A Proposal for a Valency Lexicon of English Catenative Verbs

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1. Introduction

This article sets out to put forward the essentials of a lexicographical project already undertaken. Our investigation is centred on one specific verbal class in English, the so-called 'catenative verbs', a type of predicate that shows a special capacity to combine with non-finite verbal forms according to certain set rules. This being the object of study, we aim to compile a valency lexicon of English catenative verbs which will include those verbal lexemes in common use belonging to this class (300 verbs, previously selected on the basis of their frequency of occurrence).[1]

The particular description of each predicate and its dependent constructions will be reflected in a lexicographical entry which specifies both the 'syntactic' and the 'semantic valence' of a verb. Consequently, this is a 'syntagmatic' dictionary (Haensch *et al.*, 1982: 181) in so far as it deals with the rules that govern the combination of a verb and its complements.

Our lexicographical project is based on a concrete theoretical model: Valence Theory (Tesnière, 1959; Helbig, 1971) and Dependency Grammar (Hays, 1964; Robinson, 1970), two inextricably linked linguistic theories, whose relevance to the elaboration of lexicons is manifest[2], especially if we think of these as reference works primarily intended for and used by advanced learners and foreign teachers of a language. In addition, we are firmly convinced that the degree of explicitness and comprehensiveness that characterizes the Valency/Dependency Model will considerably enrich the description of these verbs and their constructions. Moreover, the incorporation of linguistic categories into the study will add to the systematicness of the description and provide university students of English linguistics with new grammatical insights into the syntax and semantics of these verbs and their complementation.

1. The process of selection consisted of two stages: first, we drew up a list of English catenative verbs. For this purpose we used a variety of sources and reference material, like general grammars, monographs, or dictionaries. Immediately afterwards we selected those verbal lexemes which exhibit a reasonably common frequency of use and thus can be considered representative of this class. The frequency rates of catenatives were obtained from five different word lists: Brownstein, S. & M. Weiner (1977), *Basic Word List,* Woodbury, New York: Barron's Educational Series, Inc.; Eaton, H. (1940), *Semantic Frequency List for English, French, German and Spanish,* Chicago: The University of Chicago Press; Hindmarsh, R. (1980), *Cambridge English Lexicon,* Cambridge: C.U.P.; West, M. (1953), *A General Service List of English Words,* London: Longman; Zettersten, A. (1978), *A Word Frequency List Based on American English Press Reportage,* Copenhagen: University of Copenhagen.

2. In the field of Valence Theory and Dependency Grammar, proposals for valency lexicons of different types (some of them contrastive) as well as dictionaries proper are relatively numerous. For the former, see Boas (1978), Roberts (1981), Martín (1984), Herbst (1987). Most of the latter are devoted to German: Engel & Schumacher (1978[2]), Rall, Rall, Zorrilla (1980), Helbig and Schenkel (1983[7]).

2. Catenative verbs and their constructions

We have defined 'catenatives' as «lexical verbs which have a special capacity to combine with non-finite verbal forms according to certain fixed rules» (Rizo, 1990). (Verbs such as ENJOY, WANT, ASK, FORGET...). In other words, they can be distinguished from the rest of lexical verbs because of their intrinsic potential for constituting 'catenative constructions'. These, in turn, have been defined as «grammatical units consisting of a sequence of two predicates, both being verbal groups and the second a non-finite verbal form»:

$$NP_1 + VP_1 + (NP_2) + VP_2 \text{ (Non-finite)} + \ldots + VP_n$$

Consequently, this investigation is concerned with the structures mentioned above, i.e:

NP_1 + CATENATIVE VERB + (NP_2) + VP_2: 'bare' infinitive
'to'-infinitive
'-ing' form
'-ed' form

However, we have considered it expedient to broaden the scope of our study so that it includes other types of constructions also dependent on these predicates: finite verbal clauses functioning as complement. Finite clauses often alternate with non-finite verbal forms as 'complex structures of complementation' governed by catenatives. This alternation sometimes involves little or no difference of meaning, but obviously it is necessary to specify which verbs show this twofold potential, especially if they are to be used by learners of English whose native language may lead them to choose the wrong construction.

Thus lexicographical entries will also indicate whether a given predicate can accept 'that'-clauses or dependent interrogative clauses.[3]

3. Theoretical assumptions: the Valency-Dependency Model and its application to Catenative Verbs

The analysis of the syntax and semantics of each catenative is based on a concrete theoretical apparatus that has previously been elaborated following a rigorous scientific method: see Rizo (1990), *Los Verbos Catenativos Ingleses*.

In this monograph we undertake a comprehensive characterization of the syntactic and semantic properties of catenatives and their complementation on the basis of Valence Theory and Dependency Grammar. In accordance with the approach adopted and developed in this previous description, the type of lexicographical investigation that is being conducted is founded, first and foremost, on a basic principle: the close connection between 'valence' and 'dependency', two concepts of gramma-

3. A third type of finite clause functioning as complement —nominal relative clauses— has not been considered, since, as Quirk *et al.* (1985:1056) point out, they are basically noun phrases modified by adnominal relative clauses.

tical analysis originally different in nature, which, however, designate the same linguistic phenomenon from two different perspectives.

'Dependency' —see Báez (1988)— should be unterstood as the type of relation that exists between a governing unit and the rest of the elements subordinated to it, i.e. its dependent elements.

The term 'valence', on the other hand, is used to denote the number and character of the units dependent on a higher constituent, i.e. its complements —cf. Fink (1977), Allerton (1982).

It is also essential to describe each catenative and its complements syntactically and semantically. This twofold approach to valency is espoused by a number of linguists (e.g. Vater, 1975; Allerton, 1982). Hence we shall adopt the terms 'syntactic valence' and 'semantic valence' to represent the central concerns of our investigation. The syntactic valence of a verb can be observed directly in a sentence: it consists of a definite number of syntactic units that depend on the verb: they function as its complements and are necessary to complete the verbal meaning. They clearly correspond to the elements accompanying the verb in the surface structure of a sentence.

The semantic valence of a predicate is the sum of its semantic features. It manifests itself through the possible combinations of a predicate and its 'arguments'. This type of valence determines the number and character of 'arguments' or 'semantic roles'. Consequently, it is connected with the deep structure of a sentence.

Both types of valency are inextricably joined, since the verbal capacity to take certain syntactic units is a consequence of the lexical meaning of the predicate. That is why both levels are equally necessary and indispensable for carrying out the intended study.

Our goal in describing the syntactic valence of English catenative verbs will be to offer a systematic account of their complementation structures by applying a definite set of 'valency structures' previously established and analysing the grammatical relations peculiar to the complements which constitute each of them.

These syntactic 'formulae'[4] (Appendices A and B) include the following information:

— Number of complements ruled by a verb;
— Their syntactic functions and formal realizations;
— The particular syntactic configuration of complements accompanying a given verb (e.g. subject + verb + direct object).

An essential feature of our lexicographical project is the incorporation into it of semantics. This is perhaps one of the postulates most advocated by Valence Theory (Martín, 1984). The meaning of a predicate definitely constitutes a key factor of extraordinary influence on the type and number of complements taken by the verb. Accordingly, this study integrates the syntactic description of complementation with an analysis of the 'semantic valence' of the verb.

In consequence, the description of the semantic valence of catenatives will involve the following:

4. Valency structures, as a descriptive tool, have already been used by some linguists —Emons (1974), Allerton (1982)— in order to describe English verbal valency, but, to our knowledge, no attempt has yet been made to apply them extensively to a description of catenative verbs.

— 'Semantic value(s)' of the verbal lexeme;
— Its inclusion in a specific 'semantic class' (Appendix C);
— 'Semantic functions/roles' of each 'argument' (Appendix D);
— 'Selectional restrictions' affecting each 'argument' (Appendix E).

It is evident that the final configuration of 'semantic valence', as a descriptive concept, owes much to various theoretical models: Case Theory, Generative Grammar, and Structural Semantics. Thus we have borrowed categories like 'semantic class/value', 'selectional restrictions', and 'semantic functions' with the aim of enhancing the descriptive power of the Valency-Dependency Model while, at the same time, offering a much more accurate analysis of catenatives and their complementation.

In this way, Valence Theory shows its eclecticism and we follow a common trend which associates the semantic domain of verbal valency with Case Grammar (e.g. Vater, 1975; Fink, 1977) and Dik's (1978) Functional Grammar and its 'predicate frames' (Martín, 1984).

Lexicographical entries will include a definition of each verbal lexeme; this is equivalent to specifying the semantic values of a predicate. At the same time, we give indications of the semantic class to which a catenative belongs. Both levels of analysis clearly place the description under the influence of Structural Semantics.

Semantic classes of catenative verbs, as we conceive them, are definite sets of predicates which share a common area of meaning. They do not constitute 'lexical fields' (Coseriu & Geckeler, 1981), since the criterion used to identify and characterize these predicates (as explained in section 1 above) is not semantic but syntactic.

These classes allow us to define exactly the meaning(s) of a catenative by contrasting it with other verbs and also to study together all those predicates semantically related in order to examine their correlation with syntactic valency structures.

Finally, the semantic description also accounts for the features peculiar to the 'arguments' of a predicate: we indicate the 'semantic roles' as well as the 'selectional restrictions' of each complement. In order to apply the former to the description of complements we have endeavoured to elaborate a comprehensive list of semantic functions (based on previous proposals - Fillmore (1968, 1971) Anderson (1971), Cook (1979), among others) also incorporating clear definitions of each 'role'.

As regards 'selectional restrictions', we view them as 'syntagmatic lexical relations' (Lyons, 1977, vol. 1: 265) holding between the predicate and its arguments.

4. A valency lexicon of English Catenatives

4.1. Overall configuration of a lexicographical entry

In the elaboration of lexicographical entries our main objective is to offer a distinct picture of the interconnection existing between the semantic values of a predicate and its complementation.

With this aim in mind, the grammatical information in each entry will include details connected with both the syntactic valence of a verb and its semantic valence. These data will be arranged in such a way that the mutual relation obtaining between both will become immediately obvious.

We shall also include example material which illustrates the syntactic and semantic information previously offered.

A final element may be added to certain entries: pragmatic indications concerning the use of a verb with different complementation structures (e.g. 'to'-infinitive, '-ing' form) and the extent to which the verbal meaning may be affected by the selection of each of them.

On the whole, the microstructure of the lexicon, as it is now tentatively envisaged, will prove quite extensive, as befits an encoding valency dictionary, while some of its information may be found to be relatively technical. In fact, the descriptive concepts incorporated in the entries presuppose a certain familiarity with the Valency-Dependency Model, but this is absolutely logical, since it is precisely this theory that supports and enriches the dictionary. On the other hand, we should bear in mind that this dictionary, conceived for university students of English and English linguistics, draws heavily on modern linguistic theory and is grammatically oriented.

Its macrostructure, in turn (300 verbal lexemes alphabetically arranged), reduced though it is, will prove sufficiently representative of the class of catenative verbs in English.

4.2. Sample lexicographical entry

The following is a possible model for the entry of the verb ASK. Some basic details concerning the various elements of the entry are added.

ASK

I. Class 8: 'request information'; 'inquire'; 'call for an answer to'

/VS12v/
1. Agent (person)
2. Effected: transferred information (action, process, state, position)

I asked how much it cost
I asked where to get off

/VS132e/
1. Agent (person)
3. Recipient (person)
2. Effected: transferred information (action, process, state, position)

I will ask him how to do it
Please ask her where she will be tonight

II. Class 12: 'make a request to, for'

/VS12ii,iv/
1. Agent (person)
2. Goal (action, position)

They asked to see the manager
I asked that I (should) be permitted to use the telephone

/VS132b,d/ 1. Agent (person)
3. Recipient (person)
2. Goal (action, position)

She asked him to lend her some money
He asked us that something should be done

This verb belongs to semantic classes 8 (verbs of information) and 12 (verbs of command and request). As to valency structures (VS), the numbers 1, 3, and 2 stand for subject, indirect object and direct object respectively. ASK admits divalent and trivalent structures with each of its semantic values: /VS12/ (subject + direct object), /VS132/ (subject + indirect object + direct object). The Roman numerals represent the realizations of the complements. (See Appendix B.)

Semantic information, apart from classes, includes a definition of the predicate, the semantic functions of each complement and its selectional restrictions. Finally, some examples are given.

5. Conclusion

The project outlined, we hope, will break new ground in so far as it brings out the syntax-semantics relation as it affects catenative verbs and their constructions. Moreover, it means putting into practice a good number of suggestions and proposals, widely discussed in the literature specific to this theoretical model, concerning the application of the principles of Valency Theory and Dependency Grammar to the actual description of verbs and their complementation.

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APPENDIX A
Catenative Verbs: VALENCY STRUCTURES

/VS12/ Divalent structure. Characteristic of verbs whose valency is /12/: Subjet /1/ + Direct Object /2/.

/VS132/ Trivalent structure. Characteristic of verbs whose valency is /132/: Subject /1/ + Indirect Object /3/ + Direct Object /2/.

/VS124/ Trivalent structure. Characteristic of verbs whose valency is /124/: Subject /1/ + Direct Object /2/ + Object Complement /4/.

/VS15/ Divalent structure. Characteristic of verbs whose valency is /15/: Subject /1/ + Subject Complement /5/.

/VS16/ Divalent structure. Characteristic of verbs whose valency is /16/: Subject /1/ + Adverbial /6/.

/VS1/ Monovalent structure. Characteristic of verbs whose valency is /1/: Subject /1/.

APPENDIX B

Valency Structures: STRUCTURAL VARIANTS

(Each structural variant is characterized by a particular realization of the complements which constitute a valency structure.)

/VS12/: VERB	+ Subject	+ Direct Object
/VS12i/:	Noun P.	+ 'bare' infinitive
/VS12ii/:	NP	+ 'to'-infinitive
/VS12iii/:	NP	+ '-ing' form
/VS12iv/:	NP	+ 'that'-clause
/VS12v/:	NP	+ dependent interrogative clause
/VS12vi/:	NP	+ [NP(neutral) + 'bare' infinitive]
/VS12vii/:	NP	+ [NP(neutral) + 'to'-infinitive]
/VS12viii/:	NP	+ [NP(neutral) + '-ing' form]
/VS12ix/:	NP	+ [NP(possessive) + '-ing' form]
/VS12x/:	NP	+ [NP(neutral) + '-ed' form]

/VS132/: VERB	+ Subject	+ Indirect Object	+ Direct Object
/VS132a/:	NP	+ NP	+ 'bare' infinitive
/VS132b/:	NP	+ NP	+ 'to'-infinitive
/VS132c/:	NP	+ NP	+ '-ing' form
/VS132d/:	NP	+ NP	+ 'that'-clause
/VS132e/:	NP	+ NP	+ dependent interrogative clause

/VS124/: VERB	+ Subject	+ Direct Object	+ Object Complement
/VS124A/:	NP +	NP	+ 'to be' + Noun P./ Adjective Phrase
/VS124B/:	NP +	NP	+ 'ed' form

/VS15/: VERB	+ Subject	+ Subject Complement
/VS15α/:	NP	+ 'to be' + Noun Phrase / Adjective Phrase
/VS15β/:	NP	+ '-ed' form

/VS16/: VERB	+ Subject	+ Adverbial
/VS16I/:	NP	+ 'to'-infinitive
/VS16II/:	NP	+ (preposition) + 'ing' form

/VS1/: VERB	+ Subject
	NP + ... + 'to'-infinitive ('split-subject construction')
	'it' + ... + 'that'-clause

APPENDIX C
Catenative Verbs: List of SEMANTIC CLASSES

1. ASPECTUAL Verbs
2. Verbs of PHYSICAL PERCEPTION
3. Verbs of MENTAL PERCEPTION
4. CAUSATIVE Verbs
5. Verbs of PERMISSION
6. EMOTIVE verbs
7. Verbs which denote ATTEMPT or INTENTION
8. Verbs of INFORMATION
9. Verbs which express ENDURANCE or TOLERANCE
10. Verbs which express some TEMPORAL NOTIONS (different from Aspectual Verbs)
11. Verbs of PERSUASION, ENCOURAGEMENT, and INSTIGATION
12. Verbs of COMMAND and REQUEST
13. Verbs which denote AVOIDANCE, NEGLECT, and REFUSAL
14. Verbs which express HELP or TEACHING
15. CONTINGENCY Verbs
16. Verbs which express RISK or ADVENTURE
17. ACHIEVEMENT Verbs
18. Verbs of ENTAILING and INVOLVING
19. Verbs which denote MAKING SOMETHING POSSIBLE, ENABLING
20. Verbs of UNDERTAKING and ATTENDING TO
21. VOLITIONAL Verbs
22. Verbs which indicate a relation of INCLUSION

APPENDIX D
List of SEMANTIC FUNCTIONS/ROLES

AGENT
FORCE
INSTRUMENT
CAUSE
EXPERIENCER
SOURCE
AFFECTED: PATIENT
AFFECTED: CHARACTERIZED ENTITY/ACTION
MENTAL FOCUS
PHYSICAL FOCUS
EMOTIVE FOCUS
VOLITIONAL FOCUS
GOAL
EFFECTED: TRANSFERRED INFORMATION
RECIPIENT
ATTRIBUTE: CURRENT/RESULTING

APPENDIX E
SELECTIONAL RESTRICTIONS

A) Sentential complements (we have adopted Dik's (1978) semantic classification of verbs into a typology of states of affairs):

STATE	situation	[- control]	[- dynamism]
PROCESS	event	[- control]	[+ dynamism]
POSITION	situation	[+ control]	[- dynamism]
ACTION	event	[+ control]	[+ dynamism]

B) Non-sentential complements:
[± animate], [± person], [concrete], [abstract], etc.