A C T A U N I V E R S I T A T I S L O D Z I E N S I S
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THE ORGANIZATION OF PREDICATE ARGUMENT STRUCTURE AND CLASSIFICATION OF ENGLISH VERBS*

1. INTRODUCTION

Lexicology, as a branch of linguistics, is devoted to the study of a language's vocabulary. The aim of this paper is to provide a syntactic background for such study, bridging thus the gap existing among different domains of linguistics (lexicon, syntax, and semantics). I will concentrate here on the issue of the generative lexicon and appropriate lexico-syntactic representations for English verbs.

Recent studies, concerned with properties of the lexicon in the Government-Binding model of grammar, demonstrate that the lexical representation of a verb consists of two parts: the lexico-syntactic level and the lexico-semantic level[1]. The lexico-syntactic level of representation is referred to as the Predicate Argument Structure (PAS) of a verb. The PAS indicates the number and types of arguments the verb needs. The lexico-semantic level is called the Lexical Conceptual Structure (LCS) of the verb. The LCS is a representation of the meaning of the verb, in which the participants in the event, process or state denoted by the verb are indicated by means of variables.

In this paper I will discuss the properties and internal organization of the lexico-syntactic level of representation and the correspondences occurring between PAS-types and English verb

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* This article is a modified version of chapters 2 and 3 of my 1991 doctoral dissertation.

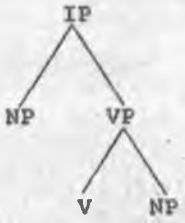
[1] Cf. W i l l i a m s [1981], M a r a n t z [1984], Z u b i z a r r e t a [1985, 1987], K e g l and F e l l b a u m [1988], G r i m s h a w [1990].

classes. I hope to provide a formal and coherent representation for the lexico-syntactic part of information necessary in any lexical entry. It is my belief that fruitful lexicological investigations can be carried out only against an articulated theory of lexico-syntactic representations.

2. THE SYNTACTIC BACKGROUND

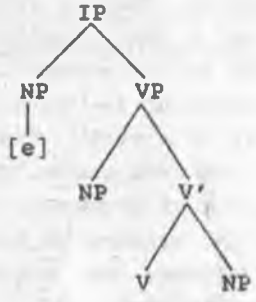
Under standard GB accounts the structure of a simple English transitive sentence has the following (simplified) form[2]:

(1)



In the above structure the external argument is outside the VP, in the SPEC of IP position. Recently, however, some researchers have suggested that the subject is base-generated within the VP, in the SPEC of VP[3]:

(2)



In (2) both arguments of the verb are identified VP-internally, however, only the object is adjacent to the verb. The subject is raised by NP-movement to its surface SPEC of IP position where it receives Case.

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[2] For recent suggestions on the $[_{IP}\ldots[_{VP}]]$ structure cf. C h o m s k y [1989] and P o l l o c k [1989].

[3] Cf. K o o p m a n and S p o r t i c h e [1985], F u k u i and S p e a s [1986], S p o r t i c h e [1988].

The VP-internal subject hypothesis fits with the assumption that VP contains all lexically selected material, furthermore, VP repeatedly appears as the domain for particle construction, idiomatic constructions, incorporation, etc.

It is now possible to define arguments of a verb as base-generated NPs, internal to VP, which must receive Case at S-structure.

Structure (2) conforms also to Larson's Realization Principle [L a r s o n 1988: 382]:

Realization Principle: If A is a predicate and B is an argument of A, then B must be realized within a projection headed by A. The above Principle can be interpreted as a locality condition on argument positions.

The second modification is more controversial as it assumes an underlying SOV word order for English NPs. Apart from the VSO structure postulated by Generative Semantics [cf. M c C a w l e y 1970] it has always been assumed that English is an SVO language at all levels of representation. Recently, however, Jan K o s t e r [1988] has argued that English is an SVO language only with respect to non-NP complements, and that the relevant D-structure is the following[4]:

(3) ... NP NP V PP S' ...

Koster assumes that in the history of English a partial re-orientation has taken place from the original leftward of Old English. This re-orientation begins with PP and sentential complements, while NP complements come last; in modern English the transition to SVO is completed for PPs and S's, but not for object NPs. This "residual SOV structure" hypothesis is formulated below:

(4) The English V governs object NPs to the left in its D-structure position and to the right in its S-structure position.

For categories other than NPs, the verb governs always to the right. The change of directionality of government formulated above, forces an obligatory verb movement:

(5) ... NP NP V ... ⟶ ... NP V_i NP [$_V$ t_i] ...

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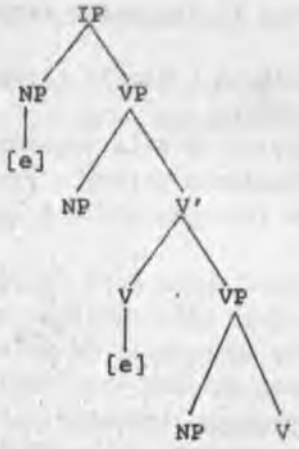
[4] In formulating his hypothesis, Koster takes under consideration the fact that NPs cannot be adjoined to the VP, the binding facts in the double object construction, and discontinuous constructions.

Verb movement of this type has been proposed by L a r s o n [1988], and as an instance of head-movement variant of move-α has been justified by C h o m s k y [1986 b], and B a k e r [1988].

The two modifications yield the following D-structure projected from the PAS of a transitive verb:

(6)



Two movement rules - head-movement of V and NP-raising - give the appropriate S-structure (cf. the traditional (1)).

3. TYPES OF ARGUMENTS AND MODES OF LICENSING

A survey of numerous articles and books devoted to the topic of PAS, lexicon and syntax, yields a typology which recognizes a distinction between external and internal arguments, between direct and indirect arguments, and between two types of indirect arguments. For purposes of exposition I will assume that the external argument is realized by the subject, the internal direct argument by the direct object, and the two indirect arguments by the prepositional object and the indirect object in the double object construction.

From a general assumption that there exist certain principles, or licensing conditions, which apply to every element in a well-formed structure, it follows that also arguments in the PAS have to be licensed (identified) by some structural licenser. In standard GB works this identifying process was referred to as θ-role assignment, or θ-marking [as in C h o m s k y 1981, S t o w e l l 1981, W i l l i a m s 1981].

Below I will present a different account of licensing in which no reference is made to θ-roles and I will concentrate on structural properties of PAS representations. Licensing will be expressed in terms of coindexing the verb with its argument(s). I assume that the lexico-syntactic representations are given in the form of a PAS-grid and an appropriate PAS-tree[5]. The verb assigns to its arguments indices thus licensing them. Following the established convention I use the symbol "x" to indicate the external argument (or rather the external index of the verb), "y" for the internal direct argument (direct index) and "z" for the indirect argument (indirect index).

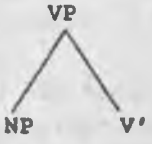
The two modifications introduced above - the VP-internal subject and the residual SOV structure - enable providing the following unified contexts for argument identification:

(7)

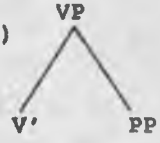
a) Internal:

b) External:

c) Indirect:



d) Indirect: (prepositional)



3.1. INTERNAL DIRECT ARGUMENTS

The structure relevant for licensing the direct argument is given in (7a) above, with sample VPs in (8). The verb identifies

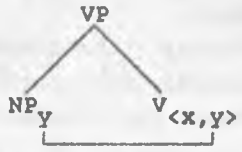
[5] A tree representation for lexical structures (i.e. PAS) was introduced by G u e r s s e l et al. [1985].

the direct argument through indexing, i.e. it assigns the direct index from its PAS-grid to the argument defined by context (7a). The PAS-grid has the form (9a) and the PAS-tree is given in (9b):

(8) a) ... kick the ball.
b) ... kiss the girl.
c) ... hit the dog.

(9) a) PAS-grid: $V_{<x,y>}$

b)



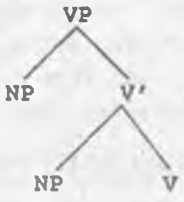
The rule responsible for this type of identificatio is formulated below:

(10) **Direct argument identification:**
In the structure $[_{VP}$ NP $V_{<x,y>}]$, where V governs NP, assign the internal index "y" to NP:
(i) $[_{VP}$ NP $V_{<x,y>}] \longrightarrow [_{VP}$ NP$_y$ $V_{<x,y>}]$

3.2. EXTERNAL ARGUMENTS

The context for licensing the external argument is given in (7b) - the subject is identified not only by the lexical head V, but rather by its intermediate projection V', and thus the full structure is as below:

(11)



Arguments in support for this kind of identification context come from the analysis of phenomena connected with the subject/ /object asymmetry. I will now discuss this issue in terms of θ-roles, as in C h o m s k y [1981] and M a r a n t z [1984], and within the traditional structure (1).

The first argument comes from the observation that the semantic nature of the whole VP determines the thematic interpretation of the subject, whereas the external argument and the verbal head can never together determine the thematic nature of an internal argument. This claim is attested by the following examples [M a r a n t z 1984: 25]:

(12) a) throw a baseball
b) throw support behind a candidate
c) throw a boxing match
d) throw a party
e) throw a fit

f) kill a cockroach
g) kill a conversation
h) kill an evening watching TV
i) kill a bottle
j) kill an audience

In the above examples the selection of the verbal complements (internal arguments) forces a particular type of subject NPs. This is not true for the sentences in (13), where the selection of the external argument does not affect the choice of the internal argument NP [M a r a n t z 1984: 26]:

(13) a) The policeman threw NP
b) The boxer threw NP
c) The social director threw NP
d) Aardvarks throw NP
e) Throw NP!

f) Harry killed NP
g) Everyone is always killing NP
h) The drunk refused to kill NP
i) Silence can certainly kill NP
j) Cars kill NP

Another type of subject/object asymmetry is provided by the behaviour of idiom chunks. As observed by M a r a n t z [1984], most idiomatic expressions involve a fixed choice of the verb and its internal argument, while the subject is free, thus idioms tend to follow the scheme of "NP kicked the bucket".

In case of idioms with a fixed choice of the verb and the subject, the internal argument is usually also fixed, as attested by (14) [M a r a n t z 1984: 27]:

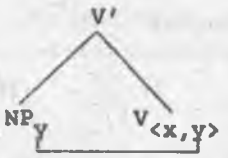
(14) a) the shit hit the fan
b) * the shit hit the air conditioner

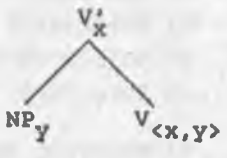
A third type of asymetry is connected with the possibility of an alternating thematic interpretation of the subject. This is attested by the following pair of sentences[6]:

(15) a) John broke the window.
b) John broke his arm.

The NP John in (15) is not uniformly interpreted: in (15a) it is understood as the Agent, while in (15b) as the Patient (or Experiencer). This alternation follows from the fact that the subject is θ-marked (i.e. licensed) within the whole VP rather than directly by the V head.

To conclude - the lexical head V alone determines the nature of the direct argument (θ-marks it = licenses it) and provides it with an index, whereas the external argument is licensed by the head together with its internal argument(s). This process is composite: only after the internal index is assigned (16a), the external index is freed from the grid and moves to a higher node (16b)[7]:

(16) a) 

b) 

Next, the V' node licenses the external argument by means of coindexing:

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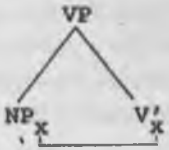
[6] Cf. the discussion of these sentences in C h o m s k y [1981: 105], see also the sentences in (25) below.

[7] This upward movement of the index is made possible by some variant of g(overnment)-projection; cf. L o n g o b a r d i [1985: 164].

(17)



The appropriate rule is given below:

(18) External argument identification:
In the structure $[_{VP}$ NP $[_{V'}\ldots V_{<x,y>}]]$, where V' governs NP, assign the external index "x" to NP:

(i) $[_{VP}$ NP $[_{V'}\ldots V_{<x,y>}]] \longrightarrow$

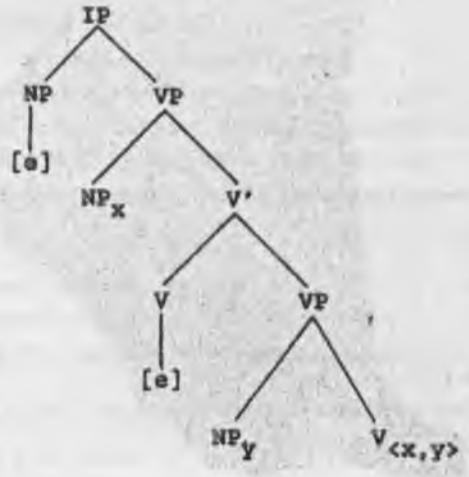
(ii) $[_{VP}\ NP_x\ [_{V'}\ldots V_{<x,y>}]]$

In (18) the symbol "$V_{<y>}$" abbreviates the process formulated in rule (10). Under our account, the external argument is realized within the VP and it is external to the non-maximal projection V', and therefore the PAS-grid representation has the form (19):

(19) PAS-grid: $V_{<x,y>}$

This PAS-grid represents typical dyadic verbs such as kiss, kick, hit, i.e. The relevant tree projection is (20), note however, that conditions on head-movement force a different internal structure of VP than the simplified (11) above, i.e. there is an additional (empty) V position:

(20) PAS-tree:



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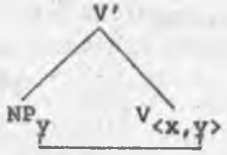
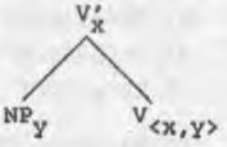
(16) a) 

b) 

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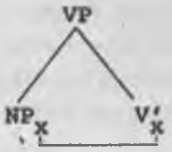

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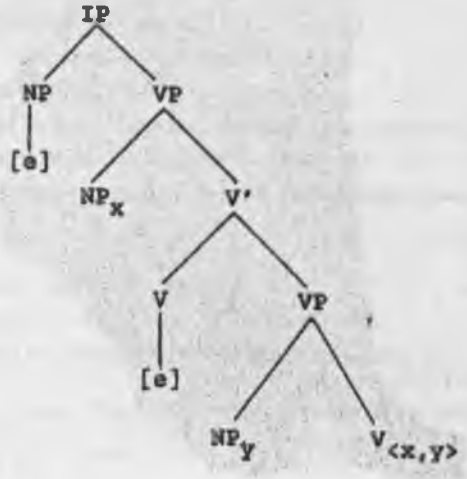
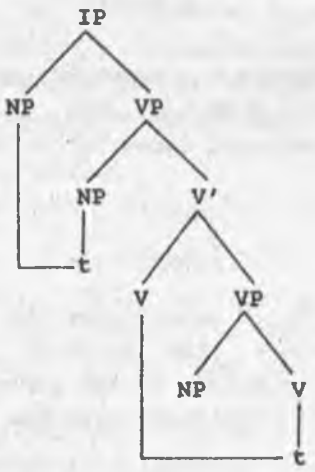


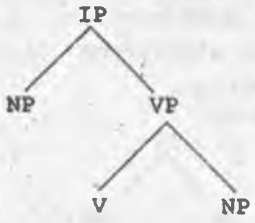
The structure in (20) is the l-syntax, i.e. syntax in the lexical representation of an item. Arguments are identified here according to rules (10) and (18)[8]. L-syntax is projected onto s-syntax (the syntax which relates D-structure and S-structure)[9]:

(21)



The final, surface, structure is the familiar (22):

(22)



(Recall, that we have simplified here the $[_{IP}...[_{VP}]]$ structure, for full elaborations, cf. C h o m s k y [1989] and P o l l o c k [1989]).

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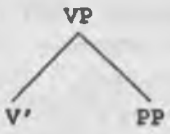
[8] A fully adequate formulation of rule (18) should take under account the structure in (20b).

[9] Further on l-syntax and s-syntax cf. H a l e and K e y s e r [1990: 16].

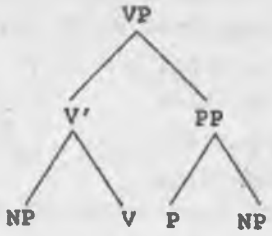
3.3. INDIRECT (PREPOSITIONAL) ARGUMENTS

The structure where a prepositional object (indirect argument) is identified has the form (7d), repeated here as (23), an abbreviation for the full structure (24):

(23)



(24)



What are the properties of indirect arguments in prepositional complements? Linguists, discussing properties of θ-role assignment in indirect arguments, observed an interesting peculiarity of these arguments - their semantic restrictedness. Speaking in terms of θ-roles M a r a n t z [1984] and Z u b i z a r r e t a [1985] point to the fact that external and direct arguments are semantically unrestricted - for example external arguments may be assigned other θ-roles than Agents[10]:

(25) a) John attacked Bill. (Agent)
b) Mary enjoyed the movie. (Experiencer)
c) Susan received the package. (Goal)
d) The skeleton key opened door. (Instrument)

On the other hand, the indirect argument is often restricted by an appropriate preposition:

(26) a) the object of to is usually the Goal,
b) -------- from --------- Source,
c) -------- of --------- Theme,

---

[10] Examples from L a s n i k [1988: 1].

d) ---------- in -------- Location,
e) ---------- with -------- Instrument, etc.

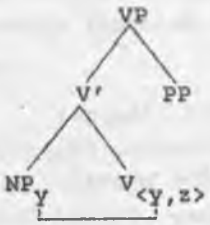
However, the claim that it is only the preposition which licenses the indirect argument seems to be too strong. As observed by H o l m b e r g [1986], there exists a direct object/prepositional object asymmetry. Sentences like (27) demonstrate that the verb together with the direct argument determine the role of the indirect (prepositional) argument, whereas the choice of the indirect argument (28) in no way affects the properties of the direct argument [H o l m b e r g 1986: 36-37]:

(27) a) give a book to John.
b) give an answer to John.
c) give a thought to John.

(28) a) give money to a child.
b) give money to the blind.
c) give money to the cause of world revolution.

Taking under consideration the above mentioned facts it is possible to suggest a compositional (verb + preposition) kind of licensing for this type of indirect arguments. As with the external argument, also in structure (24) the V first identifies the direct argument (29a), and only then the indirect index "z" is freed from the grid and moves to V' (29b)[11]:

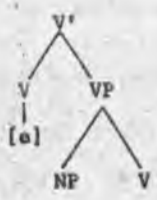
(29) a)



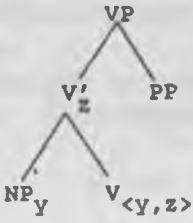
[11] Note, that in (29) the direct argument is identified within V' and not VP; what is required is a reformulation of V' - from (i) to (ii):

(i)

(ii)

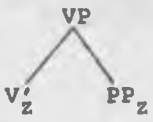


b)

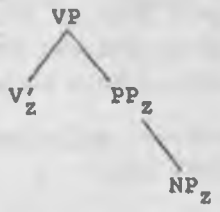


In (29) V' governs its PP complement to the right (cf. Koster's formulation of the order and directionality of government) and identifies the PP assigning it the indirect index "z" (30a), which percolates to the indirect NP argument (30b)[12]:

(30) a)



b)



The PAS-grid for verbs like put or give has the form (31), and the appropriate rule is given in (32):

(31) PAS-grid: $V_{<x,y,Pz>}$

(32) Indirect (prepositional) argument identification:

In the structure $[_{VP}\ [_{V'}\dots\ V_{<y,z>}]\ [_{PP}\dots\ NP]]$, where V' governs PP, assign the indirect index "z":

(i) $[_{VP}\ [_{V'}\dots\ V_{<y,z>}]\ [_{PP}\dots\ NP]] \longrightarrow$

(ii) $[_{VP}\ [_{V'}\dots\ V_{<y,z>}]\ [_{PP}\dots\ NP_z]]$

---

[12] For some verbs the choice of the preposition might be predictable from the meaning of the verb. In such case the verbs's indirect index "z" would match with the index of the preposition, compositionally indexing the NP prepositional object. It is also possible that there are (at least) two types of prepositions: for a verb like put the PP is itself an argument of the verb, whereas for a verb like donate the NP object of to is the argument of the verb. Cf. M a r a n t z [1984], B a k e r [1988], H a l e and K e y s e r [1990].

3.4. INDIRECT ARGUMENTS

There is one more type of indirect argument - the indirect object in a double object construction:

(33) Tim bought Jimmy a toy.

The subject/object and object/prepositional object asymmetries have their counterpart in the direct/indirect object asymmetry: the choice of the direct argument determines the role of the indirect argument [H o l m b e r g 1986: 35]:

(34) a) give John a book
b) give John an hour (to make up his mind)
c) give John the finger
d) give John a thought

The converse relationship, however, does not hold [H o l m b e r g 1986: 36]:

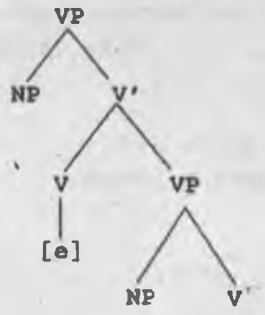
(35) a) give your neighbour a book
b) give me the book
c) give the devil a book
d) give the dogs a book

The above facts, together with the binding asymmetries observed by B a r s s and L a s n i k [1986], suggest that at some level of representation the direct argument is closer to the verbal head than the indirect argument[13]. With Koster's residual SOV structure hypothesis and verbal head-movement a new and more adequate structure for indirect argument identification can be proposed - (36) (=(7c)), an abbreviation for the full structure (37):

(36)

[13] For this reason I reject the analyses proposed by B a k e r [1988] and L a r s o n [1988]. Lack of space prevents me from discussing and comparing the approaches. Cf. K e g l and F e l l b a u m [1988].

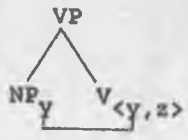
(37)



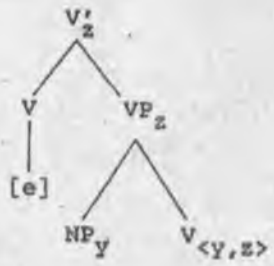
As in previous cases the verb first assigns its direct index "y" (38a), next the freed indirect index "z" is g-projected to the V' node (38b), and finally leftward indexing licenses the indirect argument (38c):

(38)

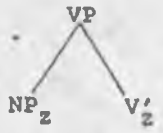
a)



b)



c)



The rule (slightly simplified) is given in (39):

(39) **Indirect argument identification:**
In the structure $[_{VP}$ NP $[_{V'}\ldots$ V$_{<y,z>}]]$, where V' governs NP, assign the indirect index "z":

(i) $[_{VP}$ NP $[_{V'}\ldots$ V$_{<y,z>}]] \longrightarrow$

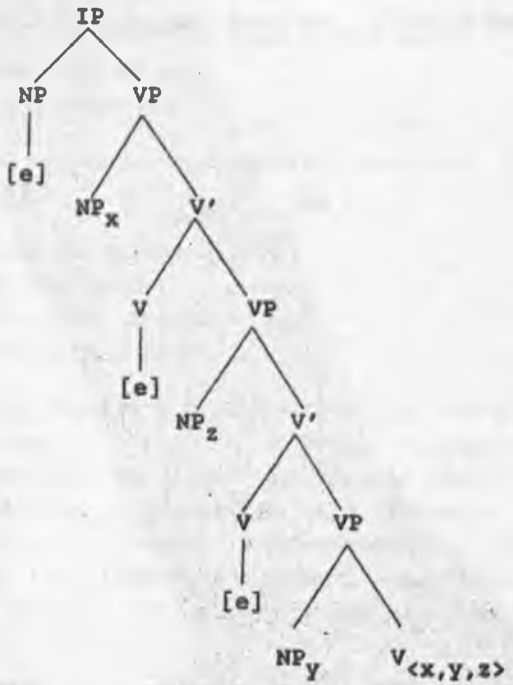
(ii) $[_{VP}$ NP$_z$ $[_{V'}\ldots$ V$_{<y,z>}]]$

The PAS-grid for the double-object variants of *give* and *send* has the form (41a) and its tree projection (41b), with sample sentences in (40):

(40) a) John gave Tom a book.
b) Tim sent Mary a letter.

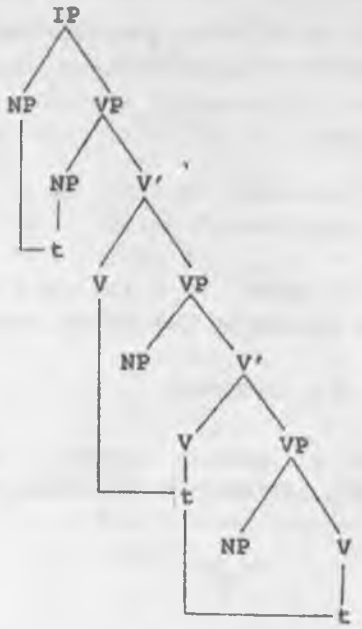
(41) a) PAS-grid: $V_{\langle x,y,z \rangle}$

b) PAS-tree:



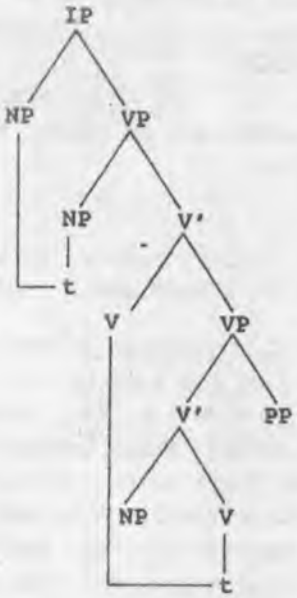
In (42) - the relevant s-syntax representation for double object constructions - successive cyclic applications of head-movement ensure that no barriers intervene between any trace and its proper governor (NP-movement is motivated and conditioned independently):

(42)



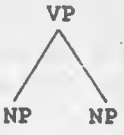
The corresponding s-syntax representation for constructions with PP complements is (43):

(43)



At some intermediate level of representation structures (42) and (43) yield the respective substructures:

(42′)



(43′)

Such exocentric VPs fall under K a y n e's [1984] *small clause* analysis, details of which remain at the moment unclear.

3.5. CONCLUSION

I have proposed here a unified approach to the problem of argument licensing; the general context for identification has the form (44):

(44)

In (44) V^n represents V (the head) or V′ (the nonmaximal projection), and X is realized as either N or P. Furthermore, the ordering of XP and V^n is parameterized (in accordance with Koster's residual SOV structure hypothesis).

Arguments in structure (44) are identified under government, where the most appropriate definition of this notion comes from Z u b i z a r r e t a [1987: 8]:

(45) Government:
A governs *B* iff *A* is a (syntactic or semantic) head or a nonmaximal projection of a head and *A* and *B* are sisters.

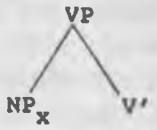
In the case of direct arguments (canonical licensing) the argument is licensed directly by the head, other instances involve licensing by the nonmaximal projection V′. Licensing by V′ is ordered with respect to the direct index assignment. This ordering is motivated by the fact that there exist subject/object, object/ /prepositional object, and direct/indirect object asymmetries which point to a tighter relation between the verb and its direct argument than is the case with other arguments. Direct, external and

indirect (double object) arguments are governed by the verb to the left; prepositional indirect arguments are governed to the right.

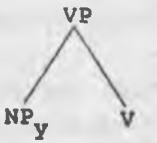
Below, the relevant contexts for argument identification are repeated together with PAS-grids and sample sentences:

(46)

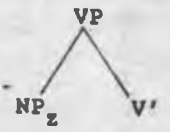
a) External argument "x":
John kissed Mary.
kiss: $V_{\langle x,y \rangle}$



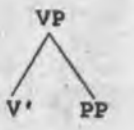
b) Direct argument "y":
John kissed Mary.
kiss: $V_{\langle x,y \rangle}$



c) Indirect argument "z":
John sent Mary a letter.
send: $V_{\langle x,y,z \rangle}$



d) Indirect argument "Pz":
He gave money to the child.
give: $V_{\langle x,y,Pz \rangle}$



4. PAS AND ENGLISH VERBS

In the previous part of this paper I have discussed types of arguments and the internal structure of PAS; now I will review the correspondences occurring between PAS-types and verb classes. The main aim of this presentation is to provide a coherent representation for different verbal classes, compatible with the theory of argument structure, and satisfying the goals set up by research into properties of generative lexicon[14].

Verbal syntactic constructions are usually classified according to the type of complements found with the verb in the given construction. Verbal complements are divided into noun phrase complements and sentential complements, here however, I limit my attention to NP complements[15].

Verbs taking NP complements have been traditionally divided into two major classes: **transitive** and **intransitive**, according to the number of NPs that the verb requires.

4.1. TRANSITIVE VERBS

In a transitive construction the verb occurs with two or three complements, which bear the subject and direct object grammatical relations in the case of two complements (47), or subject, direct object, prepositional object (48), or subject, direct object, indirect object (49), grammatical relations in the case of three complements:

(47) The horse kicked the farmer.
(48) He put the book on the shelf.
(49) John wrote Mary a long letter.

The constructions in (47), (48), and (49) will be called **transitive**, **transitive+PP**, and **double object** constructions, respectively.

---

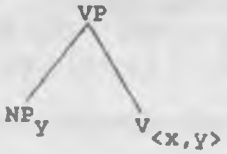
[14] The conception of lexicon underlying this discussion is based on both traditional generative theory [cf. C h o m s k y 1965], and recent developments within this theory [cf. P u s t e j o v s k y 1989, K e g l and L e v i n 1990].

[15] For an attempt at integrating the representations of nominal and sentential complementation for the purposes of a GB lexicon, cf. K e g l and L e v i n [1990]. Cf. also R o c h e t t e [1988] for a discussion of the

Transitive verbs have one external and one internal (direct) argument, and therefore the PAS-grids and PAS-trees for such verbs are trivial:

(50) kick: $V_{\langle x,y\rangle}$

(51)



The situation with transitive+PP verbs is more interesting: verbs belonging to this group often occur with one of the complements (arguments) missing. Within the optional subcategorization approach to this problem, all verbs subcategorized for taking an NP and a PP complement should fall into one of the following four classes[16]: (51).

Verb Class	Subcategorization Frame	Complement Patterns
I	[NP PP]	NP+PP
II	[NP (PP)]	NP+PP; NP
III	[(NP) PP]	NP+PP; PP
IV	[(NP) (PP)]	NP+PP; NP; PP; Ø

However, D o w t y [1979a] found only three classes of verbs, corresponding to classes I, II, and IV above[17]:

(52) Verb Class I: NP+PP
a) They put the children to bed.
b) * They put the children.
c) * They put to bed.
d) * They put.

(53) Verb Class II: NP+PP; NP
a) They transported the freight to the retailers.
b) They transported the freight.

---

semantics and syntax of (Romance) sentential complementation within a related grammatical framework.

[16] Cf. W i l l i a m s [1981]; a critique of such an approach is presented in W o o l f o r d [1984].

[17] Examples in (52-54) and (63-69) are from W o o l f o r d [1984: 392--398].

c) * They transported to the retailers.
d) * They transported.

(54) Verb Class IV: NP+PP; NP; PP; Ø
a) They surrendered the embassy to the radicals.
b) They surrendered the embassy.
c) They surrendered to the radicals.
d) They surrendered.

The general PAS-grid for transitive+PP verbs has the form (55):

(55) PAS-grid: $V_{\langle x,y,Pz\rangle}$

Rendering the subcategorization frames into lexico-syntactic representations produces the following PAS-grids:

(56) put: $V_{\langle x,y,Pz\rangle}$

(57) transport: a) $V_{\langle x,y,Pz\rangle}$
b) $V_{\langle x,y\rangle}$

(58) surrender: a) $V_{\langle x,y,Pz\rangle}$
b) $V_{\langle x,y\rangle}$
c) $V_{\langle x,Pz\rangle}$
d) $V_{\langle x\rangle}$

Taking optional elements in the PAS-grids into parentheses provides a more unified representation:

(59) transport: $V_{\langle x,y,(Pz)\rangle}$

(60) surrender: $V_{\langle x,(y),(Pz)\rangle}$

Some verbs found in a transitive+PP construction appear also in the double object construction. Under the optional subcategorization approach such verbs have alternative subcategorization frames: [NP PP] and [NP NP] [cf. W i l l i a m s 1981]. Assuming that any element in either of the two frames can be marked as optional, there are sixteen different possible patterns of complement configurations. However, due to redundancy, these sixteen patterns produce only ten different complement patterns; thus three different subcategorization frames in (61a) produce only one comple-

ment pattern (61b) (NP_1 = direct object, NP_2 = indirect object), etc.:

(61) a) Subcategorization frames:

1. [NP_1 (PP)] and [NP_1 NP_2]
2. [NP_1 (PP)] and [NP_1 (NP_2)]
3. [NP_1 PP] and [NP_1 (NP_2)]

b) Complement Patterns: NP_1+PP; NP_1+NP_2; NP_1

If we further omit the pattern with the configuration not attested for the transitive+PP verbs - i.e. [(NP) PP] - we are left with seven possible complement patterns (some of which correspond to two or three subcategorization frames):

(62)

Verb Class	Complement Patterns
I	NP_1+PP; NP_1+NP_2
II	NP_1+PP; NP_1+NP_2; NP_1
III	NP_1+PP; NP_1+NP_2; NP_1; PP; Ø
IV	NP_1+PP; NP_1+NP_2; NP_2
V	NP_1+PP; NP_1+NP_2; NP_1; NP_2; Ø
VI	NP_1+PP; NP_1+NP_2; PP; NP_2; Ø
VII	NP_1+PP; NP_1+NP_2; NP_1; NP_2

As noted by W o o l f o r d [1984] dative verbs that allow the [NP PP] complement as well as the [NP NP] construction, fall into seven classes, based upon the complement patterns they display. And these are exactly the seven classes predicted by the above analysis:

(63) Verb Class I:

a) They loaned two dollars to Bill.
b) They loaned Bill two dollars.
c) * They loaned two dollars.
d) * They loaned Bill.
e) * They loaned to Bill.
f) * They loaned.

(64) Verb Class II:

a) They brought the car to Bill yesterday.
b) They brought Bill the car yesterday.
c) They brought the car yesterday.
d) *. They brought Bill yesterday. (with the meaning in (e))
e) * They brought to Bill yesterday.
f) * They brought yesterday.

(65) Verb Class III:

a) The read the article to Bill yesterday.
b) They read Bill the article yesterday.
c) They read the article yesterday.
d) * They read Bill yesterday.
e) They read to Bill yesterday.
f) They read until two o'clock.

(66) Verb Class IV:

a) The Nurse fed the cake to Bill yesterday.
b) The Nurse fed Bill the cake yesterday.
c) * The Nurse fed the cake yesterday.
d) The Nurse fed Bill yesterday.
e) * The Nurse fed to Bill yesterday.
f) * The Nurse fed yesterday.

(67) Verb Class V:

a) They served a meal to Bill yesterday.
b) They served Bill a meal yesterday.
c) They served one meal yesterday.
d) They served Bill.
e) * They served to Bill.
f) The cafeteria serves until two o'clock.

(68) Verb Class VI:

a) They wrote a letter to Bill yesterday.
b) They wrote Bill a letter yesterday.
c) They wrote a letter yesterday.
d) They wrote to Bill yesterday.
e) They wrote Bill yesterday.
f) They wrote yesterday.

(69) Verb Class VII:

a) You owe money to the bank.
b) You owe the bank money.
c) You owe money.
d) You owe the bank.
e) * You owe to the bank.
f) * You owe.

The appropriate lexico-syntactic representations are given below:

(70) loan: $V_{\langle x,y,Pz\rangle}$
$\langle x,y,z\rangle$

(71) bring: $V_{\langle x,y,Pz\rangle}$
$\langle x,y,z\rangle$
$\langle x,y\rangle$

(72) read: $V_{\langle x,y,Pz\rangle}$
$\langle x,y,z\rangle$
$\langle x,y\rangle$
$\langle x,Pz\rangle$
$\langle x\rangle$

(73) feed: $V_{\langle x,y,Pz\rangle}$
$\langle x,y,z\rangle$
$\langle x,z\rangle$

(74) serve: $V_{\langle x,y,Pz\rangle}$
$\langle x,y,z\rangle$
$\langle x,y\rangle$
$\langle x,z\rangle$
$\langle x\rangle$

(75) write: $V_{\langle x,y,Pz\rangle}$
$\langle x,y,z\rangle$
$\langle x,y\rangle$
$\langle x,Pz\rangle$
$\langle x,z\rangle$
$\langle x\rangle$

(76) owe: $V_{\langle x,y,Pz\rangle}$
$\langle x,y,z\rangle$
$\langle x,y\rangle$
$\langle x,z\rangle$

Once again, marking the optional complements (arguments) results in a more elegant PAS-representation of the possible alternations:

(77) loan: $V_{\langle x,y,Pz\rangle}$ (=(70))
$\langle x,y,z\rangle$

(78) bring: $V_{\langle x,y,(Pz)\rangle}$
$\langle x,y,z\rangle$

(79) read: $V_{\langle x,(y),(Pz)\rangle}$
$\langle x,y,z\rangle$

(80) feed: $V_{\langle x,y,Pz\rangle}$
$\langle x,(y),z\rangle$

(81) serve: $V_{\langle x,y,(Pz)\rangle}$
$\langle x,(y),(z)\rangle$

(82) write: $V_{\langle x,(y),(Pz)\rangle}$
$\langle x,(y)z\rangle$

(83) owe: $V_{\langle x,y,(Pz)\rangle}$
$\langle x,(y),z\rangle$

The presence/absence of elements in the PAS-grid of a verb depends on the configuration of the appropriate lexico-semantic representation, a projection of which is PAS.

4.2. INTRANSITIVE VERBS

Constructions which require a single NP are traditionally classified as intransitives. In such constructions the single NP argument is realized as the S-structure (surface) subject:

(84) Tom laughed.

(85) Jim arrived late.

However, within the GB framework two distinct types of intransitive constructions are recognized: unaccusative (ergative) and unergative[18]. The distinction is motivated by the fact that cross-linguistically the S-structure subjects of verbs found in unaccusative constructions share certain syntatic and semantic properties with the objects of verbs found in transitive constructions. On the other hand, the S-structure subjects of unergative verbs share syntactic and semantic properties with the subjects of verbs found in transitive constructions.

Evidence for this distinction comes, for instance, from the phenomena of *ne*-cliticization and selection of the *essere* auxiliary in Italian [cf. B e l l e t t i and R i z z i 1981, B u r z i o 1986]; and also from the possibility of *there* constructions with unaccusative verbs and from the behaviour of cognate objects (derivate nominals) in English.

It has been observed [cf. K e y s e r and R o e p e r 1984: 404], that verbs found in some intransitive constructions allow a transitive variant with the object position occupied by a derivative nominal (86), whereas other intransitives do not occur in such constructions (87):

(86) a) He smiled a strange smile.
b) He dreamed a wild dream.
c) He sang a strange song.
d) He ran a good run.

(87) a) * The ship sank a strange sinking.
b) * We approached a strange approach.
c) * It emerged a strange emergence.
d) * He came a strange coming.

This different behaviour has been taken as evidence that the subject of verbs like **sink, approach, emerge, come,** etc., is actually an object at D-structure and therefore we do not expect to find out a cognate direct object at S-structure. On the other hand, the subject of a verb like **smile, dance, sing, run,** etc., is a subject already at D-structure and therefore the verb can take a direct (cognate) object.

---

[18] This distinction follows work in Relational Grammar, cf. P e r l m u t t e r [1978]. For discussion of the unaccusative/unergative issue within the GB framework, cf. B u r z i o [1986], and K e y s e r and R o e p e r [1984].

In the account provided by K e y s e r and R o e p e r [1984] the respective S-structures for sentences with *dance* and *sink* have the following form:

(88) He danced.

(89) The ship$_i$ sank t$_i$

In (89) the S-structure object position is occupied by an indexed trace which plays a blocking role. Verbs like *dance* on the other hand, have an optional unmarked object (direct argument) position, projected from the lexico-semantic level of representation:

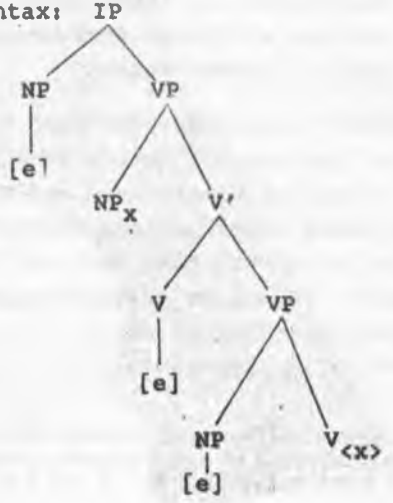
(90) He danced ([$_{NP}$e])

On the basis of language-internal evidence and also according to cross-linguistic observations, the English verbs *smile, dance, laugh, die, run, dream,* etc., are treated as unergative, and verbs like *sink, approach, arrive, bloom, come* etc., as unaccusative (ergative). Both types of verbs are one-argument intransitive verbs, however, *smile*-type verbs appear in the configuration with an external argument ($V_{<x>}$), whereas *arrive*-type verbs are found in a configuration with an internal argument ($V_{<y>}$).

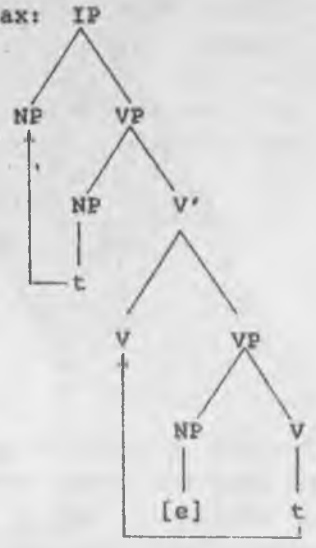
The full derivation for unergative verbs - from l-syntax, via s-syntax, to surface representation - has the following form:

(91) a) PAS-grid: $V_{<x>}$

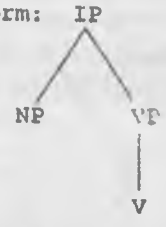
b) l-syntax:



c) s-syntax:



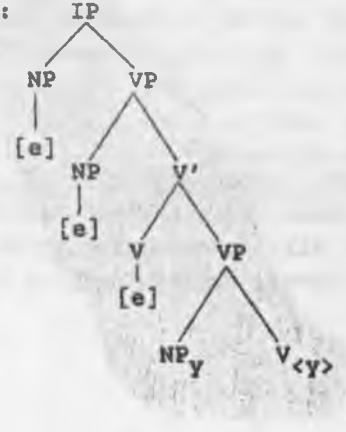
d) surface form:



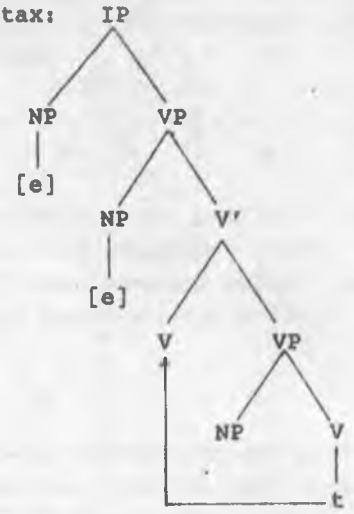
The derivation of unaccusative verbs proceeds as below (both (92c) and (92d) represent s-syntax: (c) illustrates head-movement, and (d) represents NP-movement required by Case theory):

(92) a) PAS-grid: $V_{\langle y \rangle}$

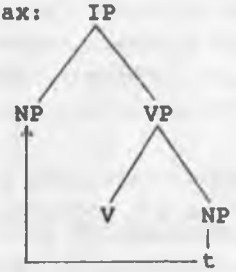
b) l-syntax:



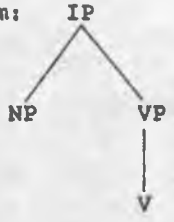
c) s-syntax:



d) s-syntax:



e) surface form:



The surface representations (91d) and (92e) are identical, however, their underlying representations, and especially l-syntax (91b) and (92b) differ considerably (cf. the lower VPs and respective empty NP nodes), explaining thus the contrast between (86) and (87) above.

4.3. TRANSITIVE/INTRANSITIVE ALTERNATIONS

Transitive verbs may occur in intransitive constructions. Also in this case the intransitive variants can be classified as either unaccusative or unergative, as demonstrated in (93) and (94):

(93) a) Joan broke the cup.
b) The cup broke.
c) * Joan broke.

(94) a) Tom ate his lunch.
b) Tom ate.
c) * His lunch ate.

The intransitive **break** in (93b) is treated as unaccusative because its S-structure subject bears the same semantic relation to the verb as the object does in the transitive sentence (93b). The intransitive **eat** in (94b) is considered unergative on similar grounds - its subject bears the same semantic relation to the verb as its subject in the transitive (94a). Ungrammatical sentences (93c) and (94c) provide further justification for this distinction. Relevant PAS-grids are given below:

(95) break: $V_{\langle x,y\rangle}$
$\langle y\rangle$
$*\langle x\rangle$

(96) eat: $V_{\langle x,y\rangle}$
$\langle x\rangle$
$*\langle y\rangle$

Indicating alternations within the PAS-grids simplifies the representations and stresses the difference between verbs belonging to the two different classes: **break** displays the inchoative/causative alternation, and thus the external argument may be missing in some constructions, whereas for **eat** the internal argument is optional (both lexico-syntactic representations (97) and (98) are projections from appropriate lexico-semantic representations):

(97) break: $V_{\langle(x),y\rangle}$

(98) eat: $V_{\langle x,(y)\rangle}$

Verbs of the type exemplified by **like** contrast with **break** and **eat**, because in their PAS-grids both arguments are obligatory:

(99) a) John likes holidays. <x,y>
b) * John likes. *<x>
c) * Holidays like. *<y>
d) like: $V_{\langle x,y\rangle}$

Differences in syntactic behaviour (following different semantics) of **break**, **eat**, and **like**, are captured in the respective PAS-grids - (97), (98), and (99d).

There exist six possible combinations of external and internal arguments with respect to optionality:

(100) a) <x,y> (= PAS for **like**)
b) <x,(y)> (= PAS for **eat**)
c) <(x),y> (= PAS for **break**)
d) <(x),(y)>
e) <x>
f) <y>

Variant (100f), i.e. a verb with only one, internal argument, without a dyadic variant, is realized by verbs found in unaccusative constructions only:

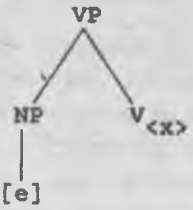
(101) a) John arrived late. <y>
b) * John arrived his brother. *<x,y>
c) * John arrived a late arrival. *<x,y>

Variant (100e), i.e. a verb with only the external argument is realized by intransitive unergative verbs. However, there appears to be a problem with an adequate PAS representation for constructions with cognate objects of the type illustrated in (86), above. One possible solution is to treat the cognate objects as direct arguments and give the following PAS-grid for **die**:

(102) a) John died.
b) John died a stupid death.
c) die: $V_{\langle x,(y)\rangle}$

The relevant part of the PAS-tree for unergative verbs is repeated below (cf. (91b)):

(103)



The empty NP slot in (103) can be interpreted as an unlinked argument of the verb. It is important to introduce here the distinction between projected and linked argument positions[19]. If an argument position is actually present in the PAS-grid of the verb (in l-syntax) it is projected; if it is mapped onto a structural (s-syntax) position it is linked. Arguments of transitive verbs are projected and linked, the missing agent of passives is projected but unlinked (though re-linking is possible through the by phrase), whereas the missing agent of unaccusatives (cf. (92b)) is unprojected and unlinked (i.e. absent from the PAS-grid).

The optional direct argument position of unergative verbs seems to be an instance of a projected and unlinked position, and therefore the appropriate PAS representation should be as in (104) (with the unlinked argument enclosed in { }):

(104) PAS-grid: $V_{\langle x, \{y\} \rangle}$

Notice however, that the class of possible cognate objects is (semantically) very restricted, and that they often require a modifier:

(105) a) * John died Tom.
b) * John died a nasty departure.
c) * John died a death.

The relation between these verbs and their cognate objects is closer and more restricted than that between ordinary transitive verbs and their direct arguments, which is also confirmed by the fact that cognate objects do not passivize:

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[19] A similar distinction is introduced by S a f i r [1987] with reference to thematic structure and θ-roles.

(106) a) * A nasty death was died by John.
b) * A simple life was lived by Mary.
c) * A heavy sigh was sighed by Joan.

All this means that an adequate theory of cognate objects is required, as well as a clear cut distinction between strictly intransitive verbs (i.e. ones which never take a direct object) and transitive verbs used intransitively[20].

Taking under consideration the above mentioned problems, and also for ease of general exposition, I continue to use the PAS-grid $V_{<x>}$ for unergative verbs.

As for variant (100d), i.e. verbs with the following three options:

(107) PAS-grid: $V_{<x,y>}$
<x>
<y>

I assume that this is the configuration for a group of middle verbs. Typical examples of middles are given below[21]:

(108) a) The speech transcribed well.
b) The car drives nicely.
c) These toys assemble rapidly.
d) Bureaucrats bribe easily.
e) The wall paints easily.

The middle construction is derived from basically transitive verbs, however some verbs, such as **read**, allow three variants: transitive, intransitive-unergative, and intransitive-middle:

(109) a) Tom read a long book. <x,y>
b) Tom read until late. <x>
c) This book doesn't read well. <y>

I assume therefore, that the PAS-grid (100d) is realized by verbs like **read**:

(110) read: $V_{<(x),(y)>}$

---

[20] Cf. the remarks in R u w e t [1989]. J o n e s [1988] treats cognate objects as adjunct NPs.

[21] Examples from K e y s e r and R o e p e r [1984: 384].

It has to be stressed at this point, that PAS-grid (110) is interpreted as an abbreviation for *two grids* - (111a) and (111b), excluding the option (112):

(111) read: a) $V_{<x,(y)>}$
b) $V_{<(x),y>}$

(112) * $V_{< >}$

Interpreting grid (110) as (112) would result in generating deviant forms, such as (113):

(113) a) * Read.
b) * Read until late.
c) * Doesn't read well.

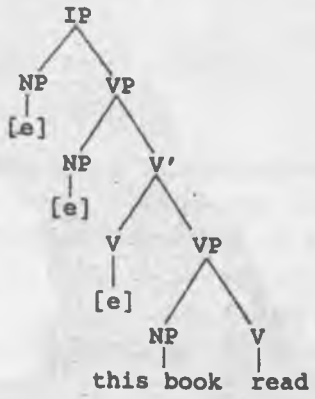
(Forms (113a,b) can be interpreted, correctly, as imperatives, this is however, irrelevant for this discussion).

Under my analysis the PAS-grids for middles and unaccusatives are identical:

(114) a) This book doesn't read well. <y>
b) The cup broke. <y>

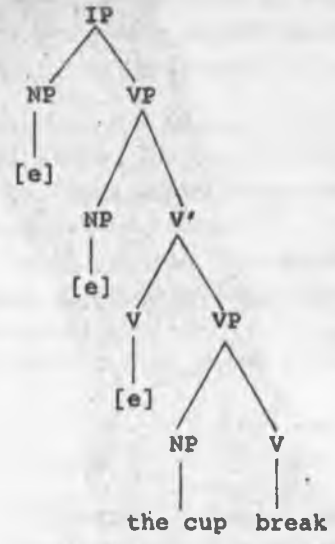
I believe that this result is correct: from l-syntax to surface structure the two constructions are identical (cf. the l-syntax representations in (115)), however, there is a difference between them articulated at an appropriately constructed semantic level of representation[22].

(115) a)



[22] Cf. H a l e and K e y s e r [1987], S t a l m a s z c z y k [1989].

(115) b)



4.4. PSYCH-VERBS

An interesting problem is raised by the psychological state verbs (psych-verbs). Verbs from one group of psych-verbs, represented by **fear, hate, admire, like, know,** etc., behave exactly like simple transitive verbs, as illustrated in (116), and therefore their PAS-grid is the familiar (117):

(116) a) Fred fears his older brother.
b) Jill hates mice.
c) I admire my wife.

(117) fear: $V_{\langle x,y \rangle}$

The second group is represented by **frighten, preoccupy, please, amuse, worry, concern, disturb, surprise,** etc. Such verbs also appear to occur in transitive constructions:

(118) a) Fred frightens his brother.
b) Students disturbed the professor.
c) His visit surprised me.

Using traditional θ-role labels Agent, Experiencer, and Theme, the difference between the two groups of verbs can be explained in the following way: for verbs of the *fear*-class the Experiencer is realized as a subject and the Theme is realized as the object (there is no Agent), and the θ-grid has the form (119):

(119) fear: <Experiencer, Theme>

Verbs like *frighten* pattern in a different way. Here the Experiencer appears as a postverbal object, and the subject position is occupied by an argument encoding the source of experience - Agent (120), or Theme (121)[23]:

(120) John frightens everyone.
frighten: <Agent, Experiencer>

(121) Such situations frighten everyone.
frighten: <Theme, Experiencer>

To conclude: at S-structure the Experiencer argument of the *fear*-type verbs appears in subject position, whereas the Experiencer argument of the *frighten*-type verbs appears in object position.

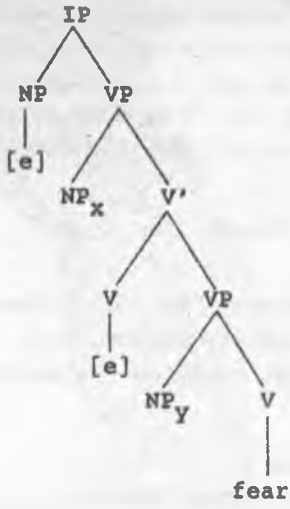
Recent work by B e l l e t t i and R i z z i [1988] suggests a reexamination of the above facts in the light of the unaccusative/unergative distinction. Sentences with *fear*-type verbs (the *temere* class in Belletti and Rizzi) have an uncontroversial D-structure and l-syntax[24]:

(122) a) Fred fears his brother.
NP_x NP_y

[23] Cf. also G r i m s h a w [1988], where the stimulus of the experience is called the *Experiencer*.

[24] B e l l e t t i and R i z z i [1988] discuss these issues with respect to Italian psych-verbs and within a standard GB approach to D-structure and organization of IP.

b)



However, the situation with *frighten*-type verbs (the *preoccupare* class of Belletti and Rizzi) is very different. Surface subjects of such verbs behave like derived subjects on a variety of tests in Italian. Subjects of these psych-verbs do not license anaphoric clitics, they do not have an arbitrary interpretation, and as suggested by binding facts, they behave as if their subjecthood was attained from a position lower than that of the surface object. This last observation is confirmed by the fact that normally, subjects of transitive verbs cannot contain a reflexive bound to the object NP (123), however, with *frighten*-type verbs such constructions are fully grammatical (124):

(123) a) * Pictures of himself fear John.
b) * Pictures of himself describe John quite well.

(124) a) Pictures of himself frightened John.
b) Pictures of himself surprised John.

The above facts suggest that at some level the surface subject of *frighten* is actually c-commanded by the object, and therefore it is not a D-structure subject[25]. I shall account for these facts with the following l-syntax:

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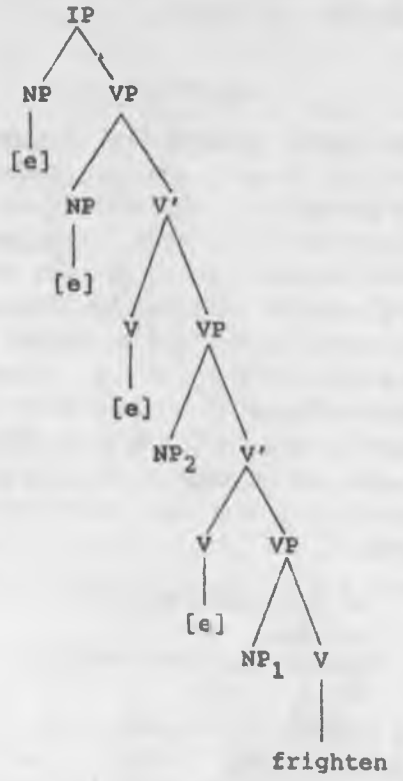
[25] Cf. also the evidence provided by the binding facts discussed by Pesetsky [1987].

(125) a) Fred frightens his brother.

NP_1 NP_2

b)



I claim here that frighten-type psych-verbs are unaccusatives with two internal arguments, and therefore the PAS-grid for frighten has the following form (NP_1 = y, NP_2 = z):

(126) frighten: $V_{\langle y,z \rangle}$

L-syntax (125b) resembles the double object construction, here however, the subject position is non-thematic (empty) and therefore PAS-grids for these verbs lack external arguments. Both internal arguments are licensed in a manner analogical to the direct and indirect argument licensing in the double object construction. In the case of psych-verb constructions, however, the full derivation is slightly more complicated as the direct argument has to be externalized to its surface (subject) position where it receives

Case[26]. This externalization proceeds in two steps: first the direct argument is moved to the SPEC of (the higher) VP, next to the SPEC of IP. Such movement is possible because both these positions are empty in the l-syntax.

4.5. WEATHER VERBS

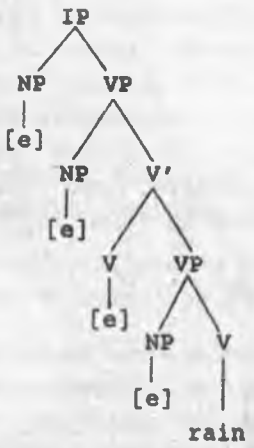
There is one more interesting class of verbs - the weather verbs, such as **rain, snow, sleet,** etc. The English verbs belonging to this group have not attracted much attention within the GB framework, on the other hand, linguists dealing with weather verbs in Romance languages present various views on this issue: for B u r z i o [1986] weather verbs in Italian are ergative (i.e. unaccusative); Z u b i z a r r e t a [1985] treats French *neiger* (**snow**) as unergative; B e l l e t t i and R i z z i [1988] treat Italian *piovere* (**rain**) as sometimes unaccusative and sometimes unergative; finally, R u w e t [1989] demonstrates that French weather verbs are in most cases unaccusative.

English weather verbs occur in constructions which seem not to involve any arguments[27]:

(127) a) It rained all day.

b) rain: $V_{< >}$

c)



[26] K e g l and F e l l b a u m [1988: 194] discuss this construction in terms of internalization of the indirect argument and a complex externalization of the direct argument: thematic to the SPEC of VP and syntactic to SPEC of IP.

[27] This is the suggestion made by K e g l and L e v i n [1990: 19], cf. also the remark in R u w e t [1989: 313].

The important question is: what is the nature of the empty NP-slots in the higher and lower VPs? The marginally acceptable sentences in (128a,b) and the idiom in (128c) suggest that these might be positions which are projected but unlinked, and therefore the PAS-grid could have the form in (129):

(128) a) ? It rained a strange kind of rain.
b) ? A strange red rain rained all day long.
c) It rained cats and dogs.

(129) rain: $V_{\langle(x),(y)\rangle}$

As with cognate objects, more research is required in order to explain all problems connected with these structures. Here however, I follow K e g l and L e v i n [1990] and treat weather verbs as non-argument verbs, with a PAS-grid (127b).

Notice, that a construction without arguments would violate the Extended Projection Principle, which states that every sentence must have a subject [cf. C h o m s k y 1982]. In the case of weather verbs the EPP is satisfied by the insertion of the expletive *it* into the subject position at the level of s-syntax.

4.6. CONSTANTS AND COREFERENTIALITY

Before presenting the typology of verbal constructions it is necessary to mention the presence of constants in the PAS-grids. In all of the so far introduced PAS representations the arguments of a verb were indicated by variables. But, as observed by Z u b i z a r r e t a [1985], in case of idiomatic expressions there occurs a constant in the lexico-syntactic representation of the verb[28]:

(130) kick - non-idiomatic: $V_{\langle x,y\rangle}$
idiomatic: $V_{\langle x,\text{"the bucket"}\rangle}$
(to kick the bucket = to die)

(131) kill - non-idiomatic: $V_{\langle x,y\rangle}$
idiomatic: $V_{\langle x,\text{"the bottle"}\rangle}$
(to kill the bottle = to empty it)

[28] This constant is projected from the LCS of the verb.

The constant usually appears in the direct argument position, in some idiomatic expressions however, constants appear in both the external and direct argument position:

(132) hit - non-idiomatic: $V_{\langle x,y\rangle}$.

idiomatic: $V_{\langle$"the shit","the fan"$\rangle}$

Furthermore, in the case of the external and internal arguments of inherent reflexives the PAS-grid must specify coreferentiality (this is a consequence of transmitting the relevant features from the lexico-semantic level of representation)[29]:

(133) a) $John_i$ behaved $himself_i$.

b) * $John_i$ behaved $himself_j$.

c) * John behaved Mary.

(134) PAS-grid for behave: $V_{\langle x_i, y_i\rangle}$

Finally, some PAS-grids may require both coreferentiality and the presence of a constant:

(135) a) John lost his way.

b) lose: $V_{\langle x_i,$ "y_i's way"$\rangle}$

5. SUMMARY OF VERB TYPES AND GENERAL CONCLUSION

In the following list I give the labels of the so far discussed syntactic constructions followed by typical verbs representing these constructions, and the relevant PAS-grids. Though the list is far from exhaustive, it nevertheless provides a neat classification of the verb types and Predicate Argument Structures. Variant constructions are given separate PAS-grids:

(136)	Constructions:	PAS-grid:
	a) transitive - kick, hit	<x,y>
	b) unergative - die, laugh	<x>

[29] The PAS-grid (134) coincides with the requirements forced by binding principles A and C [cf. C h o m s k y 1981]. This means that conditions on coreference are projected from the semantic level - via PAS - to the syntax.

c) unaccusative - arrive, approach <y>
d) transitive/unergative - eat <x,y>; <x>
e) transitive/unaccusative -
- break, melt <x,y>; <y>
f) transitive/unergative/middle -
- read <x,y>; <x>; <y>
g) transitive+PP - put, donate <x,y,Pz>
h) transitive+PP/double object -
- give <x,y,Pz>; <x,y,z>
i) psych-verbs (frighten-type) -
- frighten, amuse <y,z>
j) weather verbs - rain, snow < >

In the model of grammar accepted and advocated above the lexicon is a part of the correspondence rules component (in the sense of J a c k e n d o f f [1987]), with lexical items seen as micro-scale segments of relevant features:

(137) PUT
a) /put/
b) $V_{\langle x,y,Pz\rangle}$
c) [X CAUSE [Y GO TO Z]]

The above entry represents (a) morphonological, (b) lexico-syntactic, and (c) lexico-semantic information[30]. One of the most immediate theoretical consequences stemming out from acceptation of this framework is the diminution of the autonomous syntax thesis, i.e. the cornerstone of transformational grammar. This step seems to diminish the gap between rival models and frameworks[31], and it follows, to a large degree, from the intuitions about the isomorphism between syntactic and semantic and semantic structures. On the other hand, the modular character of grammar has been preserved under this analysis.

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[30] A more elaborate discussion of lexical levels is presented in my dissertation. For the lexico-semantic background cf. J a c k e n d o f f [1983, 1987].

[31] Such rival models include theories both related to GB (for ex. Bresnan's Lexical Functional Grammar) and/or rather less compatible (for ex. Cognitive Grammar).

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STRUKTURA PREDYKATOWO-ARGUMENTOWA I KLASYFIKACJA ANGIELSKICH CZASOWNIKÓW

Celem artykułu jest zaproponowanie spójnego opisu struktury predykatowo-argumentowej (Predicate Argument Structure - PAS) dla wybranych czasowników angielskich w zmodyfikowanym modelu współczesnej gramatyki generatywnej. PAS stanowi modelową projekcję składniowych właściwości czasownika i jest poziomem struktury leksykalnej łączącym słownik (leksykon) z poziomami składniowymi. Dla różnego rodzaju argumentów występujących w PAS zaproponowano zunifikowany sposób identyfikowania, odrzucając poprzednie opisy, które sugerowały krańcowo różne sposoby identyfikowania dla poszczególnych argumentów.

Poziom struktury predykatowo-argumentowej uzupełniony jest przez strukturę leksykalno-pojęciową (Lexical Conceptual Structure - LCS), czyli semantykę czasownika. Wzajemne oddziaływanie pomiędzy poziomem PAS a składnią kontrolowane jest przez moduł teorii przypadku (Case Theory).

Zaproponowany w artykule model struktury predykatowo-argumentowej umożliwia elegancki opis klas czasowników angielskich, podkreśla ich cechy wspólne i zaznacza różnice.