On the Theoretical Framework of the Study of Discourse Cohesion and Coherence

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Abstract

This paper looks back at the definitions of cohesion and coherence, the relationship between the two, and relevant theories. Though cohesion and coherence research has made great achievement, for various reasons, there is little consensus to the nature of coherence and coherence research approaches. Accordingly, the main theoretical framework of the present study is established on the foundation of Haliday and Hasan's cohesive devices, Halliday's two metafunctional notions in Systemic-Functional Grammar—thematic structure and information structure, van Dijk's propositional macrostructure and Hasan's generic structure.

Key words: Cohesion; Coherence; Device; Framework

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1. PREVIOUS STUDIES ON DISCOURSE COHESION AND COHERENCE ABROAD AND IN CHINA

The term of "Discourse Analysis" was firstly applied by American structuralism linguist Z.S. Harris in 1952 when he published an article titled *Discourse Analysis* in Language Journal. Discourse analysis (DA), or discourse studies, is a general term for a number of approaches to analyzing written, spoken or signed language use. It is a result of longitudinal development of linguistic study. The objects of DA are variously defined in terms of coherent sequences of sentences, propositions, speech acts or turns-at-talk. Discourse analysts prefer to analyze naturally occurring of language use. Although there are many perspectives and approaches in respect to this field, the various approaches emphasize different aspects of language use, they all view language as social interaction, and are concerned with the social contexts in which discourse is embedded.

Cohesion and relevant theory, as well as functional grammar are two of the specific theoretical perspectives and analytical approaches used in linguistic discourse analysis. Discourse cohesion and coherence is an important aspect of discourse study, and it is critical for DA to get a foothold. The reason for this is simple, "If a discourse is cohesive in its content and coherent in meaning, it is very likely to be accepted." (Hu, 1994). Since language can be divided into many different levels, discourse cohesion and coherence is naturally reflected in multidimensional aspects.

To make the definitions of discourse cohesion and coherence clear and definite, we'd better distinguish two terms—discourse and text. According to Hu Zhuanglin, discourse refers to any natural language denoting complete semantic in certain context, rising above the constraints of syntax. It can be observed in the use of spoken, written and signed language and multimodal forms of communication. Scholars have different understanding about discourse and text at different times. For instance, Steiner & Veltmen (1988) explained discourse as "the language used as process", and text as "…coded by words, a product of language delivery by utterance, written language or symbols". Halliday & Hasan (1976) claim that a text is "any passage，spoken or written—of

whatever length." In this thesis, the author will investigate the writing instruction, thus adopted the idea that text is the written form of discourse. Often a distinction is made between "local" structures of discourse (such as relations among sentences, propositions, and turns) and "global" structures, such as overall topics and the schematic organization of discourses and conversations. In the following discussion, cohesion and coherence is studied from this angle.

1.1 Cohesion

A number of important works were published that dealt with the subject of cohesion in the early seventies in the 20th century. The work by Halliday and Hasan has to be mentioned in particular among these works. Now it is generally admitted that the publication of Cohesion in English by M. A. K. Halliday & R. Hasan (1976) is the symbol of establishment of cohesion theory. In their work, cohesion is described as a semantic concept referring to relations of meaning that exist within a text (Halliday & Hasan, 1976, p.4). Their definition of cohesion emphasizes the relationship between the meanings of linguistic units. They also define a concrete form as a tie, "we need a term to refer to a single instance of cohesion, a term for one occurrence of a pair of cohesively related items. This we call a tie." This term "tie" refers to a single instance of cohesion or one occurrence of a pair of cohesively related items. The links are called "cohesive ties" or "cohesive devices". Halliday and Hasan distinguished cohesive ties in terms of grammatical cohesion and lexical cohesion in their work. Grammatical cohesion covers four cohesive devices: reference, substitution, ellipsis, and conjunction, while reiteration and collocation fall into the category of lexical cohesive devices. Hasan enlarged the range of connotation of cohesion concept in their work published in 1989, *Language, Context and Text*. Cohesion is then divided into structure-cohesion and non-structure cohesion. Structure cohesion covers Parallelism, Theme and Rheme, Given-New information structure, while non-structure cohesion falls into Component Cohesive Relations and Organic Cohesive Relations. Component Cohesive Relations include four of five cohesive devices proposed in 1976, reference, substitution, ellipsis and lexical cohesion. These four form three types of relationships such as co-referentiality, co-classification, and co-extension. Organic Cohesive Relations contains connection relation, adjacency pair, and continuance.

The major contribution of Hasan is to enlarge the range of cohesion into the relations of structures which have realized the meaning of text structuredness. Halliday and Hasan's study of cohesion is by far the most accepted and systematic one. Different definitions of cohesion have also been given by other linguists both abroad and at home. Cohesion as the connection between discourse elements is realized by kinds of cohesive devices. In the past decades, various taxonomies, including Halliday and

Hasan's (1976), Winter's (1979), Hoey's (1991) and Hu's (1994), have come into being and been developed.

In our research, the widely adopted taxonomy developed by Halliday and Hasan will be used, which consists of five categories of cohesive devices: reference, ellipsis, substitution, conjunction, and lexical cohesion.

1.2 Coherence

Coherence is a controversial topic, as its definitions are varied from linguistic scholars and their research from different angles. van Dijk (1977) studied coherence from semantics, emphasizing delivery of information in written discourse. He argues that coherence is the semantic feature of discourse. Widdowson (1978) considers coherence as a pragmatic concept which is related to the application of discourse analysis and speech act theory to denote the relationship among speech acts. Brown & Yule (1983) focused much on the process of analyzing written discourse. They pointed that coherence is the result of the interaction between discourse and its receivers, which is produced while readers dealing with discourse. As we have mentioned, coherence is not a well-defined notion (van Dijk, 1977, p.93). The vagueness in its definition may be related to the fact that coherence is an "interpretive process," created by the reader while reading the text (Mc Carthy, 1991, p.26). Thus, a writer always needs to predict the reader's response to his text. This task is what some learners cannot cope with. Despite its arbitrariness in definition, coherence is generally viewed in two aspects: reader-based and text-based coherence (Johns, 1986). The former is associated with the meaningful aspect of writer-reader or speaker-listener interaction, while the latter refers to the features associated with the internal structure of the text itself. To study coherence in reader's perspective, scholars surely presuppose that every text is coherent, that the realization of textual coherence depends on the context and the knowledge and imagination of an individual reader, but not the writer of the text. Therefore, reader-based coherence is frequently used to discuss the issues concerning the understanding of a text. However, considering the present research is about writing, we adopt the text-based approach to coherence.

Although coherence research has not had a long history, it has attracted attention of more and more researchers. This is because coherence research has not only theoretical significance but also great potential in applied linguistics. Coherence research has been an important concept in discourse analysis for about 30 years and coherence research has made great achievement. However, for various reasons, there is little consensus as to the nature of coherence and coherence approaches. In EFL writing teaching, which approach is effective and has practical significance is still under study, and the relationship between cohesion and coherence is a key factor for the choice of research methodology. Domestically, Cheng Xiaotang made a profound research

on coherence based on Hallidayan systemic functional linguistics (SFL), and explores the nature and realization of coherence from the three metafunctions and proposed a framework of discourse coherence from three dimensions: ideational coherence, interpersonal coherence and textual coherence. Although textual coherence is always interchangingly used with discourse coherence, Cheng holds that they are different concepts in that textual coherence refers to how text locally and globally linked. In includes local text structure (thematic structure and information structure) and global text structure (propositional macrostructure and generic macrostructure). Each one will be explained in the later discussion.

1.3 The Relationship Between Cohesion and Coherence

At present different linguists have different views on the relations between cohesion and coherence. In Halliday and Hasan's work (Cohesion in English, 1976), they proposed that coherence is confirmed by cohesion and consistence with register. They regard cohesion as a necessary means though not a sufficient condition for the creation of text all along and they point out that cohesion is the foundation of constituting coherence. However, other researchers have different opinions. Among them, Widdowson (1978) studied coherence from the angle of locutionary and illocutionary meaning. He voices a view that the presence of cohesion does not necessarily lead to textual coherence and the absence of obvious grammatical and lexical cohesion links does not mean the absence of coherence either. Brown & Yule (1983, p.66) believe that form features of cohesion are not necessary. No matter what angle they start from, they share the same viewpoint: cohesion cannot determine coherence. Reinhart (1980, p.161) and Ehrlich (1990) have the same views with Halliday and Hasan. They divide coherence into explicit coherence and implicit coherence. It seems that the classification of explicit and implicit coherence shows us clearer picture on how the cohesion affects coherence. In China, many researchers studied coherence based on Halliday and Hasan's research findings. Hu Zhuanglin developed cohesion theory, arguing that the range of cohesion should be enlarged, which encompasses textual structures, ideational structures, text structure and phonetics. According to Zhang Delu, the overt grammatical and lexical cohesion, thematic structure, information structure, situational context are the main factors that influence discourse coherence. It is obvious that their views are broader than that of Halliday and Hasan. Nevertheless, although it is not difficult to demonstrate that texts with abundant cohesive ties are not necessarily coherent, the role of cohesion in coherence cannot be underestimated. Thus it can be seen the understanding of the relationship between coherence and cohesion is very instructive to both Chinese teachers and students.

2. THEORETICAL FRAMEWORK OF THE STUDY

2.1 Grammatical and Lexical Cohesive Devices

Halliday and Hasan outline a taxonomy of types of cohesive relationships which can be formally established within a text and bind a text together. They studied cohesion in English and discovered two categories of cohesive devices: grammatical cohesive devices covering reference, ellipsis, substitution and conjunction, and lexical cohesive devices including reiteration and collocation.

2.1.1 Reference

Reference, as one type of cohesion, deals with a kind of semantic relation whereby information needed for the interpretation of one item is found elsewhere in a text. According to Halliday and Hasan, reference is classified into personal reference, demonstrative reference and comparative reference. As to personal reference, we often use pronouns such as *she*, *he*, *it*, *his*, *her*, and *their* to refer to earlier items. Demonstratives such as *the*, *this*, *that*, and *those* are also used for referential purposes. Comparative reference sets up a relation of contrast, involving a conception of likeness and unlikeness phenomenon. It is expressed through general comparison and particular comparison. General comparison refers to any particular feature (such as *so*, *as*, *equal*, *similar*, *different*, *otherwise*, *likewise*), whereas particular comparison means comparison that is in respect of quantity or quality (such as *more*, *fever*; *additional*, *better*; equally *good*).

2.1.2 Ellipsis and Substitution

Another type of cohesive relation takes two different forms: substitution and ellipsis. There are three types of substitution—nominal, verbal, and clausal. In nominal substitution, the substitute items always function as head of a nominal group, and can substitute only for an item which is itself head of a nominal group. The verbal substitute in English is *do*. *Do* operates as the head of a verbal group, in the place where is occupied by the lexical verb, and its position is always final in the group. One further type of substitution in which what is presupposed is not an element within the clause but an entire clause. The words used as substitutes are *so* and *not*.

Ellipsis refers to "something left unsaid". (Halliday & Hasan, 1976, p.142) There is no implication that what is unsaid is not understood. On the contrary, "unsaid" implies "but understood nevertheless". An elliptical item is one, which leaves specific structural slots to be filled from elsewhere. This is exactly the same as presupposition by substitution, except that in substitution, an explicit "counter" is used, like *one* or *do*, as a place-marker for what is presupposed. But in ellipsis, nothing is inserted into the slot. That is why we say that ellipsis can be regarded as substitution by zero. Like substitution, there are nominal ellipsis, verbal ellipsis and clausal ellipsis.

2.1.3 Conjunction

Conjunction is a specification of the way in which what is to follow is systematically connected to what has gone before. It is somewhat different from the other cohesive relations. It can be used to realize the systematic relationship between sentences or paragraphs in a text. The classification in Halliday & Hasan (1976)' work is so complicated. And it is perfected in their later work *An Introduction to Functional Grammar* (1994). Halliday classifies conjunction into three types of abstract logical-semantic relation: elaboration, extension and enhancement. Elaboration means one clause elaborated on the meaning of another by further specifying or describing it. It includes apposition and clarification. Extension means one clause extends the meaning of another by adding something new to it. What is added may be just an addition, or replacement, or an alternative. It can be subdivided into addition, adversative and variation. The additive conjunctions include *and*, *also*, *moreover*, *nor*, *but*, *on the other hand*, *however*; *on the contrary*, *instead*, *except for that*, *alternative* etc. Enhancement means one clause enhances the meaning of another by qualifying it in one of a number of possible ways: by reference to time, place, manner, cause or condition. Therefore it can be subdivided into spatio-temporal, manner, causal-conditional conjunctions like *then*, *at the same time*, *in the end*, *finally*, *previously*, *on another occasion*, *so*, *consequently*, *as a result*, *in that case*, *in that respect* etc.

2.1.4 Reiteration and Collocation

Reiteration is a form of lexical cohesion which involves the repetition of a lexical item, at one end of the scale, the use of a general word to refer back to a lexical item, at the other end of the scale, a number of things between the use of a synonym, near-synonym, or superordinate (Halliday & Hasan, 1976, p.278). According to Zhu Yongsheng (2001) and Hu Zhuanglin (2003), reiteration can be categorized into repetition, synonymy, antonymy, hyponymy and metonymy.

Collocation describes the relationship between words that tend to co-occur. Halliday & Hansan (1976, p.287) refer to the term as a "general heading" or a "covering term". Collocation is the most problematic part of lexical cohesion, which is achieved through the association of lexical items that regularly co-occur. In other words, collocation is just a covering term for the cohesion that results from the co-occurrence of lexical items that are in some way or other associated with one another in similar environments. The specific kind of co-occurrence relations is variable and complex, and would have to be interpreted in the light of a general semantic description of the English language.

According to Zhang (2001), collocation in lexical cohesion should include word collocation in the same structure (such as verb and noun, adjective and noun, etc) and habitual collocation of items above the sentence (such as blade... sharp, garden... water, ill... doctor, candle... flame, writer... style, mountaineering... peaks... climb, etc.)

2.2 The Thematic Structure

According to Hallidayan SFL, the structure which gives the clause its character as a message is the thematic structure. We can understand this concept in this way: the thematic structure organizes the message in the clause. In English, the thematic structure consists of two elements, the Theme and the Rheme. The theme is the point of departure of the message; it is usually what the clause is concerned with. The Rheme is the remainder of the message; it provides information about the theme. Below are two simple examples (The Theme is underlined):

The house is beautiful and large.

Because of the bad weather, he didn't go to school.

Of course, the thematic structure is much more complicated than what has been outlined above. According to Halliday, "The Theme is one element in a particular structural configuration which, taken as a whole, organizes the clause as a message. Within that configuration, the Theme is the starting-point for the message; it is the ground from which the clause is taking off" (1994, p.38).To put it simply, the role of theme serves as a point of departure of a message, often reflecting the topic of utterance; and the rest, the part in which the Theme is developed, is the Rheme. The theme-rheme structure is not only a formalized category, but also a functional one. On the one hand, the part embodying the theme lies in the first component of the sentence, and the Rheme is the other component following the Theme. Since each sentence has its own Theme and Rheme, when the sentence stands alone and has no context, its Theme and Rheme are fixed and unchanging. Meanwhile, there is no development of its Theme and Rheme. However, most texts are constructed on the basis of more than two sentences which are internally related. Thus the Theme and Rheme in the following sentences will have some connection with the Theme and Rheme in previous sentences. "The connection between sentences is realized with the progression process from Theme to Rheme. This is called Thematic Progression" (Zhu, 1995). Halliday stresses that the function of Themes plays a fundamental part in organizing a discourse. The essence of thematic structure lies in the cohesion and coherence of the Themes in the clauses, their internal relationship and their relationship with the content and the text. In their original cohesion theory, Halliday & Hasan (1976) overemphasized the function of nonstructural cohesion devices. After its modification in 1985, the importance of structural devices, especially that of Thematic Progression, is justified. Fries (1983) & Danes (1974) abstracted several patterns of Thematic Progression which could be adopted to explain whether a text is coherent or not. Danes proposed that the theme has two functions: (a) connecting back and linking

into the previous discourse, maintaining a coherent point of view (b) serving as a point of departure for the development of the discourse. He introduces three broad patterns, the Constant Theme Pattern, The Linear Theme Pattern and the Split Theme Pattern. In China, the linguist Zhu Yongsheng (1995) proposes four. Combining their views, the author introduces four patterns that are applied in the present study.

2.3 The Information Structure

When discourse is created to represent facts, its primary function is to establish some semantic and pragmatic representation of the facts in the memory of the hearer or reader. (Cheng, 2005) Therefore, discourse should respect various information processing constrains, from both a cognitive and an interactional or social point of view (Van Dilk, 1985, p.113). In this perspective, among many other principles, discourse must deliver information in such a way that it is easy for the hearer or reader to process and store. One way to achieve this goal is that discourse must be produced in such a way that at any point of the discourse there should be at least some New information, and that this New information should be appropriately linked with information already known to the hearer or reader. Halliday brought forth the concepts of Given information and New information on the basis of the Prague School's concepts of "old information" and "new information". According to Halliday (1994), an information unit is a structure made up of two functions, the Given information and the New information. The Given information is presented by the speaker as recoverable to the listener, whereas the New information as not recoverable. What is treated as recoverable may be something that has been mentioned before or something in the situation. Likewise, what is treated as non-recoverable may be something that has not been mentioned or something unexpected.

Although the concept of information structure is a recurring topic in the literature on discourse analysis, there is some noticeable confusion as to the question of how the information structure is realized. Some researchers (e.g., van Dijk, 1977, 1985) are concerned with how information in discourse is organized from a structural point of view, that is, how information is distributed in different parts of the clause and among the adjacent clauses, and how information is tied together. Other researchers (e.g. Brown & Yule, 1983; Halliday, 1985, 1994) concerned with how information structure is realized through phonological manifestations with a focus on the function of tonic prominence. According to Halliday (1994, p.256), the way the information structure is realized is essentially "natural" (non-arbitrary) in two aspects: (a) The New is marked by prominence; (b) The Given typically precedes the New. One thing can be clarified: the first rule applies only to spoken discourses, whereas the second rule applies to both spoken and written discourses. The present study is mainly concerned with written discourses. Therefore, the discussion on information structure is closely related to the second rule. That is, the given information precedes the new information. In order for a text to be coherent, "new information should be unpacked in the context of what is already familiar, the result being a chain of Given=>New=> Given=>New, and so on (James, 1998, p.163). The information structure functions both within the sentence and beyond the sentence in terms of discoursal organization and coherence. Within the sentence, the information structure contributes to textual coherence in that it facilitates interpretation and makes the intended message more prominent. Beyond the sentence, it helps to establish relationships among information. More specifically, the given information provides necessary information based on which the reader interprets the forthcoming information, i.e. the new information. The second way in which the information structure contributes to textual coherence is that it organizes the message in a certain way so that the intended message is made more prominent.

Some EFL students' writings are considered as "disorderly". A possible reason for this disorderliness is that these students fail to structure their information appropriately in the process of writing. (Cheng , 2005).

2.4 Propositional Macrostructure

There is an obvious lack of a clear definition of global structures when we study the global discourse structure. "Macrostructures" (van Dijk, 1977), "Rhetorical structures" (Mann & Tompson, 1988) and "generic structures" (Hasan, 1989) are some of the more frequently used terms. van Dijk's concept of macrostructures concerns the "global semantic structure" of discourse. Therefore, it falls into the category of propositional macrostructures which refers to the structure that organized the discourse propositions. According to van Dijk, coherent text usually consists of a global semantic structure called macrostructures, which is composed of a small number of hierarchically organized macro-propositions. Macro-propositions are generalized from sequences of micro-propositions that are expressed in the text. A macrostructure is a theoretical reconstruction of intuitive notions such as "topic" or "theme" of a discourse. It explains what is relevant, important or prominent in the semantic information of the discourse as a whole. The macrostructure of a discourse defines its "global coherence (van Dijk, 1985, p.115). According to van Dijk, macro- propositions need to be explicitly expressed in the text. We need some rules to obtain the macrostructure from the microstructure of the discourse. In other words, we need rules to transform one proposition sequence into another. This kind of semantic transformation is called macro-rule. There are four macro-rules (van Dijk, 1977, p.144). The models can be seen as below and "a, b, c"

in front of "→" stands for micro-propositions in the text structure, while "a, c" placed after "→" stands for macro-proposition .

2.5 Generic Structure

The concept of generic structure derived from the word "genre" implying the type of discourse. Hasan stated that generic structure potential is the resource of all the discourses, including three elements: obligatory elements, optional elements, and iterative elements. The structure of a text is determined by its obligatory elements (Halliday & Hasan, 1985). More specifically, it is the obligatory elements and its sequence that determines the type of discourse. Generic structure potential refers to the similar structure among the same genres. The concept of generic coherence is brought forth by Eggins (1994). According to Eggins, a text is considered generically coherent when the clauses in the text can be recognized as belonging to the same type of genre. If clauses in a text are recognized as belonging to different genres, the text will be considered as incoherent. Eggins has approached generic coherence from the registerial variables. She has ignored another important aspect, that is, the significance of generic structure in text coherence. When we examine genres of text, we can study at least two things: the generic forms (e.g. language mode and style) and the generic structures. (Cheng, 2005) And Eggins's concept of generic coherence is mainly concerned with generic forms, that is, the different modes and styles of language used in different genres. However, the generic structure probably plays an even more important role in text coherence, because it "allows us to distinguish between complete and in complete texts" (Hasan, 1978, p.229).

Psycholinguist Carroll (2000) has studied the role of generic structure in text production and text comprehension. He notes that a genre is a type of discourse that has a characteristic structure. Genres are important because they provide us with general expectations regarding the way information in a discourse will be arranged. The generic structure mainly concerns with arrangement of discourse components at a global level, therefore, the generic structure falls into the category of macrostructures.

According to Hasan (1978), each genre of text is a generalized structural formula, which permits an array of actual structures. Each complete text must be a realization of a structure from such an array, while a text will be incomplete if only part of some recognizable actual structure is realized in it, and the generic provenance of the text will remain undetermined, if the part so realized is not even recognizable as belonging to some distinct actual structure. Hasan proposes that the three kinds of elements—obligatory elements, optional elements, and iterative elements lie in a text structure. Obligatory elements are those that must occur in a text, otherwise, the text will be incomplete, and thus incoherent. Optional elements are those that can occur but are not obliged to occur in text. Iterative elements are those that occur more than once in a text and can be optional.

In Hasan's words, "the obligatory elements define the genre to which a text belongs" (Hasan, 1989, p.62). The appearance of all the obligatory elements in a specific order corresponds to our perception whether the text is complete or incomplete. Therefore, to make a text coherent, there are two conditions: (a) It has all the obligatory structural elements of the genre that the text belongs to; (b) The elements occur in the specific order required of the genre in question.

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