SUPPLEMENTARY READING: CARDIFF GRAMMAR

Introduction

This reading is markedly different from the others and much more challenging. As we may have indicated, we are not very happy about referring to versions of SFL by the names of specific universities (Cardiff and Sydney) because, notwithstanding the current key status of these two centres, the models have been developed and continue to be developed in the wider academic world (especially in the case of the so-called Sydney Grammar. At one time, Hallidayan linguistics was referred to as ‘the London School’ (e.g. Sampson 1980).) However, for want of better labels, we reluctantly conform to the now frequent practice of using the names Sydney Grammar and Cardiff Grammar.

As we have mentioned the Cardiff Grammar from time to time in FAE, we decided to include a supplementary reading, briefly describing some aspects of this alternative version of SFL (mainly focussing on its alternative to the rank scale). We then submitted this to Professor Robin Fawcett for comment. He generously rewrote our account, adding considerable detail about the model in general. Because of constraints on length, we have slightly abridged this version in some places although it remains much longer than the other supplementary readings. We hope that this has not resulted in any misrepresentation of his views. What we have here, then, is something that started off as our commentary but is now much more significantly Professor Fawcett’s own explanation, for which we are most grateful. What follows is a concise overview of the main points of the Cardiff Grammar, largely from the fountain-head. Professor Fawcett wishes to stress the fact that the Cardiff Grammar is a team effort involving a number of academics.

(Thomas Bloor and Meriel Bloor)
An alternative version of Systemic Functional Grammar

The sources of the differences between the two versions

It was in the early 1970s that Halliday introduced the revolutionary new view of language which underlies his *Introduction to Functional Grammar (IFG)*, and hence the version of Systemic Functional Grammar (SFG) described in *The Functional Analysis of English (FAE)*, which this reading supplements. This insight was that, in essence, a language consists of a vast network of choices between meanings, and that the structures of a language are the realizations of those meanings. However, there is a second version of Systemic Functional Grammar (SFG) that is based equally firmly on these concepts. This is the Cardiff Grammar (so-called because it was developed mainly at Cardiff University, under the leadership of Robin Fawcett). Like Halliday’s grammar, it has been developed to serve two purposes: (1) to provide a descriptive framework for analyzing texts, and (2) to be used to model the ‘sentence’ aspect of producing text in a computer, i.e. to be a SFG that is generative. But it is different from Halliday’s grammar in a number of ways.

In addition to continuing to use the grammar for various projects including text analysis, people working in the Sydney tradition have been focusing on describing languages other than English and developing other aspects of language, such as genre, register, appraisal and multimodal discourse. In contrast, those working on the Cardiff Grammar have focused more on devising a computer-compatible model for the generation of ‘text-sentences’, while at the same time striving to provide a workable descriptive framework for text analysis (as well as modelling the many other components in an overall architecture of language and its use, in both generation and understanding, as described in Fawcett forthcoming 2013a).

The Cardiff Grammar has been under continual development since the 1970s by Fawcett, Tucker and a team of co-researchers, drawing on advances in describing language in this period. (For the ways in which these have influenced the Cardiff Grammar see Fawcett 2008a: 16-21.)

Grammars and frameworks for analyzing text

Both Halliday and Fawcett have pointed out that the published SFL works that describe the functional structure of English (such as Halliday 1985, 1994 and 2004, and Fawcett 2000/2010
and 2008a) provide the text analyst with a descriptive framework for analyzing the outputs from the grammar, rather than modelling the language itself (e.g. Halliday 1994: xv). A full SFL description of a language consists of two components: a vast system network that specifies the choices between meanings that are available in a language, and a realization component that contains the rules which state how these meanings are realized in structures, words, etc., at the level of form. Here, however, we shall confine ourselves to the differences between the two versions of SFG in how they describe the structures (syntax) of English.

**Differences in the analysis of English clause structure**

Let us begin by noting some of the differences between the two models in the elements of the English clause. In Chapter 1 of *FAE*, you can read an explanation of the notion of the rank scale in the structure of a clause, taking the same position as Halliday:

A clause consists of one or more groups  
A group consists of one or more words  
A word consists of one or more morphemes

Chapters 2 and 3 of *FAE* introduce word classes and groups, concluding that the grammar needs to recognize five elements of the clause, each realized by a group, except that Finite and Predicator together are realized by a single verbal group.

<table>
<thead>
<tr>
<th>Subject (S)</th>
<th>Finite (F)</th>
<th>Predicator (P)</th>
<th>Complement (C)</th>
<th>Adjunct (A)</th>
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Not all clauses include all five elements, of course. Some may have fewer, as in *Sit!* or *We understand*, and some may have more than five. This is because a clause may have more than one Adjunct and more than one Complement. Example (1) has five groups realizing six elements: two Adjuncts as well as one each of Subject, Finite, Predicator and Complement.

(A) Earlier (S) Weismann | (F) had | (P) studied | (C) reproductive cells| (A) under the microscope.

The number of groups may vary, too, because two or more conjoined groups can fill one element.
In the Cardiff Grammar, there are six types of clause element that occur with a high frequency: one of each of Subject (S), Operator (O) and Main Verb (M); several Auxiliaries (X); up to two Complements (C); and potentially many types of Adjunct (A). If we exclude the Auxiliaries (which for Halliday would be elements of the verbal group), these are very roughly equivalent to Halliday’s Subject (S), Finite (F), Predicator (P), Complement (C) and Adjunct (A). The Operator is typically expounded by a modal verb or a form of do, as in *She can sing* and *Does she sing?*, but it may be conflated with an Auxiliary as O/X, in a case such as *Has she been singing?* (where *been* is a second X), or with the Main Verb as O/M when this is a form of *be*, as in *Is she here?* However, there are two other clause elements that are treated as central in the Cardiff Grammar of English, but which receive little attention in *IFG*. These are the Main Verb Extension (MEx) and the Auxiliary Extension (XEx). The first realizes meanings whose expression begins in the Main Verb (e.g. *He put the light out*, but also *He had a bath*), and the second realizes meanings that begin in an Auxiliary (e.g. *She will be able/willing/bound to sing*), and is followed by an Infinitive Element (I) expounded by to. See pages 183-8 and 192-4 of Fawcett 2008a for an overview of the first, and pages 200-5 for the second. Fawcett 2007a provides a detailed description of the Auxiliary Extensions of English. (These aspects of English are briefly addressed in *FAE3*, Chapters 6 and 7.) And a final additional element is the Negator (N), expounded by not.

Thus all the elements that Halliday places in the ‘verbal group’ are treated in the Cardiff Grammar as elements of the clause. For those who have learnt about SFG through *IFG* this may seem the most surprising of the differences between the two models, but it is in fact a position that has also been taken by some other systemic linguists. Some of the reasons are: (1) since the Operator (which has much in common with Halliday’s Finite) is an element of the clause, the Main Verb must be too, since, when M is a form of *be*, it is conflated with the Operator; (2) the same is true for each of the Auxiliaries, the Auxiliary Extensions and the Main Verb Extensions (see below for these); (3) the Main Verb and the Main Verb Extension need to be elements of the clause, because the Process type decides the Participant Roles; (4) if there is such a unit as the ‘verbal group’, it is one that would be ‘interrupted’ by clause elements with extraordinary frequency, e.g. as in the underlined parts of *Might (O) he (S) perhaps (A) have accidentally (A) thrown (M) it (C) out (MEx)?*, (where all of the underlined words would be part of the ‘verbal group’ for Halliday). For a rather fuller explanation of the many reasons for taking this position
than is possible here, see the extended footnote on pages 49-50 of Fawcett 2008a and the further references given there. Finally, the model distinguishes as clause elements in their own right two types of conjunctions, the Linker (&) and the Binder (B), and the element Vocative (V), all three of which Halliday treats as sub-categories of Adjunct despite their very different functions and places in the clause. A full list of clause elements and their typical places in the clause can be found on pages 249-50 of Fawcett 2008a.

*Differences in ‘filling’ and ‘expounding’ the elements of the clause*

In the Cardiff Grammar, the only elements of the clause that are regularly filled by a unit (a group or an embedded clause) are Subjects, Complements and Adjuncts. The other elements are typically expounded directly by an *item* (a term which covers a word or morpheme). There are four classes of group that may fill a Subject, a Complement or an Adjunct (with varying degrees of likelihood), and they are: **nominal group** (ngp), **prepositional group** (pgp), **quality group** (qlgp) and **quantity group** (qtgp). S and C are frequently filled by a ngp (e.g. *you, my friend or Ike*), but C is also very often filled by either a qlgp (e.g. *very slow*) or a clause (so C would be filled not only by the *answer* in *I knew the answer* but also by *he was alive in I knew he was alive*). Finally, A could be filled by a qlgp (e.g. *very quickly*), a pgp (*with great speed*), a ngp (*this morning*), a qtgp (*very much indeed*) or a clause (*when I got home*). Here we have mentioned only some of the more frequent *filling* relationships in the clause. There are many more possibilities, as shown in the summary diagrams in Appendix 1 in Fawcett 2008a and Appendix B in Fawcett 2000/10.

*Towards the full analysis of a simple clause*

Let us now look at the internal structure of the nominal group, and then, at the full analysis of a simple sentence. For any of the above classes of group, the model specifies what elements each is composed of, e.g. to name the most frequent in the ngp: **quantifying determiner** (qd), **selector** (v, almost always of), **deictic determiner** (dd), many types of **modifier** (m), **head** (h), and several types of **qualifier** (q), as in *five (qd) of (v) those (dd) very useful (m) bags (h) from Oxfam (q)*. Each of these elements is either (1) *expounded* by a specific *item* (an instance of wording), e.g. *five, of, those and bags*) or (2) *filled* by a further *unit* (e.g. the qlgp very useful that fills m and the pgp *from Oxfam* that fills q).
We shall now give an example of the analysis of a simple clause. However, we must emphasize that it lacks the **Participant Roles** of Agent and Affected, which are **conflated** with S and C respectively, and the **Circumstantial Role** of Time Position, which is conflated with A. We have to omit these here, since the two versions of SFG differ significantly, and so would require considerable discussion and description. See Chapters 3 and 10 of Fawcett 2008a for an introduction to the Cardiff Grammar’s position on Participant Roles, and Chapter 12 for Circumstantial Roles.

The diagram below may help you to grasp the significance of the technical terms **element**, **unit** and **item**.

(adapted from page 74 of Fawcett 2008a)

*The concept of a ‘rank scale’ of units versus the concept of ‘filling probabilities’*

We have noted the difference between the two models over the value of introducing the concept of the ‘verbal group’. But this difference is part of a far more general claim that Halliday makes about the nature of the structure of language, through his concept of the **rank scale**. This has been a central part of Halliday’s theory of language since he published ‘Categories of the theory of grammar’ in 1961, and it remains central to this day. See Appendix C of Fawcett 2000/10 for the fullest account so far of ‘the rank scale debate’.

The facts of language that led Halliday to propose the rank scale as one of the great generalizing concepts of a theory of language are recognized in the Cardiff Grammar, but they
are handled as probabilities, rather than as absolute (or near-absolute) statements. While Fawcett recognizes that the concept served a useful role in the early days (i.e. as a first approximation to the way in which this aspect of language works), he (like some others, including Halliday’s early colleagues Hudson and Huddleston) considers it to be too rigid in its predictions. The Cardiff Grammar therefore replaces the idea of a rank scale by the concept of probability. This is a concept that Halliday has always advocated as important, but is not prominent in his description of English in IFG. In the Cardiff Grammar, however, probabilities play a major role. In the generative version, they are placed on the features in the system networks from which structures are generated. But from the viewpoint of text analysis (whether carried out by a human or by an automatic parser in a computer), the probabilities that it is useful to know are those that are the answers to the following question: for any given class of unit, how likely is it that it will fill any one of a set of possible elements in the unit above it (i.e. the elements of a clause or any class of group or cluster)? We come now to a crucial aspect of the Cardiff Grammar. This is the fact that the sets of elements that make up the structure of each unit are all different from each other (except for the linker (&) and one other), in that each realizes a different type of meaning from that of each other element – both within that unit and also, therefore, between units. In other words, each element of each unit serves a different function. And the result of this is that, once you have identified the element that a word or morpheme expounds, you know the class of unit of which it is a component.

As the diagram above illustrates, the alternation of units filling elements and elements composing units continues all the way to the highest unit (or units), i.e. a clause or a string of two or more co-ordinated clauses. This in turn fills a sentence, represented by a sigma (Σ), which is omitted from the diagram. Thus, Fawcett would claim, the key data for text analysis are not the rigid relationships specified by Halliday’s concept of the rank scale, but the filling probabilities for each unit. Where are these to be found? There are full sets of these generalized predictions in Appendix 1 of Fawcett 2008a and Appendix B of Fawcett 2000/10.

In the Cardiff Grammar, then, the ability that a user of a language has to fill an element of a clause or a group with another clause or another group, recursively, is seen as one of the most enriching aspects of grammar. (See pages 263-7 of Fawcett 2000/10 on recursion.) This position is in contrast with Halliday’s approach, which reduces embedding and presents dependent clauses as non-embedded and therefore not an integral part of the clause on which it depends.
Yet in many such cases, as already indicated, Fawcett would argue that the dependent clause can be shown to be filling an element of it. So, for example, as indicated earlier, a projection clause, which Halliday treats as dependent, is analyzed by Cardiff as an embedded clause filling the element Complement.

While the most obvious major difference between the two versions of SFG may be the replacement of the concept of the **rank scale** by that of **filling probabilities**, it is the fact that the Cardiff Grammar defines the class of a unit by its internal structure (i.e. by the functions that the elements serve) that makes it possible to state the relations between one unit and another in terms of probabilities. This would not be possible, of course, in a grammar which tries to use the structure that is required for referring to ‘things’, i.e. the nominal group, to model the functional elements that are required when one is referring to a ‘quality’.

**Differences in the analysis of groups**

Next, let us examine (1) and (2), the two classes of group that are found in the Cardiff Grammar but not in the Sydney Grammar, (3) the Cardiff Grammar’s three major developments in the nominal group and (4) the prepositional group or phrase.

The two additional classes of group are (1) the quality group and (2) the quantity group.

1. In the **quality group**, the equivalent of a head in a nominal group is the **apex** (a), and it is expounded by either an **adjective** or a **manner adverb** (depending on its function in the unit above it). Such groups also have several other elements, including three types of **temperer** (t), a **scope** (s) and a **finisher** (f). Thus the same structural analysis is used for both **more** (t) **significant** (a) and **more** (t) **significantly** (a). As a more complex example, consider **much more** (t) **significant** (a) **for science** (s) **than we expected** (f). Here, the temperer is filled by a quantity group (the unit to which we come next), the scope is filled by a prepositional group, and the finisher by a clause. This is quite different from the way in which such expressions are analyzed in Halliday’s **IFG**. Halliday does not have a quality group (nor an ‘adjective group’), as is explained in *The Functional Analysis of English*. He seeks to handle such expressions by using the structure of the **nominal group**. But the elements that are required to express the meanings associated with a ‘quality’ are very different from those required for a ‘thing’, as Tucker 1996 shows. On the other hand, Halliday does have a simple adverbial group (Halliday 1994: 210-11), though only with recursively repeated modifiers and a Head (so using the same elements as the
nominal group). Tucker 1998 is a book-length description of the quality group and a justification of the value of recognizing it in a description of English. For a shorter treatment, see Tucker 1997, and for a brief comparison with the IFG approach see pages 206-7 of Fawcett 2000/10.

(2) The quantity group (qtgp) appears to have no equivalent in any other grammar, which is surprising. Yet expressions such as much more (which fills the temperer in the example above), approximately fifty children and far more children than there used to be (where the unit is discontinuous) support the argument for this unit. Its main elements are an adjustor (ad) and an amount (am), but the qtgp is like qlgp in also having a finisher, which is labelled qtf. This group may occur as a Degree Adjunct in a clause, as in He loves her very much indeed, but it is far more frequent as a unit that fills the quantifying determiner in a ngp, as in over fifty people. It also occurs as a temperer in a qlgp or an adjustor in another quantity group, as in very many more (people). For a slightly fuller description, see pages 207-9 in Fawcett 2000/10.

(3) Fawcett’s first extension to the nominal group is the concept of ‘selection between referents’. Look at this example: the covers (pd) of (v) a large number (qd) of (v) the most recent (sd) of (v) her (dd) textbooks (h). Here pd = partitive determiner, v = selector, qd = quantifying determiner, sd = superlative determiner and dd = deictic determiner and several of the determiners are filled by groups. Each determiner signals a different referent, with each being ‘selected’ from the referent to its right. For a slightly fuller picture, see page 251 of Fawcett 2008a or page 306 of Fawcett 2000/10, and for a full justification of this approach to the syntax of such examples see Fawcett 2007b.

(4) Fawcett’s second extension to the ngp is to recognize the need for the unit of the genitive cluster (genclr). This is a unit that challenges most of the assumptions of the rank scale concept, but which describes the facts of English neatly. As an example, look at my brother’s house. This is a ngp in which the dd is not expounded by an item (such as his) but is instead filled by a genclr that consists of a possessor (po) and a genitive element (g). So the analysis is my brother (po)’s (g), with the po being filled by one or more ngps and the g being expounded by the morpheme ’s. The reason why this unit is termed a ‘cluster’ rather than a ‘group’ is that it cannot fill an element of a clause, as groups can. It only occurs as an element of a ngp (like the other classes of cluster, which we shall omit here). For a brief introduction to clusters, see pages 211-13 and page 307 of Fawcett 2000/10. Finally, Chapter 10 of Tucker 1998 proposes substantial improvements in modelling the internal structure of modifiers in the ngp and their sequence.
The fourth class of group is the prepositional group, which Halliday calls the prepositional phrase. His grounds are that ‘whereas the group is an expansion of a word, a phrase is the contraction of a clause.’ (IFG: section 6.1). Fawcett gives reasons for rejecting this assumption (Fawcett 2000/2010: pp. 204–6), so simplifying the overall concepts of the theory. However, the internal structures of this unit are essentially the same in the two models.

For full descriptions of all of the units introduced here (and the other clusters), and also for many other aspects of the functional structure of English, see Fawcett forthcoming 2013b.

Conclusions

The fact that there have been criticisms of all or part of a description of a language does not necessarily mean that it is wrong. To date, no model of any human language has proved to be definitively ‘correct’. Understanding human language is an ongoing research project in the science of linguistics. But it is always good to consider the arguments for and against alternative positions, and to seek ways of improving both the full models of language and the derived description that we use when we analyze texts.

A final characteristic of the Cardiff Grammar is that it provides a rigorous procedure for analyzing sentences in naturally occurring texts, with specific tests at every point. See Chapter 15 of Fawcett 2008a (‘Full guidelines for clause analysis’) for how to analyze the simple clause, and Chapter 21 of Fawcett forthcoming 2013b for how to analyze complex sentences, including all the groups and clusters mentioned here. A draft of this is available directly from the author; see Fawcett 2008b.

Butler, in a recent authoritative two-volume survey of what he considers to be the three major current ‘structural-functional’ models of language, describes and evaluates SFG in relation to two other functional theories of language. But he treats the two versions of SFG as alternative versions of the theory, so that he in fact describes and evaluates four different approaches. Then in his ‘final assessment’ (2003: 471) he writes:

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.
A current difficulty, however, is that the full description of English structure in Cardiff Grammar terms is dispersed over several different publications. But Fawcett 2008a provides a clear introduction, and his three ‘forthcoming’ publications (listed below) should rectify this problem. From the present viewpoint, the most relevant of these is Fawcett forthcoming 2013b.

References


NOTE: Where the citation applies to more than one edition, any of the three Halliday publications above are indicated simply as *IFG*, and we have substituted a section reference for a page reference. (TB & MB)