A Cognitive Model for Recognition of Genre

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Abstract

This paper discusses the cognitive process (es) in recognizing instances of genre and the effects of generic features have on recognition of genre. Following the ESP tradition, the paper takes the communicative purpose as the defining feature of a genre and follow Martin's stratified model of language and context in for the analysis. Based on a preliminary study conducted among three geologists, this paper proposes a model revealing the cognitive process (es) in recognition of instances of genre. According to the model, the cognitive recognition of a genre basically goes from the bottom up, and the effects that the generic features have on recognition of instances of genres decrease from the top down. However, as the cognitive processes are very complicated, the top-down and bottom-up processes may sometimes interweave. Even at each stratum alone, the reader may have to experience a complicated interactive process. The schema theory is an important theory that works as a general thread throughout the model proposed. Apart from the general schema-matching processes at the beginning and the end of the whole processes, there might exist a schema-matching process at each processing stratum, too.

Keywords: Genre analysis, Genre recognition, Generic features

1. Introduction

Although genre analysis has become a heated research topic in recent years and that a large number of analyses have been carried out with types of texts, yet the dynamic processes underlying in recognition of genres seems to be neglected. The ultimate goal of this paper aims to reveal the role of generic features in the cognitive recognition processes of a particular genre. The basic hypotheses in this paper include: 1) In the recognition process, the attention focus of the reader basically goes from the bottom up, i.e. from the bottom level (lexico-grammar) up to the top level (the context of culture). 2) The effects of the generic features on recognition of instances of genres decrease from the top down. 3) The generic features of a typical instance of the genre may have been stored in people's mind as a schema and may help a lot in recognition of a genre. 4) As the actual processes are more complicated than the processes proposed ideally in the models, in each process, either the general overall process or the secondary processes, the bottom-up process and the top-down process may sometimes take place interactively.

2. Rationale

The model in this paper is proposed based on the following theoretical foundations:

2.1 The Defining Feature of a Genre

Unlike the traditional way to prescribe certain grammatical forms as the correct ones, recent studies in genre analysis target at revealing the structural patterns and language regularities that are appropriate to a genre. Classical theories tend to over-emphasize the commonness shared by instances of a genre, claiming that shared properties are a condition of membership (Paltridge 1997: 53). Opposing to the classical view, Eleanor Rosch (Rosch and Mervis, 1975) holds that not all instances of a genre have the same status: the most typical examples are the prototypes of a genre; people match actual instances with the prototype and assign membership. However, a lot of texts that have a lot in common are considered different genres or sub-genres. Abstract and Conclusion of the same scientific paper, for instance, may share common mode, tenor and field, and also similar cohesive devices; nevertheless, they are recognized as different genres (or subgenres). This leads to a hypothesis that however similar two established genres are, there must be one feature that distinguishes them as separated.   Then what is the defining feature of a genre?

In SFL, Hasan advocates that the obligatory elements of the Generic Structure Potential distinguish genres and help the perception of the completeness of a text. However, Ventola (1987) in her analysis of service encounters finds that

sometimes some obligatory elements may not occur but still the texts are recognized as members of the same genre. If this paper follows Hasan's tradition, then again how is it to be explained that sometimes two texts, Abstract and Conclusion (being the summary) of the same academic paper can share absolutely the same structural elements, but play different functions?

Within the ESP approach, Tarone et al (1981) establishes that the writer's communicative purpose that governs lexico-grammatical choice, and Swales (1990) also holds that the communicative purpose is the defining feature that distinguishes a genre from others. The author agrees to this proposal, which offers the solution to the questions concerning the genre assignment of the abstract and the conclusion of the same academic article. Therefore, this paper takes the communicative purpose as the defining feature of a genre.

2.2 A Stratified Model of Context and Language

The analysis and the models proposed in this paper are grounded on Martin's Stratified Model of context and language. Integrating Hjelmslev's notion of semiotic systems, Martin (1999) models the context of text (genre and register) as layered social connotative semiotic systems realized through language, which in turn is taken as layered denotative semiotic systems consisting of discourse-semantics, lexico-grammar and phonology/graphology. In the model, language functions as the expression plane of register, which in turn functions as the expression plane of genre. Martin considers ideology as a higher level of context than genre.


Figure 1. Martin's stratified model for context and language (Martin, 1999)
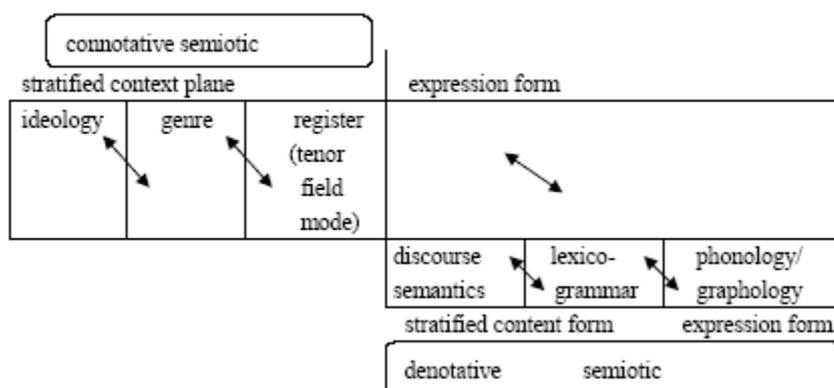
In this model, the contextual level (i.e. the connotative semiotic level or the stratified context plane) is realized by the linguistic level (i.e. the denotative semiotic level or the expression form); the contextual level includes three strata, i.e. ideology, genre and register with register having three variables: tenor, field, and mode; the linguistic strata include three strata: discourse semantics, lexico-grammar and phonology /graphology. At the contextual level, ideology is realized by genre, which in turn is realized by three variables of register; at the linguistic strata, discourse-semantics is realized by and represents patterns of lexico-grammar, which in turn is realized by and represents patterns of phonology/graphology (Martin 1999).

According to Martin, few people have been trained for analysis of ideology. It is true to me since I have found little literature in analysis of ideology. (Eggins 1994) interprets genre as the context of culture and register as the context of situation consisting of three variables: field, mode and tenor. I agree him to some extent, but to me genre has a larger scope than his interpretation in that the sense of context of culture includes not only genre but also ideology. Therefore, Martin's model is revised as the following:

Figure 2 Revised stratified model of context and language
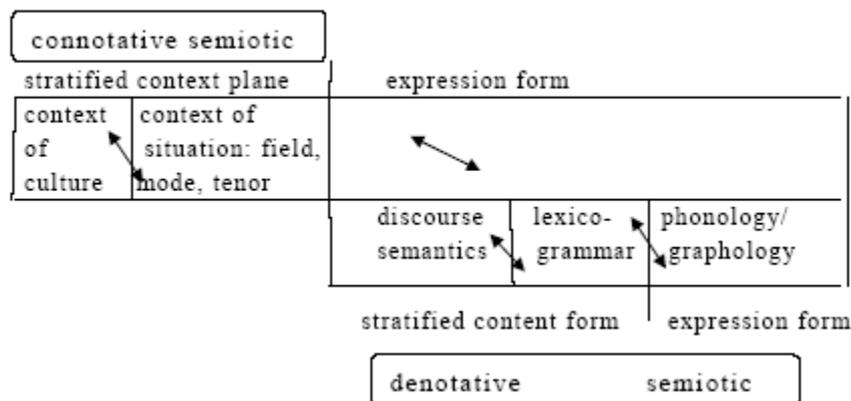
In this model, while expressing connotations, the stratified context plane is realized by and represents linguistic patterns, the expression forms of text that express denotations. The stratified context plane includes two layers: context of culture and context of situation (of which the context of situation include three variables: field, mode and tenor). Context of culture is realized by and represents context of situation (or the contextual configuration which is realized by the specific values of field, mode and tenor). The strata of linguistic forms include discourse-semantics, lexico-grammar and phonology/graphology. Discourse-semantics and lexico-grammar in turn are the stratified content of the language strata while phonology/graphology is the expression form. Each stratum of the language strata is realized by and represents its lower stratum: discourse-semantics is realized by and represents lexico-grammatical patterns; lexico-grammatical patterns are realized by and represent patterns of phonology and graphology.

2.3 The Schema Theory

The schema (Note 1) theory is formulated by Bartlett (1932) in cognitive psychology. According to Bartlett, 'schema' refers to the prior knowledge structure in mind. Carrell (1983) distinguishes formal schemata (i.e. the rhetorical structure of discourse) and content schemata (i.e. general knowledge of the world). The process of understanding a text is seen as an interactive process between the reader's background knowledge and the text (Bartlett 1932, Rumelhart 1980). Based on the conception of 'schemata' (Barlett 1932, Sanford and Garrod 1981, Carrel et al. 1988, Oller 1995), many linguists like Mandler and Johnson (1977), Carrel (1983) and Swales (1990) observe that schemata guide the production and comprehension of both content and forms of text. Carrell and Eisterhold (1983) hold that appropriate schemata must exist and should be activated during text processing to enable efficient production and comprehension.
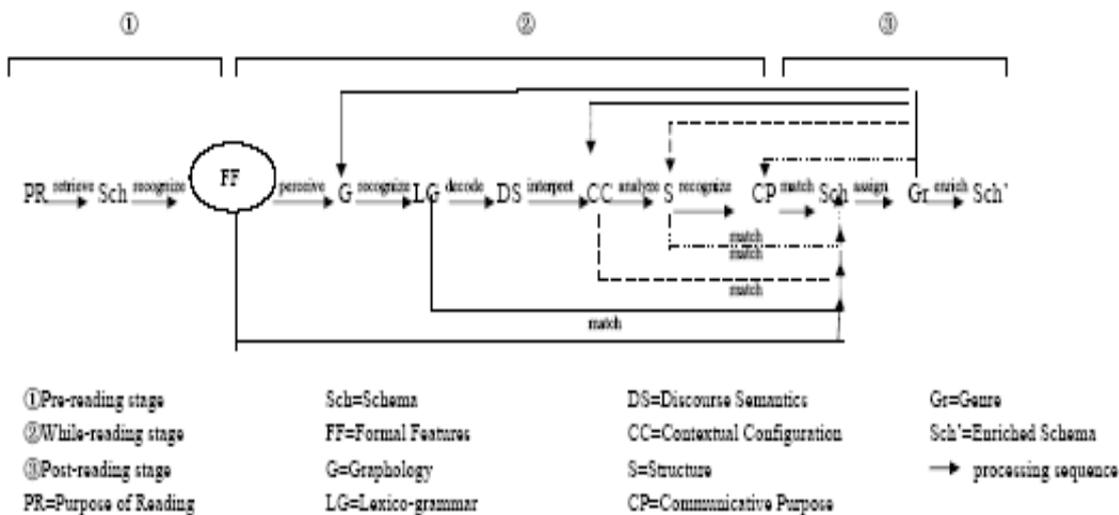
Based on the schema theory and the stratified model of context and language, this paper proposes a cognitive models for recognition of instances of a genre, to illustrate how instances of genres are interactively recognized and how generic features affect recognition of a genre.

3. A model for Genre Recognition

In genre recognition, as the text is already in existence, the perception of information relies heavily on the reader's interpretation or comprehension of the writer's intention conveyed in the text. The gap between the writer's intention and the reader's interpretation may affect the conveyance of the information, and thus may affect the assignment of the genre. To correctly interpret the reader's intention and to make an appropriate genre assignment, the reader has to go through a very complicated mental process. Hence, the process of genre assignment is more passive and more complex than the production process.

Genre assignment (or recognition) takes place after the recognition of certain genre-distinctive features embedded in a scientific text. It involves a rather complicated cognitive process of recognizing contextual and linguistic features of the text in which the top-down approach and the bottom-up approach work interactively. Therefore, like the model proposed for text production, the processing model for genre assignment also includes steps involving recognition of features at different strata of the text as Figure 3 demonstrates.

Figure 3 Model for genre recognition

① Pre-reading stage   Sch=Schema   DS=Discourse Semantics   Gr=Genre
② While-reading stage   FF=Formal Features   CC=Contextual Configuration   Sch'=Enriched Schema
③ Post-reading stage   G=Graphology   S=Structure   ——► processing sequence
PR=Purpose of Reading   LG=Lexico-grammar   CP=Communicative Purpose

According to this model, the process of genre recognition is composed of three stages: pre-reading stage, while-reading stage and post-reading stage. The pre-reading stage includes two steps: purpose formation and schema retrieval; the while-reading stage forms the text perception process which involves recognizing the conventional formal features of the genre (if there are any), recognizing lexico-grammatical features, understanding discourse semantics, figuring out the values of the contextual configuration, analyzing the generic structure and recognizing the communicative purpose; the post-reading stage includes genre assignment and schema enrichment.

At the pre-reading stage, ordinarily, people read to obtain news-value information. Before the actual reading, the writer should have a certain specific purpose. In accordance with this communicative purpose, the type of text is predicted, and the schema of that type of texts in the reader's mind is retrieved. The reader should then identify some features of the text and assign the text to a genre, so that based on the schema of the type of texts, he can have the idea where to locate the required information. Therefore, with the definite purpose of reading, the reader retrieves the schema of the expected type of text and sets on recognizing the features of the text at different strata.

At the while-reading stage, the text may possibly be assigned to a genre directly after the recognition of a certain feature at a certain step. But it may also be that at a certain step the genre the text is assigned to is a macro one, and the reader has to go on for further features till he assigns the text to an appropriate specific genre. After the text is assigned to a genre, the reader may have more fresh ideas about the features of a genre, and thus enriches the schema of the genre stored in his mind.

This inferential model involves aspects of individual cognitive processing of information. In order to assign a text to an appropriate genre for better understanding of the text, the reader must make certain inferences with the guidance of the schema in his mind. Ideally the stages and the inferential steps are supposed to go from the bottom up and then top down (if necessary) for further features.

4. Summary

To sum up, the discussions above illustrate the effects of Generic Features on Genre Recognition as follows:

(1) Generally speaking, as long as the target genre is familiar to the reader, in the reader's mind there exist the schemata of the genre concerning features at different strata, and at different strata of recognition, there exists a schema retrieval-and-matching process.

(2) The communicative purpose, the structure, the content (more generally, the register) of the texts and the content of a certain sentence may be considered as the major factors that affect genre recognition. However, some other factors, such as figures and references may also help the recognition. Lexico-grammatical features and discourse-semantic features (cohesion) have little effect on recognition of the genres within scientific settings.

(3) The process of the recognition of a genre may take place from the bottom up. That is, the reader may first read the words and recognize lexico-grammatical features, and then the relationship of ideas (discourse-semantic features), the register of the text, the structure of the texts and then the communicative purpose (function) of the texts. This process may be interactively recursive, and the steps may work serially or simultaneously. At each stage from the bottom up, the reader may match the features he recognizes with the schema in his mind. If the features are not enough for appropriate

genre assignment, the reader may go on to a further step or back to the previous step for more evidence until he gets enough evidence for appropriate genre assignment.

(4) Generally speaking, the reader applies the functional criteria to analyze the structure of a text. And the structure of a text is generalized after the reader gets the gist of the text based only on the understanding of key lexical words.

(5) The structure and the lexico-grammatical choices respectively affect people's judgment on the completeness and the appropriateness of the text as an instance of a genre. In other words, the knowledge of the appropriate schema of a text is in fact a necessary condition in genre assignment.

(6). It is noticeable that prior knowledge or the schema of a genre functions as a thread throughout the whole psychological process. At whatever stratum in the production or recognition of a text as an instance of a genre, the writer or the reader holds in his mind what he has already known about the genre as the basis for his decision.

Of course, these discussions are tentative, and more systematic experimentation is required before we can be confident about the conclusions. We hope that further work along this line will help us better understand the cognitive processes involved in genre recognition.

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Notes

Note 1. Other terms for the concept include '*frame*' by Minsky (1975) and '*script*' by Schank (1975).