

A MATTER OF *GIVE* AND *TAKE*: CORPUS LINGUISTICS AND THE PREDICATE FRAME

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ABSTRACT

In this article, the examples of the common verbs *GIVE* and *TAKE* are used to show that simple predicate frames such as those proposed by Dik (1997a: 78) are seriously inadequate to cope with the use of these lexical items as revealed in corpora. The implications of these findings for FG are discussed in relation to the warning of Thompson and Hopper (forthcoming), that models of argument structure which are not based on what those speakers frequently do are inadequate for a description of speakers' ability to use language: a serious matter for FG, given its commitment to pragmatic adequacy.

KEY WORDS: Functional Grammar, lexis, predicate frames, corpus linguistics.

RESUMEN

En este artículo se demuestra, mediante el uso de ejemplos de los frecuentes verbos *GIVE* y *TAKE*, que marcos predicativos tan simples como los propuestos por Dik (1997a: 78) son completamente inadecuados para dar cuenta del uso de estas unidades léxicas que se observa en los corpora. Las consecuencias de estos resultados para la GF se discuten a la luz de la opinión de Thompson y Hopper (en prensa) de que los modelos de estructura argumental que no se basan en el uso frecuente que hacen los hablantes se muestran inadecuados a la hora de proporcionar una descripción de la habilidad de los hablantes para usar la lengua: una cuestión importante para la GF, dado su compromiso con la adecuación pragmática.

PALABRAS CLAVE: Gramática Funcional, léxico, marcos predicativos, lingüística de corpus.

1. INTRODUCTION

At the very heart of Functional Grammar (henceforth FG) is the predicate frame, the starting point for the building up of the underlying structure of the clause (Dik 1997a: 78ff). The concept of the predicate frame represents a model of predicate-argument structure, since it specifies not only the number of arguments for a given predicate, but also their semantic functions, together with any selection restrictions with which, in non-metaphorical contexts, they should conform.



A second crucial feature of FG is its commitment to the study of language in terms of its functioning in natural communicative situations:

The system underlying the construction of linguistic expressions is a functional system. From the very start, it must be studied within the framework of the rules, principles and strategies which govern its natural communicative use (Dik 1997a: 6)

It is important, then, that the model of predicate-argument structure encapsulated in the predicate frame should be able to account for the ways in which predicates and their arguments are used in actual communicative discourse. Unfortunately, Dik's own work made very little use of attested data, and although there are groups of FG scholars (especially the Classicists at the University of Amsterdam and the Anglicists at the Free University of Amsterdam) who have been studying texts for some time, it is nevertheless true that mainstream FG theory has been built up largely on the basis of constructed rather than authentic material: even the chapter on discourse in Dik (1997b) actually contains no analyses of extended, attested text.¹ It is crucial, then, that the claims made in FG be confronted with systematic samples of the "natural communicative use" of language. In this paper, I will examine the FG predicate frame model in the light of results from the analysis of a large computer-based corpus of modern English.

2. A MATTER OF *GIVE* AND *TAKE*

In introducing the concept of the predicate frame, Dik (1997a: 78) uses the following example:

- (1) (f_i: *give*) [V] (x₁: <animate>)_{Ag} (x₂)_{Go} (x₃: <animate>)_{Rec} (= Dik's (2))

In other words, the verbal predicate *GIVE* takes three arguments, an animate Agent, a Goal and an animate Recipient.² This is indeed the semantic structure which would correspond to what most native English speakers would probably provide as a typical example of the use of *GIVE*, which might well be similar to the example Dik (1997a: 81-2) himself uses, involving an Agent *the boy* giving a Goal *the book* to a Recipient *the girl*.³

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¹ For a detailed critique of this and other aspects of Dik (1997a, 1997b) see Butler (1999).

² For an account of verbs of giving in a range of languages, see Newman (1996, 1997).

³ François (1997) claims that in a clause such as *Fred gave John the money*, Dik (1989) analyses *John* not as Recipient, but as Goal. I can find no evidence of this analysis in Dik (1989): indeed, on several occasions Dik explicitly labels such constituents as RecObj, and this analysis is

In the same vein, if we consider a second very common predicate of English, TAKE, we might postulate a basic predicate frame as follows:

$$(3) \quad (f_i: \textit{take}) [V] (x_1: \langle \textit{animate} \rangle)_{\text{Ag}} (x_2)_{\text{Go}} (x_3)_{\text{Source}}$$

according to which TAKE is a verbal predicate, again with three arguments, one of which is an animate Agent, one a Goal, but the third now acts as Source rather than as Recipient. The semantic structures given above mirror the converse relationship between the lexemes when they are used in the sense of someone handing something to someone else:

$$(4) \quad \textit{give} (x_1, x_2, x_3) \leftrightarrow \textit{take} (x_3, x_2, x_1)$$

We might also want to consider a use in which some Goal is transferred by an Agent from a Source in a particular Direction: in fact, (4) is really a specific subset of (5) in which Direction = Agent:

$$(5) \quad (f_i: \textit{take}) [V] (x_1: \langle \textit{animate} \rangle)_{\text{Ag}} (x_2)_{\text{Go}} (x_3)_{\text{Source}} (x_4)_{\text{Direction}}$$

An example of this would be (6):

$$(6) \quad \textit{Jim took John from London to Oxford.}$$

In the rest of this paper, I will present the results of my analysis of the use of forms of the lexemes GIVE and (in less detail) TAKE in the 50 million word subset of the Bank of English available online from Cobuild.⁴ We will see that the predicate frames given above fail to account satisfactorily for a substantial proportion of the attested utterances, and that some important general deficiencies of the predicate frame model emerge from the analysis.

3. THE NATURE OF THE FIRST ARGUMENT

500 examples were selected randomly from the 56,786 occurrences of forms of GIVE classified as verbs in the corpus. Of these, 2 turned out to be names (hence not verbal at all), 1 was the past participle used as a noun (*accept it as an unpleasant given*), 6 were the past participle used as a prenominal adjective (e.g. *at a given point*

confirmed in the second edition of the book (Dik 1997a: 253). The distinction is, in any case, not crucial to the arguments presented here.

⁴ This corpus consists of 11 components, covering a range of written and spoken texts, including material from the UK, USA and Australia.

TABLE 1. CLASSIFICATION OF FIRST ARGUMENT

TYPE	COUNT	%
animate Agent	290	61.1
inanimate/abstract Agent	94	19.8
implicit Agent	76	16.0
unclear	8	1.7
non-Agent	7	1.5

in time), 12 represented the quasi-prepositional use of the past participle (e.g. *given the group that I work with*) and 4 were part of the complex subordinator *given that*. These have been eliminated from the present study, leaving 475 truly verbal forms.

The first argument of these 475 examples is classified in Table 1.

As shown in Table 1, the most typical first argument (61.1%) is indeed an animate Agent (see examples 7-10), as the simple predicate frame in (1) predicts. In the category 'animate' here are included organisations, teams, etc.

- (7) persons who allegedly gave him this information
- (8) Cabinet also gave recognition to the role of 'off-reserve management'
- (9) I gave her my driving license
- (10) I gave him three minutes

A further 16.0% are implicit Agents in passives, and the context almost always suggests that these are animate (see examples 11-14).

- (11) farmers would be given financial compensation
- (12) the organisation of the seemingly impossible task was given to a Melbourne salvage expert
- (13) she would be given some medication
- (14) many young couples, who were given six months advance warning...

Note, however, that 19.8% are inanimate (often abstract) Agents. Some typical examples are given in 15-18.

- (15) it gave them something else to poke fun at you about
- (16) it gave you a bit of information
- (17) the measures give the security forces and military widespread powers
- (18) his years of composing Greek verse gave him confidence

In a very small proportion (1.7%) of cases, usually involving non-finite forms of the verb, the Agent was unclear. For instance, in (19), it is not clear whether it is the example, or the person presenting it, that should be taken as the Agent:

TABLE 2. PRESENCE AND CLASSIFICATION OF A THIRD ARGUMENT		
THIRD ARGUMENT	COUNT	%
animate Recipient	277	58.3
unspecified	119	25.1
inanimate	45	9.5
not present	34	7.2

(19) one can use that kind of example to give visual interest to what one is describing

Finally, in just 1.5% of cases, the first argument was not an Agent, but had some other semantic function. This may be because the verb is used in combination with an adverbial/prepositional particle to form a phrasal verb, as in (20), or because of combination with a noun such as *rise* or *way*, as in (21) or sequences encoding the meaning of ‘not caring about something’ as in (22):

(20) his windows gave onto the driveway

(21) this thought had given rise to much deliberation

(22) he had let everyone know that he didn’t give a damn

Such constructions, which could arguably be interpreted as encoding lexical units with their own predicate frames, will be discussed further in later sections of this paper.

4. THE PRESENCE AND NATURE OF A THIRD ARGUMENT

The predicate frame for GIVE given earlier predicts the presence, in the semantic structure, of a Recipient as third argument. Table 2 shows the incidence and classification of a third argument in the 475 clear cases of verbal GIVE in the sample.

In 58.3% of cases, there is indeed a specified animate Recipient (examples 23-26):

(23) he gave me a very good reference

(24) I gave her my driving license

(25) I gave her a sincere smile

(26) that gave him the Townsend Thoresen title

In 25.1% of the examples, there is no specified third argument, but it is clear in most cases that there is a Recipient (or sometimes, as in 28 below, a Benefi-



ciary *for* whom something is done) in the situation, and that this is an animate entity (27-30):

- (27) the police gave no details of the investigation
- (28) the guys that gave their lives
- (29) the institutions who gave their money
- (30) the Emperor gave a speech of praise

In 9.5% of cases, however, we have an inanimate Recipient (examples 31-34):

- (31) which gave the Russian Party's endorsement to his economic plans
- (32) Tim Nielsen gave a fragile innings some substance
- (33) you've always got to give it a chance
- (34) as we give more and more attention to the words

In 7.2% of cases, there is no third argument whatever, and the reason is usually (as for the irrelevance of the Agent function —see above) that there is a phrasal or prepositional verb construction or a verb-noun combination which realises a non-agentive meaning (35-37), though in the case of (38) we have an agentive use with no Recipient:

- (35) the balcony gave way
- (36) women can give up too easily
- (37) we didn't give a shit about anything
- (38) Phil Wohlsen gave a sharp intake of breath

5. PRESENCE AND CLASSIFICATION OF THE SECOND ARGUMENT: TYPES OF TRANSFER

The predicate frame for GIVE predicts a second, Goal argument, unspecified for selection restrictions. In considering *what* is given, we are in effect examining the kind of transfer (if any) which occurs (see Table 3). It will be seen that physical transfer accounts for only 17.0% of the total occurrences. Examples of various types of transfer are apparent in the examples given so far, but 39-42 below provide further illustrations of the physical type:

- (39) they gave a trophy to the local fishing club
- (40) I gave one to my friend
- (41) George Patton gave her a revolver
- (42) all you've got to do is give people money

The most frequent type of transfer is what I have called 'enablement', in which what is given (or, occasionally, not given —see further below) is chances, opportunities, power, time, recognition, etc. (examples 43-46).



TABLE 3. PRESENCE AND CLASSIFICATION OF TRANSFER

TRANSFER TYPE	COUNT	%
enablement	108	22.7
verbal	100	21.0
miscellaneous	98	20.6
physical	81	17.0
irrelevant	39	8.2
reaction/perception	35	7.4
unclear	8	1.7
cognitive	6	1.3

- (43) Maher gave himself a chance
 (44) she gave her butler control of the estate
 (45) the reforms aim to give the President the power to order military officers into retirement
 (46) it's nice to give people the opportunity of getting to Wembley

The 'enablement' category is closely followed by the 'verbal', including any kind of information transmission (examples 47-50).

- (47) Manager Alex Miller gave his No. 2 an ultimatum
 (48) the police gave no details of the investigation
 (49) it gave no clue to security arrangements
 (50) she gave me the message

Note that some of the cases classified here as 'verbal/information' could equally well have been taken as representing 'enablement': e.g. in the case of *give advice*.

Almost equal in frequency is a miscellaneous collection of uses (examples 51-54):

- (51) Kurt Masur, who gave the inaugural cycle in 1991
 (52) that would give you enough gas for 27 days
 (53) his father gave him a strong push
 (54) if Bowe can repeat the kind of performance he gave

In 7.4% of cases, the meaning was concerned with perception or reaction processes (examples 55-58):

- (55) aspirin, paracetamol or ibuprofen will give relief from pain



- (56) Bewdley beauty gave him a fright
(57) which truth from the Bible gave her the most peace
(58) I'll give her what for

A very small proportion (1.3%) of examples involved cognitive processes such as attention and consideration (59-60):

- (59) I hope that the Chinese government will give this humanitarian consideration
(60) ... believe the Government has given too much attention to blacks

A few cases (1.7%) were unclear in terms of the type of transfer, because of unfinished sentences, etc.

The 8.2% of cases labelled as 'irrelevant' in terms of transfer in Table 3 are largely those with phrasal or prepositional verbs, of which several examples have already been given.

6. GIVE AS A DELEXICAL VERB

In 26.1% of the 475 examples analysed, GIVE is used as a partially delexicalised verb⁵ in conjunction with a deverbal noun as Goal, i.e. one which is related to a verb in such a way that the verb could have been used (sometimes with a slight change of meaning) instead. This is illustrated in examples (7), (8), (11), (14), (16), (25), (30), (31), (34), (38), (53), (54), (55), (56), (59) and (60), already given above. Clearly, the use of the V + N has an advantage over the use of the lexical verb in that it allows the presentation of additional information by modification of the noun.⁶

The use of deverbal nouns with verbs of general meaning has been discussed from a corpus-based perspective by Stein and Quirk (1991), who found, in a corpus of 1.6 million words of contemporary fiction, 297 examples with GIVE, 72 with HAVE and 33 with TAKE. It should be noted, however, that the examples given by Stein and Quirk suggest that they analysed only those cases where the noun was of exactly the same form as the corresponding verb, whereas in the present study the criteria for inclusion were less restrictive. This, together with the literary, largely narrative nature of their corpus, may account for some of the differences between their results and my own.

⁵ Although the term 'delexicalised verb' is common in the literature, Stein (1991) has argued against its use, claiming that these verbs bring their own meaning to the constructions in which they occur.

⁶ Sinclair and Renouf (1988: 153) note that although GIVE as a delexical verb does appear in materials for the teaching of English, it tends to occur in the rubric of the texts, rather than in the teaching programme itself.

Stein and Quirk recognise the following 11 semantic categories into which their examples fall: perception (e.g. *give a look*), mental activity (e.g. *have a think*), verbal activity (e.g. *have a chat*), consumption (e.g. *take a sip*), bodily care (e.g. *have a wash*), contact activity (e.g. *give a hug*), physical action (e.g. *take a swim*), tentative action (e.g. *have a try*), involuntary reaction (e.g. *give a start*), potentially voluntary reaction (e.g. *give a laugh*), voluntary reaction (e.g. *give a shout [of joy]*). This classification proves over-simple when applied to the data from the Cobuild corpus: 38 of the 123 examples with a deverbal noun (i.e. 30.9%) could not easily be fitted into their scheme, largely because Stein and Quirk provide no category which would accommodate our 'enablement' type. Verbal action is the most common category in the Cobuild data (47.2%), and physical activity accounts for just 13.0%. This contrasts strongly with Stein and Quirk's data, which contain no examples of verbal activity with GIVE.

Stein and Quirk report that the nominal component was overwhelmingly indefinite, as has been remarked upon in other work on V + N constructions. In my own data, indefinite NPs again predominated (81.3%), but of these only 35.8% were singular NPs with the indefinite article, the rest being made up of indefinite NPs with mass nouns as head (35.0%), or with plural count nouns (10.6%). The examples which were definite consisted of 10.6% with singular count nouns, 3.3% with plural count nouns, and 4.9% with mass nouns.

Stein and Quirk found that whereas HAVE + N showed more 1st and 2nd person than 3rd person uses, TAKE and GIVE had many more 3rd person than 1st or 2nd. The data on GIVE are borne out by my results, which showed 62.6% were 3rd person, 6.5% 1st person and 4.9% second person, with 26.0% in non-finite constructions.

In Stein and Quirk's data, HAVE + N was almost equally split between simple finite and forms with auxiliaries, imperatives and non-finites, whereas the other two verbs occurred largely in the simple finite pattern. In my own data, only 29.3% were simple finite.

Stein and Quirk report that the nominal was pre-modified in about 70% of cases for GIVE but in only about 35% of cases for the other two verbs taken together, and suggest that this was probably because of the use of GIVE to indicate "realized experience which is thus more prone to invite detailed description and evaluation" (201, emphasis in original). In my data, 46.3% of NPs with delexical GIVE were pre-modified (not always by adjectives: pre-modifying nouns and quantity expressions were also included), a very similar proportion to the 44.7% which represented 'realised experience'.

Allan (1998), in a corpus-based study of what he prefers to call the "desemanticised" use of *give*, *have*, *make* and *take*, has isolated a number of meanings for each verb and classified them in terms of their degree centrality or peripherality with respect to the full, core meanings. He demonstrates that *make*, and to a lesser extent *give* and *have*, often retain strong traces of the core meaning, while *take* does not. Nevertheless, it is clear that many of Allan's examples, even for *give*, are indeed quite strongly desemanticised, and involve metaphorical extension.



7. INTERIM CONCLUSIONS ON THE BASIS OF THE SAMPLE ANALYSED IN DETAIL

Quite apart from the question of phrasal and prepositional verb uses of GIVE, which will be addressed in more detail later, it would seem that the predicate frame given in (1), together with illustrative examples such as those given in Dik's discussion of the predicate frame, present a very much over-simplified picture when confronted with the actual use of the verb. In particular:

- In a significant proportion (about a fifth) of cases, the Agent is not animate.
- Similarly, in about a tenth of cases, the Recipient is not animate.
- Perhaps most strikingly of all, what is given is not typically physical, but has to do with enablement or information. Note that this does not go against the proposed predicate frame as such, since the nature of the Goal is unspecified. The point is rather that the usual discussions of GIVE assume physical transfer, and say little or nothing about the detailed behaviour of the more frequent uses.
- A very frequent use of GIVE is as a delexical verb, with a noun representing the main semantic content.

8. LEXICAL COLLOCATION

To take further the line of argument presented above, let us consider collocational data derived from the whole 50 million word corpus from which the sample discussed above was drawn. I shall also broaden the picture at this point, to include analysis of TAKE as well as GIVE.

Before we begin this analysis, a few words of explanation about the statistics used to measure the strength of collocations are necessary.⁷ Two such measures are commonly quoted: the t-score and mutual information (MI) score. Put simply, the t-score gives a measure of the extent to which the node and collocate co-occur in the corpus, while the MI score takes into account the corpus size and also the relative proportion of co-occurrence and independent occurrence of the words under consideration. Lists of collocates ordered by t-score often reveal patterns which (sometimes with hindsight!) seem to make sense intuitively, while MI scores, because they are based on *mutual* attraction between words, tend to throw up fixed phrases and other very 'tight' collocations, even if these are quite infrequent in the corpus. The result of all this is that both measures can provide useful information, though the t-score is probably the more useful of the two overall. Collocates which appear in both lists are clearly very central.

⁷ A clear and practical guide to this area is given in Stubbs (1995). Further detail can be found in Church and Hanks (1990), Church et al. (1991) and Clear (1993).

TABLE 4. MOST SIGNIFICANT LEXICAL COLLOCATES OF *GIVE*

TOP LEXICAL COLLOCATES IN DESCENDING ORDER OF T-SCORE	TOP LEXICAL COLLOCATES IN TERMS OF MI
chance	
advice	
birth	x
opportunity	
information	
details	
credits	x
impression	x
evidence	
money	
support	
time	
warning	
notice	
idea	
rise	
hope	
pleasure	
extra	
access	
permission	
credit	
indication	x
priority	
ring	
	credence
	fillip
	coalfish
	prominence
	thumbs
	assent
	impetus
	hoot
	vent
	assurances
	leeway

Table 4 shows the top lexical collocates⁸ of *GIVE* (in all its verbal forms, taken together) ordered by t-score, and those of these (marked with an 'x' in the

⁸ Co-occurrence with prepositions and prepositional adverbs, which could be seen as on the borderline between lexical and grammatical status, is considered separately in Section 9.



second column) which are also in the top 50 collocates as ordered by MI, together with other collocates which appear in the MI list but not the t-score list.

The list ordered by t-score confirms very strongly the conclusions reached from the detailed analysis of the 475 examples, with regard to what is characteristically given —i.e. the nature of the Goal. Most of the collocates refer to the types of transfer which I have labelled ‘enablement’ (*chance, opportunity, support, time, hope, access, permission, priority*) or ‘verbal/informational’ (*advice, information, details, evidence, warning, notice, indication, possibly idea*). Note that most of the frequent verbal/ informational collocates could equally well have been classified as enabling: even giving a warning or giving someone notice of something could be seen as enabling them to avoid unfortunate situations. One or two are concerned with perception/reaction (*pleasure, and we could perhaps include hope here as well as in the enablement category*). A few are part of (semi-)idiomatic expressions such as *give rise to, give birth to*. Only a very few are concerned with physical transfer, usually of money or related items (*money, credit(s), possibly extra*). The frequent appearance of GIVE with ‘deverbal nouns’ (*advice, information, warning, support, pleasure, access, permission, indication, ring*) also supports our earlier analysis.

The list based on MI reinforces these conclusions: *fillip, assent, impetus, leeway*, probably *credence, assurances* and *prominence*, can be included in the ‘enablement’ category, as can *give the thumbs up*, which is the source of the collocate *thumbs*. The combination *give a hoot* (in a negative context) is concerned with the ‘not caring’ type of meaning, which I noted earlier, and *give vent to* is also an idiomatic use. The inclusion in the list of *coalfish* illustrates the tendency of the MI measure to bring to light some rather odd and infrequent cases!

Table 5 presents similar information for TAKE, again in all its verbal forms. Lack of space precludes detailed analysis of these results, but it is clear that the most frequent patterns into which the verb enters, as indicated by t-score, have rather little to do with physical transfer of something from a Source to a Recipient, initiated by that Recipient. A frequent category involves the use of TAKE plus a noun, often without any article, in an idiomatic combination (with *place, part, step(s), toll*, etc.). A second common situation is the use of TAKE with expressions of time (*time, long(er), minutes*). The verb is also frequently used with a deverbal noun (*care, action, decision, risks, lead, look, view, breath*, etc.), a phenomenon which we also noticed in the case of GIVE.

As before, we notice ‘tight’ but often infrequent collocations in the MI list (*take umbrage, take a swipe, take soundings, take up (the) cudgels, take a nosedive, take (the) logarithm(s)*, etc.), as well as rather strange items which are clearly important in particular texts in the corpus.

9. CO-OCCURRENCE WITH PREPOSITIONS AND PREPOSITIONAL ADVERBS: PHRASAL AND PREPOSITIONAL VERB USES

We can also discern clear patterns, for both GIVE and TAKE, of co-occurrence with prepositions and prepositional adverbs. Among the top 50 collocates of GIVE

TABLE 5. TOP LEXICAL COLLOCATES OF *TAKE*

TOP LEXICAL COLLOCATES BY DESCENDING ORDER OF T-SCORE	TOP LEXICAL COLLOCATES IN TERMS OF MI
Place	
Part	
Care	
Action	
Advantage	x
Time	
Account	
Seriously	x
Long	
Steps	
Step	
Granted	
responsibility	
risks	
look	
lead	
notice	
control	
hospital	
minutes	
toll	
decision	
longer	
breath	breaths
view	
	cudgels
	swig
	precedence
	precautions
	precaution
	Vergil
	soundings
	umbrage
	sip
	nosedive
	deflection
	prostata
	tiebreak
	logarithms
	logarithm
	incubators
	Ovid
	piss
	naps
	breather
	reins
	swipe



ordered by t-score are *to*, *up* and *away*. The first of these is related to both the infinitive marker preceding the form *give* and the prepositional marker of Recipient status. Both *up* and *away* are related to extremely common phrasal verb uses. Not surprisingly, no such words appear in the list ordered by MI, since mutual prediction is not strong for these items.

With TAKE, we find a larger range of prepositional and related items in the list ordered by t-score: *on*, *from*, *out*, *over*, *up*, *off*, *to*, *away*, *into*. Interestingly, one adverbial item occurs in the MI-based list: *aback*. Some uses of all of the words in the first list are related to the physical use of TAKE, as represented by the predicate frames in (4) and (5). Some examples, taken from 500 occurrences of TAKE selected randomly from the 50 million word corpus, are given in (61)-(64):

- (61) if I had one thing and one thing only to take with me to a desert island
- (62) he would take teams off us
- (63) I had to take the forty-four bus from London
- (64) the brown-carpeted stairs and dull, green banister take you up the 15 steps

Only cursory inspection of the sample is required, however, to demonstrate that the large majority of the examples are not of this kind at all, but represent phrasal or prepositional verb uses, illustrated in (65)-(68):

- (65) a new toilet could take up some of the under used space
- (66) organising the restoration of his own house was a challenge he was happy to take up.
- (67) another thing I think I would look for is people who are willing to take on the politics of school
- (68) my wife doesn't take too kindly to them

10. DIFFERENCES BETWEEN LANGUAGE VARIETIES

So far, I have presented evidence only from the whole corpus of 50 million words, or a random selection from it. In the present section I will demonstrate that collocational patterns show some differences, as well as many similarities, between written and spoken texts.⁹ For this purpose, I have used two subsets of the whole corpus, each of 10 million words. The first consists of material from the British newspapers *The Times* and *Today*, the second is entirely of spoken material recorded in the UK.

If we examine the top collocates, as indicated by t-score, in these two sub-corpora, we find many which are common, and also shared with the whole 50 mil-

⁹ This corroborates evidence from previous work: see Butler (1997, 1998).

lion word corpus: *chance, advice, birth, opportunity, information, impression, evidence, money*. There are also, however, collocates which occur frequently in the newspaper corpus but not the spoken corpus (*support, warning, notice, rise, hope, permission, credit, indication, details, boost, free, clear, job, performance*) and collocates which are common in the spoken corpus but not in the written (*time, idea, ring, example, call, number, answer, address, bath, bit, lord, pound*). Note particularly the importance of items concerned with communication in the spoken corpus: *ring* (in the sense of a telephone call), *call* itself, *number, address, answer*. Differences between spoken and written corpora also emerge clearly for TAKE, but will not be considered here.

11. DIFFERENCES BETWEEN FORMS OF LEXEMES

It has been pointed out in previous work (see e.g. Sinclair 1985, Butler 1998) that treating lexis in terms of the properties of lexemes gives only a partial picture, in that the different grammatical forms taken by a lexeme may show collocational patterns which differ to some extent. This is certainly true for the verbs under consideration here. Certain very significant collocates, as judged by t-score, are common to all forms of GIVE (and, of course, to the sum of all the forms, i.e. the lexeme): *money, chance, information*. Others are shared by 4 of the 5 forms. Some, however, are restricted to a single form: e.g. *ring, call, lift, bath, help, support* are significant collocates only for *give*. So, however, are *able, going, let, want*, and this illustrates an important point, viz. that certain items will be significant collocates for purely grammatical reasons—in this case, because they take the infinitive form of a verb. A similar point can be made in relation to *gave* which naturally collocates with certain time adverbs such as *then, never, once*, as a result of referring to past time rather than for any more idiosyncratic reason. It is noteworthy, however, that *gave* also appears to collocate with items concerned with medical matters (*tablets, doctor, prescription, smoking* [in *gave up smoking*]) as well as with words concerned with academic matters (*lecture, paper*—reflecting the nature of even this large corpus), and a range of more heterogeneous items (*mum, good, little, free, kiss*). Specific collocates of *giving* and *given* are also quite heterogeneous.

Very similar points could be made for TAKE, although in this case there is no collocate that is shared by all forms. Collocates concerned with time (and relatedly, those expressing number) tend to occur with *takes*, while as with GIVE, words concerned with medical matters collocate with the past tense form, though *hospital* and *ill* collocate most strongly with the past participle *taken*.

12. IMPLICATIONS FOR FUNCTIONAL GRAMMAR

Finally, let us consider the implications of the results of this corpus-based study for FG, and in particular for the predicate frame.

There are certain aspects of the behaviour of GIVE and TAKE which can, to some extent be accommodated within the existing framework of FG. For instance,

we might want to set up an equivalence of the following kind to represent the relationship between ‘delexical verb + N’ uses of the verbs and the use of the corresponding lexical verb (e.g. *give a hug* vs. *hug*, *take a look* vs. *look*):

- (69) $(f_i:\text{give}) [V] (x_1) (x_2; \text{pred}_N) (x_3) \leftrightarrow (f_i:\text{pred}_V) (x_1) (x_3)$ e.g.
 (70) $\text{give}(\text{Pat}, \text{kiss}, \text{Chris}) \leftrightarrow \text{kiss}(\text{Pat}, \text{Chris})$

It could also reasonably be claimed that phrasal verbs such as *give up*, *take off*, etc. are predicates in their own right, with meanings different from those we can attribute to *give* and *take* by themselves. In this spirit, we might postulate predicate frames such as the following:

- (71) $(f_i:\text{give_up}) [V] (x_1; \langle \text{animate} \rangle)_{\text{Ag}} (x_2 | E_1)_{\text{Go}}$ ¹⁰
 (72) $(f_i:\text{take_off}) [V] (x_1; \langle \text{animate} \rangle)_{\text{Ag}} (x_2)_{\text{Go}}$

to represent the meanings of the phrasal verbs in clauses such as:

- (73) I would be happy to give up one of my programmes
 (74) I think I'd give up working
 (75) Janine lets her hair down and takes off her glasses

with additional meaning postulates such as:

- (76) $\text{give_up}(x_1, E_1) \leftrightarrow \text{stop}(x_1, E_1)$
 (77) $\text{take_off}(x_1, x_2) \leftrightarrow \text{remove}(x_1, x_2)$

We could no doubt also formulate predicate frames and meaning definitions for other meanings of such phrasal verbs, such as those for *take off* in (78) and (79):

- (78) while Bowe took off ‘like a scalded Tassie devil’ according to Mazda team instructions
 (79) fly to Hamburg where you take off on an Antonov AN-2

The corpus evidence suggests, however, that things are really rather more complex than this. Giving up doing something is not just stopping doing it, as (76) would have it —it is stopping doing something which, for one reason or another, was important to the Agent: giving up is a sacrifice, performed for your own or someone else’s greater good. This emerges clearly from the collocation patterns for those occurrences of GIVE which have the item *up* within 6 words to the right. The

¹⁰ The notation here is intended to indicate that the Goal can be either a first order entity or a second order entity (predication).



list ordered by t-score reveals *smoking* as one of the most common collocates: a prime example of something which people are very attached to, but often want to give up for the sake of their health. The items *job*, *work* and *career* also figure in the list, and represent things which people abandon for the sake of their families, health, etc. Items such as *hope* are clearly positive, and represent situations which would be sacrificed only reluctantly. Giving up a *fight* or the *weapons* with which it is conducted again indicates the abandonment of something worthwhile. It is particularly significant that *forced* and *refused* also appear in the collocate list, confirming that giving up is often done reluctantly.

This point connects with a more general one about the use of GIVE. I noted earlier that the most frequent collocates are those concerned with enablement, and that even some of the verbal/informational collocates could be classified in this way too. Another way of putting this is that GIVE is surrounded by a positive *semantic prosody*: it is associated primarily with positive rather than negative outcomes.¹¹ Note that although it is, of course, possible to use GIVE plus a noun of enablement in a negative context, there are only 8 clear cases of this compared with 100 which are positive. Even where there is negativity, this may be counterbalanced by something positive, as in (80), where presenting no intellectual challenges is seen as a way of doing something positive:

(80) the best way to keep a man happy was to [...] give him no intellectual challenges

The claim of a generally positive semantic prosody is supported by the paucity of examples in the corpus in which GIVE collocates with negatively loaded nouns such as *problem(s)*, *difficulty/ies*, *trouble*. In the sample of 475 examined in detail, there is only one case of *give problems* and in the single case where *trouble* was found in the context, this is counterbalanced to some extent by the occurrence of *freedom* as the Goal. A cursory examination of concordance lines, for the whole 50 million word corpus, for forms of GIVE in collocation with *problem(s)*, *difficulty/ies*, *trouble*, reveals that there are indeed some examples with negative prosodies, but there are at least as many in which GIVE is associated with a positive effect, either because what is given is enablement to face problems (*advice* on problems and difficulties, *attention* or *clues* to them, *insights* into them *assistance* with them, *pre-*

¹¹ The concept of semantic prosody arose out of the work of Sinclair, who showed, for example, that HAPPEN and SET_IN are habitually associated with unpleasant situations (Sinclair 1987: 155-6). This idea has since been taken up by a number of scholars. Louw (1993) explores the potential of semantic prosodies for 'radical stylistics'. Stubbs examines the semantic profiles of CAUSE, AFFECT, CONSEQUENCE, CREATE, EFFECT, HAPPEN, REASON in the Cobuild corpus (Stubbs 1995: 42ff.), and later (1996: 176ff.) documents examples of collocations and semantic prosodies in the lexical encoding of key cultural concepts. Tognini Bonelli (1996: 89-90) explores semantic prosodies in Italian.

criptions for them, etc.) or because GIVE is associated with a negative (*gave no problems, never gave a problem, etc.*).¹²

With respect to its overall positive semantic prosody, GIVE contrasts sharply with CAUSE, which Stubbs (1995: 43-4) has shown to have a negative prosody. Indeed, it is interesting that among the most significant collocates of CAUSE Stubbs lists *problem, problems, trouble*, as well as other semantically negative nouns such as *anxiety, concern, etc.*

The specification of semantic prosodies goes well beyond what FG (or indeed any other grammar) can currently cope with, and yet is clearly of importance for any account of language which aims to describe the native speaker's communicative competence.

Let us now return to some of the evidence I presented earlier, concerned with the presence and classification of arguments of GIVE. We saw that while some 77% of first arguments in our examples could be taken as animate Agents (including those which are implicit, but clearly animate), about 20% were inanimate (including abstracts). Furthermore, in some 10% of cases, the Recipient was inanimate. The question arises as to how, if at all, we can accommodate this information while maintaining the concept of a predicate frame from which semantic structures are built up. The key issue is exactly what the predicate frame is intended to represent. It is clear, from intuition and from the results of analyses such as those reported here, that the predicate frame in (1) cannot be taken as adequate to represent the basic semantic structure of GIVE in all its occurrences. One possible position is that such a predicate frame represents the *prototype*¹³ for the predicate, but that various extensions from the central core are possible, including relaxation of the selection restrictions. Indeed, although the concept of prototype is regrettably all but absent from most discussion in FG, relaxation of selection restrictions has been mentioned very briefly in the context of metaphorical meaning (Dik 1997a: 94-7). Perhaps, then, occurrence of GIVE with inanimate Agents and/or Recipients is to be interpreted in terms of metaphor?¹⁴ This suggestion, in turn, raises a number of problems which FG urgently needs to address if it is to achieve its stated aims of psychological and pragmatic adequacy.

One such problem lies in the mechanisms Dik proposes for the interpretation of certain types of metaphor, which rely on a clash between the properties of terms to be inserted into a predicate frame, and the selectional restrictions imposed by that frame. This mechanism thus starts from the literal meaning as encoded in

¹² One interesting exception to the overall positivity of GIVE appears to be in expressions for not caring, revealed as quite common in the corpus, such as *not give a damn/toss/shit/fuck*.

¹³ For recent discussions of the concept of prototype and its applicability, see e.g. Taylor (1995), Geeraerts (1989), Seiler (1993), also the papers in Tsohatzidis (1990).

¹⁴ Louis Goossens (personal communication) has suggested that some of the phenomena discussed in this paper might be susceptible to analysis in terms of metonymy. For discussion of the roles of metaphor and metonymy in meaning extension see e.g. Goossens (1998).

the predicate frame, and works from that to the metaphorical meaning. However, as I have pointed out elsewhere (Butler 1991, 1999), there is good evidence, from the work of Gibbs (1984) and others, that we do not, in general, arrive at the interpretation of metaphor through a consideration of the literal meaning.

A further problem lies in the background assumption that metaphor is some kind of extension of the usual, which does not need to be built into the basic theoretical framework of the grammar, but can somehow be bolted on to it. There is, of course, now a huge literature which demonstrates the falsity of this position,¹⁵ and shows unequivocally that metaphor pervades the whole of our language activity. This underlines the need for a much stronger cognitive orientation than is currently the case in mainstream FG. There are, however, signs of change: the recent work of Faber and Mairal Usón (1994, 1999) in functional lexematics takes the line that lexical organisation can be seen as mapping cognitive organisation, and Kalisz and Kubiński (1997) have proposed that ideas from cognitive linguistics could be fruitfully imported into FG, commenting (p8) that “CL [Cognitive Linguistics] could offer such marriage [*sic*] a subtler treatment of lexical semantics.”

One possible approach which recognises the subtle diversity of related meanings for many lexemes is to make use of the concept of *schema* as proposed in the work of Lakoff (1987). In previous work on ORDER in English and (in much less detail) on PASAR in Spanish, I have proposed the enrichment of FG predicate frames by the attachment of schema networks showing relationships among related meanings of the lexeme, together with information on collocation and pragmatic phenomena, including patterning in different varieties of the language (Butler 1996, 1998). Schema networks are rich enough to be able to capture metaphorical meaning, while maintaining a clear mapping of the various relationships involved. A logical development of the work reported in this paper would therefore be an attempt to map, in terms of schematic networks, the semantic effects of, for example, changes in argument properties for GIVE. Table 6 is intended only to give some idea of the kind of information which might go into such an enriched representation of predicate frames for predicates involving ‘giving’.

Such an undertaking certainly seems to be worthwhile, and yet even the more flexible approach advocated here may, in the end, prove too rigid to accommodate the fluidity of natural conversational language. In a provocative and fascinating recent paper, Thompson and Hopper (forthcoming) question the appropriateness of models of predicate-argument structure, as they appear in much of contemporary linguistics, in relation to what is found in a corpus of American English conversation. Among the points of particular relevance to the present paper are the following:

¹⁵ For basic reading in this area, see for example Lakoff and Johnson (1980), Lakoff (1987), Ungerer and Schmidt (1996) and various other references given in this last publication.

TABLE 6. EXAMPLES OF ENRICHED PREDICATE FRAME SPECIFICATIONS

SEMANTIC PROPERTIES			COLLOCATIONAL PATTERNS	PRAGMATIC INFORMATION
PREDICATE FRAME	MEANING POSTULATES	ADDITIONAL		
(f; _i give_up) [V] (x ₁ ;<animate>) _{Ag} (E ₁) _{Go}	Give_up (x ₁) _{Ag} (E ₁) _{Go} √ stop (x ₁) _{Ag} (E ₁) _{Go}	see (as yet undeveloped) schema network for GIVE	e.g. <i>smoking</i>	Goal represents something to which Agent was attached, but which is sacrificed for the greater good.
(f; _i give) [V] (x ₁ ;<animate>) _{Ag} (i1x ₂ ;<expletive>) _{Go} (y ₁) _{Matter}	Give (x ₁) _{Ag} (i1x ₂ ;<expletive>) (y ₁) _{Matter} √ care (x ₁) _{o[Expi]} (y ₁) _{Matter}	see (as yet undeveloped) schema network for GIVE obligatorily negative	expletive = <i>damn, toss, shit, fuck</i>	informal, mainly spoken <i>shit, fuck, ?toss</i> vulgar

- Most predicates in the conversational data are not simple verbs such as are usually found in examples of predicate-argument structures, but ‘dispersed verbal expressions’ such as *‘ll be getting much out of, ‘d be on* (vitamins), etc.
- No hard and fast distinction can be made between transitive and intransitive, and the problematic cases include verbs with extensions which are indeterminate between preposition and particle (e.g. *get off* the bus —intransitive *get + off the bus* or transitive *get off + the bus?*).
- Many predicates in conversation do not have a fixed argument structure at all, but have ‘extensions’ which are used when the interaction calls for them and there is no alternative simple lexical predicate.
- Thompson and Hopper argue that the more frequent a predicate is, the less likely it is to have a fixed array of argument structures —e.g. the very frequent verb *get* occurs in many dispersed predicates with no clear argument structure. In terms of the analysis in the present paper, we have seen that GIVE and TAKE, both frequent verbs in spoken English, occur in constructions with deverbal nouns, often modified: we could well see these as examples of ‘dispersed predicates’ in Thompson and Hopper’s sense.

Thompson and Hopper’s conclusion reinforces the need to take account of corpus data, as argued earlier in the present paper:

...models of how ‘verbs’ and their ‘argument structures’ are listed in the lexicon that don’t pay any attention to what is frequently happening when people talk won’t be close to adequate for describing speakers’ ability to use language (Thompson and Hopper forthcoming)



13. CONCLUSION

The main point I hope to have made in this paper is that if FG is to take seriously its explicitly stated aspirations towards pragmatic and psychological adequacy, it must re-examine even very fundamental concepts such as that of the predicate frame. The detailed analysis of authentic language data, in the form of large corpora, clearly demonstrates that the lexical potential available to language users is much more complex than is suggested by the simple representations of predicates current in FG. In particular, we need to give attention to the specification of sets of meanings for words, often related in terms of metaphorisation, and to the collocational behaviour of words as revealed in large corpora. Ultimately, this work may force us to revise very radically the ideas about argument structure which, in one form or another, play a part in most present-day grammars, functional or otherwise.



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