

## APPLICATIONS OF SYSTEMIC FUNCTIONAL GRAMMAR

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### **Abstract**

In this article we are going to discuss the applications the Systemic Functional framework can have. We are especially interested in the ways a non-linguist would be able to use it. The question we will try to answer to is: What use has the theory to the non-linguist who may nevertheless have an interest in language and the use of language: the teacher, the writer, the politician, the translator, the literary critic, and so on? Due to the fact that the applications are numerous, we listed in this article only the most widespread applications, letting aside the rest of them. The paper is structured in two parts: in the first one we discuss the basic features of systemic functional framework, and in the second one we analyze the most used applications: analyses of scientific and technological texts, language as discourse, language development, stylistic analysis.

**Keywords:** applications, Systemic Functional framework, discourse analysis

### **I. General considerations**

Halliday (1995: xxix) described a theory as 'a means of action', meaning that we should be able to use a theory, and build the hypotheses related to it, as the basis for a very wide range of tasks, not only our aim of understanding the nature and functions of language, but also more practical tasks like helping people to learn foreign languages, improving our writing skills, or training interpreters.

Halliday's main purpose was to provide a general grammar for purposes of text interpretation and text analysis. Therefore, systemic functional grammar is a grammar which provides a basic tool for text analysis working in a wide range of different contexts.

Systemic Functional grammar is much richer semantically rather either formal or traditional grammar. This makes the analyses more

complex when interpreting a text. It presents the difference between variations as a choice about what is functional in a particular context, without judging if these variations are correct or incorrect. In this sense, functional grammar is a grammar that respects the speakers' rights to decide what they want to say. At the same time, it makes speakers explicitly aware of the possible choices, so they can make an informed decision about what the options can choose.

## **II. Applications of systemic Functional Linguistics**

Halliday listed 21 applications of this framework in throughout his works, but in this paper we are going to discuss the most important ones:

### **II.1. Analyses of scientific and technological texts**

One area of interest for applied linguistics is the way in which scientific and technical ideas are expressed in English. Many people, both native speakers and non-native speakers, find scientific language extremely difficult to understand, and there are teachers who believe that this language represents a barrier for young children to become interested in science. There are also many adults, with no training or technical background, working for example in journalism or in arts, who have needed in the recent years to learn how to use a computer and have found the instruction manuals difficult to understand. Such problems of learning and translating scientific texts have led to an analysis of this type of texts.

Halliday and Martin discuss the problem from two points of view: the identification of the particular characteristics of scientific texts and the influence this type of language has on children in order to make them use and understand the language in specific contexts.

One important specific grammatical features of scientific writing discussed by Halliday and Martin is grammatical metaphor and in particular the nominalization of processes. Grammatical metaphor resembles traditional metaphor (mainly lexical) in that it involves a choice between a more or less straightforward realization of meaning. But the choice of using it has to take into account firstly the correct grammatical options and only then the lexical options. “As there is no suggestion that literal expression is intrinsically better or worse than metaphorical expression, there is no suggestion that congruent forms are better or worse than grammatically metaphorical ones” (Bloor and Bloor 2004: 127).

Different contexts may demand different alternatives. Situational and textual factors have a great influence on the options in a particular

sentence. Although congruent and grammatically metaphorically alternatives seem to be simple variant ways of saying the same thing we can notice that any difference in expression means a difference in meaning.

Nominalization allows a process, more obviously realized as a verb, to be realized as a noun and as a result to become a participant in a further process. If we use a verb to express a process in a declarative clause, it is necessary to give the verb a Subject and, in the case of some verbs, like *describe* for example, also a Complement. This entails expressing the participants in the process. However, if we nominalize the process, we can exclude the participants relating to the process, as we can see from the following examples:

e.g. *The teacher explained the theory of Einstein.*  
*The explanation was incomplete.*

With the use of the verb in the first example, it is necessary to include a reference to the person who described the theory (the teacher in this case) and also a reference to *what* he described (theory of Einstein). In the second example we do not need to include any of the participants due to the nominalization of the verb.

The tendency to use nominal groups has a number of major effects on scientific text. First, it is a means to present the scientific information in an objective way, letting aside the people's opinions that describe it. Secondly, the writer has the possibility to choose from a wide choice of elements for Theme position in the clause (generally the Subject position). In this way a process can easily become the starting point in the clause and the agents (or even other processes) are left to the end of the clause (in Rheme position). Thirdly, the process can become the Head of a nominal group or a classifier of a nominal group.

Nominalization and other grammatical characteristics of scientific texts are discussed by Martin who demonstrates in details how important they are for understanding scientific texts especially at an early age. Martin observes that people sometimes complain that science uses too much technical language which makes science difficult to understand. The problem is scientists cannot do his or her job without technical discourse. "Not only it is compact and therefore efficient, but most importantly it codes a different perspective on reality, a perspective accumulated over centuries of scientific enquiry. It constructs the world in a different way. Science could not be science without deploying technical discourse as a fundamental tool. It is thus very worrying when syllabus documents discourage teachers from using technical language with students, especially in early years" (Halliday & Martin 1993: 172).

We have tried to make a survey on different people: students, friends and so on regarding the accessibility of technical manuals. We were interested in finding out about the different attitudes of expert and non-expert readers to specialist texts. The conclusion was that people for whom these scientific texts were written had no problem in understanding them.

School textbooks are considered to be a type of popularization of scientific knowledge, but efficient textbooks should introduce gradually the important technical language in order to explain scientific concepts and functions such as classifications, definitions, explanation, analysis so that the student is oriented into scientific discourse.

A scientific text can be analyzed from a functional perspective using the tools of thematic analysis and the description of processes, mood and modality. Before starting analyzing a text a distinction between the two ways the structure of a clause should be drawn: Given-New structure and Theme-Rheme structure. Theme is one of two systems that organize the information presented in the clause, the other being of Information. And, although our concern in this analysis is with Theme it will be useful to distinguish it from that of Information. While Theme uses position within the clause to organize information into an initial orientation followed by the Rheme, the system of information uses intonation to highlight what is particularly newsworthy in the message. The new element in the clause is being stressed as we speak, containing a tonic syllable. The fact we have both Thematic structure and Information structure in the languages makes it possible for a writer or speaker to choose to put New information in Thematic position and Given information in Rheme position. As we mentioned before, in spoken English we can use special emphasis and intonation to indicate that we are presenting New information in Theme position instead of the Rheme position which would be more normal. We can make a contrast, for example, between *The kettle's **boiling*** which has the New element at the end of the clause, and *The **kettle's** boiling* (not the milk) which has the New element in initial position of the clause. However, in written English, it is more difficult to vary the relationship of Theme and Rheme to Given and New, respectively. In the vast majority of English written sentences, Theme is realized by the same constituents as Given, while the Rheme and the New information are realized by the rest of the clause.

## II.2. Language as discourse

The question of how to speak or write more effectively has interested educators and critics for hundreds of years. And there are a lot

of communication books about how to write as convincingly as possible. Most recent educational approaches have focused on matters such as preparation and planning and how to approach the topic without over discussion of language, but lexicogrammar is largely neglected, except for pointing out common stylistic 'errors'.

Most people would agree that language users differ in their ability to communicate effectively. There is an intuitive concept of 'valued text', which is to say instances of speaking or writing that are considered 'better' in some ways than others. However, we cannot always explain precisely why one speaker or writer seems better than another. Vague terms such as 'clearer', 'more interesting', 'easier to understand' are used by critics, but beginners often find that advice given in such terms is not of much practical use.

In recent research in applied linguistics, some of the techniques of functional grammar are being used to discover the precise features of valued texts, and there is clearly a lot of scope for further work in this area, not only for educational purposes but also for business, journalism, politics and other fields where effective communication is important. Recently, for example, interest has been expressed in the discourse of public administration and calls have been made for application of strong analytic methods to this area.

Methods of linguistic analysis give us the tools for investigating the characteristics of valued text, and a number of research studies have identified measurable characteristics of such texts. Berry (1989) uses the analysis of Theme to investigate children's ability to write appropriately in the specific genre of a guidebook for tourists. The task of writing a town guide was set as a writing competition for schoolchildren. Some children clearly captured the adult style for a tourist guide (e.g. *Windsor is situated in the north of London*), especially in their selection of third person topical Themes, whereas others used a less appropriate style with first and second person pronoun Themes, e.g. *I think Windsor is a nice place to visit*. Berry concludes that more successful writers were able to control their thematic choices more consistently than the less successful writers.

McCarthy and Carter (1994) show how an advertisement for holidays utilizes contrastive thematic structure within the same text. The persuasive section of the text is written in an interactional, informal style, with the use of personal pronouns (*we* and *you*) in Theme position:

e.g. *You could be enjoying a five star holiday.*

McCarthy and Carter claim that the latter type of writing can 'distance the reader from the text' and discourage 'any sustained reading

of this section', which may be to the advantage of the advertiser. Such work is, of course, of interest to copywriters, but studies like these also provide a strong argument for raising the linguistic awareness of consumers, since readers who are aware of linguistic tricks are better equipped to evaluate texts.

Tyler (1994) studied the same statement on pieces of spoken English, concentrating on the effect of hypotactic and paratactic structures on the comprehensibility of lectures. Previous research had shown that native speakers of English used more hypotactic structures than paratactic structures in planned spoken discourse. Tyler found that there the statement according to which less complex structures are easier to understand cannot be entirely be proved. A text with numerous hypotactic structures and embedded relatives is easier to understand than another with simpler structures.

Thompson (2004) agrees with Tyler that a quantitative analysis (such as counting sentence length, lexical density, or number of clauses per sentence) is only part of the story. Due to the fact that hypotaxis can signal the speaker's intentions, this can help understand the text. To discover why complex structures are sometimes easier to understand, we need to consider functions within the text, or possibly within whole context of use.

It is clear that there are significant grammatical features of valued texts that can be learned by speakers or writers who wish to improve their communication skills. For evaluating the communicative text we need a rich linguistic system, such as provided by functional lexicogrammar in order to identify what is successful within its own communicative context.

### **II.3. Language development**

Children's acquisition of language and their early language development are of interest to educators, psychologists, the medical profession and parents. SFL has been used as an analytic tool in both of these applications following Halliday's (1975) original study of a child's acquisition of English as a mother tongue using a functional model. Another linguist who studied this matter is Painter, who, in 1999, has recorded and analyzed the way a pre-school child uses language as a learning tool and the ways in which the child constructs meaning. She noticed that when a child begins to talk about abstract entities and starts develop stories, using the grammar needed to express hypothetical situations, possible actions, and so on.

Martin (1989) considers factual writing by both children and adults within a systemic functional framework and draws comparisons between

them. The book is revealing about the state of language education at the time and Martin made a strong case for the importance of a sound approach to the teaching of writing by linguistically informed teachers. It was also ground-breaking in its focus on the importance of lexical and grammatical metaphor as a means of establishing 'objectivity' in expository writing and of the need for children to be exposed to such stylistic devices. In an application of grammatical analysis, Martin (in Halliday and Martin 1993: 211-13) uses Theme analysis to show the differences between the writing of young writer and the more complicated writing style of an older writer on the same topic. The older writer used much lengthier themes than the younger writer, who uses Themes such as *I, you* and *there*.

Applied linguists such as Carter and McCarthy, argue that teachers not only need to pass on language skills to their students, they also need to understand the processes of language development that their students undergo and the uses (and varieties) of language in the society. Working within a systemic functional framework, focusing on discourse, they consider that children should grow up with a better understanding of how language is. These different applications within an educational context are illustrated in works such as McCarthy and Carter (1994) and Carter and McRae (1996).

Further evidence of the importance of systemic functional framework can have for language education can be seen in the work of Butt et al. (2000), an introductory course on systemic linguistics, which also includes advice for teachers. Like Carter (1997), they consider that a text-based approach to language education should be firmly based in the context of language use. However, they differ from Carter in recommending the teaching of a standard meta-language for talking about language both for teachers and students in school.

Lock (1996), in his introductory book on functional English grammar for teachers, supports the view that there is a place in school for 'grammar as a source for making and exchanging meanings in context'. He argues that a systemic functional approach can be used facilitate communication in all its modes.

Halliday himself has been personally involved in applying his insights to teaching ever since the early days of Systemic Functional Linguistics when he was a co-author with McIntosh and Stevens of the influential work *The linguistic Sciences and Language Teaching*, first published in 1964. This work provided guidance for a whole generation of teachers, textbook writers and teacher trainers on the phonology and intonation of English, syllabus sign and language for specific purposes.

Over the years, probably the most widespread Hallidayan influence on language teaching has been the work on cohesion. Nowadays work on cohesion often related to specific genres, but from the date of the publication (1976) *Cohesion in English* by Halliday and Hasan, it attracted the attention of teachers of English as a foreign language, who realized that here was aspect of English that had been seriously neglected. The textbooks written before that time did not explain the most cohesive devices in a systematic way, as well as certain aspects of the grammar, particularly the nature of ellipsis and substitution in English. Nowadays, all general course books and most reading and writing courses incorporate work designed to help learners grasp the cohesive devices of written English.

It is only recently, however, that teachers and course designers have become aware of the aspects of textual coherence, such as thematic patterns.

In one study, Bloor and Bloor (1992) identified three types of stylistic problems in written academic texts caused by unusual use of the Theme-Rheme and Given-New dimension of the grammar. They found that inexperienced writers do not always have sufficient command of the grammatical devices that can be used to control the position of Given and New information in the clause. Since there can be no recourse to intonation and stress in written English, they suggest that more attention needs to be given in teaching to this aspect of the grammar. A sophisticated writer in an academic context needs a good control of the grammar of thematic equatives, predicated theme, and the various exponents of textual theme as well as an understanding of the distribution of Given and New information. This control is, of course, often intuitive, but there is no doubt that some writers, particularly those working in a foreign language, can be helped to improve their style by teachers who can raise their awareness of such issues.

In other respects, functional grammar has been particularly useful in the development of course design in English for Specific Purposes (ESP) and English for Academic Purposes. Munby's work (1978) on the design of communicative syllabuses, which calls for close attention to appropriate language use in course design for adult learners, is based on the assumption that 'language varies as its function varies.

#### **1.3.4. Stylistic Analysis**

The discussion of valued texts leads, almost inevitably, to the thought of great works of literature since these are the texts most highly valued in literate societies. In non-literate societies, spoken rhetoric and

story-telling are equally highly valued and speakers are praised for their contributions. We have to mention that other types of discourse are not less important than literature.

The language of literature has become of much interest in the last few decades, and this led to what came to be known as stylistics, which used linguistic techniques to support the investigation of literary texts.

Of important book which analyzed literary discourse is Leech's *A Linguistic Guide to English Poetry*, which was published in 1969, but, by the 1970s, some of Quirk's work referred to 'the new stylistics' which was firmly grounded in systemic Functional Grammar. Overall, the work in stylistics varies in the attention given to the role of different metafunctions in literary text as well as to the degree in which analysis is quantitative or qualitative. Some analysis focuses more on the ideational, some on the interpersonal and some on the textual.

Halliday's key work of 1971, which looked in some detail at Golding's novel *The Inheritors*, compares the language at different stages of the novel, largely in the variable use of linguistic patterns. Each of the three sections of the novel is written in a different style, the author preferring a different set of grammatical patterns, such as nominal group modification and transitivity structures. The language is shown to reflect the behaviour and social interaction of the characters and communities represented. Thus, in the first part of the novel, the author uses very few human Actors, Humans more often appear as 'affected' participants in mental processes. In addition, in this section of the book, Golding uses an 'excessive' number of circumstantial elements, mostly concerning objects in the natural environment ('in the bushes', 'under water', etc.). Consequently, there is no cause-effect relationship expressed in this part of the book. Halliday contrasts this style with those used in the other two sections, pointing out that the frequency of linguistic forms establishes a 'norm' within a particular text, or part of a text, which may differ from the rest of the literary work and may not represent the linguistic norms of the language as a whole.

#### **II.4. The influence of language**

Since language is a human social phenomenon, it develops and changes as people use it for social purposes. We understand much of the reality, namely our models of the world and the way in which we represent the world with the help of language. Usually we take this for granted and imagine that we can talk and write about the world in a completely objective way, using language as a tool that is separate from our experience, but, if we think it over, and look at the language that we

use or the language that is used around us, we can see how the words and grammar influence in certain ways the world around us. Halliday (1990) illustrates this with the way in which modern societies use the word *grow* with favorable connotations even when writing about activities that may not be good for the planet in any real long-term ways. Starting from the association of *growth* with such ideas as the growing child or the growth of food and plants, we now talk about economic growth, industrial growth, growth in air transport, and so on, and, regardless of reality, the idea that 'growth expresses a good phenomenon. The example of *growth* is a good example of how a particular ideology can become set into the form of the language (in this case the lexical item 'grow').

We can also use linguistic approaches to analyze political issues and the power and success in the academic world. Although our experiences are largely influenced by the discourses of the societies in which we grow up, we can use our consciousness to re-interpret our experience:

“Language can help us to become aware of the unconscious pressures that operate on the ways we think and behave. These pressures are not all related to deep and distant experiences lost in our infancies, but also to immediate social expectations that we should act out certain roles, behave and talk in certain ways. We can become more aware of these pressures and so make ourselves less liable to be influenced by them”. (Anderson 1988: 123)

Fairclough (1989) comments on the range of linguistic features that he has noted in his investigations into the exercise of power relations in discourse, and adds that he hopes his less educated readers in discourse analysis will value the way a close analysis of texts can help us understand relations and processes in a discourse. He explains that his aim is to show 'how a systematic and detailed textual analysis can add to a variety of current approaches to discourse analysis'.

In the earlier work, while emphasizing that description is only one stage in critical discourse analysis (the others are interpretation and explanation), Fairclough specifies the type of linguistic analysis that is appropriate for critical investigations into language use and suggests ten questions concerning vocabulary, grammar and textual features that we can ask about the features of a text.

## **Conclusions**

In this article we have tried to demonstrate that a systemic functional approach on language can be used in several domains related to discourse analysis. These practical applications can be carried out not only by linguists, but also by philosophers, teachers, doctors, writers, translators

and so on. We have discussed the most important practical applications, namely analyses of scientific and technological texts, language as discourse, language development, stylistic analysis.

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