行政院國家科學委員會專題研究計畫 成果報告

敘事文中段落劃分的語篇功能研究

計畫類別: 個別型計畫

計畫編號: NSC94-2411-H-034-008-

<u>執行期間</u>: 94 年 08 月 01 日至 95 年 07 月 31 日 <u>執行單位</u>: 中國文化大學英國語文學系暨研究所

計畫主持人: 姬少軍

報告類型: 精簡報告

處理方式:本計畫可公開查詢

中 華 民 國 95年10月30日

研究計劃中文摘要

本研究探討的是英、漢語敘事文中段落劃分的語篇功能。實證語料來自兩個語篇劃分試驗。第一個實驗是請以英、漢語為母語的實驗參加者各二十名對十篇隱去段落標記的英、漢語敘事文分別作情節段劃分,情節段的劃分反映了這些敘事文中的主題轉折點。第二個實驗是請第一個實驗的參加者在三個星期后對相同的十篇隱去段落標記的英、漢語敘事文分別作段落劃分,其目的是將所得到的段落劃分與第一個實驗所得到的情節段劃分作比較。比較的結果表明,在英、漢兩种語言的敘事文中,絕大多數的段落劃分是被用來標示情節段劃分所體現的各種主題轉折。段落劃分在標示與主情節段相關的主題轉折時一致性很強,在標示與次情節段相關的主題轉折時一致性很強。

關鍵詞:段落、情節段、敘事文

研究計劃英文摘要

This report is the result of a study conducted to specify the discourse functions of paragraph divisions in both English and Chinese narrative texts. Two segmentation tasks were carried out in each language group to provide the data for analysis. In the first experiment 20 native speakers of each language were asked to divide the unparagraphed versions of 10 narrative texts in their own language into episodes. The rationale for eliciting the episode divisions of the texts is that they reflect the thematic transitions in the narrative texts. In the second experiment the same unparagraphed narrative texts as used in the first experiment were divided into paragraphs by the same group of subjects after a three-week break. The purpose for conducting this experiment is to obtain the paragraph divisions of the texts so that they can be compared with the episode divisions obtained in the first experiment. The comparison of the two groups of divisions in both language groups indicates that the overwhelming majority of the paragraph divisions are used to mark the thematic transitions represented by the identified episode divisions and in serving these functions their uses are very consistent in marking the thematic transitions associated with the prototypical episode units and less so in marking the thematic transitions associated with the sub-episode units.

Keywords: paragraph, episode, narrative

1. Introduction

A written text is conventionally presented in paragraphs. According to three experimental studies that involved identifying paragraph boundaries in unparagraphed texts (Bond & Hayes, 1984; Koen et al., 1969; Stark, 1988), the subjects tended to make paragraph divisions where there were thematic discontinuities in the texts. As thematic discontinuities form pivotal points in the thematic development of a text, the use of paragraph divisions to signal these discontinuities clearly indicates their role in revealing the underlying structure of a text. Such a revelation is considered by many researchers to facilitate the reader's text processing (Britton, 1994; Brown & Yule, 1983; Hinds, 1980; Hofmann, 1989).

Despite the results from the three experimental studies, a question arises concerning what was also reported in them. That is, although the subjects identified paragraph boundaries where they thought there were thematic discontinuities, they did not share exactly the same paragraph divisions with the authors of the texts (and neither did they with themselves). In the task of paragraph identification conducted by Bond and Hayes (1984), for instance, while all of the 21 subjects and the author shared the identification of the first paragraph, only 8 of them chose the author's second paragraph in a 16-sentence unparagraphed text. Three new paragraph divisions were also made by 11, 2, and 7 subjects respectively. Similar results were reported by Stark (1988). In her study, which involved identifying paragraph boundaries in three unparagraphed essays, 9 author's paragraph boundaries (out of 17) were identified by more than 50% of her subjects, the rest were identified by less than 50%. While both studies observed that paragraph divisions tended to be associated with thematic discontinuities, which was based on those divisions identified with relatively high agreement rates, they offered no specific account for the role of the other paragraph divisions identified with relatively low agreement rates.²

2. Purpose of the Study

To the present study, the paragraph divisions identified with both high and low agreement rates ought to be accounted for if we want to obtain a comprehensive picture of what paragraph divisions may be used to indicate. The fact revealed in the studies mentioned above that some paragraph divisions enjoyed considerably more agreement than others suggested that the former were somewhat different from the

¹ It needs to be pointed out that the studies carried out by Bond and Hayes (1984) and Koen et al. (1969) also suggested a significant role of formal cues in paragraphing.

² Obviously taking into consideration the fact that the obtained paragraph divisions were not entirely shared, Stark concluded that "a paragraph is a discourse unit that is suggested but not absolutely specified by the content of the text" (Stark, 1988: 275).

latter. While the former seemed to represent more definite points of thematic discontinuity and therefore were identified with more agreement, the latter appeared to have no such status and therefore were identified with less agreement. The question that arises from this analysis is thus: In what ways are these paragraph divisions different? The answer to this question can throw some light on why the uses of paragraph divisions are not entirely shared among language users and at the same time tell us what kinds of paragraph divisions tend to be used with more or less agreement.

3. Research Methodology

For the purpose that has just been stated, the investigation carried out in this study is on what paragraph divisions may be used to indicate in narrative texts. The methodology it adopts is somewhat different from the one used in the aforementioned studies (Bond & Hayes, 1984; Koen et al., 1969; Stark, 1988). In their identification tasks, as mentioned earlier, the paragraph divisions were obtained from ordinary language users and compared with those made by the authors. Although this comparison enabled the researchers to see how well the former matched the latter and on this basis generalized about the tendency in their uses, it did not reveal why some paragraph divisions were different from others (as suggested by the varying agreement rates). Since this issue is our major concern in this study, we follow a different approach by conducting two experiments to elicit the data for analysis.

In the first experiment, 20 native speakers of English and 20 native speakers of Chinese were asked to divide the unparagraphed versions of 10 narrative texts in their own language into *episodes*. The reason for eliciting the data of episode divisions from this experiment is that they reflect the thematic transitions of the narrative texts. The validity of episodes has been proved by psycholinguistic studies which indicate that people recalling stories treat information of an episode as an integral unit (Black & Bower, 1979; Glenn, 1978; Mandler, 1978; Thorndyke, 1977). It is also supported by studies that have found the episode-shift effect, i.e., readers pause longer in processing episode-initial sentences that introduce an episode shift than they do for episode-internal sentences (Haberlandt et al., 1980; Mandler & Goodman, 1982). As episode divisions are recognizable on thematic grounds according to these studies, they were obtained in this study as reference points reflecting thematic transitions in the narrative texts.

_

³ Besides, comparing paragraph divisions made by ordinary language users with those made by professional writers may not be desirable since the latter may be governed by certain complex and illogical criteria (see Braddock, 1974; Rodgers, 1966). For this reason, the present study relies on data from ordinary language users.

The narrative texts used in the experiment are typical personal accounts of past experience taken from several published magazines.⁴ Each text was presented to the subjects in an unparagraphed version but with its title provided. An episode was defined to them as a portion of a narrative text that relates to an event or a series of connected events and forms a coherent unit in itself. The subjects in the two language groups consisted of 10 male and 10 female undergraduate students at the University of Alberta, Canada and Chinese Culture University, Taiwan respectively. They marked the beginning of each episode in a narrative text by placing a slash before the first word of an episode.

In the second experiment designed for this study, the same unparagraphed narrative texts used in the first experiment were used again. They were divided into *paragraphs* by the same group of subjects in each language group three weeks after they did the first experiment.⁵ The subjects were asked to mark paragraph divisions in the texts as they would normally do in their own writing. The purpose for conducting this experiment is to obtain the paragraph divisions of the texts so that they can be compared with the episode divisions obtained in the first experiment.

In conducting such a comparison, we consider it desirable to divide the episode divisions, which serve as reference points reflecting thematic transitions in the narrative texts, into three subgroups according to three categories of agreement rates ranging from high, mid to low. This classification enables us to better characterize any differences between the thematic transitions these divisions indicate. The episode divisions chosen by 65% or more of the subjects form the high-rate subgroup.⁶ As the most representative boundaries of episode units identified in the narrative texts, these divisions also represent the most definite points of thematic transitions in these texts. The episode divisions chosen by 30-64% of the subjects are classified as the *mid-rate* subgroup. Because of the lower agreement rates these episode divisions are considered to be less representative and therefore the thematic transitions they are associated with are to a certain extent less clear-cut than those marked by the first subgroup. The episode divisions chosen by 1-29% of the subjects form the low-rate subgroup. Due to the even lower agreement rates, they represent the least clear boundaries of episode units involving the least definite thematic transitions.

In a similar way as the episode divisions are classified, the paragraph divisions

⁴ The sources of these texts are provided under Experimental Materials at the end of this report.

⁵ The three-week break between the two experiments is meant to reduce the influence of the subjects' first task on their second one.

⁶ There are two reasons for taking this position: First, the episode divisions in this group enjoy a reasonable majority (as they were identified by more than half of the subjects). Second, this reasonable majority can give us more tokens of episode divisions for analysis than greater majorities as represented by 70% or 80%.

obtained in the second experiment are divided into three corresponding subgroups. The paragraph divisions are then compared with the episode divisions between each pair of subgroups in the same category of agreement rates. By so doing we can better observe how well they overlap with one another. If the paragraph divisions overlap to a large degree with the episode divisions between a pair of subgroups, it means that the paragraph divisions are used consistently in signaling the thematic transitions represented by the episode divisions. If the paragraph divisions overlap poorly or do not overlap at all with the episode divisions between a pair of subgroups, it then means that the paragraph divisions are used inconsistently in marking the thematic transitions represented by the episode divisions.

In comparing the episode and paragraph divisions in each language group in the way outlined above, we first tabulated the total number of episode and paragraph divisions respectively in each subgroup. We then tabulated the number of overlapped and unoverlapped divisions between each pair of subgroups. In the category of unoverlapped divisions the unoverlapped episode and paragraph divisions were tabulated separately.

4. Results and discussion

4.1. The English Data

The results of the comparison of the episode and paragraph divisions in each pair of subgroups in the English data are provided in Table 1:

Table 1
Comparison of the episode and paragraph divisions in the English narrative texts

Subgroups	Episode	Paragraph	Overlapped	Unoverlapped	Unoverlapped	
	divisions	divisions	divisions	episode	paragraph	
				divisions	divisions	
High-rate	107	112	102 (87%)	5 (4%)	10 (9%)	
Mid-rate	113	92	87 (74%)	12 (10%)	19 (16%)	
Low-rate	96	176	82 (44%)	14 (7%)	94 (49%)	

Listed in Table 1 are the total number of episode and paragraph divisions in each subgroup (in the 2nd and 3rd columns respectively from the left), the number of overlapped divisions in each pair of subgroups (in the 4th column), and the number of unoverlapped episode and paragraph divisions (in the 5th and 6th columns respectively). Based on the number of overlapped and unoverlapped divisions in all three pairs of subgroups we can observe a pattern of overlapping between them—the percentage of overlapped divisions are higher in the higher-rate subgroups. More

specifically, the episode divisions in the high-rate subgroup, which represent the most definite points of thematic transitions, overlap to the highest degree with the paragraph divisions in the corresponding subgroup. The episode divisions in the mid-rate subgroup, because of their less definite nature as compared with those in the high-rate subgroup, overlap to a lesser but still high degree with their corresponding paragraph divisions. The least overlapping is found between the episode and paragraph divisions in the low-rate subgroups since the episode divisions in this category reflect the least definite points of thematic transitions. The differences between the overlapped and unoverlapped divisions in number are made clearer by the number of percentages they each make up of the total number of overlapped and unoverlapped divisions identified in each pair of subgroups.⁷

Despite the differences between them, the 87% and 74% of overlapping between the high-rate and mid-rate subgroups tell us that the majority of the paragraph divisions in the two categories can be regarded as playing a similar role as their corresponding episode divisions because they clearly segment the texts based on similar thematic transitions. The 44% of overlapping between the low-rate subgroups, on the other hand, suggests that only about half of the paragraph divisions in this category serve similar functions as their corresponding episode divisions but as far as the other half are concerned their uses are poorly shared among the subjects.

Note that there are some unoverlapped divisions in each pair of subgroups. We find all those in the high-rate and mid-rate subgroups to actually overlap with their corresponding divisions in the other categories: While the 5 unoverlapped episode divisions in the high-rate category overlap with the unoverlapped paragraph divisions in the mid-category, the 10 unoverlapped paragraph divisions in the high-rate category overlap with the unoverlapped episode divisions in the mid-rate category. The 2 remaining unoverlapped episode divisions in the mid-rate category overlap with the unoverlapped paragraph divisions in low-rate category whereas the remaining 14 unoverlapped paragraph divisions in the mid-rate category overlap with the unoverlapped episode divisions in the low-rate category. The only divisions that neither overlap within the same category nor across two categories are the 92 unoverlapped paragraph divisions in the low-rate category.

The divisions that do not overlap within the same category but across the different categories indicate that they are also used to mark thematic transitions as those they overlap with yet the exact nature of these transitions appears to be

_

⁷ In the high-rate subgroups, for instance, there are 102 overlapped divisions and 15 unoverlapped divisions including 5 unoverlapped episode divisions and 10 unoverlapped paragraph divisions. Of the total (117) of these overlapped and unoverlapped divisions the 102 overlapped divisions make up 87% and 15 unoverlapped divisions 13%.

somewhat uncertain to the subjects. Nevertheless, based on the overall number of divisions that overlap both within the same category and across two categories, we can certainly perceive the significant role of the paragraph divisions in marking the points of thematic transitions in the English narrative texts.

In order to find out more specifically what are indicated by the overlapped and unoverlapped divisions in each pair of subgroups and the differences between the three pairs of subgroups in this regard, we analyzed the overlapped and unoverlapped divisions in each pair of subgroups in terms of the thematic discontinuities associated with them. In this analysis, we relied to a large extent on the information carried by the initial constructions of the division-initial sentences, namely the subjects of the sentences and the adverbials that occur before the subjects. These constructions were focused upon because they usually provide key information about thematic transitions in narrative texts: while the subjects may inform us about a change in participant or the initiation of a new topic, the adverbials may tell us about new temporal or spatial settings or thematic reorientations of various kinds. Our data analysis indicates that the thematic transitions associated with most of the overlapped and unoverlapped divisions are characterizable in terms of temporal discontinuity, spatial discontinuity, participant discontinuity, topic discontinuity, or thematic reorientation. Only some data in the low-rate category need to be characterized in terms of changes in other discourse elements. The results of this analysis are provided in Table 2:

Table 2 Thematic discontinuities associated with the overlapped and unoverlapped divisions in the English narrative texts

SG	Categories of thematic discontinuities							Total	
	Temp	Spat	Part	Topic	Reor	Quot S	New S	Psych	
HR									
O	40	12	29	7	32	0	0	0	120
U	10	0	1	1	3	0	0	0	15
MR									
O	32	10	25	20	26	0	0	0	113
U	16	0	3	9	3	0	0	0	31
LR									
O	22	7	13	18	20	2	5	0	87
U	10	7	16	43	19	5	8	8	116

Notes: SG = subgroups; HR = high-rate; MR = mid-rate; LR = low-rate;

O = overlapped; U = unoverlapped; Temp = temporal; Spat = spatial;

Part = participant; Reor = reorientation; Quot S = quoted speech; New S = new sequence of actions; Psych = psychological

Table 2 lists the number of tokens of thematic discontinuities identified in all of the overlapped and unoverlapped divisions in the English data. As we can see, the overwhelming majority of the overlapped and unoverlapped divisions can be characterized in terms of temporal, spatial, participant, and topic discontinuities or thematic reorientation. In our analysis, a division tabulated as one of temporal or spatial discontinuity typically starts with an adverbial construction such as an adverb or adverbial phrase indicating a new time or place in a story. If the subject of a division-initial sentence introduces a new participant or indicates a change in participant, this division is tabulated as one of participant discontinuity. Similarly, if the subject of a division-initial sentence introduces a new topic rather than a new participant, this division is treated as one of topic discontinuity. A division of thematic reorientation is recognized as such when this division is led by an adverbial clause such as a subordinate clause, participle clause, or verbless clause. Thematic reorientation is recognized as a separate category mainly because the way it is expressed is different from the other types of discontinuity—the information provided in it usually establishes a setting for a new episode by linking it with a preceding context or by describing the current physical or mental state of a participant. It is also not uncommon that one division may contain two or even three tokens of different discontinuities and for this reason the total number of tokens of discontinuities tabulated for the overlapped divisions in the high-rate and mid-rate categories and the unoverlapped divisions in the low-rate category exceed the total number of these divisions.

Although most of the overlapped and unoverlapped divisions in all of the three categories can be characterized in similar terms as discussed above, the divisions in the high-rate category are found to be dissimilar to those in the two lower-rate categories mainly in two aspects: First, the high-rate divisions tend to involve major thematic transitions, which are reflected in their roles in introducing new participants, initiating discussions on topics related to the main participants, and establishing new settings by providing information about time, place, or episodic development for a series of events or actions. In contrast, the mid-rate and low-rate divisions are generally associated with local discontinuities. They often serve to indicate changes between participants after they have been introduced, break up narration temporarily to offer an evaluation of a situation, an explanation of a phenomenon, a description of an environment, and so forth, or provide some information about changes in time, place, or episodic development for a limited part

of a story. Second, there is a noticeable increase of divisions that are associated with topic changes in the mid-rate and low-rate categories. These divisions not only serve the functions that have just been mentioned but also may initiate a short discussion on the relationship between people, express a personal view on a particular subject, summarize an unforgettable experience, and so forth. These two dissimilarities suggest that the divisions in the mid-rate and low-rate categories be better viewed as indicators of thematic transitions that are characteristic of sub-episodes.

There are, however, some overlapped and unoverlapped divisions in the low-rate category that are not indicative of any of the aforementioned types of discontinuities and therefore have to be characterized differently. These divisions, according to what they have in common, form three groups. Those in the first group mark the beginning of a piece of quoted speech. Their purpose is obviously to separate what is said by a participant or between participants from the narration of the story. Those in the second group involve no change in participant nor the other four types of discontinuities. The only factor that seems relevant to the making of the divisions is the predicate part of the sentence. These divisions contain verbs such as leave, find, notice, call, explain, and so forth that seem to start a somewhat different sequence of actions. Those in the third group are very similar to those in the second group except that their verbs such as think, wonder, feel, or consider indicate some mental activities, which separate such divisions from the on-going actions. Of these divisions 7 are overlapped and 21 are unoverlapped (which are the paragraph divisions). The sheer fact that these divisions end up in the low-rate subgroups makes it clear that marking the thematic discontinuities as specified here by using paragraph divisions is very poorly shared among language users.

4.2. The Chinese Data

The Chinese data are processed in the same way as the English data. The results of the comparison of the episode and paragraph divisions between each pair of subgroups in the Chinese data are provided in Table 3:

Table 3
Comparison of the episode and paragraph divisions in the Chinese narrative texts

Subgroups	Episode	Paragraph	Overlapped	Unoverlapped	Unoverlapped	
	divisions	divisions	divisions	episode	paragraph	
				divisions	divisions	
High-rate	98	103	90 (81%)	8 (7%)	13 (12%)	
Mid-rate	117	125	100 (70%)	17 (12%)	25 (18%)	
Low-rate	120	194	103 (49%)	17 (8%)	91(43%)	

As we can see from Table 3, a pattern of overlapping similar to the one found in the English data is also found between the paragraph and episode divisions in the Chinese data: there is a higher degree of overlapping in the higher-rate subgroups. This pattern of overlapping shows that the paragraph divisions in the Chinese narrative texts are most likely to mark thematic transitions represented by the high-rate episode divisions and least likely to mark the thematic transitions represented by the low-rate episode divisions. The 81% and 70% of overlapping between the high-rate and mid-rate subgroups suggest that the majority of the paragraph divisions in the two categories serve similar functions as their corresponding episode divisions. The less than 50% of overlapping between the low-rate subgroups, however, indicates that the majority of the paragraph divisions in the category are not used consistently in marking the thematic transitions represented by the low-rate episode divisions.

The unoverlapped divisions in the high-rate and mid-rate subgroups are found to overlap with their corresponding divisions in the other categories: The 8 unoverlapped episode divisions and 13 unoverlapped paragraph divisions in the high-rate category overlap with their corresponding unoverlapped divisions in the mid-rate category. The remaining 4 unoverlapped episode divisions and 17 unoverlapped paragraph divisions in the mid-rate category overlap with their corresponding divisions in the low-rate category. The only divisions that neither overlap within the same category nor across two categories are the 87 unoverlapped paragraph divisions in the low-rate category. The divisions that overlap across two categories can be seen as playing a similar role as their corresponding divisions the other categories. The fact that they end up in two different categories means that the subjects are not sure about the exact nature of the thematic transitions these divisions are used to mark. The overall number of divisions that overlap both within the same category and across two categories prove the significant role the paragraph divisions play in marking the thematic transitions in the Chinese narrative texts.

The overlapped and unoverlapped divisions in the Chinese data are also analyzed in terms of the 8 types of thematic discontinuities in the same way as the English data were analyzed. The results of this analysis are presented in Table 4:

Table 4 Thematic discontinuities associated with the overlapped and unoverlapped divisions in the Chinese narrative texts

SG	Categories of thematic discontinuities							Total	
	Temp	Spat	Part	Topic	Reor	Quot S	New S	Psych	
HR									
O	33	9	17	13	29	0	0	0	101
U	3	3	4	4	7	0	0	0	21
MR									
O	20	7	15	31	20	4	8	0	105
U	5	4	7	9	10	5	2	0	42
LR									
O	9	3	24	36	15	5	6	5	103
U	13	6	19	27	11	13	13	6	108

Table 4 lists the number of tokens of thematic discontinuities identified in all of the overlapped and unoverlapped divisions in the Chinese data. They are identified in the same way as in the English data, i.e., by examining the subject and adverbial constructions of the division-initial sentences first and if no characterization can be made based on the information of these constructions, other parts of the sentence such as the predicate are looked into. The results turn out to be similar to those found in the English data: The overwhelming majority of the overlapped and unoverlapped divisions are found to be characterizable in terms of temporal, spatial, participant, topic discontinuities and thematic orientation.

Despite this, two main differences are observed among the identified divisions in the three categories. One of the differences is that the divisions in the high-rate category generally involve major thematic transitions as they are often used to introduce new participants, initiate extended discussions on various participant-related subjects, or establish new settings for series of events or actions to come by providing information of time, place, or episodic development. On the other hand, the divisions in the mid-rate and low-rate categories typically involve more local thematic transitions as they frequently serve to indicate changes between participants, lead non-narrative sections devoted to evaluating a situation, describing an environment, summarizing an experience, and so forth, or establish temporal,

10

_

divisions.

⁸ Because several overlapped divisions in the high-rate and mid-rate categories contain more than one tokens of different discontinuities, the total number of tokens of discontinuities tabulated for the overlapped divisions in the high-rate and mid-rate categories exceed the total number of these

spatial settings for a limited part of a story.

The other difference among the divisions is that there are noticeably more cases of topic discontinuities in the mid-rate and low-rate subgroups in the Chinese data. Since these divisions lead non-narrative sections devoted to making comments, evaluations, descriptions, summaries, and so forth, they are not part of the narration of the story but rather provide background information of various kinds. The two differences pointed out here that make the mid-rate and low-rate divisions differ from the high-rate divisions also distinguish themselves as indicators of sub-episodes.

What is also worth mentioning is that unlike the English data the Chinese data contain more divisions characterized as quoted speech and new sequence of actions. They are found not only in the low-rate category but also in the mid-rate category. This indicates that the Chinese speakers seem to be more likely to use paragraph divisions to mark these two types of thematic discontinuities than the English speakers.

5. Conclusions

The results of the present study, in keeping with those of the previous studies (Bond & Hayes, 1984; Koen et al., 1969; Stark, 1988), demonstrate that the overwhelming majority of paragraph divisions used in both English and Chinese narrative texts serve to mark thematic transitions that can be characterized in terms of temporal, spatial, participant, topic discontinuities and thematic orientation. Such a finding is reflected in both language groups not only in the high percentages of overlapping between the paragraph and episode divisions in the high-rate and mid-rate subgroups but also in the overlapping between the paragraph and episode divisions across the three categories and in the low-rate subgroups.

Our comparative analysis of the data classified into pairs of high-rate, mid-rate, and low-rate subgroups enables us to see that the paragraph divisions in both English and Chinese narrative texts are used very consistently to mark the thematic transitions that are characteristic of prototypical episode units, as evidenced by the highest percentage of overlapping between the paragraph and episode divisions in the high-rate subgroups. The paragraph divisions are also highly likely to mark the thematic transitions associated with the majority of the sub-episode units, as shown by the high percentage of overlapping between the mid-rate subgroups and the overlapping between the mid-rate and high-rate subgroups. The relationship between the paragraph divisions in this and the low-rate categories and those in the high-rate category fits what Longacre described as "embedding of paragraph within paragraph" (Longacre, 1979: 131). However, based on the facts that less than

majority of the paragraph and episode divisions are found to overlap between the low-rate subgroups and both subgroups in the low-rate category are identified with low agreement rates, the paragraph divisions in the low-rate category prove to be used inconsistently in marking the thematic transitions associated with the sub-episodes identified in the low-rate category. They represent the most inconsistent uses of paragraph divisions in both English and Chinese narrative texts.

6. Experimental Materials

1) English Narrative Texts

All the English texts used in the experiment are from *Reader's Digest*. They are: *Brothers Under the Skin* (April 2003, 58-64), *Tommie's Rainbow* (May 2003, 81-85), *To Russia with Love* (Sep. 2003, 46-53), *Entwined* (Nov. 2003, 34-39), *Operation: Whale Rescue* (Nov. 2003, 72-80), *Soaring the Glory* (Dec. 2003, 62-67), *One Wrong Turn* (Dec. 2003, 74-80), *Disaster on the Aegean Sea* (Feb. 2004, 84-90), *For Amie* (March 2004, 62-69), *Hope Floats* (Aug. 2004, 20-25).

2) Chinese Narrative Texts

The Chinese texts used in the experiment are: 深夜水中救母女 Shenye shui zhong jiu mu nu (讀者文摘 Reader's Digest, June 2002, 81-86), 陌路相逢,千里相送 Molu xiangfeng, qian li xiang song (讀者文摘 Reader's Digest, Sep. 2003, 40-46), 怒海救人三壯士 Nu hai jiu ren san zhuangshi (讀者文摘 Reader's Digest, Nov. 2003, 74-80), 尋覓香格里拉 Xunmi xianggelila (讀者文摘 Reader's Digest, Feb. 2004, 50-58), 地鐵英雄 Ditie yingxiong (讀者文摘 Reader's Digest, July 2004, 76-83), 救火車 Jiuhuoche (皇冠 Crown, Feb. 2004, 442-449), 清明上河圖 Qingming shang he tu (皇冠 Crown, Feb. 2004, 42-50), 街角的鄉土美味 Jie jiao de xiangtu meiwei (皇冠 Crown, June 2004, 52-61), 真實比夢還美 春秋烏來的情人之夜 Zhenshi bi meng hai mei Chun qiu wulai de qingren zhi ye (皇冠 Crown, Sep. 2004, 30-37), 箱根遊記 Xianggen youji (鏡報月刊 Jingbao yuekan, July 2004, 84-86).

7. References

- Black, J. G., & Bower, G. H. (1979). Episodes as chunks in narrative memory. Journal of Verbal Learning and Verbal Behavior, 18, 309-331.
- Bond, S. J., & Hayes, J. R. (1984). Cues people use to paragraph text. *Research in the Teaching of English*, 18, 147-167.
- Braddock, R. (1974). The frequency and placement of topic sentences in expository prose. *Research in the Teaching of English*, *8*, 287-302.
- Britton, B. K. (1994). Understanding expository text: Building mental structures to induce insights. In M. A. Gernsbacher (Ed.), *Handbook of psycholinguistics* (pp. 641-647). San Diego: Academic Press.
- Brown, G., & Yule, G. (1983). Discourse analysis. Cambridge: Cambridge

- University Press.
- Chafe, W. (1980). The development of consciousness in the production of a narrative. In W. Chafe (Ed.), *The pear stories: cognitive, cultural, and linguistic aspects of narrative production* (pp. 9-50). Norwood, NJ: Ablex.
- Glenn, C. (1978). The role of episodic structure and of story length in children's recall of simple stories. *Journal of Verbal Learning and Verbal Behavior*, 17, 229-247.
- Haberlandt, K., Berian, C., & Sandson, J. (1980). The episode schema in story processing. *Journal of Verbal Learning and Verbal Behavior*, 19, 635-651.
- Hinds, J. (1980). Japanese expository prose. *Papers in Linguistics: International Journal of Human Communication*, 13, 117-158.
- Hofmann, T. R. (1989). Paragraphs and anaphora. *Journal of Pragmatics*, 13, 239-250.
- Ji, S. J. (2002). Identifying episode transitions. *Journal of Pragmatics*, 34, 1257-1271.
- Ji, S. J. (In press). A textual perspective on Givón's quantity principle. *Journal of Pragmatics*.
- Koen, F., Becker, A., & Young, R. (1969). The psychological reality of the paragraph. *Journal of Verbal Learning and Verbal Behavior*, 8, 49-53.
- Longacre, R. E. (1979). The paragraph as a grammatical unit. In T. Givón (Ed.), *Syntax and semantics: Vol. 12. Discourse and syntax* (pp. 115-134). New York: Academic Press.
- Mandler, J. M. (1978). A code in the node: The use of a story schema in retrieval. *Discourse Processes*, *1*, 14-35.
- Mandler, J. M., & Goodman, M. S. (1982). On the psychological validity of story structure. *Journal of Verbal Learning and Verbal Behavior*, 21, 507-523.
- Rodgers, W. L. (1966). A discourse-centered rhetoric of the paragraph. *College Composition and Communication*, 17, 2-11.
- Stark, H. A. (1988). What do paragraph markings do? *Discourse Processes*, 11, 275-303.
- Thorndyke, P. W. (1977). Cognitive structure in comprehension and memory of narrative discourse. *Cognitive Psychology*, *9*, 77-110.

8. Self-evaluation of the Study

The study reported above was carried out as planned. It contributes to a better understanding of the discourse functions of paragraph divisions in both English and Chinese narrative texts. The conductor of the study intends to have its results published in an international journal.