The Creative Use of Cohesive Devices: Exploring New Roles

Emad A. S. Abu-Ayyash
Faculty of Education, The British University in Dubai, P. O. Box 345015, Dubai, UAE
Corresponding author's email: emad.ayyash@buid.ac.ae

Abstract

The role of cohesive devices in different types of discourses has been broadly acknowledged to be maintaining texture, or holding the different parts of the text together. This role was emphasised in a plethora of studies in discourse analysis, and cohesive devices have been considered to be the glue-like linguistic tools through which textuality is achieved and without which a certain piece of discourse would look like fragmented, disconnected sentences. Important as it is, the 'gluing' role of cohesive devices has been the primary and dominant focus of research and whether these devices can play other roles in texts has been under-investigated, if not ignored. The current paper addresses this gap in research by exploring other possible roles of cohesive devices. Three newspaper, opinion articles for one of the renowned writers, Thomas L. Friedman, were selected and analysed in terms of the various roles played by cohesive devices in them. Through mixed-methods analysis, it was found that cohesive devices played several roles other than holding the various parts of the text together.

Keywords: cohesive devices; reference; ellipsis; substitution; conjunctions; lexical cohesion

1. Introduction

Naturally, various text types house a variety of linguistic techniques and involve a diverse range of stylistics. However, regardless of text type, a text cannot be considered a text if it lacks cohesion (Halliday and Hasan, 1976). In tandem with this claim, cohesive devices have been acknowledged to be the linguistic apparatus that determines whether a sequence of sentences can or cannot be considered a text (Cook 1989; Hatch 1992; Thornbury 2005). Taken together, these claims accrue an important role to cohesive devices, which is holding the various parts of a text together, thus maintaining its texture. Following from this, an increasing body of literature has investigated the use of cohesive devices in a wide variety of texts in terms of their role of holding the various parts of text together, and this role was highlighted by a host of researchers as the one-and-only purpose behind utilizing cohesive devices (e.g. Khoshsima and Moghadam, 2017). The author of the present paper views this claim as a frugal perspective and argues through this qualitative study that cohesive devices can be used to play a variety of roles other than maintaining text unity. In order to verify this claim, there is a need to consider non-academic text types - texts that go beyond and sometimes violate the set forma of usage - since academic writings were exhausted in research about cohesive devices and were rightly found to include a host of cohesive ties that serve as glue-like elements that hold the various parts of the text together.

This paper, which seeks to explore new roles of cohesive devices, has, therefore, looked at texts that do not conform with the characteristics of academic writing. The texts selected

for this study were newspaper editorials as these texts harbor hybrid written features from spoken and written discourses. As a matter of fact, these texts also require a certain level of linguistic creativity in order to be published in popular, highly ranked newspapers. Since this study is an exploratory one, it was inevitable that few texts should be chosen in order to guarantee an in-depth analysis. This kind of analysis seeks to explore as many roles as can be found for cohesive devices in a few number of texts, which can pave the way for further quantitative studies to examine these roles in a bigger number of texts. For the purpose of the present study, three newspaper articles were selected. The selection criteria will be discussed in the methodology section of this paper. In essence, this study attempts to answer the following research question: What roles, other than maintaining texture, do cohesive devices serve in newspaper opinion editorials?

The next section of this paper is the literature review, which is divided to two parts: Types of cohesive devices and the related studies on cohesion.

2. Literature Review

The section of the paper expounds the different types of grammatical and lexical cohesive devices based on the model of Halliday and Hasan (1976) and the other offshoots of devices that were propounded by other scholars; this review also reports on the findings of various studies that investigated the role of cohesive devices in a variety of texts.

2.1 Types of cohesive devices

The core model used by the majority of researchers who worked on cohesive devices is based on (Halliday and Hasan 1976). However, the following account also introduces the devices suggested by other researchers ever since as introduced in Table 1. Where the source is not mentioned, it means that the category was first presented in the 1976 model.

Main	#	Type of tie	Example		
Categories					
	[1]	Anaphoric reference	John is not in his room. He must be		
			at work.		
	[2]	Cataphoric reference	John met her in the café. Susan was		
			having coffee.		
	[3]	Exophoric reference	John saw it.		
Grai	[4]	Associative reference	Youtube is a popular video sharing		
Grammatical cohesion		(Cutting 2008)	website where users can upload,		
al cohe			view and share video clips.		
esion	[5]	Parallelism (Gutwinski	John hardly worked on his		
		1976)	assignment. When the deadline		
			approached, he barely completed		
			the first part of it.		
	[6]	Substitution	I bought the red blouse. My sister		
			preferred the red one .		

Ellipsis A: Are the guests coming soon?	r			1		
[8] Conjunctions Mark failed to meet the assignment's deadline. Therefore, he failed the module. [9] Repetition They were lost in the woods for three days. The woods were really frightening. [10] Collocation Let's go to the nearby pool. It is a good place for swimming. [11] Hyponymy I bought a number of electronic devices last month. I got an iPhone, an iPad and an iPod. [12] Synonymy I left my house last year. Actually, I departed the whole area. [13] Antonymy My friend lives in a small villa. It is located in a huge compound. [14] Meronymy My car broke last night. There was		[7]	Ellipsis A: Are the guests coming soon?			
Lexical cohesion General cohesion Lexical cohesion				B: Yes, they are (coming).		
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				located in a huge compound.		
something wrong with its engine .		[14]	Meronymy	My car broke last night. There was		
				something wrong with its engine .		

Lexico		[15]	Construction	n-based	John brought a spoon into a knife		
Cohe			cohesion	(Abu-Ayyash	fight. He was not ready for the		
Cohesion	Grammatical		2019)		discussion, and his opponent's		
	tical				argument was much more solid.		

Table 1: Examples of cohesive devices

The cohesive devices outlined in Table 1 will constitute the instrument of the current paper. As it can be seen, the majority of those devices were developed by Halliday and Hasan (1976), and the rest were suggested by other authors. A word on each type merits consideration at this juncture, and the numbers 1-15 used in Table 1 will be used in the subsequent illustration whenever the example from the table is considered.

The first two types (anaphoric [1] and cataphoric [2] reference) are examples of in-text ties. That is to say, in order to decode the bold-faced pronouns, one only needs to refer either backward (anaphora) or forward (cataphora) in the text. In example [3], however, the pronoun it cannot be interpreted except by referring to contextual clues because there is no information in the text itself as to what it might refer to. This kind of contextual appeal is referred to as exophoric reference (Abu-Ayyash 2020). As for the associative reference [4] introduced by Cutting (2008), the accurate interpretation of the boldfaced linguistic items video and sharing requires some kind of a knowledge pool that enables the reader to figure out that sharing is an online activity rather than a hand-to-hand physical action.

Parallelism [5] was introduced as a cohesive device by Gutwinski (1976) and was later

accepted as such by a host of linguists and researchers (e.g. Abu-Ayyash and McKenny 2017; Beaugrande and Dressler 1981; Kaur 2015). *Parallelism* is defined as reusing some surface format or structure to introduce new components. Therefore, 'hardly worked' and 'barely completed' in [5] can be considered as a cohesive tie vis parallelism, where the form 'adverb+verb' is repeated, yet recognised by different words.

The following cohesive device is *substitution* [6], which, according to Halliday and Hasan (1976), can occur in texts in three forms: 1) nominal, where a noun is substituted by a word like *one* or *ones*; 2) verbal, where a verb can be substituted by a word like *do* or *did*; and 3) clausal, where an entire clause is replaced by a word like *so* or *not*. Thus, the example given in [6] is an instance of nominal substitution, since 'one' substitutes for the noun 'blouse'. *Ellipsis* [7] maintains the same three categories of substitution, nominal, verbal and clausal, yet no words are used to substitute for linguistic elements, which are retrieved through deletion in this case. Therefore, 'coming' can be retrieved in the second sentence in [7] although it is deleted. The last grammatical cohesive device is *conjunctions* [7], which are used as transitions from one sentence to another. The list of conjunctions is a huge one and includes items like *therefore*, *because*, *if*, *however*, *nevertheless*, *in addition*, and *while*, only to name some.

The second set of devices are lexical cohesive devices, which include repetition [9] (reiteration of the same lexical item), collocation [10] (the habitual co-occurrence of lexical items, hyponymy [11] (the relationship of inclusion), synonymy [12] (sameness in

meaning), antonymy [13] (the relationship that involves oppositeness), and meronymy [14] (part-whole relationship).

The last type of cohesive devices, categorized within lexico-grammatical cohesion, is a contribution of the author of the present study. Construction-based cohesion [15] builds on the principles of two theories: Construction Grammar and Systemic Functional Linguistics. One of the major principles of the former is that it views language constructions as pairings of form and function, and it takes into account the language structures that violate language norms in a way or another. For example, an idiom like "someone is a dark horse" transcends the literal meanings of individual words to mean 'someone who surprises others by doing better than expected'. Expressions like idioms are hard to discuss in terms of cohesion because such ties, as per Systemic Functional Linguistics, involve surface connections irrespective of the function of words. To elaborate, in order to consider an idiom like 'someone is a dark horse' in terms of cohesive devices, one has to look at the individual words, thus looking at how many times the word 'dark' was repeated', the synonyms/antonyms of the word 'dark', hyponymy relations of 'horse', parallel 'adjective+noun' structures', etc. However, the author of this paper argues that the 'formfunction' pairing introduced by the theory of Construction Grammar can broaden the cohesive analysis system by looking at how the functions of linguistic items, such as idioms, link to entire ideas in the text as shown in example [15].

Having explained the different types of cohesive devices that will constitute the model of

analysis of this paper, it is worth now turning to the relevant literature that addressed cohesive devices in order to situate the study solidly within its research context.

2.2 Related Work

Considering the literature done on cohesive devices since their inception in 1976 to date, it is not hard to discern that the majority of the studies assigned cohesive devices the sole role of linking the various parts of the text together, and, quite understandably, this was tied to text quality. Within this inclination, a number of investigations looked at the impact of using cohesive devices on the quality of writing. Tahsildar and Yusoff (2018) considered the pedagogy of these tools by examining the impact of teaching them on language accuracy in L2 students' written texts. The study found that teaching cohesive devices had a positive impact as students' written productions improved as was evident from the differences between the pre-test and the post-test scores. In the same vain, Liu and Brian (2005) found that there was an evident link between employing cohesive devices and the quality of argumentative writing produced by college students, a finding that was supported by two similar study conducted seven years later (Mohamed and Mudawi 2012; Yang and Sun 2012). The role of cohesive devices in maintain texture, or holding the various parts of the text together, and, therefore, in improving the writing quality of descriptive texts was also evident in Abdul Rahman's (2013) investigation of college students' descriptive writing.

In addition to argumentative writing and descriptive writing, other types of texts were

analysed in terms of cohesive devices' contribution to writing quality. Links between cohesive devices and the quality of texts were found to hold in studies conducted on narrative texts (Bae 2001), children's expository texts (Cox, Shanahan and Sulzby 1990), poems (Kaur 2015; Paramartha 2013; Yeibo 2012), psychology papers (Sharif 2015) and comparative studies between texts and their translations (Khoshsima and Moghadam 2017). Although the majority of the studies established a connection between cohesive devices and the quality of writing while others did not (e.g. Green 2012), it can be clearly noticed that a significant number of the studies on cohesion was encapsulated within the understanding that the role of cohesive devices was to maintain texture and to keep text unity, based on which text quality or lack of it was determined. This paper, however, seeks to explore other roles of cohesive devices, and therefore, broaden the scope of analysis of these linguistic tools.

3. Methodology

In order to answer the research question "What roles, other than maintaining texture, do cohesive devices serve in newspaper editorials?", the present paper embraced a mixed-methods approach to discourse analysis. This approach has its roots in the Pragmatic Paradigm, where the guiding principle is fitness for purpose (Cohen, Manion and Morrison 2018). The mixed-methods approach will secure the breadth (quantitative) and the depth (qualitative) dimensions to the data analysis, thus, avoiding the shortcomings ensuing from

embracing a single approach. Since there are a number of mixed-methods designs (Creswell 2012), a word on the specific design adopted in this paper is in order here. This study uses the embedded mixed-methods QUAL:quan design (Creswell 2012), meaning that the analysis will mainly be of qualitative, in-depth nature where quantitative data, or numericals, will only be used if relevant to the qualitative interpretation. Therefore, the articles selected for analysis were explored for various roles of cohesive devices, and the frequency of these tools was only addressed to support certain arguments.

In line with the dominant qualitative, exploratory design, the study espoused a criterion-based sampling procedure. Three criteria were set for the selection of the articles: 1) the three articles are written by a famous opinion writer, 2) the articles should be published in a highly-ranked newspaper, and 3) the articles should have abundant instances of cohesive devices. Based on these criteria, three articles written by Thomas L. Friedman were selected: *Four Words Going Bye-bye*, *What is News*, and *May be in America*. The first selection criterion was met as Thomas L. Friedman is a very famous writer whose books were best-sellers in many occasions. The second criterion was also met as the selected articles were all published in the New York Times, a highly renowned and reputable US-based newspaper. In addition, the initial scanning of the three articles revealed the author's employment of a significant and diverse number of cohesive devices, which meets the third criterion set for sampling. The instrument used in the analysis included all the types mentioned in Table 1.1 above. In the analysis of the three articles, the symbol P stands for

Paragraph and L for Line. Therefore, P2_L4 would mean that the items under analysis appeared in the second paragraph, fourth line in the article, which will make it easy to locate the items under consideration in their respective articles, to which the links where they can be found were also provided ahead of the analyses.

4. Findings and Discussion

4.1 Article 1: Four Words Going Bye-bye

As the title suggests, the article argues that four words are disappearing and provides detailed support from a variety of sources to prove it. The four words that are vanishing are "privacy," "local," "average" and "later." The disappearance of the four words is discussed in order in the text, and it is lexical cohesive devices that have built the organisation of the article. The article is divided into twelve paragraphs, clearly organised as introduction (paragraph 1), body (paragraphs 2-11) and conclusion (paragraph 12). This organisation is well-established via the utilisation of lexical cohesive devices, particularly *repetition* and *synonymy/antonymy*. The four words, *privacy*, *local*, *average*, and *later*, appear together in the text only in two paragraphs: the first and the last, therefore marking the two as introduction and conclusion respectively because the four words are not repeated together in any of the other ten paragraphs.

Repetition and **synonymy/antonymy** have also served not only as identifiers of the introduction, the body and the conclusion of the article, but also as organisers of the ideas

in the body of the article. By tracing *repetition* and *synonymy/antonymy* occurrences in the body, it is easy to realise that paragraphs 2 – 5 are about *privacy*, 6 about *local*, 7-9 about *average* and finally 10 and 11 about *later*. Table 2 illustrates the frequencies of each item in the article and the synonyms/antonyms linked to each item.

Word	Frequency via repetition and	Repetition/Synonyms/antonyms
	synonymy	
privacy	12	private/privacy (P2_L2; P3_L3;
		P5_L7); disclosure (P2_L2); public
		(P2_L6; P5_L8); off-the-record
		(P3_L5-L6; P3_L8); on-the-record
		(P3_L7-L8); safekeeping (P4_L3);
		spied/spying (P5_L2-L3);
local	5	local (P6_L1; P6_L8); global
		(P6_L3; P6_L4; P6_L8)
average	6	Average (P7_L1; P7_L3; P9_L1;
		P9_L3); value-add (P7_L4); extra
		(P7_L4)
later	8	Later/late (P11_L1; P11_L4;
		P11_L5; P11_L7 ×3); irreversible

Table 2: Frequencies of Repetition and Synonymy

It is obvious that none of the words appears in another word's paragraph, which means that *repetition* and *synonymy/antonymy* have been used to organise the body of the article in a way that reflects the order in which the four words appear in the introduction.

In addition to organisation, cohesive devices are the main tool used in the article to provide illustrations of the main arguments. *Hyponymy* is used all through the article to illustrate the dangers posed by modern advancement in communication. Consider Figure 1.

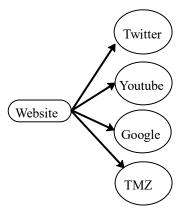


Figure 1: Hyponymy of Website

The *hyponymy* relationship between *website* and the subclasses of *Twitter*, *YouTube*, *Google* and *TMZ* serves the purpose of highlighting some major sources of danger to

privacy. Also, *meronymy* is employed to illustrate the same idea of privacy penetration by certain sources as shown in Figure 2.

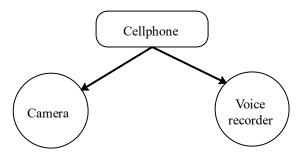


Figure 2: Meronymy of Cellphone

In addition to their role in illustrating the main arguments in the article, cohesive devices are crucial for extending and enhancing the main ideas. A variety of forty-two *conjunctions* dispersed all through the entire article is employed to serve these two purposes. To extend main ideas, the article relies heavily on *and* and *but* with seven occurrences for the former and three for the latter. The following example shows how *but* is used to extend the information that the Santa Rosa's mother's story was not local anymore.

[1] It doesn't get more local than that, *but* it went global thanks to Google. (P6_L8-L9)

To serve the second purpose, which is enhancement, Friedman employs conjunctions and

hyponymy. This role is clearly represented through temporal conjunctions, such as now and then, causal-conditional conjunctions, such as because and if and hyponymy of press and its subclasses. The following is an example of then showing the sequence of events of a conversation that was taped and leaked:

...some of which she *then* sent digitally to a friend of hers for "safekeeping," who *then* leaked it to TMZ, a gossip website. (P4_L3-L4)

And here is an example of *if* used to provide a piece of advice that will help avoid the speech-leak risk:

[3] If you don't want your words broadcast in the public square, don't say them.

(P5_L7-L8)

A broader instance of enhancement is reflected in the use of *hyponymy* to enhance the main argument of the article, which is the disappearance of the four words. The article argues that this can be proven by reading the press. In order to enhance this idea, many subclasses of *press* have been dispersed throughout various parts in the article. Figure 3 presents two sets of subclasses of the hyponym *press*.

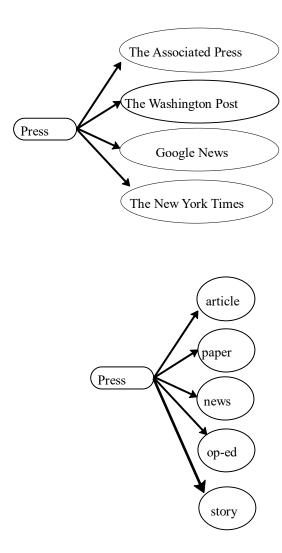


Figure 3: Hyponymy of *Press*

Furthermore, cohesive devices play the role of delineating the significance of the article's topic, which is the disappearance of the four words. In order to do that, the article relies heavily on *exophoric reference* and *repetition*. Through *exophoric reference*, the text emphasises that the disappearance of what the four words represent involves all, including the readers. To do this, the referring items *we* and *you* are used in several parts of the text.

[4] ...we are all now on Candid Camera. (P3_L2-L3)

You cannot assume anything is private anymore. (P3_L3)

Everything and anything controversial you say or do...(P6_L1-L2)

To add force to the idea that the issue raised in the article involves all, the article employs *repetition* of general referring lexical items. The frequency of *everyone* is five times, *anyone*, *everything* and *anything* three each, *anywhere* twice and *every boss* once. In order to emphasise the involvement of all even more, the article uses several types of referring items that could refer to *anything*. When everyone/thing is involved, the topic is significant; that is what *repetition* does. One more device used to stress the involvement of all, and therefore the significance of the topic, is the utilisation of usually-specific reference items that could be interpreted as *anything*, literally. The following is an example:

[5] *This* is off-the-record. (P3_L5-L6)

Is your cellphone or Google glasses recording *this*? (P3_L8)

The demonstrative reference item, *this*, in the above examples could refer to *anything* said in a conversation as the co-text provides no specific reference.

Still, the major role played by cohesive devices in this article is that they provide support for the main argument in a variety of ways. *Cataphora* is employed to support with facts and stories. The text is replete with examples of *cataphoric reference*:

[6] The fact that in a world... (P2_L3)
...it is not surprising that... (P3_L4)
Google News carried the following story... (P6_L6)
Finally, comes the news,... (P10_L1)

In all the four examples in [6] the italicised items refer forward to entire chunks that provide examples, facts and stories that support the text's argument. For instance, the news (P10_L1) refers forward to the entire chunk: scientists have concluded that a large section of the mighty West Antarctica ice sheet has begun falling apart and its continued melting now appears to be unstoppable. This part, in turn, supports the argument that later is over, and that immediate action is always needed.

Another tool used to support the article's argument is *collocation*. It is through this device that the text reveals how certain sources of danger are processed. Consider the following lexical items that collocate with *video*, for example: *record*, *upload*, *share*, *film*, *taped*, *leaked*. Those items provide a conspicuous illustration of how videos can offend privacy.

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The same strategy can be seen with other collocations, such as *cellphone camera*: *record*, *film*, *photograph*; and *conversation*: *hear*, *record*, *taped*, *leaked*.

In some cases, the text's argument is supported by a twinning between two sets of cohesive ties. In P11_L2 all through to L4, the text houses both *cataphoric reference* and *parallel structures* to support the argument. (Do) *the same* (thing) is an example of a comparative reference used cataphorically as it cannot be decoded except with the subsequent *that you did when you were a kid* (P11_L4). This cohesive tie is accompanied by *parallelism* as the structure *infinitive* + *determiner* + *adjective* + *head noun (phrase)* is repeated seven times as follows:

Infinitive	Determiner	Adjective	Head noun (phrase)
paint	the	same	landscape
see	the	same	animals
climb	the	same	trees
fish	the	same	rivers
visit	the	same	Antarctica
enjoy	the	same	weather
rescue	the	same	endangered species

The two cohesive devices are there together to support the idea that the same things cannot be done 'later' as things used to be in the past. Parallelism is also used on its own to support the argument as in the following example:

One more device used to support the argument is *construction-based cohesion*. In the very first line of the article, the construction used sets the ground for the entire argument:

The construction of *the more...*, *the more...* ties the two sides of the argument, which are the four words that are disappearing based on what can be read or seen in the news. The second construction appears in the following example:

The italicised construction can form a tie with *local*, and within the co-text it is used, it can be linked to the entire idea of the disappearance of *local*.

Finally, one more use of cohesive devices is the role played by *associative reference* and *exophoric reference* to involve the readers in the discussion of certain ideas. In the article, the disappearance of privacy partly involves the readers' ability to make associations that will help them get a better understanding of this issue. The reference here involves making the necessary associations between share (P3_12), video and Youtube (P2_L5). The idea here is that the readers need to infer that video sharing refers to online watching of videos by the public, rather than physically passing DVDs to friends; the involvement of readers occurs here as they have to depend on their own knowledge of the "presuppositional pool" (Cutting 2008) of *Youtube*. Exophoric reference expressions used to serve the same purpose of involving the readers are personal pronouns, such as *we* and *you* that refer outside the text to the readers of the article. Occurrences of such pronouns can be seen in (P3_L2; P3_L3; P6_L1), to name but a few.

This article, then, harbours a number of patterns related to the role of cohesive devices. The first one is that the article is organised and paragraphed mainly by virtue of two lexical cohesive devices, which are repetition and synonymy. Added to their role in organisation, lexical cohesive devices illustrate the main ideas by the use of hyponymy and meronymy. The third role played by cohesive devices is extending and enhancing the main ideas, which is done by utilising temporal conjunctions, causal-conditional conjunctions and hyponymy.

Furthermore, although the author does not directly state that the topic is significant, repetition and reference have been employed to signal this. Furthermore, a battery of cohesive devices has been used to support the main argument of the article. These are cataphora, parallelism, collocation, cataphora-and-parallelism twinning, and construction-based cohesion. Finally, associative reference and exophoric reference have been utilised to involve the readers in the discussion of certain details.

4.2 Article 2: What is News

The main argument of this article can be looked at as a call for preserving diversity, be that for animals or humans, and the author stresses that any issue related to maintaining diversity should be considered *news*. In order to introduce the issue of diversity, the writer starts with a personal experience with one of the endangered species, the Sifaka lemurs, when he was in Madagascar. This part of the article, the one that describes the lemurs, is there because it paves the way for the main argument, which is preserving diversity.

The article employs most types of cohesive devices in the section that describes the author's experience with the lemurs. The reason behind using this wide range of cohesive devices goes far beyond maintaining texture, which automatically takes place almost every time cohesive devices are used. In the lemurs' story case, it is obvious that the author aims to

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keep reminding the readers of this 'poor' species in order to win their sympathy not only with the lemurs, but also with the cause he is introducing.

One of the most direct ways to attract the readers' attention to the importance of the lemurs' cause is the employment of *repetition*. In addition to repeating *lemurs* four times, their physical properties that reflect their beauty, such as *white* and *fluffy*, are also repeated. The writer's attempt to win the readers' sympathy with the lemurs can be clearly noticed when the concordances of the four occurrences of the word are analysed. Following are the L1 to R4 (the one word left and the four words right) concordances of *lemur(s)*.

Sifaka	lemurs	white,	fluffy	primates,	with
these	lemurs	are	able	to	leap
a	lemur	here	and	there,	we
Sifaka	lemurs	huddling	together	for	warmth

The concordances of *lemur(s)* reveal that every time this lexical item is repeated, a new piece of information is introduced. In the first occurrence of the word, focus is on the physical properties which make this animal beautiful, in the second occurrence, it is what this animal is able to do, in the third their locations and in the fourth their instinctive intimacy to each other. Apparently then, *repetition* of lexical items is not only there to

maintain texture, but to provide a momentum of occurrences that will keep reminding the reader of this 'beautiful' creature while seeking to win the reader's support for the author's argument.

Another type of lexical cohesion used to serve the same purpose is *collocation*. More information is provided about the lemurs using this cohesive device. Examples of *collocation* are provided in [10].

[10] ...lemurs...with very long hind limbs that enable them to bound...(P2_L10-L11)

How these lemurs are able to leap...(P2_L12)

Nine Sifaka lemurs huddling together...(P3_L3)

Once again, through *collocation*, the author is reminding the reader of these creatures, probably trying to help them visualise what these animals do, that they are alive, yet endangered and deserve sympathy. In addition to this device, the article employs *meronymy*, again laying more focus on this creature. This cohesive device is represented in the relationship that ties *lemur* (P3_L1) and *limb* (P3_L4). Lemurs are also part of a *hyponymy* relationship since in addition to *kangaroos*, *lemurs* are a subclass of *animal* (P2_L2). A similar relationship also exists between lemur and primates (P2_L10). The

lemurs' actions are introduced via *synonymy/antonymy*, with words like *bound* (P2_L11) and *leap* (P2_L12).

One more device used to serve the same function is *anaphora*. In this case, the article employs a total of seven anaphoric personals and comparatives to refer to *lemurs*. The following is an example of the former:

The personal pronoun *they* in [11] refer back to *lemurs*. Comparative anaphoric reference is also used to refer to *lemurs* in [12] via using *such*:

The article also contains instances of *ellipsis* and *substitution* that are tied to *lemurs*. Again, the purpose of creating more linguistic momentum around these creatures is to win the readers' sympathy with their cause and with the argument that calls to maintain species diversity. To support, examples of *nominal ellipsis* in the text about *lemurs*, the deleted item is *lemurs* in all the instances. Following are the examples from the text.

In the two statements above, the deleted head noun after the numbers is *lemurs*. Even with *clausal ellipsis*, what is to be retrieved from the co-text has to do directly with *lemurs*. Here is an example:

In [14] the items to be retrieved from the previous text are (*They/Lemurs were*) as subject and verb of *too cute*, thus employing one more cohesive device to attract the reader's attention to this species. A similar example involves *clausal substitution*. In [15] below, *did* can be decoded as *wanted to leave*, making the meaning of the entire statement as *none* of us wanted to leave, probably putting the reader in a situation to wonder about the reason why TF and his companion did not want to leave. The answer to these wonders would be that the two of them were enjoying the scene of the *lemurs* huddling together.

The idea behind employing all these cohesive devices in the part of the text that describes these creatures is the readers' sympathy with them will pave the way towards their acceptance of the article's argument in favor of maintaining diversity.

Cohesive devices are also used to set the context of the article mainly through *hyponymy* and *repetition*, which can be seen all through the text. There are two contexts discussed in the article: Madagascar's ecosystem and the Middle East. The two are established and highlighted in the article through the use of cohesive devices. Considering the context of Madagascar's ecosystem, several hyponyms, such as *desert*, *forest*, *grove*, *plant species* and *natural vegetation*, are subclasses of *ecosystem*. Using *hyponymy* has provided the context and the specific components that need to be considered within that context. Hyponymy plays the same function with the second context considered in the article, which is the Middle East, under which the following subclasses are provided: Jews, Palestinians, Shiites, Sunnis, Christians, and Islamist Jihadists.

Marking the context of the article is also done by *repetition*. First, let's consider the frequencies of the key words in the two contexts. WordSmith Tool 6.0 (Scott 2015) is used to calculate the frequencies of lexical items in the article; *Madagascar* tops all the lexical units in the number of occurrences in the text with thirteen times, followed by, *forest(s)* with eight frequencies. While *Madagascar* means only Madagascar, *forest* is used in the

text to refer to both contexts, Madagascar and the Middle East. The majority of the occurrences of *forest* is linked to the ecosystem of Madagascar; however, the word also ties to the context of the Middle East as shown in [16]:

[16] So a human rain *forest* once rich with ethnic and religious diversity is becoming a collection of disconnected monocultures...(P11_L5-L7)

A third purpose of employing cohesive devices in this article is to enhance main ideas used to build the argument. One of those is the emphasis on the importance of space and time dimensions. Through using *spatio-temporal conjunctions*, the author seems to be saying: This is the place; clock is ticking. There are eight occurrences of *here* and *there* in the text, with four frequencies each, all pointing to locations and places that are in danger of disappearing. In [17], *here* and *there* refer to Madagascar's forests and the Middle East respectively.

... we have to think about how this one-of-a-kind natural world can be protected with the limited resources *here*. (P8_L1-L2)
... tragic *events* happening *there* are real news. (P6_L2)

The simultaneous threat on places and the creatures inhabiting them are also expressed

through **spatio-temporal conjunctions**, such as *now*. Following is an example:

Enhancement of the importance of place and time also occurs through relations of *hyponymy* and *meronymy*. Hyponyms of place have been discussed earlier in this section. As far as time is concerned, all temporal expressions, like *today*, *now*, *hours*, and *decades* can be considered subclasses of *time*. *Meronymy* of time expressions is displayed in Figure 4.

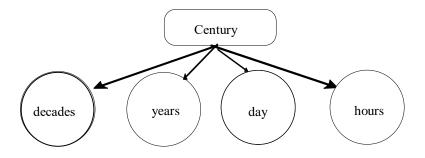


Figure 4: Meronymy of *Century*

A conspicuous pattern in this article is the use of *cataphoric reference* to raise questions, far-reaching solutions, and problematic trends. Following are all the instances of cataphora in the text:

Just look at *the trends*: Madagascar has already lost more than... (P4_L3-L4)

And that brings me to *the question*: What is news? (P5_L1)

Too bad we'll never see *this news story*: "The U.N. Security Council...(P7_L1)

Or *this*: "Secretary of State John Kerry today broke off his vacation...(P7_L4)

We know *the answer* in theory – A well-managed national system of parks and reserves...(P8_L2-L3)

In all the examples stated in [19] referring items point forward in the text, which requires the readers to wait until they read what comes next before they can decode the referents of the used cohesive devices. This strategy probably aims to draw the readers' attention to those questions, unsolved problems and far-reaching solutions by referring forward to a lengthy stretch of the text, rather than a lexical item or unit.

Finally, cohesive devices also play a major role in maintaining the smooth flow of ideas.

This is primarily done by using *conjunctions*. Consider the following excerpt from the text:

None of us did. *But* it wasn't just *because* we'd never seen such a thing *before*.

It was *because* we knew we may *never see such a thing again* — that no one would, *particularly* our kids. (P4_L1-L3)

The adversative *but* plays a major role in organising the idea presented in [20] as it extends the previous substitutive statement of "None of us did", meaning *None of us wanted to leave*. The first thing that comes to mind is that the narrator and his companion did not want to leave the forest because they were enjoying the scene so much and *because* they had never seen such a beautiful scene *before*. The use of *but*, however, prepares the reader for another explanation: They did not expect to see such a scene in the future. This idea is reflected by the interplay of *because...before* and *because...again*, thus pointing out that neither in their past, nor in the future did/would they see such a beautiful scene. Finally, there is an elaboration on the unlikelihood of seeing a similar scene in the future when the kids are particularised.

The use of cohesive devices in "What is News" has revealed a number of patterns. Firstly, all types of cohesive devices have been utilised to win the readers' sympathy and support of the cause. More specifically, lexical cohesive ties of all types, i.e. repetition, synonymy/antonymy, collocation, meronymy and hyponymy, in addition to three sets of grammatical cohesion, which are anaphoric reference, ellipsis and substitution, have all been used to attract the readers' attention and win their sympathy with the cause of the lemurs. In addition, cohesive devices served the purpose of putting an exemplary case, the lemurs being endangered, in its broader context using hyponymy and repetition to

create the immediate context of Madagascar and the broader one of the Middle East. A third role of cohesion in the article has been enhancing the main ideas by emphasising the dimensions of place and time through the use of spatio-temporal conjunctions, hyponymy, and meronymy. The article has also revealed a particular usage of cataphora to draw the readers' attention to major questions, unsolved problems and far-reached solutions. Finally, to maintain the smooth flow of ideas, conjunctions have been employed in an organisational role.

4.3 Article 3: Maybe in America

The article argues that there are three forces that are empowering some nations and blowing up others, particularly weaker ones. The three forces are the market, Mother Nature and Moore's Law. The author takes Madagascar as an example by listing the problems and proposed solutions related to the three forces there. Cohesive devices play a major role in setting the argument format as *problem-refutation-solution* (Hatch 1992). This is evident all through the network of lexical cohesive ties dispersed across the text's argument. Those ties include *repetition, meronymy* and *collocation*.

First, in order to realise how these three determine the argument format as *problem-refutation-solution*, both the frequencies and concordances of lexical items also need to be

considered. For all the examples, concordances with a span of –4, +4 are listed. Related to the issue of Mother Nature, the article states several dimensions, including biodiversity, population and erosion. It is obvious that *biodiversity* is used only once with the following concordance:

Mother Nature (climate Change, biodiversity loss erosion and population

It is immediately clear from the above occurrence that biodiversity faces a problem as it concords with R1 *loss*. Tracing how loss happens, one can realise that forests are the closest link to biodiversity loss. Collocations of forests lay more emphasis on the problem as forests collocate with expressions like eroding (P6_L2), chopped down and firewood (P6_L4) in two occurrences. Meronymy is also used to highlight the problem. Trees, a meronym of forest, are disappearing, too as it is shown in the following concordance:

most hillsides have no trees to hold the soil

The third occurrence of *forests* can be linked to the third part of the argument format, which is *solution*, since there is a call for forests preservation linked to this occurrence (P9_L1-L2).

The second and third words linked to Mother Nature are soil and population. The former

has been repeated five times, three of which in *collocation* with *erode/eroding/eroded*, to mark *refutation* of the problem. The latter has been repeated four times as shown in the concordances below:

biodivers	Loss,	erosi	and	populati	growt	have	all	passed
ity		on		on	h)			
there's	Moth	Natur	the	populati	of	Madagas	is	explodi
	er	e:		on		car		ng
here	in	1984,	the	populati	was	nine	or	10
				on				
countries	have	rapidl	growi	populati	and	rapidly	diminish	natural
		у	ng	ons			ing	

Obviously, the problem of population growth is conspicuous in the above concordances.

Cohesive devices not only help setting the format of the argument, but they also support the main ideas, which are the pillars of the author's argument. *Parallel structures*, *construction-based cohesion* and *cataphoric reference* are used in the article to serve this purpose. Parallelism at the structural level occurs twice in the article. The first happens by distantly repeating the same wording of 'Maybe in America' four times, one in the title,

two in *Captain Phillips*'s digressive story (P4_L1) and once in the concluding paragraph (P11_L1-L2). The main idea of this structure is that the author does not want to hear it anymore; he wants the world of order to be anywhere, not only in America. This is fundamental to the argument of the article, which points out the difficulty of achieving this in light of the three pressures that compose the main ideas.

The second *parallel structure* is an adjacent one. The excerpt is in [21].

You see a giant red plume of eroded red soil bleeding into the Betsiboka River, bleeding into Mahajanga Bay, bleeding into the Indian Ocean. (P6_L7-L8).

The soil, one main component of the details provided under Mother Nature, is personified and described as bleeding, not once, but three times to support the idea that this is a major problem that needs to be stopped.

The article also employs *construction-based cohesion* to support the main ideas of world order, soil bleeding and the importance of having a powerful leader. Consider the constructions below:

[22] America quietly *folded up its embassy* in Libya last week and left...(P1_L3-L4)

- [23] *The more* you erode, *the more* people you have with less soil under their feet to grow things. (P7_L1-L2)
- [24] We can only hope *he has some Hercules in him*. (P8_L5-L6)

The construction used in [22] falls within supporting the main idea of the mistake of having, or in this case, creating a world of disorder, and that America should not have 'folded its embassy', meaning probably turning its back to the situation there in Libya. In [23], the construction is *The Xer*; the *Yer* pattern (Goldberg 2003), and it appears as *The more...*, the *more...*, which is there only to highlight the dangers of soil erosion, this time on agriculture. The last construction that is introduced in [24] supports the idea that a powerful leader is needed to solve the problems in Madagascar, someone who is as powerful as Hercules.

In tandem with these two, *cataphoric reference* also serves the purpose of supporting the argument, yet through referring to bigger chunks of the text. To support, the movie line (P3_L1) refers forward to the entire dialogue between the pirate and Phillips extending from (P3_L5) to (P4_L1). This reference is vital to the general idea of the text around which the argument revolves, namely, 'may be in America' should no longer be the trend. Another example of *cataphora* is the expression *the scale of the problem* (P6_L7), which again refers to a big stretch of language extending from (P6_17) to (P6_L9), thus roughly referring to how huge the problem of deforestation is in Madagascar.

Cohesive devices have also been used to mark digressions. There is one digressive text within the article, that which tells part of *Captain Phillips*, starring Tom Hanks. The article relies heavily on *collocation* and *hyponymy* to mark this digression. The collocating lexical items are not repeated elsewhere in the article to mark that the text they occur within is digressive. The collocations meant here are linked to *pirate*, and they are *hijacked*, *ship*, *captain*, *hijacker*, *fisherman*, and *kidnapping*. Serving the same purpose is *hyponymy* of the word *people*. Again the subclasses for this lexical item do not occur anywhere else in the text. Those are *pirate*, *captain*, *fisherman* and *hijacker*.

Another conspicuous pattern of cohesive devices is their role in clarifying the problem-refutation-solution divide of the argument through systematic use of *anaphoric reference* and *conjunctions*. It is obvious that the article employs certain pairs of cohesive devices, such as *and* and *but*, *here* and *there* and *this* and *that*. Consider the following occurrences of the first pair of additive *conjunctions*, where *and* is linked to stating the problem, and *but* for proposing solutions:

[25] Mandatory education here is only through age 15, *and* it's in the local Malagasy language. (P5_L6-L7)

**And then there's Mother Nature: the population of Madagascar is

```
exploding...(P6_L1)
...and the forests and soils are eroding. (P6_L2)
...but they will only be sustainable if they are supported by ecotourist lodges and guides...(P9_L5-L6)

But,..., they need help with capacity building: training, access to credit...(P10_L6-L7)
```

The examples in [25] indicate that *and* introduces problems, such as education, population and soil, whereas *but* precedes proposed solutions, such as ecotourist lodges, guides and capacity building. Akin to this usage, *here* and *there* and *this* and *that* are also used anaphorically to add more clarification to the problem-solution divide in the argument, where *here* and *this* introduce problems, and *there* and *that* solutions. Following are some examples from the article:

...Chinese merchants working with corrupt officials *here* to illegally import everything...(P5_L3-L4)

Mandatory education *here* is only through age 15...(P5_L6)

Of the 25 locals working *there*, 22 were women (P10_L3-L4)

There will be more of *this*. It's not easy being a country anymore.. (P2_L1)

... *that* takes a government able to expand protected areas ...(P9_L7-L8)

In [26] here refers anaphorically to Madagascar and within a co-text of problematic areas, namely corrupt officials and mandatory education being merely through age 15. This also points anaphorically to 'a tribal/militia war of all against all', leading to a world of disorder. At the other end of the spectrum are there and that, which are linked to proposed solutions, such as involving women in ecotourism, having a capable government and good leadership. Again, being proximity expressions, here and this for near and there and that for far, might provide an explanation of using them in the pattern shown above. The explanation could be that problems are around and near, while solutions are far-reached.

Another important pattern of cohesive devices is their role in emphasising significant details that feed in the argument of the article. One device used for this purpose is lexical cohesion. Starting with *repetition*, consider Table 3 for frequencies of main lexical items used in providing certain details.

Word	Frequency
Madagascar	9
World	9
America	6

Soil(s)	5
population	4

Table 3: Frequencies of Main Lexical Items

Repeating the above items draws the attention to the details involved with each one of them. Synonymy/antonymy adds more emphasis to those details, for example, the antonyms order and disorder are attached to world in almost half of its occurrences. The most noticeable cohesive device attached to Madagascar is hyponymy. This can be noticed considering the subclasses of people that are related to Madagascar. These include merchants, officials, manufacturers, astronauts, president, guides, women and conservationists. Each one of those subclasses is linked to some detail or another in the article. For example, merchants from China work with corrupt officials for illegal trade transactions, manufacturers quit their projects in Madagascar due to political instability and women, conservationists and guides are three parties involved in ecotourism. In addition to these, collocation also draws attention to details, with words like growing and exploding collocating with population; erode with soil; and order and disorder with world. Moreover, the *meronymy* relationship between *forests* and *trees* also serves the purpose of adding emphasis to the details related to these two. These details include forests being chopped down (P6 L4) and hillsides having no trees (P6 L5).

Two more cohesive devices used to emphasise details are *anaphoric reference* and *ellipsis*.

Demonstrative anaphoric expressions have been used to refer back to complete details as follows:

There will be more of *this*. (P2_L1)

It has been instructive to see all *these* pressures up close here in Madagascar...(P5_L1) *That* makes it hard to compete...(P5_L7)

All the referring expressions in [27] refer to complete details in the article, with this referring to leaving behind a tribal/militia war of all against all; these to the three main pressures discussed in the article; and that to the fact that mandatory education in Madagascar is through age 15 and that it is done in the local language.

Comparative anaphoric expressions are used to set up a contrast between two details. The comparative expression *more important* in [28] contrasts the detail of the Cold War with the detail of the three pressures, confirming the latter is more significant.

[28] *More important*, the combined pressures of the market...(P2_L2-L3)

There is one instance of *ellipsis* in the article that serves the same purpose. This is shown in [29].

The clausal *ellipsis* here refers to the entire detail mentioned in the paragraph concerning leading to a state of world disorder.

Cohesive devices have showed a variety of patterns in this article. Firstly, they served as linguistic tools for setting the argument format as problem-refutation-solution through lexical cohesive devices, particularly repetition, meronymy and collocation. Akin to this function, is their role in clarifying the problem-refutation-solution divide of the argument through systematic use of anaphoric reference and conjunctions. Another patent role of cohesion in this article is supporting the main ideas by employing parallel structures, construction-based cohesion and cataphoric reference. Particular to this article is the use of cohesive devices to mark digression. In order to do this, the article has employed collocation and hyponymy. Also, cohesive devices have been used to add emphasis to main ideas in the article through clausal ellipsis, anaphoric reference and a host of all lexical cohesive devices, including repetition, hyponymy, synonymy/antonymy, meronymy and collocation. Finally, cohesive devices have also functioned as tools to set contrasts between

details via comparative anaphoric expressions.

5. Conclusions and Implications

This paper sought to find out whether cohesive devices, the linguistic tools known for their role in maintaining texture, play other roles. Three newspaper opinion editorials were explored within a mixed-methods approach. It was found that cohesive devices do play a host of various roles at different levels. At the level of organisation, it was found that cohesive devices could be the main text organisation tool. They also played a primary role in illustrating, expanding and supporting the main ideas at times and the entire argument at others. More evident roles of cohesive devices were their employment in getting the readers involved, at times by attempting to win their sympathy and support of a certain cause, and in saying what the author does not directly say. At the level of context, cohesive devices were found to play a patent role in situating the case under discussion in its broader context. In addition to these roles, the analysis found particular functions of some devices. Cataphora in particular was employed to serve the important role of drawing the readers' attention to major questions, unsolved problems and far-reached solutions. Collocation and hyponymy were used in one article to mark digressions. Finally, comparative anaphoric devices have functioned as tools to set contrasts between details.

Taken together, the findings of the present paper house significant implications to the

educational setting and to future research in the area of cohesive devices. Primary among these is that this analysis has opened the doors wide before language learners to use cohesive devices in a creative way in their writing to serve a variety of roles, other than the well-known function of maintaining texture. In addition, since cohesive devices are an integral part of writing assessment, it is now evident that adding the roles played by these tools merits consideration. That is to say, assessing cohesion and coherence should take into account the fact that cohesion is more intricate and more diverse than being a mere texture-maintaining tool and that diverse meanings and functions of cohesive devices should be integrated into writing assessment rubrics. Finally, while this paper is anticipated to take the study of cohesion one step forward, further research is still needed particularly in the under-researched areas, which are exophora and construction-based cohesion. Another future research area may involve a bigger corpus to analysis the patterns found in this paper.

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