CHAPTER I

INTRODUCTION

1.1 Background of the Study

Language is a kind of media used by human being between two parties or more to communicate each other in order to deliver message from the speaker and get the feedback from the hearer of language. Language is also useful for human being to share his or her ideas in having communication messages. Moreover, language is used to have and increase relationship from one region to another region all over the world. In development of language, language is also used to unite any kinds of different ethnic groups, cultures, regions. Then, in beyond development of language, many people concern in learning language because it has many characteristics and styles. Language is very important for us, especially for communication. People communicate with each other by using language whose actual instances can be called as discourse(Sapir, 1958:69).

According to Johnstone (2002:2) discourse is "the actual instances of communication in the medium of language." The term discourse is similar to text. Both of them are used for the wider context (e.g. an article, a book, a novel, conversation, a newspaper, etc) in which a sentence occurs. Sentence is groups a word arranged form coherence sentences. Sentence should have relation with cohesive devices in paragraph of the text.

Sentence occurs such as in a text. A coherent text consists of every sentence. A text is a stretch of language that may be longer than one sentence. Thus text is about

how sentence combines to form texts (Salkie 2001: IX). A good text consists of interrelated sentences. And then the sentences make a text so that the sentences are easily understandable by the readers. Good sentences consist of correlation between words and clauses in the text about cohesion. Cohesion in a text has a function to make part of sentences tie one another. Cohesion in a text will help the reader to understand the whole topic in the article.

Cohesion focuses on the relation of boundaries between sentences rather than within sentence. The researcher chooses cohesion because there are sentence ties with another sentence form to make the readers know cohesion clearly in this research. Beside that cohesion can help the readers understand what the writers say and write about cohesion. Cohesion constitutes part of the system in a language which has a important role in sentence. Every clause of sentence has cohesive meaning and cohesiveness that occurs in the text.

Cohesion is divided into two types namely grammatical cohesion and lexical cohesion. Grammatical cohesion is cohesive devices which help text hang together or be cohesive. The schematic structure of text, in turn provides a text with unity of texture. Texture results from the combination of semantic configuration of two kinds: those of register and those of cohesion. According to Halliday and Hasan (1976:28) those are reference, ellipsis, substitution, and conjunction. Lexical cohesion is relation between clause and main clause of sentence in written text. The researcher chooses lexical cohesion as main topic because lexical cohesion is a study of cohesive element in the text. Every sentence will discuss each clause which has a cohesive meaning. Cohesive meaning occurs in lexical cohesion of written text. There are two basic categories of

lexical cohesion: reiteration and collocation. Reiteration includes repetition or same word, synonym, superordinate, general word and collocation.

The researcher chooses a scientific article as the data of this research. The text consists of some types lexical element in the article. The features of a scientific article should have cohesive devices. It means that the text should be interrelated. The text is scientific article taken from internet by Zeenat F. Zaidi entitled *A Review Gender Differences in Human Brain* by Zeenat F Zaidi. This research paper is categories as written text, a text contain about scientific article. A scientific article is an article that has been peer reviewed which has standard quality and scientific validity. Then this article consists of messages for those who read it. The article tells about the differences gender among women and men based on their experiences about the way of thinking, behavior in stressed situation. The scientific article usually occurs lexical cohesive in relation to clauses in sentences. A scientific article is comprehensive reading material for the readers. The reader who are learning to read, the unified form of the text is very important so they might be able to comprehend within the text easily. The text should be lexical cohesive, it means that the text could be consisted of repeated words, variation words of a text so that it will be more understandable for the readers.

The researcher uses lexical cohesion as research in this thesis entitled Lexical Cohesion Analysis ofthe article *A Review Gender Differences in Human Brain* by Zeenat F Zaidi basis of the textual meaning through cohesion will analyzed. Repetition, Synonymy, Antonymy, Hyponymy, Meronymy, Collocation in lexical cohesion put forth by Halliday and Hasan (1976:274:6) should be applied to the article and analyzed to demonstrate the relevance of the cohesive elements that are present in texts which

contribute to the overall meaning of the text. Understanding how cohesion functions within text to create semantic links could be beneficial for the students of English as a second or foreign language to help “decode” meaning. Beside that, how lexical cohesion can be used to make a coherent text which uses a different word class with a related meaning to get another way of making text hang together, and how super ordinates words and words with a very general meaning are used as cohesive devices.

1.2 Statements of the Problem

In line with the reasons above, the statement of the problem can be stated as follows:

1. What lexical cohesive devices are used in the article *A Review Gender Differences in Human Brain* by Zeenat F. Zaidi?
2. How do lexical cohesive devices make the sentences interrelated?

1.3 Scope of the Study

This study is to identify lexical cohesion. The researcher uses the scientific article *A Review Gender Differences in Human Brain* by ZeenatF.Zaidi. The researcher investigated the article about lexical cohesion analysis. Every kind of texts employs cohesion to achieve the unity and the meaningfulness so do the headline. According to Halliday and Hasan (1976:4), the concept of cohesion is a semantic one. It refers to a relation of meaning that exists within the text, and that defines it as a text. Issues of cohesion can be analyzed, for example, the types of lexical cohesion devices which

can be classified into six types, namely repetition, synonymy, antonymy, hyponymy, meronymy, collocation.

1.4 Objectives of the Study

In line with the research questions above, the objectives of this study are as follows:

1. To find out the types of lexical cohesion in scientific article of *A Review gender Differences in Human Brain by Zeenat F. Zaidi.*
2. To describe how the use lexical cohesive devices interrelated the sentences.

1.5 Significances of the Study

It is hoped that the result of this study can be great contribution to:

1. The researcher

This study can be useful for the researcher because she can get knowledge that she never to learn it.

2. The reader

The reader who reads this thesis can get additional information about lexical cohesion in scientific article.

3. The Student

This research is expected to give additional inputs of science particularly about using lexical cohesion in article *A Review Gender Differences in Human Brain by Zeenat F. Zaidi* and hoped to provide good understanding of how to write a good text in the sense of the language used.

1.6 Thesis Organization

The thesis is composed systematically in order that the readers can read and understand it easily. It is divided into five chapters, and each chapter contains sub chapters.

Chapter one is introduction. It explains background of the study, statement of the study, scope of the study, objective of the study, significance of the study, and thesis organization.

Chapter two is review of related literature. It contains the opinion from the scientists of education or linguist. Those are language as a means communication, Written Language, Text, Cohesion, Types of Cohesion: Grammatical Cohesion and Lexical Cohesion.

Chapter three is research method. This chapter discusses research design, unit of analysis, source of the data, technique of data collection, and technique of data analysis.

Chapter four is data analysis. This chapter explains about data analysis explanation as well.

Chapter five is conclusion and suggestion. It contains conclusion from the data research and suggestion.

CHAPTER II

REVIEW OF RELATED LITERATURE

In this part of review of related literature makes the study clearer and understandable. The researcher employs several theories as the proponent of this research. The theories used here are as follows: language as a means communication, Written Language, Text, Cohesion, Type of Cohesion: Grammatical Cohesion and Lexical Cohesion. The brief exploration about each theory can be seen in sub chapter below:

2.1 Language as a Means of Communication

People use language to communicate with others. It means that language is used as a means of communication. Communication takes place when a move made by a participant gets a response from the other participant. In communication, people use language to convey information and to lead each other toward an interpretation of meanings and intentions. In other words language is used as a medium of communication. In relation to this,Ventola (1979:267) states that:

> Language as a means of communication can be used not only for the transmission of informative messages but also for establishing and maintaining contact between people. Establishing and maintaining social relationships with others are very needed. Everyday people express their social function of language when they interact casually with one another.

From Ventola's statement above there is a fact that language is used as means for people to conduct their social interaction. It is clear that in communication there is an

exchange of meaning among the interactants. They construe their experiences in meaning and communicate it to each other through language. Here, language plays an important role to present the meaning above.

Language as a communication system is thought to be fundamentally different from and of much higher complexity than those of other species as it is based on a complex system of rules relating symbols to their meanings, resulting in an indefinite number of possible innovative utterances from a finite number of elements. Language is thought to have originated when early hominids first started cooperating, adapting earlier systems of communication based on expressive signs to include a theory of other minds and shared intentionality. (Bloomfield, 1949:87)

According to Ulbaek, (1998:30) said that language as a system of communication that enables humans to cooperate. This definition stresses the social functions of language and the fact that humans use it to express themselves and to manipulate objects in their environment. Functional theories of grammar explain grammatical structures by their communicative functions, and understands the grammatical structures of language to be the result of an adaptive process by which grammar was "tailored" to serve communicative needs of its users.

Languages, understood as the particular set of speech norms of a particular community, are also a part of the larger culture of the community that speaks them. Humans use language as a way of signalling identity with one cultural group and difference from others. Even among speakers of one language several different ways of using the language exist, and each is used to signal affiliation with particular

subgroups within a larger culture. Linguists and anthropologists, particularly sociolinguists, ethnolinguists and linguistic anthropologists have specialized in studying how ways of speaking vary between speech communities.(Seboek, 1996:89)

Language can be divided according to their basic assumptions. Some theories are based on the idea that language is so complex that one cannot imagine it simply appearing from nothing in its final form, but that it must have evolved from earlier pre-linguistic systems among our pre-human ancestors. These theories can be called continuity-based theories. The opposite viewpoint is that language is such a unique human trait that it cannot be compared to anything found among non-humans and that it must therefore have appeared fairly suddenly in the transition from pre-hominids to early man (Chomsky, 1955:55).

Austin (1962:10) explained that “language cannot only be used but also tocommit some action”. In addition, American linguist, John B. Carrolasquoted by Ramelan (1992:8) defines language is as follows:

> Language is an arbitrary system of speech sounds or sequences of speech sounds which is used or can be used in interpersonal communication by an aggregation of human beings, and which rather exhaustively catalogs things, processes, and events in the human environment. Moreover, the characteristics of human language according to John B. Carrol.

In a language longer than one sentence makes the other sentence to be a text.Any instance of living language that is playing some part in a context of situation can be called a text.

2.2 Text

The term ‘text’ is quite difficult to define. The word is based on Latin ‘textere’, and suggests a coherent, merged collection of sentence, but this is not really the case. The text is not product of either the conscious or unconscious, intention of an author; nor is its centrality and autonomy evident (Macherey, 1978:154-155). The text is produced in relation to something other. There are, in fact raw materials of literature which form necessary base from which it is produced. Text may be spoken and written, in which it reflect the larger unit of language. *The word text is used in linguistics to refer to any passage, spoken or written, of whatever length, that does form unified whole* (Halliday and Hasan 1976:1). A text is encoded in sentences, which can be distinguished from a random list of sentences.

Text is used in linguistics to refer to any passage, spoken or written, of whatever length, that does form as unified whole. A general rule, whether any specimen of our language constitutes a text or not. A text may be spoken or written, prose or verse, dialogue or monologue. It may be anything from a single proverb to a whole play, from a momentary cry for help to an all day discussion on a committee (Halliday and Hasan, 1976:1).

A text is unit of language in use. It is not a grammatical unit, like a clause or a sentence, and it is not defined by its size. A text is sometimes envisaged to be same kind of super sentence, a grammatical unit that is larger than a sentence but is related to a sentence in the same way that a sentence is related to a clause, a clause to group and so on (Halliday and Hasan, 1976:2).

Text was defined as a unit larger than sentence" (de BeaugrandeandDressler, 1981:23). Language is the important material for the text, as soil for pottery, ink for pen, and the leather for shoes. However, it is necessary to notice that language is different from such other kinds of material. Language is a human artifact and so, it contains cultural in heritance from the speakers of certain language.

A text is a stretch of language which seems appropriately coherent in actual use. That is, the text 'coherent' in its real-world context, semantically and pragmatically, and it is also internally or linguisticallycoherent. For this letter facet, the term 'cohesive' has been applied, referring to the actual forms oflinguistic linkage.

A text is not just a string of sentences. In other words it is not simply a large grammatical unit, something of the same kinds as a sentence but differing from it is size a sort of supersentence. A text is best thought of not as a grammatical unit at all, but rather as a unit of a different kind a semantic unit. The unity that it has a unity of meaning in context, a texture that express the fact that it relates as a whole to the environment in which it is placed (Halliday and Hasan 1976:293). Text is usually distinguished from non-character encoded data, such as graphic images in the form of bitmap s and program code, which is sometimes referred to as being in "binary" (but is actually in its own computer-readable format).

A text has several criteria to fulfill in order to make it understandable and communicative. According to De Beugrande and Dressler as cited in Wahyuningsih, (2007:7), there are seven standard criterian to fulfill, that is textually, namely

cohesion and coherence, which both text-centered, and intentionally, acceptability, informatively, and intertextuality as follows:

1. Cohesion concern the way in which the linguistic items of which a text is composed are meaningfully connected to each other in sequence on the bases of the grammatical rules of languages.
2. Coherence concern the way in which the component of the textual world, are mutually accessible and relevant.
3. Intentionally concern the text producer's intention to produce a cohesive and coherent text that will attain whatever goal she or he planned that it should obtain.
4. Acceptable concern the receiver's wish that the text should be cohesive and coherent and be relevant to him or her.
5. Informative concern the extent to which the occurance of presented text expected with unexpected with unexpected or known with unknown or certain.
6. Situationalyconcern the factors which make a text relevant to a situation of occurance.
7. Intertextuality concern the way in which the use of certain text depend on knowledge of other texts.

Text consists two types are spoken text and written text. In this study only focused on written text.

2.3 Written Text

Written text is something written, especially copied from one medium to another as a type written version of dictation. Writing is representation of language in a text medium through the use of a set of sign or symbols. Writing more particularly, refers to thing writing as a noun, the thing that is written and writing as a verb, which designated the activity of writing. It refers to the inscription of characters on a medium, there by forming words, and larger units of language, known as text. It also refers to the creation of meaning and the information there by generated. In that regard, linguistics and related sciences distinguishes between the written language and spoken language (William, 1999:77-123).

A person who composes a message or story in the form text is generally known as a writer or an author. However, more specific designations exist which are dictated by the particular nature of the text such as that of poet, essayist, novelist, playwright, journalist, and more. A translator is a specialized multilingual writer who must fully understand a message written by somebody else in one language. Writing is also a distinctly human activity. Such writing has been speculatively designated as coincidental. At this point in time, the only confirm writing in existence is of human origin (Frank, 1994:142).

In the scientific article must cohesion devices so that written text hang together.

2.4 Cohesion

The one presupposes the other in the sense that it can not be effectively Cohesion is a semantic property of a text sticking together in some way a cohesive text tends to link its sentences together semantically. This semantic aspect of cohesion has a relation with the reader who interprets the elements in a given co-text depending on the other element within the same co-text. Halliday and Hassan assert that:"Cohesion occurs where the interpretation of some element in the discourse is dependent on that of another. (Halliday and Hassan, 1976:9)

decoded except by resources to it". In fact, the presupposition is an important aspect in cohesion because it extracts the unrelated sentences by the connected one. Thus relations in meaning of any sentence depending on the surrounding elements.

In other words "cohesion refers to the range of possibilities that exist for linking something with what has gone before. Since this linking is achieved through relationship meaning" (Halliday and Hassan, 1976:10). For example: *Wash and core six cooking apples*. *Put them in a fire proof dish*.The item *them* in the second sentence refers back to(is anaphoric to)*sixcooking apples* in the first sentence. In this, since we cannot understand the second sentence, so that we interpret them as a whole; the two sentences together constitute a text. That is to say, *them* is an item to which it facilitates the reader's understanding of the relation between sentences in the text. As in the case of the above example, cohesion is focused on the relation of the boundaries between sentences rather than within sentences (Halliday and Hassan, 1976:2).

In other words, it is interested in the“intersentence” which ensure texture. Moreover, although cohesion exists within the limit of a single sentence, it is of less importance because the sentence is naturally cohesive due to its grammatical structure. For instance, *If you happen to see the admiral don't tell him his ship's gone down*in this sentence, *His* and *Him* refer to *admiral* in the first half of the same sentence .Thus, the realization of cohesion within the sentence is governed by rules of pronominalisation the use of a given pronoun to be referred to is determined by the sentence structure (Halliday and Hassan, 1976:8). For example a sentence such as *John took John's hat off and hang John's hat on a peg* cannot be accounted as a cohesive sentence unless we use some of the pronominal forms to be referred to the identity of the pronominal form. Then, let us consider that we are talking about the same *John* and the same *hat*. Meanwhile, we get sentence structured as *John took his hat off and hang it on a peg* in which *his* referred to *John* and *it* referred to *hat* Halliday and Hassan (1976:8). The intersentence cohesion is the most important aspect in cohesion. Halliday and Hassan point out that cohesion relation have in principle nothing to do with sentence boundaries.

2.5 Type of Cohesion

There are two kinds of cohesion. The first is grammatical cohesion which consists of references, substitution, ellipsis, and conjunction, and The second is lexical cohesion which consists of repetition, synonymy, antonymy, hyponymy, meronymy, and collocation. (Hasan, 1976:274) as cited in Paltrigde (2000:139).

2.5.1 Grammatical Cohesion

Grammatical cohesion is cohesive helps text hang together or be cohesive, that means they contribute to what Hasan terms of text's unity of texture. The schematics structure of the text, in turn provides a text with unity of texture. Texture from the combination of semantics configuration of two kinds: those of register and those of cohesion. According to Halliday and Hasan (1976:28) there are four types of grammatical cohesive devices. Those are reference, ellipsis, substitution, and conjuction. Reference items may be anaphoric and cataphoric.

Anaphoric Reference is signifies a word or a phrase that refers to another word or phrase used earlier in the text. And then Cataphoric reference describes the use of a word or phrase that refers to another word or phrase which is used later in the text. Cataphoric reference is less common in speech but can be used for dramatic effect in writing. It occurs when the reader is introduced to someone as an abstract, before later learning his or her name.

Ellipsis is another cohesive device which can be improving the readers understanding of a piece of writing. It happens when, after a more specific mention words are missed out when the phrase need to be repeated. Ellipsis can be divided into: nominal ellipsis, verbal ellipsis, clausal ellipsis

Substitution is very similar to ellipsis in the effect; it has on the text, and occurs when instead of leaving a word or phrase out, as in ellipsis, it is substituted for another, more general word. The distinction between substitution and reference is that substitution is a relation in the wording rather than in meaning. It is a relation

between linguistics items, such as words or phrases; whereas reference is a relation between meanings. Substitution can be divided into: Nominal substitution, Verbal substitution, Clausal substitution

Conjunctionelements are cohesive not in themselves but indirectly, by virtue of their specific meanings, they are not primarily devices for reaching out into the preceding (or following) text, but they express certain meanings which presuppose the presence of the other component in the discourse. Hasan and Halliday (1976: 226). Conjunctions are categorized by Halliday and Hasan (1976:267) as cited in Paltridge (2000:135) as a temporal conjunction, causal conjunction,additive conjunction.

Conjunction can be divided into:

1. Temporal conjunction: *after, while, when, meanwhile, before, then, after that, an hour later, finally, at last, at once.*
2. Causal conjunction: *because, so, then, therefore, nevertheless, thus, hence, consequently, for this reason, it follows that.*
3. Additive conjunction: *and, and also, in addition, moreover, or, or else, further, further more, additionally, for instance, alternatively, by the way, in other words, in same way, similarly*.
4. Adversative conjunction: *but, however, in any case only, instead, yet, on the other hand, despite this, on the contrary, in fact, anyhow, though, nevertheless.*

5. The last conjunctive category

   is temporal and links by signaling sequence or time. Some sample temporal conjunctive signals are *then, next, after that, next day, until then, at the same time, at this point, etc.*

2.6 Lexical Cohesion

According to Halliday and Hasan (1976:277), lexical cohesion is“basically created by repetition (reiteration) of the same lexeme, orgeneral nouns, or other lexemes sharing the majority of semanticfeatures, lexical cohesion can also form a relation pattern in text in away that links sentences to create an overall feature of coherence with the audience sometimes over lapping with other cohesion features”.The understanding of how content ofsentences in linked helps to identify the central information in texts bymeans of a possible summary. Moreover, Lexical cohesion refers torelationship among lexical items in a text and in particular among content words.

Halliday and Hasan (1976:318) classify reiteration into four types: repetition(the same word), a synonym or near-synonym, hyponymy or a superordinate, meronymy, and a general word. For example, ‘a boy’ can be replaced in the following sentences with ‘the boy’ (the same word), ‘the lad’ (a synonym/near-synonym), ‘the child’ (hyponym or a superordinate),Finger is meronym of ‘hand’ (meronymy) and ‘the idiot’ (a general word) (Halliday&Hasan 1976:279–80). Meanwhile, they recognice collocation as an important part of

creating cohesion in connect of the text. Collocation refers to the semantic and structural relation among words, which native speakers can use subconsciously for comprehension or production of a text.

According to Halliday and Hasan (1976:274) and Salkie (2001:3:9:15:23) lexical cohesion refers to relationship among lexical items in – a text and, in particular, among content words. The main kinds of lexical cohesion are:

2.6.1 Repetition

Repetition is concern repeating key words can help to make a text coherent (Salkie, 2001:3).

For example:

> *It's stuffed with packs of condoms and **AIDS** advice literature. An **AIDS** victim like Sonia needs help, not discrimination. Jesuits in Britain are leading the call for St Aloysius to be officially designated as the patron saint for **AIDS** sufferers. Our body service, which support people living with Aids, has trebled in size in three years. Meanwhile, Northern Ireland is beginning to confront **AIDS.*** (Salkie, 2001:8).

Each of the five sentences in this extract contains the word ***AIDS***, but the text as a whole is barely coherent. In fact, each sentence comes from a different newspaper article about ***AIDS***, and they are just strung together here at random.

2.6.2 Synonymy

Synonymy is using different word class with a related with a related meaning is another way of making text hang together (Salkie, 2001:9).

For example:

> *The doctor told me I'd been working too hard and I needed at least six weeks off work to get my strength back.*
> *Amanda's* ***employer****, however, was less sympathetic. My* ***boss*** *gave me an envelope and told me it was redundancy money – two weeks pay £280. I was shocked.* (Salkie, 2001:9).

The words ***employer*** and ***boss*** do not always have exactly the same meaning. They are very close in meaning, though, and in this example they refer to the same person, so we can them synonym. It can get boring if the same word is repeated, and this is one reason why synonym is used instead. It would have been possible to use employer on both occasions in above text, it would have been equally possible to use *boss* twice. Using synonyms instead adds variety.

2.6.3 Antonyms

Antonyms these meaning relations can be classified precisely, but others are harder to pin down. All of them can be used as cohesive devices (Salkie, 2001:23).

For example:

> *At least 125 people died of AIDS in Bulawayo between April and June this year, according to City Health authorities….Out of the 125,71 were* ***males*** *while 54 were* ***females.*** (Salkie, 2001:23).

The words ***male*** and ***females*** are opposite. Using two words near each other obviously enables the writer to express a contrast, but it also contributes to the cohesion text. The structure of the sentences plays a part here: when we read *Out of the 125,71 were males while 54 were….*,we expect to find a word that will contrast with *males.* By creating this expectation and then satisfying it, the writer helps readers to navigate through the text- which is what cohesion is all about.

Another example:

> *Until recently, linguistics and phonetic degrees were directly relevant to only a* ***small*** *number of jobs. This is now changing. The trend towards European integration, and the growth of information Technology, is making graduates who combine language and computing skills particularly attractive to a* ***wide*** *range of employers*. (Salkie, 2001:25).

When a text expresses a contrast, it isn't just straightforward opposites like ***wide(big)***and ***small*** that you should look for. Whatever words the writer wants to contrast are potentially analyzable as opposites.

2.6.4 Hyponymy

Hyponymy is the same superordinate words and words with a very general meaning are used as cohesive devices (Salkie, 2001:15).

For example:

> ***Brazil****, with her two-crop economy, was even more severaly hit by the depression than other* ***Latin American*** *states hit by the country was on the verge of complete collapse*. (Salkie, 2001:15).

This link here is between ***Brazil*** and ***the country***, Brazil is a specific instance of the more general word *country*. The general word is called the superordinate, and the more specific one is called a HYPONYM. So Brazil, Vietnam, Germany, Morroco and Zambia are all hyponyms of country: they are sometimes called co-HYPONYMS.

Hyponyms can themselves have hyponyms, depending on how elaborate the relevant area of vocabulary happens to be. A very elaborate area is the classification of living organism. Starting with the most general words, we can go down the hierarchy of terms, getting more specific at each stage:

> ***Living organism*** has a its hyponyms ***plant, animal, bacteria, etc***
>
> Choosing one of the hyponyms each time, we continue:
>
> ***Animal*** has the hyponyms ***reptile, amphibian, mammal, etc.***
>
> ***Mammal*** has the hyponyms ***primate, ruminant, sea mammal, etc.***
>
> ***Ruminant*** has the hyponyms ***cow, horse, deer, goat, etc*** (Salkie, 2001:15).

If we had started with one of the most specific terms, we could alternatively (and equivalently) have said that ***cow*** has as its superordinate ***ruminant***, which in turn has the superordinate ***mammal,*** which in turn has the superordinate ***animal,*** and ***so on.*** If you are familiar with *mathematic*, you may have noticed that the co-hyponyms of any superordinate are the members of the set generated by the superordinate.

2.6.5 Meronymy

Meronymy refers to lexical which are in a whole-part relation, such as the relationship (Haliday and Hasan, 1976:287).

For example:

Finger is meronym of ***'hand'*** because ***finger is part a hand.*** (Journal lexical cohesion by Keiko Muhto)

Similarly ***'wheel'*** is a meronym of ***automobile.*** (Journal lexical cohesion by Keiko Muhto)

Earth and ***sun*** meronyms. (Journal lexical cohesion by Markus Egg)
Earth as a planet and ***sun*** as a star are members of the solar system, these items are thus meronyms.

2.6.6 Collocation

Collocation is describing association between words that tend to co-occur, such as; combinations of adjectives and nouns. It also includes the relationship between verbs and nouns and pairs of nouns (Halliday and Hasan, 1976:284).

For example:

The Australian girls have beautiful ***curl*** hair.

The collocation of the sentence is ***curl*** hair. It means that straight hair is only for ***hair***. (www.examplecollocation.com)

2.7 Scientific Article

A scientific article presented research result and is written by researchers and aimed at a reader ship. The article must have been reviewed by expert within the same subject area before publication.

Scientific article can be divided into different types:

1. Original article where the author presents empirical studies and for the first time describes the result of research work.
2. Review article aim at developing new theories from existing research.
3. Theoretical articles aim at developing new theories from existing research.
4. Scientific articles can be structured in different ways according to subject, method and the type of the article.(Linnaeus University. Scientific Article :2012)

A scientific original article usually consists of the following elements:

1. The title should be concise and indicate the contents of the article.
2. The names and affiliation of all authors are given. In the wake of some scientific misconduct cases, publishers often require that all co-authors know and agree on the content of the article.
3. The first part is normally an abstract; this is a one-paragraph summary of the work, and is intended to serve as a guide for determining if the articles is pertinent, and to furnish subject metadata for indexing services.
4. The format should be archival, in the sense that libraries should be able to store and catalogue the documents and scientists years later should be able to recover any document in order to study and assess it, and there should

be an established way of citing the document so that formal reference can be made to them in future scientific publication. The lack of an established archival system is one of the hurdles that World Wide Web based scientific publication has had to overcome. Reliable repositories such as arXiv or PubMed Central have been instituted, and progress is now being made on their interoperability and permanence.

5. The content should be presented in the context of previous scientific investigations, by citation of relevant documents in the existing literature, usually in a section called an "Introduction".
6. Empirical techniques, laid out in a section usually called "Materials and Methods", should be described in such a way that a subsequent scientist, with appropriate knowledge of and experience in the relevant field, should be able to repeat the observations and know whether he or she has obtained the same result. This naturally varies between subjects, and obviously does not apply to mathematics and related subjects.
7. Similarly, the results of the investigation, in a section usually called "Results", data should be presented in tabular or graphic form (image, chart, schematic, diagram or drawing). These figures should be accompanied by a caption and referenced in the text of the article.
8. Interpretation of the meaning of the results is usually addressed in a "Discussion" or "Conclusion" section. The conclusions drawn should be based on previous literature and/or new empirical results, in such a way that any reader with knowledge of the field can follow the argument and

confirm that the conclusions are sound. That is, acceptance of the conclusions must not depend on personal authority, rhetorical skill, or faith.

9. Finally, a "References" or "Literature Cited" section lists the sources cited by the authors in the format required by the journal. (Talbott, T.; M. Peterson, J. Schwidder, J.D. Myers:2005).

CHAPTER III

RESEARCH METHOD

In this study, research method is a main way to make a relevant result. The data will be taken from the internet a scientific article. This component discusses about research design, unit of analysis, source of the data, technique of the data collection and technique of data analysis as follows:

3.1 Research Design

The researcher uses qualitative research of this study. It describes, identifying the data the types in lexical cohesion of cohesion**.** Qualitative research because the data taken from the internet is a scientific article. It is research method to describe the subject or the object of the research based on the fact or reality. Descriptive qualitative research study things in their natural settings, attempting to make sense of or to interpret, phenomena in terms of the meanings people bring to them. Qualitative research is intended to penetrate to the deeper significance that the subject of the research ascribes to the topic being researched. It involves an interpretive, naturalistic approach to its subject matter and given priority to what the data contribute to important research questions or existing information. (Denzin, 1994) Qualitative research often categorizes data as the primary source. This study used qualitative research to describe lexical cohesive in a scientific article *A Review Gender Differences in Human Brain* by Zeenat F. Zaidi.

This study was conducted by formulating the problem, collecting data and analyzing the data.

3.2 Unit of Analysis

The unit of analysis of this research there are clauses of the sentences related to the meaning of lexical cohesive devices.

3.3 Source of Data

The data of this study is written data. The data was taken from The Open Anatomy Journal. The research paper is written by Zeenat F. Saidi entitled *A Review Gender Differences in Human Brain.* It has been presented at A Review Gender Differences in Human Brain on February, 11st 2010. The article is publisher by LicenseeBentham Open second edition on page 37-55. The data taken from the internet by the researcher in a website www.benthamscience.com/open/toanatj/articles/V002/37TOANATJ.pdf

3.4 Techniques of Data Collection

The researcher of collected the data by employing the steps below:

1. Searching the article

   The researcher searched the data from the internet. Then, the researcher selected the data is the scientific article.

2. Choosing the article

   The researcher choosing the article by Zeenat F. Zaidi entitled *A Review Gender Differences in Human Brain*.

3. Downloading the article

The researcher retrieved the data taken from the internet through www.benthamscience.com/open/toanatj/articles/V002/37TOANATJ.pdf

3.5 Techniques of Data Analysis

1. Reading the data of each clause and each sentence in scientific article.

   For example:

   Emotions
   Male oriented brains, hardly express feelings. It is due to the use of the right hemisphere only. Male brains separate language, in the left, and emotions in the right, while the female's emotions are in both hemispheres. It helps explain why the male brain has a hard time expressing its feelings. (Paragraph 20:41)

2. Dividing the sentences into each clause found in scientific article.

   For example:

   Male oriented brains, hardly express feelings. It is due to the use of the right hemisphere only. ***Male brains*** separate language, in the ***left***, and emotions in the ***right***, while the female's emotions are in both hemispheres. It helps explain why the male brain has a hard time expressing its feelings.

   There are two clauses of the sentence above:

   1. Male brains separate language, in the ***left***,

   2. emotions in the ***right.***

3. Classifying the clause into type of lexical cohesion.

Male brains separate language, in the ***left***, and ***emotions*** in the ***right***,

In the clauses above the researcher classifies the type of lexical cohesion into antonymy because ***left*** and ***right*** are in the opposite meaning.

4. Interpreting the data.
5. Drawing Conclusion.

CHAPTER IV

DATA ANALYSIS

This chapter is divided into two sections: the findings and the discussion. The findings present the identification of the kinds of lexical cohesion devices occurring in the article *A Review Gender Differences in Human Brain* by Zeenat F Zaidi issued on February 11, 2010. Meanwhile, the discussion contains the interpretations of the kinds of lexical cohesion devices utilized in the article *A Review Gender Differences in Human Brain* by Zeenat F Zaidi issued on February 11, 2010.

4.1 Findings

The data of this research are the sentences in the article *A Review Gender Differences in Human Brain* by Zeenat F Zaidi issued on February 11, 2010. According to Halliday and Hasan (1976:4), the types of lexical cohesion devices can be classified into six types, namely repetition, synonymy, antonymy, hyponymy, meronymy, collocation. The occurrence of the six types of lexical cohesion device in the article *A Review Gender Differences in Human Brain* by Zeenat F Zaidi issued on February 11, 2010 is found.

Table 4.1 Lexical Cohesion found the article *A Review Gender Differences in Human Brain* by Zeenat F Zaidi issued on February 11, 2010.

No	Types of Lexical Cohesion	Number	Percentage
1	Repetition	60	14,5 %
2	Synonymy	12	2,9%
3	Antonymy	226	54,6%
4	Hyponymy	8	1,9%
5	Meronymy	29	7,0%
6	Collocation	79	19,1%
	TOTAL	414	100%

Table 4.1 shows the most prominent types of lexical cohesion devices employed in the article *A Review Gender Differences in Human Brain* by Zeenat F Zaidi issued on February 11, 2010, is repetition with 60 occurrences or 14,5%, then next is synonymy with 12 occurrences or 2,9%, antonymy with 226 occurrences or 54,6%, after word is hyponymy with 8 occurrences or 1,9%, after that is meronymy 29 occurrences or 7,0%, and the last collocation is 79 occurrences or 19,1%.

The numbers of repetition is 60 occurrences or 14,5% of 414 total number. Repetition explains about repeated words of clauses or sentences in the text so that it can make the sentences interrelated to one another. The function of repetition is retelling words so that have coherent meaning in the text. The total number of repetition has represented standard in a scientific article. Repetition occurs when

words available in first sentence and next sentence which made coherent sentence. The numbers of synonymy is 12 occurrences or 2,9% of 414 total number. Synonymy explains different similar words of clauses or sentence in the text so that it can make the sentences interrelated to one another. The function of synonymy is adding variety words so that no bored in the text. The total number of synonymy has represented standard in a scientific article. Synonymy occurs there are two different words have similar meaning in order to variation in the coherent sentence. The numbers of antonymy is 226 occurrences or 54,6% of 414 total number. Antonymy explains about different words have opposite meaning. The total number of antonymy has represented standard which have a lot of total number in a scientific article. The function of antonymy is binary contrast words in different ways so that coherent meaning. Antonymy occurs there are two different words have different meaning in order to alternative the other words in the coherent sentence. The numbers of hyponymy is 8 occurrences or 1,9% of 414 total number. Hyponymy explains general word and specific word in sentence. The total number of hyponymy has represented standard in a scientific article. The function of hyponymy is differences which distinguish this term from general to specific. Hyponymy occurs when general words relation specific word which have tie coherent meaning, but hyponymy difficult found in the article. The numbers of hyponymy is 29 occurrences or 7,0% of 414 total number. Meronymy explains about relation words of a whole part to the other part. The total number of meronymy has represented standard in a scientific article. The function of meronymy is a part whole relationship with respect to an independent object. The last the numbers of

collocation 79 occurrences or 19,1% of 414 total number. Collocation explains combination words in order to the analysis have coherent meaning. The function of collocation is combination words interrelated meaning. The total number of collocation has represented standard in a scientific article.

4.2 Discussion of the Findings

The discussion section presents the interpretations of the kinds of lexical cohesion devices employed in the article *A Review Gender Differences in Human Brain* by Zeenat F Zaidi issued on February 11, 2010. The following points are the interpretations of the types of cohesion presented in the order repetition, antonym, synonym, hyponymy, meronymy, and collocation.

4.2.1 Lexical Cohesion of Excerpt One

Text:

Size & Weight
The adult human ***brain weighs*** on average about 3lb (1.5kg) with a ***size*** of around 1130 cm3 in ***women*** and 1260 cm3 in ***men*** although there is substantial individual variation. ***Male brains*** are about 10% ***larger*** than ***female brains*** and ***weigh*** 11-12% more than that of ***a woman***. ***Men's*** heads are also about 2% bigger than ***women's***. This is due to the ***larger*** physical stature of ***men***. ***Male's larger*** muscle mass and ***larger body size*** requires more neurons to control them. The ***brain weight*** is related to the ***body weight*** partly because it **increases** with ***increasing*** height. This ***difference*** is also present at birth. ***A boy's brain*** is between 12-20% ***larger*** than that of ***a girl***. The head circumference of ***boys*** is also ***larger*** (2%) than that of ***girls***. However, when ***the size*** of the ***brain*** is compared to ***body weight*** at this age, there is almost no ***difference*** between ***boys*** and ***girls***. So, ***a girl baby*** and ***a boy baby*** who ***weigh*** the same will have similar ***brain sizes***. (Paragraph 2:37)

The excerpt one above that there are five types of lexical cohesion is found, they are antonymy, repetition, synonymy, meronymy, and hyponymy. Lexical chain as follow:

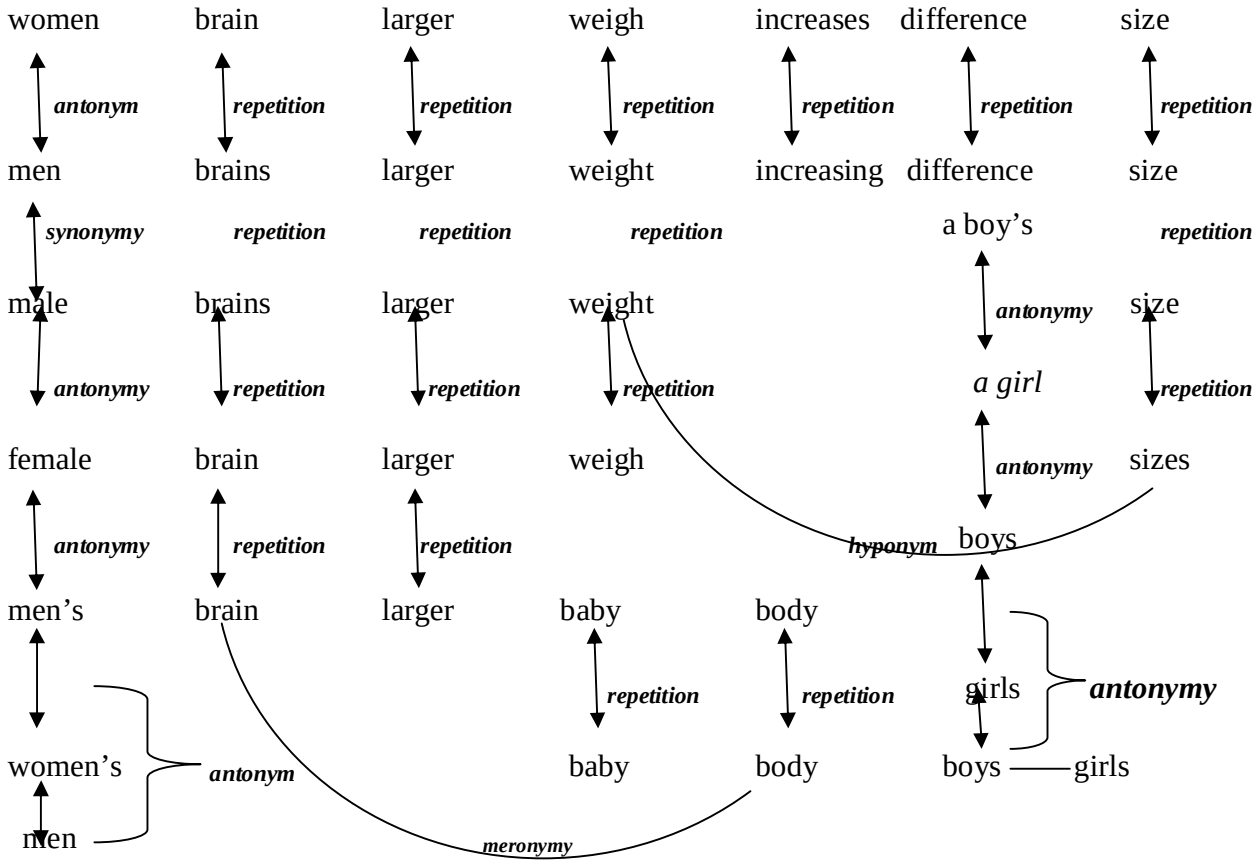


Figure 4.1

Lexical chain of excerpt one shows several types found, they are antonymy, repetition, synonymy, hyponymy, meronymy. The explanation of each type can be seen as follow:

The excerpt one text above that there are many antonymy found. Those are ***women, men, male, female, men's, women's, a boy's, a girl, boys, girls.*** Those words are classified as antonymy because they have opposite meaning and same forms.

The first antonymy found in the text above is ***women*** and **men**. Those two words are classified as antonymy because i'ts function is as opposite meaning and these words are in a same form. The form of ***men*** is a noun, meanwhile ***women*** is a noun. The word ***women*** and ***men*** shown in the sentence ***"****The adult human brain weighs on average about 3lb (1.5kg) with a size of around 1130 cm3 in* ***women*** *and 1260 cm3 in* ***men*** *although there is substantial individual variation"* above refer to size of adult human brain. The next antonymy of ***male*** and ***female*** shown in the sentence "***Male*** *brains are about 10%* ***larger*** *than* ***female brains*** *and* ***weigh*** *11-12% more than that of a woman"* tells about large of brains. The words ***men*** and ***women*** shown in third *sentence "****Men's*** *heads are also about 2% bigger than* ***women's****"* explain about size of head. Another antonymy is ***boy*** and ***girl*** shown in the *sentence "****A boy's*** *brain is between 12-20% larger than that of* ***a girl****"* tells size of brain. The next antonymy of ***boys*** and ***girls*** shown in the sentence *"However, when the size of the brain is compared to body weight at this age, there is almost no difference between* ***boys*** *and* ***girls****"* refer to the large of head circumference. The last antonymy of ***a girl*** and ***a boy*** shown in the sentence *"So,* ***a girl*** *baby and* ***a boy*** *baby who weigh the same will have similar brain sizes"* tells the babies who weigh the same will have similar brain sizes.

As a result antonymy in the excerpt one above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

The excerpt one text above, that there are many repetitions found. Those are ***brains, brain, larger, weigh, weight, increase, increasing, difference, baby, body, a size, size, the size, sizes.*** Those words are classified as repetition because they have similar meaning and same forms and its function is to make the sentence more varied and not monotonous.

The word ***brains*** shown in the first sentence *"The adult human **brain** weighs on average about 3lb (1.5kg) with a size of around 1130 cm3 in women and 1260 cm3 in men although there is substantial individual variation"* means adult human brains. The word ***brains*** shown in the second sentence *"Male **brains** are about 10% larger than female **brains** and weigh 11-12% more than that of a woman"* refer to male and female brain. The next ***brain*** shown in the sentence *"A boy's **brain** is between 12-20% larger than that of a girl"* talking the boys and girl brains .The last word ***brain*** shown in this sentence *"So, a girl baby and a boy baby who weigh the same will have similar **brain sizes**"* refer to a brain generally.

The word ***larger*** shown in this sentence *"Male brains are about 10% **larger** than female brains and weigh 11-12% more than that of a woman"* talks about compare male and female brains. The word ***larger*** shown in next sentence *"Male's **larger*** muscle mass and ***larger** body size* requires more neurons to control them*"* describes muscle mass and body size of men. Another word ***larger*** in this sentence *"The head circumference of **boys** is also **larger** (2%) than that of **girls**."* tells about the head circumference of boys and girls comparing.

Another repetition is also found in the word ***weigh***. The first ***weigh*** shown in the sentence *"The adult human brain **weighs** on average about 3lb (1.5kg) with a size of around 1130 cm3 in women and 1260 cm3 in men although there is substantial individual variation"* means weigh adult human brains. The second ***weigh*** shown in the sentence *"Male brains are about 10% larger than female brains and **weigh** 11-12% more than that of a woman"* describes male and female brains weigh. The third ***weight*** shown in the sentence *"The brain **weight** is related to the body **weight** partly because it increases with increasing height"* tells rain weight generally and another ***weigh*** shown in the sentence *"However, when the size of the brain is compared to body **weight** at this age, there is almost no difference between boys and girls"* means body weight partly. The last ***weigh*** shown in the sentence *"So, a girl baby and a boy baby who **weigh** the same will have similar brain sizes"* explain similar brain sizes of babies. The form of ***weigh*** is a verb, meanwhile ***weight*** is a noun.

It can be seen in the excerpt above that there are two words repetition found. Two words are ***increases*** and ***increasing***. The word ***increases*** shown in the sentence *"The brain weight is related to the body weight partly because it **increases** with increasing height. This difference is also present at birth"* describes the increasing of brain weigh, and the next word ***increasing*** shown in the sentence *"The brain weight is related to the body weight partly because it increases with **increasing** height. This difference is also present at birth"* tells increases of body height. The form of ***increase*** is a verb, meanwhile ***increasing*** is a noun.

It can be seen in the excerpt above that there are two words repetition found. Two words are ***difference*** and ***difference***. The first ***difference*** shown in the sentence *"This **difference** is also present at birth. A boy's brain is between 12-20% larger than that of a girl"* explains the differences between brain weight and the body weight partly of adult. The second ***difference*** shown in the sentence *"However, when the size of the brain is compared to body weight at this age, there is almost no **difference** between boys and girls"* tells the differences between the size of brain and weight of boys and girls.

In the last part, it can be seen in the excerpt above that there are two words repetition found. Four words are ***size*** and ***sizes.*** These words are classified as repetition because they have an equal meaning and forms, that it is a noun. The word ***size*** shown in the first sentence *"However, when the **size** of the brain is compared to body weight at this age, there is almost no difference between boys and girls"* explains about a size of adult human brain. In the next sentence ***size*** shown in the sentence *"This is due to the larger physical stature of men. Male's larger muscle mass and larger body **size** requires more neurons to control them"* tells about male's larger muscle mass and body size. Another words ***size*** shown in the sentence *"However, when the **size** of the brain is compared to body weight at this age, there is almost no difference between boys and girls"* describes about the size of brain generally. The last word ***sizes*** shown in this sentence *"So, a girl baby and a boy baby who weigh the same will have similar brain **sizes**"* mean about the similar brain sizes of girl and boy babies.

As a result in the excerpt one above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

It can be seen in the excerpt above that there are two words synonymy found. Two words are ***men*** and ***male.*** These words are classified as synonymy because its function is to make the meaning closer and is also has same forms. The form of ***men*** is a noun and ***male*** is a noun. The words ***men*** and ***male*** shown in this sentence *"This is due to the larger physical stature of* ***men. Male's*** *larger muscle mass and larger body size requires more neurons to control them"* describes larger physical muscle mass.

As a result synonymy in the excerpt one above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

It can be seen in the excerpt above that there are two relation words of meronymy found. The words are classified as meronymy because its function to relation a whole part and this word are in same forms. The word brain is a part of the body.

As a result meronymy in the excerpt one above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

4.2.2 Lexical cohesion of Excerpt Two

Text:

Brain Volume
Sexual dimorphisms of adult ***brain volumes*** were more evident in the cortex, with ***women*** having ***larger volumes***, relative to cerebrum ***size***, particularly in frontal and medial paralimbic cortices. ***Men*** had ***larger volumes, relative*** to cerebrum ***size***, in frontomedial cortex, the amygdala and hypothalamus. There was ***greater sexual*** dimorphism in ***brain*** areas that are homologous with those identified in animal studies showing ***greater*** levels of ***sex*** steroid receptors during critical periods of ***brain development***. These findings have implications for ***developmental studies*** that would directly test hypotheses about mechanisms relating ***sex*** steroid hormones to ***sexual*** dimorphisms in humans. (Paragraph 3:37)

From the excerpt one above that there are five types of lexical cohesion is found, they are antonymy, repetition, synonymy, meronymy, and hyponymy. Lexical chain as follow:

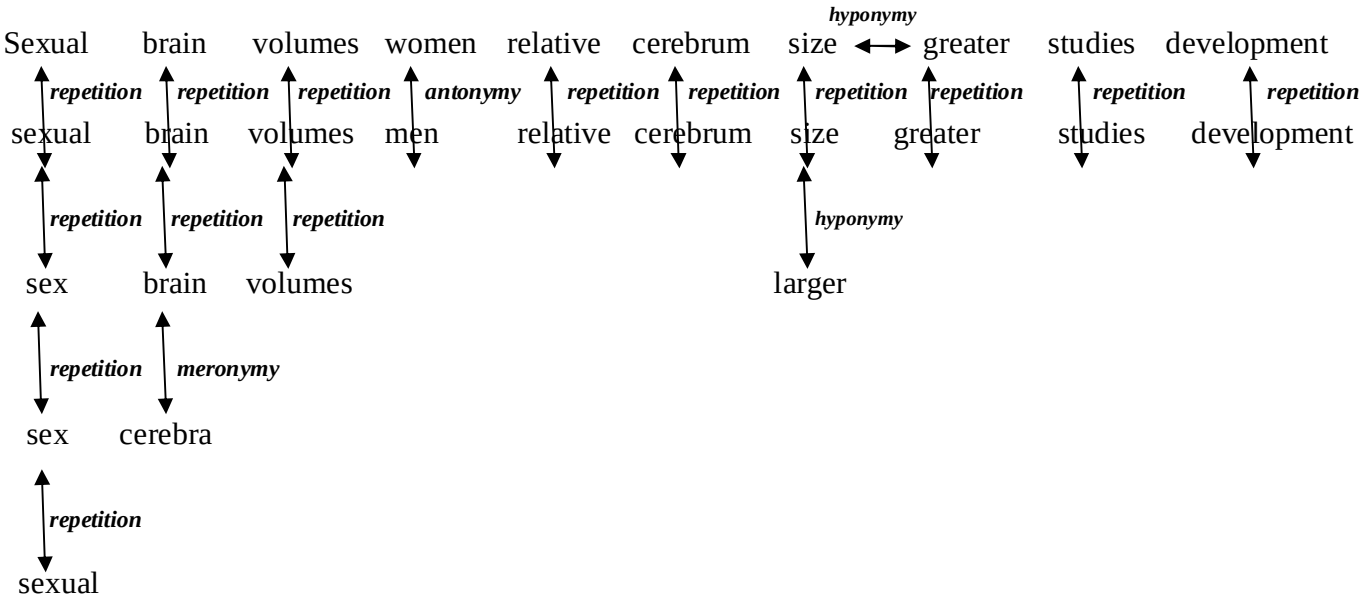


Figure 4.2

Lexical chain of excerpt two shows several types found, they are repetition, antonymy, synonymy, hyponymy, meronymy. The explanation of each type can be seen as follow:

It can be seen that there are five repetition found. Those words are classified as repetition because they have similar meaning and same forms and its function is to make the sentence more varied and not monotonous. Those words are ***sexual*** and ***sex.*** The forms of ***sexual*** is an adjective, meanwhile ***sex*** is a noun. The word ***sexual*** shown in the

sentence *"**Sexual** dimorphisms of adult brain volumes were more evident in the cortex, with women having larger volumes, relative to cerebrum size, particularly in frontal and medial paralimbic cortices"* refers to sexual dimorphism of adult brain volumes in the first sentence. Next ***sexual*** shown in this sentence *"There was greater **sexual** dimorphism in brain areas that are homologous with those identified in animal studies showing greater levels of sex steroid receptors during critical periods of brain development"* refers to sexual dimorphism of adult brain areas. Another ***sex*** shown in the sentence *"There was greater sexual dimorphism in brain areas that are homologous with those identified in animal studies showing greater levels of **sex** steroid receptors during critical periods of brain development"* refers to steroid receptors and steroid hormones. The last ***sexual*** shown in the sentence *"These findings have implications for developmental studies that would directly test hypotheses about mechanisms relating sex steroid hormones to **sexual** dimorphisms in humans"* refers to sexual dimorphism of adult brain human.

It can be seen that in the word ***brain*** shown in the sentence *"Sexual dimorphisms of adult **brain** volumes were more evident in the cortex, with women having larger volumes, relative to cerebrum size, particularly in frontal and medial paralimbic cortices"* which is indicate adult brain volume, meanwhile another brain shown in this sentence *"There was greater sexual dimorphism in **brain** areas that are homologous with those identified in animal studies showing greater levels of sex steroid receptors during critical periods of brain development"* indicate adult brain area. The last brain shown in the sentence *"There was greater sexual dimorphism in brain areas that are homologous with those identified in animal studies showing greater levels of sex steroid receptors*

during critical periods of ***brain*** *development"* explain critical period of brain development. The word ***brain*** have similar that is a noun.

Next repetition found in word ***volumes***. The researcher found three repetition. First repetition ***volumes*** shown in the sentence *"Sexual dimorphisms of adult brain* ***volumes*** *were more evident in the cortex, with women having larger volumes, relative to cerebrum size, particularly in frontal and medial paralimbic cortices"* refer to the volume of adult brain, second repetition ***volumes*** shown in the sentence *"Sexual dimorphisms of adult brain volumes were more evident in the cortex, with women having larger* ***volumes****, relative to cerebrum size, particularly in frontal and medial paralimbic cortices"* refers to the volume of women brain. The last word ***volume*** shown in the sentence *"Men had larger* ***volumes****, relative to cerebrum size, in frontomedial cortex, the amygdala and hypothalamus"* refers to the volume of men brain. All of the word volume has similar form that is a noun.

Another repetition is also found in the word ***relative***. The word ***relative*** in this paragraph has two meaning shown in the sentence *"Sexual dimorphisms of adult brain volumes were more evident in the cortex, with women having larger volumes,* ***relative*** *to cerebrum size, particularly in frontal and medial paralimbic cortices" and "Men had larger volumes,* ***relative*** *to cerebrum size, in frontomedial cortex, the amygdala and hypothalamus"* They are women cerebrum size and men cerebrum size. Both relative have same form that is an adjective.

The researcher found the word twice ***cerebrum***, so it can be classified as repetition. The form of ***cerebrum*** in this paragraph is a noun. ***Cerebrum*** shown in the

first sentence *"Sexual dimorphisms of adult brain volumes were more evident in the cortex, with women having larger volumes, relative to* ***cerebrum*** *size, particularly in frontal and medial paralimbic cortices"* means women cerebrum, beside that ***cerebrum*** shown in second sentence *"Men had larger volumes, relative to* ***cerebrum*** *size, in frontomedial cortex, the amygdala and hypothalamus"* means men's cerebrum.

Next repetition found in the word ***size***. The form of ***size*** is a noun. The word size shown in this sentence *"Sexual dimorphisms of adult brain volumes were more evident in the cortex, with women having larger volumes, relative to cerebrum* ***size****, particularly in frontal and medial paralimbic cortices"* means women's cerebrum size and men's cerebrum size. After size, the researcher found the word ***development*** and ***developmental***. ***Development*** shown in this sentence *"There was greater sexual dimorphism in brain areas that are homologous with those identified in animal studies showing greater levels of sex steroid receptors during critical periods of brain* ***development****"* means develop of brain, meanwhile developmental shown in this sentence *"These findings have implications for* ***developmental*** *studies that would directly test hypotheses about mechanisms relating sex steroid hormones to sexual dimorphisms in humans"* means developing brain a study. The form of ***development*** is a noun, meanwhile ***developmental*** is a verb.

Last repetition there are two words ***studies***, so the researcher decides the word ***studies*** including a repetition. The first ***studies*** shown in the sentence *"There was greater sexual dimorphism in brain areas that are homologous with those identified in animal* ***studies*** *showing greater levels of sex steroid receptors during critical periods of brain*

development" talking animal studies and second ***studies*** shown in the sentence *"These findings have implications for developmental studies that would directly test hypotheses about mechanisms relating sex steroid hormones to sexual dimorphisms in humans"* talking about brain development studies. Both words ***studies*** before have similar form that is a noun.

As a result repetition in the excerpt two above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

The researcher found several words which have relation each other, so the words can be classified as antonymy. According antonyms these meaning relations can be classified precisely, but others are harder to pin down. All of them can be used as cohesive devices (Salkie, 2001:23).

The first antonymy found in the text above is ***women*** and **men**. Those two words are classified as antonymy because its function is as opposite meaning and these words are in a same form. Women shown in the sentence *"Sexual dimorphisms of adult brain volumes were more evident in the cortex, with **women** having larger volumes, relative to cerebrum size, particularly in frontal and medial paralimbic cortices"* explain having larger volumes of women, meanwhile men shown in the sentence "***Men** had larger volumes, relative to cerebrum size, in frontomedial cortex, the amygdala and hypothalamus"* explains larger volumes of men.

As a result antonymy in the excerpt two above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

In the paragraph above which is entitled “Brain Volume”, the researcher found two collocation. First ***developmental studies*** shown in this sentence *“These findings have implications for* ***developmental studies*** *that would directly test hypotheses about mechanisms relating sex steroid hormones to sexual dimorphisms in humans”* talking developing brain by a study. It called collocation because there is combination of adjectives and noun. Another collocation found in the word ***sexual dimorphism*** shown in this sentence *“****Sexual dimorphisms*** *of adult brain volumes were more evident in the cortex, with women having larger volumes, relative to cerebrum size, particularly in frontal and medial paralimbic cortices”* which refers to relate sex steroid hormones to sexual dimorphisms in human. The combination in the word ***sexual dimorphisms*** is an adjective and noun.

As a result collocation in the excerpt two above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

Meronymy refers to lexical which are in a whole-part relation, such as the relationship (Halliday and Hasan, 1976:287). Meronymy in this paragraph found in word ***cerebra*** and ***brain.*** The word ***cerebra*** is a part of the brain.

As a result meronymy in the excerpt two above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

According to hyponymy is frequently used in people’s name, objects and event occur in the same article. In the paragraph which subtitled Brain Volume the researcher found hyponymy in the word ***size*** and ***large***, where large is same superordinate with size.

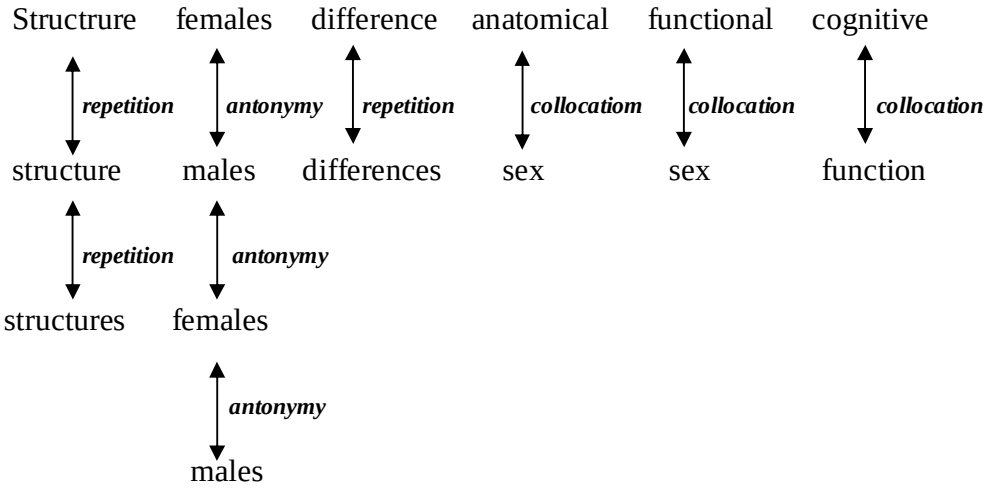
As a result hyponymy in the excerpt two above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

4.2.3 Lexical Cohesion of Excerpt Three

Text:

Massa Intermedia
A structure that crosses the third ventricle between the two thalami, was present in 78% of ***females*** and 68% of ***males***. Among subjects with a massa intermedia, ***the structure*** was an average of 53.3% or 17.5 mm2 larger in ***females*** than in ***males***. ***Anatomical sex differences*** in ***structures*** that connect the two cerebral hemispheres may, in part, underlie ***functional sex differences*** in ***cognitive function*** and cerebral lateralization.
(Paragraph 7:38)

From the excerpt three above that there are three types of lexical cohesion is found, they are repetition, antonymy, and collocation. Lexical chain as follow:



The figure 4.3

Lexical chain of excerpt three shows several types found, they are antonymy, repetition, collocation. The explanation of each type can be seen as follow:

The excerpt three above, that there are many repetitions found. Those are ***structure, structures, difference*** and ***differences.*** Those words are classified as repetition because they have similar meaning and same forms.

In the paragraph above which is entitle is “Massa Intermedia”. There are three repetition, two antonymy and three collocation found.

The researcher found repetition in this paragraph. They are ***structure, structure, structures***. Those three words are classified as repetition because they have similar meaning and same forms and its function is to make the sentence more varied and not monotonous. The form of ***structure*** is noun. The word ***structure*** in the first sentence means something that crosses the third ventricle between the two thalami. The word ***structures*** refer to something among subject with a massa intermedia in the second sentence. The last ***structure*** means something that connecting the two something cerebral hemispheres.

The next repetition found in the word ***differences***. The word ***differences*** shown in this sentence *“Anatomical sex **differences** in structures that connect the two cerebral hemispheres may, in part, underlie functional sex differences in cognitive function and cerebral lateralization”* mean that the differences of anatomical sex, meanwhile another word ***differences*** shown in this *sentence “Anatomical sex differences in structures that connect the two cerebral hemispheres may, in part, underlie functional sex **differences** in cognitive function and cerebral lateralization”* means that the difference of functional sex.

As a result repetition in the excerpt three above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

Three are two antonymy in the paragraph above is found. Firstly, we can found it, the word ***females*** and ***males***. The first meaning of word ***female*** and ***male*** shown in the sentence *"A structure that crosses the third ventricle between the two thalami, was present in 78% of **females** and 68% of **males**"* refer to a structure that crosses the third ventricle between the two thalami meanwhile ***females*** and ***male*** shown *in this sentence "Among subjects with a massa intermedia, the structure was an average of 53.3% or 17.5 mm2 larger in **females** than in **males**"* means a structure among subject with a massa intermedia.

As a result antonymy in the excerpt three above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

The researcher found three collocation in the paragraph above. Collocation describes association between words that tend to co-occur, such as combinations of adjectives and nouns and pairs of noun (Halliday and Hasan, 1976:284). Collocation is frequently used in people's name, objects, and events occurring in the same article.

Collocation found in the paragraph above. The words are ***anatomical sex, functional sex, cognitive sex, cognitive function*** and ***cerebral lateralization***. Those words are classified as collocation because they occurs combination words, but those words are in different forms and its function to explain noun and adjective. The word ***anatomical sex*** shown in the sentence *"**Anatomical sex** differences in structures that*

connect the two cerebral hemispheres may, in part, underlie functional sex differences in cognitive function and cerebral lateralization" refers to the structure of the body anatomically. The form of ***anatomical*** is an adjective, meanwhile ***sex*** is a noun. The word ***functional sex*** shown in this sentence *"Anatomical sex differences in structures that connect the two cerebral hemispheres may, in part, underlie* ***functional sex*** *differences in cognitive function and cerebral lateralization"* means that the structure of the body which is functionally as sex. The form of ***functional*** is an adjective, meanwhile ***sex*** is a noun. ***Cognitive function*** shown in this sentence *"Anatomical sex differences in structures that connect the two cerebral hemispheres may, in part, underlie functional sex differences in* ***cognitive function*** *and cerebral lateralization"* means that a function which has cognitive structure. The form of ***cognitive*** is an adjective, meanwhile ***function*** is a noun. ***Cerebral lateralization*** shown in this sentence *"Anatomical sex differences in structures that connect the two cerebral hemispheres may, in part, underlie functional sex differences in cognitive function and* ***cerebral lateralization****"* mean that the structure of cerebral which is lateral functions. The form of ***cerebral*** is an adjective, meanwhile ***lateralization*** is a noun. It is clear that ***anatomical sex, functional sex, cognitive sex, cognitive function*** and ***cerebral lateralization*** which is mentioned in collocation because words adjectives and noun relates some words which have some cause effect relation to the other in the sentence above.

As a result collocation in the excerpt three above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

4.2.4 Lexical Cohesion of Excerpt Four

Text:

Cerebral Hemispheres
According to the majority of studies, ***men*** possess larger cerebra than ***women*** of the same age and health status, even if the body size ***differences*** are controlled statistically. ***Male brains*** were larger than ***female brains*** in all locations, though ***male*** enlargement was most prominent in the frontal and occipital poles, bilaterally. ***The male differentiated brain*** has ***a thicker right hemisphere***. This may be the reason ***males*** tend to be more spatial, and mathematical. ***The left hemisphere***, which is important to communication, ***is thicker*** in ***female*** oriented ***brains***. (Paragraph 9:38)

From the excerpt four above that there are three types of lexical cohesion is found, they are antonymy, repetition, and collocation. Lexical chain as follow:

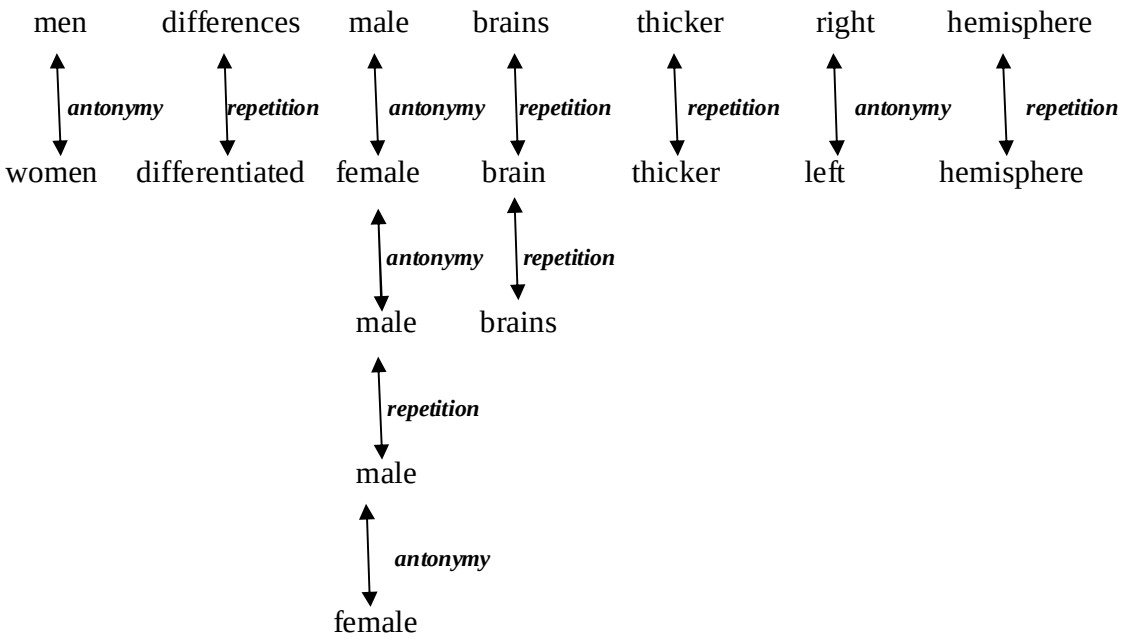


Figure 4.4

Lexical chain of excerpt four shows several types found, they are antonymy, repetition. The explanation of each type can be seen as follow:

In the paragraph which entitled “Cerebral Hemisphere” that the researcher found several types of lexical cohesion, they are antonymy, repetition, and synonymy. There are four antonymy, nine repetition, one synonymy.

There four antonymy found in the word ***men, women, male, female, male, female.*** The word ***men*** shown in this sentence *“According to the majority of studies, **men** possess larger cerebra than women of the same age and health status, even if the body size differences are controlled statistically”* refer to men cerebra, meanwhile the word ***women*** shown in this sentence *““According to the majority of studies, men possess larger cerebra than **women** of the same age and health status, even if the body size differences are controlled statistically”* refer to women cerebra. Next antonymy found in the word ***male*** and ***female. Male*** shown in this sentence *“**Male** brains were larger than female brains in all locations, though male enlargement was most prominent in the frontal and occipital poles, bilaterally”* describes male brain and ***female*** shown in this sentence *““Male brains were larger than **female** brains in all locations, though male enlargement was most prominent in the frontal and occipital poles, bilaterally”* describes female brain. Another ***female*** and ***male*** found in the last sentence of this paragraph. ***Male*** shown in this sentence *“The **male** differentiated brain has a thicker right hemisphere. This may be the reason males tend to be more spatial, and mathematical”* describes right hemisphere and female shown in this sentence *“The left hemisphere, which is important to communication, is thicker in **female** oriented brains”* describes left hemisphere. The last antonymy there are two words found. Two words are ***right*** and ***left***. ***Right*** shown in this sentence *“The male differentiated brain has a thicker **right** hemisphere. This may be the reason males tend to be more spatial, and mathematical”* means right hemisphere,

meanwhile ***left*** shown in this sentence *"The **left** hemisphere, which is important to communication, is thicker in female oriented brains"* means left hemisphere.

As a result antonymy in the excerpt four above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

Beside antonymy, the researcher found several repetition, they are ***difference, differentiated, brains, brain, brains, male, male, hemisphere, hemisphere.*** The word ***differences*** in the first sentence means different of male brain, meanwhile the word ***differentiated*** means different of male brain.

The word ***brain*** in the second sentence of paragraph shows male brain. The word ***brain*** shown in the next sentence *"Male **brains** were larger than female brains in all locations, though male enlargement was most prominent in the frontal and occipital poles, bilaterally"* means male differentiated brain. The word ***brain*** shown in the sentence *""Male brains were larger than female **brains** in all locations, though male enlargement was most prominent in the frontal and occipital poles, bilaterally"* mean male brain, meanwhile ***brain*** shown in next sentence *"The male differentiated **brain** has a thicker right hemisphere. This may be the reason males tend to be more spatial, and mathematical"* refers to male differentiated brain. Last repetition found in the word. First ***hemisphere*** shown in the sentence *"The male differentiated brain has a thicker right **hemisphere**. This may be the reason males tend to be more spatial, and mathematical"* talking male oriented brain and second ***hemisphere*** shown in the sentence *"The left **hemisphere**, which is important to communication, is thicker in female oriented brains"* talking female oriented.

As a result repetition in the excerpt four above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

4.2.5 Lexical cohesion of Excerpt Five

Text:

Orbitofrontal to Amygdala Ratio (OAR)
The ratio between the orbitofrontal cortex, a region ***involved*** in regulating ***emotions***, and the ***size*** of the ***amygdala***, ***involved*** in producing ***emotional reactions***, was significantly ***larger*** in ***women*** than ***men***. One can speculate from these findings that ***women*** might on average prove more capable of controlling their ***emotional reactions***. ***Women*** have ***larger*** orbital frontal cortices than ***men***, resulting in highly significant ***difference*** in the ratio of orbital grey to amygdala volume. This may relate to behavioral evidence for sex ***differences*** in ***emotion*** processing. (Paragraph 10:39)

From the excerpt five above that there are three types of lexical cohesion is found, they are antonymy, repetition, and collocation. Lexical chain as follow:

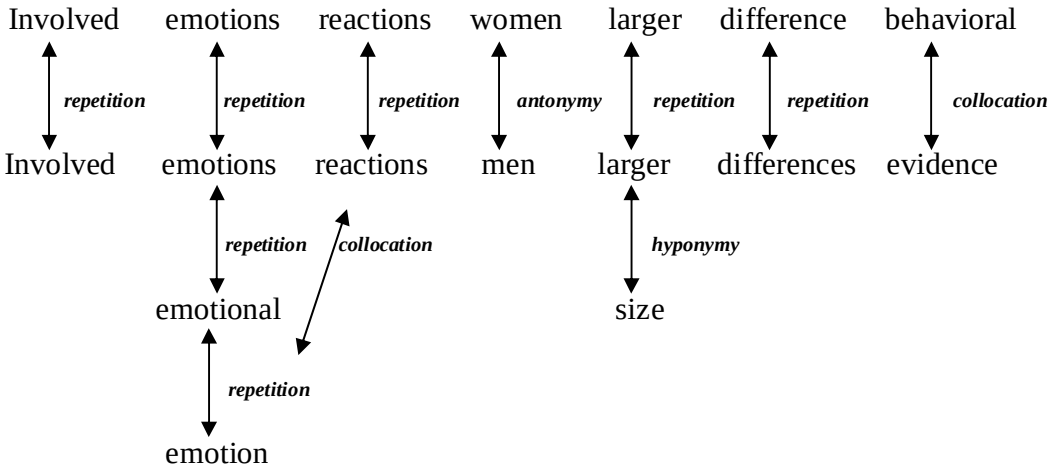


Figure 4.5

Lexical chain of excerpt five shows several types found, they are repetition, antonymy, collocation. The explanation of each type can be seen as follow:

The excerpt five above, that there are many repetitions found. Those are ***involved, emotions, emotional, emotion, reactions, larger, difference, differences.*** Those words are classified as repetition because they have similar meaning and same forms. The lexis above shows the relevant issued that is about differences in emotion processing.

In the excerpt above that the researcher found four types of lexical cohesion, they are repetition, antonymy, hyponymy and collocation. The explanation of each type found read in the following statement. According to the paragraph above, there are four words includes in repetition, they are ***involved, involved, emotions, emotions, reactions, reactions, larger, larger, difference, differences.***

Involved in the first sentence explains regulating emotions, another word ***involved*** in the same sentence explains producing emotional relations. Both ***involved***, before have similar form that is a verb. The word ***emotions*** found in the first sentence means regulating, meanwhile the word ***emotions*** found in the last sentence means producing. The form of ***emotions*** is a noun. Next repetition found in the word ***larger***. There are two ***larger*** in this paragraph. The first ***larger*** refers to size of amygdala, meanwhile second ***larger*** refers to orbital frontal cortices. The form of ***larger*** is an adjective. Last repetition found in the word ***difference*** and ***differences.*** The word ***difference*** explains ratio of orbital grey to amydala volume, meanwhile ***differences*** explain emotion processing. The form of ***difference*** and ***differences*** is noun.

After repetition, the researcher found antonymy, they are women and men. The word ***women*** explain producing emotional reactions in women, meanwhile ***men*** explain emotions processing.

As a result repetition in the excerpt five above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

Another lexical cohesion identified, that is hyponymy. Hyponymy is frequently used in people's name, objects, and events occurring in the same article. The hyponymy identified in the paragraph is ***larger*** and ***size***. ***Larger*** is always kind of a ***size*** but ***size*** is not a ***larger***, it could be volume, weight, height, and more.

As a result hyponymy in the excerpt five above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

The researcher found collocation, there is ***behavioral evidence***. This word means highly significant differences in the ratio of orbital grey to amygdale volume. This word called collocation because it consists of adjective and noun.

As a result collocation in the excerpt five above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

4.2.6 Lexical Cohesion of Excerpt Six

Text:

Emotions
Male oriented ***brains***, hardly ***express feelings***. It is due to the use of the ***right hemisphere*** only. ***Male brains*** separate language, in the ***left***, and ***emotions*** in the ***right***, while the ***female's emotions*** are in both ***hemispheres***. It helps explain why the ***male brain*** has a hard time ***expressing*** its ***feelings.*** (Paragraph 20:41)

From the excerpt six above that there are three types of lexical cohesion is found, they are antonymy, repetition, and collocation. Lexical chain as follow:

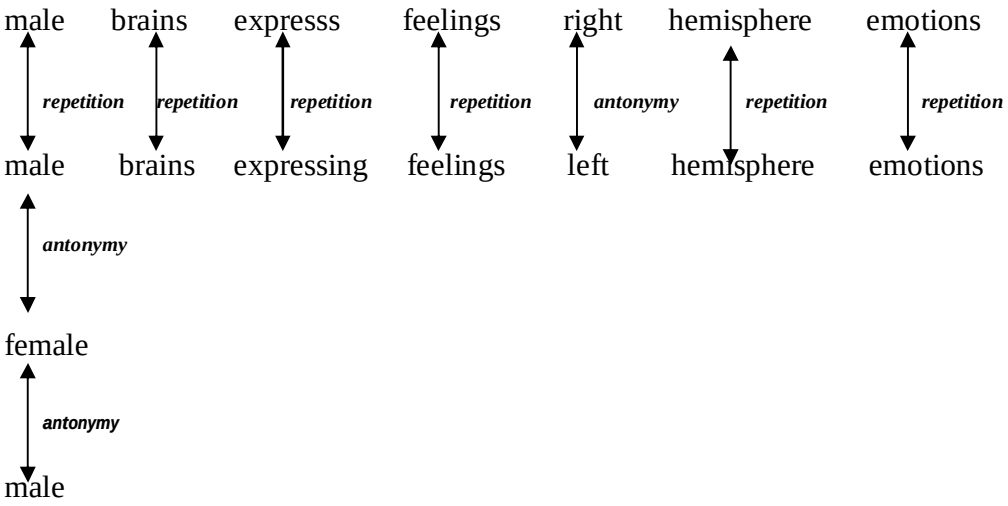


Figure 4.2.6

Lexical chain of excerpt six shows several types found, they are repetition and antonymy. The explanation of each type can be seen as follow:

According to the paragraph above, the researcher found several repetition and antonymy. The repetition consists of ***male, male, male, brains, brains, express, expressing, hemisphere, hemisphere, feelings, feelings, emotions, emotions***, meanwhile the antonymy found in the word ***left*** and ***right***.

After found the type of lexical cohesion then the researcher identified the meaning of each word, beside that the explanation of each word.

Repetition found in the text above consists of ***male, male, male, brains, brains, express, expressing, hemisphere, hemisphere, feelings, feelings, emotions, emotions.*** The word ***male*** in the first sentence of this paragraph explains men oriented brain, meanwhile ***male*** in second sentence of this paragraph explains male brain. The last ***male***

found in last sentence of this paragraph, it explains male brain. The form of the word ***male*** is a noun.

Another repetition found in the word ***brain***. There are two repetition found in this word. The first ***brain*** talking male brains, meanwhile another word ***brains*** describes male brain. The words ***brains*** in the paragraph above have same form that is a noun.

Next repetition found in the word emotions. There are two repetition of this word. First ***emotions*** refers to male emotion, meanwhile in the second ***emotions*** refers to female emotions. In this paragraph the word ***emotions*** have similar form that is a noun.

The researcher found ***express*** and ***expressing*** as repetition in the paragraph above. ***Express*** in this paragraph tells that male oriented brains hard to express feelings, meanwhile the word ***expressing*** tells the way male brain expressing its feelings. The form of the word ***express*** is a noun and ***expressing*** is a verb.

Next repetition found in the word ***hemisphere***. There are two repetition of this word. First ***hemisphere*** refers to brain used in right hemisphere of men, meanwhile in the second ***hemisphere*** refers to female emotions of both. In this paragraph the word ***hemisphere*** have similar form that is a noun.

Last repetition found in the word ***feelings***. There are two repetitions in the paragraph above. The word ***feelings*** shown in the first sentence of this paragraph describes male feelings. Another ***feelings*** describes male feelings. In this paragraph, all the word ***feelings*** have similar form that is noun.

As a result repetition in the excerpt six above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

After repetition, the researcher identified antonymy in the paragraph above, that is ***left*** and ***right***. The word ***left*** in the paragraph above shows the male brains separate language, meanwhile the word ***right*** shows male brains separate emotions.

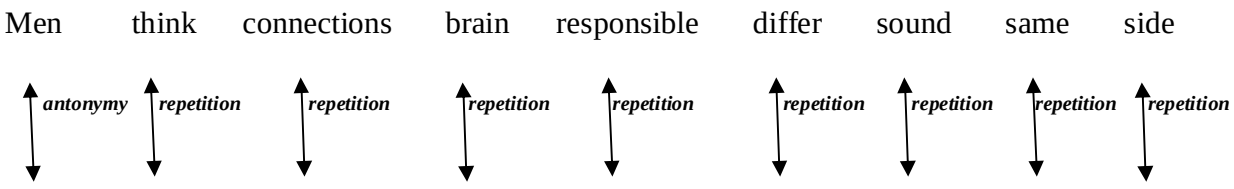
As a result antonymy in the excerpt six above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

4.2.7 Lexical Cohesion of Excerpt Seven

Text:

Thinking
Men seem to ***think*** with their grey matter, which is full of active neurons. ***Women think*** with the white matter, which consists more of ***connections*** between the neurons. In this way, ***a woman's brain*** is a bit more complicated in setup, but those ***connections*** may allow ***a woman's brain*** to work faster than ***a man's***. The parts of the frontal lobe, ***responsible*** for problem-solving and decision-making, and the limbic cortex, ***responsible*** for regulating emotions, were larger in ***women***. In ***men***, the parietal cortex, which is involved in space perception, and the amygdala, which regulates sexual and social behavior, was large. ***Men*** and ***women differ*** in accessing ***different*** sections of the ***brain*** for the ***same*** task. In one study, ***men*** and ***women*** were asked to sound out ***different*** words. ***Men*** relied on just one small area on the left ***side*** of the ***brain*** to complete the task, while the majority of women used areas in both ***sides*** of the ***brain.*** However, both ***men*** and ***women*** sounded out the words equally well, indicating that there is more than one way for the ***brain*** to arrive at the ***same*** result. (Paragraph 20:41)

From the excerpt seven above that there are three types of lexical cohesion is found, they are antonymy, repetition, and hyponymy. Lexical chain as follow:



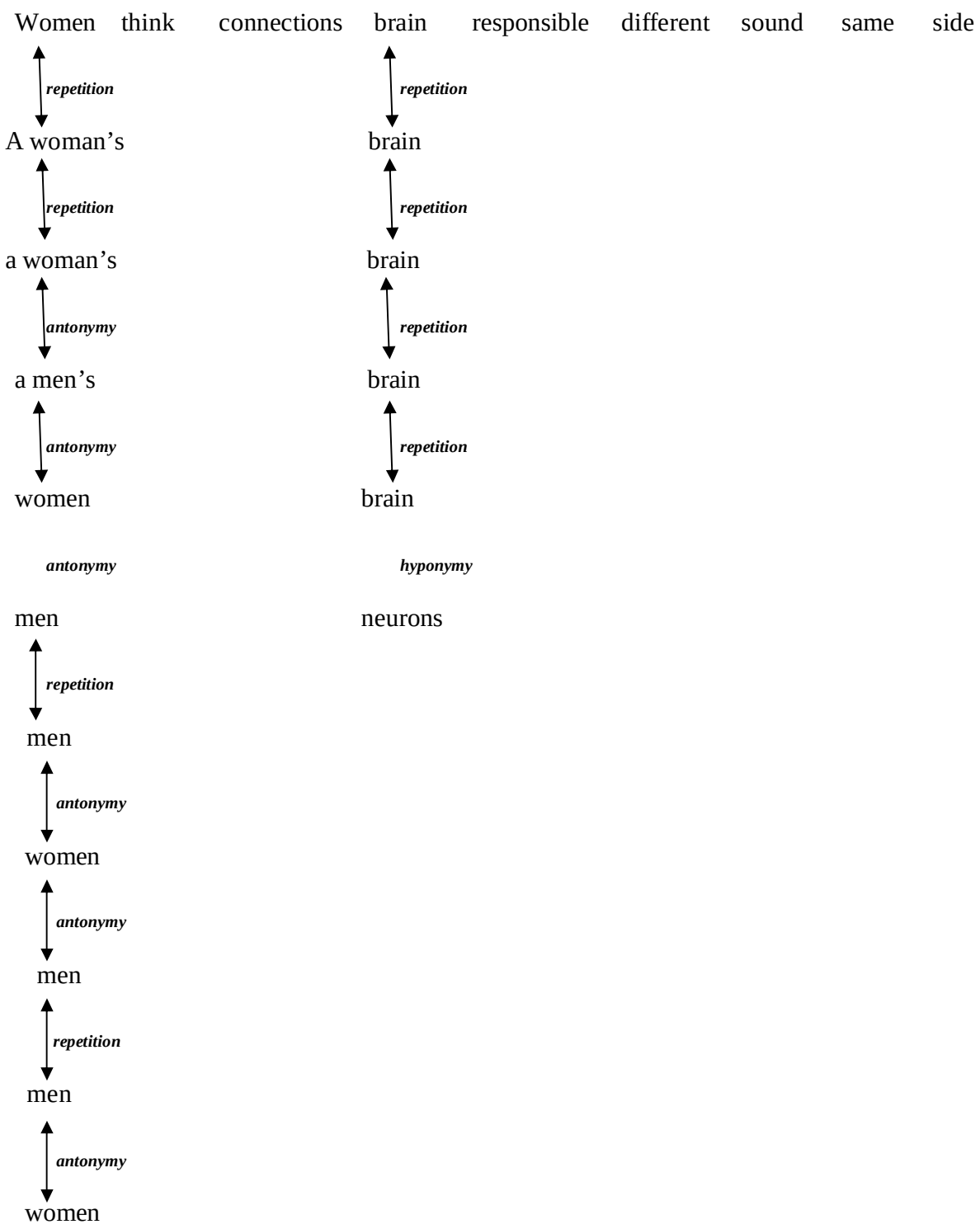

Women think connections brain responsible different sound same side
repetition
repetition
A woman's
brain
repetition
repetition
a woman's
brain
antonymy
repetition
a men's
brain
antonymy
repetition
women
brain
antonymy
hyponymy
men
neurons
repetition
men
antonymy
women
antonymy
men
repetition
men
antonymy
women

Figure 4.2.7

Lexical chain of excerpt seven shows several types found, they are antonymy, repetition, and hyponymy. The explanation of each type can be seen as follow:

According paragraph entitled ***"Thinking"*** the researcher several types of lexical cohesion, they are antonymy, repetition, and hyponymy. There are fourteen antonymy, twenty two repetition, and hyponymy.

In the excerpt above, the researcher found some words which identified as antonymy. The word ***men*** tell grey matter in the first sentence, meanwhile the word ***women*** tell white matter. The other word woman describes women's brain in the second sentence, while the word ***men*** describe men's brain. The word ***women*** refers to the parts of the frontal lobe in women in the fourth sentence and men refers to the parietal cortex which is involved in space perception, and the amygdale which regulates sexual and social behavior. The next antonymy found ***men*** and ***women***. The word ***men*** means differ in accessing different sections men's brain, meanwhile ***women*** differ in accessing different sections women's brain. The other antonymy found ***men*** and ***women***. The word ***men*** show the sound of men, while ***women*** show the sound of women. The other word found ***women*** and ***men***. The word ***women*** tell men's sound, meanwhile ***men*** tell men's sounded out the words equally well in the last sentence.

As a result antonymy in the excerpt seven above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

First repetition found in the word ***men***. There are five words men identified as repetition in this paragraph. The word has a meaning that related each other. The form of word ***men*** in this paragraph is noun means grey matter, next word ***men*** means men's brain. The other word ***men*** refer to the pariental cortex which is involved in space perception and the amygdale which regulates sexual and social behavior, meanwhile ***men*** in the next sentence refers to differ in accessing different sections of men's brain. The word ***men*** refer to men's sound and the last ***men*** refers to men's sounded out the words equally well. The form of ***men*** is noun

The researcher found in the word ***women*** of second repetition. The word ***women*** means white matter in the first sentence, meanwhile other ***women*** refers to woman's brain. The next ***women*** explains the parts of the frontal lobe in space perception and the amygdale which regulates sexual and social behavior, meanwhile the word ***women*** in the middle sentence of the paragraph refers to the sound of the different sections of women's brain. Next word ***women*** refer to women's sounded out the words equally well. The form of ***women*** is a noun.

Third repetition found in the word ***think***. The word ***think*** in the first sentence means the way men thinking, meanwhile the word **think** in the sentence means the way women thinking. The form of ***thinking*** is a verb.

Another repetition found in the word ***brain***. There are six repetition of the word brain. The word ***brain*** in the first sentence describes the complicated of the woman's brain. Next word ***brain*** refers to the work of woman's brain. The other ***brain*** refers to the access of men and women's brain, meanwhile ***brain*** in another sentence means small area

on the left men's brain. Another ***brain*** this paragraph means majority area on the left of women's brain. The last ***brain*** refers to women and men's brain generally.

Next repetition identified in the word found in the word ***differ*** and ***different***. The word ***differ*** shows the way men and women accessing, meanwhile ***different*** shows sections. The form of ***differ*** is a verb but ***different*** is noun.

Another repetition found in the word ***sound*** and ***sounded***. The word ***sound*** means make a noise, meanwhile ***sounded*** is the noise result by men and women.

The researcher identified the word ***same*** as repetition. First, the word ***same*** talking task, meanwhile second the word ***same*** talking result.

Last repetition found in the word ***side***, first ***side*** refers to the one small area on the left brain, meanwhile the second word ***sides*** mean the majority of women used area and one small area on the left brain.

As a result repetition in the excerpt seven above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

Hyponymy is frequently used in people's name, objects and event occuring in the same article. In the paragraph which entitled "Thinking" the researcher found hyponymy in the word ***neurons*** and ***brain***, where ***neurons*** are same superordinate with ***brain***.

As a result hyponymy in the excerpt seven above is coherent sentence are made of repeating words to create interrelated sentence and make the text understandable.

CHAPTER V

CONCLUSION AND SUGGESTION

With regard to the findings and discussion presented in the previous chapter, the writer finds out some important points. They are presented through conclusion, and suggestions.

1.1 Conclusion

From the analysis of lexical cohesion devices in the article *A Review Gender Differences in Human Brain* by Zeenat F Zaidi issued on February 11, 2010, it can be concluded that the story used lexical cohesion devices in the form of text and cohesion that occurs in the text. Those lexical cohesion devices may help the reader to understand whole topic of the text and its meaning easily.

The total of lexical cohesion ties consists of Repetition, Antonymy, Synonymy, Hyponymy, Meronymy, Collocation. The lexical cohesion of the text is develop by using repetition, antonym, synonymy, hyponymy, meronymy and collocation. Repetition occurs from the repeating of some key words can help to make a coherent. Each of the paragraph in these excerpts contain some key words but the excerpt as a whole barely coherent. In fact, each excerpt comes from a different book and newspaper. Antonym occurs by some opposite words founded in the excerpts. By creating this expectation and then satisfying it, the excerpts help readers to navigate through the text-which is what cohesion is all about. Hyponymy occurs by same superordinate words founded in the excerpt and words with a one of the most specific terms, it could alternatively have said that larger, weight, volume superordinate size. Meronymy occurs from a 65 relation, such as the relationship. In these excerpts, amygdale, hemisphere, neuron is meronymy of brain because amygdala, hemisphere, neuron is part of brain. Collocation occurs by some words which describe associations of adjectives and nouns, as in emotional reactions, behavioral evidence. The total cohesion devices found are 414 words. These lexical cohesion devices are repetition with 60 occurrences or 14,5%, then next is synonymy with 12 occurrences or 2,9%, antonymy with 226 occurrences or 54,6%, after word is hyponymy with 8 occurrences or 1,9%, after that is meronymy 29 occurrences or 7,0%, and the last collocation is 79 occurrences or 19,1%.

From those forms of lexical cohesion device, “antonyms” has the highest frequency of the use among others that is (226 occurrences or 54.6%). Moreover,

hyponyms has the lowest frequency of use among others, that is (8 occurrences or 1,9%).

1.2 Suggestion

The writer has suggestion in article *A Review Gender Differences in Human Brain* by Zeenat F Zaidi, the writer found some difficulties. The students should concern and pay attention to lexical cohesion of the text when they write or read a text, because lexical cohesion in the text will help them to understand the meaning of lexical text. The students also have to pay attention to the use of lexical cohesion devices is very important especially to comprehend a reading passage. They should be able to make a unified sequence of sentences, which have relation in meaning. By doing this, it is expected that the result will increase the study of discourse especially on lexical cohesion.

Considering that reading is interpreting discourse and writing is creating discourse, it is significant to make use of cohesion to interpret or create coherence in a text. Ultimately, cohesion is one function to create coherence in discourse.

For the new writers should have a broader understanding about the types of lexical cohesion devices in presenting to the new readers in order to achieve the quality of the news text which should be simple, informative, and concise.

It is also suggested that they conduct other studies on lexical cohesion in other kinds of text, such as other kinds of article in a newspaper, magazine, short story and novel. Also, the studies or the learners more understand how to make a proper scientific text by reading the article.

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