AN EXTENDED TOPIC CHAIN: 
A PARAGRAPH DEVELOPMENT MODEL 
FOR CHINESE LEARNERS OF ENGLISH

Chien-ching Mo

摘 要

本文的目的是利用擴充主題串，為中國學生學英文而設計出一套英文段落發展的模式。為了要分析英文中的段落結構，我們先得修改並且擴充主題串。這主題串在曹達甫教授（1981）的論文中稱之為基本言語單位，相當於英文表達結構中的句子。在本文中我們把布拉格學派句子的功能分佈觀為中文段落發展原理，用來說明主題串中評述子句的前後關係。有了這個模式以後，我們拿臺灣大專聯考英文試題中的四段閱讀測驗文章來加以檢視，結果我們發現英文的段落並不一定直線進行，因此我們可以反駁那種中文段落組織方式和英文段落組織有顯著不相同的說法。我們的結論是以到學習英文的中國學生清楚地講解擴充主題串，將有助於對英文閱讀方面的了解。最後，本文提出數中國學生閱讀英文文章時，一些實際可行的建議。

Abstract

This paper proposes an alternative model for teaching paragraph development in English reading classes in Taiwan senior high schools. In order to analyze English paragraph structures, we have to revise and extend the topic chain, which is viewed by Tsao (1981) as a basic discourse unit, equivalent to a surface sentence in English. We incorporate the Prague School Functional Sentence Perspective theory into the principle of paragraph development in Chinese to account for the sequencing of comment clauses in the topic chain. With this model in mind, we then examine four reading passages given in the joint college entrance examinations in Taiwan. After the examination, we have found English paragraphs do not necessarily follow

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a direct line of development, so we refute the claim that the organizational pattern of Chinese writing differs markedly from that of English. Therefore we conclude that explicitly teaching the extended topic chain to the Chinese students of English can facilitate English reading comprehension. Finally, the paper presents some practical suggestions for teaching English reading to Chinese students.

1. Introduction

Text analysis is an area often neglected in reading textbooks in Taiwan but its importance in the teaching of reading has been recently recognized. Robinet (1978: 233), for instance, states that "students must learn to follow the general rhetorical principles typical of English composition, which include the logical organization of sentences within a paragraph, the linking of sentences within paragraphs, and the organization of whole compositions." Unfortunately, many English reading teachers in Taiwan senior high schools usually emphasize close analysis of sentence patterns and discuss word or phrase meanings while overlooking teaching of various aspects of text structure. As a result, most students have the concept that singular sentences rather than texts are the basic units of communication. Sometimes, they can analyse a complex sentence so well that they know the grammatical function of every word, but they still fail to comprehend the text though none of the words or phrases used in the text are new to them.

However, many linguists are discussing texts rather than sentences as the basic units of communication. For example, the concept of textuality defined by Halliday and Hasan (1976) refers to relationships that obtain across "sentence boundaries." Because a paragraph is not a grammatical structure, but a semantic one, it is basically a mini-text which is a group of logically related sentences expressing one central idea.\(^1\) We can assume that with a model for a paragraph in mind, students are more likely to order sentences coherently than if they have no such plan. But what models of paragraph development will be of great help for Chinese students? The answer seems to be the extended topic chain.

2. Extended Topic Chain

Tsao (1981: 4) proposes that "a Chinese sentence is a topic chain (TC), a stretch of discourse consisting of one, or more frequently, more than one comment clause headed by a common topic." Besides, Li and Thompson (1981:
659) states that “in the topic chain, a referent is referred to in the first clause, and then there follow several more clauses talking about the same referent but not overly mentioning that referent.” But they have not mentioned what specific roles the comment clauses play in the topic chain and have not focused on relationships between and among sentences. Like Functional Sentence Perspectivists, Tsao has developed the theory of topic chain based on thematization and used it to test whether a sentence can function as a basic discourse unit in Chinese, as in (1.a):

(1) Jei ke shu, hwa syau, yedz da, jen nankan.
    this-Class tree flowers small leaves large really ugly

(1.a) TC topic C_1 __________ C_2 __________ C_3
(1.b) FSP theme transition focus
   rheme

(1.c) chi C_{cheng} C_{jwan} C_{he}

"This tree (topic), (whose) flowers (are) small, (and) (whose) leaves (are) large, is really ugly.

As Halliday (1974: 43) notes, Functional Sentence Perspectivists are concerned with “the analysis of the sentence into parts having a function in the total communication process.” For example, the order of the communication process in (1.b) is theme-transition-focus, in which transition and focus can be subsumed under rheme. Halliday (1967: 211) calls this order “unmarked sequence.” However, the reverse, or “marked sequence” is also possible. In addition, it is of great importance to note that the number of parts a sentence should be analyzed into, what these parts should be called, and what functions they should fulfill are not unanimously agreeable among theorists.³

The similarities between sentence structure and paragraph structure are recognized by psychologists and linguists interested in discourse level problems. Christensen (1965: 144), for instance, states that “the paragraph has, or may have, a structure as definable and traceable as that of the sentence and that it can be analyzed in the same way.” He further claims that “the parallel between sentence
and paragraph is so close that the paragraph seems to be only a macro-sentence or a meta-sentence.’’

Now that the Functional Sentence Perspective (FSP) theory of Prague School can describe sentence structures, undoubtedly, it can also describe paragraph structures. As the concept of theme and rheme may take different textual forms from one paragraph to another, and even within a single paragraph, Daneš (1974: 118-119) has proposed four main types of thematic progression (hereafter TP) for written English. The first type of TP is called “simple linear progression of themes.” It consists of two or more sentences in which each rheme becomes the theme of the next sentence. Following Daneš, this pattern may be diagrammed as:

\[
\begin{align*}
T_1 & \rightarrow R_1 \\
\downarrow & \\
T_2 \ ( = R_1 ) & \rightarrow R_2 \\
\downarrow & \\
T_3 \ ( = R_2 ) & \rightarrow R_3 , \text{ etc.}
\end{align*}
\]

The second features a “continuous (constant) theme.” It contains two or more sentences with the same theme. Daneš diagrams this as:

\[
\begin{align*}
T_1 & \rightarrow R_1 \\
\downarrow & \\
T_1 & \rightarrow R_2 \\
\downarrow & \\
T_1 & \rightarrow R_3 , \text{ etc.}
\end{align*}
\]

The third type of TP involves “hypertheme,” in which the themes of each sentence are individually different but are all derived from a “hypertheme.” Daneš diagrams this as:

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"Hypertheme"
T_1 \rightarrow R_1 \quad T_2 \rightarrow R_2 \quad T_3 \rightarrow R_3 , \text{ etc.}
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The final type is called “the exposition of a split rheme.” It has a certain rheme which is divided or split into two or more parts, each of which is developed separately as the theme of subsequent sentences. Daneš diagrams this as:
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\[ T_1 \rightarrow R_1 \left( = R'_1 + R''_1 \right) \]
\[ \downarrow \]
\[ T'_2 \rightarrow R'_2 \]
\[ \downarrow \]
\[ T''_2 \rightarrow R''_2, \text{ etc.} \]

In order to apply topic chain at the paragraph level, we incorporate the FSP component into the most famed principle of paragraph development in Chinese to extend the topic chain. We view theme as \textit{chi} while the last theme or comment clause represents \textit{he} with the clauses inbetween providing \textit{cheng} and \textit{jwan} respectively. According to the principle, a well-organized and well-developed paragraph can be described by four Chinese characters: \textit{chi (起)}, \textit{cheng (承)}, \textit{jwan (转)} and \textit{he (合)}. Therefore, topic, \( C_1 \), \( C_2 \) and \( C_3 \) can correspond exactly to \textit{chi, cheng, jwan and he} respectively, as in (1.c). Their respective meanings of \textit{chi-cheng-jwan-he} are described as follows:

In \textit{chi} (literally, explicit or implicit introduction of a topic), the author tells the reader what he is going to discuss. He frequently provides the reader with a sentence to introduce explicitly or implicitly the main idea of the paragraph. This idea tends to be general. The \textit{cheng} and \textit{jwan} parts are usually specific. The function of \textit{cheng} (literally, elucidation of the topic) is to elucidate or support the details that relate to the main idea in the \textit{chi} part by using the techniques of (1) illustration and examples, (2) definition, (3) classification, (4) specific or descriptive details, (5) cause and effect, (6) analogy, etc. Regarding \textit{jwan} (literally, transition to another viewpoint), by (1) negation, (2) comparison or contrast, (3) concession, (4) question and answer, etc., “it involves a change of some kind — a change of mood (from factual to suppositional), a change of place, a change of time, a change of point of view, a change of tone, or simply a change of grammatical subject/topic, etc.” (Tsao, 1983: 111). Probably because Chinese writers always emphasize the \textit{jwan} part in writing, Kaplan (1972: 46) feels that

Some Oriental writing . . . is marked by what may be called an approach by indirection. In this kind of writing, the development of the paragraph may be said to be “turning and turning in a widening gyre.”

Actually, the \textit{jwan} part in the paragraph is like a one-word traffic sign — TURN or STOP. Finally, \textit{he} probably summarizes the details in the discussion or restates the main idea expressed in the \textit{chi} part. It may also contain a suggestion,
inference or conclusion based on material in the paragraph or a solution to a problem stated in the paragraph. Therefore, the *he* part must refer back to the topic announced in the *chi*. Evidently, the four parts, like links in a chain, are semantically related to one another in the paragraph, as shown in Figure 1:

![Figure 1](image)

As the *jwan* part turns to another viewpoint, it is not directly or explicitly connected to the *cheng* part. *Cheng* and *jwan* are linked up through a broken arrow to show such a relationship. Adopting this framework of analysis, we will demonstrate that the extended topic chain can apply to the paragraph structure in English.

The example below, taken from the 1989 March TOEFL Test, will serve to illustrate this framework:

1. The energy content of food is measured in calories. 2. The calorie is defined as the heat energy needed to raise the temperature of 1 kilogram of water from 14.5°C to 15.5°C. 3. The calorie used in nutrition is sometimes spelled with a capital “C” to distinguish it from the much smaller energy calorie used in physics and chemistry, but it is more properly called the kilogram-calorie, or kilocalorie, because it is precisely 1,000 times the smaller unit, or gram-calorie. 4. The energy content of food is stored in the chemical bonds that link its atoms and molecules.

**Analysis**

The first sentence (*chi*) is a topic sentence which directly introduces the subject matter for discussion. A reader may ask, “What is the calorie?” The second (*cheng*) elucidates the main subject *calorie* by definition. The third (*jwan*) presents a contrast, as indicated by the adversative conjunction *but*. It points out the differences between the calorie used in nutrition and the calorie used in physics and chemistry. The fourth (*he*) gives the conclusion by referring back to the sentence topic: *the energy content of food*. The four sentences in this paragraph thus correspond exactly to *chi*, *cheng*, *jwan* and *he* respectively. Nothing is extra. Nothing is irrelevant to the topic announced in the *chi* part.
3. English Paragraph Structure

Just as people differ in appearance and languages, their thought patterns vary from culture to culture. It is not easy to visualize the abstract features of a language and its thought pattern but Kaplan (1972: 64) manages to show many different types of thought patterns in the following diagrams:

![Diagram showing different languages and thought patterns]

The above diagrams show that the basic feature of an English paragraph is that it normally follows a straight line of thought development. No wonder, English paragraphs frequently begin with a topic sentence.⁶

Let us see Christensen’s (1965: 145-146) proposal of rules for paragraph organization:

1. The paragraph may be defined as a sequence of structurally related sentences.
2. The top sentence of the sequence is the topic sentence.
3. The topic sentence is nearly always the first sentence of the sequence. It is likely that, influenced by Christensen, traditional rhetoricians assume that a paragraph is a series of sentences that develop a main idea. That idea is usually stated in a general form in the topic sentence. The rest of the sentences in the paragraph, called the supporting sentences, provide the reader with specific details, help the reader understand more clearly what the writer means and show that the topic sentence is valid. In other words, each paragraph contains a topic sentence and supporting sentences.

In addition, the English paragraph has two important characteristics: unity and coherence.⁷ A paragraph should be of one piece, a distinct unit that involves a single topic, and the writer must write only about that topic. In order to link
the single topic and its details, transitional devices are usually employed, so that the paragraph is coherent.

Finally, it should be indicated that there are two common methods of reasoning: deduction and induction, which are widely used in academic writing. In deductive reasoning, a writer infers ("deduces") a conclusion from one or more statements, called premises. The reasoning is usually from the general to the particular. In contrast, the writer of inductive reasoning also draws ("induces") a conclusion from one or more statements. But these statements are commonly called evidence (not premises); the reasoning is from the particular to the general.

In this paper, for ease of comparison, we divide the supporting sentences into elucidative sentence, transitional sentence and concluding sentence. That is, the paragraph contains four different types of sentences: TOPIC, ELUCIDATIVE, TRANSITIONAL and CONCLUDING. These four sentences play the roles of chi, cheng, jwan and he respectively.

4. Application of Extended Topic Chain to the Reading Passages Given in the Joint College Entrance Examinations in Taiwan

According to Longacre (1983: 5), there are four discourse types: expository, narrative, procedural and behavioral. Except expository discourse, the rest of them are typically oral rather than written styles. Apart from this, an English expository paragraph frequently begins with a single topic, while the other sentences in the paragraph have the function of developing that topic in a number of prescribed ways. Furthermore, Kaplan (1987: 18) contends that "written language discourse deserves study separate from oral discourse." Therefore, the passages we are going to analyze are expository writing.

Weissberg (1984: 486) mentions "the conventional classroom models do not provide a completely accurate explanation of the ways in which real paragraphs may be structured." Therefore, he considers "the given/new contract, with its associated patterns of topic development, a rational alternative to the traditional rhetorical models used in teaching paragraph construction" (p. 499). In fact, patterns of topic development here refer to Danes' four types of thematic progression. Weissberg (pp. 486-487) further states:

Most sentences occurring in a text can be divided into two units of information: the topic (roughly corresponding to, but not necessarily restricted to, the subject noun phrase), which announces what the
sentence is about; and the comment, which offers some information about the topic. The tendency in English is for recoverable (i.e., "given") information to occur in the topic, which always appears in the first part of the sentence. Less recoverable (i.e., "new") information tends to occur in the comment, the latter part of the sentence.

The following four passages based on a deductive thought pattern will serve to illustrate how English paragraphs are structured within the model of extended topic chain. In each figure, the part occurring before the box is *chi*; what occurs between the box and the square bracket is *cheng*; the part enclosed in the square brackets is *jwan*; and finally, the part after the square brackets is *he*. In the topic progression section, (1) stands for Danes' first type of thematic progression, (2) for his second type, (3) for his third type and (4) for his fourth type.

4.1 Reading Passages Given in the 1988 Joint College Entrance Examination in Taiwan

(1-a) Seahorses live in warm, shallow water where there is lots of sea grass. (1-b) They can change their color to match the colors of the grass, so it is very hard to see them. (1-c) Their coloring protects them. (1-d) This is called protective coloring. (1-e) In warm weather, they spend their time mostly about a meter below the surface of the water. (1-f) When it gets cold, they go down to about seven meters below the surface. (1-g) At this depth, the temperature of the water does not change very much. (1-h) When there is a storm, the seahorse holds onto a piece of grass with its tail. (1-i) Then it cannot be carried to the shore.

Analysis

As Figure 3 indicates, the above passage contains five distinct sentence topics, in which "seahorses" is the most important because it is mentioned first and occurs most frequently. What is more, "seahorse" is the main idea around which all other ideas in the passage revolve. Thus the passage is unified because it deals with a single topic: seahorses. Regarding the *cheng* part, (1-b), (1-c) and (1-d) elucidate the topic by cause and effect. As Halliday and Hasan (1976) point out, the topics of the various sentences are referentially identical by using repeated lexical items, synonyms, near-synonyms, pronominals or demonstratives. Because
the topic of (1-b) \((they)\) allows the reader to recover information mentioned in (1-a), (1-a) and (1-b) form a progression with a constant topic. (1-b) and (1-c), because the topic of each is different, constitute a linear progression. As the topics in (1-c) and (1-d) are referentially the same, using the demonstrative \(this\), they also form a progression with a constant topic. Note that there is no linkage between (1-d) and the topic of (1-e). That is, (1-e) turns to another sentence topic from \(coloring\) to \(weather\). From here the paragraph goes to the \(jwan\) part
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and makes the first turn (jwan₁). It in (1-f) refers to weather, so (1-e) and (1-f) form again a progression with a constant topic. At this depth refers to seven meters; hence (1-f) and (1-g) again form a linear progression. Note again that no linkage exists between (1-g) and the topic of (1-h), which means that the paragraph makes the second turn (jwan₂). (1-h) changes to another sentence topic from depth to storm. Finally, it is a pity that the paragraph has no concluding sentence. That is, it lacks the he part. To conclude the paragraph, we would add the following sentence that touches on the main points of the discussion:

Seahorses have their ways of protecting themselves.
Since the writer places such great importance on jwan in the passage, we doubt whether the paragraph tends to be linear.

4.2 Reading Passage Given in the 1983 Joint College Entrance Examination in Taiwan

(2-a) In the development of literature, prose generally comes late. (2-b) Verse is more effective for oral delivery and more easily retained in the memory. (2-c) It is therefore a rather remarkable fact that English possessed a considerable body of prose literature in the ninth century, at a time when most other modern languages in Europe had barely developed a literature in verse. (2-d) This unusual accomplishment was due to the inspiration of one man, King Alfred the Great, who ruled from 871 to 899. (2-e) When he came to the throne, Alfred found that the learning which in the previous century had placed England in the forefront of Europe had greatly decayed. (2-f) In an effort to restore his country to something like its former state, he undertook to provide for his people certain books in English, books which he deemed most essential to their welfare. (2-g) In preparation for this task, he set about in mature life to learn Latin.^

Analysis

As Figure 4 indicates, the above passage contains seven distinct sentence topics but none of them occur twice in the seven sentences. It is unified because it deals only with a single topic: the development of English prose. A reader may ask, "In the development of literature, which generally comes late?" The second half of (2-a) tells the reader that prose comes late. Therefore, we assume that
(2-g) In preparation for this task, he set about in mature life to learn Latin.

Figure 4

<table>
<thead>
<tr>
<th>Sentence No.</th>
<th>Topic No.</th>
<th>Topical Progression</th>
<th>Role Playing</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-a</td>
<td>1</td>
<td>... development of literature</td>
<td>chi/cheng</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>2-b</td>
<td>2</td>
<td>Verse (1) ... effective for oral delivery</td>
<td>jwan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>2-c</td>
<td>3</td>
<td>that clause ... remarkable fact</td>
<td>he</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>2-d</td>
<td>4</td>
<td>This unusual accomplishment (1)</td>
<td>chi</td>
</tr>
<tr>
<td>2-e</td>
<td>5</td>
<td>When he came to throne ... decayed</td>
<td>cheng</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>2-f</td>
<td>6</td>
<td>... restore his country ... provide for his people certain books ... former state (1)</td>
<td>jwan</td>
</tr>
<tr>
<td>2-g</td>
<td>7</td>
<td>... preparation he ... learn Latin for this task</td>
<td>he</td>
</tr>
</tbody>
</table>

the first half of (2-a) belongs to the chi part and the second half, to the cheng part. The sentence topic of (2-a) is the development of literature which is a hypertheme. Prose literature and verse literature are identified with reference to their relationships to the hypertheme. (2-b) presents a new topic: verse instead of prose, so it belongs to jwan. Logically the reader may further ask, “Why does prose come late?” (2-b) tells him that verse precedes prose because the former lends itself better to oral transmission. (2-c) (he) gives the conclusion, as indicated
by the concluding word therefore. Note that although this paragraph is a complicated one, the principle of chi-cheng-jwan-le can be applied once more. As mentioned before, a paragraph is a unit involving a single topic. (2-d) is the chi part in the second half of the paragraph, so this unusual accomplishment in (2-d) must refer to the remarkable fact that England acquired a prose literature before most of the other modern European states stated in (2-c), otherwise the writer will run the risk of confusing his reader. (2-e) is the cheng part which elucidates this accomplishment by cause and effect. In (2-e) English learning declined in the ninth century but in (2-f) Alfred set about developing English prose in order to revive learning. Evidently, (2-f) turns to another topic from decay to revival, so it belongs to the jwan part. Finally, we may conclude from the passage that Alfred learned Latin because much of the early English prose was borrowed from Latin, some by Alfred himself. Therefore, Alfred may be regarded as the father of English prose. Under our analysis, we have seen that this paragraph follows a direct line of development. Each thought is connected to the one before and after. All details used to develop the main topic are relevant.

Theoretically speaking, there is no limit to the potential length of a paragraph. Practically speaking, in Hairston (1978: 90), it is suggested that "a paragraph should be long enough to allow the writer to make some response to the commitment made or implied in the topic sentence." To strengthen the topic sentence and to warrant the conclusion, the writer may form a longer paragraph. Thus he needs to make chi, cheng, jwan and he recursive elements. That is, the principle of chi-cheng-jwan-he can be applied once more.

4.3 Reading Passage Given in the 1984 Joint Entrance Examination in Taiwan

In writing, inductive paragraph development begins with particular facts, evidence or examples used to prove the truth of a concluding general statement. For example:

(3-a) When the Westinghouse Science Talent Search Team named its top achievers in 1983, the grand prize went to Paul Ning, then 16.

(3-b) Paul Ning is not a native-born American. (3-c) He is the son of a diplomat from the Republic of China on Taiwan. (3-d) Ning came to the United States at the age of three. (3-e) By 11, he was constructing a simple wind tunnel to study the relationship between speed and pressure. (3-f) Now a senior at the superb Bronx High School of Science in New York City, Ning feels, "You have to be aggressive in your studies to really understand what you're doing." (3-g) Adds
his mother: "He always tries to prove to us and to himself that he is the best."

(3-h) Out of 40 Westinghouse finalists, nine, including Ning, were born in Asia and three others were of Asian descent. (3-i) This story has reminded us of the fact that some 10% of Harvard University’s freshman class is Asian American. (3-j) While no more than 15% of California high school graduates are eligible for admission to the University of California system, about 40% of Asian Americans qualify.

(3-k) Most educators believe that Asian scholastic achievement has much to do with breeding and nurture. (3-l) Many Asian American children have also well-educated parents who are always on the school’s side. (3-m) In addition, most Asians regard education as the best avenue to recognition and success through which they pay the indefinite debt to parents. (3-n) Also, it is a way of showing filial piety. (3-o) As a result, it is no wonder that Asian American children usually do a far better job than their classmates.

Analysis

Because an essay is a series of paragraphs about one subject, the same principle which applies at the paragraph level also applies at the essay level. Thus, a well-organized essay can be divided into four paragraphs: INTRODUCTION, ELUCIDATION, TRANSITION and CONCLUSION. Every paragraph carries one idea and relates it to the others in forming a coherent sequence of ideas.

The fact in the introductory paragraph (Paragraph Chi) is that Paul Ning was awarded the Westinghouse prize at 16. Logically a reader may ask, "Who is Paul Ning?" The second paragraph (Paragraph Cheng) elucidates Paul Ning by giving his other facts. The third (Paragraph Jwan) changes to another topic from Paul Ning to Asian Americans. The concluding paragraph (Paragraph He) gives the conclusion: Asian scholastic achievement has much to do with breeding and nurture. By not stating a thesis sentence until the concluding paragraph, a writer creates a feeling of suspense that makes a reader want to keep on reading. Therefore, the concluding paragraph often sums up a writer’s main point in inductive writing.

As Figure 5 below indicates, the above essay is made up of nine different sentence topics, in which Paul Ning and Asian American Children are equally important because each of them is repeated in four of the fifteen sentences. As inductive reasoning is from the particular to the general, the former must precede the latter.
Paragraph length varies according to purpose as well as idea. Now in order to announce who the winner of the grand prize is, the writer uses a one-sentence paragraph in (3-a). (3-b) through (3-g) describe who and what Paul Ning is. (3-h) turns to another sentence topic from his mother to out of 40 Westinghouse finalists. Obviously, Paragraph Jwan starts from (3-h) because no linkage exists between (3-g) and the topic of (3-h). In (3-i) this story refers to twelve Asian American Westinghouse finalists. Note that there is no linkage between (3-i) and the topic of (3-j). Clearly, the jwan part in Paragraph jwan begins from here. Now the reader may ask, "What causes the Asian American children to be so successful in their studies?" In (3-k), most educators give the answer. (3-1) through (3-n) belong to the jwan part because of no linkage between (3-k) and the topic of (3-l). Their constant topic is Asian American children (who are included within the superordinate term Asians) rather than most educators. (3-o) gives the conclusion that Asian American children are superior to their classmates by respecting education and elders.

In sum, the essay consists of four paragraphs. Each paragraph has its own topic sentence. But so far as paragraph organization is concerned, not all paragraphs contain the four parts: chi, cheng, jwan and he. The first paragraph has only chi; the third lacks he, and the fourth lacks cheng. Only the second paragraph has all of them.

4.4 Reading Passage Given in the 1989 Joint Entrance Examination in Taiwan

That topics precede comments is the tendency for English speakers to organize their sentences. Kuno (1987: 302) calls such an order "From-Old-To-New Principle." But the reverse is also possible. For example:

(4-a) There are three ways to take the salt from ocean water: electrodialysis, freezing, and distillation. (4-b) Electrolysis is used to desalt water that does not have much salt. (4-c) In this process, an electric charge is sent through the salty water and causes the salt to separate from the water.

(4-d) Another method of desalinization is freezing. (4-e) Ice is pure, fresh water. (4-f) When seawater is frozen, the salt separates and can be washed off. (4-g) Finally, the ice can be melted and used as fresh water.

(4-h) The oldest and most common way to turn seawater into fresh water is distillation. (4-i) In this process, the sun provides the heat for distillation. (4-j) A piece of plastic covers a few inches of salty water in a shallow basin while the water evaporates with the heat of the sun. (4-k) The vapor rises until it hits
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<tbody>
<tr>
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<td>1</td>
<td>1</td>
<td>Westinghouse . . . team</td>
<td>Paul Ning . . .</td>
<td>Chi</td>
</tr>
<tr>
<td>3-b</td>
<td>2</td>
<td>2</td>
<td>Paul Ning</td>
<td>is not . . . American</td>
<td>Chi</td>
</tr>
<tr>
<td>3-c</td>
<td>2</td>
<td>2</td>
<td>He</td>
<td>is the son of diplomat . . .</td>
<td>cheng</td>
</tr>
<tr>
<td>3-d</td>
<td>2</td>
<td>2</td>
<td>Ning</td>
<td>came . . . age of three</td>
<td></td>
</tr>
<tr>
<td>3-e</td>
<td>3</td>
<td>3</td>
<td>By (age of) 11</td>
<td>he was constructing a simple wind . . .</td>
<td></td>
</tr>
<tr>
<td>3-f</td>
<td>2</td>
<td>2</td>
<td>{ Now (Ning is) a senior . . . }</td>
<td>Ning feels . . .</td>
<td>jwan</td>
</tr>
<tr>
<td>3-g</td>
<td>4</td>
<td>3</td>
<td>his mother</td>
<td>adds . . .</td>
<td>he</td>
</tr>
<tr>
<td>3-h</td>
<td>5</td>
<td>3</td>
<td>Out of 40 Westinghouse finalists</td>
<td>nine . . . three others . . .</td>
<td>chi</td>
</tr>
<tr>
<td>3-i</td>
<td>6</td>
<td>3</td>
<td>This story . . .</td>
<td>Asian American</td>
<td>cheng</td>
</tr>
<tr>
<td>3-j</td>
<td>7</td>
<td>3</td>
<td>{ . . . high school graduates . . . Asian Americans qualify }</td>
<td>jwan</td>
<td></td>
</tr>
<tr>
<td>3-k</td>
<td>8</td>
<td>4</td>
<td>Most educators</td>
<td>Asian scholastic achievement . . .</td>
<td>chi</td>
</tr>
<tr>
<td>3-l</td>
<td>9</td>
<td>4</td>
<td>Many Asian American children</td>
<td>. . . well-educated parents . . .</td>
<td>jwan</td>
</tr>
<tr>
<td>3-m</td>
<td>9</td>
<td>4</td>
<td>. . . most Asians . . .</td>
<td>. . . parents . . .</td>
<td></td>
</tr>
<tr>
<td>3-n</td>
<td>9</td>
<td>4</td>
<td>(To most Asians)</td>
<td>it is a way . . .</td>
<td></td>
</tr>
<tr>
<td>3-o</td>
<td>9</td>
<td>4</td>
<td>. . . Asian American children</td>
<td>usually do . . . their classmates</td>
<td>he</td>
</tr>
</tbody>
</table>
An Extended Topic Chain: A Paragraph Development Model for Chinese Leaners of English

the plastic top. (4-l) Then it condenses into fresh water. (4-m) This method is not very efficient because it does not produce much water quickly enough.

Analysis

As Figure 6 below indicates, the first sentence in each paragraph (i.e., (4-a), (4-d) and (4-h)) violates the From-Old-To-New Word Order Principle, but all of them are perfectly acceptable. Use of non-referential there in (4-a) and use of inversion of subject and its complement allow the writer to introduce the topics for the following string of sentences, so the comment precedes the topic. In the chi part, the topic (i.e., to take the salt from ocean water) is divided into three ways, each of which is developed in turn by processes in the cheng part. (4-b) and (4-c) elucidate the topic electrodialysis; (4-e) through (4-g) elucidate the topic freezing; (4-i) through (4-m) elucidate the topic distillation. This essay lacks jwan and he. In fact, the expository essay developed by division or classification exactly corresponds to Dánes's fourth type of thematic progression: the exposition of a split rhyme. Finally, this essay may be roughly represented as Figure 6.

Figure 6

<table>
<thead>
<tr>
<th>Sentence No.</th>
<th>Paragraph No.</th>
<th>Topical Progression Comment</th>
<th>Topic</th>
<th>Role-Playing</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-a</td>
<td>1</td>
<td>three ways:</td>
<td>to take salt from ocean water</td>
<td>Chi</td>
</tr>
<tr>
<td></td>
<td></td>
<td>electrodialysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>freezing</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>distillation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-b</td>
<td>1</td>
<td>is used to</td>
<td>to take salt from ocean water</td>
<td>Cheng</td>
</tr>
<tr>
<td></td>
<td></td>
<td>desalt water ...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-d</td>
<td>2</td>
<td>another method ...</td>
<td>to take salt from ocean water</td>
<td>Cheng</td>
</tr>
<tr>
<td></td>
<td></td>
<td>freezing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-h</td>
<td>3</td>
<td>The oldest and</td>
<td>distillation</td>
<td>Cheng</td>
</tr>
<tr>
<td></td>
<td></td>
<td>most common way ...</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. Findings

In recent years, linguists have stepped out of the domain of the sentence. The analyses of the reading passages above have made it clear that one way to work beyond the sentence level is to study the structure of *chi-cheng-jwan-he* in relation to the structure of English. Furthermore, the incorporation of Daneš’ four types of thematic progression into the principle of paragraph development in Chinese has insightfully revealed that the English paragraph does not necessarily follow a direct line of development.\(^{10}\) If the paragraph structure can be fitted into Daneš typology,\(^ {11}\) the English paragraph tends to be linear; otherwise it does not. In other words, there must be some information either old or new to provide a connecting link between any two sentences. For example, the reading passage in (4.2) is linear in its development because each sentence topic refers to the information made accessible in the previous sentence. However, in the reading passage in (4.1), there is no information at all in (1-e) and (1-h) that have been made accessible in (1-d) and (1-g) respectively. As mentioned before, the writer emphasizes the *jwan* part so much that we are doubtful of whether the paragraph is linear.

In the case of Chinese, Mohan and Lo (1985: 518-520) have examined classical texts and modern works on Chinese composition and found no support for the claim that the Oriental paragraph tends to follow a circular line of development (Kaplan, 1972 64). They claim that the Chinese paragraph is direct. In fact, like the English paragraph, the Chinese paragraph is not necessarily direct, contingent upon whether the paragraph structure is consistent with Danes’ four types of thematic progression. Besides, we have demonstrated that the principle of *chi-cheng-jwan-he* also applies to the paragraph structure in English. Thus, we assume that similarities between the organizational pattern of Chinese writing and that of English writing are far more apparent than differences. Surely, this does not mean no differences exist in both languages.

Another significant finding is that a paragraph or an essay organization does not usually follow the order of *chi, cheng, jwan* and *he*. Eden and Mitchell (1986: 416) point out that “paragraphs in admired professional writing do not necessarily contain topic sentences, they rarely follow prescribed patterns, and they seem essentially accidental, invented as the writer composes.” Any paragraph or essay can be fitted into one of four categories — expository, narrative, procedural and behavioral — but whether it can be fitted into the order of *chi-cheng-jwan-he* depends on its nature. Each category requires somewhat different
treatment from the writer, while the reader needs to know what kind of paragraphs he is dealing with. Just as Brown (1976: 227) says:

How do you get more out of a paragraph? It's like getting food out of a container. With some you need a can opener. With others you just unscrew a lid. Sometimes you use a key to remove a metal strip or pull on a tab. It depends on the container. There's no point trying to unscrew a pry-off lid. So it is in reading paragraphs. How you do it depends on the paragraph.

It is important to recognize that so far as the sentence level is concerned, not all Functional Sentence Perspectivists agree on the number of comments that follow the topic. Tsao (1981: 174), for example, suggests that “a topic chain be limited to four comments at most.” Similarly, the number of parts a paragraph should be analyzed into is not unanimously agreeable among writers. Our passage analyses (4.1 – 4.4) show that not all paragraphs or essays in English except well-structured ones contain chi, cheng, jwan and he parts; therefore the principle should not be applied rigidly. If the principle is applied flexibly, then the flexibility of English writing can be accounted for.12

Our last finding is that with the principle of chi-cheng-jwan-he in mind, Chinese students of English can improve the logical continuity of their paragraphs and essays. That is, the principle can provide them with guidelines for revision. For example, to make the reading passage in (4.1) coherent, the writer should add a concluding sentence (i.e., the he part). Holloway (1981: 208) provides another example to illustrate why teachers are irritated by gaps in their students’ logic:

(a) Teachers should explain their requirements more clearly.
(b) Students can’t afford to waste time.

Sentence (a) (chi) is evidently a topic sentence whose topic is teachers. Logically, a reader may ask, “Why should teachers do so?” Sentence (b) should have elucidated the topic by giving a reason, but its topic is students. Undoubtedly, (b) turns to another topic from teachers to students, so it should be considered jwan rather than cheng. Obviously, (a) and (b) do not hang together. This is the so-called logical discontinuity. What the paragraph needs is cheng. Let us see how Holloway solves the puzzle.

In an effort to provide a connecting link between those two sentences,
a student may come up with "When they (teachers) don't" (old information), "students often read much more material than necessary," etc. (new information). This new information about the "students" provides a link with the last sentence so that the sentences read as follows:

Teachers should explain their requirements more clearly. When they don't, students often read much more material than necessary because they aren't sure what will be required of them. Students can't afford to waste time like this.

Finally, he (p. 217) concludes that "semantic terms designate a combination of form and concept; taught and used well, they force writers to adjust the structures of their discourse to the demands of the ideas they want to express."

From this viewpoint, a paragraph is a semantic structure, so chi, cheng, jwan and he should be considered semantic terms. Christensen's first rule for paragraph organization should be rewritten for coherence as follows:

The paragraph may be defined as a sequence of semantically related sentences.

6. Practical Suggestions for Teaching Reading to Chinese Learners of English

Besides the traditional way of teaching words, phrases and grammatical structures of sentences, the extended topic chain should be incorporated into a reading class so that the students will read more efficiently and, later on, write more systematically. On the basis of the findings and discussion in this paper, we can give the following practical suggestions to English teachers teaching Chinese students.

First, Carrell (1985: 727) indicates that "knowledge and use of textual organization discriminates good readers from poor readers." Our findings show that the extended topic chain is a useful tool for describing and modeling paragraph or essay organization. Even though an English paragraph or essay is not organized only by the model of chi-cheng-jwan-he, this model is, nevertheless, a very important one. Such a model should be taught and practiced in a reading class just as Carrell says, "We can facilitate ESL reading by explicit teaching of text structure (p. 727)."

Second, reading and writing, like the two sides of a coin, are two inseparable learning activities. Shortly after Chinese students can read an article, they should
be taught to compose a paragraph. One way to compose a paragraph is to summarize an article because summarization can help students clarify the meaning and significance of the article. But it is a pity that this is often not taught. As a result, students do not establish any habit of "true reading." They can at most get the lexical and structural meaning of a piece of reading, but not the real core thought of the article that the writer expresses. Unless students can use what they have learned, their learning is not meaningful. Unless they learn meaningfully, they do not really learn anything significant.

Third, Kieras (1978: 27) reminds us that "... paragraphs that violate the coherence and topicalization conventions yield longer reading times, poorer recall, and distortions of apparent theme." For this reason, the teacher must select his reading materials with a great deal of care; otherwise he will run the risk of confusing his students. This points out the need for well-structured materials for his students. The teacher can make full use of them to help his students develop reading skills.

Fourth, now that Chinese and Functional Sentence Perspectivists view paragraph development from the viewpoint of information distribution, the teacher should teach the student to ask for information to clarify ideas and facilitate analysis and use questions as a springboard to discussion. For example, the student can ask for old information (i.e., topic) by asking the following questions:

(a) What is the central idea of this passage?
(b) What is the theme of the passage?
(c) What is the author's main purpose in writing this passage?
(d) What is the best title of this passage?

As to teaching text analysis, the teacher can ask the student to identify the topic and comment in each sentence, transition words and clues that signal the relationship between ideas. After all, the arrangement of ideas is a very important clue in understanding the text.

7. Conclusion

In the course of our analyses and discussions presented in this paper, we have seen that English does not necessarily tend to be linear. Therefore, a rational alternative model is needed for teaching paragraph development in English reading classes in Taiwan senior high schools. This is because English and Chinese do not have gross differences in the organizational pattern of writing. The paragraph or essay structure in English is comparable to the extended topic chain, which
can apply either at the paragraph level or at the essay level. Since Chinese students are well familiarized with the model of *chi-cheng-jwan-he* in their Chinese writing or reading classes, English teachers need only to analyze the English paragraph into *chi-cheng-jwan-he* rather than into a topic sentence and supporting sentences. It is hoped that the paragraph-oriented teaching approach will be adopted to train Chinese students not only to consciously exercise their English but also to lay the foundation of good reading comprehension and good paragraph writing ability in the future.

Notes

1 Meyer (1975) also holds the view that a text is a set of interrelated simple propositions that together form a complex proposition.

2 Functional Sentence Perspectiveists, like Mathesius, Firbas and Daneš of the Prague School of linguists hypothesize that sentences in discourse can be divided into two units of information: the theme (also called topic) and the rheme (also called comment). The communicative function of the topic is to express the old information in a sentence, that which is either expressed in, recoverable from, or relatively more accessible in prior sentences. But the function of the comment is to express the new information in a sentence, that which is not expressed in, is difficult to derive from, or is relatively less accessible in prior sentences. For further details, see Daneš (1974). Witte (1983: 314-321) examines theoretically and historically the concept of tropical structure.

3 For some of the varying views on these matters, see Firbas (1974: 11-37) and Svoboda (1974: 38-42).

4 The Daneš typology classifies a paragraph in terms of its information structure as manifested through intersentential linkages within the text itself (Weissberg, 1984: 491). For more details, see Daneš (1974: 106-128) and Dillon (1981: 105-115).

5 This principle has its origin in classical Chinese poetry but it is considered a suitable pattern for all genres of written discourse. One of expository prose styles in Japanese, *ki-shoo-ten-ketsu*, derives from classical Chinese organization of poetry; hence it is often described as corresponding to a looser version of *chi-cheng-jwan-he*.

Takemata (1976: 26) explains *ki-shoo-ten-ketsu* as follows:

ki First, begin one's argument.
shoo Next, develop that.
ten At the point where this development is finished, turn the idea to a subtheme where there is a connection, but not a directly connected association [to the major theme]
ketsu Last, bring all of this together and reach a conclusion.

6 The topic sentence usually occurs at the beginning of the paragraph but advanced or professional writers state the topic at various places in the paragraph. Some writers do not state it at all. Therefore, some text linguists like D'Angelo (1986: 439) do not suggest that
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"we should tell students that every paragraph must have a topic sentence or that all topic sentences should be placed in the initial position in paragraphs."

Regarding the reason why topic sentences should occur so frequently in paragraph initial position, psychologists offer different views. For example, Bransford and McCarrell (1978) have found that the purpose of placing topic sentences in paragraph initial position is to allow the reader to activate any collateral knowledge of this topic, along with knowledge of related information, in order to facilitate comprehension.

7 Bander (1977: 4) assumes that "the typically straight line of development of an English paragraph is the basis of its particular type of coherence." Although coherence has multiple meanings, it, particularly in composition textbooks, is equated with transitions or connections between sentences. This meaning of coherence is tantamount to what Halliday and Hasan (1976) call cohesion. They refer to two types of cohesion: grammatical and lexical. They subdivide grammatical cohesion into the categories of reference, substitution, ellipsis, and conjunction; and lexical cohesion into the categories of repetition of the same item, synonymy, superordinate relationships, general items, and collocation. These types of cohesion can tie sentences together to create a meaningful unit or text.

8 This passage is taken from Harris (1969: 65-66).

9 In case a passage shows inductive development, we concur with Tsao (1983: 111) in his standpoint that "the chi part has to be related to the general theme in some way or other, but it is not necessarily a theme statement."

10 Kaplan (1987: 10) admits having made the case too strong. He further indicates that "all of the various rhetorical modes... are possible in any language — i.e., in any language which has written text."

11 Our passage analyses show that in Dane's four types of thematic progression, two types combine to produce the commonest type — the mixed thematic progression. The simple thematic progression is not common.

12 The flexibility of English writing here can refer to Christensen's 6th, 7th and 8th rules for paragraph organization.

The 6th rule: Some paragraphs have no top, no topic, sentence (1965: 152).

The 7th rule: Some paragraphs have sentences at the beginning or at the end that do not belong to the sequence (1965: 153).

The 8th rule: Some paragraphing is illogical (1965: 154).

For this possible reason, Eden and Mitchell (1986: 429) advise students to "learn paragraphing as a flexible device which exploits the reader's expectations, which arise from the working of human cognitive processes."

13 Stotsky (1983) reviews research dealing with reading/writing relationships. She reports that in almost all of the studies significant gains are made when writing activities are used specifically to improve reading comprehension and recall.
Bibliography

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