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Identifying episode transitions☆

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Abstract

This paper reports on a study that concerns how narrative is hierarchically organized. By conducting an experiment of segmentation, the study seeks to determine what the important elements are that form the basis of our conception of episode transitions and how such transitions are linguistically expressed. The result of the study indicates that in narrative discourse, episode transitions are defined by major changes in temporal, spatial or thematic continuity. When the contents of a narrative lack such changes as anchorable points of transition, the episode boundary will become less clear.

Keywords: Discourse; Narrative; Episode; Discontinuity; Transition; Marked sentences

1. Introduction

A major issue in the study of discourse is how narrative is structured, and numerous studies have already provided us with good analyses of various aspects of its structure. Longacre (1983: 3), for instance, pointed out two main features of narrative discourse. One is what he characterized as the "contingent temporal succession" of the described actions or events in a narrative. This characterization means that these actions or events are usually not only temporally ordered but also mutually dependent. Such dependency may be created by causality or it may result

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from a more general sense of coherence. The other main feature of narrative discourse, according to Longacre, is its "agent orientation". This orientation reflects the fact that narratives are typically built around human agents or other animate beings.

It has also been established that narrative is not composed merely of sequences of sentences, but is hierarchically organized into intermediate units such as episodes or paragraphs (Bamberg and Marchman, 1991; Black and Bower, 1979; van Dijk, 1982; Grimes, 1975; Hinds, 1977, 1979; Longacre, 1979; Pu, Prideaux, and Stanford, 1992; Tomlin, 1987). This fact is generally in line with results from studies that are more focused on the issues of how thematic continuity is maintained and how thematic discontinuities are signaled in the narrative type of discourse (Brown and Yule, 1983; van Dijk and Kintsch, 1983; Givón 1983, 1984; Virtanen, 1992).

Based on the research mentioned above, the present study intends to carry out an empirical investigation of language users' conception of episode transition and its role in the organization of narrative discourse. More specifically, the present study seeks to determine what the important elements are that form the basis of our conception of episode transitions and how such transitions are linguistically expressed.

2. Towards an episodic analysis

As mentioned above, a narrative does not merely consist of sequences of sentences, but in addition its various parts are also organized hierarchically. Focusing on the form of written narrative, some investigators have made detailed analyses of the hierarchical structure of narrative by using the paragraph as a useful intermediate unit. Grimes (1975), for instance, described paragraph boundaries as one form of "partitioning" discourse. His views on paragraph division were shared by Hinds (1977), who in his analysis emphasized the significance of "participant orientation" in narrative. Longacre (1979) also regarded the paragraph as a structural unit. His analysis showed that a paragraph is often built around a unique topic such as a participant or a theme. Formally, there is a sentence that introduces the paragraph (i.e., the "setting" or the "introduction") and a sentence that ends it (i.e., the "terminus"). A paragraph thus has a hierarchical organization: the topic is assumed to be at the top of the hierarchy whereas the other statements are considered to be occupying a subordinate position.[1]

[1] It is necessary to point out that both Grimes and Longacre did not analyze narrative discourse only in the unit of paragraph. Grimes (1975: 109) mentioned that the constituent units of narrative discourse could be recognized at the levels of both paragraph and episode, which may consist of a series of paragraphs. Longacre (1983: 271–272) made it clear that apart from the paragraph, he also recognized *discourse* as another useful constituent unit since "any string of paragraphs that belong together can be shown to have the structure of a discourse of a recognizable type" (p. 272). In his view, "the constituents of a discourse are discourse level slots which are filled either by a paragraph or an embedded discourse (with the latter ultimately composed of paragraphs as well)" (Ibid.). According to his analysis, these discourse level slots could be episodes or chapters.

The analysis of narrative by using paragraph as the intermediate unit certainly applies to texts that contain thematically well-structured paragraphs. However, it may not apply to texts in which paragraphs are not structured on thematic grounds. Several corpus studies have suggested that paragraphs considered as visual units do not always correspond to paragraphs considered as structural units (Braddock, 1974; Halliday and Hasan, 1976; Longacre, 1979). Such a dissociation results from the fact that the "paragraph indentations of a given writer are often partially dictated by eye appeal; that is, it may be deemed inelegant or heavy to go along too far on a page or a series of pages without an indentation or section break" (Longacre 1979: 116). Results obtained by Bond and Hayes (1984) partly support such an interpretation. More specifically, their results indicated that people avoid one-sentence paragraphs. The "good" paragraph length depends on at least three spatial factors: the number of sentences in a paragraph, sentence length, and text length.

The undesirability of using the paragraph as a structural unit for analysis can also be seen from the fact that the criteria used by authors to indent their texts do not completely overlap with segmentation criteria used by readers in segmentation tasks. Bond and Hayes (1984) provided the data of a study in which subjects were asked to reinstate paragraph markers in a 17-sentence unparagraphed text on the basis of their own definition of the paragraph. It shows that subjects' segmentation differed in many points from the initial author segmentation. Similar results were reported by Stark (1988). In her study, only 9 author's breaks (out of 17) were identified as such by more than 50% of subjects.

The studies cited above suggest that the paragraph is a discourse unit that may be or may not be structured on thematic grounds. In the latter case, paragraphing may be the result of stylistic concern or it may be the result of personal preference following no common criterion. Because of this, the use of paragraph as the unit of analysis is obviously undesirable. A thematically defined intermediate unit seems to be what we need. In this study, the *episode* will be used as such a unit.

Empirical support for the validity of episodes has been provided by psycholinguistic studies which indicate that people recalling stories treat information of an episode as an integral unit (cf. Black and Bower, 1979; Glenn, 1978; Mandler, 1978; Thorndyke, 1977), a result which is further 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, Berian, and Sandson, 1980; Mandler and Goodman, 1982). Although an episode may not have its boundary marked, as does the indented paragraph, these studies suggest that the boundary of an episode is recognizable on thematic grounds.

Equally important contributions to our understanding of the structure of narrative have been made by studies using other methodologies. Based on his study of *The Pear Story* data, Chafe (1979, 1980) not only demonstrated the relationship between major thematic breaks and processing difficulty by using hesitation as evidence, he also suggested that such thematic breaks tend to be associated with a change in space, time, character configuration, event structure, or even world. Because the focus of his study was to show the relationship between the difficulty of

oral production and points of thematic shifts, he did not discuss in a comprehensive way the forms of linguistic expressions that are used at these points of shift.

Focusing their attention on the discourse function of preposed subordinate clause of time in their experimental research, Prideaux and Hogan (1993) found that in both oral and written narratives, the preposed subordinate clause of time (a marked structure) occurred statistically far more frequently at the beginning of episode than the nonpreposed one (an unmarked structure). The nonpreposed subordinate clause of time tended to occur far more frequently within an episode. Their analysis indicates that since the preposed subordinate clause is a good device for thematic reorientation, it often serves to code the beginning of a new discourse unit. Givón (1993: 315) made the same observation as did Prideaux and Hogan (1993) and in addition, he also suggested that preposed participial phrases and preposed prepositional phrases may serve the same discourse function.

3. Identifying episode transitions: an experiment of segmentation

As the above survey indicates, previous studies have, for various reasons, suggested a correlation between episode transitions and major changes of such discourse elements as time, place, participant, or thematic reorientation. However, a study is needed to establish the empirical basis of this correlation in terms of episode boundaries as identified by ordinary language users. If we can acquire some empirical evidence about ordinary language users' view of how narrative develops from one episode to another, we will better understand how narrative is structured. The following is the hypothesis for the present study:

In narrative discourse, episode transitions are defined by major changes in temporal, spatial, or thematic continuity. When the contents of a narrative lack such changes as anchorable points of transition, the episode boundary will become less clear.

To test this hypothesis, an experiment was conducted in which 20 native speakers of English were asked to segment three narrative texts from *Reader's Digest* (Canadian Edition),[2] which are personal accounts of past experience. After the title, each text appeared in an unparagraphed form. The participants of the experiment were asked to divide the texts into episodes by following the definition of episode as a portion of a narrative that relates to an event or a series of connected events and forms a coherent unit in itself. Participants identified the beginning of each episode in the narrative by placing a vertical stroke before the first word of the episode. Each carried out the task when and wherever convenient, with no specific time limit. The participants consisted of 16 undergraduate students and 4 graduate students at the University of Alberta, Canada, half of whom were male and half female.

[2] The three narrative texts used in the segmentation task are *My Elephant Patient* (*Reader's Digest,* December 1996, 71–74), *The Seeing Glass* (the beginning section) (*Reader's Digest*, September 1997, 176–180), and *Hanging From Cliffs* (*Reader's Digest*, September 1998, 102–108).

4. Results and discussion

4.1. High-rate group data and analysis

After the segmented narratives were collected, all the identified sentences of episode transition were tabulated. Those identified by more than 70% of the subjects are considered as representative of language users' general view of episode transitions in the surveyed narratives because 70% stands for a clear majority. Group 1 is used to refer to sentences within this category (and later is compared with sentences that have lower identification rates). Excerpts (1), (2), and (3) in the following contain a number of episode-initial sentences in Group 1:

(1) At first the elephant keeper thought the windy razzing was deliberate. Ellie seemed to make a rude noise with her trunk whenever his back was turned. But it was a sound not usually associated with a well-mannered, three-ton Indian elephant. That's when I was called. (followed by an account of the narrator's past interactions with the elephant as her doctor)

Now, hearing of her elephantine raspberries, I went immediately to Ellie's quarters. She looked at me with moist, gray eyes and flapper her ears. "Praaa," went the trunk. (followed by the narrator's temporary diagnosis and decision)

Back at my office, I phoned a surgical-instrument manufacturer. I asked to borrow a flexible endoscope. (followed by an explanation of the use of the instrument and the result of getting it)

The next morning I injected Ellie with anesthetic. Five minutes later she sank to her knees, unconscious, her trunk still blaring when she exhaled. (followed by the narrator's examination of the inside of Ellie's trunk)

(2) As my guide emerged from his beat-up 1985 Honda, I was immediately struck by his bright-orange dread-locks, which dropped down to his shoulders like hundreds of crisscrossing mountain streams. (followed by an account of the initial interactions between the narrator and her guide)

Before attempting to scale the heights in the real world, I had gone to Chelsea Piers, a sports complex in Manhattan, to train on their climbing wall. For fifty bucks, I spent two hours learning to tie the classic climbing knots and use the equipment. (followed by an account of how the narrator became motivated in climbing a real mountain)

Forty feet up a novice climb called Jackie, I got stuck between a crack and an overhang. I was sure that if I moved either of my feet or my paws, gravity would have its way with me. (followed by a description of the narrator's difficult situation and her further actions of climbing)

After I conquered Jackie, Paul took me over to Three Pines, an easier multiple-pitch climb – which means climbing cliffs that are higher than your rope is long. (followed by an account of the climbing process)

(3) ***On Monday morning*** Ellie came to see me again. And again on Tuesday, Wednesday, Thursday and Friday. Each time I looked at the trunk and told her how

well she was doing. On the morning of her tenth office visit, I snipped out the steel sutures. The wound had healed and would leave hardly any scar. Ellie must have decided that the removal of the stitches indicated that I was signing her off, for she didn't come the next day, nor ever again.

A fellow vet once told me that his father had been prescribed champagne after an operation for nasal polyps. "It sounds like sensible medicine," he had remarked. I agreed. So a few days later, I bought a bottle to split in celebration with Ellie's keeper. The patient, however, did not go unrewarded. Ellie got a large, iced currant bun.

As we can see from the above examples, most of the episode-initial sentences in Group 1 typically start with one of a few types of phrases such as adverbial phrase, prepositional phrase, noun phrase, participial phrase, or a subordinate clause. Semantically, these structures carry the information suggesting major temporal, spatial discontinuities or thematic reorientation. Since the usual position for these structures in a sentence is after the verb, their preposed position is considered marked (e.g., Clark and Clark, 1977). The dominant use of marked structures constitutes a very prominent characteristic of the way temporal and spatial discontinuities or thematic reorientation are expressed in the episode-initial sentences. Of the total 14 transitional sentences in Group 1, 12 contain at least one marked form of expression, while one sentence contains two marked structures. Table 1 summarizes this:

In tabulating the temporal, spatial, or thematic discontinuities, we set up four functional categories, namely temporal discontinuity, spatial discontinuity, thematic discontinuity, and thematic reorientation. A case of temporal or spatial discontinuity corresponds to a preposed structure indicating a clear change in time or place. If a transitional sentence starts with a new participant or theme in subject position, it is treated as a case of thematic discontinuity. A case of thematic reorientation typically consists of a preposed subordinate clause or participial phrase. Thematic reorientation may be regarded as a kind of thematic discontinuity, but as we will see below, the way thematic reorientation is expressed is quite distinct from

Table 1

Syntactic categories	Functional categories			
	Temporal discontinuity	Spatial discontinuity	Thematic discontinuity	Thematic reorientation
Adverbial phrase	2			
Prepositional phrase	2	2		1
Participial phrase				1
Noun phrase	3	1		
Subordinate clause				1
Total	7	3		3

Based on Group 1 data Episode-initial sentences with marked forms of expression of different types of discontinuities (12 sentences out of the total 14: 80%).

the way thematic discontinuity is expressed. For this reason, thematic reorientation is maintained as a separate category.

In our tabulations, *now* is recorded as an adverbial phrase expressing a temporal discontinuity,[3] whereas *back at my office* is treated as a case of prepositional phrase responsible for a spatial discontinuity. *The next morning* is regarded as a noun phrase informing a temporal discontinuity. *Hearing of her elephantine raspberries* (a participial phrase), *before attempting to scale the heights in the real world* (a prepositional phrase), and *after I conquered Jackie* (a subordinate clause) are all considered as cases involving thematic reorientation.

Because all the marked structures are responsible for expressing temporal and spatial discontinuities or thematic reorientation, there are no cases of thematic discontinuity recorded in Table 1. This fact informs us that thematic discontinuity (as defined in this study) is normally not expressed by marked structures.

There are two transitional sentences in Group 1 that do not use the marked structures to indicate the transitional discontinuity:

(4) ***A fellow vet*** once told me that his father had been prescribed champagne after an operation for nasal polyps. "It sounds like sensible medicine," he had remarked. I agreed. So a few days later, I bought a bottle to split in celebration with Ellie's keeper. The patient, however, did not go unrewarded. Ellie got a large, iced currant bun.

(5) (After the narrator examined the trunk of the elephant) "How are you going to get it out?" asked Jack, distraught. Ellie and he were inseparable friends. "I'll think of something." ***I walked to my office, brewed some tea and sat staring out the window***. (The narrator started to think about a solution)

Unlike the majority of sentences in Group 1, these two sentences are not syntactically marked so as to express information indicating an episode transition.

[3] The English word *now* has quite a few usages. Apart from the most common one, meaning "at present", it can also be used (particularly in narratives) to indicate "at this time (in the past)" (Longman Dictionary of Contemporary English, 1978: 748). For example, *He left school in 1830; now he was able to go and live in London* (Ibid.). In this context, *now* serves as a temporal adverb referring to the time indicated in the previous sentence. An important feature of this usage is that *now* refers to a specific time in the past which had already been indicated by a previous context. The word *now* as used in Excerpt 1 is considered a similar case, because the narrator uses it to take the reader back to the time of the narrative world (when the elephant started to show symptoms of sickness) after he briefly mentioned his earlier experience with the elephant. This change in time is immediately specified by the participial phrase *hearing of her elephantine raspberries*. Another common usage of *now* is as a so-called *discourse marker* "with weakened meaning to attract attention or to express a warning, command, etc." (Longman Dictionary of Contemporary English, 1978: 748). Consider an example of this usage: *Now the question I've been talking about seems important, because* (Ibid.) The function of *now* as such a discourse marker may also be performed by other English expressions such as *now then*, *there now*, or *now, now* (Ibid.). For instance, if we replace *now* in the above example with *now then*, it would fit very well in the context because it serves the same function. However, if we replace *now* in Excerpt 1 with *now then*, it would be quite out of place. Our sense of it as being out of place indicates that *now* in Excerpt 1 is not used as a discourse marker. Used as a discourse marker, *now* also contrasts with its usage as a temporal adverb explained above in that it does not have any link in time with a previous context.

Furthermore, their syntactic structures have little in common. Because of this, it seems reasonable to focus on the semantics of each sentence as a whole in order to explain its discourse function. From this perspective, the first sentence clearly introduces a totally new participant into the story. The indefinite noun phrase in the subject position is mainly responsible for informing this thematic discontinuity. What this fellow vet told the narrator set an example for her and made her celebrate the success of her operation on her elephant patient later on. Accordingly, the sentence has been identified as a transitional sentence. The second sentence is analyzed as a sentence with compact information, because it contains three conjoined verb phrases which not only provide the information about a major change of place but also clearly marks off two specific things that the narrator did as the beginning of a process of trying to find a solution to the elephant's medical problem. For this reason, this sentence might be treated as a case of involving both spatial and thematic discontinuities.

The consistent use of marked structures in the transitional sentences supports the claim made by Prideaux and Hogan (1993) that one major discourse function of these structures is to signal shifts of thematic units. As Prideaux (1994:126) put it,

> One reason might be that it is at the onset of new thematic units where major background reorientation is required and preposed adverbial phrases or clauses seem to serve this scene-setting or reorienting function. Thus, a marked structure with an initial adverbial phrase or clause of time, location, or the like might appear to be a natural device for encoding the requisite semantic redirection.

From the point of view of textual development, the initial position of the transitional sentence is crucial in the sense that it is easy for the element placed here to connect the sentence with what has preceded in the previous thematic unit. It is also a natural starting point for the rest of the sentence or the whole unit it leads.

In the present study, the further questions we would like to ask are: How can a number of marked structures be used to achieve the same purpose? What are the specific ways they get the message of transition across? The answer to these questions may be partially related to the general strategy used in comprehending a narrative.

Many researchers have proposed that the default assumption of readers is that the order in which the events are reported corresponds to the chronological order of these events (e.g., Comrie, 1985; Dowty, 1986; Fleischman, 1990; Givon, 1992; Hopper, 1979). This has been called the *iconicity assumption* (Fleischman, 1990; Hopper, 1979). Following the iconicity assumption, readers would tend to regard an incoming story event as immediately following the previously mentioned event, unless they encounter an overt indicator of a shift in narrative time. In the latter case, an adverb or adverbial of time will function as a processing cue to override the default assumption. Consider again:

(6) ***I walked to my office, brewed some tea and sat staring out the window.***

Because there are no specific expressions of time in this sentence, the reader would assume that the three events described in the sentence occurred subsequently and

contiguously. In other words, the reader would not assume that a significant amount of time has elapsed between the three events. Thus, without encountering explicit information about the time of the events, the reader would assume that events that are consecutive and contiguous in the text are consecutive and contiguous in the story world.

In a similar fashion, the reader also seems to have a default assumption about the place of the events happening in the described world. That is, the reader would assume that events that are consecutive and contiguous in the text take place in the same location. In the case of the sentence being discussed, the reader would regard brewing some tea and sitting staring out the window as events that took place in the narrator's office.

So, knowing the reader's general comprehension strategy regarding the information about the time and place of the described events, the writer (or speaker) would at the onset of a new episode seize the initial position of the transitional sentence as the most crucial spot for placing information about the new temporal or spatial setting. The information about the significant temporal or spatial discontinuity placed here will most effectively terminate the previous episode and initiate another one with the new setting.

However, the way that marked structures carry out thematic reorientation seems somewhat different. Consider again the three structures that belong to this category: *hearing of her elephantine raspberries*, *before attempting to scale the heights in the real world,* and *after I conquered Jackie*. According to Givón (1993: 315), all these preposed structures that are capable of indicating thematic reorientation have their coherence links in two directions, anaphoric and cataphoric. Their anaphoric links can reach back to thematic information anywhere in the preceding episode. Their cataphoric links anchor themselves nicely to the main clause, which then launches the new episode. The anaphoric links are particularly important in suggesting a thematic reorientation. Their clause-like structures can express more complicated propositions (as compared with those preposed structures carrying information about temporal or spatial discontinuity) and therefore anchor the new episode to any specific happening in the previous episode (as exemplified by *hearing of her elephantine raspberries*), or the previous episode as a whole (as exemplified by *before attempting to scale the heights in the real world* and *after I conquered Jackie*). The way thematic reorientation is expressed explicitly relates to some contents of the previous unit. In comparison, thematic discontinuity is expressed (as exemplified by *A fellow vet once told me that...*) in an unmodified manner, since the indefinite noun phrase in the subject position is mainly responsible for informing the thematic discontinuity.

4.2. Low-rate group data and analysis

Although we regard the identification of the transitional sentences in Group 1 as representative of language users' general view of episode transitions, we also examined the transitional sentences that had been identified with less (than 70%) agreement. We divided these sentences into two groups: Group 2 with 40–69% identification rates and Group 3 with 1–39% identification rates. The reason for

making such a subdivision is that sentences in Group 2 were identified by about half of the subjects on average, whereas the number of subjects that identified sentences in Group 3 was considerably smaller. It is plausible to assume that this difference between sentences in Group 2 and Group 3 in identification rates may reflect a possible difference between the episodes they initiate. By examining the sentences of these two low-rate groups and making a comparison with those of the high-rate group, we hoped to find out in what aspect they may be similar and in what aspect they may be dissimilar.

One important similarity between the two low-rate groups and the high-rate group is that the transitional sentences in these groups are also characterized by the four types of discontinuities. This will become clear as our discussion develops.

However, there are also two important dissimilarities. One dissimilarity is that there are fewer marked sentences in the low-rate groups. Tables 2 and 3 provide the specific numbers to show this dissimilarity.

As we can see, in Group 2 these marked sentences only make up 41% of the total group and in Group 3 they make up 50%. However, in Group 1, the percentage of

Table 2

Syntactic categories	Functional categories			
	Temporal discontinuity	Spatial discontinuity	Thematic discontinuity	Thematic reorientation
Adverbial phrase	1			
Prepositional phrase		1		
Participial phrase				1
Noun phrase	1	1		
Subordinate clause				2
Total	2	2		3

Based on Group 2 data. Episode-initial sentences with marked forms of expression of different types of discontinuities (7 sentences out of the total 17: 41%)

Table 3

Syntactic categories	Functional categories			
	Temporal discontinuity	Spatial Discontinuity	Thematic Discontinuity	Thematic Reorientation
Adverbial Phrase	8			
Prepositional Phrase	2	2		
Participial Phrase				1
Noun Phrase	3			
Subordinate Clause				8
Total	13	2		9

Based on Group 3 data. Episode-initial sentences with marked forms of expression of different types of discontinuities (24 sentences out of the total 48: 50%)

the same types of marked sentences is over 80%. If the high percentage of these marked sentences in Group 1 indicates some sort of mode of episode transition in these texts, the low-rate groups clearly deviate from such a mode.

In contrast to Group 1, both low-rate groups contain a large number of sentences that may be characterized as the introducers of new themes (rather than new participants). These transitional sentences may initiate a description of a scenery or of a person's inner feelings. They may precede an evaluation of a situation or an explanation of a phenomenon. They may also be a piece of direct speech that indicates a new sequence of actions. Syntactically, these sentences may appear in the form of unmarked sentences (as the transitional sentences in (8) and (9) shown below). They may also be in the more marked forms of existential sentence and cleft sentence (as exemplified by the first sentence in (7) below). There are 8 such sentences in Group 2 (making up 47% of the total group) and 15 sentences in Group 3 (making up 31% of the total group). The following excerpts contain four examples of these sentences in Group 2:

(7) " It's bright red," he tells me, with some evident alarm. "You have lost the color red." ***It has never occurred to me that it is possible to lose just one color.*** I understand that a person can have trouble distinguishing one color from another, but I never knew it was possible to lose an entire part of the spectrum. "***Let's test your distance vision.***" Following his instructions, I put my glasses on, cover my left eye and stare straight ahead with my right. There is nothing in front of me but a fuzzy gray cloud.

(8) (Descriptions of the narrator's actions of climbing) "Want some beta?" Paul asked from below. ***The sport has its own language***. Beta is climber-speak for advice. Climbs are known as problems. The boulders at the base of the wall are called talis. And if you fall, you become talis food. The moves that you use to climb also have their own names. (A couple of more climbing jargons explained)

(9) (Descriptions of the narrator's actions of climbing) With one last push, I swung my legs up and rolled gracelessly onto the ledge. "Nice work," said Paul as I grabbed a seat on the three-foot ledge. "Just kick it here for a while. Enjoy the view." ***New York's Hudson River Valley was a sight to behold***: miles of pale-green valley bathed in lush yellow light, budding treetops, blackbirds sailing across the sky. The harder you work to get to the top, I'd been told, the better the view. This one was spectacular.

In the form of a cleft sentence, the first sentence in (7) switches from the main line of events to the narrator's thought. In contrast to all the events that have developed so far, this realization clearly represents a thematic discontinuity. The second sentence in (7) is a direct quotation of the doctor, suggesting the start of a new series of events in the hospital. In (8), *the sport has its own language* breaks the current line of actions by offering an explanation for the technical language used by the mountain climbers. The use of a stative verb in the sentence such as *has* also shows this thematic discontinuity. *New York's Hudson River Valley is a sight to behold* is another similar example, which precedes a few descriptive sentences that specify the magni-

ficent view. Using these sentences, the narrators typically put off their accounts of further actions of the participants temporarily and switch to expressing their thoughts, feelings, responses, observations, and so forth. This seems to be a natural characteristic of narrative discourse. Although a narrative is typically built around human (or animate) participants, providing an account of what they did and/or what happened to them, it may also embed sections which depict one's inner feelings or outdoor scenery or an explanation or evaluation of certain actions or events. Despite the fact that such sections are recognized by some readers as discrete thematic units, these units are nevertheless different from episodes in that they are not part of the main story line. For the same reason, the transitional sentences that initiate these sections typically contain no temporal or spatial information.

In comparing the new-theme introducers of the two groups, we find that on average the sentences in Group 2 exemplified by (7), (8), (9) tend to initiate larger units, specifying various new themes, than do their counterparts in Group 3. The following excerpt contains several of these short theme units introduced by transitional sentences in Group 3:

(10) Before attempting to scale the heights in the real world, I had gone to Chelsea Piers, a sports complex in Manhattan, to train on their climbing wall. For fifty bucks, I spent two hours learning to tie the classic climbing knots and use the equipment. "***The gym is a great place to work on your strength,***" Tom Andrews, who teaches at Chelsea Piers and leads climbs in upstate New York, told me. "But it's no substitute for the real thing." ***Indeed,*** "***the real thing***" ***doesn't come with the color-coded plastic handles you see on the gym wall.*** Also, out on the crags, the ropes and anchors are not already in place. ***That's why I hired Paul.*** For $150 he'd take me on a six-hour climb.

There are also a number of remaining unmarked sentences in the low-rate groups (2 in Group 2 and 9 in Group 3). Six of these sentences may be characterized as informationally-compact sentences (as exemplified by (4)), while 5 contain certain verbs which seem capable of suggesting a turn of events. All of these sentences are regarded as cases of thematic discontinuities.

Another important dissimilarity between the low-rate groups and the high-rate group is that the transitional sentences in the high-rate group are characterized by major changes in temporal, spatial, or thematic continuity whereas their counterparts in the low-rate groups typically involve more local changes. In the following excerpt, containing transitional sentences from all the three groups, we can easily see the difference being discussed here.

(11) It is such a simple joy to have her (the narrator's daughter) healthy again. I marvel at her resiliency – only 24 hours out of surgery for sinus problems and just like new. ***When I was visiting her in the pediatric recovery room*** **[Group 2],** I developed such a severe headache I had to leave. Even after it passed, my vision was blurred, as if I were looking through a fogged-up windshield. ***As we wheeled Kelsey out of the hospital*** **[Group 3],** the symptom persisted. ***When she held out her hand to me*** **[Group**

3], I reached to clasp it, but my hand clutched air and I fell forward, steadying myself on the handle of her wheelchair. I had blamed it on fatigue. ***Now that she is back home*** **[Group 3],** I am able to rest. I drift off to sleep to the sound of her voice. ***The next morning*** **[Group 1]** I am rubbing my eyes when I wake up. They are throbbing terribly now and there is a sticky wetness on my cheeks. I must have been crying in my sleep.

5. Conclusion

The result of the experiment supports the hypothesis of the present study. It also enables us to draw the following conclusions. First, in identifying episode transitions, the participants used the same strategy: they looked for sentences that involve temporal, spatial, or thematic discontinuities. This strategy is consistent with the data of all the three groups. This phenomenon proves from a new perspective what has been suggested by many previous studies, namely that temporal, spatial, and thematic discontinuities are natural indicators of transitions of thematic units and they are perceived by language users as such. All the identified sentences are characterized by these discontinuities.

Secondly, the data of the high-rate group, as compared with the data of the low-rate groups, shows that language users view the episode as an intermediate unit with a certain scale in the sense that episode transitions are defined by major changes in temporal, spatial, or thematic continuity in a certain part of the story. The transitional sentences in the low-rate groups typically involve more local changes in these dimensions. The less agreement shown on the identification of the transitional sentences in the low-rate groups tells us on the other hand that they represent less clear cases of episode transitions.

Thirdly, as the intermediate unit of the narrative type of discourse, which is primarily an account of past events or actions, the episode seems to be perceived by language users mainly as a unit of events or actions. As we have already noticed, many transitional sentences in the low-rate groups are sentences that initiate a new theme (rather than a new participant) such as a description of a scenery, a person's inner feelings, a verbal exchange, an evaluation of a situation, an explanation of a phenomenon, and so on. The fact that these sentences end up in the low-rate groups demonstrates that language users generally prefer to treat such a unit as a subunit of a larger episode.

Finally, the study has not only revealed how a typical written narrative develops in episodic units, it has also helped us to understand our conception of episode itself better. What this new understanding basically tells us is that if major changes in temporal, spatial, and thematic continuities generally correlate with episode transitions, it means that the discourse elements of time, place, and participant are also important to our conception of the episode as a coherent unit. In other words, our sense of the episode as a thematically coherent unit is derived from our evaluation of the roles played by these elements in the formation of the mental representation of an episode. This evaluation is cognitively based in the sense that we (together with

other people) engage in many different activities in different periods of time at different places every day. Our common view as to which activities should belong to one rather than another 'episode' of our daily life seems to rely heavily on the parameters of the time and place of the activities, as well as on who participate in them.

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