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The meeting of lexis and grammar

Introduction

This chapter considers what is involved in making a description of the very common words of a language, using the new techniques described in this book. There are two main sets of factors:

- a. those concerning how information about the word is gathered, evaluated, and organized;
- b. those concerning the presentation of the information in a reference work.

What is said about *of*

First of all, let us review common practice. It is often said that very common words just waste space in a dictionary, that their proper place is in a grammar, and that no one would ever look them up in a dictionary.

The entries in most dictionaries are indeed not very helpful about words like, *the*, *of*, *and*—the most common words in the language. Because dictionaries traditionally give priority to semantic meaning, as against the meaning found in grammar, usage, and pragmatics, they try to analyse the words by semantic criteria. This is a difficult task, indeed, these very words are frequently said to lack semantic meaning altogether. One dictionary gathers the following examples of *of* in one category of meaning:

the city of York
the art of painting
the age of eight
the problem of unemployment
a price increase of 15 per cent
some fool of a boy

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Using the hallowed criterion of substitutability (that is, that the definition can actually replace *of* in the text), it defines *of* in this sense as *that is/are; being*. It is difficult to imagine in what circumstances a person will need this information. Another dictionary collects examples like:

cure sb. of a disease
rid a warehouse of rats
rob sb. of his money
relieve sb. of his anxiety

These are dubbed as 'indicating relief, deprivation, riddance'. It seems more likely that such an indication is given in the verb (*cure, rid, etc.*), rather than in the *of*.

It might, then, be thought that a more helpful account of a word like *of* would be found in grammar books. Since its main contribution to the language appears to be its participation in grammatical structure, there should be a tidy treatment of it in any reasonable grammar.

Sad to say, this is not the case. *Of* pops up all over the place, attracting dozens of special statements. It does not readily fit a conventional grammar any more than it fits a conventional dictionary. In one recent grammar there are over fifty references to *of*, spanning the entire book with substantial entries in more than half the chapters.

In this grammar, there seems to be an implied distinction between an 'of-phrase', as in partitives like 'a gallon of water', and prepositional phrases, which are dealt with elsewhere in the book (Quirk *et al.* 1985, Chapters 5 and 9).

In a well-known pedagogical grammar, there are fourteen references to *of*, fairly evenly spread over the first hundred pages. Twelve of these references concern the patterns preceding *of*, and only two ('possessives' and *of all*) concern what follows *of* (Thomson and Martinet 1986).

Despite this scattered distribution, everyone seems unanimous that it is a preposition. However, it does not seem to be at all a typical preposition. In one grammar, for instance, it appears at the beginning of the chapter on prepositions and then drops out until some fairly minor uses are swept up towards the end (Quirk *et al.* 1985, Chapter 9).

A corpus view of *of*

Prepositions are principally involved in combining with following nouns to produce prepositional phrases which function as adjuncts in

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clauses. This is not anything like the main role of *of*, which combines with preceding nouns to produce elaborations of the nominal group. So whereas typical instances of the preposition *in* and *behind* are:

... in Ipswich ...
... in the same week ...
... behind the masks ...

Typical instances of *of* are:

... the back of the van ...
... a small bottle of brandy ...

It is true that *of* occasionally heads a prepositional phrase which functions as an adjunct, for example,

I think of the chaps on my film course ...
... convict these people of negligence.

However, the selection of *of* is governed by the choice of verb, and *of* is again sensitive to what precedes more than to what follows. And these instances constitute only a small proportion of the occurrence.

The value of frequency information shows itself here, because without it a grammar could conveniently introduce *of* as a plausible, ordinary preposition, and then add what in fact is its characteristic use as an extra. But with the overwhelming pattern of usage being in nominal groups, this fact must dominate any good description.

It may ultimately be considered distracting to regard *of* as a preposition at all. I can think of no parallel classification in language or anywhere else. We are asked to believe that the word which is by far the commonest member of its class (more than double the next) is not normally used in the structure which is by far the commonest structure for the class. Doubts about whether *be* should be considered a verb or not are not as serious as this.

It is not unreasonable to expect that quite a few of the very common words in a language are so unlike the others that they should be considered as unique, one-member word classes. If that status is granted to *of*, then there is no substantial difference between a dictionary entry for the word and a section of a grammar devoted to it. The one-member class is the place where grammar and lexis join.

The huge frequency of *of* means that there is no lack of evidence; in fact, in the present state of our ability to process language text, there

is far too much evidence. Some kind of selection is necessary when *of* is approximately every fiftieth word—over two per cent of all the words—regardless of the kind of text involved.

The description offered below is the result of applying a simple procedure to deal with the embarrassment of examples. A selection of about thirty examples was retrieved arbitrarily from a large corpus, and on this evidence a tentative description was prepared. Then a second, similar set was retrieved and the description adjusted accordingly. After several such trawls, each new one added little to the picture, and it was felt that most of the major patterns had been exemplified, and quite a few minor ones as well.

To go beyond this requires either the application of a lot of labour or the creation of automatic routines. Before such investment, however, it is prudent to put the description forward for comment and criticism.

Frequency

This study is at a pilot stage and the actual frequency of instances of each category of use is not a reliable guide to the proportions in the language as a whole. The small samples showed hardly any consistency in the relative frequencies, and as usual most uses were exemplified in minute percentages.

However, even when the study advances to consider much more evidence, there will always be problems about statements of proportion and frequency. This is because a large number of examples are in one way or another problematic. One of the inescapable conclusions of studying real text is that the categories of description are so intertwined in realization that very few actual instances are straightforward illustrations of just one of the factors that led to the particular choice.

This does not constitute an argument for inventing examples; in fact, if carefully examined, it can be seen that this would develop into a total demolition of the view that people can replicate the real patterns of language outside their acts of communication. The selection of suitable examples for any particular explanation requires only a sufficiently large number of instances to choose from.

If many—sometimes most—of the actual instances show features that make them rather special, we are reminded of the fragility of any description, and the ever-present possibility that another way of organizing the evidence may lead to a superior description.

Of outside nominal groups

Around twenty per cent of the occurrence of *of* is not part of the regular structure of nominal groups. The main categories are:

- a. a constituent of various set phrases, for example, of course; in spite of; out of; on top of; because of; consisting of; as a matter of fact; regardless of; in need of;
- b. following certain verb-forms, for example, remind; constructed; sapped; made up; thought; smell; heard;
- c. following certain adjectives, for example, short; capable; full.

Of in nominal groups

The simple structure of nominal groups is based on a headword which is a noun. Determiners, numerals, adjectives, etc. come in front of the noun and modify its meaning in various ways. Prepositional phrases and relative clauses come after the noun and add further strands of meaning.

The function of *of* is to introduce a second noun as a potential headword:

this kind of problem
the axis of rotation
the bottle of port
the treadmill of housework
leaves of trees

Each of the two nouns can support pre-modifiers, and the structural effect of these will be dealt with later in this chapter.

To begin with, we note that in most cases the second noun (N2) appears to be the most salient. This is not what would normally be expected in a conventional grammar; the general structure *the N1 of N2* would be analysed as having *N1* as headword, with *of N2* as a post-modifying prepositional phrase.

Conventional measures

Some grammars recognize that this kind of analysis is unhelpful when *N1* is a number or a conventional measure:

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both of them
a couple of weeks
one of my oldest friends
one of these occasions
millions of cats
three quarters of the world
another of these devices
a lot of the houses
some of those characteristics
a number of logistic support ships

Perhaps *any of 'em* could be added to this set. In all cases, N2 is the obvious headword.

Less conventional measures

We shall also attach to this set some more lexically rich partitives and quantifiers, which do not require special justification but indicate that this category, like most, has uncertain boundaries:

a series of S-shaped curves
the bulk of their lives
a fraction of a second
an average of 12.9 trout
groups of five
1,300 grams of cholesterol
the amount of sulphur dioxide
the bottle of port

In the last example, the classification here depends on interpreting *bottle* as more a measure rather than a physical object.

The status of headword

Before proceeding to more controversial cases, let us consider the status of headword, since the identification of headword is the first step in describing a nominal group.

The headword is the only obligatory element in the group, so it should not be capable of ready omission. Here we are not concerned with the niceties of syntax, or even concord, but with whether or not a listener or reader would be likely to follow the sense with one of the nouns missed out. Consider some examples (only the first is authentic):

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- a. Once I escaped the grasp of the undertow and had reached a rock ...
- b. Once I escaped the grasp and had reached a rock ...
- c. Once I escaped the undertow and had reached a rock ...
- a. There are many examples of local authorities who've taken ...
- b. There are many examples who've taken ...
- c. There are many local authorities who've taken ...
- a. By the evening of 5th August further enemy attacks had ...
- b. By the evening further enemy attacks had ...
- c. By the 5th August further enemy attacks had ...

In each of these cases, it is the omission of N2 that does the greatest damage to coherence, and c. is preferable to b.

A similar result is given by another criterion. It is reasonable to expect the headword of a nominal group to be the principal reference point to the physical world. In a large number of cases, N2 is the closer to a concrete physical object than N1:

the shapes of simple organisms
a glimpse of the old couple
the position of France

Focus nouns

Using these criteria, and expecting that it is normal for N2 to be the headword, the notion of quantifier or partitive can be extended into a general area of 'focus'.

Focus on a part

The first step is to include examples where N1 specifies some part of N2:

the middle of a sheet
the end of the nipple
the edge of the teeth
the top of the pillar
the end of the day
a part of us
that part of its power
the undersides of plates

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Focus on a specialized part

This category of 'part' can be extended in various ways; for example, by more specialized words still indicating essentially a part of N2:

the evening of 5th August
the first week of the war
some green ends of onion
a small dried drop of it
the interior of Asia
the depths of the oceans
the point of detonation
in the midst of the grey gloom
the beginning of the world where winter is real
the outskirts of Hannover
leaves of trees
the horns of the bull

Focus on a component, aspect, or attribute

We move from 'part' to a more general notion of 'focus'. N1 specifies some component, aspect, or attribute of N2 which is relevant to the meaning of N2 in the context. Quite often, these are familiar idiomatic phrases:

the whole hull of your boat
the cream of the Cambridge theatre
an arrangement of familiar figures
the perils and labours of incubation
a uniform grouping of all arms
a little shrill gasp of shock
the recommendations of the Nunn-Bartlett Report
the text of two or three White House tapes
the disadvantages of wear and tear
generations of men
five thousand years of superstition, humbug and mumbo-jumbo
a list of the items
a little glimmer of satisfaction
the net of amateur or 'ham' radio stations
the sound of his feet
the new generation of cards
a fact of modern life

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a sequence of zeroes and ones
the blistering heat of the prairie
their principles of operation
the headquarters of Sinn Fein
argument of the 'zero-growth' school
the study of geography

Some examples of this category have been reserved for special attention:

a. the portals of the Police Judiciary

This example shows N1 as almost redundant and present for stylistic reasons.

b. the forces of the Atlantic Alliance

In this example N1 also seems on the verge of being redundant, containing a kind of explicitness that is likely to have a tactical motive.

c. the granite of the Colorado Rockies

Assuming that the Colorado Rockies are made of granite, and that this is not a 'part' example, it is again virtually redundant and is motivated by stylistic considerations.

Support

The next major category is distinct from the 'focus' meaning because N1 is seen as offering some kind of support to N2, rather than just specifying some relevant aspect of N2. There are several ways in which this is done.

In some instances, N1 is a noun which is typically used as a supporting noun. Often reduced in meaning, words of this kind are noted in the *Collins COBUILD English Grammar* (Sinclair, Fox *et al.* 1990) as 'nouns which are rarely used alone':

the notion of machine intelligence
the position of France
an object of embarrassment
various kinds of economic sanctions
many examples of local authorities
the context of a kitchen
the familiar type of the peppery conservative

One colloquial development of this structure is a cover for vagueness, as exemplified by:

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a sort of parody
the kind of thing that Balzac would have called
a sort of 'A' like that
some sort of madness
this kind of problem

Marginal to this category and the preceding one is the type where the support noun has considerable lexical force, but is subordinated by the structure, for example, 'the burden of partial occupation'.

In an interesting extension of this category, the support noun, N1, offers additional grammatical support.

In such an example as 'a single act of cheating', the support noun *act* offers its countability and 'noun-ness' to the participial *cheating*. The word *a* indicates the countability, and *single* the discreteness of the act. So, in this instance, *cheating* as one separate event is clearly distinguished from *cheating* as a settled habit or general disposition.

In another example, 'the power of speech', the support noun *power* is a familiar collocation and semantically almost redundant. It may help to focus on speech as a basic human faculty, but it is more important grammatically.

Metaphor

By the device of metaphor, another kind of support is offered to N2:

the juices of their imagination
the grasp of the undertow
a twilight of reason and language
the treadmill of housework

In each case, some semantic feature of N2 is pointed up by the metaphor of N1.

Double-headed nominal groups

In most of the above cases, N2 will be accepted as the headword (though see the discussion below, on modification of N1). But there remain many cases where neither noun seems to be pivotal or dominant, and where the structure simply requires both of them.

Titles

One minor type includes titles of people, places, etc. The first noun

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names someone or something that is affiliated to the institution named in N2:

the Duchess of Bedford
the United States of Europe
the new President of Zaire
the Garden of Allah

Nominalizations

Much more important, however, is the type where there is something approximating to a propositional relationship between the two nouns. The two nouns are understood as being in a 'verb-subject' or 'verb-object' kind of relationship.

The meaning of the structures can be brought out by composing clauses of equivalent meaning, for example, 'the payment of Social Security'. This is similar to a clause such as 'x pays Social Security' and N2 is in an 'object' relationship to N1.

Consider the following example, 'the enthusiastic collaboration of auctioneers'. In this example, related to 'Auctioneers collaborate enthusiastically', N2 is in a 'subject' relationship to N1.

Many grammars would explain these structures as clauses which had been somehow transformed into nominal groups, and indeed in a large number of cases N1 is a noun derived from a verb (*payment* from *pay*; *collaboration* from *collaborate*). It is, however, unnecessary to describe one structure as derived from another, and it is a complication which tends to ignore the function of *of*.

In general, we can say the following: the nominal group allows for two nouns to be chosen, of equal status and connected by *of*. These are interpreted as propositional, and the listener or reader deduces the likeliest propositional relationship. One consequence of using this construction is that N1 can be modified as a noun, whereas in the equivalent clause it would be modified as a verb.

Here is a representative collection of examples, including some which may be regarded as marginal or overlapping with another category:

the British view of the late senator
widespread avoidance of call-up
a wonderful sketch of her
the aim of the lateral thinker

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reflection of light
the owner of the Estancia
the description of the lady
the growth of a single-celled creature
sales of its magazine
advertising of infant formula
the killing of civilians
the spreading disillusion of Mrs Nixon's oldest supporters
an exhibition of his work
a superlative examiner of undergraduates
the expectation of a million dollars
the teaching of infants
control of the company
the design of nuclear weapons
a direct reflection of the openness
the large movements of currency
a clear reflection of the position

The main overlap is with the 'focus' category for N1, and we can recall some of those examples which would not necessarily be out of place here:

an arrangement of familiar figures
a uniform grouping of all arms
the recommendations of the Nunn-Bartlett Report
the sound of his feet

Certainly, it is easy to find equivalent clauses for these examples ('X arranges familiar figures', etc.). However, such an operation seems to offer a misleading interpretation of the nominal group, as compared with the 'focus' classification which relies on collocation (*recommendation—report*) and the conventional associations we make in the light of our experience of the world.

Another 'propositional' category arises when N1 is clearly derived from an adjective, and this is understood as being in a complement relation to N2 where N2 would be subject, for example, 'the shrewdness of the inventor'. This is clearly relatable to a proposition such as 'the inventor was shrewd'.

The final type of 'double-headed' nominal group is the one that gives rise to statements in grammars that associate *of* with possession. Because of equivalences like, 'The cabinet of Dr Caligari', and 'Dr Caligari's Cabinet', it is sometimes said that the N1 *of* N2 structure is an alternative way of

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stating that N2 'possesses' N1. In fact, the *of* structure has little to do with ownership or possession, as can be seen when a personal pronoun in N2 position has to be expressed in the possessive form, for example, 'a mate of mine', not *'a mate of me'. The structure has to do with a fairly loose kind of association involving such things as common location, sponsorship, and representation, for example:

the tea shops of Japan
the Mission to the United Nations of the People's Republic of China
the closed fist salute of ZANU-PF

Modification of first noun (N1)

The previous section covers instances of *N1 of N2* which are double-headed regardless of the modification of either noun. However, an interesting process can be seen in the earlier 'focus' category where N1 is modified by one or more adjectives.

- a. Japan's first taste of Western progress
- b. the familiar local life of Zermatt
- c. the governing mechanism of the new EEC
- d. the technical resources of reconnaissance
- e. a comprehensive selection of containers

Without the modifiers, we might classify a., b., c., and e. under 'focus' generally, and d. as a support noun. It is clear that the secondary role of N1 is much enhanced by modification, so that the examples above should be regarded as double-headed. Neither N1 nor N2 can easily be omitted, because N1 is treated as a full headword. The two noun groups balance each other.

In exemplifying earlier categories, quite a few examples of modifiers of N1 were included, and these are now printed below for consideration. Many would be best placed in this double-headed category (though the semantic relation between N1 and N2 is not affected):

this first week of the war
a uniform grouping of all arms
a little shrill gasp of shock
five thousand years of superstition
a little glimmer of satisfaction
the new generation of cards

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various kinds of economic sanctions
the familiar type of the peppery conservative
little hope of new ideas
some green ends of onions
a small dried drop of it

Mopping up

It is an important feature of this method of investigation that no instances are overlooked in any sample, no matter how awkward or bizarre they might be. Those which do not readily fall into any of the preceding categories are:

Superlative adjectives

There is clearly a regular syntactic pattern built around superlative adjectives:

the most delectable of soups
the most perfect fossilising medium of all

and provision must be made for it in a grammar.

Fixed phrases

In their various ways, the following seem to be relatively fixed phrases, and thus of little structural interest:

birds of paradise
the axis of rotation
the patience of Job
a court of law
a lack of distinction

Miscellaneous

The following is an unusual example:

fantasies of the ship's sinking.

It is probably closest to the double-headed associative relationship as in:

the Cabinet of Dr Caligari.

Evaluation

To test the comprehensiveness and accuracy of the description, we return to the concordances to take a fresh sample of about thirty instances and see how well the classification accounts for the new evidence—see Table 1; three of these examples are used in the introduction.

The analysis of the examples in Table 1 is set out systematically with brief notes, followed by a discussion of problematic cases. The categories follow closely the sequence of the presentation above. Numbers refer to lines in Table 1.

Table 1: A Set of instances of of

1	off the end	of	Long Island
2	and you hadn't heard	of	either
3	his own degree	of	guilt
4	a small bottle	of	brandy
5	None	of	the final few clippings
6	overhung the slope	of	the Third Ice Field!
7	and would bring her some sense	of	what she was
8	the easing	of	shall we say, the rules of
9	with a touch	of	indefinable pathos in his make-up
10	with Conrad asleep in the back	of	the van,
11	a tiny little bit like the shock	of	rape
12	I think	of	the chaps on my film course
13	one has days when one isn't certain	of	anything
14	A group	of	unstable left-wing countries
15	to people who knew neither	of	them well
16	the lives of one quarter	of	the human race
17	convict these people	of	negligence, or of criminal irresponsibility
18	in the early stages	of	a conflict
19	in the midwestern states	of	North America
20	rundown buildings, modest blocks	of	flats
21	Succeeding generations	of	youthful American males
22	Operations	of	this sort
23	a series of most able incumbents	of	the post
24	it tears it open with the claws	of	its front legs
25	Dan had completed the first draft	of	his next play
26	Three hundred pounds is a lot	of	money
27	Once this sort	of	start had been made
28	was not the least	of	the sensual joys of the evening
29	spotted with the loveliest	of	colours,

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- 30 A parson's just as cunning as the rest of 'em when it comes to
money,
31 The patch may look newer than the rest of the carpet,
32 no money when you of all people could have had it
33 Prepare ye the way of the Lord
34 I found a prodigality of pattern and colour

Analysis of examples in Table 1

Non-nominal instances of *of*

- 1 phrases—none
- 2 verbs
 - 2 heard of
 - 12 think of
 - 7 convict of
- 3 adjectives
 - 13 certain of

Nominal group

1.1.1 conventional measure

- 5 none of the final few
- 15 neither of them
- 16 one quarter of the human race
- 26 a lot of money
- 30 the rest of 'em
- 31 the rest of the carpet

1.1.2 less conventional measures

- 3 degree of guilt
- 9 a touch of indefinable pathos
- 14 a group of unstable left-wing countries
- 4 a small bottle of brandy
- 34 a prodigality of pattern and colour

1.2.1 focus on a part

- 1 the end of Long Island

1.2.2 focus on a more specialized part

- 6 the slope of the Third Ice Field
- 10 the back of the van
- 18 the early stages of a conflict
- 19 states of North America

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1.2.3 focus on a component, aspect, or attribute

- 11 the shock of rape
- 20 blocks of flats
- 21 generations of youthful American males
- 24 the claws of its front legs
- 25 the first draft of his next play

1.3.1 support N1

- 27 this sort of start

Example 7—some sense of what she was—is close enough to this category, but N2 is in this instance replaced by a clause.

1.3.2 metaphor—no examples in this sample

2.1 titles—no examples in this sample

2.2 prepositional relationships

- 8 the easing of, shall we say, the rules of

3 modification of N1

The following examples are double-headed,

e.g. 4: a small bottle of brandy

Also: 7, 18, 19, 20, 21, 28

4.1 superlative adjectives

- 29 the loveliest of colours

Note also within 28 there is another superlative:

not the least of the sensual joys

4.2 fixed phrases

- 32 you of all people
- 33 Prepare ye the way of the Lord

There are two examples which do not readily fit the descriptive framework that was established in the first part of this chapter.

The following example suggests a re-ordering of type 1.3.1, the support noun:

22 operations of this sort

Though in this case, the support noun is at N2. Such variation looks to be quite acceptable, so this category should be redefined.

The following example looks like a prepositional relationship:

23 incumbents of the post

But no obvious equivalent sentence is possible. Since it was stressed earlier that the relationship to a clause is purely made to illustrate meaning, there is no barrier to a word like *incumbent* at N1 even though there is, by chance, no related verb.

Conclusion

The previous section demonstrates that this account of *of* is reasonably robust, and that future trawls for examples will fill out categories, but are not likely to uncover fundamentally disturbing evidence. The classification offered above forms a good basis for both a dictionary entry and a section in a grammar of English.

The ordering will probably vary: for example, it is useful in analysis to filter out uncharacteristic instances, like the non-nominal uses of *of*, but often preferable to leave them to the end in presentation.

A grammatical account will concentrate on the status of the head-word, the distinction between single and double heads, and the indeterminate cases. A dictionary might prefer to say little about this and concentrate on the classification of use.

Within the nominal group structures each version of the information will choose a level of detail depending on the space available and the intended purpose of the book. In digest form, the whole of category 1 could be summarized with two or three examples; if more space were available, the distinctions into 1.1, 1.2, and 1.3 would be valuable. Whether or not 1.3.2—metaphor—is separately instanced might well be a later decision, depending on the balance of the entry.

Whatever the purpose, this study shows that a firm classification of uses and meanings can be made, despite the fact that there are some problem cases and some overlaps. For the lexicographer, there are very few usable examples in such a small selection, because each instance carries its own particularity. But a full-scale study will provide ample evidence, and among the many examples there will be some that can be cited out of context without perplexing the user.