

The Case for Cash

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Introduction

In his paper "On the Semantic Analysis of Verbs of Exchange," Richard DeArmond claims that certain verbs form 'co-occurrence relationships' with each other, i.e. they have "a common underlying base form, since they include the same semantic selectional restrictions." (p. 2). Such a relationship holds, he claims, between such verbs of exchange as buy and sell, as well as among other similar pairs.

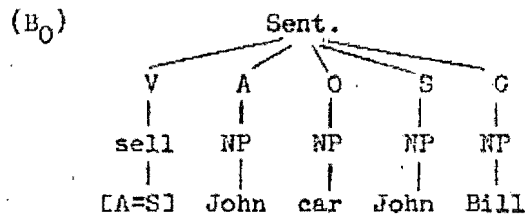
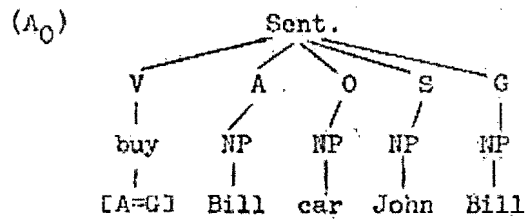
The only way to support this claim is to show that the two members of such an exchange-verb pair are completely symmetrical; otherwise, each verb would have to be treated as a separate lexical entry with its own description. This, in fact, is the crucial distinction between DeArmond's generative semantic approach and Fillmore's case grammar. Fillmore currently believes that verbs like buy and sell cannot be reduced to a common set of semantic primes which would predict their various syntactic peculiarities.

In this paper I will explore some of the syntactic peculiarities of exchange verbs from the case grammar point of view. After deriving the sentences which case grammar handles easily (e.g., John sold a car to Bill), I will discuss indirect object constructions in relation to equivalent sentences without the preposition to (e.g., John sold Bill a car), and show how "benefactives" might be handled. More important, however, will be the discussion of Exchange NP's (Bill bought the car for \$100), for these NP's test the very validity of the case grammar framework. Finally, I will make some tentative proposals about the relationship of exchange verbs in general to the theory of case grammar.

As now conceived by Fillmore, verbs like buy and sell are verbs of motion in which there are at least four underlying variables:

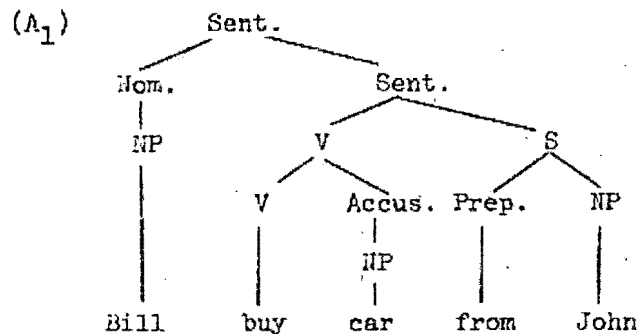
Agent--someone who is responsible for the motion
Object--the thing which moves
Source--where the Object starts out from
Goal--where the Object ends up

These "cases" are concatenated with the verb as follows:

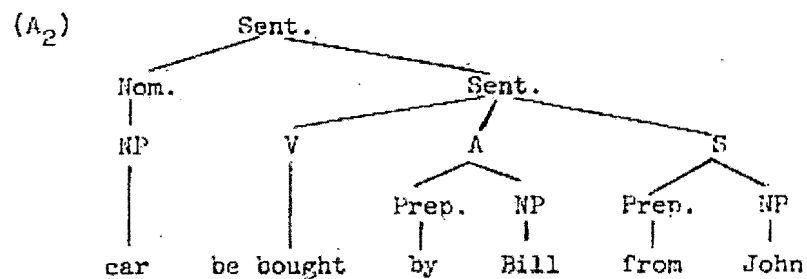


The set of ordered rules 1.-7. will yield the surface structures in (A₁ and (A₂) and (B₁) and (B₂)

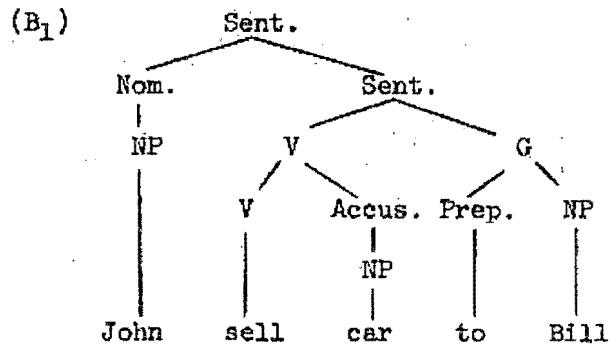
1. Required coreference deletion
2. Accusative marking
3. Passive (optional)
4. Nominative marking
5. Subject formation
6. Object formation (if the Passive is not applied)
7. Preposition selection



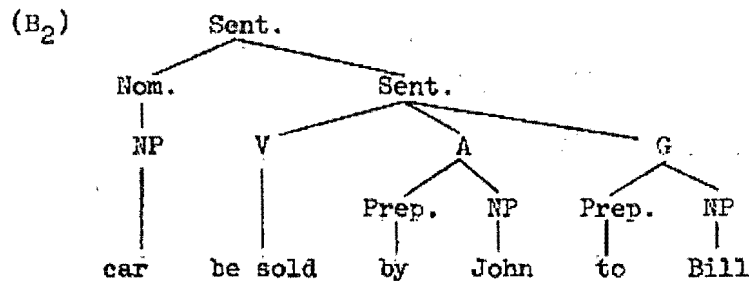
(1) Bill bought a car from John.



(2) A car was bought by Bill from John.



(3) John sold a car to Bill.



(4) A car was sold by John to Bill.

(Note that it is not clear where the Passive downgrades the Agent to, so that for (2) and (4) we could also get:

(5) A car was bought from John by Bill.

(6) A car was sold to Bill by John.)

At this point we can establish the following case frames for buy and sell:

Buy / (_ A O S G)
 (A=G)
 (S=omissible)

Sell / (_ A O S G)
 (A=S)
 (G=omissible)

(The omissibility feature, which is noted by both Fillmore and DeArmond, means that with these verbs the Agent and Direct Object must be specified, though any other term may be absent: Bill bought a car. John sold a car. So, disregarding certain aspectual features, the following sentences are no good: Bill bought from John. John sold to Bill. And, noun phrases which appear as the result of Indirect Object Movement (see below) can only be interpreted as Direct Objects: Bill bought Alice (for Alice). John sold Bill (to).)

One of the things which DeArmond notes about buy and sell is that you get an optional indirect object construction with the latter, but not with the former:

- (3) John sold a car to Bill. (3a) John sold Bill a car.
 (1) Bill bought a car from John. -----

Fillmore has suggested an Indirect Object Movement transformation in order to account for the variation with the verb sell. This would place to Bill before car and delete the preposition to (or simply block Preposition Selection). There are problems in formulating this rule which are beyond the scope of this paper; but if it is workable, it would have to occur before Object Formation and thereby block its application. It would also have to precede Passive, or there would be no way to generate (7),

- (7) Bill was sold a car by John.

because Nominative Marking applies to the first case element following the verb. Note that this accounts for the fact that (in my dialect, at least) sentence (6), which has the preposition to, is grammatical, while (8) is not;

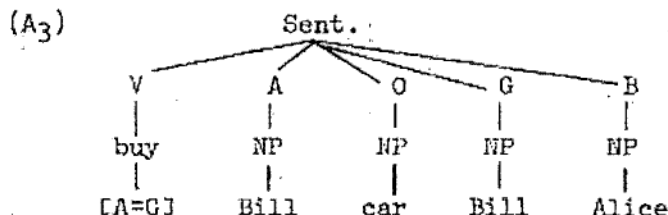
- (8) *A car was sold Bill by John.

for the only way one can get (7) is to first apply Indirect Object Movement, then the Passive. If Indirect Object Movement does not occur, then the Passive will yield (6).

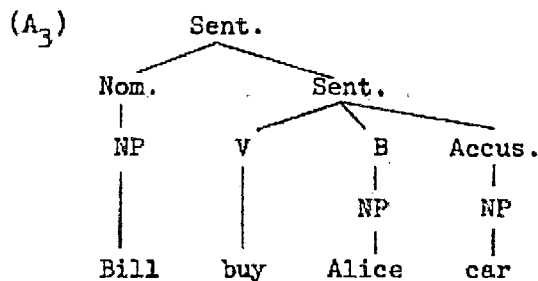
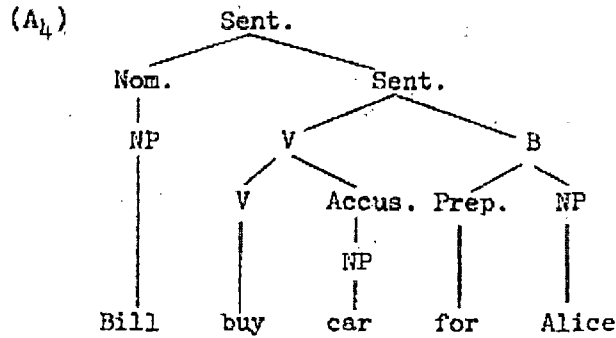
Theoretically, Indirect Object Movement is also possible with buy; but since Required Coreference Deletion gets rid of the indirect object, the former transformation may apply vacuously unless the sentence contains a Benefactive:

- (9) Bill bought a car for Alice.
 (10) Bill bought Alice a car.

Let us suppose that there is an independent case, B. Then these two sentences may be derived as follows:



1. Required coreference deletion
2. Accusative marking
3. Indirect object movement (optional)
4. Passive (optional)
5. Nominative marking
6. Subject formation
7. Object formation
8. Preposition selection



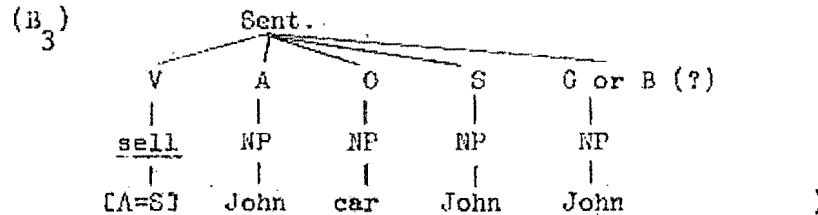
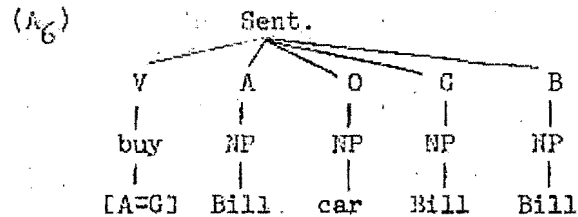
Note that the same constraint on the occurrence of the preposition to is valid for the preposition for. Thus, Indirect Object Movement is an argument for Benefactive being a Goal case of some type.

Some additional facts about the relation of Benefactive to Goal can be deduced from the following sentences:

- (11) John sold $\left\{ \begin{array}{l} \text{a car to Bill} \\ \text{Bill a car} \end{array} \right\}$ for Alice.
- (12) *John sold a car for Alice (on one reading)
- (13) John sold Bill a car for Alice.
- (14) *John sold Alice a car to Bill.
- (15) Alice was bought a car by Bill.
- (16) *Alice was sold $\left\{ \begin{array}{l} \text{a car to Bill} \\ \text{Bill a car} \end{array} \right\}$ by John.
- (17) *Bill bought himself a car for Alice.

Benefactive must co-occur with Goal (which normally remains in the surface structure of sell, but is obligatorily deleted in the surface structure of buy) (sentences (11) and (12)). Goal must occur first in the underlying structure, and it is the case which may undergo Indirect Object Movement (sentences (13) and (14)). Consequently, you do not get Benefactive as the subject of the Passive if a Goal is present (sentences (15) and (16)). Only when the Benefactive is coreferential with the Goal do you get a reflexive (sentence (17)).

(A note on reflexives. Cf., Bill bought a car for himself. Bill bought himself a car. Bill bought Bill a car. The reflexive transformation precedes subject formation; this preserves the well-known constraint on its application: John sold a car to himself. John sold himself a car.)



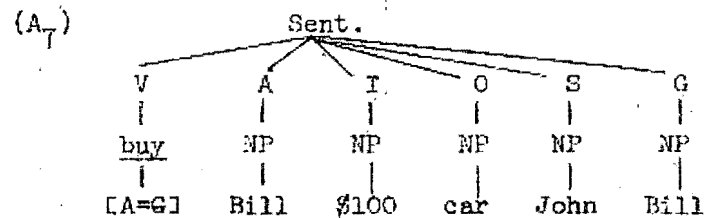
The foregoing also suggests a comparison between Source and Benefactive. Compare (18 and (19), where the underlying sentence is (20)

- (18) *Bill bought John a car.
 (19) *John was bought a car by Bill.
 (20) Bill bought a car from John.

The sentences with John in subject or direct object position must be construed as deriving from (21), which again suggests that Benefactives are like Goals and as such are available for Indirect Object Movement if the Goal is not expressed.

- (21) Bill bought a car for John.

The foregoing analysis poses no insurmountable problems to the theory of case grammar. However, the structures underlying the two verbs in question have to be expanded in order to include another term, which expresses that, in exchange for which the Object was transferred. So we might now want to represent the verb buy, for example, as follows:



Possible justifications for considering the NP \$100 as an Instrument are:

1. You can get the instrumental preposition with in a sentence like (22).

- (22) Bill bought a car with \$100.

Some people might consider this sentence ungrammatical, or, at best, "funny". It may be that there is some sort of complementary distribution here; for generally occurs when we state the amount involved in a transaction; with is necessary when we are pointing out the medium of exchange, as in the following examples:

(23) I bought it $\left\{ \begin{array}{l} *for \\ with \end{array} \right.$ a check (not cash).

(24) I bought it $\left\{ \begin{array}{l} *for \\ with \end{array} \right.$ the \$100 I earned last year.

(Compare the following distinction between for and with:

(25) She bought his loyalty with a kiss.

(26) She bought his loyalty for a kiss.

(25) suggests that SHE OFFERED to kiss him if we would be loyal to her, and HE ACCEPTED. ("kiss" used as an instrument). (26) suggests that HE DEMANDED a kiss from her in return for his loyalty, and SHE ACCEPTED. ("kiss" used as the amount of payment). The same distinction obtains in the following sentences:

(27) He sold his loyalty with a kiss.

(28) He sold his loyalty for a kiss.

There seems to be some sort of directionality which is independent of the verbs buy and sell, but which is associated with the prepositions for and with.)

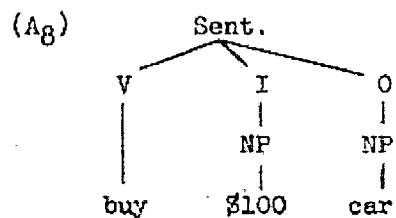
2. You can paraphrase with the instrumental verb use:

(29) Bill used a check (and not cash) to buy the car (with).

Note that the sentence (30) implies that he had more than \$100, but that \$100 was the amount that he allotted for the purchase of the car.

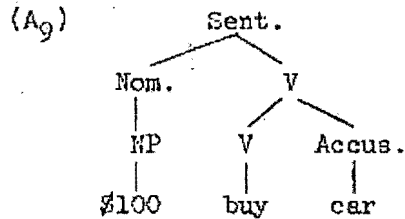
(30) Bill used \$100 to buy the car (with).

3. If the Agent is omitted, the NP \$100 can become the subject of the sentence (as is normal in sentences containing an Instrument):



1. Accusative marking
2. Nominative marking

3. Subject formation
4. Object formation



And you also get the Benefactive here:

- (31) \$100 bought us this car.

But once again certain problems arise. If, in (A₇), the Agent is downgraded by the Passive, then you get (32), but what you want to get is (33).

- (32) *\$100 was bought

}	by Bill a car from John
	a car by Bill from John
	a car from John by Bill

.

- (33) A car was bought by Bill from John for \$100.

Note that this seems to be a general fact about instruments:

- (34) Bill felled the tree with an axe.
 (35) *An axe was felled by Bill the tree.

It seems that you need some sort of "Instrument Shunting" rule, in order to prevent the Instrument from becoming the subject of a Passive sentence.

If the verb buy appears to involve a certain amount of complication, the verb sell seems to present an insurmountable difficulty. Here the NP \$100 certainly cannot be taken as an Instrument:

- (36) *John sold Bill a car with \$100.
 (37) *John used \$100 to sell Bill a car (with).
 (38) *\$100 sold Bill a car.

These prove that the NP \$100 is not an Instrument when associated with the verb sell. But we would also like to say (taking cognizance of the earlier discussion of for vs. with) that the NP \$100 is not an Instrument even with buy. In the case of both verbs \$100 seems to be an Object, which moves from Bill to John.

Two basic problems seem to emerge from the case grammar analysis of the sentences with which we have been dealing:

1. The problem of a single case occurring more than once in the same simple sentence. We would like to say that

a. Both NP's in a verb of exchange (e.g., car and \$100 in the data presented in this paper) are Objects, for the reasons given in

the preceding paragraph.

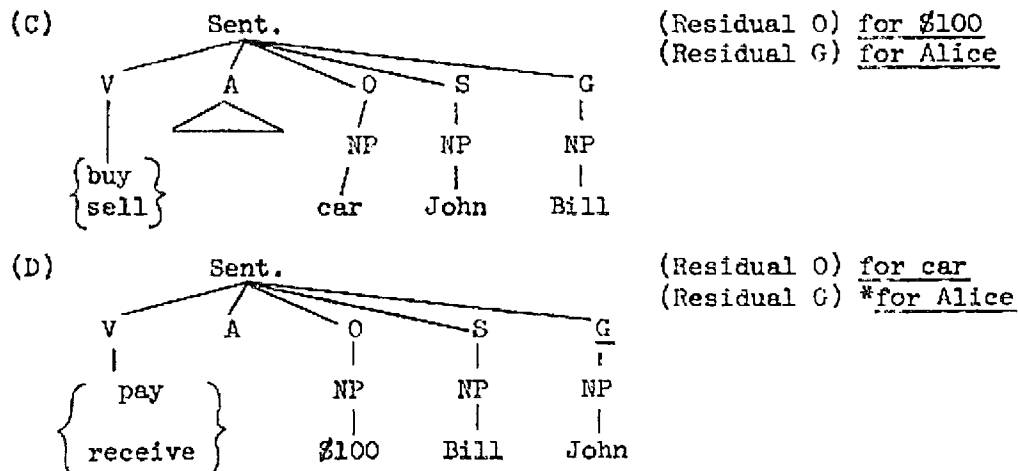
b. Both Goal and Benefactive are instances of the same role notion, that of recipient of an Object.

2. The problem of multi-directionality in a single (simple) sentences.

a. In sentences where you have a monetary amount and an exchange object, the Source of the money is the same as the Goal of the Object; and the Goal of the money is the same as the Source of the Object.

b. In sentences with a Benefactive, there is the more complicated problem that the Goal of the Object with respect to the Source is also the Source of the Object with respect to the Benefactive, which is the ultimate Goal of the Object (but not the Source of anything).

I would like to suggest a tentative explanation for these problems. (The Benefactive and the monetary term both originate in a higher or at least a coordinate, sentence, and appear as Residual Terms in the underlying structures we have posited so far. (Perhaps it would be better not to specify which of the Objects is a Residual Term. See below.) In the following diagrams, the verbs buy & sell and pay & receive have been grouped together, because they have the same Focus of Direction and thus require the same Residual Terms.



(I have no satisfactory explanation for the problem of the Residual Goal on (D).)

What I mean by Focus of Direction is that with the pair buy & sell, the Source and the Goal remain the same; whereas with pay & receive the NP's governed by these roles is reversed. What differentiates the first member of each pair from the second member is the choice of Agent. Buy and receive select the Goal as Agent, while sell and pay select the Source as Agent. This suggests that we might want to have a dummy Agent with a copying rule, as has been suggested to account for Spanish intransitive reflexives such as JUAN SE MURIO 'John died'. Both the copying rule and the reflexive precede subject-formation, so there would seem to be no problem with this analysis.

The solutions discussed (rather sketchily) here are admittedly somewhat vague. This is perhaps due to the complexity of the material. There are many verbs of exchange, such as lend, borrow, pawn, redeem, rent, lease, disburse, reimburse, purchase, cash (a check), fine, earn, forfeit, extort, blackmail, etc. The semantic and syntactic relations among all these verbs requires much more study before any comprehensive solution to their problems can be properly expressed and properly defended.