

Resultative and Depictive Constructions in English*

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I. Introduction

The following illustrates two types of secondary predication, the resultative and the depictive construction:

- (1) a. John hammered the metal flat. (Resultative Construction)
- b. John ate the meat raw. (Depictive Construction)

In (1a), the adjective *flat*, called a resultative, a result phrase, or a resultative predicate, describes the final state of the object NP which results from the action or process denoted by the verb. Thus (1a) means "John caused the metal to become flat by hammering it." On the other hand, in (1b) the adjective *raw*, called a depictive, a depictive phrase, or a depictive predicate, characterizes the state of an NP at the time of the initiation of the main predicate's action.¹⁾ So the sentence (1b) has the meaning "John ate the meat, and at the time he ate it, it was raw."

Many linguists have assumed that the resultative and the depictive construction are not syntactically different despite their difference in semantic interpretation (cf. Rapoport, 1990). In this paper, however, we propose that the resultative and the depictive construction involve two different types of syntactic configuration.

*This paper is the summarized version of Lee's Ph.D. Thesis.

1) "Resultative" and "depictive" may be used to indicate a resultative and a depictive sentence, respectively.

II. Syntactic Status of Resultatives and Depictives

In the literature, it is generally assumed that resultatives and depictives are predicates (Hoekstra, 1984, 1988; Rothstein, 1985; Rapoport, 1990; Napoli, 1992). Let's consider the following examples:

- (2) a. John cut her hair [short].
 b. Jack left her house [furious].

In the above two sentences, there are two predicates, the primary one (the main verb) and a secondary one, in brackets, in the sense of Rothstein (1985). In the resultative construction (2a), *her hair* is assigned two properties – each of which is described by the primary and the secondary predicate, respectively – one of “having been cut by John” and one of “having been short.” Of course, there is a semantic relationship between the two properties: the latter is caused by the former. Similarly, in the depictive construction (2b), *Jack* is given properties from the primary and the secondary predicate, respectively: one of “having left her house” and one of “having been furious.” There is a semantic relationship between the two properties in this case, too: Jack performed the act of leaving her house while he was in a state of fury.

There has been another controversy on what kind of relation resultatives and depictives have with the main verb. Rothstein (1985, 81) and Jackendoff (1990, 228) argue that resultatives and depictives are adjunct XPs. In contrast, Speas (1988) argues that both resultatives and depictives are complements, supposing that a main verb forms a complex predicate with either of them under the head-complement relation. Carrier and Randall (1992), and Rapoport (1990) argue that the resultative is an argument of the matrix verb. On the other hand, Napoli (1992) argues that most resultatives are arguments of the verb, and only those accompanied with fake objects²⁾ are degree modifiers of the matrix verb.

We argue, by citing some convincing pieces of syntactic and

2) When an intransitive verb forms a resultative construction, the so-called fake objects, just like the italicized NPs in (i), play the role of a direct object:

- (i) a. The joggers ran *their Nikes* threadbare.
 b. The kids laughed *themselves* into a frenzy.
 c. They laughed *John* off the stage.

semantic evidence, that a resultative is an argument of the matrix verb, whereas a depictive is an adjunct. This discussion supports the view that resultatives and depictives are syntactically different.

1. Resultative as an Argument

An important formal condition of argumenthood is selection. According to Radford (1988, 192), there are severe selectional restrictions on the choice of arguments. Many linguists have argued that resultatives are selected by the matrix verb (Simpson, 1983; Rothstein, 1985).

Especially, Carrier and Randall (1992, 183) provide concrete examples which show that selectional restrictions are imposed on resultatives: although the resultative predicate is fairly free in terms of category, – it can be an AP, a PP, or an NP – still, not every potential resultative within the same category is allowed:

(3) AP Resultatives

- a. She pounded the dough [_{AP} flat as a pancake].
- b. She painted the barn [_{AP} red].
- c. They ran their sneakers [_{AP} ragged].

(4) PP Resultatives

- a. She pounded the dough [_{PP} into a pancake].
- b. *She painted the barn [_{PP} (in)to a weird shade of red].
- c. They ran their sneakers [_{PP} to tatters].

(5) NP Resultatives

- a. *She pounded the dough [_{NP} a pancake].
- b. She painted the barn [_{NP} a weird shade of red].
- c. They ran their sneakers [_{NP} a dingy shade of grey].

In some cases, resultative constructions constitute idiomatic expressions: they require as their resultatives either one unique lexical item as in (6a) or a small set of lexical items with a highly idiosyncratic meaning as in (6b) (Carrier and Randall, 1992, 184):

- (6) a. God smote him dead/ *half-dead/ *black and blue.
- b. He drove her crazy/ bonkers/ over the edge/ to the brink of lunacy/ *happy/ *to the brink of ecstasy.

We can hardly explain these examples in (3-6) unless we assume that the matrix verb selects a resultative directly.

More convincing evidence for the argumenthood of a resultative comes from the phenomenon of long-distance *wh*-extraction of resultatives. Consider the following sentences from Carrier and Randall (1992, 185):

- (7) a. ?How flat_i do you wonder whether they hammered the metal t_i?
 - b. ?How shiny_i do you wonder which gems to polish t_i?
 - c. ?Which colors_i do you wonder which shirts to dye t_i?
- (8) a. ?How threadbare_i do you wonder whether they should run their sneakers t_i?
 - b. ?How hoarse_i do you wonder whether they sang themselves t_i?
 - c. ?How dry_i do you wonder whether the sun baked the field t_i?

Those sentences in (7) are instances of long-distance *wh*-extraction of resultatives from the transitive resultatives, while those in (8) are instances of long-distance *wh*-extraction of resultatives from the intransitive resultatives. As McNulty (1988, 157, 165) points out, when *wh*-resultatives are extracted out of *wh*-islands, the result is a Subjacency violation rather than an ECP violation. In this respect, resultatives behave like internal arguments:

- (9) a. ?Which boys_i do you wonder whether to punish t_i?
 - b. ?Which guests_i do you wonder which dishes to serve t_i?
 - c. ?Which letters_i do you wonder how vaguely to word t_i?
- (10) a. *How_i do you wonder whether to punish these boys t_i?
 - b. *How_i do you wonder who should punish these boys t_i?
 - c. *How_i do you wonder which boys to punish t_i?

Those sentences in (9) are instances of long-distance *wh*-extraction of internal arguments. On the other hand, those in (10) are instances of long-distance *wh*-extraction of adjuncts. If resultatives are adjuncts, as argued in Rothstein (1985) and Jackendoff (1990), the marginality of the sentences in (7) and (8) must be identical with (10). But the marginality of the sentences in (7) and (8) is identical with (9). This means that the result XPs in (7) and (8) are lexically governed by the verb in the sense of Chomsky (1986a). This evidence crucially supports the claim that resultatives are internal arguments of the verb.

2. Depictive as an Adjunct

The first evidence of the adjuncthood of a depictive comes from its multiplicity. An important difference between adjuncts and arguments is that the former can be iterated, whereas the latter must appear singly (Bresnan, 1982b; Radford, 1988; Pinker, 1989). In this respect, depictives behave like adjuncts while resultatives behave like arguments:

- (11) a. *John washed the clothes *clean white*.
 b. They ate meat *raw, tender*.

(Rothstein, 1985, 18)

As in (11a), a sentence cannot have more than one resultative. But, as in (11b), more than one depictive can be stacked in a recursive manner.

The ordering restriction also supports the adjuncthood of depictives. According to Jackendoff (1977, 58), Hornstein and Lightfoot (1981, 22), and Radford (1988, 177), (postverbal) arguments must precede (postverbal) adjuncts. Note the following contrast from Rothstein (1985, 19):

- (12) a. We hammered the metal *flat hot*.
 b. *We hammered the metal *hot flat*.

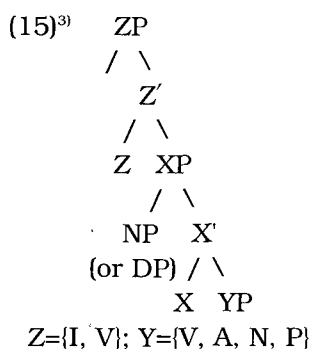
In (12a), a resultative *flat* precedes a depictive *hot*. This sentence is grammatical. On the other hand, in (12b), the depictive *hot* comes before the resultative *flat*. This sentence is ill-formed. If resultatives are arguments and depictives are adjuncts, the contrast in (12) is naturally explained.

The phenomenon of long-distance *wh*-extraction of a depictive clearly shows that the depictive is an adjunct of the verb (Carrier and Randall, 1992, 185):

- (13) a. *How angry_i does Mary wonder whether John left t_i?
 b. *How angry_i does Mary wonder why John left t_i?

The above examples show that extraction of depictives out of *wh*-islands results in total ungrammaticality. This is to be expected if depictive phrases are considered adjuncts. This means that depictives in (13), like adjuncts in (10), are not lexically governed by the verb in the sense of Chomsky (1986a).

Summing up, the critical syntactic difference between the resultative and the depictive construction lies in the distinct



Let's assume that the canonical position of the notional subject is [Spec, XP]. If Z=I and Y=V, then we get matrix predication. On the other hand, if Z=V and Y=A, N, or P, then we get SC predication. Then what is X and what are its syntactic and semantic properties? According to Bowers (1993), it is Pr, a mnemonic for *predication*.

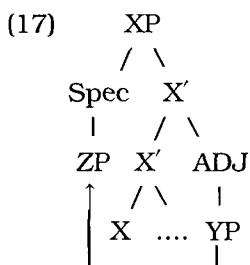
Bowers (1993) proposes that Pr has the following syntactic and semantic properties: (a) the canonical position of an external argument is [Spec, PrP]; (b) Pr functionally selects the maximal projection YP of any category Y; (c) either PrP is functionally selected by I (or AGR), or it can be subcategorized as a complement of V; (d) the semantic function of PrP is predication.

One type of predication, however, is not harmonious with the configurational structure (15). The structure in (16) illustrates SC predication in a so-called adjunct small clause construction (including the depictive construction) (Yang, 1984: 1402):

- (16) a. John left the room *angry at himself*.
 b. John came home *singing a song*.

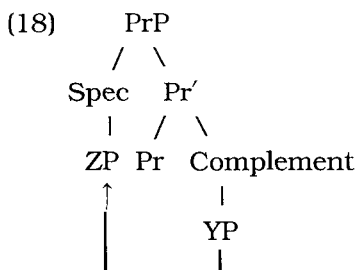
Each predicate of the adjunct SCs in (16) is not a complement in the sense of X-bar theory. For predication in the adjunct small clause construction, we propose the configuration in (17), to be called Peripheral Predication:

3) If we accept the DP hypothesis of Abney (1987), the subject marked as NP should be represented as DP. And if we follow the Split-INFL Hypothesis of Pollock (1989) and Chomsky (1993), I (nfl) should be represented as AGR, more concretely as AGRo.



Peripheral Predication

Peripheral Predication is a relation between the Spec of XP and the predicate YP which is right adjoined to X'. The matrix predication and the so-called complement SC predication (to be called Core Predication) on the other hand, employ a relation between the Spec of PrP and the predicate XP in the complement position:



Core Predication

Our predicational approach to the resultative and the depictive construction is based upon the distinction between these two types of predication.

2) Object in the Spec of VP and Structural Case-Checking

Another major assumption in this paper is that structural Case assignment is, literally, structurally determined. In particular, we argue that the canonical position of the object NP (before Spell-Out) is the Spec of VP.

One major point of Case-checking Theory in Chomsky (1993) is that the N-features of T and V as checker and those of subject and object NPs as checkee are already given in the lexicon. Instead, we would like to suggest (19), which is rather different from the original Checking Theory of Chomsky (1993):

(19) The [+Nominative] feature of the subject and the

[+Accusative] feature of the object as checkee are not given to NPs when they are introduced into the computational system from the lexicon, but generated structurally in the position of [Spec, PrP] and [Spec, VP], respectively.

Given (19), the NP-movement for Case-checking can be uniformly defined as Spec-to-Spec movement on both cases of Nominative and Accusative Case-checking, since the source position of NP-movement for Accusative Case-checking is also the Spec position (of VP).

3) V-to-Pr Movement and Subcategorization Feature Checking

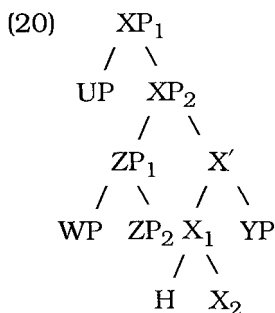
In the Larsonian VP-shell structure, the main verb undergoes movement from the lower V to the empty V position of the higher VP. Larson (1988a, 10) says that this movement is suggested to follow from general principles governing the assignment of Case and agreement.

However, in the Minimalist framework of Chomsky (1993), the V-features of AGR and T are weak. Therefore, the motivation for the overt V-raising suggested by Larson (1988a) cannot be maintained under the Minimalist framework of Chomsky (1993). Then what's the reason for the overt V-raising below the structure of INFL?

We suggest that the morphological motivation for the overt V-raising below the structure of INFL is subcategorization feature checking in the sense of Yang (1993 fall lecture, 1994). According to Yang (1993 fall lecture), the main predicate is inserted into the syntactic structure with its subcategorization feature which prescribes the number of external and internal arguments. To clarify the subcategorization feature of the main predicate, Yang exploits the concept of domain in the sense of Chomsky (1993).

Chomsky (1993, 11ff.) provides two kinds of important concepts of domain which are defined by the minimal X-bar structure:⁴⁾

4) Chomsky (1993, 11) defines the *domain* of a head α as follows: the *domain* of α is the set of nodes (i) which are contained in the least full-category maximal projection dominating α , and (ii) that are distinct from and do not contain α . Thus, the domain of X in (20) is {UP, ZP, WP, YP, H} and whatever these categories dominate.



Chomsky (1993) assumes that the fundamental X-bar theoretic relation is that of head-complement, typically with an associated θ -relation determined by properties of the head. He defines this relation as a concept of domain which is called *complement domain*:

- (21) The *complement domain* of α is the subset of the domain reflexively dominated⁵⁾ by the complement of α . (Chomsky, 1993, 11)

According to the definition (21), the complement domain of X in (20) is YP and whatever it dominates.

Chomsky's the other concept of domain is *the residue of complement domain*. The residue is a heterogeneous set, including the specifier and anything adjoined to the maximal projection, its Spec, or its head. The technical definition of the residue of complement domain is as follows:

- (22) The *residue* of α is the domain of α minus the complement domain of α .

(Chomsky, 1993, 11)

Thus, in (20), the residue of X is {UP, ZP, WP, H} and whatever they dominate.

However, Chomsky (1993, 12ff.) says that the operative relations have a local character. He is, therefore, interested not in the sets just defined, but rather in *minimal* subsets of them that include just categories locally related to the heads:

5) In the following structure,

(i)

$$\begin{array}{c}
 \alpha \\
 / \quad \backslash \\
 \beta \quad \gamma
 \end{array}$$

α dominates β and γ , and α reflexively dominates α , β and γ .

At first, the verb *put* is inserted from the lexicon into the position of Pr_2 with the subcategorization feature [CD=1, ID=2]. In this position, the verb *put* has one CD (=DP₃) and one ID (=PP), so its subcategorization feature cannot be checked. Then the verb *put* raises to V in accordance with the Economy Principle of Derivation.⁶ In this process, the verb *put* forms a chain (put_i, t_i). The concept of the domain of a chain is defined as follows (Chomsky, 1993, 13ff.):

- (26) a. The domain of the chain ($\alpha_1, \dots, \alpha_n$) is the set of nodes contained in the minimal projection of α_1 that are distinct from α_i and do not contain α_i .
- b. The complement domain of the chain ($\alpha_1, \dots, \alpha_n$) is the subset of the domain of the chain ($\alpha_1, \dots, \alpha_n$) reflexively dominated by the complement of α_1 .
- c. The minimal complement domain is the internal domain (=ID).
- (27) a. The residue of the chain ($\alpha_1, \dots, \alpha_n$) is the domain of the chain ($\alpha_1, \dots, \alpha_n$) minus the complement domain of the chain ($\alpha_1, \dots, \alpha_n$).
- b. The minimal residue is the checking domain (CD).

Given the definition of (26) and (27), the chain (put_i, t_i) has one CD (=DP₂) and two IDs (=DP₃ and PP). Apparently, it seems that the subcategorization feature of the verb *put*, [CD=1, ID=2], can be checked or satisfied in this stage. But this is not the case. Here, let us assume (28):

- (28) An argument DP must have a Case feature before Spell-Out in order for a derivation to converge.

Then, the candidate for CD, the DP₂ *the book*, must raise from the Spec of PrP_2 to the Spec of VP to obtain the [+Accusative] feature as checkee. After this raising, there emerges a chain (*the book_j, t_j*), in which the DP₂ in the Spec of VP and the trace in the Spec of PrP_2 are actually the same lexical element. Now, I would like to suggest the following constraint for counting the domain of a predicate:

6) *Economy Principle of Derivation*: A derivation with a longer move is blocked.
 a. Principle of shortest chain: A derivation with a longer chain is blocked.
 b. Principle of shortest link: A derivation with a longer link is blocked.

- (29) For a chain $(\alpha_1, \dots, \alpha_n)$, it is counted as an ID of a predicate X if the tail of the chain is a minimal complement domain of X .

By the constraint of (29), the subcategorization feature of the verb *put*, [CD=1, ID=2], cannot be checked in this position. Then the verb *put* raises to Pr_1 . In this stage, the verb *put* forms a chain (put_i, t_i', t_i) . According to the definition of (26) and (27), the chain (put_i, t_i', t_i) has one CD (=DP₁) and two IDs (=the chain of DP₂ and PP). So the subcategorization feature of the verb *put*, [CD=1, ID=2], can be checked or satisfied in this stage.

Hence, the overt V-raising to Pr is motivated by subcategorization feature checking in our theoretical framework.

4) Adverbs as Adjoined Elements to X'

There have been three kinds of explanation for the position of adverbs. First, Stowell (1981) claims that an adjunct is a daughter of XP . Second, Radford (1988) contends that an adjunct is adjoined to X' . Third, Chomsky (1986a) argues that an adjunct is adjoined to XP . Among the three positions, we take the second position of Radford (1988) as one of our basic assumptions.

An empirical argument for the X' -adjunction of adverbs comes from verbal pro-forms:

- (30) a. John will buy [_{NP} the book] [_{PP} on Tuesday].
 b. John will put [_{NP} the book] [_{PP} on the table].

In (30), both sentences seem to have an identical linear configuration of V-NP-PP. Yet, the NP and the PP are complements in (30b) while the NP, but not the PP, is a complement in (30a). Hence, the two sentences in (30) would have the respective structures of the following under the X' -adjunction hypothesis of Radford (1988):

- (31) a.
- ```

 IP
 / \
 NP PrP
 | / \
 Johnj NP Pr'
 | / \
 tj Pr' PP
 / \ |
 Pr VP on Tuesday
 | / \
 buyi NP V'
 | |
 the book V
 |
 ti

```
- b.
- ```

      IP
     /  \
    NP   PrP1
    |   /  \
  Johnk NP   Pr'1
        |   /  \
        tk Pr1   VP
            |   /  \
          puti NP   V'
                |   /  \
          the bookj V   PrP2
                    |   /  \
                    t'i NP   Pr'
                        |   /  \
                        tj Pr   PP
                            |   |
                          ti on the table

```

Now let us consider the following contrast from Radford (1988, 234):

- (32) a. John will [buy the book on Tuesday], and Paul will *do* so as well.
 b. John will [buy the book] on Tuesday, and Paul will *do* so on Thursday.
- (33) a. John will [put the book on the table], and Paul will *do*

so as well.

- b. *John will [put the book] on the table, and Paul will do so on the chair.

The examples in (32) and (33) have the pro-form *do so*. Jackendoff (1977, 58) observes that *do so* is a pro-form of V' :

- (34) The phrase *do so* is a pro- V' .

Since Jackendoff's V' is equivalent to our Pr' , (34) may be put into (35):

- (35) The phrase *do so* functions as a pro- Pr' .

In (32), the phrases [*buy the book on Tuesday*] and [*buy the book*] are replaced by the pro- Pr' *do so*. This implies that both of these phrases are Pr' constituents. In (33), *do so* can only replace the string [*put the book on the table*], but not the phrase [*put the book*]. This means that, in (33), not [*put the book*] but the whole string [*put the book on the table*] is a Pr' -constituent. Now note that the Pr' -constituency observed in (32) and (33) is not different from that represented in (31a) and (31b).⁷⁾

2. Syntactic Structure of the Resultative and the Depictive Construction

1) Resultative Construction as an Instance of Core Predication

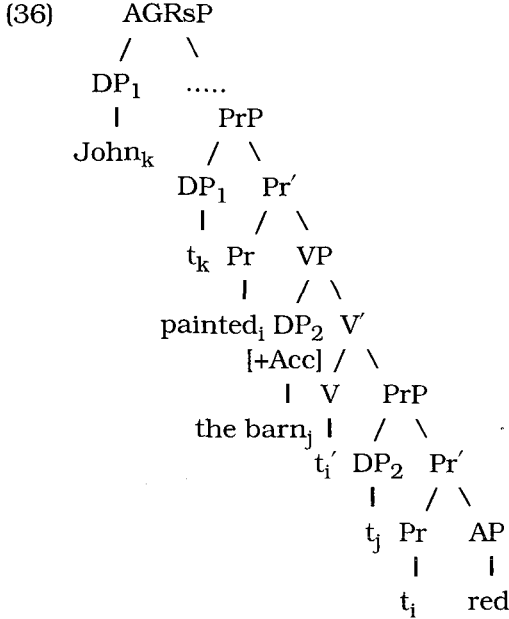
The predication relation between the postverbal NP and the result phrase is an instance of Core Predication, since the latter is a complement (see III.1.1)). Therefore, a resultative

7) Some might argue that the same result comes out even if we assume that the adjunct *on Tuesday* in (31a) is adjoined to PrP and that the phrase *do so* functions as a pro- PrP . If such an argument is accepted, the phrase *do so* in (32) would replace either [t_j *buy the book on Tuesday*] or [t_j *buy the book*], in which t_j represents the trace of the subject NP *John_j*. However, such a view makes an illegitimate LF form for the second conjunct after LF reconstruction in (32):

- (i) a. $Paul_k$ will [$_{PrP}$ t_j *buy the book on Tuesday*] as well.
 b. $Paul_k$ will [$_{PrP}$ [$_{PrP}$ t_j *buy the book*] on Thursday].

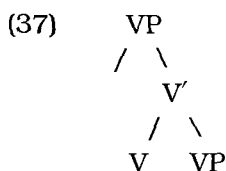
(ia) is the LF form of the second conjunct in (32a) and (ib) is that of in (32b) under the perspective of XP-adjunction version of adverbs. In (ia), for example, the subject NP $Paul_k$ does not have a proper trace which it can bind since the PrP which has replaced *do so* contains the trace not of $Paul_k$ but of $John_j$, namely t_j . So the chain ($Paul_k$, t_j) cannot form a legitimate LF object, and the whole sentence crashes.

construction has a syntactic structure of (36):

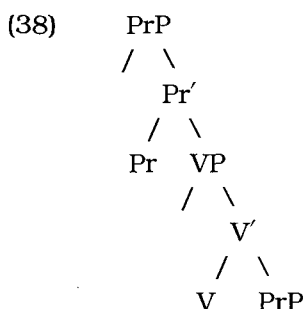


In (36), the verb *painted* is generated in the position of Pr^o of the lower PrP with the subcategorization feature [CD=1, ID=2]. In the lower PrP, the verb *painted* mediates the predicational relation between *the barn* and the AP *red*. Then the verb undergoes head-movement to V to satisfy its subcategorization requirement, [CD=1, ID=2]. But, in that position, the verb cannot have its subcategorization feature checked, since there is no CD. (The chain of DP₂ is considered as an ID since its tail is a minimal complement domain of the verb. see (29).) Hence, the verb *painted* raises to the higher Pr, and gets its subcategorization feature checked: one CD, viz., DP₁, and two IDs, DP₂ and AP. Note also that in (36) the Spec of VP is filled with *the barn* which has undergone DP-movement for getting the Case feature of [+Acc].

The resultative construction has a causative meaning. The causative meaning of the resultative construction is reflected in (36). In Hale and Keyser (1991, 1992, 1993), it is suggested that the VP-recursion configuration (37) represents the "causative" meaning:



Since (37) of Hale and Keyser corresponds to our (38), we may well say that the double PrP structure in (36) represents the "causative" meaning.^{8,9)}



Now, let's turn to the syntactic structure of the so-called intransitive resultative construction. When a resultative construction is made from an intransitive verb, it is called an intransitive resultative construction (Carrier and Randall, 1992, 173):

- (39) a. The joggers ran their Nikes threadbare.
 b. The kids laughed themselves into a frenzy.
 c. He sneezed his handkerchief completely soggy.

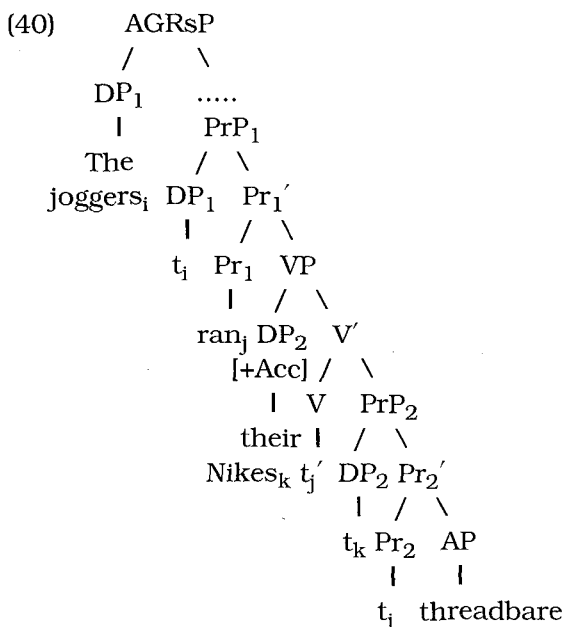
For this construction, I propose the following (40), which is the same as the configuration of the transitive resultative construction in (36):

8) Traditionally causative constructions are analyzed as a structure in which a causative verb takes a clausal argument (Marantz, 1984; Baker, 1988). In our theoretical framework, a PrP corresponds to a notional clause. So if a verb takes a PrP as its complement just like (38), such a structure naturally can have a causative meaning.

9) The structure (38) does not always imply a causative meaning. For instance, the so-called complement small clause in (i) includes the structure (38):

(i) [_{AGRSP} I_i [_{PrP} t_i [_{Pr'} consider_k [_{VP} John_j [_{V'} t_k [_{PrP} t_j [_{Pr'} e honest]]]]]]].

However, (i) does not have a causative meaning. For discussion, see Lee, 1996.



In (40), the verb *ran* is generated in the lower Pr^0 with the subcategorization feature [CD=1, ID=2]. In this position the verb *ran* mediates the predication relation between *their Nikes* and *threadbare*. It combines with the result phrase *threadbare* and compositionally assigns a θ -role to *their Nikes*. The verb *ran* then undergoes head-movement to Pr_1 by way of V to satisfy its subcategorization feature, [CD=1, ID=2]. Incidentally, the Spec of VP is filled with *their Nikes*, which has undergone NP(or DP)-movement to obtain the Case feature of [+Acc]. This means that Accusative Case is assigned to the postverbal NP.

An interesting question arises here: how can the postverbal NP satisfy the Case Filter? It is generally assumed that an intransitive verb can not assign Accusative Case:

- (41) a. *They laughed John.
 b. *They ran the shoes.

However, if we add a secondary predicate to each sentence in (41), we can get well-formed resultative constructions like the following:

- (42) a. They laughed John *off the stage*.
 b. They ran their shoes *threadbare*.

Apparently, in (42), there is nothing to Case-mark the postverbal NP. The matrix verb cannot do so as shown in (41). The resultative cannot do so either, since it is assumed that Case is assigned by a zero level [-N] head. At this point, we need to consider the so-called Burzio's generalization:

$$(43) \theta_s \leftrightarrow A \text{ (Burzio, 1986, 185)}$$

The point of (43) is that a verb assigns an external θ -role (θ_s), if and only if it assigns Accusative Case (A). Burzio (1986, 185) points out that (43), which is equivalent to the statement $-\theta_s \leftrightarrow -A$, consists of two independent claims:

- (44) a. $-\theta_s \rightarrow -A$
 b. $-A \rightarrow -\theta_s$

Rothstein (1992, 125) suggests that the conjunction of these two principles makes a strong prediction, namely that no Accusative Case is assigned when and only when no external θ -role is assigned. In other words, when an external θ -role is assigned, Accusative Case will always be available to licence an NP in the object position. An immediate consequence of this reinterpretation is this: unergative verbs (as opposed to unaccusative verbs) are always potential Accusative Case-assigners. Rothstein's reinterpretation, if reformulated in our theoretical framework, may be put as (45):

- (45) [Spec, VP] is with the [+Acc] feature if and only if the head of VP has the subcategorization feature [CD=1].

Given (45), we can explain the Case problem in the intransitive resultative construction. In (40), the verb *ran* is generated in Pr_2 with the subcategorization feature [CD=1, ID=2]. In conformity with (45), the verb *ran* allows the [+Acc] feature in [Spec, VP]. Later, the DP_2 *their Nikes* is raised to [Spec, VP] to obtain the [+Acc] feature.¹⁰⁾

One intriguing problem concerning θ -marking still remains. It was mentioned that the verb *ran* is generated in the lower Pr^0 with the subcategorization feature [CD=1, ID=2]. However, the verb *ran* does not take any internal argument when it appears in a non-resultative construction. How can we account for this

10) After some subsequent grammatical operations take place, DP_2 is clarified as the object by Accusative Case-checking in the projection of AGRoP .

fact?

I suggest that the argument structure of the verb *run* in intransitive resultative use is different from that of non-resultative use, and that the subcategorization requirement of the verb *run* should be represented in the lexicon as follows:

(46) *run*: V, [CD=1, ID=0 or 2]

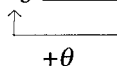
If the verb *run* takes the subcategorization feature [CD=1, ID=0], it is used in the non-resultative construction. On the other hand, if it takes the subcategorization feature [CD=1, ID=2], it is used in the intransitive resultative construction.

An immediate question arises concerning this suggestion: is the postverbal NP in the intransitive resultative construction a real internal argument of the verb? The subcategorization requirement [CD=1, ID=2], suggested for the case of the intransitive resultative construction, leads us to regard the postverbal NP as an internal argument of the verb. Remember that the result phrase is a complement of the verb. This is expressed in (40) as a sisterhood relation between the verb and the result phrase. When the verb *ran* is raised into Pr_1 , it has its subcategorization feature [CD=1, ID=2] checked. According to the definition of ID presented in III.1.3), the verb *ran* takes the chain (*their Nikes_k, t_k*) and the AP *threadbare* as its two IDs. This means that some relevant θ -roles of the verb *ran* are assigned to these two lexical items. Let's consider some examples of the intransitive resultative construction:

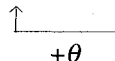
- (47) a. The boy cried himself sick. (Napoli, 1992, 60)
 b. They ran their shoes threadbare. (Rothstein, 1992, 127)

The sentence (47a) has the meaning: "the boy caused himself to be sick by crying." The sentence (47b) has the meaning: "they caused their shoes to be threadbare by running on them." We suppose that the meaning of these examples is a reflection of compositional θ -marking, as depicted in (48):

- (48) a. He caused himself to be sick by crying.



- b. They caused their shoes to be threadbare by running on them.



In (48), the italicized NPs, which correspond to NP objects in (47), are compositionally θ -marked by the underlined expressions. The underlined expressions correspond to the amalgam of the verb and the result phrase in (47).

Since Marantz (1984), it has been generally assumed that compositional θ -marking is available only for the subject. Larson (1988b), however, suggests that in some cases even the direct object can be compositionally θ -marked. Consider the pair (49a, b) presented in Larson (1988b, 340):

- (49) a. Beethoven gave the Fifth Symphony to the world.
 b. Beethoven gave the Fifth Symphony to his patron.

In (49a), the direct object *the Fifth Symphony* has the meaning "masterpiece." On the other hand, in (49b), the direct object *the Fifth Symphony* is understood as a physical object to be transferred. In other words, giving an object to the world is different from giving an object to an individual. This shows that the exact semantic role assigned to the direct object is determined by the amalgam of the verb and the following complement. So the view of compositional θ -marking of the postverbal NP in the intransitive resultative construction is confirmed by the suggestion of Larson (1988b).

On the basis of Larson's corollary, our question on θ -marking is solved in a straightforward manner: the postverbal NP in the intransitive resultative construction is an internal argument of the verb, and it is compositionally θ -marked by the amalgam of the verb and the result phrase.

There are two pieces of evidence which indicate that the postverbal NP in the intransitive construction is an internal argument. The first one comes from the phenomenon of long distance *wh*-extraction of the postverbal NP out of the intransitive resultative construction. Let's consider the following examples from Carrier and Randall (1992, 204):

- (50) a. ?Which metal_i do you wonder who hammered t_i flat?
 b. ?Which metal_i do you wonder whether to hammer t_i flat?
 (51) a. ?Which sneakers_i do you wonder who ran t_i threadbare?
 b. ?Which sneakers_i do you wonder whether to run t_i threadbare?

The sentences in (50) are instances of long-distance *wh*-extraction of the postverbal NP out of the transitive resultative construction, whereas those in (51) are instances of long distance *wh*-extraction of the postverbal NP out of the intransitive resultative construction. As we can see in the above examples, when the *wh*-postverbal NPs are extracted out of the resultative construction, the result is a Subjacency violation rather than an ECP violation. This means that a complement, rather than an adjunct, is extracted out of the *wh*-island. In other words, the marginal status of the examples in (51) indicates that postverbal NPs in intransitive resultatives are internal arguments of the verb.

The second piece of evidence for the complementhood of the postverbal NP in the intransitive resultative construction is found in verbal passive formation (Napoli, 1992, 66):

- (52) a. The seedlings_i were watered t_i flat.
 b. Those cookies_i were broken t_i into pieces.
 c. The socks_i have finally been scrubbed t_i clean.
- (53) a. Her Nikes_i have been run t_i threadbare.
 b. We_j have been talked t_i into a stupor.
 c. Ralph_i was laughed t_i out of the room.

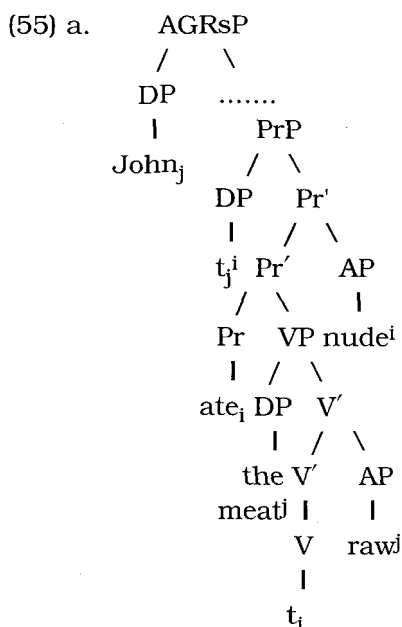
The intransitive resultatives in (53) can form verbal passives just like the transitive resultatives in (52). In other words, when a resultative sentence is passivized, whether it is transitive or intransitive, the postverbal NP plays a role of subject, just as normal direct objects do. But the postverbal NP in the intransitive resultative construction would not be linked to the grammatical function (GF) of object in the absence of the result phrase:

- (54) a. *Nancy has run her Nikes.
 b. *Bill had talked us.
 c. *Sue laughed Ralph.

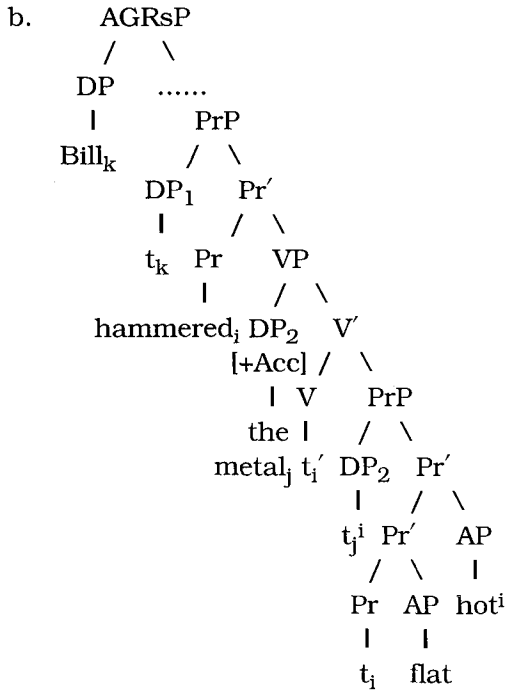
So, the examples in (53) and (54) clearly indicate that the postverbal NP in the intransitive resultative construction is a direct internal argument of the verb, and that the amalgam of the verb and the result phrase is a complex transitive predicate.

2) Depictive Construction as a Case of Peripheral Predication

Now, let's consider the syntactic structure of depictive constructions. In the previous discussion, we argued that the resultative construction is a case of Core Predication just like matrix and the so-called complement SC predication. Here, by contrast, we argue that the depictive construction is a case of Peripheral Predication, since the depictive phrase is an adjunct. In Peripheral Predication, the predicate XP in question is regarded not as a complement but as an adjunct. So the syntactic structure for Peripheral Predication should be an adjunction structure. The tree diagrams in (55) illustrate the syntactic structure of the depictive construction:¹¹⁾



11) The superscript index indicates the relation of predication.



The main point of our suggestion for the syntactic structure of the depictive construction is this: subject-oriented depictives are Pr-licensed adjuncts adjoined to Pr', as we can see in (55a); object-oriented depictives are either V-licensed adjuncts adjoined to V' or Pr-licensed adjuncts adjoined to the lower Pr', as we can see in (55a) and (55b).¹²⁾ If the object NP does not participate in any secondary predication such as the resultative construction, it should be (according to our assumption) generated in the Spec position of the verb phrase. In this case, the object-oriented depictive is adjoined to V' as *raw* in (55a). In contrast, if the object NP takes part in some other secondary predication such as the resultative construction, it should be (according to our theory) generated in the Spec position of the lower PrP. In this case, the object-oriented depictive is adjoined to the lower Pr' as *hot* in (55b). Then how can the (external) θ -role of the peripheral predicate XP (depictive phrase) be assigned to the host NP? We propose that the (external) θ -marking of the depictive construction is realized via Peripheral Predicate-

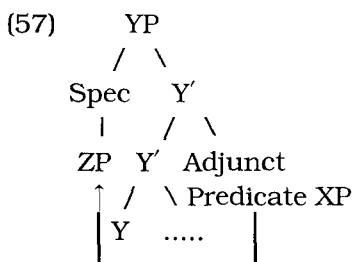
12) Following Travis (1988), we assume that a certain head licenses the modifier (adjective or adverb).

Linking (PPL) which can be assumed to be one of the interpretive principles at LF:

(56) *Peripheral Predicate-Linking*:

In order to have a proper interpretation, a non-selected predicate must be linked to an argument which is in the Spec position of a projection to which it is adjoined.

The principle of Full Interpretation, in the sense of Chomsky (1986b), forces a non-selected predicate XP like a depictive phrase, to have some manner of a subject, since absence of the subject would leave it uninterpreted. PPL is the mechanism by which the non-selected predicate XP can have a subject. Following Radford (1988), we have assumed that adjuncts are adjoined to the intermediate projection. So the configuration of PPL would be depicted as follows:



Peripheral Predicate-Linking

According to the definition of PPL (56), the (external) θ -role of *nude* is assigned to the trace of *John*, t_j , and the (external) θ -role of *raw* is assigned to *the meat* in (55a). Likewise, in (55b), the (external) θ -role of *hot* is assigned to the trace of *the metal*, t_j , through PPL.

Now, let's consider the semantic interpretation of Peripheral Predication. Depictive phrases cannot be a part of the basic thematic structure of a sentence, since they are not arguments but adjuncts. Therefore, the semantic interpretation of depictive phrases should be a kind of modification. In other words, the crucial role of Peripheral Predication is to give an additional meaning to the whole sentence. Of course, such an additional meaning added to the meaning of the whole sentence does not take part in the core meaning of the sentence denoted by the matrix verb and some relevant complements. As predicted in our

assumption, the meaning of the depictive construction is a compositional one which consists of the core meaning of the sentence denoted by the matrix verb and some relevant complements, and the additional meaning of the depictive phrase:

- (58) a. Bill hammered the metal flat.
 = Bill caused the metal to become flat by hammering it.
 b. Bill hammered the metal flat hot.
 = Bill caused the metal to become flat by hammering it,
 and at that time the metal was hot.

As we can see in the interpretation of (58b), the semantic role of a depictive phrase is to add some additional meaning to the sentence. This role is well represented by adjunction structure in syntax, as in (55).

IV. Empirical Arguments for Predicational Approach

In this section, we will examine the empirical feasibility of our predicational approach on the syntactic structures of the resultative and the depictive construction. For this we survey several syntactic anomalies of the two constructions in question. In the course of discussing each problem, we argue that our predicational approach to the resultative and the depictive construction is on the right track by showing that these problems are successfully explained in our theoretical framework.

1. Object-Orientedness of the Result Phrase

A result phrase can only be predicated of the direct object (Simpson, 1983). This fact receives a straightforward explanation in our theoretical framework. For example, (59) cannot have a meaning such as "Fred caused himself to become black by cooking something on the stove."

- (59) Fred cooked the stove black.

In our theoretical framework, the only way for the result phrase to be predicated of the subject is to form a PrP structure with the subject generated in the Spec position of the lower PrP,

(60)

```
      AGRsP
     /    \
   DP1    .....
   |       PrP1
Fredi    /    \
          DP2   Pr'1
          |       /    \
          t'i Pr1   VP
                   |    /    \
               cookedj DP3 V'
                       |    /    \
                     the V   PrP2
                    stove |    /    \
                        t'j DP4 Pr'2
                              |    /    \
                              ti Pr2 AP
                                  |    |
                                *MLC ti black
```

There is another reason for the ill-formedness of (60). The V-raising of *cooked* from V to Pr₁ violates the Principle of Greed.¹⁴ We should postulate that the verb *cooked* has the subcategorization feature [CD=1, ID=2], since it has a subject and two internal arguments, viz., the object and the result phrase. In the position of Pr₂, the verb *cooked* has one CD (=DP₄) and one ID (=AP), so its subcategorization feature cannot be checked. Then the verb *cooked* moves to V. Here, it has one CD (=DP₃) and two IDs (=DP₄ and AP), and so its

α must make the “shortest move” (Chomsky, 1994, 14).

A category moves somewhere only for its own benefit.

oblique argument cannot be located on a postverbal position, since it is structurally impossible.

In our theoretical framework, the postverbal NP and the result phrase must form a PrP structure, since the latter is a predicate. Therefore, the phrase *with his razor dull* in (61b), for example, has the following structure:

(62) [_{PP} with [_{PrP} his razor dull]]

Above all, the PrP cannot serve as the complement of any head other than AGR and V by definition in our theoretical framework (see III.1.1)). So the resultative construction in which a preposition precedes [DP+Result Phrase] is not acceptable in our theoretical framework. Despite this, if we depict the structure for (61b), it would look like the following:

(63)

```

    AGRsP
      /  \
     DP   .....
     |    PrP
    Billi  /  \
          DP  Pr'
          |   /  \
        ti Pr  VP
          |   |
        shavedj V'
                /  \
               V   PP
               |   |
              tj' P'
                /  \
               P   PrP
               |   /  \
            with DP Pr'
                |   /  \
            his razor Pr AP
                   |   |
                   tj dull
    
```

This seemingly plausible structure (63) is illegal due to two syntactic reasons. First, the DP *his razor* in the Spec position of the lower PrP cannot satisfy the Case Filter because it is not θ -

marked by the inherent Case assigner *with*. According to Chomsky (1986b, 193), an inherent Case is assigned by an inherent Case assigner (P, N, or A) to an NP if and only if it θ -marks the NP:

- (64) If δ is an inherent Case-marker, then α Case-marks an NP if and only if α θ -marks the chain headed by the NP.

Also, in (63), the only possible way for the DP *his razor* to be Case-marked is to get an inherent Case from the preposition *with*. However, the DP *his razor* is θ -marked not by the preposition *with* but by the resultative predicate AP *dull* (more precisely by the amalgam of the matrix verb and the result phrase) via Core Predication in our theoretical framework. Therefore, the preposition *with* cannot Case-mark the DP *his razor* due to the Uniformity Condition (64), and so the DP *his razor* violates the Case Filter.

The second reason for the ill-formedness of (63) is that the head movement of *shaved* from the lower Pr to V violates the Head Movement Constraint (HMC), because it crosses the intervening head *with*.¹⁷⁾ The verb *shaved* moves to the higher Pr via V to satisfy its subcategorization feature. But, in the process of such a movement, it crosses the head position which is occupied by the preposition *with*. This is a typical case of the HMC violation. In current terms, we can say that the verb *shaved* crosses a possible landing site. Then the HMC violation reduces to the MLC violation. At any rate, the head movement of *shaved* violates some locality condition, and so the structure (63) is illegitimate.

Consequently, the resultative construction in which a preposition precedes [DP+Result Phrase] is structurally impossible. Therefore, even if the postverbal DP appears as an oblique complement in a non-resultative sentence, it should be represented as the direct object without any preposition in the resultative construction, due to Case and locality requirements.

3. Ban on Predication with the Goal Argument in the Depictive Construction

The notional subject of a depictive predicate must be not a

17) Head Movement Constraint: An X^0 may only move into the Y^0 which properly governs it (Travis, 1984, 131).

Goal but an Agent or a Patient (Rothstein, 1985, 85):

- (65)¹⁸⁾ a. *John gave Maryⁱ the book *drunk*ⁱ.
 b. *The nurse gave Johnⁱ the medicine *sick*ⁱ.

In (65a), the depictive phrase *drunk* can only be predicated of *John*. *Mary* cannot serve as the host NP for *drunk* in (65a), despite that such a reading is pragmatically plausible. (65b) is also an ungrammatical sentence if it means "The nurse gave John, who is sick, the medicine."

However, it is not plausible to simply generalize that depictives cannot be predicated of Goal arguments (Jackendoff, 1990: 203):

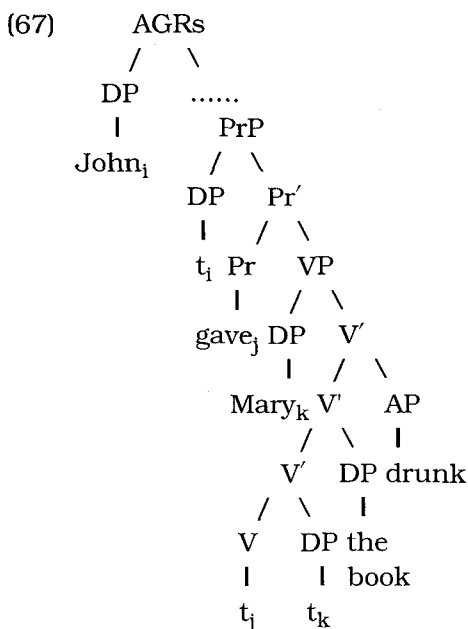
- (66) a. John received the letter *drunk*.
 b. Bill buttered the bread *warm*.

In (66a), contrary to the prediction of Rothstein (1985), the depictive phrase *drunk* is predicated of *John* even though it is a Goal. In (66b), the depictive phrase *warm* is predicated of *the bread*, and the latter can be regarded as a Goal as well as a Patient.¹⁹⁾ Then the examples in (66) suggest that the ungrammaticality of the sentences in (65) does not result from the thematic label "Goal."

Again, the ungrammaticality of the sentences in (65) can be accounted for in purely structural terms according to our theoretical framework. Incidentally, the two sentences in (65) are the so-called double object constructions. Here, we argue that the first object in the double object construction cannot serve as host for a depictive predicate. If Larson's (1988b) "internal passive" analysis of the double object construction is correct, the syntactic structure for (65a) would, in our theoretical framework, be as follows:

18) The superscript index indicates the relation of predication.

19) *X butter Y* means "X causes butter to come to be all over Y" according to Jackendoff's (1990) analysis.

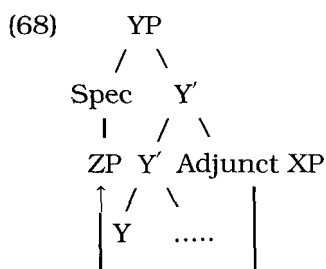


According to Larson (1988b, 351 ff.), a double object construction like (67) is derived from a dative construction through "Dative Shift" – which he argues is a kind of passive. First, Passive absorbs the Case assigned to the indirect object. Second, the θ -role assigned to the subject of VP (the direct object role) undergoes Argument Demotion²⁰, reducing this position to nonthematic status. After Argument Demotion takes place, the direct object is realized as a V' adjunct. The indirect object is Caseless in its deep position, and, in our theoretical framework, the Spec of VP is a position from which it can get a Case feature as checkee. In the usual way, in (67), the indirect object *Mary* undergoes movement to the Spec of VP to obtain the [+Accusative] feature as checkee.

In (67), the indirect object *Mary* and the depictive phrase *drunk* seemingly form a relation of Peripheral Predication. Contrary to our expectation, they cannot form a relation of Peripheral Predication, since the indirect object *Mary* is not in its deep position. The strong D-structure Hypothesis claims that all features of meaning, not just θ -roles, are determined at D-

20) *Argument Demotion*: If α is a θ -role assigned by X^i , the role of α may be assigned (up to optionally) to an adjunct of X^i (Larson, 1988b, 352).

structure. Though this claim is too strong to accept, it is obvious that D-structure determines the grammatical relations such as "subject of" and "object of" (Riemsdijk, van, H. and E. Williams, 1986, 81). Since the representation of predication is a kind of θ -marking, the predication relation should be formed between the deep positions of arguments and predicates. Then the depictive phrase *drunk* in (67) forms a relation of Peripheral Predication not with *Mary* in the derived position, the Spec of VP, but with the trace t_k . But the trace of *Mary, t_k , cannot be the notional subject of *drunk* because it is not in the Spec position. By definition, the predicate XP in an adjunct position must be predicated of the argument in the Spec position of the very projection to which it is adjoined:*



Peripheral Predication

However, in (67), the trace of *Mary*, t_k , and the depictive predicate, *drunk*, do not form a proper configuration for Peripheral Predication because the former is not in the Spec position. So the depictive predicate, *drunk*, cannot be related to any argument, and so it cannot be interpreted properly. Hence, the structure (67) violates the FI Principle, since the depictive predicate *drunk* is not a legitimate, properly interpreted, lexical item. Consequently, in our theoretical framework, the phenomenon of ban on the predication with Goal arguments in depictive constructions can be successfully accounted for in structural terms without depending upon an improper constraint which refers to a θ -role label.

V. Conclusion

In sum, we propose that the resultative and the depictive

construction are distinguished on syntactic grounds: the former is a case of Core Predication and the latter is a case of Peripheral Predication. This refutes the lexicalist claim that the resultative and the depictive construction can be explained only at the lexical semantic level. A straightforward consequence of our proposal is that the semantic difference between the two constructions is reflected in syntactic configuration.

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