contrary, the well-formedness of syntactically derived complex words must be determined in the syntactic component by precisely the same mechanisms that have been postulated in the lexicon. The verbal (syntactic) and adjectival (lexical) passives in English provide a good example (316). Although these two types of passive exhibit distinct syntactic behavior, they nonetheless manifest the same morphology. These considerations lead B to set up ‘Morphology theory’ as a subtheory of the grammar, on a par with X’ theory, Case theory or government theory. While X’ theory is responsible for X’ and XP categories, Morphology theory takes care of the well-formedness of X0 categories, regardless of whether the X0 categories are formed in the standard lexical component or in the syntax as a result of Incorporation (428–31). This modular view of word formation opens up a new perspective for the interactions of the lexicon and syntax, although it is a serious flaw in this work that except for passing allusions to productivity and semantic transparency, B does not elucidate exactly what properties unify lexical and syntactic words and what properties distinguish them (cf. Shibatani & Kageyama 1988 for relevant discussion).

B’s morphology theory leaves the possibility of extending to the ‘left-hand side’ of the grammar, namely PF. Indeed, this possibility is attested by Shibatani & Kageyama 1988 and Kageyama & Shitabani (in press), where new types of compound formation in Japanese are brought to light which are best analyzed as obtaining after S-structure, presumably in PF. Such instances of PF word formation, taken together with B’s syntactic Incorporation and the standard lexical word formation, point to the correctness of postulating an independent morphology theory that operates across different modules of the grammar.

10. CONCLUSION. Despite the deficiencies mentioned above, I have no doubt that this is important work. As vigorous implementation of the Barriers framework covering as many as eighty languages in the world, it should give a great impetus to GB theorists in the areas of syntax and morphology; as manipulation of a diversity of GF-changing phenomena in a radically new perspective, it issues an intriguing challenge to relational grammarians, language typologists, and all researchers interested in universal grammar and comparative syntax.

Finally, this book offers easy access to specific points in the text, thanks
to the admirably detailed indexes. Misprints are very few: p.64/9th line after (63), Y → X; 111/-2 past → pass; 183/11 & 263/-2 by in large → by and large; 260/8 of → if; 359/-8 frequent → frequently; 427/20 external → internal, internal → external. In addition, wrong citations of page numbers in References are noted: p. 493 Chung (1976), 1-37 → 41-87; p. 498 Roeper & Siegel (1978), 205-42 → 199-260.

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