

The Effectiveness of Cohesion to Portray Child Abuse in Toni Morrison's *God Help the Child*: A Corpus Analysis

Esraa Aly Hasab Al-Naby
Assistant Professor

Modern University for Technology and Information
(Languages Center) Egypt
esraa-aly@hotmail.com

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Abstract

This paper is a corpus-based study of the quality of cohesion and coherence in Toni Morrison's "*God Help the Child*" (2015). The aim of the study is to evaluate the quality of cohesion in the novel, and to test to what extent coherent texts can reveal the author's themes. This is achieved via adopting the theoretical framework of Halliday and Hasan (1976) model of cohesion. Analysis of cohesion is carried out using automatic calculations processed by a computer software (TAACO 2.0.4). The analysis is accomplished through the focus on TTR (Type Token Ratio) indices testing diversity of parts of speech, connectives, semantic overlap through adjacent sentences and paragraphs, and the occurrence of synonyms. The study adopts a quantitative approach via testing the quantity of parts of speech, and how they affect the conveyed message of the writer. Besides, it adopts a qualitative approach through the investigation of grammatical and lexical cohesion. Throughout the analysis, special attention is devoted to how cohesive ties enrich textuality and support the intention of the writer that is portraying violence and abuse against dark-skinned African American children and women that needs to be voiced out. The study concluded that Morrison is able to focus on child abuse through her coherent text. Thus, this study presents a contribution to solve prevailing problems regarding racial discrimination against dark-skinned children and adds new dimensions to shed the light on the problem.

Key words: *Corpus Analysis, TAACO (2.0.4), cohesion, semantic overlap, connectives, child abuse, violence, Toni Morrison.*

0.1. Introduction

This study is intended to achieve a comprehensive analysis of Toni Morrison's "*God Help the Child*" in terms of cohesive devices. This is to show how coherent texts can support the writer's message, which is child abuse and violence against women. Data is examined quantitatively by using TAACO (2.0.4) to determine the frequent lexical and grammatical cohesive devices to detect the cohesion. Afterwards, qualitative analysis is achieved to the scores detected to draw significant interpretations about the degree of cohesion. The main framework applied in this study is Halliday & Hasan (1976) model of cohesion.

0.2. Objectives of the Study

The study is conducted to achieve certain aims:

1. To uncover various kinds of cohesive devices accomplished by Morrison in her novel "*God Help the Child*", and to show how these devices are distributed among adjacent sentences and paragraphs.
2. To describe densities of various parts of speech; each on its own, and to what extent the variety of some types along with the repetition of others contributes to the degree of textuality achieved by the writer.
3. To show how proper use of grammatical and lexical cohesion affects the coherence in the novel.
4. To explore the theme of child abuse and discrimination against dark-skinned African American children in an attempt to shed the light searching for a solution.

0.3. Statement of the problem:

The problem investigated in the present study is to detect whether cohesive lexical and grammatical devices adopted by the writer can contribute to the text being perceived as coherent, and thus facilitate the writer's task to send certain messages. In the light of the above, the study analyzes the cohesive ties used by Toni Morrison to deliver her clear messages to the audience about the severe child abuse dark-skinned children are subjected to, which is considered a kind of racial discrimination.

0.4. Hypotheses of the study

The study hypothesizes that:

1. There is a clear relationship between the density of grammatical cohesion through repetition and reference on one hand, and lexical cohesion on the other hand.
2. The high degree of cohesion in the structure of Morrison's novel supports the situation of dark-skinned children facing abuse.

0.5. Research Questions

The aim of the study is to answer the following questions:

1. What are the dominant kinds of lexical and grammatical cohesive devices used by Morrison in her novel "*God Help the Child*"?
2. How can repetition of the same parts of speech among adjacent sentences and paragraphs help in achieving cohesion, and thus lead to a coherent text with vivid aims and strong clear message?
3. How can Reference act as an important device in perceiving coherent texts?
4. To what extent is the usage of certain words and their synonyms considered fundamental in portraying the writer's message?
5. What are the most frequent parts of speech used with the synonyms in adjacent sentences and paragraphs?
6. How can frequent cohesive devices act as an aid to Morrison to portray the severe child abuse and violence against women?

1. Theoretical Framework

1.1. Review and Methodology:

This section presents an explanation of the theoretical framework of Corpus Linguistics as a dominant tool that facilitates linguistic analysis of literary texts with authentic results. Furthermore, it offers an explanation of Halliday and Hasan (1976) model of cohesion, and later works particularly Halliday & Matthiessen (2004) and Halliday & Matthiessen (2014). Besides, it introduces the theoretical side of the corpus stylistic approach in general, as well as an

objective assessment of corpus-based stylistic studies. It then introduces the biography of Toni Morrison, and introduces the themes adopted by Morrison in her novel and the message she wants to deliver concerning childhood trauma and violent abuse against African American children.

1.2. Previous Studies and the Contribution of the present Study:

Many papers have been devoted to the works within the area of stylistics and the linguistic analysis for literary texts. Basically, the main aim of most of them was to investigate various linguistic characteristics, either semantic, grammatical, or lexical using manual tools to achieve qualitative analysis. The findings, most probably, are limited and focused on a very narrow scope within the literary field.

Later on, many scholars and pioneers in the field of corpus linguistics such as Flowerdew (2012), Sinclair (1991), Stubbs (1996), and Hunston (2002), refer to the importance of analyzing huge data. They all view a corpus as a collection of written or spoken authentic language, which has been compiled and collected for a particular linguistic purpose. They are collected as a "machine-readable form" which can be electronically accessed to be analyzed. (Flowerdew, 2012, p.3). Biber comments on the importance of analyzing large data saying, "Large-scale corpus analysis is used to provide empirical evidence to support stylistic judgments" (Biber, 2011, p.19).

Indeed using corpus-based analysis in the branch of stylistics and linguistic analysis of literary texts is totally recommended by pioneer writers and great scholars aiming to reach more authentic, valid, and clarified results. However, they focus on corpus analysis for certain lexical items provided by the computer program. In this paper, the analysis goes deeper to the extent that it analyzes most of the tools of cohesion to test the intertextuality of the text.

1.3. Corpus Linguistics

Corpus Linguistics, as an important area of Computational Linguistics (CL), provides huge quantities of language databases accumulated in a systematic and automatic manner from various fields of actual language use. It follows some statistical methods and techniques of data sampling. Furthermore, it presents some sophisticated tools to analyze these corpora to extract linguistic

data, examples, and information needed in applied linguistics, applying this data and information in various fields of human knowledge.

Baker (2010) gives an example of this saying that corpus linguistics is applied to advance theories such as Hoey's (2005) theory of "Lexical Priming", but still in itself a method of analysis. Then, Baker (2010) explains other linguists views concerning Corpus Linguistics saying that Teubert (2005) argues that corpus linguistics is not in itself a method but it is "an insistence on working only with real language data taken from the discourse in a principled way and compiled into a corpus"(p.5). This is to some extent reasonable and agrees with McEnery et al. (2006) in the view that says that corpus linguistics is not an "independent branch of linguistics in the same way as phonetics, syntax, semantics , and pragmatics"(p.7).

1.3.1. TAACO (2.0.4) Software

TAACO (2.0.4) is a tool of automatic analysis tracking cohesion throughout texts. It performs this through testing repetition of every single part of speech. Furthermore, it investigates repetition through overlap between sentences and between paragraphs, in addition to investigation word synonyms among various sentences and paragraphs.

This software is freely downloaded from

(<http://www.kristopherkyle.com/taaco.html>)

According to (Kyle & Crossley, 2017), the automatic program TAACO (2.0.4) has the ability to measure the degree of cohesion through calculating the **TTR** (Type-Token Ratio) and **Givenness** indices. These indices are able to measure the amount of word repetition throughout the whole corpus. This is achieved by the division of the number of individual words (types) by the total number of words. Through TACCO (2.0.4), 15 different TTR indices are calculated. These indices are helpful tools that act as an aid to the researcher to reach clear ultimate linguistic characteristics of the writer and the type of words he/she uses frequently and consequently can determine to what extent he/she achieves cohesive features.

1.3.2. Corpus Stylistics

Recently, the field of corpus-based stylistic analysis has witnessed an outstanding growth in which automatic tools of corpus analysis are used for literary studies. Consequently, this broadens the research scope and provides new trends and patterns for stylistic scholars that can never be achieved through manual analysis. In the past decade, this kind of research has become extensively popular for the aim of studying literature, and is carried under the umbrella of the so-called “Corpus Stylistics”. This kind of research has a well-defined target of blending both techniques of corpus and automatic analysis with its qualitative and quantitative results, as well as the traditional stylistic aims of stylistic research. However, this new technique is, according to Biber, "seems to be of great potential for new lines of research that integrate the statistical methods of earlier research with the more rhetorical concerns of recent studies" (Biber, 2011, p.21).

Furthermore, Flowerdew defines the link between corpus linguistics and literary stylistics stating that, "both are interested in the relationship between meaning and form. Stylistics puts an emphasis on how we say what we say, and corpus linguistics also claims that what we say depends on form"(Flowerdew, 2012, p.15). He adds, "The focus of the two disciplines, however, tends to be different. Stylistics focuses on what makes a text, or a group of texts, distinctive, and it investigates deviations from linguistic norms that trigger artistic effects and reflect creative ways of using language."(Flowerdew, 2012, p.15). Thus, Corpus stylistics is the stylistic studies and research that have been made to reach interpretation of literature with the characteristics of computational approach and the usage of computer software to provide quantitative analysis. This facilitates the task of reaching hypotheses of linguistic research under study within various linguistic frameworks.

1.4 Halliday and Hasan (1976) model of cohesion

Cohesion is a linguistic element that guarantees consistency throughout a given text. It is considered a network of grammatical and lexical relations among words that facilitate the connection of different elements in a text and make it meaningful by using various linguistic markers.

1.4.1. Coherence and Cohesion

Halliday and Hasan (1976) refer to the text saying that it involves the two elements of coherence and cohesion as follows:

- **Coherence:** means the text's relation to its extra-textual context (the social and cultural context of its occurrence).
- **Cohesion:** the way the elements in a text bind together as a unified text.

Then the outcome of the interaction of these two elements is a unified meaningful piece of language within a situational and cultural context.

Text's texture is not only derived from linguistic patterns of cohesion, but also from the text's coherence with its social and cultural context. At this point, it is clear that the analysis of cohesive ties and to what extent the whole text is coherent act as an aid from the writer to the reader to deliver him/her certain message, and to involve him/her in certain issues that need to be highlighted. The problem the writer wants to portray in the novel under study is the violent abuse against African American children particularly females.

1.4.1.1. Coherence:

Halliday & Hasan refer to coherence as a group of clauses and sentences that relate to the context (Halliday & Hasan, 1976, p.23). There are two types of coherence, which are:

A- Registerial coherence: Eggins comments on this point saying that it can be easily achieved when a reader of a novel can identify a single situation in which all the clauses of the text can occur together. This happens when the reader can specify for the entire collection of clauses the domain the text is focusing on, this is what is called "**field**". It is also achieved when the roles played by the writers or interactants are achieved, and this is called "**tenor**", and how closely the language is tied to the experience it is commenting on, and this is called the "**mode**" (Eggins, 2004, p.29)

B- Generic Coherence: a text has generic coherence when it can be recognized as an example of a particular genre. Eggins comments on the idea of **genre** saying that "Genre theory is about bringing this unconscious cultural knowledge

to consciousness by describing how we use language to do things, and reflecting critically on just what our cultural life involves.”(Eggins, 2004, p.84)

1.4.1.2. Cohesion

Halliday and Hasan introduces the true meaning of cohesion saying: “Cohesion occurs where the INTERPRETATION of some element in the discourse is dependent on that of another. The one PRESUPPOSES the other, in the sense that it cannot be effectively decoded except by recourse to it. When this happens, a relation of cohesion is set up, and the two elements, the presupposing and the presupposed, are thereby at least potentially integrated into a text” (Halliday and Hasan, 1976, p.4)

Combinations between lexicogrammatical elements throughout a text generate certain cohesive ties and links that help in creating obvious semantic relationships between text patterns that are beyond grammar. Cohesive features and cohesive ties linking the whole text together can be accomplished through investigating the amount of repetition of the same items, in addition to testing each single part of speech and its synonym among adjacent sentences and paragraphs.

Halliday & Matthiessen provide a clear explanation of this point saying that lexicogrammatical items are unified together to create certain understanding that is extended throughout the text. These lexicogrammatical items originate in the textual metafunction and are collectively known as the system of COHESION. (Halliday & Matthiessen, 2014, p. 603)

1.4.1.2.1. Types of Cohesion

Halliday and Hasan (1976) classify cohesion into two main categories: grammatical and lexical. Grammatical tools make relations between sentences more explicit, while the lexical tools are recognized through the vocabulary in terms of their meaning. Grammatical cohesion is categorized into four types: Reference, Substitution, Ellipsis, and Conjunction. On the other hand, lexical cohesion is categorized into Reiteration and collocation.

1.4.1.2.1.1 Grammatical cohesion

A. Reference:

Reference refers to how the speaker/writer introduces participants, and then keeps tracking them once they are in the text. Halliday and Hasan describe reference as referring to the relationship between two linguistic expressions (Halliday and Hasan, 1976, p.31). This is achieved through the corpus analysis when the researcher tests the ratio of the pronouns and nouns in a given text that shows that whenever the writer mentions a character he/she still refers to it in adjacent sentences. This is achieved through TAACO (2.0.4) software via TTR index, and adjacent sentence and paragraph overlap. Halliday & Matthiessen give a clear explanation of this saying "The speaker /writer can use personal pronouns, possessive pronouns, determiners, and demonstratives to refer to any item in the text" (Halliday & Matthiessen, 2004, pp.551, 554). Moreover, the speaker/writer can refer to any item in the text by using **comparative reference** (e.g. more) "where the identity of an item is retrieved because it is compared to something that has been mentioned before" (Halliday & Matthiessen, 2004, p.553).

According to Halliday & Matthiessen "reference creates cohesion by creating links between elements" (Halliday & Matthiessen, 2014, p.605). This kind of cohesion is produced by relating single element within a text to another one creating links between referents. Reference has two kinds: **Exophoric reference** (pointing outward from the text), and **Anaphoric reference** (it is the formation of referential chains in the conversation). This kind of cohesion can be achieved only on the level of meaning. Consequently, this deepens the cohesive ties inside the text and shows the text to be totally coherent.

B. Substitution and Ellipsis:

Substitution creates the relation between the parts of the text on the level of **wording**. Substitution "occurs when an item is omitted and replaced by another one", but ellipsis "occurs when an item is omitted and is replaced by nothing" (Halliday & Matthiessen, 2004, p.561-562). Halliday and Matthiessen comment on this saying "Ellipsis makes it possible to leave out parts of a structure when they can be presumed from what has gone before" (Halliday & Matthiessen, 2014, p. 606)

C. Conjunction

According to Halliday & Matthiessen "conjunction links whole clauses or combinations of clauses" (Halliday & Matthiessen, 2014, p. 605). It links and creates a relationship between an idea and a preceding discourse. "Conjunctive relations marked by explicit cohesive conjunctions may hold between clauses in a clause complex, between text segments realized by clause complexes, or between longer text segments such as rhetorical paragraphs"(Halliday & Matthiessen, 2014, p.605). Halliday & Matthiessen provide the meaning of conjunction saying that conjunctive cohesion mainly focuses on the "the conjunctive relations that are used to refer to the logical relations that are used to refer to the logical relations between parts of a text"(Halliday & Matthiessen, 2014, p.538). Proper conjunctions are not used in the opening phase of any discourse, but are used cohesively later on as a kind of linking ideas. Conjunctions are analyzed through TAACO (2.0.4) through the index of Connectives, and the repetition of some of them indicates the writer's need to focus on certain ideas and solve issues related to violence and mistreatment of African American children.

1.4.1.2.1.2 - lexical Cohesion:

Lexical cohesion according to Halliday and Hasan is a linguistic tool that is used to create unity and textuality among sentences and paragraphs. It is referred to as "the cohesive effect that is achieved by the selection of vocabulary"(Halliday & Hasan,1994, p.274). According to Halliday & Matthiessen, lexical cohesion is a cohesive resource that "operates within the lexical zone and is achieved through the choice of lexical items."(Halliday & Matthiessen, 2014, p.608). Most probably, such cohesive relations are achieved among single lexical items. They add that the systems of cohesion in general can be achieved either through the grammatical "zone", or within the lexical choices within the lexicogrammatical "zone". Halliday & Matthiessen (2004) state that lexical cohesion has to do with the relation between lexical items. It involves relations such as: **synonymy** (a word or phrase which has the same or nearly the same meaning as another word or phrase), **hyponymy**, (where a lexical item represents a class of another one), and **repetition**. This is achieved by the last index operated by TAACO (2.0.4) that tests the amount of certain part of speech and its synonyms in adjacent sentences and paragraphs.

1.5. About the Novel

1.5.1. Toni Morrison

Toni Morrison (born 18th of February 1931) is considered one of the most distinguished authors in the world. She is efficient in writing plays, novels, in addition to children books. Her outstanding novels have earned endless prestigious awards including the Pulitzer Prize, in addition to the Presidential Medal of Freedom from President Barack Obama in the East Room of the White House (Alexander, 2019). Toni Morrison is considered the first African-American female writer to win Noble prize for her exceptional production. Morrison grew up in an area suffering from racial discrimination. Later on, she grew up and moved to Washington to attend Howard University. “While in college, Morrison experienced racial segregation in a new way. In addition, she witnessed how racial hierarchy divided people of color based on their skin tone” (Alexander, 2019). This drives Morrison to focus on African American problems particularly violence against female children and to what extent they are subjected to abuse as a result of their dark skin. Bates comments on her works saying, “Morrison's work focused on African American life and culture, and she dominated an industry in which depictions of black life were often limited and rooted in stereotype.” (Bates, 2019). Morrison died on 15th of August 2019 .Chow Comments on her death saying that she is “the Pulitzer Prize-winning author who illuminated the joys and agonies of black American life through breathtakingly vital works” (Chow, 2019).

1.5.2. *God Help the Child* Dominating Themes

God Help the Child, Toni Morrison’s 11th and final novel adopts the main theme explored in most of her novels, which is the theme of Childhood Trauma and racial discrimination. According to Morrison, children have little control over violence and discrimination they are subjected to at the hands of adults, and this may lead to childhood trauma. She focuses on the fact that this trauma affects its victims in the stage of adulthood.

Lula Ann Bridewell, Morrison’s protagonist grows up unbeloved by both parents because of her dark skin. Bridewell suffers and struggles severely throughout the stage of childhood and upbringing, the thing that affects her actions during her adulthood.

Her mother is characterized by light skin with a moderate “good” hair as Morrison refers to her. She is ashamed of her daughter’s skin color, and treats her cruelly to the extent that she refuses to touch her. The mother makes her daughter call her Sweetness instead of “Mum”, and claims that this may be a preparation for the girl to be able to face racism due to her dark skin. “I told her to call me ‘Sweetness’ instead of ‘mother’ or ‘Mama.’ It was safer. Being that black and having what I thought were too-thick lips calling me ‘Mama’ would confuse people”(Morrison, 6).

The protagonist experience with her family is extremely frustrating and annoying. She suffers from a childhood trauma that lets her struggle to love herself and to receive acceptance and equality from her society, but she does not know how to get it. This childhood trauma affects her life later on in the stage of girlhood and adulthood. Through “Bride”, the protagonist, Morrison tries to shed light on the African American racial discrimination in an attempt to achieve equality from the society.

2. Analysis

Through the process of testing the amount of repetition of words in a given text, a researcher is able to determine the degree of cohesion, and to what extent the parts of a text are united and collaborate together to facilitate the readers’ comprehension and clarify the writer’s targets easily. In this study, emphasizing the amount of cohesion unveils the violence against women and maltreatment of children and the level of child abuse that Morrison insists to show and reflect through her novel.

2.1. Procedures of Analysis

Throughout the analysis section, the researcher chooses certain indices provided by the chosen computer software, TAACO (2.0.4), that adequately fits the hypothesis and may help in finding solutions to the suggested research problems.

The chosen indices are:

- **TTR indices** (Type Token Ratio) to test the density of various parts of speech each on its own, and to what extent the frequency of each leads to a coherent text.

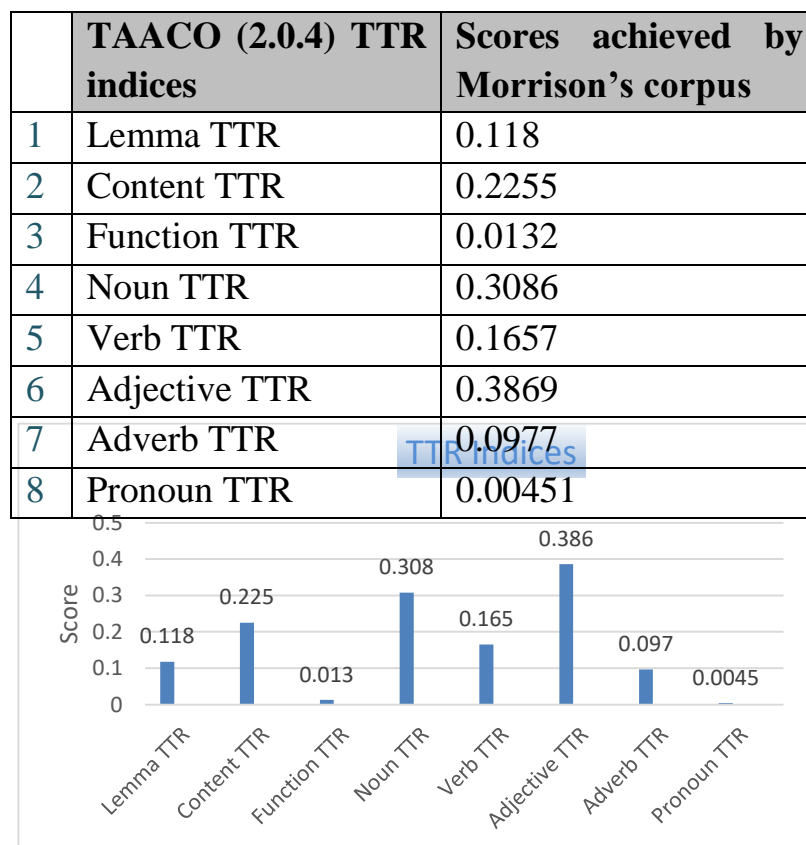
- **Connectives Indices**, to test the density of linking and connecting words within a text.
- **Sentence Overlap Indices**, to test the frequency and repetition of certain parts of speech in adjacent sentences.
- **Paragraph Overlap Indices**, to test the frequency and repetition of certain parts of speech in adjacent paragraphs.
- **Semantic overlap**, to test the frequency of nouns and verbs with their synonyms in adjacent sentences and paragraphs.

2.1.1. TTR indices:

TTR indices provided by TAACO (2.0.4) clarify the cohesion achieved within a given corpus through the scores that show the amount of repetition and consequently the extent of cohesion as Crossley and Kyle (2017) refer.

The scores provided by TAACO (2.0.4) when applied on Morrison’s novel to investigate TTR indices, in addition to the number of types and total number of tokens for every part of speech are as follows

Table (1)



Type-Token Ratio (TTR) indices, that provide measure of lexical diversity, test the score achieved by every part of speech, to what extent each is repeated, and thus cohesive ties throughout the whole corpus are achieved. Through these indices, all parts of speech are tested. For example, they test Lemma (lemma form of each word) TTR , Content TTR, Function TTR, Noun TTR, Verb TTR, Adjective TTR, Adverb TTR, and Pronoun TTR.

Through TAACO (2.0.4), the first score of the Lemma TTR is (0.118) approximately. The way of calculating this index is dividing the number of unique running lemmas (types) by the number of total running lemmas (tokens) to show to what extent Morrison resorts to diversity of words from different parts of speech. The score can be considered, to a great extent, high score that shows that Morrison sticks to the variety of word forms and send messages by different ways to be able to portray all sorts of child maltreatment and violence against children and their traumatic situations. The variety of word forms can also be justified as she is in need to show violence against child and then women in different life stages. That is why she has to show this by different word forms to present different life stages.

By analyzing indices investigating content and function words provided by TAACO (2.0.4), Morrison's novel gets score (0.013) approximately concerning Function TTR, and score (0.225) concerning Content TTR. Function TTR index is calculated by dividing the number of unique function word lemmas (types) by the number of total function word lemmas (tokens). On the other hand, Content TTR index is calculated by number of unique content word lemmas (types) divided by the number of total content word lemmas (tokens). The discrepancy between the two results here signifies that the language used by Morrison is full with new content words and repeated function ones that unify the ideas and tie the events of the stories together.

The results of the Type Token Ratio here show that the wide range of using different and various content words are very frequent compared to the variety of function words used within the text. This may refer to Morrison's

concern to portray the extreme suffering and abuse children undergo with its various forms, shapes and methods and to let all kinds of oppression and victimization be visualized. Indeed, it appears that she sticks to the small range of function words and resorts to repetition of the same ones to achieve kind of cohesion among the parts of the text and to enhance full understanding in addition to the fact that it may attract the attention of the reader to be able to comprehend the wide range of various content words.

Concerning the scores of the frequency of various nouns and verbs, it appears that Morrison's novel achieves score (0.308) concerning the variety of nouns (Noun TTR), and achieves score (0.165) concerning the variety of verbs (Verb TTR). Noun TTR index is calculated by dividing the number of unique noun lemmas (types) by the number of total noun lemmas (tokens). On the other hand, verb TTR is calculated by dividing number of unique verb lemmas (types) by the number of total verb lemmas (tokens). This is a clear indication that the writer sticks to the repetition regarding the usage of verbs, while the choice of nouns are always different throughout the various phases of the heroine's life. Based on the previous data, the writer appears to be frustrated and this frustration and disappointment is extremely clear throughout the incidents of her novel while using variety of nouns trying to send the message by various synonyms. Morrison focuses on the damage and violence adults (society, community, and the family) inflict and practice on young ladies with different skin color, and to what extent this may have long lasting impact on their lives.

Similarly, the same with using adjectives (words describing nouns) and adverbs (words describing verbs). Morrison's novel achieves score (0.386) concerning the Adjective TTR, and score (0.097) concerning the Adverb TTR. Adjective TTR is calculated by dividing the number of unique adjective lemmas (types) by the number of total adjective lemmas (tokens). Adverb TTR is calculated by dividing by the number of unique adverb lemmas (types) by the number of total adverb lemmas (tokens). This signifies that Morrison presents her ideas and portrays her characters through frequent adjectives and repeated adverbs. Frequency in adjectives

serves in showing traumatic stress that happens to children and occurs when children or adolescents are heavily exposed to deep and long-term abuse or any other kind of traumatic situations to the extent that they. Thus, the writer is in need to show this using wide range of nouns that are described by heavy adjectives to be able to portray vivid image.

Concerning the pronoun TTR, the score fulfilled by Morrison's corpus is very low (0.0045). Actually, this is very normal in any piece of writing, not only Morrison's. This is because the nature of the pronoun types in very limited either first person pronoun (e.g. I, us), second person pronoun (e.g. you), third person pronouns (e.g. he, she, him, her), subject pronouns (e.g. I, he, she, it, they, we, you), and other quantity pronouns (e.g. many, much) (according to Kyle & Crossely, 2017).

This may signify that she resorts to repetition in a reasonable and objective attitude. Consequently, a reader may be able to detect the events and incidents of her novel, and is able to tie the episodes and grasp the messages and comprehend the events of the writer in detail, and realize the traumatic situation the protagonist is suffering from.

2.1.2 Connectives Indices:

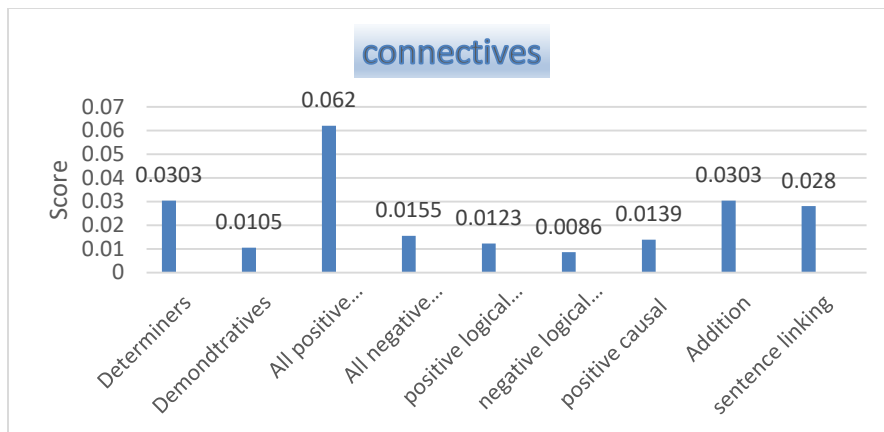
TAACO (2.0.4) provides several indices that can measure the nature of linking and connecting words within a text. This can easily be used to detect the extent of cohesion characterizing the writer's style. As (Kyle & Crossley, 2017) mention in their research concerning TAACO, connectives indices are theoretically based. They explain the dimensions as follows

“The first dimension contrasts positive versus negative connectives, and the second dimension is associated with the particular classes of cohesion identified by Halliday and Hasan (1976)” and Louwrese (2001), such as temporal, additive, causative and connectives.”

TACCO (2.0.4) expresses the scores fulfilled by a given text and the degree it achieves concerning these indices. At that moment, it is easy to judge the intensity of cohesion and connection between the different parts of that text.

Table (2)

	Index name	Corpus' score
1	Determiners	0.0773
2	All Demonstratives	0.0105
3	All positive connectives	0.062
4	All negative connectives	0.0155
5	Positive logical connectives	0.0123
6	Negative logical connectives	0.0086
7	Positive causal	0.0139
8	Addition	0.0303
9	Sentence linking	0.028



‘Determiners’ and ‘Demonstratives’ are two separate indices offered by TAACO (2.0.4) to calculate the score of their existence divided by the total number of words in a given text. In Morrison’s novel, the ‘determiners’ index is the highest one as it fulfils score (0.077). Examples of determiners are “a, an, the”. **Determiners** (index 1) are tools that can be used to mark the nouns and direct the reader towards what the writer desires to imply. The frequent use of these determiners is very important that it explains communication and helps to make sentences more precise, accurate and focused. Since nouns are one among the most frequent parts of speech, it is logic that determiners also are frequent. This also confirms that the frequent nouns used by Morrison are clarified. Determiners provide certain modification for nouns by providing context and specificity to various nouns used by the writer and provides information about the quantity of a noun. Actually, the frequency of these items in a given text can explain whether a writer is speaking about something general or something specific

Quite similar, **demonstratives** (index 2) such as “this, that, these” in Morrison’s novel achieves high score which is (0.0105) approximately. It is not the highest like determiners, but can be considered among the highest ones. Demonstratives work as an aid for the reader to decide which thing in particular the writer is referring to. The frequency of such parts of speech achieves full text comprehension and act as an aid to specify the noun or noun phrase. Determiners and demonstratives among the higher scores signify that the text is characterized by an extremely high degree of cohesion

A reader of this kind of texts is always supported by the writer to connect the ideas and to link the characters and the events in their lives. It can be also a kind of paving the way to present the intended idea by the writer such as destructive prettiness standards for women, particularly African American women; mother-child relationships; colorism and racism; in addition to child abuse, which is the most common in Morrison’s explored themes. This facilitates the task for the reader to be bothered only by the issues presented within the text and to save his/her effort to sympathize with the writer and her ideas and views more than trying to link and understand her texts.

The results provided by TAACO (2.0.4) after that show that the second highest score is fulfilled by index (3) which is intended to calculate ‘**all positive connectives**’, such as “again, actually, after,” divided by the total number of words in the text. The result of this index is (0.062) approximately. This is a significant evidence that most of the connectives used by Munro are linking consequential ideas, and that she frequently supports her reader that ties the ideas together. She insists to exert all the needed effort to present the ideas in its simplest ways. She sticks to put her events as series and order the events in order to show the effect of racism that children are subjected to, can affect women. She intends to show that the social construction of the blacks identity creates anxiety in the future.

Among the highest ranks also comes index (7) dedicated to calculate the ‘**positive causal connectives**’ with score (0.013) approximately. This index is offered by TAACO (2.0.4) just to calculate the total number of positive causal connectives such as “arise, enabling, because” divided by the total number of words in a given text. The indication of the high score achieved by this index is the fact the writer is concerned much with linking the ideas of the text through showing the causes of every incident, event, or characters’ intentions. She insists to connect all the words, phrases, and clauses along to tie the ideas to focus on the trauma and suffering incidents children are exposed to since the birth of this dark-skinned baby to the extent that her dark skin embarrasses her mother. This young girl is always suffered by not feeling her parents’ love. Accumulation of incidents and events over each other using the frequency of positive causal parts of speech portrays childhood wounds that leaves a scar long lasting scar in women’s adulthood. This is straight way used by Morrison to smooth the task and to pave the way for the reader to follow the events and to know the causes of these events.

Besides, she resorts to the frequency of “**positive logical connectives**” “at index (5) with score (0.012). Examples of these connectives are such as “actually, after all, all in all”. These kinds of connectives may imply a sense of confirmation that the writer is totally sure about the damage that the protagonist is suffering from.

On the other hand, Morrison’s usage of connectives indicating negative attitude is somehow frequent. Results show that Munro’s usage of ‘**all negative connectives**’ (index 4) achieves scores (0.015) approximately. Morrison uses

negative connectives such as “admittedly, alternatively, although” with a score which is lower than those of the positive ones. This implies that the writer is concerned to present her ideas in a positive way or, in other words, she is interested to draw the image of her protagonist as positive characters in all ways inspite of the struggle she is suffering from.

Similarly, index (6) shows ‘**negative logical connectives**’ by dividing the negative ones such as “admittedly, alternatively” by the total number of words in a text. The score achieved is (0.008) which is considered the lowest among other. This is an indication that she is discussing the struggle in a positive way hoping to modify the current situation African American are suffering from.

Finally, Morrison proves that her writing has a high degree of cohesion by her excessive and extreme use of “**sentence linking conjunctions**” and “**addition conjunctions**” at indices(8) and (9) respectively. Munro’s corpus fulfills scores (0.03) and (0.02) at these two indices. The first one, “sentence linking”, calculates the number of linking conjunctions such as “although, nonetheless, therefore” divided by the total number of words in the text. Besides, the “**addition**” index calculates the total number of addition words divided by the total number of words in a text. The high scores of these two indices indicate that cohesion is accomplished within the different parts of the novel, and that the text is highly systemized, organized and arranged and is totally under the writer’s full control.

In addition to the connectives indices, TAACO (2.0.4) provides two distinguished and rigid tools that can facilitate the task of linguistics researchers to detect the intensity of cohesion and interconnection, and the concrete construction that characterizes the novel under study . These tools are “**sentence overlap**” and “**paragraph overlap**”

2.1.3. Sentence Overlap Indices:

Through the user manual they provided for TAACO (2.0.4), (Kyle & Crossley , 2017) explore the fact that the sentence overlap tool calculates 57 types of overlap indices that help to decide the degree of cohesion in a given text. This study focuses on 6 among them, each focuses on a single part of speech and its frequency among adjacent sentences .The first index “**adjacent sentence overlap**” calculates the amount of words’ repetition among adjacent sentences. The repetition as Halliday and Matthiessen mention is a way that

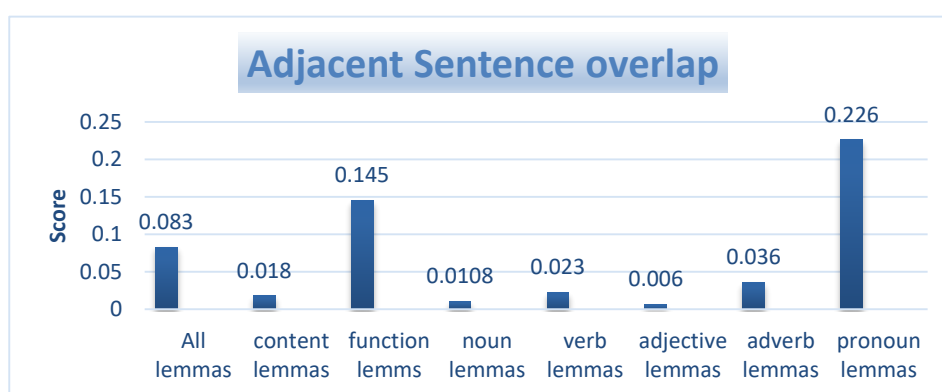
detects the amount of degree of lexical cohesion, and consequently, the degree of textuality characterizing the text.

According to TAACO (2.0.4), the program provides 57 indices that show the amount of repetition and overlap among adjacent sentences. This helps critics and linguists to judge the amount of interconnection characterizing a corpus under study . The research focuses on 6 indices, one for each part of speech, so that their clear analysis may imply cohesion and are used once to investigate sentences, and another time for paragraphs.

According to TAACO (2.0.4) results, the scores achieved by Morrison’s novel concerning sentence overlap are as follows:

Table (3)

	Index in text name	Score
1	Adjacent sentence overlap all lemmas	0.0837
2	Adjacent sentence overlap content lemmas	0.0181
3	Adjacent sentence overlap function lemmas	0.145
4	Adjacent sentence overlap noun lemmas	0.0108
5	Adjacent sentence overlap verb lemmas	0.0238
6	Adjacent sentence overlap adjective lemmas	0.00687
7	Adjacent sentence overlap adverb lemmas	0.0360
8	Adjacent sentence overlap pronoun lemmas	0.2264



As reported by TAACO (2.0.4), results show that Morrison’s highest repeated parts of speech among following sentences are pronouns. The score achieved by

the overlap index of the pronouns is (0.226). The software calculates the adjacent sentence overlap all lemmas, then each on its own. This index is calculated by dividing the total number of the pronoun that occur at least once in the next sentence by number of pronouns in each sentence (except the last sentence). Fulfilling high score in such kind of calculation may imply that the writer resorts a lot to repetition among sentences, and that her style is efficient to catch the reader, and offers him tools to understand and comprehend the sequence of events in a very simple way.

Similarly, on the level of linguistic features, her style is characterized by a very high degree of cohesion and interconnection among the parts of her stories, and refers to a writer who is concerned with certain issue as if she is revising with the reader every now and then about whom she is referring. This efficiency is to facilitate the task to the reader to receive her messages easily.

Comparing the scores of the pronoun with the scores of the noun that may replace the pronoun and the adjectives that are needed to describe the nouns and the pronouns, it appears that the nouns index achieves (0.01) approximately and the adjectives index achieves the lowest score (0.006) approximately. Noun index is calculated by dividing the number of noun lemma types that occur at least once in the next sentence by the number of types in each sentence (except the last sentence) .This may indicate that the writer frequently refers to the same pronoun like “she” for instance but with different nouns as she in referring to different persons but all of them are from the same category. On the other hand, the adjectives index is the lowest. Adjective index is calculated by dividing the number of adjective lemma types that occur at least once in the next sentence by the number of types in each sentence (except the last sentence). This may indicate that she insists to refer to the same pronouns and different nouns with a new adjective every time. This may imply that she wants to portray all kinds of suffering but with various nouns with various senses to give validity and authenticity to the image children and women are suffering from.

The discrepancy in the scores concerning the amount of overlap and lexical cohesion appears when tracking the scores achieved by the “Adjacent sentence overlap content lemmas” and the “Adjacent sentence overlap function lemmas”. The index concerned with the function words achieves (0.14) approximately, while the one concerned with the content words achieves (0.018) approximately. Content index is calculated by dividing the number of content

lemma types that occur at least once in the next sentence by the number of types in each sentence (except the last sentence). Similarly Function index is calculated by dividing the number of function lemma types that occur at least once in the next sentence by the number of types in each sentence (except the last sentence). This is a clear indication that the writer is concerned with achieving a great degree of cohesion concerning the function words through repetition but she rarely repeats content words. This may indicate that she is a writer characterized by rich and deep ideas and that she has various aspects and issues she wants to prove and portray through her novel. She only achieves cohesion by repetition among adjacent sentences through function words.

On the level of repetition among adjacent sentences concerning the verbs and adverbs, Morrison's novel achieves nearly the same score. "Adjacent sentence overlap verb lemmas" achieves score (0.02), while Adjacent sentence overlap adverb lemmas achieves (0.03). Verb index is calculated by dividing the number of verb lemma types that occur at least once in the next sentence by the number of types in each sentence (except the last sentence). Similarly, adverb index is calculated by dividing the number of adverb lemma types that occur at least once in the next sentence by the number of types in each sentence (except the last sentence). The frequency of repeating the verbs and adverbs among adjacent sentences is not so high and not so low, in addition to the fact that they are nearly the same is logic as the adverb is a word describing verb and they are not so high as the writer is not focusing on action but her target is to portray the circumstances her protagonist is going through and to what extent she was suffering when she was a child from which she portrays the severe levels of child abuse of dark colored children.

2.1.3. Paragraph Overlap Indices:

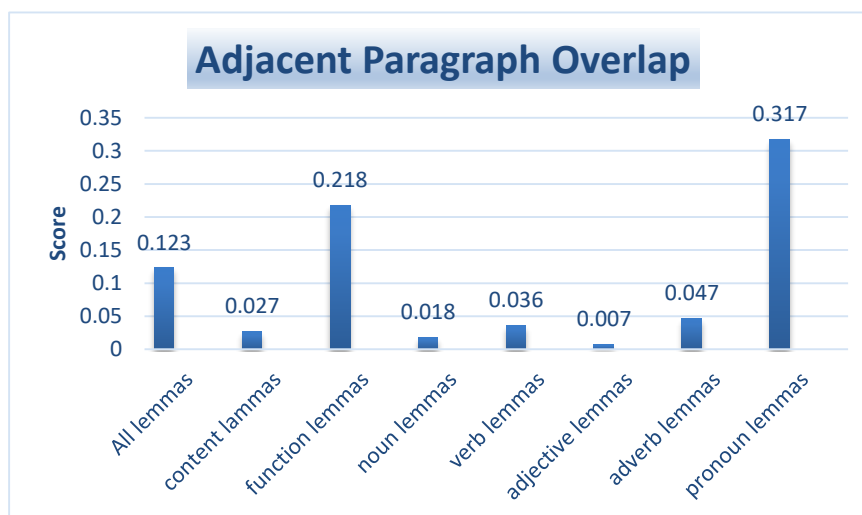
The same result that is provided on the level of sentences can be provided on the levels of paragraphs. An index entitled "**paragraph overlap**" offers the amount of repeated words among paragraphs, explores this through using the same manner of calculation, and applies it among consequent paragraphs.

Beside the scores of sentence overlap provided by TAACO (2.0.4), it also offers the same scores, but at the paragraph level. Paragraph overlap indices present the same overlap among various parts of speech, like those offered

among the sentences, and proves a very high score that confirms an extremely elevated degree of cohesion.

Table (4)

	Index in text name	Score
1	Adjacent paragraph overlap all lemmas	0.123
2	Adjacent paragraph overlap content lemmas	0.0273
3	Adjacent paragraph overlap function lemmas	0.2188
4	Adjacent paragraph overlap noun lemmas	0.0187
5	Adjacent paragraph overlap verb lemmas	0.0365
6	Adjacent paragraph overlap adjective lemmas	0.0076
7	Adjacent paragraph overlap adverb lemmas	0.047
8	Adjacent paragraph overlap pronoun lemmas	0.3173



Similar to the results achieved by sentence overlap, the results of paragraph overlap are nearly the same. The most common repetition is apparent through the repetition of pronouns and nouns rather than the repetition of verbs and adverbs. The indication here that the writer focuses on certain characters not actions. And the low frequency of adjectives shows that she gives every time a different description to portray the extreme bad circumstances they are suffering from.

2.1.4. Synonym Overlap:

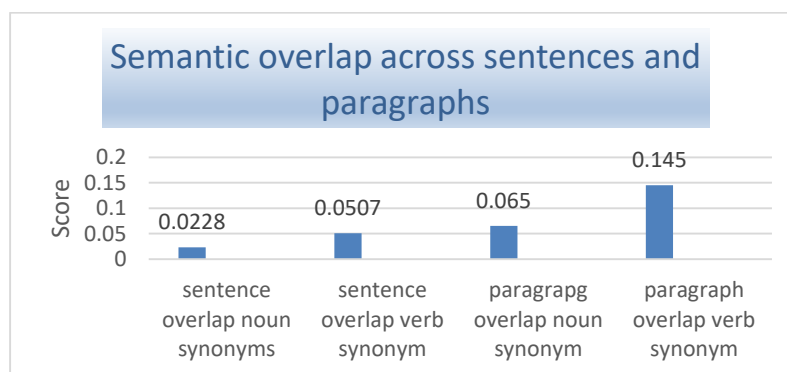
On another level, Halliday & Matthiessen (2004) state that lexical cohesion has to do with the relation between lexical items. It involves relations such as **synonymy** (a word or phrase which has the same or nearly the same meaning as another word). Based on this fact, lexical cohesion is the type of cohesion that is achieved within the lexical zone.

TAACO provides the extent of synonymous items among adjacent sentences and adjacent paragraphs.

The scores concerning synonyms provided by TAACO (2.0.4) are as follows:

Table (5)

	Index	Score
1	Adjacent sentence overlap noun synonyms	0.0228
2	Adjacent sentence overlap verb synonyms	0.0507
3	Adjacent paragraph overlap noun synonyms	0.0652
4	Adjacent paragraph overlap verb synonyms	0.1452



This index tests the amount of referring to the same verb or noun but with using a synonym. The excess use of synonyms creates vivid picture of the same exact idea. It makes it clearer to the reader and indicates that the writer is very accurate and precise in her language choices. Exploring a bunch of synonyms whether synonymous of verbs or synonymous of nouns provides the reader with various levels of psychological problems the characters are suffering from. The use of synonyms also makes the process of reading the novel more enjoyable. It helps to avoid redundancy. For example, when the mother wants to say that the

problems the young girl is suffering from seems to be equal to the state of the protagonist. This is to make the image clearer to the reader.

According to the above outcome, Morrison seems to be caring a lot about expressing her ideas and events and stream of thoughts through words and their synonyms on the verb levels and the noun levels. This widespread of synonyms is frequent between adjacent sentences along with adjacent nouns.

The results provided by TAACO(2.0.4), at the sentence level, show repetition of nouns and their synonyms with score (0.02) approximately. This means that the number of noun lemmas and their synonyms that are repeated in every sentence and its adjacent one divided by the total number of sentences in a text is (0.2). This score is considered largely very high. It shows that she is interested to draw the attention of the reader with her through the process of narration.

The case is the same and even more at the verbs' levels among adjacent sentences. Morrison's novel achieved score (0.05) for the overlap of verbs and their synonyms among adjacent sentences. This clarifies the fact that the number of repeated verbs and their synonyms among adjacent sentences divided by the total number of sentences in a whole text is (0.05). This score, compared to other scores, is very high and means that she uses synonyms a lot, a fact that enriches the texts' interconnection quality.

At the paragraph level, the repetition of ideas using various range of synonyms is very frequent. Regarding the nouns, the novel achieves score (0.06) which means that the number of repeated nouns and their synonyms among paragraphs divided by the total number of paragraphs is (0.06). This high score is a proof that Morrison's readers are easily caught up with her and can easily understand her events and comprehend the messages beyond the sequence of events.

Likewise, the case seems to be high at the verbs level, and even more. The novel achieves score (0.14) which is the highest. The total number of repeated verbs and their synonyms divided by the number of paragraphs are (0.14). This signifies a very professional writer, who is focusing on the importance of facilitating the task for the reader to understand the events. Morrison seem to be concerned more with the issues she raises, interested to convey her messages,

and keen to let others sympathize with the protagonist's status, and react with her as much as possible.

3. Conclusion

Morrison's novel proves to be coherent, and thus succeeds in portraying child abuse against African American children due to high degree of textuality.

Regarding the cohesive ties binding the parts of the novel together, Morrison records reasonable score concerning the lemma type token ratio. This may signify that she resorts to repetition in a reasonable and objective attitude throughout the novel. Consequently, a reader may be able to detect the events and incidents of her protagonist, and is able to tie the episodes and grasp the messages and comprehend the events of the writer in detail.

The ratio of repeating the parts of speech varies to a great extent varies. For instance, she repeats the same nouns more than repeating the same verbs. Similarly, she uses various adjectives compared to a lot of repeated adverbs. This repetition is to attach the reader with the events and characters of her stories, and, thus, reach a rational proportion of cohesion.

Regarding cohesion through the use of connectives, a reader of Morrison's novel is always aided by the writer to connect the ideas and to link the characters and the events in their lives. This facilitates the task of the reader of being bothered only by the issues presented within the text, which is childhood trauma and child abuse against African Americans and to save his/her effort.

Morrison sticks more to the positive causal connectives to represent her ideas. This means that the writer is concerned with issues of African American children and their status, and is eager to visualize their lives and ideas within a very clear context to enable the reader to sympathize with them.

As for the cohesion that is achieved through sentence overlap, or paragraph overlap, or synonym overlap, the novel records a very high score concerning each kind of repetition. This may indicate that the writer is efficient to draw the attention of the reader, and offers him tools to understand and comprehend the sequence of events in a very simple way. Thus, her style is characterized by a very high degree of cohesion and interconnection among the parts of her novel,

implies that the writer is concerned with certain issues, and is always interested to facilitate the task of the reader to receive her messages easily.

This study may work as an aid to direct the attention of researchers to the importance of cohesive devices, and that the most coherent text is successful in delivering certain messages and is effective in trying to change the present situation of certain people, namely black-skinned children.

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