

## FURTHER COMMENTS ON INSTRUMENTALS

by

Richard J. Leskosky

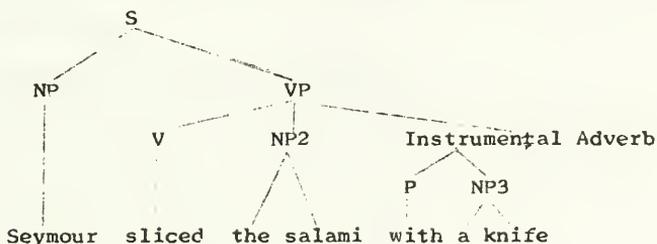
0. Introduction

In his 1968 work on instrumental adverbials<sup>1</sup> Lakoff provided a number of arguments for the position that the two sentences

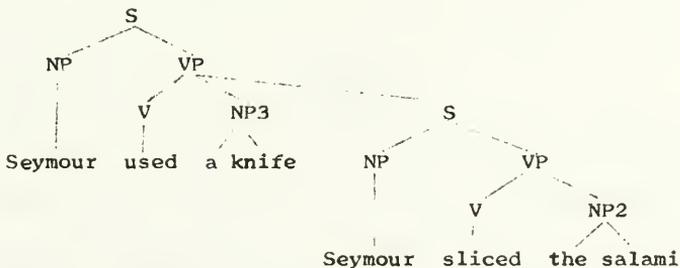
- 1a) Seymour sliced the salami with a knife.  
 1b) Seymour used a knife to slice the salami.

must have the same deep structure rather than the separate structures usually postulated at that time:

2a)



2b)



His contention was that the single structure underlying the two sentences would necessarily have to be more abstract than the representation of deep structure subscribed to by Chomsky or else



English grammar and their correspondence in these constructions is stranger still if their deep structures are essentially different. In his view a correct grammatical analysis would express the two above constraints as a single constraint.

In an attempt to counter this argument Bresnan cites<sup>4</sup> the "for-dative" as a construction which demands a constraint between the object of the verb and the object of a preposition:

- 7) Seymour called me a porter. (=Seymour called a porter for me)
- 8) \*Seymour called me myself. (=\*Seymour called me for myself)
- 9) Seymour brought Harry a concubine.
- 10) \*Seymour brought Harry himself.  
 (=\*Seymour brought Harry for himself)

She points out that in this respect instrumentals and datives behave the same, "are strikingly different from other phrases, and surely must be treated in special ways."<sup>5</sup> As an example of this special treatment she offers another exceedingly strange rule to the effect that the antecedent of an oblique noun phrase in a verb phrase must lie outside that verb phrase ("operate across a verb").

There are, however, two points which can be made against this position.

1.1.1 First, although the dative and the instrumental may be strikingly different from other phrases they are also strikingly different from each other and for Bresnan to categorize them together under this same constraint leaves her open to the same charge of overgeneralization that she lays against Lakoff.

The dative but not the instrumental can undergo the Dative Shift Transformation. Thus

- 11) Seymour called me a porter.  
 12) Seymour gave me a salami sandwich.

can be derived from

- 13) Seymour called a porter for me.  
 14) Seymour gave a salami sandwich to me.

but when an analogous transformation is performed on 1a the result is the unacceptable

- 15) \*Seymour sliced a knife the salami.

This difference leads in turn to a further difference between the two constructions--namely, the dative (once it has undergone Dative Shift) can be passivized but the instrumental (that is, the instrumental in its with form) cannot.<sup>6</sup> Thus

- 16) I was called a porter by Seymour.  
 17) I was given a salami sandwich by Seymour.

can be acceptably produced, whereas the following sentence would be ruled out since it could not have met the structural description required for passivization to occur:

- 18) \*A knife was sliced the salami by Seymour.

Lastly, the instrumental also has the constraint that the subject cannot be identical to the object of the instrumental preposition:

- 19) \*Henry broke the window with himself.

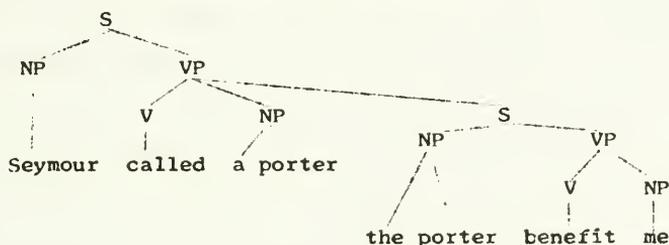
The dative, on the other hand, has no such constraint, as evidenced by sentences like

- 20) Seymour bought a book for himself.  
 21) Seymour bought himself a book.

1.1.2 Second, even if Bresnan is allowed to generalize about the dative and the instrumental as similar structures obeying a similar

constraint, it can nevertheless be argued that a more abstract interpretation of the dative explains the phenomenon at least as effectively as Bresnan's oblique object constraint yet does so in accordance with a constraint already needed in the grammar. Specifically, the constraint in the for-dative sentences which Bresnan cites could be explained by the presence of an underlying verb benefit so that the deep structure of 7 would be something like

22)



Benefit belongs to that class of verbs (like murder, kidnap, assassinate, and use) which cannot take an object identical to the subject. Sentences like 8 and 10 would then be ruled out on the grounds that

23) \*I benefit myself.

is ungrammatical.

1.1.3 Bresnan's attempt to use the dative to defend her idea of deep structure only militates against that concept in the end, for if the dative and the instrumental are to be taken as operating under the same constraint this can be meaningfully done only within the context of a more abstract notion of deep structure wherein both instrumental and dative would be derived from underlying verbs.

1.2 Bresnan offers as partial counterevidence to Lakoff's argument the fact that there are many dialects in which

24) Seymour used a knife to slice the salami with.

is acceptable.<sup>7</sup> This is taken to indicate that 1a may be embedded in 1b. If such were the case, Bresnan points out, some similarities in co-occurrence relations and selectional restrictions between the two sentences would be expected (namely, those Lakoff pointed out). On the other hand, differences like those Bresnan claims between the sentences would also be possible.

- This argument could be dismissed with the assertion that it was not such a dialect Lakoff was describing. A more honest and meaningful approach to the problem is forestalled by the lack of further data on the dialects mentioned--for example, whether the with is an optional or an obligatory constituent of the structure and whether it is fully acceptable or only marginally so. It could be suggested, however, that the redundant with is purely a surface phenomenon which occurs because of a mistaken analogy made by the speaker on the basis of sentences like

25) Seymour brought a knife to slice the salami with.

1.3 The most serious allegation Bresnan levels against Lakoff's argument is that his claim about the synonymy of the two instrumental forms is false. Given theoretical assumptions current in 1968-69, if two sentences have the same underlying structure they are necessarily synonymous. If their underlying structures are different, it is not necessary that they have the same meaning; and Bresnan holds that one could expect some differences in meaning in this case since one deep structure contains the additional morphological material use while the other does not. She offers the following examples of such differing selectional properties as support for her claim that 1a and 1b have different deep structures.

26a) All at once Seymour broke the door open with a bat.

27a) Seymour finally managed to open the door with his penknife.

28a) Seymour rapidly sliced the salami with a knife.

are respectively not synonymous with the following doubtful sentences:

26b) ?All at once Seymour used a bat to break open the door.

27b) ?Seymour finally managed to use his penknife to open the door.

28b) ??Seymour rapidly used a knife to slice the salami.

This problem arises from the fact that if these two instrumental forms have the same underlying structure it must be such that it can allow either the use S or the +ACTIVITY S to appear in surface structure as the primary S with the other S embedded immediately below it--that is, either use or the +ACTIVITY verb may command the other, but they cannot command each other simultaneously. The problem is further complicated by the fact that when use--the underlying verb--becomes embedded in such a structure it appears in its prepositional form with.

As Bresnan pointed out,<sup>8</sup> use and slice (or any other verb which is +ACTIVITY) obviously have different selectional restrictions. The differences between the a and the b forms of 26, 27, and 28 which she ascribes to the "peculiar selectional properties" of the "additional morphological material" use in the use versions are actually due to the differing properties of whichever verb it is that commands the other in the respective sentences. That is, in the sentences given by Bresnan if use is chosen in deep structure to command slice, break, or open it in turn is immediately commanded by another verb (taking the surface form of either a verb or an

adverb). The selectional restrictions of these higher verbs would prevent the appearance of a verb like use in the next S below them, as evidenced by the unacceptability or dubious acceptability of

29) ??All at once Seymour used a bat.

30) ?Seymour finally managed to use a penknife.

31) ?Seymour rapidly used a knife.

Therefore, the b versions of 26, 27, and 28 are unacceptable because use cannot meet the selectional requirements of the higher verb. In the sentences where the +ACTIVITY verb commands the underlying use it is the +ACTIVITY verb which must meet the restrictions of the higher verb in order for the sentence to be acceptable. In the a versions of the above sentences this condition has obviously been met, and the sentences are acceptable.

Thus, Bresnan is only partially right in her analysis. The unusual properties of use are responsible for the unacceptability of 26b, 27b, and 28b, but not because of the mere presence of use but rather because of its position in the deep structure and because of the filtering selectional requirements of the verb above it.

## 2.0 Bresnan's alternate system

2.1.1 Bresnan next attempts to show the superiority of her own system by providing an alternative explanation for the phenomena discussed by Lakoff, the first such instance being those examples showing that an instrumental cannot be embedded in another instrumental. "For this class," she asserts, "there is crucial evidence showing that instrumental adverbs must be syntactically defined in deep structure rather than transformationally derived."<sup>9</sup>

Lakoff relates the ill-formedness of sentences like

32) \*Henry broke the window with a chisel with a hammer.

to the nonoccurrence of the instrumental reading for sentences like

33) \*Henry used a hammer to use a chisel to break the window.

Bresnan notes that Lakoff gives no motivation for the nonoccurrence of the latter type of sentence and then goes on to state that these facts are only superficially related, that Lakoff's is a false generalization. She holds that there are limitations on the number and kind of adverbial phrases associated with any given verb and that it moreover is necessary to subcategorize verbs for lexical insertion on this basis. Verbs that take instrumental adverbials she calls "I-type verbs." Apparently there are no verbs which take more than one instrumental, and this fact is expressed in the Lakoff-rejected theory of deep structure by the Phrase Structure Rules which provide for only one Instrumental Adverbial per VP.<sup>10</sup> Since use and a number of semantically related verbs (for example, employ, and utilize) cannot take "oblique objects of the appropriate kind" (that is, instrumentals) they are not to be considered I-type verbs. This I-type verb category is supposedly useful in explaining the fact that when use has a verb-phrase complement the embedded verb must be an I-type verb (provided that the complement is the type under discussion here). Bresnan calls this "Condition I." Since use is not an I-type verb it cannot fulfill Condition I and so cannot complementize itself--in other words, sentences like 33 are ruled out.

2.1.2 Bresnan's argument continues along these lines, but this serves as a convenient point to pause and raise a number of objections.

First, if all verbs are subcategorized on the basis of the kind and number of adverbial phrases they take, then there must be a set of M-type verbs that take varying numbers of manner adverbials, T-type verbs that take certain time adverbials, D-type verbs that take durative adverbials, and so on indefinitely, since every time a new type of adverbial is distinguished from the rest all verbs must be subcategorized with respect to it. Correspondingly, there must also be Conditions M, T, D, and so on indefinitely, added to the grammar to explain similarities parallel to those exhibited by the instrumental construction discussed here.

All these listings of verbs according to the kind and number of adverbials that they take is no doubt satisfying to certain types of researchers interested in taxonomics, but it reveals nothing about grammar and in fact beclouds the issue. Mere listing provides no meaningful generalizations. Moreover, the degree of overlap of these verb categories is high in the extreme and again provides no insight but only further confusion.

Second, assuming that Bresnan's ideas about I-type verbs and Condition I were correct, she still could not account very well for the non-existence of the with phrase in the S embedded immediately below the use S. In other words, although only I-type verbs can appear as embedded immediately under use-verbs they nevertheless cannot take in this situation the adverbial which qualifies them as I-type verbs. In her earlier discussion of sentences like 24 she suggested by way of explanation that 1a may actually be embedded in 1b. Here in her discussion of résultative clauses (those embedded immediately below use) one can see the point of her earlier mention

of the dialect phenomenon. Given this sort of structure (that is, 1a embedded in 1b) the identical NP naming the instrument in the embedded S can be deleted through some sort of identity-deletion condition. But this does not account for the non-existence of sentences like

34) \*Seymour used a hammer to break the window with a chisel.

Here Bresnan must rely upon certainly the strangest of all the strange constraints she defends--an identity constraint between the direct object of the main verb and the object of a preposition in an embedded S.

Third, although Lakoff gives no motivation for the non-existence of sentences like 33, there is a reasonable constraint which accounts for this phenomenon and which is needed for other verbs as well. Most verbs do not tolerate an embedding of an identical verb immediately below them whether the subject of the embedded S is the same as or different from the subject of the main S<sup>11</sup> as, for example, in

35) \*Seymour sliced the salami to slice the bologna.

36) \*Seymour sliced the salami for Alvin to slice the bologna.

Other verbs can be embedded as complements to themselves with either an identical or a different subject in the embedded S:

37) I forced Earl to force Tom to marry my ugly sister.

38) I forced myself to force Tom to marry my ugly sister.

Finally, there is a class of verbs which cannot be embedded as complements to themselves when the subject of the embedded S is the same as the subject of the main S but can when the subjects are different:

- 39) Alvin expected Carl to expect him to arrive at six.  
 40) \*Alvin expected himself to expect to arrive at six.  
 41) \*Alvin expected to expect to arrive at six.  
 42) I supposed Fischer to have supposed himself to play chess better than Petrosian.  
 43) \*I supposed myself to have supposed Fischer to play chess better than Petrosian.

Use is simply a member of the first and largest of these groups and cannot be embedded under itself as a complement. This constraint, which applies to most verbs, accounts for the nonexistence of sentences like 33. Given Lakoff's system, this also accounts for all cases in which instrumentals within instrumentals are unallowable.

2.2.1 Bresnan classifies the S embedded below use as a "resultative clause" but gives no syntactic characterization of it. Her Condition I "specifies that the result of using an instrument must be something that it is possible to do with an instrument."<sup>12</sup> Verbs like know are not I-type verbs and would violate Condition I if they were embedded below use-verbs. This would explain the non-existence of sentences like

- 44) \*Seymour used a slide rule to know the answer.

Bresnan goes on to try to demonstrate the necessity of having a Condition I. Condition I, as mentioned above, demands that verbs embedded in resultative clauses below use must be I-type verbs. Lakoff's constraint demands that these verbs be +ACTIVITY. Bresnan cites a number of verbs like consider which are +ACTIVITY but not I-type verbs. That consider is +ACTIVITY is evidenced by the acceptability of sentences like

- 45) I forced John to consider the alternatives.

46) I was considering becoming a beekeeper.

But consider cannot be used in instrumental sentences, as in

47) \*I used (a book     )  
          (my mind    )  
          (a computer)

48) \*I considered it with (a book     ).  
                          (my mind    )  
                          (a computer)

To Bresnan this demonstrates that Condition I accounts for data which Lakoff's theory cannot account for and so is more acceptable. The necessity of having a Condition I to explain the above data then justifies a nonsemantic characterization of instrumentals.

2.2.2 I find, however, that Bresnan's supposed counterexamples (specifically, the behavior of the verbs she cites) actually form an argument of their own for the semantic characterization of instrumentals and for other structures as well.

Certain verbs presuppose or subsume certain instrumentations in their meaning. Thus, the following sentences spoken with normal intonation and stress are semantically unacceptable (or, at best, exceedingly strange) because of the redundancy caused by the presence of the instrumentals.

49) ??I strangled Seymour with my hands.

50) ??I used my hands to strangle Seymour.

51) \*The dog bit John with his (mouth).  
  (teeth)

52) \*The dog used his (mouth) to bite John.  
  (teeth)

53) ?Bill shot John with a gun.

54) ?Bill used a gun to shoot John.



using a neck tie instead of bare hands, for instance). Sentences like

69) I strangled Seymour with my own hands.

70) I heard it with my own ears.

are examples of an intensification marking analogous to the intensive reflexive in sentences like

71) I strangled Seymour myself.

72) I heard it myself.

Just as bite presupposes teeth and strangle presupposes hands as instrumentation in the unmarked state, so do Bresnan's +ACTIVITY, -I verbs presuppose the mind in general, some particular mental process, or the vocal apparatus as instrumentation. The difference is that the instrumentation in these latter cases is of a more inalienable nature and the alternatives are extremely limited (if they exist at all) or only figurative. In fact, her -I verbs can take instrumentals in certain marked cases like the following

73) She considered (accepting) his proposal with her heart rather than her brain.

74) She used her heart rather than her brain to consider (accepting) his proposal.

Finally, Bresnan's inclusion of a book and a computer in her sample sentences which appeared here as 47 and 48 can really have no bearing on her argument since these sentences would be semantically anomalous in the same way

75) \*Bill shot John with a knife.

is semantically anomalous.

2.3.1 Bresnan offers a final proof for the necessity of a Condition I by citing a set of verbs with two senses, one +ACTIVITY but not

I-type and the other +ACHIEVEMENT and I-type. Examples are swim, run, climb:

- 76) \*I forced Harry to use a breast stroke to swim.  
 77) He uses special racing shoes to run. (=in order to)  
 78) He was forced to use Marvel crampons to climb. (=in order to)

This set of sentences shows the impossibility of using an instrumental with the first mentioned sense (+ACTIVITY, -I) of these verbs, while such a possibility with the second sense (+ACHIEVEMENT, -I) is demonstrated in the following sentences.

- 79) He used a breast stroke to swim the Hellespont!  
 80) He plans to use special racing shoes to run the race.  
 81) He used Marvel crampons to climb Mt. Everest.

Bresnan obviously takes this as proof that her Condition I is explaining data that Lakoff's +ACTIVITY constraint cannot account for.

2.3.2 Eschewing the subject of the underlying status of the objects of her +ACHIEVEMENT verbs and of the validity of the above structures as actual instrumentals, one can still point out a major flaw in her argument. As she demonstrates the two categories +ACTIVITY and +ACHIEVEMENT they are not mutually exclusive; in fact, +ACHIEVEMENT not only does not imply -ACTIVITY--which would be the case if they were mutually exclusive--but rather entails +ACTIVITY. Thus, +ACHIEVEMENT verbs are actually a proper subset of +ACTIVITY verbs. All Bresnan has shown is that not all senses of all +ACTIVITY verbs can be embedded below use-verbs. She has shown Lakoff's discussion of instrumentals not to be in error but merely to be somewhat too general in one minor aspect. Even this minor flaw is done away with, however, when one considers that Lakoff's constraint is that

verbs embedded as verbal complements to use must be +ACTIVITY and not that all +ACTIVITY verbs must be able to be embedded as verbal complements of use. Thus, the last of Bresnsn's objections to Lakoff's article is done away with.

### 3.0 Conclusion

In this paper I have shown that Bresnsn's arguments against Lakoff's treatment of instrumentals can be answered and her own assertions handled more simply and economically within the framework of Lakoff's ideas on the same subject. Hopefully, this has also produced some additional argumehts for a more abstract notion of deep structure.

## NOTES

- 1 Lakoff, George. "Instrumental Adverbs and the Concept of Deep Structure," Foundations of Language, Vol. 4, No. 1, February, 1968.
- 2 Bresnan, Joan W. "On Instrumental Adverbs and the Concept of Deep Structure," Quarterly Progress Report No. 92, Research Laboratory of Electronics, Massachusetts Institute of Technology, January 15, 1969, pp. 365-375.
- 3 All sentences taken from the Lakoff and the Bresnan articles have been renumbered.
- 4 Bresnan, op. cit., p. 367.
- 5 Ibid., p. 367.
- 6 It should be noted that the only way to produce a passive sentence that has the instrument in subject position is to passivize the use form of the instrumental:  
A knife was used by Seymour to slice the salami.
- 7 Bresnan, op. cit., pp. 367-8.
- 8 Ibid., pp. 368-9.
- 9 Ibid., p. 369.
- 10 Bresnan uses this opportunity to again link the instrumental with the dative by pointing out that, similarly, only one dative is allowed per VP--apparently ignoring sentences like:  
The mailman gave me a letter for (my brother ).  
(the postmaster)
- 11 Sentences like  
Seymour sliced the salami at five o'clock (in order) to slice the bologna at six.  
would not be exceptions to this observation since there is obviously a verb be able which has been deleted (but which is still understood) between the two instances of slice.
- 12 Bresnan, op. cit., p. 371.