

## **CHAPTER 4**

### **DATA ANALYSIS AND DISCUSSION**

#### **4.0 Introduction**

This chapter presents the findings obtained from an analysis of lexical cohesion, schematic structure and cohesive force of Text 1 and Text 2. The analysis encompasses both a qualitative and quantitative analysis of lexical cohesion and cohesive force. As mentioned in Chapter 3, the analysis is limited to “intersentential” level as proposed by Halliday and Hasan (1976). The lexical cohesion analysis illustrates how semantic relationships are engaged between lexical items. The schematic structure analysis shows how the texts form a pattern of flow from start to finish whilst the analysis of cohesive force reveals the distance created between cohering lexical items in the lexical strings.

## 4.1 Data analysis and findings of Text 1

### 4.1.1 Lexical cohesion analysis

There are 19 lexical strings formed in Text 1. Figure 4.1.1.1 from page 47 to 49 shows an analysis of lexical cohesion of Text 1: 'A Pandora's box of ethical paradoxes'. The lexical strings have been given headings according to the type of lexical items they carry. The strings were also labelled **LS<sub>n</sub>**, where **n** represents the string's numerical order in Figure 4.1.1.1. This procedure was given detailed treatment in section 3.5 in the previous chapter. Each string carries a chain of lexical items that are related to each other through semantic relationships realised on a paradigmatic level of analysis. These semantic relationships are based on the categories of lexical relations proposed by Martin (1981, 1985b & 1992). The lexical relations identified are repetition, synonymy, antonymy, hyponymy, and co-hyponymy. Table 4.1.1.1 on page 47 presents the key representing the headings of lexical strings in Text 1.

Table 4.1.1.1 Key representing the headings of lexical strings in Text 1

Heading	Meaning
Twins (LS 1)	The conjoined twins, Ladan and Laleh Bijani
Physical condition (LS 2)	The twins' physical condition
Separation (LS 3)	The attempt made to separate the twins
Surgery (LS 4)	The surgery performed on the twins
Medical professionals (LS 5)	Medical professionals involved in the surgery
Emotions (LS 6)	Emotions felt by the public pertaining the surgery
Ending life (LS 7)	The act of ending one's life
Qualities (LS 8)	The qualities the twins possessed
Failure and success (LS 9)	Failure and success in the twins' lives
Risks (LS 10)	Risks involved in the surgery
Life and death (LS 11)	Life and death issues involving the twins
Dreams (LS 12)	The dreams the twins had
Success rate (LS 13)	The odds of the surgery being successful
Methods of dying (LS 14)	The ways to end one's life
Religious beliefs (LS 15)	Religious beliefs
Modes of speech (LS 16)	Modes of speech
Venue (LS 17)	The place of the surgery
Miracle (LS 18)	Miracle expected from the surgery
Recent technology (LS 19)	Recent technology in the medical world

Figure 4.1.1.1 The analysis of lexical cohesion in Text 1

Paragraph no.	Sentence no.	Twins	Physical condition	Separation	Surgery	Medical professionals	Emotions	Ending life	Qualities	Failure and success	Risks	Life and death	The dreams	Success rate	Methods of dying	Religious beliefs	Modes of speech	Venue	Miracle	Recent technology
		LS 1	LS 2	LS 3	LS 4	LS 5	LS 6	LS 8	LS 9	LS 10	LS 11	LS 12	LS 13	LS 14	LS 15	LS 16	LS 17	LS 18	LS 19	
1	1	twins	conjoined	separation	operating	team of surgeons														
	2		rep																	
	3			rep	rep	co-hyp	joy													
	4	the				doctor	ant													
	5	twins	Syn	rep	to separate	operation	grieving													
2	5	Bijani																		
	6	twins		physical separation																
	7	the	rep	to separate																
	8	twins	joined																	
	9																			
	10																			
	11	rep	Syn																	
	12																			
	13																			

Key to Figure 4.1.1.1:  
 rep = repetition  
 syn = synonymy  
 ant = antonymy  
 hyp = hyponymy  
 co-hyp = co-hyponymy



Figure 4.1.1.1, continued

Paragraph no.	Sentence no.	Twins	Physical condition	Separation	Surgery	Medical professionals	Emotions	Ending life	Qualities	Failure and success	Risks	Life and death	Dreams	Success rate	Methods of dying	Religious beliefs	Modes of speech	Venue	Miracle	Recent technology
5	14																			
	15																			
	16																			
	17																			
6	18	the twins																		
	19	Ladan and Laleh Bijani																		
7	20																			
	21																			
8	22	the twins																		
	23	the twins																		
	24																			

Key to Figure 4.1.1.1:  
 rep = repetition  
 syn = synonymy  
 ant = antonymy  
 hyp = hyponymy  
 co-hyp = co-hyponymy

Figure 4.1.1.1, continued

Paragraph no.	Sentence no.	Twins	Physical condition	Separation	Surgery	Medical professionals	Emotions	Ending life	Qualities	Failure and success	Risks	Life and death	Dreams	Success rate	Methods of dying	Religious beliefs	Modes of speech	Venue	Miracle	Recent technology
	25	LS 1	LS 2	LS 3	LS 4	LS 5	LS 6	LS 7	LS 8	LS 9	LS 10	LS 11	LS 12	LS 13	LS 14	LS 15	LS 16	LS 17	LS 18	LS 19
	26																			
	27																			
	28																			
9	29																			
	30																			
	31																			
	32																			
10	33																			
	34																			
11	35																			
	36																			
	37																			
	38																			
	39																			
	40																			
	41																			

Key to Figure 4.1.1.1:  
 rep = repetition    hyp = hyponymy  
 syn = synonymy    co-hyp = co-hyponymy  
 ant = antonymy

#### 4.1.2 Explanations on lexical cohesion analysis

The lexical strings in Figure 4.1.1.1 carry information pertinent to the development of topics in Text 1. The 19 lexical strings in Text 1 were given headings according to the lexical items that run through them. The strings were labelled **LSn** for the purpose of clarity.

The first string, LS 1 carries lexical items that are related to the conjoined twins, Ladan and Laleh Bijani. This string is formed of repetitions with lexical items such as *twins*, *the twins* and *Bijani twins* and a synonymy relationship between *the twins* and *Ladan and Laleh Bijani*. LS 1 practically runs through the text because after all, the twins Ladan and Laleh are the main topic in this text. LS 2 carries items like *conjoined* and *joined* forming a synonymy relationship. Next, LS 3 forms a cluster from paragraph 1 to 3 and do not appear anywhere else after that. In this string, lexical items such as *separation*, *to separate*, *physical separation* and *separated* form a repetition relationship.

Next, LS 4 is made up of repetitions with items such as *operating*, *operation* and *to operate* and a synonymy relationship between *operation* and *pre-surgery*. This string extends from paragraph 1 to 7 and runs through the text. LS 5 runs through the text from paragraph 1 to 8 because it is one of the main topics of this text. This string is formed by semantic relationships such as co-hyponymy, hyponymy and repetition whereby *doctor* is a co-hyponym of *team of surgeons*, *surgical team* is the hypernym of *doctor*, *medical practitioners* is the hyponym of *surgical team*,

*surgeons* is the co-hyponym of *medical practitioners* and *doctors* is the co-hyponym of *surgeons*. The following string, LS 6, carries two lexical items; *joy* and *grieving*, which are antonyms. This string does not seem to be significant to the flow of the text as it only appears in paragraph 1 and does not occur anymore after that.

LS 7 consists of items such as *kill* and *terminate*, which form a synonymy relationship with each other. LS 8 also forms a synonymy relationship between *adamant* and *uncompromising*. On the other hand, LS 9 forms an antonymy relationship between lexical items *to achieve* and *not making it*. Next, LS 10 runs through the text from paragraph 3 to 10 and is made up of repetition ties comprising items such as *high risk*, *risks*, *risk* and *risked*. LS 11 weaves through the text from paragraph 3 to 11 and is comprised of antonymy and repetition ties with lexical items such as *death*, *life* and *lives*.

LS 12 carries items such as *dream* and *impossible dream* forming a synonymy relationship. This string occurs from paragraph 2 to 4. The following string, which is LS 13, runs from paragraph 4 to 8 and is made up of the lexical items *possibility*, *odds* and *medical odds*. These items form synonymy ties. The next lexical string is LS 14 where items such as *euthanasia* and *suicides* form an antonymy relationship. LS 15 is made up of a synonymy tie running from paragraph 5 to 11 with lexical items *religious dictum* and *belief systems*.

LS 16, on the other hand, occurs in paragraph 8 and 9 where *suggestion* and *argument* espouse an antonymy relationship. The following string, LS 17, bears a synonymy tie between *Singapore* and *Lion City* occurring in paragraph 8 and 9. LS 18 however is formed with repetition ties carrying items such as *miracle* and *bestower of miracle*. Finally, LS 19 carries two sets of lexical items, which are *contemporary technology* and *test-tube babies, cloning and stem cell technology* occurring in paragraph 9. The next section provides the schematic structure analysis of Text 1.

#### 4.1.3 Schematic structure analysis

The concept of schematic structure has already been explained in Chapter 3. This section proposes to identify the schematic structure of Text 1 and 2. In this analysis, various stages that take place in Text 1 are identified. These stages were found to reflect the stages that are often found in expository texts. Traditionally, the stages found in expositions are introduction, body of paragraphs and conclusion. Table 4.1.3.1 from page 53 to 55 captures the schematic structure that occurs in Text 1 and interpretation to what is taking place in those stages.

Table 4.1.3.1 Schematic structure analysis of Text 1

Stages	Sentence boundaries	Interpretation
Introduction and background to the issue	S 1 – S 4	At this stage, the writer provides the reader with some information regarding the surgery to separate the Iranian conjoined twins, Ladan and Laleh Bijani. She starts by saying that if the surgery had been successful, the surgeons involved might have received a lot of admiration. The researcher is of the opinion that the writer's previous statement was to imply that the surgery on the twins should not have been carried out. The writer also brings the twins' father into the picture who had always held the belief that any operation on his daughters would be fatal. This is a strategy employed by the writer to show that she is not alone in her opinion.
Argument 1	S 5 – S 10	The writer at this stage presents two sides to her argument. She argues that although the twins were adamant about wanting to be separated, their physical condition was too complex for surgeons to tamper with.
Argument 2	S 11 – S 13	At this stage the writer argues that the twins had a 50-50 chance of survival from that surgery. However, the twins went ahead with the surgery. The writer then argues that the surgery probably could be considered at best, as euthanasia.

Table 4.1.3.1, continued

<b>Stages</b>	<b>Sentence boundaries</b>	<b>Interpretation</b>
Argument 3	S 14 – S 17	Here, the writer argues that the surgical team was assisting suicides in performing the surgery. Her argument is based on the idea that life is sacred and should not be taken away until its natural time, which most religious beliefs dictate.
Argument 4	S 18 – S 21	The writer holds the belief that the twins should have been counselled properly on the surgery's risk. She argues that the surgeons' decision to operate knowing the risk was high, was unacceptable.
Argument 5	S 22 – S 28	This stage reveals that the writer thinks that the surgeons might have been pressured by the twins to go ahead with the surgery. Thus, the surgeons might have actually performed a humanitarian act in order to relieve the suffering that the twins might have had.
Argument 6	S 29 – S 32	The writer's argument at this stage is that the twins' decision to go on with the surgery might have been motivated in part by the medical technology that appeared to create miracles. She also argues further saying that the twins felt a certain sense of desperation, which lead them to proceed with the operation.

Table 4.1.3.1, continued

Stages	Sentence boundaries	Interpretation
Argument 7	S 33 – S 34	At this stage, the writer argues for the validity of the surgery considering its high risk. This argument seems to support argument 4.
Conclusion	S 35 – S 41	Here, the writer wraps up her arguments. The <b>thesis statement</b> , which is <b>S 39</b> , appears in this paragraph. The writer takes a stand in the final sentence saying that humans should not be playing God. In other words, it implies we do not have the power or the right to take away a life before its time.

A newspaper commentary such as Text 1 is a type of expository writing. In most expository writing, the writer would normally present the thesis statement in the introductory paragraph. However, the findings from the analysis of schematic structure on Text 1 seem to suggest that it is not the case here. An analysis of the schematic structure of Text 1 reveals that its **thesis statement (S 39)**, which is “**A life is not to be trifled with**” appears in the final paragraph of the text, which is the concluding paragraph. Perhaps, the writer presented the thesis statement in the final paragraph for the following reasons:

- to gradually convince the reader whose initial opinion is in opposition to hers.



- to consolidate her arguments in the reader's mind, thereby reaffirming what her previous arguments conveyed.

#### 4.1.4 Interaction of lexical cohesion and schematic structure

Table 4.1.4.1 presents the interaction of lexical cohesion and schematic structure of Text 1. The lexical strings identified in this text are then plotted in line with the stages they occur in. The findings suggest that five strings: *Twins* (LS 1), *Surgery* (LS 4), *Medical professionals* (LS 5), *Risks* (LS 10) and *Life and death* (LS 11) are primary strings. In other words, they run throughout the text because they carry the main topics that the writer places importance on. *Twins* (LS 1) appears in the Introduction, Argument 1, Argument 4, Argument 5 and Argument 6. *Surgery* (LS 4) appears in the Introduction, and Arguments 1, 2 and 4. *Medical professionals* (LS 5) is found in the Introduction, and Arguments 1, 3, 4 and 5. *Risks* (LS 10) is found in Arguments 1, 4, 5 and 7. Finally, *Life and death* (LS 11) occurs in Arguments 1, 3, 4, 6, 7 and the Conclusion. The rest of the strings are considered secondary in this text because they appear to be more localised. These patterns are outlined in Table 4.1.4.1 on page 57.

Table 4.1.4.1 Interaction of lexical cohesion and schematic structure in Text 1

Stages	Twins	Physical condition	Separation	Surgery	Medical professionals	Emotions	Ending life	Qualities	Failure and success	Risks	Life and death	Dreams	Success rate	Methods of dying	Religious beliefs	Modes of speech	Venue	Miracle	Recent technology
	LS 1	LS 2	LS 3	LS 4	LS 5	LS 6	LS 7	LS 8	LS 9	LS 10	LS 11	LS 12	LS 13	LS 14	LS 15	LS 16	LS 17	LS 18	LS 19
Introduction	x	x	x	x	x	x													
Argument 1	x	x	x	x	x		x	x	x	x	x	x							
Argument 2				x									x	x					
Argument 3					x		x				x			x	x				
Argument 4	x			x	x	x				x	x		x						
Argument 5	x	x			x					x			x			x	x		
Argument 6	x							x		x	x						x	x	x
Argument 7										x	x								
Conclusion											x				x				

#### 4.1.5 Cohesive force analysis

Table 4.1.5.1 from page 59 to 64 displays the analysis of cohesive force between the lexical items in Text 1. A total of 57 ties are found in the analysis of cohesive force. Four kinds of ties were identified. They were:

- i) immediate ties
- ii) remote ties
- iii) mediated ties
- iv) mediated and remote ties

The number of immediate ties found is 6. There are 14 remote ties whilst no mediated tie was found. Finally, there are 37 ties, which are both mediated and remote ties and this appears to be the most favoured type of tie in this text. These ties are outlined in table 4.1.5.1.

Table 4.1.5.1 The analysis of cohesive force in Text 1

Paragraph no.	Sentence no.	Cohesive item	Distance	Presupposed item	Interpretation
1	4	the twins	N.2	twins (S 1)	The item <i>the twins</i> in S 4 presupposes <i>twins</i> in S 1. There are no intermediate references between the two items hence making the tie a remote one.
		to separate	N.2	separation (S 1)	Likewise, the item <i>to separate</i> (S 4) presupposes <i>separation</i> (S 1). The tie is a remote one.
		operation	N.2	operating (S 1)	<i>Operation</i> presupposes <i>operating</i> (S 1). Both items create a remote tie.
		doctor	N.2	team of surgeons (S 1)	The item <i>doctor</i> in S 4 presupposes <i>team of surgeons</i> in S 1. Together, they form a remote tie.
		grieving	0	joy (S 3)	The item <i>grieving</i> however is an immediate tie because it presupposes <i>joy</i> in S 3, which is the immediate preceding sentence.
2	5	Bijani twins	M.1 + N.2	the twins (S 4) → twins (S 1)	<i>Bijani twins</i> in S 5 is mediated by <i>the twins</i> in S 4, presupposes nothing in S 3 and S 2 and refers back to <i>twins</i> in S 1.
		physical separation	M.1 + N.2	to separate (S 4) → separation (S 1)	Likewise, <i>physical separation</i> (S 5) presupposes <i>to separate</i> (S 4), does not presuppose anything in S 3 and S 2 but refers back to <i>separation</i> in S 1.
	6	the twins	M.2 + N.2	Bijani twins (S 5) → the twins (S 4) → twins (S 1)	<i>The twins</i> (S 6) is mediated by <i>Bijani twins</i> (S 5) and <i>the twins</i> (S 4). It presupposes nothing in S 3 and S 2 but then relates back to the original item, which is <i>twins</i> in S 1.
	7	joined	N.4	conjoined (S 1)	On the other hand, the item <i>joined</i> in S 6 coheres with <i>conjoined</i> in S 1 and presupposed nothing in sentences 5, 4, 3 and 2.

Table 4.1.5.1, continued

Paragraph no.	Sentence no.	Cohesive item	Distance	Presupposed item	Interpretation
2	7	to separate	M.2 + N.2	physical separation (S 5) → to separate (S 4) → separation (S 1)	To <i>separate</i> in S 6 is mediated by <i>physical separation</i> (S 5) and to <i>separate</i> (S 4) but does not relate to anything in S 3 and S 2 before referring back to <i>separation</i> in S 1.
		doctor	N.4 + M.1	doctor (S 4) → team of surgeons (S 1)	Doctor in S 7 presupposes nothing in S 6 and S 5. It is then mediated by doctor (S 4) and has no intermediate references in S 3 and S 2 before relating back to <i>team of surgeons</i> in S 1.
3	8	separated	N.3 + M.3	to separate (S 6) → physical separation (S 5) → to separate (S 4) → separation (S 1)	The item <i>separated</i> (S 8) presupposes nothing in S 7. It is mediated by <i>to separate</i> (S 6), <i>physical separation</i> (S 5) and <i>to separate</i> (S 4) before referring back to <i>separation</i> (S 1). In that process, <i>separated</i> (S 8) does not rely on any references in (S 3) and (S 2).
		pre-surgery	N.5 + M.1	operation (S 4) → operating (S 1)	Similarly, <i>pre-surgery</i> (S 8) relates to nothing in sentences 7, 6 and 5 but is mediated by operation in S 4. It presupposes nothing again in S 3 and S 2 before relating back to operating in S 1.
	9	not making it	0	to achieve (S 8)	The clause <i>not making it</i> in sentence 9 presupposes <i>to achieve</i> in sentence 8, which is the immediate preceding sentence. This tie is an immediate tie.
4	12	impossible dream	N.6	dream (S 5)	<i>Impossible dream</i> (S 12) has no reference items in sentences 11, 10, 9, 8, 7 and 6 before referring back to <i>dream</i> in S 5. This is a remote tie.
	13	operation	N.9 + M.2	pre-surgery (S 8) → operation (S 4) → operating (S 1)	Operation (S 13) has no reference items in sentences 12, 11, 10 and 9. It is then mediated by <i>operation</i> in S 4, presupposes nothing in S 3 and S 2 before presupposing <i>operating</i> in S 1.

Table 4.1.5.1, continued

Paragraph no.	Sentence no.	Cohesive item	Distance	Presupposed item	Interpretation
5	14	surgical team	N.10 + M.1	doctor (S 7) → doctor (S 4) → team of surgeons (S 1)	<i>Surgical team</i> (S 14) coheres with <i>team of surgeons</i> in S 1. It is mediated by <i>doctor</i> in S 7 and again in S 4 but presupposes nothing in sentences 13, 12, 11, 10, 9, 8, 3 and 2.
	15	medical practitioners	M.3 + N.10	surgical team (S 14) → doctor (S 7) → doctor (S 4) → surgeons (S 1)	<i>Medical practitioners</i> (S 15) coheres with <i>team of surgeons</i> (S 1). It is mediated by <i>surgical team</i> (S 14), <i>doctor</i> (S 7) and <i>doctor</i> (S 4). <i>Medical practitioners</i> (S 15) does not presuppose any items in sentences 13, 12, 11, 10, 9, 8, 6, 5, 3 and 2.
		suicides	N.1	euthanasia (S 13)	<i>Suicides</i> in sentence 15 refers to <i>euthanasia</i> in sentence 13 but presupposes nothing in sentence 14.
	17	terminate	N.10	kill (S 6)	<i>Terminate</i> (S 17) presupposes nothing from S 16 to S 7 but refers back to <i>kill</i> in S 6. A remote tie is thus created.
		life	N.6	death (S 10)	Likewise, <i>life</i> (S 17) presupposes nothing from S 16 to S 11 but relates back to <i>death</i> in S 10. A remote tie is formed.
6		belief systems	o	religious dictum (S 16)	On the other hand, <i>belief systems</i> (S 17) presupposes <i>religious dictum</i> in its preceding sentence, which is S 16. This forms an immediate tie.
	18	the twins	N.12 + M.4	the twins (S 8) → the twins (S 6) → Bijanti twins (S 5) → the twins (S 4) → twins (S 1)	<i>The twins</i> (S 18) has no reference items from S 17 to S 9, in S 7, S 3 and S 2. However, <i>the twins</i> (S 18) is mediated by <i>the twins</i> (S 8), <i>the twins</i> (S 6), <i>Bijanti twins</i> (S 5) and <i>the twins</i> (S 4) before being referred back to <i>twins</i> (S 1).

Table 4.1.5.1, continued

Paragraph no.	Sentence no.	Cohesive item	Distance	Presupposed item	Interpretation
6	18	high risk	N.8	high risk (S 9)	High risk (S 18) refers to <i>high risk</i> (S 9) but relates to nothing from S 17 to S 10. This tie is a remote tie.
	19	death	M.1 + N.6	life (S 17) → death (S 10)	Death (S 18) refers to <i>death</i> (S 10). At the same time, <i>death</i> (S 18) is mediated by <i>life</i> (S 17) but has no intermediate references from S 16 to S 11.
		Ladan and Laleh Bijani	M.5 + N.12	the twins (S 18) → the twins (S 8) → the twins (S 6) → Bijani twins (S 5) → the twins (S 4) → twins (S 1)	Ladan and Laleh Bijani (S 19) refers to <i>twins</i> (S 1). It is mediated by <i>the twins</i> (S 18), <i>the twins</i> (S 8), <i>the twins</i> (S 6), <i>Bijani twins</i> (S 5) and <i>the twins</i> (S 4). It does not presuppose any items from S 17 to S 9, in S 7, S 3 and S 2.
		risks	M.1 + N.8	high risk (S 18) → high risk (S 9)	Risks (S 19) refers to <i>high risk</i> (S 9). It is mediated by <i>high risk</i> (S 18) and presupposes nothing from S 17 to S 10.
		odds	N.7	possibility (S 11)	Odds (S 19) has no intermediate reference items from S 18 to S 10 and refers back to its original item, <i>possibility</i> (S 11).
7	20	operation	N.15 + M.3	operation (S 13) → pre-surgery (S 8) → operation (S 4) → operating (S 1)	Operation (S 20) coheres with <i>operating</i> (S 1). Its mediating sentences are S 13, S 8 and S 4 carrying items such as <i>operation</i> , <i>pre-surgery</i> and <i>operation</i> respectively. It does not presuppose any items from S 19 to S 14, from S 12 to S 9, from S 7 to S 5 and in S 3 and S 2.

Table 4.1.5.1, continued

Paragraph no.	Sentence no.	Cohesive item	Distance	Presupposed item	Interpretation
7	20	surgeons	N.14 + M.4	medical practitioners (S 15) → surgical team (S 14) → doctor (S 7) → doctor (S 4) → team of surgeons (S 1)	Likewise, <i>surgeons</i> (S 20) coheres with <i>team of surgeons</i> (S 1). It is mediated by <i>medical practitioners</i> (S 15), <i>surgical team</i> (S 14), <i>doctor</i> (S 7) and <i>doctor</i> (S 4). It presupposes nothing from S 19 to S 16, S 13 to S 8, S 6 to S 5 and S 3 to S 2.
		high risk	M.2 + N.8	risks (S 19) → high risk (S 18) → high risk (S 9)	<i>High risk</i> (S 20) refers to <i>high risk</i> (S 9). It is mediated by <i>risks</i> (S 19) and <i>high risk</i> (S 18). It presupposes nothing from S 17 to S 10.
		to operate	M.4 + N.15	operation (S 20) → operation (S 13) → pre-surgery (S 8) → operation (S 4) → operation (S 1)	<i>To operate</i> (S 21) coheres with <i>operation</i> (S 1). It has four mediating items, which are <i>operation</i> (S 20), <i>operation</i> (S 13), <i>pre-surgery</i> (S 8) and <i>operation</i> (S 4). It does not have any intermediate references from S 19 to S 14, S 12 to S 9, S 7 to S 3 and S 3 to S 2.
8	22	the twins	N.14 + M.5	Ladan and Laleh Bijani (S 19) → the twins (S 18) → the twins (S 8) → the twins (S 6) → Bijani twins (S 5) → the twins (S 4) → twins (S 1)	<i>The twins</i> (S 22) refers to <i>twins</i> (S 1). It is however, mediated by sentences that consists of <i>Ladan and Laleh Bijani</i> in S 19, <i>the twins</i> in S 18, <i>the twins</i> again in S 8, <i>the twins</i> once more in S 6, <i>Bijani twins</i> in S 5 and <i>the twins</i> in S 4. <i>The twins</i> (S 22) does not presuppose any items from S 17 to S 9, in S 7, S 3 and S 2.
		doctors	N.15 + M.5	surgeons (S 20) → medical practitioners (S 15) → surgical team (S 14) → doctor (S 7) → doctor (S 4) → team of surgeons (S 1)	<i>Doctors</i> (S 22) refers back to its original item, <i>team of surgeons</i> (S 1). It presupposes nothing from S 19 to S 16, S 13 to S 8, S 6 to S 5 and S 3 to S 2. It is also mediated by items such as <i>surgeons</i> (S 20), <i>medical practitioners</i> (S 15), <i>surgical team</i> (S 14), <i>doctor</i> (S 7) and <i>doctor</i> (S 4).



Table 4.1.5.1, continued

Paragraph no.	Sentence no.	Cohesive item	Distance	Presupposed item	Interpretation
8	23	possibility	N.10 + M.1	odds (S 19) → possibility (S 11)	The item <i>possibility</i> (S 23) coheres with <i>possibility</i> (S 11). It is mediated by odds (S 19) but has no intermediate reference items from S 22 to S 20 and S 18 to S 12.
		argument	o	suggestion (S 22)	<i>Argument</i> (S 23) presupposes <i>suggestion</i> in sentence 22, which is its immediate preceding sentence. Thus, this tie is an immediate one.
	24	the twins	N.15 + M.7	the twins (S 22) → Ladan and Laleh Bijani (S 19) → the twins (S 18) → the twins (S 8) → the twins (S 6) → Bijani twins (S 5) → the twins (S 4) → twins (S 1)	<i>The twins</i> (S 24) refers back to <i>twins</i> in sentence 1. It does not have any presupposing items in sentence 23, 21, 20, 17 to 9, 3 and 2. It does however have mediating items as such; <i>the twins</i> (S 22), <i>Ladan and Laleh Bijani</i> (S 19), <i>the twins</i> (S 18), <i>the twins</i> (S 8), <i>the twins</i> (S 6), <i>Bijani twins</i> (S 5) and <i>the twins</i> (S 4).
		conjoined	N.21 + M.1	joined (S 6) → conjoined (S 1)	<i>Conjoined</i> (S 24) refers to <i>conjoined</i> in S 1 and is at the same time mediated by <i>joined</i> in S6. It does not presuppose anything from S 23 to S 7 and S 5 to S 2.
		doctors	N.16 + M.6	doctors (S 22) → surgeons (S 20) → medical practitioners (S 15) → surgical team (S 14) → doctor (S 7) → doctor (S 4) → team of surgeons (S 1)	<i>Doctors</i> (S 24) refers back to its original item, <i>team of surgeons</i> (S 1). It presupposes nothing from S 23 to S 21, from S 19 to S 16, S 13 to S 8, S 6 to S 5 and S 3 to S 2. It is mediated by items such as <i>doctors</i> (S 22), <i>surgeons</i> (S 20), <i>medical practitioners</i> (S 15), <i>surgical team</i> (S 14), <i>doctor</i> (S 7) and <i>doctor</i> (S 4).

## 4.2 Data analysis and findings of Text 2

### 4.2.1 Lexical cohesion analysis

There are 14 lexical strings formed in Text 2. Figure 4.2.1.1 from page 67 to 68 shows an analysis on lexical cohesion in Text 2: 'Struggle to be free.' The lexical strings were given headings according to the type of lexical items they carry. Each lexical string was labelled **LSn**. The strings in Text 2 carry a chain of lexical items that are related to each other through semantic relationships realised on a paradigmatic level of analysis as shown in Text 1. Like in Text 1, these semantic relationships are based on the categories of lexical relations proposed by Martin (1981, 1985b & 1992). The lexical relations identified are repetition, synonymy, antonymy, hyponymy, co-hyponymy, meronymy, and co-meronymy. Table 4.2.1.1 on page 66 presents the key representing the headings of lexical strings in Text 2.

Table 4.2.1.1 Key representing the headings of lexical strings in Text 2

<b>Heading</b>	<b>Meaning</b>
News (LS 1)	The news of the twins' death
Venue (LS 2)	The place of the surgery
Medical professionals (LS 3)	Medical professionals involved in the surgery
Surgery (LS 4)	The surgery performed on the twins
Nationalities (LS 5)	Nationalities of the twins and the writer
Twins (LS 6)	The twins, Ladan and Laleh Bijani
Physical condition (LS 7)	The twins' physical condition
Emotions (LS 8)	Emotions from the public over the twins' death
Life and death (LS 9)	Life and death issues involving the twins
Success rate (LS 10)	The success rate of the surgery
Norms of religion (LS 11)	The norms performed in most religions
Reactions (LS 12)	Reactions from the public pertaining the surgery
Disability	Issues on being disabled
Growth	The growth on the writer's back

Figure 4.2.1.1 The analysis of lexical cohesion in Text 2

Paragraph No.	Sentence No.	News	Venue	Medical professionals	Surgery	Nationalities	Twins	Physical condition	Emotions	Life and death	Success rate	Norms of religion	Reactions	Disability	Growth	
1	1	news over the radio	LS 1	LS 2	LS 3	LS 4	LS 5	LS 6	LS 7	LS 8	LS 9	LS 10	LS 11	LS 12	LS 13	LS 14
2	2	news over the radio	syn broadcast	Raffles Hospital	medical team	surgically	Ladan and Laleh Bijani	fused together	solemnly and sorrowfully	died	50-50 chance	praying	tributes and praise			
3	3	co-mer	co-mer	mer Lion City	doctors	rep	ant Malaysians	the Bijanis	ant	inner devastated	syn	rep	co-mer	ant		
4	4	the news				never-before attempted surgery	co-hyp	the girls		the women's death	rep		blame and shame	syn		
5	5	rep				syn		rep					scolding	syn		
6	6					operation	Iran	the girls					disability	rep		
7	7	the worst news														
8	8															
9	9															
10	10															
11	11															

Key to Figure 4.2.1.1:

rep = repetition  
syn = synonymy  
ant = antonymy  
hyp = hyponymy  
co-hyp = co-hyponymy  
mer = meronymy  
co-mer = co-meronymy

Figure 4.2.1.1, continued

Paragraph No.	Sentence No.	News	Venue	Medical professionals	Surgery	Nationalities	Twins	Physical condition	Emotions	Life and death	Success rate	Norms of religion	Reactions	Disability	Growth
		LS 1	LS 2	LS 3	LS 4	LS 5	LS 6	LS 7	LS 8	LS 9	LS 10	LS 11	LS 12	LS 13	LS 14
12	12						conjoined twins							disabled	
13	13						rep conjoined twins	independent						rep disabled	
14	14						rep conjoined twins			death			blunt	rep disabled	
15	15						syn conjoined twins the Biganis			ant				rep disabled	
16	16				surgery									rep disabled	
17	17				rep									rep disabled	
18	18				surgically									rep disabled	
19	19			doctors						survival over life	50-50 chance			rep disabled	showed up
20	20														ant
21	21			rep doctors								thank God		disabilities	concoaled
22	22														
23	23														

Key to Figure 4.1.1.1:

rep = repetition  
 hyp = hyponymy  
 syn = synonymy  
 ant = antonymy  
 co-hyp = co-hyponymy  
 mer = meronymy  
 co-mer = co-meronymy

#### 4.2.2 Explanations on lexical cohesion analysis

The lexical strings in Figure 4.2.1.1 describe the organization of topics in Text 2. There are 14 lexical strings in this text. LS 1 stretches from paragraph 1 to 7. This string is formed from synonymy, co-meronymy and repetition relations carrying lexical items such as *news over the radio*, *broadcast*, *the news* and *the woeful news*. The following string, LS 2 carries lexical items such as *Raffles Hospital* and *Lion City* and is found in paragraph 2 and 3. A meronymy tie forms this string.

LS 3 runs through the text from paragraph 2 to 22 and carries lexical items such as *medical team*, *doctor* and *doctors*. Repetition and co-meronymy ties form this particular string. LS 4 runs through the text from paragraph 3 to 22. It carries the lexical items *surgically*, *never-before-attempted surgery* and *operation* formed with semantic relationships, namely repetition and synonymy.

Next, LS 5 occurs from paragraph 3 to 7 consisting of words such as *Iranian*, *Malaysians* and *Iran*. This string is formed with an antonymy and co-hyponymy tie. As we progress with the text, LS 6 begins at paragraph 3 and extends until paragraph 15 with synonymy and repetition ties between items such as *Ladan and Laleh Bijani*, *the Bijanis*, *the girls* and *conjoined twins*. LS 7 is comprised of items such as *fused together* and *independent* and these create an antonymy tie.

LS 8 is found in paragraph 3 and 4. Words like *solemnly* and *sorrowfully* and *devastated* form a meronymy relationship. LS 9 bears

words such as *died*, *the women's death*, *death*, *survival* and *life* forming cohesive ties of synonymy, repetition, antonymy and meronymy. This string occurs from paragraph 3 to 20. LS 10 is formed with a repetition tie for *50-50 chance* and this string extends from paragraph 6 to 19.

The next string is LS 11. It carries lexical items such as *praying* and *thank God* beginning in paragraph 6 and ending in paragraph 21. LS 12 starts in paragraph 7 and ends in paragraph 14 bearing phrases like *tributes and praise*, *blame and shame* and words like *blunt*. This string is formed with both an antonymy tie and a synonymy tie. As we progress with the text towards the end, we find LS 13 extends from paragraph 11 to 20 with items such as *disability*, *disabled* and *disabilities*. This string is made up of repetitions. Finally, LS 14 forms an antonymy tie as words like *showed up* and *concealed* are opposite in meaning. This string occurs from paragraph 18 to 21. The next section presents the schematic structure analysis in Text 2.

#### 4.2.3 Schematic structure analysis

Table 4.2.3.1 from page 71 to 72 captures the schematic structure that occurs in Text 2 and interpretation of what is happening in those stages.

Table 4.2.3.1 Schematic structure analysis of Text 2

<b>Stages</b>	<b>Sentence boundaries</b>	<b>Interpretation</b>
Introduction	S 1 – S 3	The writer begins his introduction with an anecdote. He inserts the issue of the Bijani twins' surgery after providing the reader with some information on how he heard the news of their deaths. The reason he does this is probably to gently reel in the reader's attention to read the text further.
Background to the issue	S 4 – S 5	At this stage, the writer expresses his grief upon hearing the news of the twins' death. He dramatizes this feeling more by saying that he had to drive around the block to actually comprehend what had happened to the twins.
Reactions from the public	S 6 – S 10	Here, the writer shares the hope he had about the outcome of the surgery with the reader. He also adds that the twins' decision to go on with the surgery not only reflected their courage but also received a lot of admiration. However, when the surgery resulted in their deaths, many people thought that it should not have been done. The writer also mentions that there were some ethical factors involved in the outcome of the surgery.



Table 4.2.3.1, continued

<b>Stages</b>	<b>Sentence boundaries</b>	<b>Interpretation</b>
Argument 1	S 11 – S 14	At this stage, the writer introduces his first argument. He rhetorically asks whether conjoined twins like Ladan and Laleh Bijani could even be considered as being disabled. In addition, the <b>thesis statement</b> , which is S 14, appears in this paragraph.
Argument 2	S 15 – S 16	The writer argues here that a surgery to 'correct' disabilities such as the case with the Bijani twins could be a form of eugenics, the science to create a better race.
The writer's personal experience	S 17 – S 21	The writer relates the issue of being disabled to his own physical condition. The writer also shares with the reader the fact that he was born with a condition that makes him unable to walk. This perhaps is a strategy to make his previous arguments on the issue of disability stronger.
Conclusion	S 22 – S 23	This stage shows that the writer was glad his family did not decide to rectify his condition when the doctors asked them. He points out that disabled people can still contribute to society while living with their disabilities.

The findings from the analysis of schematic structure on Text 2 shows that the writer is more inclined to use a lot of personal anecdotes before presenting his arguments. His choice of words seems to suggest that he has had a stronger than usual emotional impact from the twins' deaths. Thus, this explains his use of personal anecdotes in the text. The findings from the analysis above also reveal that the **thesis statement (S 14)**, which is **"There were other more blunt questions and comments: is death considered a "better" option than life for conjoined twins and severely disabled people?"** was introduced in Argument 1, not in the introductory paragraph as is usual in most expository writing. This is perhaps a common feature in expository writing such as newspaper commentaries whereby the writer introduces his or her arguments gently throughout the text. Subsequently, a thesis statement is inserted in the body of the text to further support the arguments proposed. This phenomenon was also found in Text 1. However, unlike Text 1 where the thesis statement appeared in the concluding paragraph, the thesis in Text 2 emerged in the paragraph of Argument 1.

#### 4.2.4 Interaction of lexical cohesion and schematic structure

Table 4.2.4.1 presents the interaction of lexical cohesion and schematic structure of Text 2. The findings suggest that four strings: *Medical professionals* (LS 3), *Surgery* (LS 4), *Twins* (LS 6) and *Life and death* (LS 9) are primary strings. They are found to run through the text

carrying the main topics. *Medical professionals* (LS 3) is found in the Introduction, reactions from the public, the writer's personal experience and the Conclusion. *Surgery* (LS 4) occurs in the Introduction, background to the issue, reactions from the public, Argument 2, the writer's personal experience and the Conclusion. *Twins* (LS 6) appears in the Introduction, reactions from the public, Argument 1 and Argument 2. Finally, *Life and death* (LS 9) places itself in the Introduction, reactions from the public, Argument 1 and the writer's personal experience. Other strings in the text are considered as secondary strings since they are more localised and remain clustered at particular areas. These patterns are outlined in Table 4.2.4.1 on page 75.

Table 4.2.4.1 Interaction of lexical cohesion and schematic structure in Text 2

Stages	News	Venue	Medical professionals	Surgery	Nationalities	Twins	Physical condition	Emotions	Life and death	Success rate	Norms of religion	Reactions	Disability	Growth
	LS 1	LS 2	LS 3	LS 4	LS 5	LS 6	LS 7	LS 8	LS 9	LS 10	LS 11	LS 12	LS 13	LS 14
Introduction	x	x	x	x	x	x	x	x	x					
Background to the issue	x			x	x			x						
Reactions from the public	x		x	x	x	x			x	x	x	x		
Argument 1						x	x		x				x	
Argument 2				x		x							x	
The writer's personal experience			x	x					x	x	x		x	x
Conclusion			x	x										

#### 4.2.5 Cohesive force analysis

Table 4.2.5.1 from page 77 to 83 displays the analysis of cohesive force between lexical items in Text 2. Like in Text 1, 4 types of ties were identified, namely immediate, remote, mediated, and both mediated and remote ties. A total of 39 ties are found in the analysis of cohesive force. The analysis also reveals that this text has 8 immediate ties. There are 7 remote ties, whilst mediated ties add up to 6. Finally, there are 18 ties, which are both mediated and remote ties. This type of tie appears to be the most favoured in Text 2.

Table 4.2.5.1 The analysis of cohesive force in Text 2

Paragraph no.	Sentence no.	Cohesive item	Distance	Presupposed item	Interpretation
2	2	broadcast	0	news over the radio (S 1)	The item <i>broadcast</i> (S 2) presupposes <i>news over the radio</i> (S 1), which appears in the immediate preceding sentence. This makes the tie an immediate one.
3	3	Lion City	0	Raffles Hospital (S 2)	Likewise, <i>Lion City</i> (S 3) presupposes <i>Raffles Hospital</i> (S 2), which appears in the immediate preceding sentence. The tie is an immediate one.
		doctors	0	medical team (S 2)	Doctors (S 3) presupposes <i>Raffles Hospital</i> (S 2) that occurs in the preceding sentence. The tie is an immediate one.
4	4	the news	N.1 + M.1	broadcast (S 2) → news over the radio (S 1)	The news (S 4) refers back to <i>news over the radio</i> (S 1). It does not presuppose anything in S 3. However, it is mediated by <i>broadcast</i> (S 2).
		Malaysians	0	Iranian (S 3)	<i>Malaysians</i> (S 4) presupposes an item in its immediate preceding sentence. That item is <i>Iranian</i> (S 3). Together they form an immediate tie.
		devastated	0	solemnly and sorrowfully (S 3)	<i>Devastated</i> (S 4) and <i>solemnly and sorrowfully</i> (S 3) form an immediate tie as well. <i>Devastated</i> (S 4) presupposes <i>solemnly and sorrowfully</i> (S 3), which appears in the immediate preceding sentence.
5	5	never-before-attempted-surgery [sic]	N.1	surgically (S 3)	<i>Never-before-attempted-surgery</i> [sic] (S 5) presupposes <i>surgically</i> (S 3). The former does not presuppose anything in S 4 and S 2.
6	6	the Bijanis	N.2	Ladan and Laleh Bijani (S 3)	<i>The Bijanis</i> (S 6) has a presupposing item, which is <i>Ladan and Laleh Bijani</i> (S 3). At the same time, <i>the Bijanis</i> (S 6) does not presuppose any items in S 5 and S 4.

Table 4.2.5.1, continued

Paragraph no.	Sentence no.	Cohesive item	Distance	Presupposed item	Interpretation
7	7	the woeful news	N.3 + M.3	the news (S 4) → broadcast (S 2) → the radio (S 1)	The clause <i>the woeful news</i> (S 7) refers back to <i>news over the radio</i> in S 1. It is does have any intermediate presupposing referents in S 6, S 5 and S 3. Hence, the tie is a remote one. However, it is also mediated by items such as <i>the news</i> (S 4) and <i>broadcast</i> (S 2).
		operation	N.2 + M.1	never-before-attempted-surgery [sic] (S 5) → surgically (S 3)	Similarly, <i>operation</i> (S 7) and <i>surgically</i> (S 3) form a remote and mediated tie. <i>Operation</i> (S 7) is coherent with <i>surgically</i> (S 3). It presupposes nothing in S 6 and S 4 but is mediated by <i>never-before-attempted-surgery</i> [sic] (S 5).
		Iran	N.2 + M.1	Malaysians (S 4) → Iranian (S 3)	<i>Iran</i> (S 7) and <i>Iranian</i> (S 3) also has a remote and mediated tie. <i>Iran</i> (S 7) refers back to <i>Iranian</i> (S 3) and presupposes no reference items in S 6 and S 5. However, it is mediated by <i>Malaysians</i> (S 4).
		the girls	M.1 + N.2	the Bijanis (S 6) → Ladan and Laleh Bijani (S 3)	<i>The girls</i> (S 7) refers back to its original item, <i>Ladan and Laleh Bijani</i> (S 3). <i>The Bijanis</i> (S 6) mediates <i>the girls</i> (S 7), which does not presuppose anything in S 5 and S 4.
		the women's death	N.3	died (S 3)	<i>The women's death</i> (S 7) does not presuppose anything in S 6, S 5 and S 4 before referring back to <i>died</i> (S 3). This tie is a remote one.
8	8	blame and shame	0	tributes and praise (S 7)	<i>Blame and shame</i> (S 8) refers back to <i>tributes and praise</i> (S 7), which is found in the immediate preceding sentence. Hence, the tie formed is an immediate one.
9	9	doctor	N.5 + M.1	doctors (S 3) → medical team (S 2)	<i>Doctor</i> (S 9) refers to <i>medical team</i> (S 2). It presupposes nothing from S 8 to S 4. However, it is mediated by <i>doctors</i> in S 3.

Table 4.2.5.1, continued

Paragraph no.	Sentence no.	Cohesive item	Distance	Presupposed item	Interpretation
9	9	scathing	M.1	blame and shame (S 8) → tributes and praise (S 7)	Scathing (S 9) presupposes the clause <i>blame and shame</i> (S 8). In order to resolve it, we need to follow this through the occurrence of <i>tributes and praise</i> in S 7. This type of tie is a mediated one.
10	10	surgery	N.4 + M.2	operation (S 7) → never-before-attempted-surgery [sic] (S 5) → surgically (S 3)	Surgery (S 10) does not have any intermediate references in the following sentences: S 9, S 8, S 6 and S 4. This type is called a remote tie. However, <i>surgery</i> (S 10) refers back to surgically (S 3). In order to resolve this, we have to follow through <i>operation</i> (S 7) and <i>never-before-attempted-surgery</i> [sic] (S 5). This type is known as a mediated tie.
12	12	disabled	0	disability (S 11)	Disabled (S 12) presupposes <i>disability</i> (S 11), which appears immediately in the preceding sentence. This type is an immediate tie.
13	13	conjoined twins	0	conjoined twins (S 12)	<i>Conjoined twins</i> (S 13) presupposes <i>conjoined twins</i> (S 12) and since <i>conjoined twins</i> (S 12) appears in the preceding sentence, this tie is an immediate one.
		independent	N.9	fused together (S 3)	<i>Independent</i> (S 13) has no intermediate references from S 12 to S 4 but coheres with <i>fused together</i> in S 3, making this tie a remote one.
		disabled	M.1	disabled (S 12) → disability (S 11)	Disabled (S 13) presupposes <i>disability</i> (S 11). In order to resolve it, we need to follow this through the occurrence of <i>disabled</i> in S 12. This type of tie is a mediated one.
14	14	conjoined twins	M.1	conjoined twins (S 13) → conjoined twins (S 12)	Likewise, <i>conjoined twins</i> (S 14) presupposes <i>conjoined twins</i> (S 12). In order to resolve it, we have to follow through the occurrence of <i>conjoined twins</i> (S 13), thus creating a mediated tie.



Table 4.2.5.1, continued

Paragraph no.	Sentence no.	Cohesive item	Distance	Presupposed item	Interpretation
14	14	death	N.9 + M.1	the women's death (S 7) → died (S 3)	<i>Death</i> (S 14) does not have any intermediate references in the following sentences: S 13, S 12, S 11, S 10, S 9, S 8, S 6, S 5 and S 4. This type is called a remote tie. However, <i>death</i> (S 14) refers back to <i>died</i> (S 3). In order to resolve this, we have to follow through <i>the women's death</i> (S 5). This type is known as a mediated tie.
		blunt	N.4 + M.2	scathing (S 9) → blame and shame (S 8) → tributes and praise (S 7)	<i>Blunt</i> (S 14) does not have any intermediate references in the following sentences: S 13, S 12, S 11 and S 10. This type is called a remote tie. However, <i>blunt</i> (S 14) refers back to <i>tributes and praise</i> (S 7). In order to resolve this, we have to follow through <i>scathing</i> (S 9) and <i>blame and shame</i> (S 8). This type is known as a mediated tie.
15	15	disabled	M.2	disabled (S 13) → disabled (S 12) → disability (S 11)	<i>Disabled</i> (S 14) presupposes <i>disability</i> (S 11). In order to resolve this, we have to follow through the occurrence of <i>disabled</i> (S 13) and <i>disabled</i> (S 12) that form a mediated tie.
		the Bijanis	M.5 + N.6	conjoined twins (S 14) → conjoined twins (S 13) → conjoined twins (S 12) → the girls (S 7) → the Bijanis (S 6) → Ladan and Laleh Bijani (S 3)	<i>The Bijanis</i> (S 15) refers back to its original item, <i>Ladan and Laleh Bijani</i> (S 3). <i>The conjoined twins</i> (S 14), <i>conjoined twins</i> (S 13), <i>conjoined twins</i> (S 12), <i>the girls</i> (S 7) and <i>the Bijanis</i> (S 6) mediate <i>the Bijanis</i> (S 15), which does not presuppose anything in S 11, S 10, S 9 and S 8.
		disabled	M.3	disabled (S 14) → disabled (S 13) → disabled (S 12) → disability (S 11)	<i>Disabled</i> (S 15) presupposes <i>disability</i> (S 11). In order to resolve this, we have to follow through the occurrence of <i>disabled</i> (S 14), <i>disabled</i> (S 13) and <i>disabled</i> (S 12) that form a mediated tie.

Table 4.2.5.1, continued

Paragraph no.	Sentence no.	Cohesive item	Distance	Presupposed item	Interpretation
16	16	surgery	N.9 + M.3	surgery (S 10) → operation (S 7) → never-before-attempted-surgery [sic] (S 5) → surgically (S 3)	Surgery (S 16) does not have any intermediate references in the following sentences: S 15, S 14, S 13, S 12, S 11, S 9, S 8, S 6 and S 4. This type is called a remote tie. However, surgery (S 16) refers back to surgically (S 3). In order to resolve this, we have to follow through surgery (S 10), operation (S 7) and never-before-attempted-surgery [sic] (S 5). This type is known as a mediated tie.
		disabled	M.4	disabled (S 15) → disabled (S 14) → disabled (S 13) → disabled (S 12) → disability (S 11)	Disabled (S 16) presupposes disability (S 11). In order to resolve this, we have to follow through the occurrence of disabled (S 15), disabled (S 14), disabled (S 13) and disabled (S 12) that form a mediated tie.
19	19	doctors	N.14 + M.2	doctors (S 9) → doctors (S 3) → medical team (S 2)	Doctors (S 19) does not have any intermediate references in the following sentences: from S 18 to S 10 and from S 8 to S 4. This type is called a remote tie. However, doctors (S 19) refers back to medical team (S 2). In order to resolve this, we have to follow through doctors (S 9) and doctors (S 3). This type is known as a mediated tie.
		surgically	N.11 + M.4	surgery (S 16) → surgery (S 10) → operation (S 7) → never-before-attempted-surgery [sic] (S 5) → surgically (S 3)	Surgically (S 19) does not have any intermediate references in the following sentences: in S 18, S 17, from S 15 to S 11, S 9, S 8, S 6 and S 4. This type is called a remote tie. However, surgically (S 19) refers back to surgically (S 3). In order to resolve this, we have to follow through surgery (S 16), surgery (S 10), operation (S 7) and never-before-attempted-surgery [sic] (S 5). This type is known as a mediated tie.
		survival	N.13 + M.2	death (S 14) → women's death (S 7) → died (S 3)	Survival (S 19) does not have any intermediate references in the following sentences: from S 18 to S 15, from S 13 to S 8, S 6 to S 4. This type is called a remote tie. However, survival (S 19) refers back to died (S 3). In order to resolve this, we have to follow through death (S 14) and the women's death (S 5). This type is known as a mediated tie.

Table 4.2.5.1, continued

Paragraph no.	Sentence no.	Cohesive item	Distance	Presupposed item	Interpretation
19	19	50-50 chance	N.12	50-50 chance (S 6)	The item 50-50 chance (S 19) has no intermediate reference items from S 18 to S 7 and refers back to 50-50 chance (S 6). This is a remote tie.
20	20	life	M.3 + N.13	survival (S 19) → death (S 14) → the women's death (S 7) → died (S 3)	<i>Life</i> (S 20) refers back to its original item, <i>died</i> (S 3). <i>Survival</i> (S 19), <i>death</i> (S 14) and <i>the women's death</i> (S 7) mediate <i>life</i> (S 20), which does not presuppose anything from S 18 to S 15, S 13 to S 8 and S 6 to S 4.
		disabilities	N.3 + M.5	disabled (S 16) → disabled (S 15) → disabled (S 14) → disabled (S 13) → disabled (S 12) → disability (S 11)	<i>Disabilities</i> (S 20) does not have any intermediate references in the following sentences: from S 19 to S 17. This type is called a remote tie. However, <i>disabilities</i> (S 20) refers back to <i>disability</i> (S 11). In order to resolve this, we have to follow through <i>disabled</i> (S 16), <i>disabled</i> (S 15), <i>disabled</i> (S 14), <i>disabled</i> (S 13), <i>disabled</i> (S 12) and <i>disability</i> (S 11). This type is known as a mediated tie.
21	21	thank God	N.14	praying (S 6)	<i>Thank God</i> (S 21) has no intermediate references from S 20 to S 7, but coheres with <i>praying</i> in S 6, making this tie a remote one.
		concealed	N.2	showed up (S 18)	<i>Concealed</i> (S 21) has no intermediate reference items in S 20 and S 19 and refers back to <i>showed up</i> (S 18). This is a remote tie.
22	22	doctors	N.16 + M.3	doctors (S 19) → doctor (S 9) → doctors (S 3) → medical team (S 2)	<i>Doctors</i> (S 22) does not have any intermediate references in the following sentences: from S 21 to S 20, from S 18 to S 10 and from S 8 to S 4. This type is called a remote tie. However, <i>doctors</i> (S 19) refers back to <i>medical team</i> (S 2). In order to resolve this, we have to follow through <i>doctors</i> (S 19), <i>doctors</i> (S 9) and <i>doctors</i> (S 3). This type is known as a mediated tie.

Table 4.2.5.1, continued

Paragraph no.	Sentence no.	Cohesive item	Distance	Presupposed item	Interpretation
22	22	surgery	N.13 + M.5	<p>surgically (S 19) →  surgery (S 16) →  surgery (S 10) →  operation (S 7) →  never-before-attempted-surgery  [sic] (S 5) → surgically (S 3)</p>	<p>Surgery (S 22) does not have any intermediate references in the following sentences: from S 21 to S 20, in S 18, S 17, from S 15 to S 11, S 9, S 8, S 6 and S 4. This type is called a remote tie. However, surgery (S 22) refers back to <i>surgically</i> (S 3). In order to resolve this, we have to follow through <i>surgically</i> (S 19), <i>surgery</i> (S 16), <i>surgery</i> (S 10), <i>operation</i> (S 7) and <i>never-before-attempted-surgery</i> [sic] (S 5). This type is known as a mediated tie.</p>

### 4.3 Quantitative results of Text 1 and Text 2

#### 4.3.1 Results obtained from lexical cohesion analysis

This section summarizes the findings by providing the frequency counts of lexical cohesive ties obtained. The information is captured in Table 4.3.1.1 for Text 1 while the results for Text 2 are shown in Table 4.3.1.2. Next to the frequency count column, the equivalent percentage of each tie is given. The percentages were arrived at through a manual calculation of the frequency count of a tie divided by the total number of ties before multiplying the arrived figure by 100.

Table 4.3.1.1 Frequency counts of lexical cohesive ties in Text 1

Type of tie	Frequency count	Percentage
Repetition	29	52.73
Synonymy	13	23.64
Antonymy	7	12.73
Hyponymy	2	3.64
Co-hyponymy	4	7.27
Total	55	100.00

Table 4.3.1.2 Frequency counts of lexical cohesive ties in Text 2

Type of tie	Frequency count	Percentage
Repetition	19	48.72
Synonymy	10	25.64
Antonymy	4	10.26
Hyponymy	0	0.00
Co-hyponymy	1	2.56
Meronymy	2	5.13
Co-meronymy	3	7.69
Total	39	100.00

In Text 1, the most favoured tie is repetition and the least favoured is hyponymy. In Text 2, the most favoured tie is repetition whilst the least favoured is hyponymy.

#### 4.3.2 Results obtained from cohesive force analysis

In both Text 1 and 2, the mediated and remote tie is the most favoured whilst the least favoured is the mediated tie in both texts. The frequency counts of these ties are presented in Table 4.3.2.1 for Text 1 and in Table 4.3.2.2 for Text 2. The percentages were obtained through a manual calculation of the frequency count of a cohesive item divided by the total number of cohesive items before multiplying the arrived figure by 100.

Table 4.3.2.1 Frequency counts of ties with cohesive force in Text 1

Distance between cohesive items	Frequency count	Percentage
Immediate	4	10.00
Mediated	0	0.00
Remote	12	30.00
Mediated and Remote	24	60.00
Total	40	100.00

Table 4.3.2.2 Frequency counts of ties with cohesive force in Text 2

Distance between cohesive items	Frequency count	Percentage
Immediate	8	20.51
Mediated	6	15.38
Remote	7	17.95
Mediated and Remote	18	46.15
Total	39	100.00

#### 4.4 Discussion

This research report has set out to investigate the following research questions:

- 1. What is the most favoured type of cohesive tie in the two texts chosen?**

The findings from the lexical cohesion analysis suggest that repetition is the most favoured cohesive relationship in both Texts 1 and 2. This finding is in opposition to the norm of writing in the English language. The English language appears to be repetition "sensitive". Usually, ESL instructors would encourage their learners to vary their use of words when producing essays. This study has pointed out that repetition was highly favoured in Text 1 and Text 2. Therefore, it can be concluded that repetition is a common semantic relation between words in a text. Thus, when ESL instructors acquire the knowledge of how semantic relationships in authentic data are employed, they would be able to liberate themselves from the traditional thinking of writing expositions, where semantic ties are alternated within the text. As a result, ESL learners will adopt the contemporary way of using semantic relationships in their writing, where the frequent use of the repetition is accepted.



## **2. What is the schematic structure of the two texts?**

The schematic structure analysis helps to establish the genre of both texts. Martin (1985a:251) states that "schematic structure represents the positive contribution genre makes to a text: a way of getting from A to B in the way a given culture accomplishes whatever the genre in question is functioning to do in that culture."

The stages in Text 1 are the Introduction and background to the issue, Argument 1, Argument 2, Argument 3, Argument 4, Argument 5, Argument 6, Argument 7 and the Conclusion. Meanwhile, the stages in Text 2 are the Introduction, background to the issue, reactions from the public, Argument 1, Argument 2, the writer's personal experience and the Conclusion.

The thesis statement of Text 1 (S 39) was identified in the concluding paragraph. Meanwhile, the thesis statement of Text 2 (S 14) was found in the paragraph of Argument 1, which lies in the body of Text 2. This finding suggests that expositions such as newspaper commentaries, produced in an authentic setting do not necessarily present the thesis statement in the Introduction. Conversely, expositions such as college essay writing locate the thesis statement in the Introduction.

### 3. What kinds of patterns derive from the interaction of lexical cohesion and schematic structure?

The interaction between lexical cohesion and schematic structure appears to suggest that primary lexical strings run throughout the texts whilst carrying with them essential topics pertinent to the issue being raised by writers of both texts. Meanwhile, the secondary strings appear to form clusters in regional areas in the texts. This phenomenon presents us with a view that the secondary strings carry topics that provide further support to the arguments deployed by the writers.

Interestingly, both texts share four primary strings, namely *Twins*, *Medical professionals*, *Surgery* and *Life and death*. The texts are similar in this way considering the issue being raised concerns ethical and medical issues on the outcome of the surgery performed on the Iranian conjoined twins, Ladan and Laleh Bijani. Since the texts appear to possess similar primary strings, the texts must cohere with their context of situation; a phenomenon already discussed in Chapter 3.

**4. Finally, what is the nature of cohesive force projected between lexical items in the two texts mentioned?**

Finally, the cohesive force analysis suggests that mediated and remote ties are favoured most in both texts. Halliday and Hasan (1976: 331) describe this phenomenon as being "quite typical of both speech and writing, with a tendency for the more informal modes of discourse to be more complex, as they are also in sentence structure."

Furthermore, the findings from Text 1 and 2 suggest that both texts cohere with the genre of newspaper commentaries and their context of situation in terms of field, tenor and mode. The contribution of semantic relationships espoused through lexical cohesion, the organization of schematic structure in the discourse and the distance between presupposing items provide coherent texts that have a social function in the Malaysian society and culture.

In conclusion, Text 1 and 2 were written to be read by the general public. So, the ideas put forward by the writers were concise, straight to the point and persuasive. Furthermore, the writers put forward a thesis statement and try to give explanations to support their stand. So, the words used in the texts were probably chosen with great care to represent the writers' opinion and in order to preserve the originality of the message intended.

#### 4.5 Comparison with other studies done on lexical cohesion

This section provides the similarities and differences derived from a comparison done between the present study and other studies done on lexical cohesion over the years.

In the comparison to Pappas' (1985) study of cohesive harmony and cohesive density in children's oral and written stories, the present study differs from her research from the aspect of the research framework adopted. While Pappas worked on Hasan's (1980) work on cohesive harmony and cohesive density, this study adopted Halliday and Hasan's (1976) cohesion theory and Martin's (1981, 1985b & 1992) lexical network. Pappas executed her research on children's oral and written stories, which fall under the genre of narration whilst the present research was done on expositions from the genre of newspaper commentaries.

Parson's (1991) study on coherence in scientific texts also adopted Hasan's (1980) framework of cohesive harmony like Pappas (1985), which differs from the framework of the present research.

Myers (1991) conducted a study on lexical cohesion in science and popular science texts. He applied Halliday and Hasan's (1976) cohesion model in his analysis such is the case in the present study as well. The findings of his research suggest that repetitions are preferred in scientific texts. This cohesive tie is also found to be favoured most in the texts analysed.

Finally, the present study shares the same theoretical framework that Srinivass (1996) used in her study on lexical cohesion in chemistry texts. She implemented her research design based on Martin's (1981, 1985b & 1992) lexical relations network in order to identify the semantic relationships generated in chemistry texts. Her analysis revealed that repetition is the most favoured tie as in the present study. The findings of this study concur with Srinivass' findings that repetition is the most favoured semantic tie. While Srinivass developed system networks to conceptualise the contents of chemistry texts, the present study unravelled the schematic structures and the cohesive force established between cohesive items in the texts analysed.

#### 4.6 Conclusion

This study has been an attempt to explore lexical cohesion and schematic structures in newspaper commentaries. This study also aspires to make a contribution to the development of more research on the cohesion theory.

This chapter has presented the qualitative and quantitative findings of lexical cohesion, schematic structure and cohesive force analysis on 'A Pandora's box of ethical paradoxes' (Text 1) and 'Struggle to be free' (Text 2). A discussion entailed providing answers to the research questions, which were formulated in Chapter 1. The following chapter acts

as a tie up of what has been presented so far in this research report, thus providing a conclusion to the present study.