

Published as: Fawcett, Robin P., 2006a. 'Establishing the grammar of "typicity" in English: an exercise in scientific inquiry', Part 1'. *Educational Research on Foreign Languages & Art*. No. 2. Guangzhou: Guangdong Teachers College of Foreign Language and Arts, pp. 71-91.

Establishing the grammar of 'typicity' in English: an exercise in scientific inquiry

Robin P. Fawcett

Centre for Language and Communication Research
Cardiff University
UK

Abstract

This paper has two aims: (i) to develop a more adequate model than is currently available for the syntax and semantics of a central area of English grammar for which there are still, surprisingly, no adequate accounts in the literature - i.e. the meanings and forms of 'typicity' - and (ii) to examine critically the adequacy of the methods used in descriptive studies in general and in this study in particular. Typicity is the grammar of 'type', so of items such as *type, sort, kind* and a large set of other words which serve a similar function. But it is also the grammar of those cases in which the meaning of 'type of' is present, BUT THE WORDS THEMSELVES ARE NOT, as in *Shell have developed a new oil*. The discussion assumes the desirability of taking a functional approach to language and, while the model of language used here is Systemic Functional Grammar, the discussion does not depend on a prior understanding of that model. To some extent, then, this paper provides a high-level introduction to SFG for those readers who are unfamiliar with it. However, the discussion of 'typicity' and its realizations in structure presupposes an understanding of the approach taken here to the nominal group that greatly extends the traditional concept of the 'determiner'. This in turn introduces an even more central concept than 'typicity': i.e. the concept that a nominal group may include 'selection' between two or more referents, as in *five of those children* and *a group of those children*. Since we shall recognize here no fewer than ten different types of determiner - and since there is, at the time of the publication of this paper, no full published description of the nominal group in these terms - we shall devote much of Part 1 of the paper to this topic, which is an important one in its own right. Part 2 will focus almost entirely on (i) the problem of deciding between alternative representations of the forms and meanings of 'typicity' in English, and (ii) the methods available to the twenty-first century linguist in seeking to determine which of the various alternatives provides the best way to model the facts.

Part 1

An overview of 'selection' in the English nominal group: is 'typicity' a type of 'selection'?

1 Introduction

1.1 The data to be explained

The three questions to which this paper provides answers are these.¹

- (i) How should we model the **syntax** around the underlined words in (1a) to (3a) below (which express the concept of ‘typicity’)?
- (ii) What **semantic** features do these items and their associated structures realize?
- (iii) What other patterns at the level of form realize meanings of ‘typicity’?

(1a) (The system needs) a few different sorts of documents.

(2a) (You need to determine) the appropriate type of insulin the person should use.

(3a) (This is) one of the first of the new varieties of GM wheat.²

Until quite recently, I had assumed that I had long since identified the ‘right’ description for examples such as these. This paper will present (i) evidence which suggests the need to consider a significantly different syntactic representation from the one that I had assumed was appropriate, (ii) the evidence for and against adopting the new proposal, and (iii) my decision on this finely balanced issue. Indeed, the paper will be as much about the concepts and methods to be used in reaching such decisions as it is about the description of English that results from the decision.

1.2 The plan of the paper

The paper is in two parts. The present section will be followed, in Section 1.3 of Part 1, by a discussion of the methods to be used in determining how best to represent an area of the grammar of a language, such as that to be examined here. It therefore addresses the question of how a functional theory of language should be developed. Then, in preparation for the discussion of the concepts of ‘selection’ in Section 4 and ‘typicity’ in Sections 5, Section 2 will introduce the basic assumptions about the nature of language made here, i.e. the framework of concepts in which the discussion will be set. While these will be drawn from Systemic Functional Linguistics (SFL), the discussion will be presented in terms that are relevant to any functional approach to understanding language. Then Section 3 will provide a summary and evaluation of the surprisingly thin literature on this topic. That concludes the introductory sections.

Section 4 will present a summarizing description of the English nominal group that provides for the cases exemplified of what we shall term ‘selection’ in (4) to (7) - among very many others, as we shall see.

¹The research that is drawn on here was in large measure carried out as part of the COMMUNAL Project. COMMUNAL was supported by grants from the Speech Research Unit at DRA Malvern for over ten years, as part of Assignment No. ASO4BP44 on Spoken Language Understanding and Dialogue (SLUD), by ICL and Longman in Phase 1, and throughout by Cardiff University. I would also like to express my personal thanks to the two friends and colleagues to whom I am most indebted. The first is Michael Halliday, the ‘father’ of Systemic Functional Linguistics and the linguist to whom I, like many others, owe the basis of my current model of language. The second major debt is to Gordon Tucker, who has worked with me in (i) developing the version of Systemic Functional Grammar (SFG) that has come to be known as the Cardiff Grammar, and (ii) implementing it in the COMMUNAL computer model of language. But I am also very grateful to Chris Butler for his acute comments, questions and suggestions during the particularly troublesome birth of this paper, which have led to very many improvements.

²Examples (1a) and (2a) are taken from the google corpus described in Section 5.6, and (3a) is the result of a ‘thought experiment’ to check whether the various types of ‘selection’ included here can indeed occur in a single example.

- (4) all (of) those children / them
 (5) five of those children / them
 (6) five of the youngest of those children / them
 (7) a picture of a group of the youngest of those children / them etc.

(The layout of (4) to (7) is significant - as also is the optionality of *of* in (4).)

However, any adequate description of the English nominal group must also model the expression of 'typicity', as in (1a) to (3a) and in (8):

- (8) some photographs of two of the latest types of jet engine

Example (8) appears to belong to the same general pattern as (4) to (7) - but does it? In other words, is 'typicity' a type of 'selection'?

This is the crux of the problem to be addressed in Part 2 of the paper. The task of Section 5, which constitutes the core of the paper and is by far the longest section, is therefore to explore and to assess the evidence related to this question. It is Section 5, then, that investigates the new hypothesis to be explored here. Finally, in Section 6, I shall (i) summarize my conclusions and (ii) review the methods used in this scientific inquiry. It is these methods that I take to be the main tools available to the scientist whose task is to investigate the nature of language.

When I began work on this paper, I thought it would tell a tale of using FOUR types of evidence to justify introducing A NEW SYNTACTIC PATTERN for certain core elements of the nominal group in English. But it has instead turned out to be a tale about the use of FIVE types of evidence - the last of which has led to the REJECTION OF THE POSSIBLE NEW SYNTACTIC PATTERN, and so to the confirmation, with minor changes, of an earlier proposal for this area of English grammar. However, since that earlier proposal hasn't been widely publicized, this paper may still give you the fun of being challenged to reconsider your current assumptions about this area of English grammar.

1.3 How to make progress in Systemic Functional Linguistics (SFL)

Let me begin by giving an informal description of how, in my view, we should expect improvements in the description of a language to come about - and so, much less frequently, how improvements in a theory of language may come about.

In a functional theory that respects the evidence of real life texts - as SFL does - the natural route to such changes in the theory is (or should be) as follows:

- 1 A linguist analyzing a text finds that the current description is unable to handle some phenomenon in a principled manner.
- 2 He or she then invents (or borrows from elsewhere) a new descriptive category that she will try out to see if it helps in handling the problem. (For now on we shall say 'she', to balance the fact that the writer of the present paper is male.)
- 3 She thinks systemically - i.e. paradigmatically, and at the levels of both form and meaning - about possible similar cases that might occur; she search corpora wherever possible; and she remains alert to this area of the grammar from then on in all uses of language that she encounters - noting relevant examples and steadily testing, modifying and refining the possible innovation in the descriptive apparatus.
- 4 If she then finds that the new category has become established as a necessary concept (e.g. for analyzing texts), she considers carefully whether it is (i) an artefact of her particular research task (as has occasionally happened in SFL), or (ii) a part of the general description of the language. If the latter, she asks whether (i) it is another instance of an already established category (e.g. the recognition of a new element in an established unit, of which

Gordon Tucker and I have found a few cases in recent years, as we developed our description of the grammar of English) or whether (ii) it has implications for the theory itself (as would be the case if, say, one were to propose an element that was NOT part of a unit).³

5 She presents the new proposal in a conference paper, a journal article or a book (as I shall here).

6 Other scholars respond to the proposal, either pointing out why it should not be incorporated into the general description of theory, or incorporating it and acknowledging it - at least for the next few years, until it simply becomes a fully established component of the revised theory.

In practice, relatively few additions to the descriptive apparatus turn out to have implications for the theory, but when a number of them have been made it sometimes becomes clear that there is also a need to adjust the theory itself.⁴ In Section 6, then, we shall return to the question of the methods used in an exercise in linguistic inquiry such as this.

The next two sections describe (i) the concepts that provide the necessary background to the alternative proposals to be discussed in Sections 4 and 5, and the contributions made so far in the literature to understanding the phenomena to be examined here.

It may strike you as a little surprising that I have decided to introduce the background concepts before surveying the relevant literature. The reason is that they provide a useful framework for interpreting the proposals made so far in the literature.

2 The necessary background concepts

2.1 Some preliminary definitions

Since the theory of language in whose framework this discussion will be conducted is SFL, it will be useful to make a distinction from the start between Systemic Functional Linguistics (SFL) and Systemic Functional Grammar (SFG). As we shall see in Section 2.3, a SFG is the sentence-generating component of an overall model of language and its uses that draws on SFL. And the term 'Systemic Functional Grammar' is also used, by extension, for the study of the SFG of a language, or of language in general. Halliday (1996) has proposed the term 'grammatics' to refer to the study of 'grammar'. These two distinctions - (i) between a theory of language and the grammar of a language whose description uses such a theory, and (ii) between the grammar itself and the grammatics that studies it - are ones that are useful to any theory of language.

³This idea has been suggested in the past for Linkers such as *and* and *or* (e.g. Muir 1972:88), but it is not so far as I am aware advocated by any currently active SF grammarian. Indeed, there are compelling reasons why an *and* that links two co-ordinated clauses should be attached to the start of the second one.

⁴At various points in Fawcett 2000, I describe cases of how I came to make changes of this sort to Halliday's theory of syntax. The most important of these is the change in the criteria for identifying a unit, and the consequent partial replacement of the concept of the 'rank scale' (which involves faulty predictions about relations between units) by one that gives weight to the varying probabilities in the question of what unit may fill what element in what other unit. For this see Fawcett 2000:238-43.

2.2 Common ground and differences in two versions of SFG

We shall begin with a summary of the relationship between the version of SFL developed by Halliday and his colleagues ('the Sydney Grammar') and the version developed by my colleagues and myself ('the Cardiff Grammar'). As Halliday has remarked (1994:xii), the version of SFG with which 'Cardiff Grammar' systemicists work is 'based on the same systemic functional theory' as that of Halliday. However, in the light of the differences between the two, as pointed out in Fawcett 2000 and in Butler 2003a and 2003b, we should insert 'essentially' before 'the same'.

Thus, while there are important differences between the two models of language, the two also have a vary large amount in common. For example, both assume that the concept of a vast system network of interdependent 'choices between meanings' should be the foundation of a SFL model of language, and both assume that realization rules convert these meanings into words, syntax, intonation, and so on. At a more general level, both aim to provide, for the languages of the world, (i) a **descriptive** grammar - and so a grammar that is capable of being used to describe both languages and texts - and (ii) a **generative** grammar - and so one that is sufficiently well formalized to be able to operate in a computer as part of a natural language generation system. I take it as axiomatic that work on the descriptive grammar of a language benefits work on the generative grammar (and vice versa), because ultimately both draw on - and in turn contribute to - the same model of language.⁵

The SFL model of language to be presented here - i.e. the Cardiff Grammar - is no less systemic and no less functional than Halliday's. Indeed, there are ways in which it can claim to be both more systemic and more functional, e.g. in the explicitly semantic nature of its system networks.

The current position is therefore that, as a result of the extensive work by the team at Cardiff since the late 1980s, there are now two fairly comprehensive versions of SFG, with certain significant differences between them. As the names for the two versions used here suggest, the two models are generally referred to by the names of their academic bases, i.e. as 'the Sydney Grammar' and 'the Cardiff Grammar'. Butler 2003a & 2003b provides fairly full descriptions of both versions (as well as two other 'functional-structural' models), and he reaches the encouraging conclusion that 'in my view the Cardiff model represents a substantial improvement on the Sydney account' (2003b:471).

The main theoretical difference is that in the Cardiff Grammar the system networks for TRANSITIVITY, MOOD, THEME, TIME etc are regarded as constituting the level of meaning - i.e. the semantics - so implementing Halliday's revolutionary proposals of the 1970s (e.g. 1971/73:110; see Chapter 4 of Fawcett 2000 for a summary of these and their significance). But in other writings (e.g. in Halliday & Matthiessen 1999 and 2004) Halliday suggests that there is a second and equally complex layer of networks of 'choices between meanings' above these, and that it is these that constitute the semantics. However, the fact that in both versions the system networks for TRANSITIVITY, MOOD, THEME, TIME etc are seen as modelling a 'meaning potential' that is realized in functional structures means that the proposals in this paper are potentially relevant to both. The differences become most pronounced when we consider the question of what other components of the model of language lie above this level of system networks.⁶

⁵See Fawcett 2000:78-81 for a discussion of the fact that we need to recognize that we find both 'text-descriptive' and 'theoretical-generative' strands of work in SFL - as in linguistics as a whole.

⁶Two problems about evaluating Halliday & Matthiessen's 'two levels of meaning' proposal - which many SF linguists believe makes the model unnecessarily complex - are (i) that so far only fragments of such a description have been published, and (ii) there is no clear indication of how choices in that network would 'predetermine' choices in the standard network.

2.3 How a Systemic Functional Grammar (SFG) works

I shall now provide a brief overview of how a SFG works. Here we assume a model with only one level of networks for the ‘meaning potential’ of a language. You can interpret it as the semantics, as in the Cardiff Grammar, or as the lower of the two networks that specify ‘meaning potential’, as in the Sydney Grammar.⁷

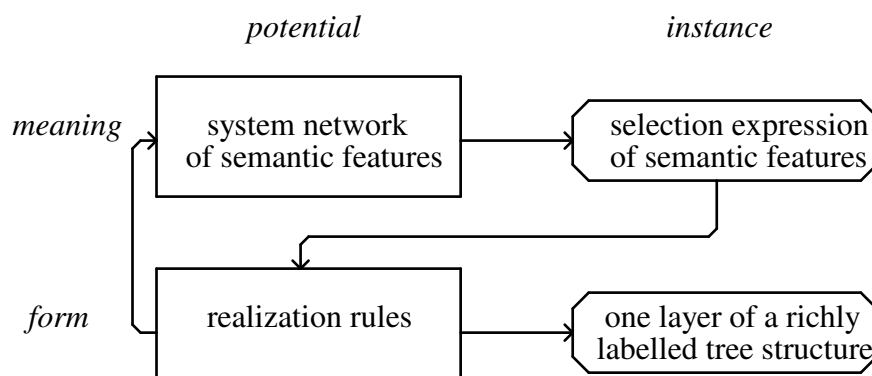


Figure 1: The main components of a Systemic Functional Grammar and their outputs

The process of generation is controlled by the **system network**. This models the ‘meaning potential’ of the language, and it consists of statements about relationships between semantic features. One uses a system network by ‘traversing’ it, collecting semantic features as one goes. In Section 5.5 I shall introduce a small part of the overall network.

Figure 1 shows (i) the two main components of the grammar of a language (on the left), and (ii) their outputs (on the right). As the label above the two main components suggests, the grammar specifies the two main ‘potentials’ of a language: one at each of the two levels of **meaning** and **form**. Figure 1 also shows the two types of ‘instances’ - i.e. the outputs from each of the two components.

As the arrows in Figure 1 indicate, semantic features in the system networks generate the ‘richly labelled’ syntactic structures of the language - but not directly. Each traversal of the system network results in one **selection expression**, this being the set of semantic features that have been chosen on that traversal of the network in the generation of one syntactic **unit**. The selection expression is the input to the level of **form**, but it is also the representation at the level of **meaning** of the unit being generated.

Each of the selected semantic features is then checked against the **realization rules**, and if a rule that refer to the feature is found it is applied.

The output from the realization rules is added to the structure being generated, and it will consist of: (i) one syntactic unit, (ii) its elements, and (iii) the items that expound them - unless an element of the unit is to be filled by a further unit (for which see below). In comparison with other theories of language, the ‘nodes’ of a SFL representation are, as the label on the output at the level of form says, ‘richly labelled’ (as the analyzed examples that we will meet).

While most types of realization rule build structures, one type re-enters the system network (as indicated by the arrow on the left of Figure 1). The first pass through the network typically generates a clause, but generation of a full text-sentence usually requires several re-entries to the system network to generate the nominal groups (and other units) that fill some

⁷See Chapter 5 of Fawcett 2000 for a discussion of the many major similarities and the relatively minor differences between the generative versions of the Sydney Grammar and the Cardiff Grammar.

of the elements of the clause, and some of the elements of the groups. We shall see the results of such a ‘re-entry’ in the analyses of examples in Figure 2 onwards.

This paper, then, will focus on the structures that are generated as the **outputs** from the level of **form** - and in particular on some key areas of the nominal group. But we shall find that, in assessing the relative merits of alternative structures, we shall need to examine them in relation to (i) the part of the system network from which they are generated and (ii) the realization rules that express the relationship between meaning and form.⁸

2.4 A brief introduction to the structure of the English nominal group

While the **semantics** of the **nominal group** (like the semantics of the clause) involves several different types of meaning (‘metafunctions’ in Sydney Grammar terms, ‘strands of meaning’ in Cardiff Grammar terms), at the level of **form** these are integrated into a single structure. In Halliday’s description of the nominal group in *IFG* he at first takes precisely this position, but later, somewhat confusingly, he suggests the need for a second structure. As we shall see, the structure for the nominal group described here provides neatly for the problem that led Halliday to introduce a second structure, so that here all of the various strands of meaning that are realized in the nominal group are modeled in a single structure.⁹

A **nominal group (ngp)** consists of four broad types of element: **determiners (d)**, **modifiers (m)**, the **head (h)** and **qualifiers (q)**. As a simple example, consider Figure 2.¹⁰

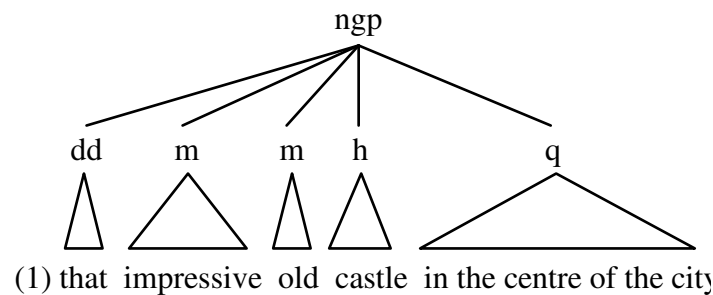


Figure 2: The primary structure of a simple nominal group

Note the following points about the example in Figure 2:

- 1 Each ngp has at least one **referent**, which may be ‘singular’, ‘plural’ or ‘mass’.
- 2 We shall say that each of *this book*, *it*, *these books*, *they* and *oil* has a **single referent**. Thus a ‘plural’ ngp has a single referent.
- 3 We shall use the following technical terms and abbreviations (as specified in Fawcett 2000) when describing a **ngp** - using (1) as an example. This **unit** is a **ngp** that has as its **elements** a **deictic determiner (dd)**, two **modifiers (m)**, a **head (h)** and a **qualifier (q)**. The deictic determiner is **expounded** by the **item** *the* and the head by the **item** *castle*. The qualifier (whose internal structure is not shown) is **filled** by a **prepositional group (pgp)** (*in the centre of the city*). Each of the two modifiers is filled by a **quality group (qlgp)** (also not

⁸For a fuller discussion of the implications of Figure 1 see Chapter 3 of Fawcett 2000, and for a full account of how a SFG works see Fawcett, Tucker & Lin 1993.

⁹See Fawcett forthcoming for a full discussion of this question.

¹⁰This example is taken from a real question that I asked when visiting the University of Gent, Belgium: *Does anyone live in that impressive old castle in the centre of the city?*

shown), the **apex** being **expounded** by the **items** *impressive* and *old*.¹¹

4 A ngp may contain many types of **determiner** and **modifier** and several **qualifiers**, but it can only have one **head**.¹²

5 Each determiner, modifier and qualifier is a separate element, and each realizes a different type of meaning.

6 With only very minor variations, the **sequence** of the elements is fixed.

7 The presence of the **head (h)** element is almost OBLIGATORY (though we shall shortly meet an exception to this generalization). There are three main types:

(i) heads that state the **cultural classification** that is being assigned to the referent by a choice in the vast system network of noun senses that a language makes available to its users ('common nouns');¹³

(ii) heads that refer to their referent by a **token cultural classification** ('third person pronouns'); and

(iii) heads whose referent is **named** ('proper nouns').

Here we shall be concerned with Types (i) and (ii) - as in (1a) to (7).

8 All elements other than the head are structurally OPTIONAL, with Type 1 allowing for the widest range of elements.

9 The function of both **modifiers** and **qualifiers** (which precede and follow the head respectively) is to **describe** the referent. Both answer the general question 'What sort of object?', and there are specialized questions for each subcategory of modifier and qualifier. But modifiers typically also serve one of three broad functions: in principle, all modifiers can be used to **classify** the referent, but some simply **depict** it (cp. the traditional terms 'defining' and 'non-defining') - and some modifiers are **affective** (e.g. *nice*, *nasty*).

2.5 The use of *of* in structures other than 'selection'

We turn now to the use of the word *of* - a word whose centrality in understanding the structure of English cannot be overestimated. It is the second most frequent item in English after *the*, and it comprises about two per cent of all words in all types of text (Sinclair 1991:84, 143). It expresses many different semantic relationships, but in the grammar presented here these are realized in either of just TWO types of structure. One is the 'selection' structure to be introduced in Section 4, and the other we shall deal with here.

In this 'other' use, the item *of* functions as a preposition in a prepositional group. In this syntactic function, it is used in the Cardiff Grammar to express several different semantic functions. Two of the more important are the meaning of 'personal relationship' in (2) and the 'reification' of an event as a **nominalization**, as in (3).¹⁴

¹¹We recognize the presence of a qlgp here because almost all such cases can be preceded by a **temperer**, e.g. *very*. For the fullest grammar yet published of the grammar of the **quality group** (the unit whose pivotal element is an adjective or adverb), see Tucker 1998.

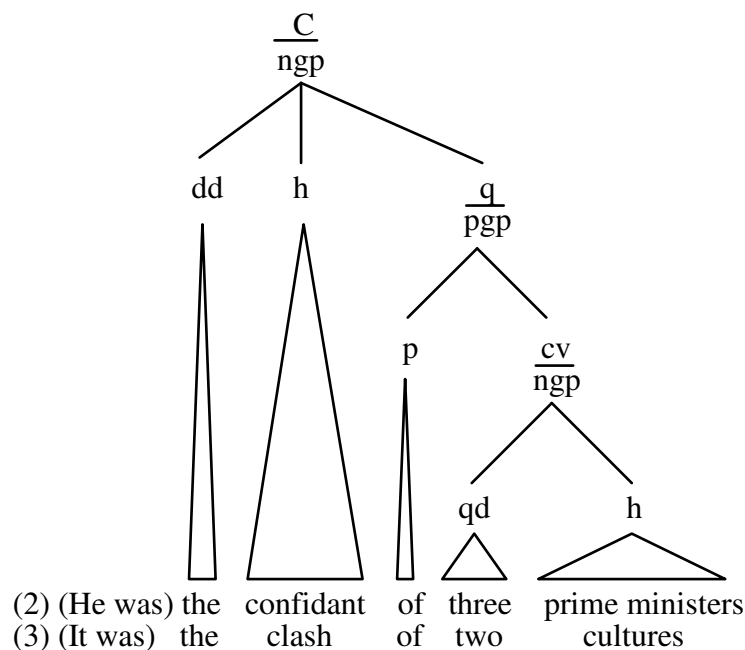
¹²However, the new proposal considered in Section 5.10 would, if accepted, modify this claim.

¹³For an excellent introduction to this important SFL concept, including a survey of the literature up to the time, see Tucker 1996.

¹⁴The function of *of* in a nominalization is to mark what follows as a Participant Role (PR) in the Process that is expressed (or partly expressed) in the head. So in *the clash of two cultures (with each other)*, 'two cultures' functions as a PR in the Process of 'clashing' that is realized in *clash*. A third (and rather different) use of *of* as a preposition occurs when it realizes part of the meaning of a Process, e.g. in examples such as *I'm thinking of you* and *I'm aware of the problem* (where 'thinking of' and 'being aware of' are the Processes).

- (2) (He was) the confidant of three prime ministers.
 (3) (It was) the clash of two cultures.

The structure of both examples is shown in Figure 3.



Key (new elements): pgp = prepositional group
 p = preposition cv = completive qd = quantifying determiner

Figure 3: The 'prepositional group as qualifier' construction

Currently most linguists - other than those who use the approach suggested in Fawcett 1974-6/81 and 1980 - appear to assume that this structure is the only one that is required for modelling ANY instances of the word *of*.¹⁵ Section 4, however, will introduce a very different structure as being the appropriate one to use when *of* is being used in its 'selection' sense.

3 The sparseness of the relevant literature

3.1 'Selection' and 'typicity'

First, however, I shall offer a brief overview of certain publications that are - or should be - relevant to the concepts of (i) 'selection' in the nominal group, as presented in Section 4, and (ii) 'typicity' in the nominal group, as discussed in Section 5.

This paper will demonstrate that the concept of 'typicity' and its various realizations at the level of form is far more central in the grammar of English than one might at first think. And yet much of the relevant literature, you should be warned, is very sparse - and, by and large, un insightful.

¹⁵One group of linguists who don't make this assumption is Sinclair and his team. Sinclair 1990 lists the cases where they use a prepositional group (or 'phrase') to represent the structural relationships around *of* (which include some that are handled here as types of 'selection') but, disappointingly, that work doesn't say what the structural relationship between *of* and its neighbouring elements is in cases such as *five of them* or *a pile of books*. Nor is this explained in Sinclair 1991.

3.2 Fawcett 1974 to 2000

Let me begin by tracing the history of the concept of ‘selection’ in my own work on developing a SFG for English. So far as I am aware, this concept was introduced to linguistics for the first time in Fawcett 1973/81.

The approach to the structure of the English nominal group to be presented here is set within the broad framework of the principles set out in Halliday 1961 - while being significantly different from the description of English found in *IFG*. Most of the specific proposals set out in Section 3 have been published previously, but only as incidental components in papers or books whose main focus was elsewhere. The first presentation of the concept of ‘selection’ in the nominal group was in Fawcett 1974-6/84, and it was presented again, in a slightly revised form, in Fawcett 1980.

The current version, however, which includes full system networks and realization rules, was developed with colleagues (especially Gordon Tucker) as part of the COMMUNAL Project. It is described briefly in Fawcett 2000; it is the main focus of Fawcett forthcoming b; and the fullest descriptions are to be found in Fawcett forthcoming a and c. Here I shall draw on those works to provide the framework for my discussion of the meanings of ‘typicity’, and for the structures through which they are realized..¹⁶

The types of determiner recognized in my early work - together with examples of what expounds them - were:

- (i) ‘deictic’ (e.g. *the*),
- (ii) ‘uniquifying’, a term that was replaced in my 1980 book by ‘ordinative’ and ‘superlative’, e.g. *the first* and *the biggest*),
- (iii) ‘quantifying’ (e.g. *five* and *a small number*), and
- (iv) ‘partitive’ (e.g. *the back*).

Examples and brief descriptions of most of the others that we shall meet later in this paper are also given in my 1980 book - including, on p. 220,

- (v) the ‘typicity’ meanings to be discussed in Section 5 (e.g. *this type*).

So virtually the full set of ideas to be presented here was in the public domain by 1980 - if only in outline form.

3.3 Downing & Locke 1991

However, it was not Fawcett 1980 but Fawcett 1974-6/84 that Angela Downing and Philip Locke acknowledge as one of their sources for their valuable 1992 *University Course*

¹⁶In addition, I have presented (i) workshops on ‘selection in the nominal group’ at several International Systemic Congresses; (ii) guest lectures on this topic at the Universities of Macquarie (Sydney), Doshisha (Kyoto) and Gent (Belgium); and (iii) undergraduate and postgraduate courses at Cardiff. There is also an excellent summary of the Cardiff Grammar’s general approach to the nominal group in Butler 2003a:309-13), and on pp. 334-6 he ingeniously uses the early system network from Fawcett 1980 (which is the only one to have been published so far, apart from the fragments in Fawcett, Tucker & Lin 1993) to traces the pathways though the network that are chosen in generating the example he considers, i.e. *two old plush tablecloths*. The large-scale networks in the current version for computer implementation are far more complete than those in Fawcett 1980 and Fawcett, Tucker & Lin 1993, but they operate on the same principles, so that Butler’s description gives an authentic feel for how this grammar works. They will be published in Fawcett forthcoming c.

in *English Grammar* (p. xix), recently revised as Downing & Locke 2006. The heading of their Module 47 is ‘Selecting and particularising ‘things’, and although Downing & Locke limit themselves to just two types of ‘selection’ - selection by ‘deixis’ and by ‘quantification’ - they are using these terms in essentially the senses in which I intended them.¹⁷ At a time when we who were working on the COMMUNAL Project were becoming aware that our proposals for improvements to the SFL description of English were falling on (largely) deaf ears in Sydney, this was a small but very welcome encouragement.

3.4 Matthiessen 1995

However, one of the Sydney group, Christian Matthiessen, has found my concept of ‘selection’ useful, as he courteously acknowledges in a footnote in Matthiessen 1995:655. So, even though this work is, in Matthiessen’s own words, ‘based on Halliday’s work’ and ‘intended to be read together with *IFG* as a companion volume’ (pp. i-ii), we should note that, in his 1995 book, he felt able to add concepts that were not found in *IFG*, if he considered them useful.

But I have to point out, regretfully, that there is a serious limitation in Matthiessen’s use of the concept of ‘selection’. It is that he only seems to be willing to recognize that ‘selection’ is involved IF THE RELEVANT DETERMINER IS FILLED BY A NOMINAL GROUP AND FOLLOWED BY *of*. So for him *a pack of cards* involves ‘selection’, but *fifty-two cards* does not - in part, perhaps, because of the presence of *of* in the former. However, I shall show in Section 4 why the syntax of the two should in fact be represented as broadly similar - though not, of course, precisely identical - irrespective of the presence of the item *of*.¹⁸

Matthiessen’s treatment of ‘selection’ is fuller than that of Downing & Locke, in that it makes provision for two more of the categories to be introduced here. These are the ‘representational’ and ‘typic’ types of ‘selection’ for which see Section 4.3 - though he uses the alternative labels of ‘symbolization’ and ‘exemplification’) - so making five different types of ‘selection’. However, there is a further problems with his description. This is that the classification of types of ‘Facet’ that he offers on p. 657 implies that his five ‘sub-types’ are in a systemic - so **paradigmatic** - relationship to each other. But the facts of English texts show that four of his five types are in a **syntagmatic** relationship to each other - as the many analyzed examples in Fawcett 1974-7/81 were expressly designed to show - and as Section 4 will demonstrate. (The exceptions are his ‘aggregate’ and his ‘measure’, which are subtypes of our ‘quantity’.)

Nonetheless, this acceptance of some at least of our proposals by a second fellow systemicist was also a source of encouragement at the time to the Cardiff grammarians, and it appeared to give some hope that our proposals for improved SFG descriptions of English were being noted.¹⁹

¹⁷Further work in the COMMUNAL Project on the nature of the referents of nominal groups has persuaded me to change my position on my earlier assumption (in Fawcett 1980) that ‘particularization’ is itself a type of ‘selection’. Logically the idea makes sense, but the way that English (and every other language I know of) works is, I now see, to treat the ‘particularization’ as part of the meaning of what we shall refer to as the ‘rightmost referent’. Section 4.3 will expand on this.

¹⁸Perhaps Matthiessen accepts this apparently illogical difference in structure out of deference to Halliday’s early analysis of one-item quantifying expressions as ‘numeratives’. But that analysis fails to capture the important generalizations that the present analysis captures - and both Halliday and Matthiessen are, by temperament, seekers after generalizations.

¹⁹Matthiessen’s discussion has the further virtue of reminding us of the discontinuity that our analyses must handle in cases such as *Dorian Grey I haven’t seen a picture of*, and this was useful in pointing me to an even wider set of related problems problema to which Chapter 15 of Fawcett forthcoming a provides solutons.

3.5 *IFG*: Halliday 1985 & 1994, Halliday & Matthiessen 2004

Interestingly, however, the concept of ‘selection’ is completely absent from all three editions of *IFG* - even the 2004 edition, in which Matthiessen functioned as the ‘reviser’. Unless he has changed his mind since his 1995 book, it would seem that his remit as ‘reviser’ did not extend to the concepts used in the description.²⁰

However, we should note that all three editions of *IFG* include two of the concepts proposed in Fawcett 1974-6/81, and so also in my later writings (though under different names from mine). The first is the concept of ‘Measure’, as in *a pack of cards* and *another three cups of that good strong tea* (Halliday 1994:195). And this brings us to an apparent inconsistency. In the first example, *a pack of* is analyzed as a ‘Numerative’, while, in the second (which occurs immediately below it on the same page), *another three cups of* is described differently, i.e. as a ‘Pre-numerative’.

The second concept that was first suggested in Fawcett 1974/81 is that exemplified in *the front of the house*. In the 1994 edition of *IFG* this is described as a ‘Pre-Deictic’, but in the 2004 edition it becomes a ‘Facet’.

A further problem, apart from the inconsistency in the labelling in these examples, is that Halliday never offers any comment on the function of *of*. He simply analyzes it as PART OF the ‘Numerative’, ‘Pre-Numerative’, ‘Pre-Deictic’ or ‘Facet’, and this leaves the reader asking ‘What is the unit of which the word *of* is an element?’

The only possible conclusion is that the current *IFG* description of these areas of meaning and form need substantial revision, if they are to account consistently for the data to be discussed here.

3.6 Butler 2003a & 2003b

Within the framework of a comparison of SFL with two other “structural-functional” theories (Dik’s Functional Grammar and van Valin’s Role and Reference Grammar), Butler 2003a and 2003b provides an impressively full and detailed comparison of the two main versions of SFL. On pp. 309-13 of Butler 2003a there is an excellent summary of the Cardiff Grammar’s approach to the nominal group, based on Fawcett 2000. It therefore includes a brief account of ‘selection’, including all the determiners to be introduced in Section 4 (except one more recent addition). He avoids direct comparisons for much of the two volumes, leaving readers to draw their own conclusions, but in Butler 2003b he writes in summary that “there can be no doubt that SFG has lived up to its claim to be a text-oriented theory of language; ... it has achieved a much wider coverage of English grammar than other approaches, this being especially true of the Cardiff grammar” (2003b:471). I hope this paper will exemplify Butler’s comment on the Cardiff Grammar’s coverage, and also that his remarks will encourage you to look seriously at the descriptions of the rest of English offered in this framework by my colleagues and myself.

3.7 Quirk et al 1985, Biber et al 1999 and Huddleston & Pullum 2002

While Quirk et al 1985 take a traditional approach to the phenomena to be examined here, they provide - as almost always - a useful exploration of the much of the relevant territory. Their approach to the ‘definite article’ and the ‘indefinite article’ (pp. 253-4) reflects the traditional approach established in the 18th century - a tradition that is challenged in the present approach (in Section 4.1). Then in pp. 248-52 they provide an informal survey of what they term ‘partitive constructions’. They define these (p.249) as ‘denoting a part of the

²⁰Matthiessen has told me (personal communication) that the chapter on groups in Halliday and Matthiessen 2004 was one for which Halliday took responsibility.

whole'. This might at first appear to correspond closely to the concept of a partitive determiner that I shall introduce in Section 4.3, but in fact it does not. This is because Quirk et al use the term in an extremely broad sense that includes several of the many meanings and forms to be described here - BUT ONLY WHEN THE RELEVANT DETERMINER IS FILLED BY A NOMINAL GROUP AND FOLLOWED BY *of*. Their notion of 'partition' can perhaps be seen as a more limited version of our concept of 'selection', and much of what they have to say concerns matters of 'agreement' between a Subject that contains a nominal group followed by *of* and the following verb.

Biber et al. 1999 state that they rely on 'previous descriptions of English', and in particular that their 'descriptive framework and terminology closely follows' that of Quirk et al 1985 (pp. 6-7). Since they characterize this, quite accurately, as 'terminologically conservative' (p. 7), we should not expect innovative proposals from them either. Their great contribution - and it is great - is to provide a mass of information about probabilities in language, derived from a very large corpus - and some of these, as we shall see, are relevant to the present study.

Huddleston & Pullum 2002, like Quirk et al 1985, are largely concerned with so-called 'agreement' phenomena (pp. 352-3), and they have nothing useful to say about the syntax of such constructions - assuming without question the traditional form-based approach, i.e. that *of* is a preposition and that what follows is an embedded noun phrase (e.g. pp. 411-3).

3.8 Sinclair 1991 and Prakasam 1996

To complete the picture, I shall now briefly summarize the proposals of two scholars who have made detailed studies of the word *of*. On the basis of a small corpus study, Sinclair suggests that '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' - and he proposes this status for the item *of*. It is indeed frequent, his corpus showing that *of* constitutes 'every fiftieth word - over two per cent of all the words - regardless of the kind of text' (p. 84).

But from a functional viewpoint what is important about an item is not its 'word class' but its function in a higher unit - and Sinclair fails to show that *of* performs the same structural function in every case. Indeed, he offers no structural analysis at all. However, he does separate off the 20% of cases in which *of* occurs as part of a set phrase, or when predicted by certain lexical verbs such as *consist* and adjectives such as *full*, and he then groups the remainder into a number of loosely defined categories (e.g. 'focus on a component, aspect or attribute'. Some, such as his 'conventional measures' (for *both of them* and *a couple of weeks*) and his 'focus on a part' (for *the middle of a sheet* etc) clearly correspond to elements in the model proposed here (to my 'quantifying determiner' and my 'partitive determiner', in these two cases). But in other cases his categories cut across those described here, with examples of nominalizations (see Section 2.5) grouped with what seem to me to be clear cases of 'selection' (see Section 4). Generously (or is it sceptically?), Sinclair reminds the reader of 'the possibility that another way of organizing the evidence may lead to a superior description' (p. 84).

What would Sinclair think of the present proposals? Not a lot, probably. This is because he prefers to work with a minimal grammar that consists mostly of actual words, word classes and a few basic units such as the nominal group. As Sinclair 1991 shows, his instinct is to avoid structural descriptions wherever possible - including functional ones. So it is not surprising that he has nothing to say about the functional structure of nominal groups that include *of*. And in this he is following Halliday, as we saw in Section 3.5.

What interests Prakasam, on the other hand, is precisely the challenge to establish an appropriate structure for each of the various functions that *of* may serve. He therefore shares my interest in challenging the apparently unquestioning acceptance by most linguists of the

‘prepositional group as qualifier’ analysis. However, while Sinclair tends to characterize *of* constructions as ‘N1 *of* N2’ (e.g. p. 93), Prakasam sees them as ‘NGp of NGp’, on the grounds that ‘it is not in principle a noun but a nominal group that precedes and follows the item *of*.’ (1996:568). In Section 4.2 I shall suggest that both approaches are too narrow, from a functional viewpoint. Within this ‘NGp of NGp’ framework, Prakasam explores both right-branching and left-branching analyses as ways of representing the different meanings, together with some functional labelling. One of his eleven structures - that shown in Figure 15.12 - reflects the approach taken here. He in fact refers (p. 574) to my approach to such constructions (in Fawcett 1980:204), but he declines to comment on it. It would have been interesting if he had evaluated my proposal in relation to his.

The first problem with Prakasam’s approach is that, while it provides for *a large number of those books*, it does not account for the functionally similar *five of those books* (unless we treat *five* as a nominal group). The second is that he appears to be working on the assumption that the differences in meaning between the various forms should be reflected in different branching structures (an assumption shared with formalist grammars). This is likely to lead to considerable difficulties in generating these structures, as we shall see in Section 4.2. Functional grammars tend to have simpler (i.e. ‘flatter’) tree representations, and to use richer labelling to distinguish the various ‘functions’, which helps to avoid such problems. And the third problem is that Prakasam only gives us structures, so that we have no picture of what the system networks and realization rules from which such structures might be generated would be like.

In the present paper - in Sections 2.5 and Section 4 - I shall suggest that we need just two broad types of syntactic structure to handle all of the various semantic functions served by *of* - but with variants within one of them, i.e. ‘selection’.

3.9 Summary of the literature

The works that we have surveyed fall broadly into two types. The first assumes that the item *of* is a preposition, and that *of* and the following nominal group together constitute a prepositional phrase (or group) - essentially as in Figure 3. This approach can be criticized for placing too much emphasis on the evidence at the level of form. In contrast, some scholars, notably Halliday and Sinclair, simply ignore the question of the syntactic role of the word *of*, and provide descriptions that leave its role unspecified. None of these scholars (other than Prakasam) suggest a structure for *of* in its ‘selection’ sense that in any way resembles the structure presented here, and none have anything insightful to say about the concept of ‘typicity’ and its realization in structure.

We turn next to a summary of the approach to ‘selection’ to be presented here.

4 The concept of ‘selection’ in the English nominal group

This section summarizes an approach to the structure of an important aspect of the nominal group which will be new to many readers, and which therefore needs justifying. Here I have space to do no more than justify the most frequent type, but the principles established here apply to the full range of types of ‘selection’, and there is a fuller account of all these in Chapter 7 of Fawcett forthcoming a (and also in Fawcett forthcoming b).

However, this approach to analyzing nominal groups has been used by those working in the framework of the Cardiff Grammar for over thirty years - both for extensive text analysis and for generating text-sentences in the computer. My intention here is simply to give you a flavour of this approach to the nominal group, as the necessary background to the issue to be addressed in Section 5.

4.1 The deictic and quantifying determiners

We begin with the concept that the two most frequent types of **widest referent** (a term that will be explained shortly) are (i) the **whole class** of an object (aka ‘generic reference’), as in Example 1, or (ii) a subset that is **particularized** (or ‘definite’), as in Example 2. The key semantic features are shown to the right of the examples. (Semantic features are normally shown in square brackets, as here; the ‘underscores’ in the name of a feature reflect the requirement of the computer model of the full version of the grammar that each feature be a single orthographic word.)

- | | |
|-----------------|------------------|
| (1) books | [whole_class] |
| (2) these books | [particularized] |

Example (2) illustrates the **deictic determiner (dd)** *these*. This is the most frequent type of determiner, and it answers the question ‘Which (or whose) thing?’ In over 99% of cases it is **expounded** by an **item**, and in over 90% of these the item is *the* (the most frequent word in English). But it may also be (i) a ‘demonstrative determiner’ (*this, that, these, those, which* etc), or (ii) a ‘possessive determiner’ (*my, your, whose* etc).²¹ Occasionally, however, a **dd** is **filled** by a **genitive cluster**. This typically expresses a ‘possessive’ meaning, e.g. *Fred’s, the new doctor’s*.²²

The second most frequent type of determiner is the **quantifying determiner (qd)**. It answers the question ‘How much?’ or ‘How many?’ This raises the question ‘Of what?’ The answer is: ‘Of whatever is specified in the part of the nominal group that follows it’. Usually this is simply a **head** (possibly preceded by one or more **modifiers**) - but it can also be a **dd** (or one of a few determiners to be introduced in Section 4.3) that is then followed by a head. We shall shortly address the question of how to model an example of this sort, such as *five of those books*.

There is a probability of around 90% that the **qd** will be directly **expounded** by an **item**, as in (3) and (4) - typical examples being *one, two, three ... ninety-nine; much, many, plenty (of); more, less, fewer; all, most, some* and *no*.

- | | |
|---------------------|------------------------|
| (3) five books | [cardinal_plural] |
| (4) plenty of books | [approximate_quantity] |

The **qd** is also expounded by the fifth most frequent word in English, i.e. *a(n)*. The fact that the two semantic features shown after (5) and (6) form a system reflects the close semantic and structural relationship between *a(n)* and *one*.²³

- | | |
|--------------------------|----------------|
| (5) one ant | [cardinal_one] |
| (6) an ant / a large ant | [unmarked_one] |

²¹Frequencies such as these are derived wherever possible from the published results of corpus studies, e.g. Sinclair 1991 and Biber et al 1999, and otherwise from my own considered estimates.

²²This requires two re-entries to the network: the first generates the genitive cluster and the second the ngp that fills its **possessor** element. For a summary of all units and elements, including the genitive cluster, see Part 2 of Fawcett 2000, especially pp. 204-7.

²³However, when the feature ‘unmarked one’ is selected from any referent other than the ‘whole class’, e.g. from a **particularized** referent as in (11) below, its realization is NOT *a(n)* but the weak form of *one* that we may represent as *w’n* - as in *Now he feels more like w’n of the boys*. For the full justification of this analysis see Fawcett forthcoming a.

But in around 10% of cases the **qd** is **filled** by a **group**. This may be a **ngp**, as in (7) and (8), or a **quantity group (qtgp)**, as in (9) - or both (a **ngp** within a **qtgp**), as in (10).²⁴

- | | |
|------------------------------------|----------------------------------|
| (7) <u>five hundred</u> children | [cardinal_plural] |
| (8) <u>two cups</u> of tea | [measured_by_container] |
| (9) <u>very many</u> people | [approximate_quantity] |
| (10) <u>about two dozen</u> youths | [rough_numerical_unit, adjusted] |

Now we are ready to look at the expression of ‘quantity’ as a type of ‘selection’.²⁵ We shall begin with examples that consist of **selection by quantity** from a **particularized** referent - i.e. a nominal group that has both a **qd** and a **dd**, as in (11) and (12). The question is: ‘How should their syntax be represented?’

- (11) five of those books
 (12) a large number of those books

To keep matters simple we shall focus on (11). However, since *five* and *a large number* are realizations of two meanings with a fairly close systemic relationship, the structure that we establish for (11) must also be right for (12) - even though the quantifying expression is a nominal group rather than a single item.

If we were to look only at (11), we might be tempted to formulate the problem - as Section 3 shows many linguistics to have done in the past - like this:

‘What is the most appropriate way to relate the two nominal groups of *a large number* and *those books* syntactically - while also finding some existing syntactic category in which to place *of*?’

But to ask this question is to foreground the patterns at the level of **form**. In a functional grammar it is more insightful to ask a question that embraces both (11) and (12), i.e.:

‘How should we relate a quantifying expression such as *a large number*, *very many*, *five* and so on to what follows it (e.g. *those books*) - while also identifying the semantic and syntactic functions of *of*?’

Let me now give my answer to this question. We start with the **semantics** of ‘selection’. Put at its simplest, we shall say that, in *five of those books*, *five* is selected from *those books*. But it would be more accurate to say that the **referent** of *five of those books* is selected from the **referent** of *those books*. In what follows, however, I shall for brevity sometimes write as if *five* - and so *a large number* - had a referent.

At this point we need to introduce two further terms. The referent of the FIRST (or leftmost) determiner is the **substantive referent**. And the referent of the LAST (or rightmost) referent (excluding referents embedded in qualifiers) is termed the **widest referent**, because it is the most comprehensive one. In an example such as *five of these books*, then, the substantive referent is *five (of those books)*, and the widest referent is *those books*.

How, then, is the **meaning** of ‘selection’ realized at the level of **form**? Clearly, the first part of the answer relates to the role of *of* - but the second and more challenging part is to

²⁴This requires a re-entry to the network to generate the nominal or quantity group that fills the **qd** - and a second re-entry in the case of (10) to generate the embedded **ngp**.

²⁵This section is, in effect, a summary of Section 4.4 of Fawcett forthcoming b.

identify a **structure** that represents appropriately the relationship of *of* to its neighbouring elements.

4.2 Alternative structures for modelling ‘selection’

Let us now consider the alternative structures for (11) - and so for (12). In broad terms, there are three possible structures: in Option A *of* and *those books* form a unit; in Option B *five* and *of* do; and in Option C *of* is a sister element to both *five* and *those books*.

The reasoning that is necessary to choose between these three relates, as is natural with statements about syntax in a functional grammar, to (i) the **meanings** that are being expressed, and so also to (ii) the **realization rules** that relate meaning to form. In other words, it relates to the way the grammar ‘works’ and so, in SFG terms, to the way in which it generates structures from ‘selection expressions’ of features from the semantic system networks (see Figure 1).²⁶

The full set of reasons for preferring Option C is set out in Fawcett forthcoming b. Here I shall simply show examples of analyses of our two key examples in terms of the three major structural possibilities, and summarize the conclusions reached in that paper.

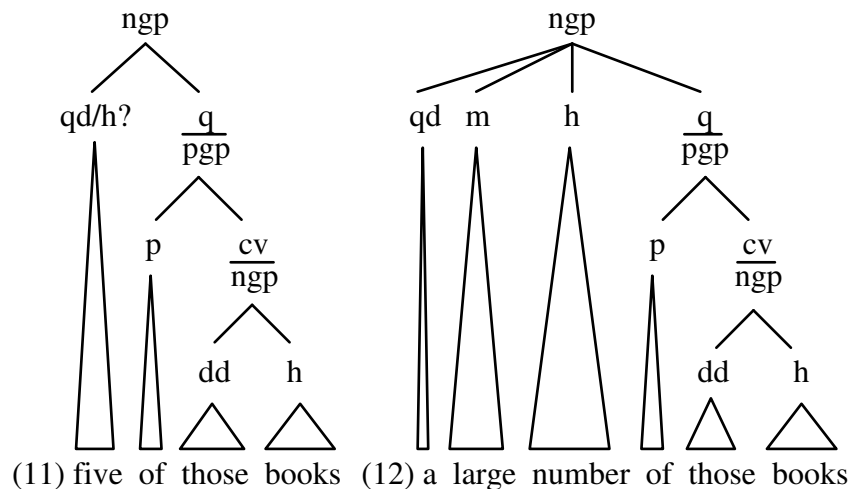


Figure 4: Option A:

The use of the ‘prepositional group as qualifier’ construction to represent ‘selection’

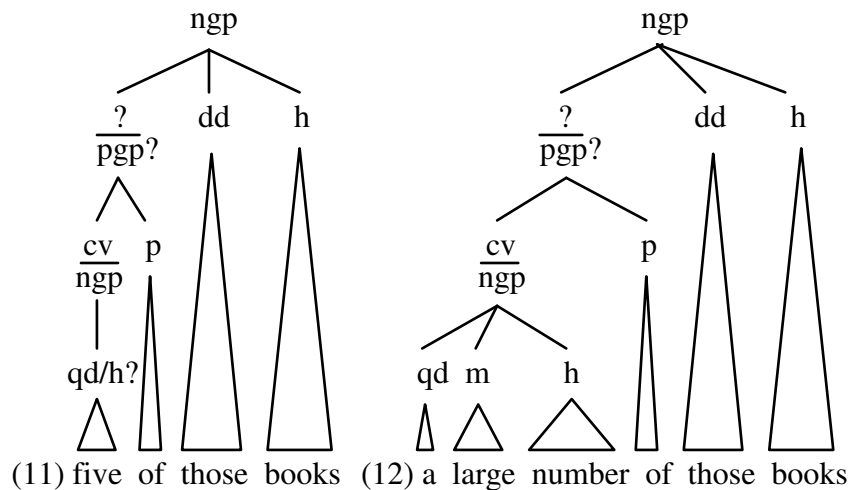
The overwhelming consensus of opinion, as reflected in published grammars, is that examples such as (12) - i.e. examples in which the quantifying expression contains a noun - should be analyzed as shown in Figure 4 (which is Option A). However, no reasons are given for preferring this structure to the alternatives.

There are in fact no fewer than five problems with this analysis. The first, which is evident from Figure 4, is that, while the analysis of (12) may appear to be similar to the syntactic pattern found in Figure 3, the analysis of (11) is not. Nor is it clear, if (11) were to be forced into that structure, what element *five* expounds. Is it functioning as a **head** - perhaps on the generally assumed (but unexplained) grounds that a nominal group has to have a head? Or is it a quantifying determiner (which most linguists would agree that it is in *five books*). But the two most serious problems arise when we consider how the grammar would generate this structure, and both result from the fact that the word which expresses both the ‘cultural classification’ and the ‘number’ of the widest referent would, in Option A,

²⁶See Appendix A of Fawcett 2000 for a simple explanation of how a SFG works, and Fawcett, Tucker & Lin 1993 for a much fuller one.

be buried TWO LAYERS BELOW THE MATRIX NOMINAL GROUP. For example, before the grammar can select between alternative choices in ‘quantity’, it needs to know whether the ‘widest referent’ - i.e. *books* - is ‘singular’, ‘plural’ or ‘mass’. But in Option A this item would be buried two layers below the matrix nominal group, and so would not have been generated at the higher point in the structure at which the quantifying expression would be generated. These and the other reasons for rejecting Option A are set out in full in Fawcett forthcoming b.

Now consider Option B, as shown in Figure 5.



Key (new elements): ? = new name for element required
pgp = pre-/post-positional group p = pre-/post-position

Figure 5: Option B:

The use of a pre-head ‘postpositional group’ construction to represent ‘selection’

Option B is the inverse of Option A. It has fewer disadvantages, but, as with Option A, it raises problems for the established units and elements of the grammar. Its second disadvantage - which is also shared by Option A - is that it requires TWO MORE LAYERS OF STRUCTURE than Option C. The relevant principle is that additional structure that is not justified by the requirements of the grammar should be avoided.

Option C, which is shown in Figure 6, brings the enormous advantage that NEITHER *those books* NOR *five* is buried. In this option the ‘cultural classification’ and the ‘number’ of the widest referent are always expressed in the head of the matrix nominal group, and the ‘relating’ element *of* is treated as AN ELEMENT OF THE SAME UNIT AS THE TWO ELEMENTS THAT IT RELATES - the **qd** and the **dd** - so neatly meeting all the requirements that have emerged in the discussions of Options A and B.²⁷

²⁷In this respect it plays a role with similarities to that of a ‘relational’ Process such as ‘being’ and ‘having’ in the clause. Compare the interesting analysis in Prakasam 1996:57-8 of a subset of nominal groups in which *of* is analyzed, as a lexical verb would be, as the element ‘Process’.

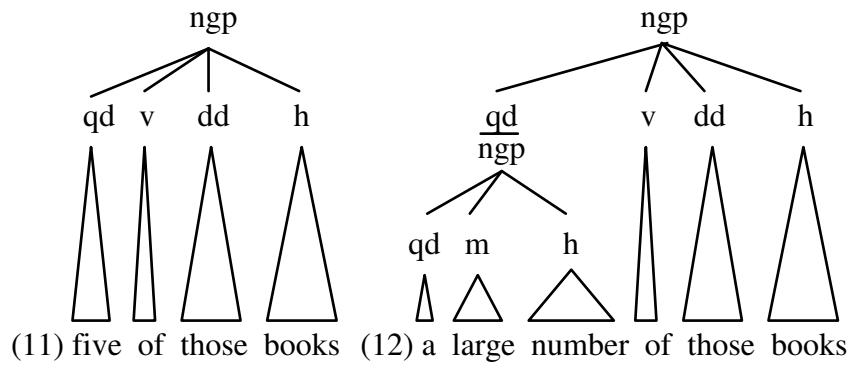


Figure 6: Option C: The structure of two nominal groups with ‘selection’

The structure used in the Cardiff Grammar is therefore that shown in Figure 6. Moreover, this structure functions equally well for ALL examples of selection between a **qd** and a **dd**, including (11). It is therefore not just a structure that is used when the **qd** is filled by a nominal group (as it is in Matthiessen 1995:655). Furthermore, as we shall see in Section 4.3, it handles various other types of ‘selection’ equally neatly. For obvious reasons, we call the element expounded by *of* the **selector (v)**.²⁸

There are THREE major ways in which a **particularized** widest referent is manifested in a nominal group with ‘selection’. Consider (14) to (16):

- (14) I’ll take five of those bananas. [cultural_classification]
 (15) I’ll take five of them. [token_cultural_classification]
 (16) I’ll take five. [token_cultural_classification_unrealized]

In each of (14) to (16), then, the **qd** is expounded by *five* - so generating *five* BY THE SAME RULE in each case. Thus (16) has no head and no selector.

We have now established the pattern for ‘selection by quantity’ from a ‘particularized’ referent. But what is the semantics of examples such as (17) and (18), in which the referent is NOT ‘particularized’?

- (17) five books
 (18) many / plenty of books

The answer is that the relationship between *five* and *books* in (17) is the same as that between *five* and *those books* in (11). The difference between the two is that *those books* in (11) refers to a **particularized** sub-set of ‘books’, while *books* in (17) refers to the **whole class** of ‘books’. And it follows from this that *one book* - and so also *a book* - have the same syntax as (17), i.e. **qd h**. So in all such cases ‘selection’ occurs WITHOUT BEING MADE OVERT in the word *of*.

There are in fact many cases of ‘selection’ without *of* - often with a semantically similar form that does use *of*. In (18), for example, *of* occurs with *plenty* but not with *many*, and other semantically similar pairs are: *much grass* and *lots of grass*, *several thousand books* and *several thousands of books*, and *all those children* and *all of those children*. In each pair of examples the relationship of ‘selection’ is **covert** in the first case and **overt** in the second. These close semantic similarities suggest that in all of the above examples - irrespective of

²⁸However, the reason for using ‘v’ to represent the selector in a diagram may be less obvious. Why not use ‘s’? The answer is that (i) a capital ‘S’ is already in use for the Subject and (ii) there is another group element whose name begins with ‘s’ (the **scope** in a **quality group**). So here we use here ‘v’ - because it represents the minimal phonetic representation of *of*.

whether ‘selection’ is realized by *of* - the grammar should (i) treat the word expressing the cultural classification as the **head** of the matrix nominal group, and (ii) treat the quantifying expression and the optional selector as sister elements to it - so as **qd** and **v**, as in Figure 6. Any other decision would add a great deal of unnecessary complexity to the realization rules that convert the features in the system network into structures at the level of form. This, then, is further evidence that Option C is the most appropriate of the three syntax models.

4.3 The other determiners

Consider the relationship between the familiar example in (1) and the more complex structure in (2):

- (1) five of those books
 (2) five of the most interesting of those books

Our analysis of (1) is given in Figure 6 - and I introduce here a more economical equivalent LINEAR REPRESENTATION:

- (1a) ngp: five [qd] of [v] those [dd] books [h]

But how should we analyze (2)? The two instances of *of* suggest that the referent of *five* is selected from the referent of *the most interesting (ones)*, and that this is in turn selected from the referent of *those books*. So we have a second type of ‘selection’ - and the analysis (ignoring for the moment the internal structure of *the most interesting*) is as in Figure 7.

Thus the **superlative determiner (sd)** occurs between the **qd** (if there is one) and the **dd** (if there is one) - with the **sd** being filled by a **quality group** (Tucker 1998, Fawcett 2000:206-7, 307).

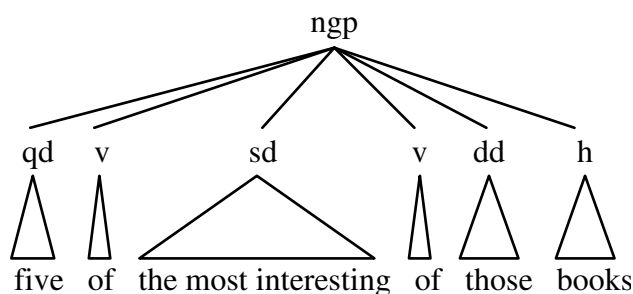


Figure 7: The structure of a nominal group with two types of ‘selection’

And, to be consistent with (2) - and so to keep the realization rules simple - the structure that realizes *the most interesting books* must be as in (3) - again, with a quality group filling the **sd**.²⁹

- (3) ngp: the most interesting [sd] books [h]

The SEQUENCE of the three determiners in relation to each other is fixed as **qd (v) sd (v) dd (m) h**. The model therefore predicts that these elements will always occur in this sequence.

²⁹Thus (3) is not, as you might at first think, similar in structure to *these very interesting books* - the latter being ngp: *these* [dd] *very interesting* [m] *books* [h].

I shall now briefly explain how TWO APPARENT COUNTER-EXAMPLES are to be analyzed. Each uses words that typically occur as a **qd** - but here they serve a different function.

The first is the occurrence AFTER the **dd** of words such as *few*, *many* and cardinal numerals, as in *her five grandchildren* and in (4):

(4) one of her five grandchildren (is here).

In (4), the **qd** *one* is the **substantive referent** (as the verb *is* shows) and *five* is a **quantifying modifier (qtm)**. And such modifiers, like *elderly* in *her elderly father*, almost always serves the **depicting** function (Section 2.4).³⁰

Example (5) illustrates a second apparent counter-example, with *all* occurring AFTER the **sd**.

(5) one of the most important of all (of) his benefactors

Again, *one* is the **qd**, and the function of *all* is simply to ‘emphasize’ that what follows refers to the ‘full total’ of the referent. Thus *all* (which, note, cannot here be replaced by any other item) expounds the **totalizing determiner (tod)**.

We come next to the **fractionative determiner (fd)**. This answers the question ‘What fraction of it (or them)?’ about whatever is specified to the right of it. It is often expounded directly by *half*, but it may also be filled by a **nominal group**, such as *three fifths*, *three in / out of (every) five* and *sixty per cent*. Its place in the sequence of determiners is shown in (6):

(6) a third [fd] of [v] his set [qd] of [v] the best [sd] of [v] the [dd] prints [h]

The **ordinative determiner (od)** answers the question ‘Which thing is being uniquely identified in terms of its position in a sequence?’ Its typical position among the determiners is shown in (7):

(7) one [qd] of [v] the first [od] of [v] the fastest [sd] of [v] the [dd] runners [h]

The **partitive determiner (pd)** answers the question ‘What part or parts of it (or them)?’ A **pd** is invariably filled by a **nominal group** whose **head** denotes a part of something, e.g. *the back of a the house*, *the head of the valley*, *the head / president of the company*, *the peaks of the mountains*. The place in sequence of the **pd** is shown in (8):

(8) the porches [pd] of [v] half [fd] of [v] those [dd] old [m] houses [h]

Semantically, the **representational determiner (rd)** is unlike any determiner that we have met so far, in that ‘selection by representation’ does NOT identify a referent that is A SUB-SET OR A PART of what follows it. It is not, strictly speaking, a type of ‘selection’ at all, but an ‘abstraction by representation’. It answers ‘Yes’ to the question ‘Is this a representation of the referent of the following part of the nominal group?’ It is filled by a **nominal group** whose head expresses one of various types of ‘representation’, and it may be **physical**, as in *a map of the world*, *a recording of her voice* and (9) below, or **mental**, as in *the concept of liberty* or *an example of this construction*.

(9) (This is) a photo [rd] of [v] the back [pd] of [v] our [dd] house [h]

³⁰It is this relatively infrequent element (rather than the **qd**) that appears to correspond, positionally, to the ‘Numerative’ in *IFG*.

One indication that *house* is the head of the full nominal group is the fact that the overt specification of the ‘representation’ is itself an option in a system - i.e. in many circumstances we refer to the **substantive referent** (i.e. the photo) by simply saying *This is the back of our house*.³¹

The **rd** precedes all the determiners considered already. This means that if one of them APPEARS to occur before the **rd**, it is in fact **embedded** in it (as described in the next section).

The final determiner (for now) is the **qualifier-introducing determiner (qid)**. It is the least frequent of all, and is always expounded by *those*. Its sole function is to signal that the **cultural classification** in the head is about to be **sub-classified** by additional information in a **qualifier** - as in (10).

(10) those [qid] of [v] her [dd] family [h] who are mentioned in her will [q]

Note: if you are already familiar with the model of ‘selection’ in the nominal group presented here (e.g. from Fawcett 1980 or 2000) you might expect me to introduce at this point a tenth determiner: the ‘typic determiner’. But since the purpose of Section 5 is precisely to evaluate the status of this concept, we shall say no more about it till then.

4.4 Embedding and discontinuity within the determiners

There are two final complications to the picture of structure in the nominal group that we have developed - and both will be important in the decision to be made in Section 5.10.

This question arises: ‘Can an embedded nominal group, such as those found in the **rd**, the **pd**, and the **qd**, contain a further embedded nominal group?’ The answer is that they can - and quite frequently do.

Consider the following two examples, each of which involves two determiners filled by nominal groups (a **rd** and a **qd**):

- (1) (What I liked best was) that simple picture of a bowl of fruit.
- (2) (Which one? - There are) several roomfuls of pictures of fruit!

In any one nominal group, the sequence of determiners that are (or may be) filled by an embedded nominal group is:

rd v pd v fd v qd v ...

Since the **rd** and **qd** in (1) are already in that sequence there is no problem. But in (2) they are not. The present model can handle this, because the ‘pictures’ in (2) is ‘quantified’ by the nominal group *several roomfuls* (plus *of*). So in (2) there are THREE nominal groups, and the linear representations of the three layers of the structure are:

- (2a) ngp: several roomfuls of pictures [rd] of [v] fruit [h]
- (2b) ngp at **rd**: several roomfuls [qd] of [v] pictures [h]
- (2c) ngp at **qd**: several [qd] roomfuls [h]

(For a full diagram of a similar structure, see Figure 10.)

Now consider the underlined portion of (3).

- (3) The picture of the fruit that I like best is this one.

³¹This option is one of the earliest that we teach our children, i.e. when looking at a picture book with a year-old baby we say *What’s this? It’s a cow*, and so on - not *It’s a picture of a cow*.

This is clearly a qualifier, but does it describe ‘the picture’ or ‘the fruit’? It could be either - so the syntax must allow for the qualifier to be a sister element to either *picture* or *fruit*. And in the former case the nominal group *the picture that I like best* is **discontinuous**. In a full representation of such examples, therefore, the line joining the qualifier to the rest of its nominal group crosses the analyses of *of*, *the* and *fruit*. (A similar type of discontinuity will be described in the discussion in Section 5.10.)

4.5 Summary: the ‘selection principle’

The set of concepts that underlie the description of the nine determiners summarized here constitutes the **selection principle**. This states that:

- 1 Each **determiner**, **pronoun** and **proper name** has an associated **referent** that is expressed in that element (and in what follows it, if anything does).
- 2 The last (or ‘rightmost’) part of the nominal group refers to the **widest referent**, e.g. *books* in *five books*, *them* in *five of them* and *the books* in *five of the books*. It is the referent of EITHER (i) the **deictic determiner** (if there is one) plus any following modifiers, head and relevant qualifiers, OR (ii) the **pronoun** or **proper name** that is the head, plus any relevant modifiers or qualifiers.
- 3 The referent of the **last determiner** (if any) that occurs before the widest referent is treated as being **selected** from the widest referent.
- 4 This relationship of **selection** is repeated for the referent of the **second last determiner** (if any) before the widest referent, then for the referent of the **third last determiner** before it, and so on, each being selected from the referent of what follows to the right of it.
- 5 The leftmost referent is the **substantive referent**, the others being simply other referents from which it is selected. The substantive referent may be realized in a nominal group that is **embedded** within another determiner (see 9 below).
- 6 The type of ‘selecting relationship’ between the referent of the determiner and the referent of what follows varies according to the type of meaning that the determiner realizes.
- 7 The meaning of ‘selection’ is frequently not expressed overtly - especially when a **qd**, **od** or **sd** is. But when the relationship of ‘selection’ is realized the **selector** is always expounded by *of*.
- 8 It is rare for more than three determiners to co-occur, but when they do they occur in the following sequence:

rd v pd v fd v qd v od v sd v tod v qid v dd ... h

- 9 When a **nominal group** fills a determiner, **embedding** occurs, thus occasionally permitting what may at first appear to be a non-canonical sequence of determiners.

Finally, I should emphasize that this model has served those working in the framework of the Cardiff Grammar well for over three decades of work in text analysis and computer generation. Moreover, it has easily accommodated minor additions such as the **tod** (*all*) and the **qid** (*those*), when these were noted.

However, the important question of the status of a possible ‘typic determiner’ remains, and we shall turn to that in Part 2. The question to be addressed there is this: ‘Is typicity also a type of selection?’

References

- Biber, D., Johansson, S., Leech, G., Conrad, S., and Finegan, E., 1999. *Longman Grammar of Spoken and Written English*. Harlow: Pearson.
- Butler, C. S., 2003a. *Structure and Function: An introduction to three major structural-functional theories. Part 1: Approaches to the simplex clause*. Amsterdam: John Benjamins.
- Butler, C. S., 2003b. *Structure and Function: An introduction to three major structural-functional theories. Part 2: From clause to discourse and beyond*. Amsterdam: John Benjamins.
- Downing, A. 1991. 'An alternative approach to theme: a systemic-functional perspective'. In *WORD* 42.2, 119-143.
- Downing, A. 1996. 'The semantics of *get*-passives'. In Hasan, R., Cloran, C., and Butt, D. (eds.) *Functional descriptions: Theory in Practice*. Amsterdam: John Benjamins, 179-206.
- Downing, A., and Locke, P., 1992. *A University Course in English Grammar*. New York: Prentice Hall.
- Downing, A., and Locke, P., 2006. *English Grammar: A University Course*. 2nd. edn. Abingdon and New York: Routledge.
- Fawcett, R.P., 1974-6/81. *Some Proposals for Systemic Syntax* (revised version of 1974, 1975b and 1976a). Cardiff: Polytechnic of Wales (now University of Glamorgan).
- Fawcett, R.P., 1980. *Cognitive Linguistics and Social Interaction: Towards an Integrated Model of a Systemic Functional Grammar and the Other Components of an Interacting Mind*. Heidelberg: Julius Groos and Exeter University.
- Fawcett, R.P., 2000. *A Theory of Syntax for Systemic Functional Linguistics*. Current Issues in Linguistic Theory 206. Amsterdam: John Benjamins.
- Fawcett, R.P., forthcoming a. *Functional Syntax Handbook: Analyzing English at the Level of Form*. London: Equinox.
- Fawcett, R., forthcoming b. 'Modelling 'selection' between referents in the English nominal group: an essay in scientific inquiry in linguistics'. In Butler, C.S., Hidalgo Downing, R., and Lavid, J., *Functional Perspectives on Grammar and Discourse: Papers in Honour of Prof. Angela Downing*. Amsterdam: John Benjamins.
- Fawcett, R.P., forthcoming c. *Functional Semantics Handbook: Analyzing English at the Level of Meaning*. London: Equinox.
- Fawcett, R.P., and Perkins, M.R., 1980a-d. *Child Language Transcripts 6-12, Volume 1: Six Year Olds, Volume 2: Eight Year Olds, Volume 3: Ten Year Olds, Volume 4: Twelve Year Olds*. Pontypridd, Wales: Polytechnic of Wales (now University of Glamorgan).
- Fawcett, R.P., and Perkins, M.R., 1981. 'Project report: Language development in 6- to 12-year-old children. In *First Language* 2, 75-9.
- Francis, G., Hunston, S., & Manning, E., 1996. *Collins COBUILD Grammar Patterns 1: Verbs*. London: HarperCollins.
- Francis, G., Hunston, S., and Manning, E., 1998. *Collins COBUILD Grammar Patterns 2: Nouns and Adjectives*. London: HarperCollins.
- Fawcett, R.P., Tucker, G.H., and Lin, Y.Q., 1993. 'How a systemic functional grammar works: the role of realization in realization'. In Horacek, H., and Zock, M., (eds.), 1993, *New Concepts in Natural Language Generation*, London: Pinter, 114-86.
- Halliday, M.A.K., 1961/76. 'Categories of the theory of grammar'. *Word* 17, 241-92. Reprinted as Bobbs-Merrill Reprint Series No. Language-36, and in part in Halliday, M.A.K., 1976, *System and Function in Language: Selected Papers by M.A.K. Halliday* (ed. G.R. Kress), London: Oxford University Press, 84-7.

- Halliday, M.A.K., 1985. *An Introduction to Functional Grammar*. London: Arnold.
- Halliday, M.A.K., 1994. *An Introduction to Functional Grammar* (Second Edition). London: Arnold.
- Halliday, M.A.K., 1996. 'On grammar and grammatics'. In Hasan, R., Cloran, C., and Butt, D. (eds.) *Functional descriptions: Theory in Practice*. Amsterdam: John Benjamins, 1-38.
- Halliday, M.A.K., and Matthiessen, C.M.I.M., 1999 *Construing Experience through Meaning: a Language-Based Approach to Cognition*. London: Cassell Academic.
- Halliday, M.A.K., and Matthiessen, C.M.I.M., 2004, *An Introduction to Functional Grammar* (Third Edition). London: Arnold.
- Huddleston, Rodney D, and Pullum, Geoffrey K. (principle authors) 2002. *The Cambridge Grammar of English*. Cambridge: Cambridge University Press.
- Matthiessen, C.M.I.M., 1995. *Lexicogrammatical Cartography: English Systems*. Tokyo: International Language Sciences Publishers.
- Meillet, A., 1937. *Introduction a l'Etude Comparative des Langues Indo-Européennes*. 8me ed. Paris: Libriaire Hachette.
- Neale, A., 2002. *More Delicate TRANSITIVITY: Extending the PROCESS TYPE system networks for English to include full semantic classifications*. PhD Thesis. Cardiff: School of English, Communication and Philosophy, Cardiff University. Available on request via neale@qmul.ac.uk
- Neale, A., 2006. 'Matching corpus data and system networks'. In Thompson, G., & Hunston, S., (eds.), *System and Corpus: Exploring Connections*. London: Equinox.
- Prakasam, V., 1996. "'NGp of NGp" constructions: a functional-structural study. In Berry, M., Butler, C.S., Fawcett, R.P., and Huang, G.W. (eds.) *Meaning and Form: Systemic Functional Interpretations*. Meaning and Choice in Language: Studies for Michael Halliday. Norwood, NJ: Ablex, 567-83.
- Quirk, R., Greenbaum, S., Leech, G., and Svartvik, J., 1972. *A Grammar of Contemporary English*. London: Longman.
- Quirk, R., Greenbaum, S., Leech, G., and Svartvik, J., 1985. *A Comprehensive Grammar of the English Language*. London: Longman.
- Sinclair, John, (editor-in-chief), 1987/95. *Collins COBUILD English Language Dictionary*. London: Collins.
- Sinclair, John, (editor-in-chief), 1990. *Collins COBUILD English Grammar*. London: HarperCollins.
- Sinclair, J., 1991. *Corpus, concordance, collocation*. Oxford: Oxford University Press.
- Tucker, G.H., 1996. 'Cultural classification and system networks: a systemic functional approach to lexis'. In Berry, M., Butler, C.S., Fawcett, R.P., and Huang, G.W. (eds.) *Meaning and Form: Systemic Functional Interpretations*. Meaning and Choice in Language: Studies for Michael Halliday. Norwood, NJ: Ablex, 533-536.
- Tucker, G.H., 1998. *The Lexicogrammar of Adjectives: a Systemic Functional Approach to Lexis*. London: Cassell Academic.