CHAPTER 3

TEXTURE, COHESION ANALYSIS AND GENERIC STRUCTURES

3.1.0. Introduction

As stated in Chapter 2, a suitable framework to study genre in this research is one that enables the researcher to find the linguistic resources used within the text that create cohesion and texture. These findings have pedagogical implications as teachers could teach their students to utilise similar cohesive resources and structural devices in their writing of a similar genre. The framework used must also relate cohesion and texture to genre in order to differentiate the distinctive patterns of cohesive and structural resources that may occur with different types of genres.

Cohesion analysis started formally after the publication of Halliday and Hasan’s (1976) book on cohesion in English (Bloor & Bloor, 1997:229). It has developed tremendously since then. Bloor and Bloor (1997) commented that the study of cohesion has now often been connected to specific genres. In other words, cohesion patterns could be seen as distinctive features in the formation of specific genres. By analysing the cohesiveness of a text and the linguistic resources used to create it, the results of the analysis may prove to be useful for pedagogical purposes. Therefore, the aim of this research is to analyse cohesive devices used by a writer to realise his intentions of producing a written essay that could be classified as an instance of the expository genre.
As stated in Chapter 2, the genre theory proposed by Martin (1999a) enables cohesion "to be defined as the set of resources for constructing relations in discourse that transcend grammatical structure". Cohesion in turn is considered as an aspect of the study of texture, which is defined as the process whereby meaning in discourse is channelled into a complete whole instead of breaking apart into all directions. In order to form texture, cohesion needs to collaborate with other text forming resources such as grammar and phonology (Martin, 1999a). Halliday (1994:334) identified both structural and cohesive resources that combine to give texture to a discourse and these resources are deployed in specific ways that vary according to the register or genre of the text.

Texture is also thought to be an aspect of the study of coherence. Martin (1999a) considered coherence as the process of positing a naturalised reading position within texts for both listeners and readers. Through coherence and alongside texture, the understandings and expectations about social context, which a text dynamically construes is enabled. Therefore, coherence involves the realisation of social context within texts through register and genre theory. Texture then is closely related to the generic coherence, which is thought to be the coherence of a text towards the social process of culture (Eggins, 1994). And cohesion is then related to generic coherence through the texture that it creates. In this way, cohesion is seen as another means to realise and construe generic coherence and thus fulfilling the requirement of this research in selecting a suitable genre theory. For that reason, Martin’s model of genre will be used as
the foundational framework for this research. This modular perspective on text organisation will be reviewed and referred to again in the sections below.

To categorise cohesive devices, the author will look at the work of Halliday (1994), Eggins (1994), and Martin (1992, 1999a). The views of these scholars in the systemic-functional school will be described in detail and examples will be given for every type of cohesive devices, which are taken from the text that is being used in this research. Apart from cohesive resource, structural devices that have the ability to create texture, as mentioned by Halliday (1994), will also be reviewed as a method to analyse text in this chapter. In describing schematic structure, which is the generic structure that defines a genre, the theory of Rhetorical Structure or commonly known as Rhetorical Structure Theory developed by Mann, Matthiessen and Thompson (1992) will be incorporated into this study to further explain how cohesive resources are used in relation to generic structure. Lastly, the process of coding clauses of the text will also be briefly explained in the last section of this chapter.

3.2.0. Cohesion

As stated earlier, cohesion is defined as the resources for constructing relations in text that transcend grammatical structure. Halliday and Hasan (1976) listed the inventory of cohesive resources as reference, ellipsis, substitution, conjunction, and lexical cohesion. These are considered as the semantical resources above grammatical structures that could be used as texture forming devices together with structural resources such as Thematic Structure and
Progression, which will be considered later in the section on texture as proposed by Martin (1999a).

Martin (1999a) proposed that the combination or the interaction of cohesion with grammatical structure that creates cohesive harmony and produces a method of development is the ground for studying and analysing texture in text. Martin (1999a) and Eggins (1994) have reconstructed cohesion as a stratum of discourse semantics that includes reference, conjunction, lexical cohesion or ties, and conversation structure. This plane of discourse semantics leaves out substitution and ellipsis as both scholars defined such resources as belonging to the stratum of lexicogrammar. This view on substitution and ellipsis brought forward by Martin (1992; 1999a) and Eggins (1994) will be adopted as the methodological framework of this research. Therefore, the author will only look at cohesion from the discourse semantics stratum and thus leaving out substitution and ellipsis, which has been suggested by Halliday (1994). As for the interaction between cohesion and structural devices at the level of lexicogrammar, due to time constraints and the extensiveness of the method of analysis, this research will only look at the interaction of referential and lexical ties with information flow in clause grammar, in particular with the concept of Theme and Thematic Progression, thus leaving out the study of cohesive harmony, point, and modal responsibility, which belong to the system of texture formation in Martin's model on text organisation.
3.2.1. Reference

Reference is understood as resources for referring to a participant or circumstantial element whereby the identity of such a participant and element is recoverable. A writer or speaker introduces participants and then keeps track of them through the cohesive resource of reference (Eggins, 1994). Whenever a participant is introduced into a text, it can be presented as “new participant” to the text or presumed where the identity of such participant could be retrieved from elsewhere, presuming participants are the ones that create cohesion in the text through the relation of dependency of the presumed participant to its referent. An example is shown below.

1.2.0. Misalnya, di antara 1981 hingga 1989, kadar kematian akibat sakit jantung di Malaysia meningkat daripada 15.3 orang bagi setiap 100,000 orang penduduk kepada 37 orang bagi setiap 100,000 penduduk, bertambah sebanyak 141.8 peratus.

1.3.0. Kemudian pada tahun 1988, sebanyak 5,181 (29.4%) daripada kesemua kematian yang disahkan oleh pihak berkuasa perubatan di Semenanjung Malaysia adalah berpunca daripada penyakit jantung.

The two participants underlined and marked bold in these sentences are in a state of related reference where the identity of the presumed participant Semenanjung Malaysia in clause 1.3.0 could be recovered from the referent Malaysia in 1.2.0.

The identity of a presuming reference item could also be recoverable from a number of different contexts such as a shared cultural context or immediate situational context. A participant or an item in the text is considered homophoric when its identity is retrieved from the general knowledge of a
certain culture. For example, in the sentence below, the identity of the item *Pertubuhan Kesihatan Sedunia* requires certain knowledge of the world in order to recover its identity. Therefore, such an item is considered homophoric in nature.

1.5.0. Pada peringkat antarabangsa pula, laporan *Pertubuhan Kesihatan Sedunia* (WHO) mengesahkan bahawa rata-rata di dunia ini, 12 juta orang mati kerana diserang penyakit jantung dan strok setiap tahun di samping menyebabkan berjuta-juta orang lagi hilang upaya.

In the analysis that will be displayed in the next chapter, homophoric items such as the one above will be labelled like the example given below.

![homophoric](image)

Pertubuhan Kesihatan Sedunia

When we retrieve items from a shared immediate context, such items are referred to as *exophoric* reference.

1.1.0. Peningkatan jumlah pengidap sakit jantung atau kardiovaskular tahun demi tahun jelas membuktikan kebenaran *pernyataan di atas*.

The item *pernyataan di atas* refers to a statement made by the author of the question that generated the essay used in this research. The identity of this item is recoverable by reading the question given, which is considered as knowledge from an immediate or situational context. Exophoric items will be labelled as in the example below.
When the identity of a referent item is retrieved from within the text, such an item is referred to as an endophoric reference. Endophoric items are the ones that create cohesion because these items produce endophoric ties, which form the internal texture of a text (Eggins, 1994). Homophoric and exophoric reference on the other hand, contribute to a text’s situational or cultural coherence. There are different types of endophoric reference such as anaphoric, cataphoric and esphoric. Apart from these 3 main kinds of endophoric reference, there are also others such as comparative reference, bridging reference, whole text reference and locational reference.

A referent that has appeared at an earlier point in a text is considered anaphoric. The anaphoric reference may be located nearby such as in a preceding clause or many pages before. An example of anaphoric reference is given below.

1.2.0. Misalnya, di antara 1981 hingga 1989, kadar kematian akibat sakit jantung di *Malaysia* meningkat daripada 15.3 orang bagi setiap 100,000 orang penduduk kepada 37 orang bagi setiap 100,000 penduduk, bertambah sebanyak 141.8 peratus.

1.3.0. Kemudian pada tahun 1988, sebanyak 5,181 (29.4%) daripada kesemua kematian yang disahkan oleh pihak berkuasa perubatan di *Semenanjung Malaysia* adalah berpunca daripada penyakit jantung.
The item *Semenanjung Malaysia* in clause 1.3.0 refers back to the item *Malaysia* in the preceding clause. Such a relation is displayed in a reference chain as shown in the example below.

```
Malaysia
  anaphoric
Semenanjung Malaysia
```

A referent that has not yet appeared, but provided subsequently is considered as cataphoric. For example, the word *jalan* indicates a presumed referent but the referred item is only introduced in the following nominal group *mengamalkan penjagaan kesihatan*.

5.4.0. Namun begitu, *jalan* yang sebaik-baiknya dilakukan ialah *mengamalkan penjagaan kesihatan sebelum dihinggapi sesuatu penyakit*.

A reference chain of a cataphoric reference will look like this:

```
jalan
  cataphoric
mengamalkan penjagaan
```

When the referent occurs in the phrase immediately following the presuming referent item, it is called esphoric reference. For example:
3.3.0. Sesungguhnya keruncingan begini khususnya dihadapi di kalangan penduduk bandar seperti Kuala Lumpur.

The word bandar could indicate a presumed item but the presumed item is not found in an earlier part of the text. Rather the referent item is found in the following preposition group seperti Kuala Lumpur. The reference chain formed will look like this:

![Reference Chain Diagram]

Comparative reference could operate anaphorically, cataphorically or esphorically. A comparative reference is formed not because the identity of the presumed item is retrievable by prior mentioning of the referent in the text but through the comparison with another item that has been mentioned before. Some examples have been given by Eggins (1994:98):

- Her other problems included …
- Such problems can lead to …
- A different but equally common problem is …
- Something else that was happening to her was …

Another special kind of reference is bridging reference. With a bridging reference, the identity of the presuming item is derived inferentially from an earlier item. An example is given below.
3.6.2. *manusia kota* seperti bandaraya Kuala Lumpur terpaksa berhadapan dengan kesesakan lalu lintas dan cuaca panas.

3.7.0. Kerenah *pengguna-pengguna* jalan raya turut menimbulkan ketegangan dalam diri seseorang.

Though *pengguna-pengguna* was not mentioned before, the identity of this presuming item could be bridged inferentially from another item mentioned earlier, that is *manusia kota*. A bridging reference chain is shown like below in the analysis.

```
manusia
   bridging
   pengguna-pengguna
```

When reference items referred to consist of a sequence of events and actions or a stretch and an entire portion of text, a whole text reference relation is build between the presuming reference item and the portion of the text referred to. In the example below, the presuming reference item *angka-angka yang* diperincikan ini refers to numerical information found in an entire stretch of text ranging from clause 1.2.0 to 1.5.0. This relation is considered as the referencing of an entire text or whole text referencing. An example of the reference chain is shown below.
1.2.0. Misalnya, di antara 1981 hingga 1989, kadar kematian akibat sakit jantung di Malaysia meningkat daripada 15.3 orang bagi setiap 100,000 orang penduduk kepada 37 orang bagi setiap 100,000 penduduk, bertambah sebanyak 141.8 peratus.

1.3.0. Kemudian pada tahun 1988, sebanyak 5,181 (29.4%) daripada kesemua kematian yang disahkan oleh pihak berkuasa perubatan di Semenanjung Malaysia adalah berpunca daripada penyakit jantung.

1.4.0. Mereka yang dimasukkan ke hospital kerana sakit jantung juga meningkat sebanyak 534 peratus yakni 10,190 kes pada 1965 kepada 64,696 kes pada 1989.

1.5.0. Pada peringkat antarabangsa pula, laporan Pertubuhan Kesihatan Sedunia (WHO) mengesahkan bahawa rata-rata di dunia ini, 12 juta orang mati kerana diserang penyakit jantung dan strok setiap tahun di samping menyebabkan berjuta-juta orang lagi hilang upaya.

1.6.0. Kalau berdasarkan angka-angka yang diperincikan ini,

When a reference involves the identification of a location in time or space in a text, it is called locational reference. In the example below, the word kemudian creates a locational reference in time with the preceding clause. In this example, the locational reference is considered endophoric because the time sequence is related to a preceding clause within the text.

1.2.0. Misalnya, di antara 1981 hingga 1989, kadar kematian akibat sakit jantung di Malaysia meningkat daripada 15.3 orang bagi setiap 100,000 orang penduduk kepada 37 orang bagi setiap 100,000 penduduk, bertambah sebanyak 141.8 peratus.

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1.3.0. Kemudian pada tahun 1988, sebanyak 5,181 (29.4%) daripada kesemua kematian yang disahkan oleh pihak berkuasa perubatan di Semenanjung Malaysia adalah berpunca daripada penyakit jantung.

This type of referencing could be shown as the reference chain below.

```
1.2.0.
   ↑
  locational
   ↓
kemudian
```

In order to see how schematic structures phase the reference patterns found within the text of this research, reference chains such as the ones shown above could be used to make a chart that display major reference chains found within a paragraph or a section of the text. An example is shown in Figure 6 in the following page.

The reference patterns of a text could review the major participants within the text and at what point different participants get referred to and how this is related to the functional stages of schematic structure in the text. Reference patterns could also be used to analyse the cohesiveness of a text by identifying how most items are retrieved. Endophoric references create highly cohesive text while exophoric and homophoric references are characteristics of a context-sensitive text such as an exam answer paper. Endophoric are normally utilised in a monologic text while exophoric ties reflect an interactive and face-
to-face context (Eggins, 1994). Reference patterns also play the role in realising textual meanings of a discourse. This provides the link between textures and types of meaning at the discourse-semantic stratum. Types of reference patterns are also said to vary according to the mode, which the text was constructed (Eggins, 1994). This will be discussed further in the following chapter.

<table>
<thead>
<tr>
<th>Clause</th>
<th>Reference Chain</th>
<th>Reference Chain</th>
<th>Reference Chain</th>
<th>Reference Chain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.0</td>
<td></td>
<td></td>
<td>3 (1.1.0)</td>
<td></td>
</tr>
<tr>
<td>1.2.0</td>
<td>exophoric</td>
<td></td>
<td>-nya</td>
<td></td>
</tr>
<tr>
<td>1.3.0</td>
<td>Malaysia</td>
<td>anaphoric</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4.0</td>
<td>Semenanjung</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5.0</td>
<td>Malaysia</td>
<td>exophoric</td>
<td>dunia ini</td>
<td></td>
</tr>
<tr>
<td>1.6.0</td>
<td>anaphoric</td>
<td>anaphoric</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(7.1.0)</td>
<td>Malaysia</td>
<td>anaphoric</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>seluruh dunia</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Malaysia</td>
<td></td>
<td>dunia</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 6**
Major Reference Chains for Paragraph 1 (P1)

3.2.2. **Lexical Relations**

The cohesive resource of lexical relations refers to how open-class lexical items such as nouns, verbs, adjectives, and adverbs, and event sequences such as
chains of clauses and sentences relate to each other to form an area of focus or a
topical development. The analysis of lexical relations systematically describes
how words are related to one another in a text, and how clusters of such words
that are related build lexical strings, which are important in creating cohesion
within a text (Eggins, 1994).

There are two main kinds of lexical relations, namely taxonomic lexical
relations and expectancy relations. Taxonomic lexical relations are formed when
a lexical item relates to another through the relations of class/sub-class (sakit-
sakit jantung) or part/whole (dunia-Malaysia). Normally taxonomic relations
refer to people, places, things, and qualities that are expressed in nominal groups,
but sometimes, taxonomic relations could also be developed between processes
of verbal groups (bawa-junjung/bimbit). Expectancy relations are predictable or
expected relations between processes and the doers or the ones affected by these
processes (kerunsingan-meruncing). Expectancy relations enable the linkage
between verbal groups with nominal groups.

Taxonomic relations could be broken down into two major relations,
namely classification and composition. Classification is the relationship
between a superordinate term with its members, or hyponyms (Eggins, 1994).
Classification could be seen as the relation between x that is a type of y. For
instance, sakit jantung (x) is a type of penyakit (y) therefore sakit jantung is a
hyponym of the superordinate penyakit. The relation between a hyponym and its
superordinate could be shown with a lexical chain as shown below.
There are three main kinds of classification relations. **Co-hyponomy** is the relation between two lexical items where both lexical items are the members of a superordinate class. For example, *sakit jantung* and *darah tinggi* are both hyponyms for the superordinate *penyakit*. Thus, *sakit jantung* and *darah tinggi* are related through co-hyponomy relation because both are members of the superordinate *penyakit*. The relation can be shown in the lexical chain below.

**Contrast** relation refers to two or more lexical items used in a text that are linked through a contrasting relationship. For instance, *tempat kerja* is in an antonymy relationship with *rumah*. The relation of contrast is shown in the lexical chain below.

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Similarity is the third main kind of classification relations. Similarity is realised when two or more items expressed similar meanings. This relation could be divided into two main types. Synonymy is formed when two items restate each other. For example, sakit jantung is a synonym for kardiovaskular. This can be shown in a lexical chain.

Repetition refers to the relation when a lexical item is simply repeated or reproduced with affixation that does not change the root meaning of the item. For example, meningkat is considered as the repetition of peningkatan with a slight difference in the grammatical grouping due to affixation. This relation is shown as a lexical chain below.

Composition, which is the second main type of lexical relation, refers to the part/whole relationship between lexical items. There are two possible types of composition relation, namely meronymy and co-meronymy. Meronymy is the
relation between two lexical items where one item is the part of another item that constitutes the whole. For example, tahun is the whole and the specific years like 1981 and 1989 are parts of such a whole. Both lexical parts that constitute the whole are considered to be co-meronyms as both are parts belonging to a common whole. This relation is illustrated as a lexical chain below.

```
<table>
<thead>
<tr>
<th>tahun</th>
</tr>
</thead>
<tbody>
<tr>
<td>mer</td>
</tr>
<tr>
<td>1981</td>
</tr>
<tr>
<td>co-mer</td>
</tr>
<tr>
<td>1989</td>
</tr>
</tbody>
</table>
```

The second main type of lexical relations, apart from taxonomic relations, is expectancy relation. Such relations may operate between a nominal element and a verbal element. The relation may be between an action and a typical doer of that action (ayam/berkokok) or between an action/process and the typical participant affected by the action (baca/buku). The relation between an event/process and the expected typical location may also be considered as an expectancy relation (rawatan/klinik). Expectancy can also capture "the relationship between individual lexical items and the composite, predictable, nominal group they form" (Eggins, 1994). For example, penderma/darah is a nominal group formed by two individual lexical items with a predictable or expected relation. Martin describes this as nuclear relations of activities that utilises Halliday's general logico-semantic relations of expansion through

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elaboration, extension, and enhancement to produce a more abstract level of interpretation (Martin, 1992). For example, sakit jantung is a nominal group (thing = classifier) that is formed by the logico-semantic relations of elaboration whereas darah tinggi (thing + epithet) is expanded through extension. Gerai di tepi jalan (thing * qualifier) is a nominal group that is formed through the logico-semantic relations of enhancement. All these nominal groups are treated as a single item and they are labelled like the examples given below.

sakit = jantung  
darah + tinggi  
gerai * di tepi jalan

Lexical relations in a text are displayed through lexical strings. Single examples have already been shown while discussing about types of lexical relations. Figure 7 shows the diagram of major or main lexical strings found in the text used for this research. The description of lexical strings allows the analyst to understand what is being talked about because each major lexical string indicates a topic or part of a topic. Lexical strings also allow the researcher to quantify the number of major lexical strings and observe the patterns of these major strings. These patterns may show that lexical strings are simultaneously or sequentially created by the author of a text to indicate the importance of certain topic. The ending of a lexical strings change the topic of focus and this may be related to the functional staging of genres. The displaying of lexical strings gives the analyst the opportunity to identify the kinds of lexical relations that are used in the text. The observation of lexical relations enables the researcher to describe the experiential meanings being realised in the text and thus providing the link
between the two levels of texture and meaning in the stratum of discourse-semantic. Lexical choices are also related further up to the register variable of field. The different fields unveil different usage of lexical relations and produce various depths of taxonomic relations.

<table>
<thead>
<tr>
<th>Clause</th>
<th>Lexical Strings 1</th>
<th>Lexical Strings 2</th>
<th>Lexical Strings 3</th>
<th>Lexical Strings 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.0</td>
<td>sakit = jantung</td>
<td>syn</td>
<td>tahun</td>
<td>rep</td>
</tr>
<tr>
<td></td>
<td></td>
<td>kardiovaskular</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2.0</td>
<td>sakit = jantung</td>
<td>orang</td>
<td>1981</td>
<td>Malaysia</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.0</td>
<td>penyakit = jantung</td>
<td>rep</td>
<td>1988</td>
<td>Semenanjung</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mer</td>
<td></td>
<td>Malaysia</td>
</tr>
<tr>
<td>1.4.0</td>
<td>Sakit = jantung</td>
<td>rep</td>
<td>1965</td>
<td>mer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>co-mer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5.0</td>
<td>penyakit = jantung</td>
<td>orang</td>
<td>tahun</td>
<td>dunia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>rep</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>orang</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6.0</td>
<td>sakit = jantung</td>
<td>rep</td>
<td></td>
<td>Malaysia</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>dunia</td>
</tr>
</tbody>
</table>

**Figure 7**
Major Lexical Strings for P1

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3.2.3. Conjunctive Relations

A writer creates logical relationships between the parts of a text through the manipulation of conjunctive relations. There are three main types of conjunctive relations, which are elaboration, extension, and enhancement. Elaboration refers to the relationship between two parts of a text whereby one part restates or clarifies another part of the text. For example, the two sentences below are related through the conjunctive relation of elaboration whereby the preceding sentence is restated by the following one. This elaborative relation is realised through the conjunctive adjunct of Misalnya. The elaborative relation could be further defined as an explicit exemplifying appositive relation (Halliday, 1994). It is explicit in nature because the conjunctive relation is expressed explicitly by a conjunction.

1.1.0. Peningkatan jumlah pengidap sakit jantung atau kardiovaskular tahun demi tahun jelas membuktikan kebenaran pernyataan di atas.

1.2.0. Misalnya, di antara 1981 hingga 1989, kadar kematian akibat sakit jantung di Malaysia meningkat daripada 15.3 orang bagi setiap 100,000 orang penduduk kepada 37 orang bagi setiap 100,000 penduduk, bertambah sebanyak 141.8 peratus.

A conjunctive reticulum is used to display the conjunctive relations in a text. The example of given above thus could be displayed as a conjunctive reticulum below. Conjunctive relations could be external, which represents the real world logical relations or internal, that is a writer’s own rhetorical organization of events in his/her text.

<table>
<thead>
<tr>
<th>Internal</th>
<th>Clause</th>
<th>External</th>
<th>Lexical Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>explicit elaboration: appositive exemplification</td>
<td>1.1.0</td>
<td>Misalnya</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.2.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The second type of conjunctive relations is extension. Extension is a relationship of either addition or variation where a sentence adds meanings to another or in the case of variation, changes the meanings of another. In the two sentences below, the conjunctive relation of extension is formed by the adverb juga. This relation is further described as explicit and belonging to the extension relation of addition. This additive relation could be shown in a conjunctive reticulum as before.

1.3.0. Kemudian pada tahun 1988, sebanyak 5,181 (29.4%) daripada kesemua kematian yang disahkan oleh pihak berkuasa perubatan di Semenanjung Malaysia adalah berpunca daripada penyakit jantung.

1.4.0. Mereka yang dimasukkan ke hospital kerana sakit jantung juga meningkat sebanyak 534 peratus yakni 10,190 kes pada 1965 kepada 64696 kes pada 1989.

<table>
<thead>
<tr>
<th>Internal</th>
<th>Clause</th>
<th>External</th>
<th>Lexical Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>explicit extension: additional</td>
<td>1.3.0</td>
<td>1.4.0</td>
<td>juga</td>
</tr>
</tbody>
</table>

The third type of conjunctive relations is enhancement, which refers to the ways a sentence could use to extend the meanings of another. Meanings could be extended or enhanced through the dimensions of time, comparison, cause, condition or concession. An example of an explicit enhancement relation is given below. The usage of the temporal conjunction kemudian creates an explicit enhancement relation that could be further detailed as a general temporal enhancement. This relation is again shown as a conjunctive reticulum to better the description of such relationship.
1.2.0. Misalnya, di antara 1981 hingga 1989, kadar kematian akibat sakit jantung di Malaysia meningkat daripada 15.3 orang bagi setiap 100,000 orang penduduk kepada 37 orang bagi setiap 100,000 penduduk, bertambah sebanyak 141.8 peratus.

1.3.0. *Kemudian* pada tahun 1988, sebanyak 5,181 (29.4%) daripada kesemua kematian yang disahkan oleh pihak berkuasa perubatan di Semenanjung Malaysia adalah berpunca daripada penyakit jantung.

<table>
<thead>
<tr>
<th>Internal</th>
<th>Clause</th>
<th>External</th>
<th>Lexical Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>explicit enhancement:</td>
<td>1.2.0</td>
<td></td>
<td><em>Kemudian</em></td>
</tr>
<tr>
<td>temporal-general</td>
<td>1.3.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The analysis of conjunctive relations allows the analyst to know what kind of logical relations is formed within the text, whether it is of elaboration, extension or enhancement. The analysis also allows the analyst to understand major conjunctive relations that structure the text. Apart from this, the analysis will show whether the logical relations derive from an external or an internal organization of text. Different derivation of logical relations from external or internal sources is related to different genres. Narratives that emphasize sequential presentation of events may prefer external logical organization whereas persuasive expository genres may utilise more of internalised organization. Lastly, the analysis will also inform the analyst of the explicitness of the conjunctive relations used in the text, whether listeners and readers are left to their own to determine the logical organization or they are guided explicitly by the author of the text at crucial stages of the text. Therefore, using conjunctive
relations to form logical organization is also facilitated by the functional stages or generic structures of the genre in which the text belongs.

Conjunctive relations reveal information about two semantic dimensions of text. External conjunctive relations reveal experiential meanings and internal conjunctive structures on the other hand realize textual meanings, which in turn show how a text is organized as a rhetorical event (Eggins, 1994). Because of this capability to express double dimensions of meanings, conjunctive relations are related to two aspects of situational context. Conjunctive relations are linked to the field and mode aspects of the register system. Internal conjunctive structures are related to the mode of a text and the field aspect of it is linked to external conjunctive relations. The entire conjunctive reticulum for Paragraph 1 (P1) is shown in Figure 8.

<table>
<thead>
<tr>
<th>Internal</th>
<th>Clause</th>
<th>External</th>
<th>Lexical Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>explicit elaboration:</td>
<td>1.1.0</td>
<td></td>
<td>Misalnya</td>
</tr>
<tr>
<td>appositive exemplification</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>explicit enhancement:</td>
<td>1.2.0</td>
<td></td>
<td>Kemudian</td>
</tr>
<tr>
<td>temporal-general</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>explicit extension:</td>
<td>1.3.0</td>
<td></td>
<td>Juga</td>
</tr>
<tr>
<td>additional (+)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>explicit extension:</td>
<td>1.4.0</td>
<td></td>
<td>pula</td>
</tr>
<tr>
<td>addition (+)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>explicit enhancement:</td>
<td>1.5.0</td>
<td></td>
<td>Kalau</td>
</tr>
<tr>
<td>causal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.6.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 8
Conjunctive Reticulum of P1

64
3.3.0. Structural Devices

Apart from cohesive resources, certain structural devices at clause level also collaborate to build texture within text. Halliday (1994) considered thematic structure as an example of such device. Another structural resource that forms texture is the progression of information in the thematic structure. These two devices will be explained further in the sections below.

3.3.1. Thematic Structure

Theme has to do with the particular angle a person takes to develop the content of a text. Theme is realised by putting the clause constituent that plays a major role in the development of the text first or in the initial position of the clause. Thus, theme is often referred to as a point of departure that reflects discourse patterns relevant to the structure of paragraphs and texts as a whole (Martin, 1989). The rest of the message within the clause is termed as Rheme, which is presented against the background of the theme or point of departure of the clause (Martin, Matthiessen & Painter, 1997). There are three types of theme: textual, interpersonal and topical.

3.3.2. Textual Theme

Textual themes usually constitute the first part of the theme and they normally come before interpersonal themes (Martin, Matthiessen & Painter, 1997). A textual theme relates the clause conjunctively to what has gone before (Martin, 1989). In a textual theme, prominence is given to textual elements with a linking function. Two types of textual elements are taken into consideration in
this research. The first type is structural conjunctions such as *dan, sementara,* etc. These structural conjunctions link two clauses in a coordinating relation or marking a clause as dependent upon another. The second type of textual elements is conjunctives. These textual elements provide a cohesive link back to previous discourse. Some examples are *kemudian, misalnya, oleh sebab itu* etc. Conjunctives sometimes are not considered as thematic depending on initial location within a clause criterion. That means conjunctives are not thematic when they do not occur at the initial position of the clause that marks them as thematic. An example of textual theme in a clause is shown below.

<table>
<thead>
<tr>
<th>Clause</th>
<th>Textual Theme</th>
<th>Interpersonal Theme</th>
<th>Marked Topical Theme</th>
<th>Unmarked Topical Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2.0</td>
<td>Misalnya</td>
<td></td>
<td>di antara 1981 hingga 1989</td>
<td></td>
</tr>
<tr>
<td>1.3.0</td>
<td>Kemudian</td>
<td></td>
<td>pada tahun 1986</td>
<td></td>
</tr>
</tbody>
</table>

3.3.3. Interpersonal Theme

There are at least five kinds of interpersonal elements which occur in the interpersonal theme. For the purpose of this research, only two types are examined. There are what is referred to as the Finite in SFL and adjuncts, typically an adverb. The finite elements are normally realised by an auxiliary verb such as *perlu, masih,* dapat etc. Adjuncts positioned as interpersonal themes mostly provide the interpersonal elements of an author or speaker such as comments, assessments or attitudes. An example of this kind of interpersonal theme is given below.
<table>
<thead>
<tr>
<th>Clause</th>
<th>Textual Theme</th>
<th>Interpersonal Theme</th>
<th>Marked Topical Theme</th>
<th>Unmarked Topical Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3.0</td>
<td><em>Sesungguhnya</em></td>
<td></td>
<td>kerencingan begini</td>
<td></td>
</tr>
<tr>
<td>6.5.0</td>
<td><em>Mungkin barangkali</em></td>
<td></td>
<td></td>
<td><em>merek</em></td>
</tr>
</tbody>
</table>

3.3.4. Topical Theme

A topical theme realises the aspect of field that has been determined for development within a text (Martin, 1989). Thus, a topical theme realises the ideational or experiential part of the metafunctions. Topical theme is the element of the clause that has some representational or experiential meanings. It might be a participant, circumstance or even a process in the transitivity structure. Examples are shown below.

<table>
<thead>
<tr>
<th>Clause</th>
<th>Textual Theme</th>
<th>Interpersonal Theme</th>
<th>Marked Topical Theme</th>
<th>Unmarked Topical Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2.0</td>
<td><em>Misalnya</em></td>
<td></td>
<td><em>di antara 1981 hingga 1989</em> (circumstance)</td>
<td></td>
</tr>
<tr>
<td>2.2.0</td>
<td></td>
<td></td>
<td></td>
<td><em>Fenomena seperti ini</em> (participant)</td>
</tr>
<tr>
<td>4.5.0</td>
<td></td>
<td></td>
<td><em>Ada</em> (process)</td>
<td></td>
</tr>
</tbody>
</table>

Topical theme may either be marked or unmarked depending on how common it is for a clause constituent to be moved to the initial position. An unmarked theme is the first topical element of a declarative clause that also functions as the subject of the clause. This positioning of the topical element is considered to be without prominence and thus the label of being unmarked. The participant
Fenomena seperti begini in clause 2.2.0 above is the first topical element that is also functioning as the subject of the clause and therefore considered unmarked, that is without special prominence. However, when the topical theme of a declarative sentence such as clause 1.2.0 above is not the subject, it displays a greater textual prominence (Martin, Matthiessen and Painter, 1997). The prepositional group di antara 1981 hingga 1989 is the circumstantial topical element that is not functioning as the subject of the clause and thus obtaining the status of a marked theme.

3.3.5. Thematic Progression

Thematic progression is a term introduced by linguists who developed the theory of language called Functional Sentence Perspective. One of these linguists, Daneš, "demonstrated that the organization of information in texts is determined by the progression in the ordering of themes" (Nwogy & Bloor, 1991). According to Daneš, there are four major types of thematic progression patterns that occur in a text, namely simple linear thematic progression, constant thematic progression, derived thematic progression and split-rheme thematic progression. Written discourse is organised in terms of thematic progression and patterns of thematic progression are sensitive to factors such as purpose, audience, and context (Nwogy & Bloor, 1991). The understanding of these factors could account for the various patterns of thematic progression found within a text. Thus, the expository genre may have different patterns of thematic progression to organise information within a text compared to the narrative genre.

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3.3.6. Simple Linear Thematic Progression

This type of thematic progression is one of the most elementary patterns used in a text. Simple linear progression occurs when information found in the rheme section of a clause becomes the theme or thematic information in the following clause. This type of progression could be illustrated in Figure 9.

3.3.0 Theme A
Sesungguhnya
keruncingan bengini

Rheme A
khususnya dihadapi di
kalangan penduduk
bandar seperti Kuala Lumpur.

Simple Linear

3.4.1 Rheme A = Theme B
Hidup manusia di bandar

Rheme B
menjadi terkejar-kejar

Figure 9
Simple Linear Thematic Progression

3.3.7. Constant Thematic Progression

The constant thematic progression refers to the continuous sharing of a common theme in each clause. Common theme may be reiterated through repetition of the same words, through synonyms or by nominalizations. Synonyms and nominalizations help to preserve a continuous theme while avoiding mere simple lexical repetition to create cohesion in written text (Eggins, 1994). An example of a constant theme is shown in Figure 10.
3.3.8. Derived Thematic Progression

Derived thematic progression is shaped when themes from clauses are derived from a hyper theme of a paragraph or text section. Usually meaning rather the form provides the cohesive link between the hyper theme and themes derived from it. An example is given below in Figure 11.

**Figure 10**
Constant Thematic Progression

### 1.1.0 Theme A
Peningkatan jumlah pengidap sakit jantung atau kardiovaskular tahun demi tahun

**Rheme A**
Jelas membuktikan kebenaran pernyataan di atas.

### 1.2.0 Theme B

**Rheme B**
Kadar kematian akibat sakit jantung di Malaysia meningkat daripada 15.3 orang bagi setiap 100,000 orang penduduk kepada 37 orang bagi setiap 100,000 penduduk, bertambah sebanyak 141.8 peratus.
3.3.9. Split Rheme Thematic Progression

The split rheme pattern of progression occurs when the rheme of a clause has two components. Each component is developed as a theme in the subsequent clauses. An example is given below\(^1\).

![Split Rheme Pattern Diagram]

4.1.0 Theme A
Sakit jantung

Split Rheme Pattern

<table>
<thead>
<tr>
<th>Rheme A + berpunca</th>
<th>Rheme B daripada pengamalan makanan yang tidak seimbang</th>
</tr>
</thead>
<tbody>
<tr>
<td>Derived</td>
<td></td>
</tr>
</tbody>
</table>

4.2.0 Rheme B = Theme B
Yang dimaksudkan dengan makanan yang tidak seimbang

<table>
<thead>
<tr>
<th>Rheme B ialah tidak meliputi kesemua bahan makanan yang diperlukan untuk kesehatan badan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Derived</td>
</tr>
</tbody>
</table>

4.3.0 Theme C
Dapat dikatakan

<table>
<thead>
<tr>
<th>Rheme A = Rheme C + bahawa punca segala penyakit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rheme B = Rheme D adalah disebabkan oleh makanan yang diambil oleh seseorang</td>
</tr>
</tbody>
</table>

**Figure 11**
Split Rheme Thematic Progression

3.4.0. Method of Development

Martin (1999a) believes that the interaction of cohesion at discourse semantics stratum with grammatical structures at the lexico-grammar level is able to create cohesive harmony and a method of development. Together with

\(^1\) This example contains theme and rheme patterns that have not been mentioned before in previous SFL literatures. New terms that are coined by the author will be explained in Chapter 4.
conjunctions and modal responsibilities, these interactions provide the resources for texture formation as shown in Figure 12.

Figure 12
Martin's Modular Perspective on Text Organization
For the purpose of this research, cohesion through ideation, identification and conjunction, and the interaction between identification and ideation with thematic structure and progression that forms the method of development for the text will be analysed to understand how texture is realised in an expository genre. The method of development simply refers to how ideation and identification interacts with information flow through thematic structure and progression. Thus lexical strings and reference chains will be combined with the analyses of theme structure and thematic progression in order to comprehend the method of development chosen by an author to create texture in an expository genre.

3.5.0. Exposition Structure and Rhetorical Structure Theory (RST)

Martin (1989) has proposed that expository genre could be divided into two main types. Hortatory exposition functions to persuade a reader to accept and perform the thesis proposed within the text where else analytical exposition purposes to influence readers that they may receive positively the thesis proposed. Normally hortatory exposition is spoken or written as such that it contains characteristics of spoken language. Analytical exposition could be found typically in lectures, seminars, tutorials, scholarly papers, essay writing, and examination answers (Martin, 1989). Thus, the text used in this research could be considered an example of an analytical exposition. But, as stated by Rothery (1994) in Chapter 2, generic blends or the blending of genres within one text often happen. Therefore, it will not be surprising to find that both characteristics of hortatory exposition and analytical exposition within the text used as corpus for this dissertation.
Martin (1999b) suggested that the generic structure or the schematic structure of exposition genre could be expressed as shown in Figure 13.

![Expository Structure Diagram](image)

**Figure 13**
Expository Structure (Martin, 1999b)

What Martin has proposed could be complemented with the rhetorical functions or relations found in Rhetorical Structure Theory. Relational Structures are structures expressing the organization of coherent contiguous text (Mann, Matthiessen and Thompson, 1992). However, because RST does not attempt to incorporate accounts of either genre or syntax, therefore it needs the theoretical framework of genre proposed by SFL linguists. RST believes that text is organised by functionally significant parts called text spans that combine to form larger parts or the whole text. The usefulness of RST in this research is that it provides the information needed to show how the phasing of unit or text span or relational structures may reflect the intervention of social processes or genres.
upon the text structure that is trying to construe such social context from which it
derives (Mann, Matthiessen and Thompson, 1992). Relational structures found in
RST will be elaborated in Chapter 4 in relation with cohesive and structural
resources that are used to form texture.

3.6.0. Data Encoding

Clauses within the text used as corpus in this research are encoded
systematically according to the number of the paragraphs they exist in. The first
number in a clause numbered as 1.6.1 tells the information of the paragraph
where the clause is to be found. The second number encodes the sequence of the
clause within the paragraph. Thus, the number 6 refers to clause number six in
paragraph 1. The last number reveals the number of the coordinated or dependent
clause found within the clause complex. Therefore, the number 1 in the example
above shows that clause number six in paragraph 1 is a clause complex that
consists of two clauses. This coding system will be utilised in the entire analysis
of the text used in this research.

In this research, the corpus consists of only a single but complete text.
The reason for using only a single text is that the analytical framework developed
by systemic functional linguistics is thoroughly comprehensive that includes
different plane of analysis. Each plane of analysis could be broken into many
separate parts of analysis. This research looks at three different aspects of
analysis at the level of discourse semantics and two other areas in the lower level
of lexicogrammar. Due to the comprehensiveness of the framework, therefore
only a single text is used for the current research, which is considered sufficient given the time constraint and the level of study.