

Review

Combining transformative generative grammar and systemic functional grammar: Linguistic competence, syntax and second language acquisition

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Transformational generative grammar (TGG) and systemic functional grammar (SFG) are two of the most influential theoretical linguistic schools. Previous literature has mostly taken the two approaches as two contrastive perspectives to language. In the present study, the author focused on the non-contradictory side of the two approaches to see how they could be bound together to supplement each other in terms of linguistic competence, syntax and pragmatics, thus forming a more comprehensive picture of language. This paper ends with a discussion on the application of these two grammars in second language acquisition and second language teaching. Findings have shown that instead of being completely contradictory and mutually exclusive, SFG and TGG supplement each other and together present us a more holistic picture of language with their own strengths and weaknesses.

Key words: Transformational generative grammar, systemic functional grammar, second language teaching and acquisition.

INTRODUCTION

Language has double characters. On one hand, it is the product from the mind and the mouth of individuals, and it expresses one's thoughts. On the other hand, whenever one speaks, he speaks to others and inevitably has some effect on others, and therefore, language is also the tool of human communication.

Following these two lines, since the 1950s, there have been two linguistic schools appearing among others, each developing along its own line and both gaining more impact and influence than the others. One is the transformational generative grammar (TGG) represented by Chomsky, an American scholar; the other is the

systemic functional grammar (SFG), represented by M.A.K. Halliday, a British linguist.

As most previous literature has taken TGG and SFG as two contradictory perspectives to language and their differences have already been talked thoroughly time and again, in this study, the author mainly focused on the non-contradictory side of the two approaches to see how they could supplement each other and forms a more comprehensive picture of the language of English. The research method adopted in the present study is qualitative to describe the two approaches of grammar and to explore how they could be "combined" in terms of

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linguistic competence, syntax and pragmatics.

To achieve this goal, the attitudes of the two grammars towards the nature of language and linguistic competence will be discussed to see how, instead of being exclusive to each other, they could mutually support each other. Then, special attention will be paid to different functional purposes that guide the transformation from the same deep structure to different surface structures, and the transformational processes that facilitate the completion of linguistic functions.

Furthermore, bearing these similarities and complementation in mind, most importantly, this paper discusses how to combine these two perspectives to make the best use of them in second language acquisition and second language teaching.

LITERATURE REVIEW

Transformational generative grammar (TGG)

Chomsky's TGG sees language as a system of innate rules. For TGG, a native speaker possesses a kind of linguistic competence. The child is born with knowledge of some linguistic universals. Thus, language learning is not a matter of habit formation, but an activity of building and testing hypothesis (Chomsky, 1986).

Chomsky's theory initiates from his three main questions: a) What constitutes knowledge of language? b) How is such knowledge acquired? c) How is such knowledge put to use?

With sentence as his focus, Chomsky's grammar has essentially two basic components: Phrase structure rules and transformational rules. Phrase structure rules are generalizations about the ways in which categories (such as noun, adjective, verb, etc.) can be combined to make phrases and sentences in a language. With these rules, many sentences can be created: $S \rightarrow NP + VP$; $VP \rightarrow V + NP$; $NP \rightarrow Det + N$, and so on. Such rules are the major source of productivity in grammar (Chomsky, 1986, 1994).

For the transformational rules, according to Chomsky (2002), a sentence has two structures, one is surface structure and the other is deep structure. The surface structure is the kind of sentence we ordinarily say, while the deep structure is an abstract syntactic representation of sentence from which its surface structure generates. The deep structure specifies the basic meaning and categories of the sentence. In other words, it is the skeleton of a sentence with all the information necessary to do three things: to derive a well-formed sentence, to give it a phonological representation and to give it a semantic interpretation. This structure is modified in various ways to become a surface structure, which is the 1 linear arrangement of words and phrases which will be produced. The rules with which we transform the deep structure of a sentence into the surface structure are called transformational rules. They are rules of passive

transformation, yes/no transformation, do transformation, negation transformation, etc. These rules were used to add, delete, or permute, that is, change order and sometimes also hierarchic relationship among constituents of the deep structure to turn it into an ordinary sentence we use in everyday life.

Systemic functional grammar (SFG)

Contrary to Chomsky's TGG, Halliday's SFG attaches great importance to the sociological aspects of language. He views language as a form of "doing" rather as a form of "knowing" (Halliday, 1979; Halliday and Matthiessen, 2014).

SFG focuses on the following two questions: a) What are the special functions of language? b) How are these functions reflected in the linguistic system? Halliday (1973) recognizes three functions of language in communication of human society. They are: 1) Ideational function: language functioning as a means of conveying and interpreting experience of the world (this function is subdivided into two sub-functions, the experiential and the logical sub-functions). 2) Interpersonal function: language functioning as an expression of one's attitudes and an influence upon the attitudes and behavior of the hearer. 3) Textual function: language functioning as a means of constructing a text, that is, a spoken or written instantiation of language.

Halliday's functional theory is based his systemic theory, with the former as the output of the latter. They are two inseparable parts for an integral frame work of linguistic theory. Systemic grammar aims to explain the internal relations in language as a system network, or meaning potential. And this network consists of systems from which language users make choices. The items of a particular system should belong to the same area of meaning.

HOW TGG AND SFG COMPLEMENT EACH OTHER

The nature of language

Looking at language from the inside, Chomskian linguists define language as a set of rules or principles. They believe that human beings are born with a language acquisition device, which enables them to acquire a language in such a way that other animals cannot. TGG relates language with human being's physical and psychological features and views language as "a form of knowing". Chomsky considers language as the starting point to investigate the common laws of language and to find out the cognitive system, mental laws and intrinsic quality of human being.

On the other hand, SFG views language as a systematic resource for meaning expression in social context, and thus linguists should focus on how people

exchange meanings through the actual use of language. Halliday (2004, 2007) views language as form of “doing”, and holds that the nature of language is determined by the functions it evolves to serve in the society. This functional perspective to the nature of language is deeply rooted in its anthropology and sociology origins from Malinowski and Firth.

From the above analysis, we can see that although TGG and SFG look at language from two different angle—one from a psychological perspective inside the language, and the other from a sociological perspective outside the language, they do not exclude each other, but are different aspects of the same subject- language. It would be unthoughtful to deny that language is a psychological phenomenon, but equally unwise to deny that it is a social phenomenon. Taking the two perspectives together, we can gain a more wholesome understanding of the nature of language as both inside knowledge and a behavior serving certain social functions. Without language acquisition device in human mind, it would be impossible for human beings to ever start acquiring language, not to say using language to serve certain purposes. Meanwhile, leaving the social and functional aspect of language unconsidered, there would be no reason for the existing of language. Everything in the world is connected with others, the same is true for language. Language could never be fully understood leaving its social features aside.

Parole and Langue

As both SFG and TGG belong to modern linguistics, they all follow the basic principles of modern linguistics proposed by Saussure and get new linguistic points from previous linguists. Both of them pay attention to the distinction of LANGUE- the linguistic competence of the speaker (sentence) and PAROL- the actual phenomena or data of linguistics (utterance).

Following Saussure’s concepts of langue and parole, Chomsky introduces the fundamental distinction of linguistic competence and performance in his aspects of the Theory of Syntax (1965). In that book, he points out a language user’s underlying knowledge about the system of rules is called his linguistic competence; while the actual use of language in concrete situations of daily communication is named performance. As TGG is primarily concerned with the internal knowledge of language inside human mind, it focuses more on the linguistic competence rather than performance which contains numerous false starts, deviations from rules and changes of plan in expression, and so on. In Chomsky’s view, linguistic competence can explain every single linguistic performance, as thus, it should always be the focus of linguistic study.

In the meantime, Halliday (2001) distinguishes linguistic behavior potential and actual linguistic behavior. He sees language as a three-level semiotic system, consisting of

a semantic system (what can be done), a lexico-grammatical system (what is meant to be done) and a phonological system (what can be said) with the higher-level systems embedded/realized in the lower level systems. Halliday points out clearly that linguistics study should include both langue and parole. But he does not use these two terms proposed by Saussure, instead he uses “can do” and “does”. “Can do” refers to the meaning potential which provides various possibilities to human beings for communication thorough language, while “does” refers to the actual choices of the possibilities, that means, the choices of lexico-grammatical system reflecting the chosen meaning potential. However, he also noticed that as “can do” is what is hidden behind, we cannot observe it directly. The only way we can get to know the linguistic potential (can do) of someone is through the observation of his/her actual linguistic behavior (does). As thus, in SFG, more attention has been paid to actual linguistic behavior, or linguistic performance in Chomsky’s term.

However, although in different terms, as pointed by all the three linguists: Saussure, Chomsky and Halliday, all languages have an internal side and an external side, to know a language, we should have the knowledge of both internal “linguistic competence”/ “what one can do” and external “linguistic performance”/ “what one does”. We can work from the external to shed light on the internal or vice versa, but whatever the start point is, the ultimate goal of linguistics should be to gain a knowledge of both aspects of language. So from this perspective, we may say that the distinction between the focuses of SFG and TGG is a matter concerning the start point, rather than a black and white contradiction. They are more like two roads leading to the same destination, each with its own landscape.

Syntax and pragmatics

Functional guidance of transformation

SFG has evolved in use and it has no existence apart from the practice of those who use it. The social functions of language have occupied a crucial place in SFG. According to Halliday, ‘language is because of the functions it has evolved to serve’ (1976, p. 26). SFL puts great emphasis on the different functions language serves in the social communication of human beings. Halliday defines functional grammar as essentially a natural grammar, in the sense that everything in it can be explained, ultimately, by reference to how language is used. As SFG takes clause as the basic unit of analysis, on the syntax level, all the transformational rules in TGG could be explained with the functions it is to accomplish. Whenever and wherever there is transformation, there is a reason behind, and the ultimate reason is the function it is to serve.

To take the sentence “John broke the vase” for

example, it can be transformed to the following sentences under the transformation rules:

1. John didn't break the vase.
2. Did John break the vase?
3. The vase was broken by John.
4. The vase was broken.
5.

All the transformations are guided by the functions the deep structure "John broke the vase." This structure is called "kernel sentence" by Chomsky. In the first example, the kernel sentence undergoes the transformation of negation. The function it serves is to express the addresser's attitude or belief in the topic under discussion. In this way, it serves the interpersonal function. Example 2 is a case of interrogative transformation, it serves the function of "demanding information" with the form of an interrogation. It belongs to the interpersonal function and makes up the principle speech role of question according to Halliday. The next sentence "The vase was broken by John." undergoes passive transformation from the kernel sentence. By putting the object "the vase" in the beginning place of the sentence, the departure of the information delivered by the sentence has changed accordingly from "John" to "the vase". It represents a different way of our perception of the world. So it serves both ideational and textual functions. In the last example, the subject "John" is omitted directly from the original kernel sentence. This is an optional transformation in passive transformation. Nevertheless, it has its own functions to serve. By omitting the actor (John) of the material process, this whole action seems to happen all by its own, thus hiding the causal relationship between the actor and the process (break), creating a mystifying effect. The vase seems to break all by itself. In this way, the actor "John" is protected from his responsibility of breaking the vase.

From these examples, we can see that functions are served during the transformation processes from the same deep structure to a variety of surface structures, and even within every transformational step in every transformational process, transformation is functionally directed. In the extended standard theories of Chomsky, he also admits that any kind of transformations will certainly change the sentence meaning, and now completely puts semantic interpretation which is related with the functions of language into the surface structure.

Linguistic function facilitation of transformational device

In the meantime, in order to serve some particular functions, particular forms of language should be taken. We cannot use the same surface structure once and for all the different functions we want to achieve. According to Chomsky (1965), the deep structure specifies the basic meaning and categories of the sentence. In other words,

it is the skeleton of a sentence with all the information necessary to do three things: to derive a well-formed sentence, to give it a phonological representation and to give it a semantic interpretation. To express different meanings to serve various functions, the same deep structure has to be transformed into a variety of surface structures. As thus, the transformational devices facilitate the accomplishment of functions language serves, and it is what makes the language creative and functionable.

The ideational function, as it deals with the conveying of new information through specific use of language to refer to categories of experiences in the world, can only be achieved by the different uses of language (surface structures). And the same world process can be expressed in different ways according to our different understandings. For example, the material process "John broke the window" can be reworded as "the window was broken by John" or just "the window was broken" if the speaker does not know who broke it or chances may be that speaker does know who broke the window but does not want to tell the others. Thus, our particular perceptions of the world are tied up with particular expressions. And as for the interpersonal function which deals with people's attitudes, the same kernel sentence "John broke the window" can be said as "perhaps John broke the window" or with more confidence "It must be John who broke the window." So we can see, in order to achieve different degrees of confidence, to express different attitudes, we have to apply different surface structures. And textually, as the textual function deals with combining stretches of discourse into a coherent and unified text, to make a passage coherent and sound natural, we have to make some transformations from the deep structure. For example, to make the actual sentence "John ate some spaghetti, and Mary some macaroni" work, first we have the deep structures "John ate some spaghetti" and "Mary ate some macaroni", then we have to add the conjunction "and" to combine these two sentences together, then the combined sentence "John ate some spaghetti and Mary ate some macaroni" undergoes the deletion rule – the second "ate" is omitted to make the sentence sound more natural and coherent. This combining and deleting transformations together facilitate the textual function of a language.

In summary, we can see that transformation process from the same deep structure to a variety of surface structures allows for the achievement of different functions. It is the generative nature of these transformational rules that made it possible to achieve the numerous functions we can fulfill with our language.

IMPLICATIONS FOR SECOND LANGUAGE ACQUISITION AND TEACHING

Application of TGG

Although Chomsky announces that his theory applies

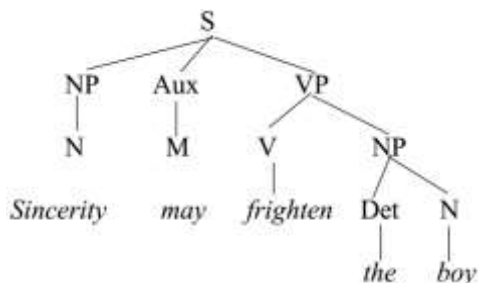


Figure 1. Tree diagram for “sincerity may frighten the boy”.

primarily to native speakers but not to second language learners, there are several aspects of his theory which is significant in second language acquisition and have been adopted by many second language teachers and researchers.

TGG presents grammar as a linguistic knowledge capable of generating an infinite number of sentences from a finite set of rules which is capable of generating all and only the grammatically correct sequences of that language. From this point, to know a language means to know the finite set of rules. This makes language learning and teaching a much easier and more direct experience. For example, from the tree diagram (Figure 1) of the sentence “sincerity may frighten the boy”, the structure of this sentence is presented clearly. The following phrase structure rules are applied to generate this sentence.

1) $S \rightarrow NP + Aux + VP$

$VP \rightarrow V + NP$
 $NP \rightarrow Det + N$
 $NP \rightarrow N$
 $Det \rightarrow the$
 $Aux \rightarrow M$

2) $M \rightarrow may$

$N \rightarrow sincerity$
 $N \rightarrow boy$
 $V \rightarrow frighten$

When we learn this sentence, we do not just know the surface expressions of the sentence; instead, we learn the set of rules that could generate the sentence, so that we can make other sentences with the same structure. For example, we know that a sentence may consist of a noun phrase, an auxiliary verb and a verb phrase. Then we may generate other sentences like “John may come”, “The bird can imitate what people say” and so on. Then on the lower level, the verb phrase “frighten the boy” in this sentence is formed by a verb and a noun phrase, following this rule, we may generate an infinite number of verb phrases like “eat an apple”, “sing a song”, etc. By

the same token, the students can generate all the negative sentences by acquiring the negative transformation rule, and interrogative sentences and passive sentences, so on and so forth. In this way, the students can acquire a language easily by mastering a finite number of phrase structural rules and transformational rules.

Besides, the deep structure and surface structure may also help the students to understand some ambiguous expressions. Take the sentence “the cat ate the mouse with a fork” for example, the ambiguity of the sentence comes from the two deep structures it is related with. These are shown in Figure 2.

In the first deep structure, the PP “with a fork” is attached with the verb “ate”, generating the meaning of “the cat ate with a fork”, while in the second deep structure of the sentence, as can see the PP can also be attached to the noun phrase “the mouse”, so it becomes “a mouse with a fork was eaten by the cat”. In this way, TGG helps the students to understand particular sentences and allows the teachers to explain clearly to their students wherever ambiguities occur.

Application of SFG

Unlike most theoretical linguistics, SFG makes no distinction between linguistics and applied linguistics (Chen, 2008), always ready to apply their theory of language use and meta-functions to educational practices. Via foregrounding the social nature of language and viewing language in functional terms, SFG has been a useful model in a pedagogically applied sense since its emergence. One basic assumption of all these functionally oriented pedagogies is that the ultimate goal of knowing a language is to communicate with others—language is a tool of communication. If we want to interact in the world successfully, we must learn more about the usage of a certain language instead of the rules of that language system itself. The objective of language teaching is to generate successful language users and not flawless grammarians.

Having said that, SFG is extremely useful in communicative approaches of second language teaching where function is always considered as an important issue. It leads directly to the development of notion/function-based syllabuses (Chen, 2008). This approach was first proposed by Wilkins (1976) and van Ek (1975), two famous linguists in U.K. and has received considerable attention since the 70s in 20th century. In the fully notional model proposed by Wilkins (1976), there is great emphasis on Halliday’s meaning potential which is the semantic system of a language, and thus he coins the term notional. The functional model proposed by van Ek (1975) has much in common with Wilkins’ notional model, but it further takes in Halliday’s concepts of meta-functions. Van Ek’s focus of the functional model is on what a learner can do with language rather than the

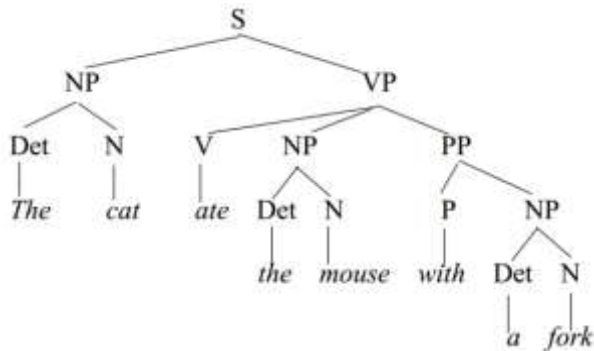


Figure 2. Tree diagram for “the cat ate the mouse with a fork”.

meaning potential he has in mind and intends to express. However, focusing on the communicative or functional aspect of second language teaching and learning does not mean that SFG totally ignores the rules of language or that the rules are not important in second language teaching and learning, rather, it proposes that if we view the linguistic system as closely related to our social needs and the functions that it serves, then we may begin to make sense from the way it is organized. To know a language, we have to know both the grammatical organization of the language itself, and how to use language appropriately in practical interactions with people around us.

CONCLUSION

From the above discussion, it can be seen that SFG and TGG are not mutually exclusive. On the surface, these two approaches seem to be opposed to each other. They have different views towards the nature of language; they propose different emphasis on research, and they have totally different analytical frameworks. Nevertheless, based on the above analysis, we may see that each of them has a considerable amount of truth on its own side. Instead of being completely contradictory and mutually exclusive, SFG and TGG supplement each other and together present us a more holistic picture of language with their own strengths and weaknesses. They offer us a multi-angle view towards the nature of language. While it would be unwise to deny that language is a psychological phenomenon, it would be equally senseless to deny that it is a social phenomenon. On the syntax level, the different theories of SFG and TGG can be used to elaborate each other. Although, their research focuses are different with one on linguistic competence and the other linguistic performance, this is more a difference of starting points which gradually lead to the same destination, as both of them admit and accept the two aspects (competence and performance) of language and acknowledge their importance. Linguistic knowledge t

should be a combination of the two. In the field of second language teaching and acquisition, each of the two approaches has its own advantages. To be a competent language user, one should be able to speak that language in a correct way and in an appropriate manner.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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