

# The Pragmatics of Function Words in Fiction: A Computer-aided Text Analysis

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**Abstract**—This paper uses a computer-aided text analysis (CATA) to decipher the ideologies pertaining to function words in fictional discourse represented by Edward Bond's *Lear*. In literary texts, function words, such as pronouns and modal verbs display a very high frequency of occurrence. Despite the fact that these linguistic units are often employed to channel a mere grammatical function pertaining to their semantic nature, they, sometimes, exceed their grammatical and semantic functionality towards further ideological and pragmatic purposes, such as persuasion and manipulation. This study investigates the extent to which function words, linguistically manifested in two personal pronouns (I, we) and two modal verbs (will, must) are utilized in Bond's *Lear* to convey both persuasive and/or manipulative ideologies. This paper sets three main objectives: (i) to explore the persuasive and/or manipulative ideologies the four function words under investigation communicate in the selected text, (ii) to highlight the extent to which CATA software helps in deciphering the ideological weight of function words in Bond's *Lear*, and (iii) to clarify the integrative relationship between discourse studies and computer-aided text analysis. Two findings are reported in this paper: first, function words do not only carry semantic functions, but also go beyond their semantic functionality towards pragmatic purposes that serve to achieve specific ideologies in discourse. Second, the application of CATA software proves useful in extracting ideologies from language and helps better understand the power of function words, which, in turn, accentuates the analytical integration between discourse studies and computer, particularly in the linguistic analysis of large data texts.

**Keywords**—Computer-aided text analysis (CATA); concordance; function words; persuasion; manipulation; ideology; Bond's *Lear*

## I. INTRODUCTION

Starting from the assumption that language is a means of communication that often reflects the ideologies of its users, it can be claimed that there is a reciprocal relationship between language and ideology [1]. This relationship has been approached within the field of fictional discourse [2], and in other discourse genres [3]. The different linguistic units expressing language can also be said to be ideology carriers. In the realm of critical discourse analysis (CDA), ideology is one cornerstone of its analytical umbrella to the extent that it is uncommon to conduct a CDA for any text without a reference to ideology; CDA takes as one of its core concerns the task of decoding the hidden ideologies in discourse, either spoken or written. According to van Dijk [4], ideology refers to such set of specific rules, beliefs, and attitudes that are commonly shared between individuals of the same group,

institution and/or party. For him, ideologies are individualized - and institutionalized-based notions that not only demarcate the process of communication within the in-group, but also determine specific communicative guidelines to contact with the out-group. These shared-beliefs often serve to discursively distinguish between the 'We' and 'They' relationship in discourse. The communal relationship between language and ideology is clearly evident in discourse, particularly where notions of power, dominance, and control are addressed [5]. Ideology can be discussed from different linguistic angles, including the semantic, the pragmatic, the lexical, or the grammatical, and it can also be communicated at the different levels of discourse: the word, the sentence, and the utterance. Even function words, such as pronouns and modal verbs, whose main purpose in discourse is to convey a grammatical function, can also be perceived as ideology carriers.

This paper attempts to decipher the ideological significance of function words in Edward Bond's *Lear*. The reason why a drama text is selected for the analysis lies in the fact that literary genres always witness numerous number of function words that are recurrently repeated in these texts. In many cases of their usage in texts, these words carry their naturally semantic function of grammaticality. So, for instance, the different personal pronouns are employed to conduct their semantic function of just referring to deictic concepts, and also the modal verbs can be discursively used to indicate obligation (must, should), high level of certitude (will), possibility (can), etc. In light of this paper, these function words are linguistically investigated by means of a computer-aided text analysis (CATA) and CDA to decode the ideologies these words convey beyond their ordinary semantic functions.

As a result of the incessant technological development, computer software have come to occupy substantial significance in numerous studies within the scope of linguistic studies, as they are used to draw both theoretical and empirical results that contribute to the field of linguistics in general and to textual analysis in particular [6], [7], [8], [9]. These studies highlighted the indispensable role of computer software as digital tools that serve to support and facilitate a comprehensive and enhanced analytical milieu, wherein analysts and linguists can easily manage their analyses by providing adequate, credible and ample results. According to [10], adopting a computational approach to the analysis of fictional texts not only facilitates the whole process of text analysis, but also emphasizes the integration between modern technologies and other social and human disciplines.

The paper is theoretically framed upon three concepts. The first is critical discourse analysis, which is approached in terms of Fairclough's [11] model of analyzing grammatical concepts in discourse, including pronouns and modality, the core concern of this study; the second is ideology, which is addressed in light of van Dijk's [12] perspective concerning the concept; and the third is a computer-aided text analysis, which is represented by a frequency distribution analysis (FDA) to the four function words under investigation. Crucially, the analysis seeks to highlight the analytical integration between CDA and CATA, as well as to shed light on the way these two analytical tools are interwoven within the discourse of Bond's *Lear* to decipher the hidden ideologies of persuasion and/or manipulation encoded in the conversational turns of characters in the selected play, and channeled by the function words employed throughout dialogicity.

Approaching pronouns and modality as carriers of ideology in discourse by the application of CATA via concordance reflects the significance of the grammatical aspects and function words as linguistic tools in the communication process [13], and the significance of utilizing and applying computer software to the analysis of large data texts [14], [15]. There is no discourse that does not carry ideological significance; such an ideological significance serves to open the gate of research towards recurrent discussions that function to discover further meanings pertaining to texts, or to challenge and refute the existing meanings of such texts. Literature is a fertile soil wherein discourse analysts and linguists find so many linguistic phenomena worthy of linguistic research [16], [17]. Despite the fictional nature of communication in literary texts, they are still considered as mirrors of what is going on reality, and, therefore, are perceived as parallel to naturally occurring conversations.

#### A. Research Questions

The current study tries to offer answers to the following research questions:

- 1) To what extent does a computer-aided text analysis contribute to the analysis of fictional texts?
- 2) What are the ideologies communicated by function words in the selected play?
- 3) To what extent does Key Word in Context (KEWIC) offered by concordance contribute significantly to the understanding of the power of function words in fictional discourse?

#### B. Research Objectives

The answer of the abovementioned research questions constitutes the main objectives of the study as follows:

- 1) To highlight the extent to which computer-aided text analysis helps in deciphering the ideological weight of function words in Bond's *Lear*.
- 2) To clarify the complementary relation between critical discourse analysis and computer-aided text analysis.
- 3) To explore the persuasive and/or manipulative ideologies function words communicate in the text at hand.

In what follows, the paper provides the theoretical background as well as the review of literature relevant to the study of function words as carriers of ideologies in discourse in Section II. Section III provides the methodology adopted in this paper by offering the analytical procedures, the rationale, and the description of the selected data. Section IV is dedicated to the analysis of the selected data. Section V presents the discussion of the results reported in this study, and Section VI is the conclusion of the article, which also provides recommendations for further research.

## II. LITERATURE REVIEW

### A. Computer-Aided Text Analysis (CATA)

The employment of a computer-aided text analysis (hereafter, CATA) proves useful for the understanding of the thematic and ideological message of texts in corpus linguistics [18]. Applying the different computer software to the analysis of texts serves to facilitate the process of interpretation pertaining to these texts, which in turn, helps decode the ideological significance encoded in the linguistic expressions, either at the word level or the sentence one. Such ideological significance carried by words and/or sentences is difficult to be deciphered if it is approached manually; that is, without the work of computer [19]. Nowadays, computer software occupies an integral part in the field of linguistics. The importance of computer software is not only confined to the computational linguistics studies, but they have their contributive part in the other fields of linguistics, including pragmatics, semantics, morphology, and discourse studies [20]. This is because computer software such as concordance can efficiently foster the analytical process in large data texts in a way human performance alone proves to be inadequate [21].

It is worth mentioning that CATA offers various analytical tools and options. One of these analytical options is the Frequency Distribution Analysis (FDA), which entirely functions to provide the number of occurrences a searched item occurs in a text. According to [22], the frequency analysis that can be generated by concordance makes it available for analysts to have a general look about the textual nature of a specific lexis in a text. This further serves to direct the analytical wheel towards the significant precedence of one occurrence over another, which is computationally enabled by the second variable offered by CATA, that is, the variable of Key Word in Context (KWIC). The variable of KWIC provides the contextual picture in which a specific searched word occurs. In other words, KWIC clarifies the contextual environment of the searched items, which, in turn, helps arrive at the ideological significance pertaining to words and/or phrases [23]. A further analytical option realized by CATA is Content Analysis (CA). For Weber [24], content analysis serves to categorize the different words into classes according to their semantic features. This content or semantic categorization is very contributive to the thematic intelligibility of texts, as it classifies words into semantic groups that ultimately function to achieve a comprehensive understanding of the thematization of texts, particularly large data texts such as the literary ones, as is the case with the play under investigation.

In light of this paper, CATA is enabled by the program of Concordance to provide the analytical options listed above. Concordance is a computer software that enables analysts and users to collect, access, classify and analyze the different types of texts, specifically those that abound in large amount of data [25], [26]. Concordance, therefore, can retrieve all occurrences of a searched lexis in a text, can display the contextual environment of any word, and can categorize all words according to their semantic content [27]. By deriving the frequency distribution of the four function words under investigation, which is accompanied by both the use of KWIC and content analysis, the ideologies the four function words carry will be revealed.

### B. Ideology and Discourse

Ideology has been a main area of concern for discourse and ideological discourse analysts within linguistic studies adopting critical discourse analysis as their theoretical framework [28], [29], [30], [31]. These studies have emphasized the connection between language, power and ideology. They point out that ideology is enacted through language and helps to legitimate domination. They argue that any aspect of structure could be ideologically significant; that is, all linguistic expressions can communicate ideological significance, which can also be manifested phonologically, syntactically, semantically, pragmatically, etc. Highlighting the significant role of institutionalized ideology, van Dijk [32] postulates that ideologies are specific types of ideas that form what he terms 'belief systems' or 'social representations'. He maintains that such beliefs cannot only perceived as belonging to individuals, but they also form the general cognitive and background shared by groups.

According to van Dijk [33], ideology is a mediator element between society and discourse. Such a relationship serves to facilitate and activate the linguistic intelligibility among the different members of the group. Forming and agreeing upon a unified ideological background within the in-group is a prerequisite that helps to establish a successful act of communication produced by the different representations of discourse. By means of ideology, relations of power and dominance are motivated in discourse; power relations are produced and practiced. Ideology is employed also to persuade and/or manipulate; in both cases, it is a medium through which the powerful exercise their power and the powerless resist. Consequently, one can find different discursive practices that tend to manipulate and others to persuade. The targets sought beyond each type determine the type of ideology practiced in the process of communication, that is, whether or not the benefit is both speaker and hearer-oriented (persuasion), or only speaker-oriented (manipulation). Van Dijk maintains that ideology intelligibility among the members of the group leads to a successful participation of the individual member towards the ideological principles shared by the group as a whole. This ideological participation tends to create a discursive cohesion among discourse participants, which, for Khafaga [34], accentuates the idea that individually-based ideology affects and is affected by the institutionalized ones; it is an unremitting process of influence that emphasizes ideology-discourse reciprocity.

### C. Fairclough's Grammatical Approach to Critical Discourse Analysis

In discussing the role of function words and their ideological significance in discourse studies, Fairclough [11] proposes four sets of items that can be used for the linguistic analysis of function words in texts and discourse. The first set requires the investigation of the experiential values of texts, which necessitates the analysis of pronouns and modality. The second set involves the analysis of the relational values of texts, and entails a focus on the grammatical features, such as the type of sentence used, i.e. declarative, interrogative, or imperative; the type of modality: truth, obligation, or possibility modality; and the type of pronouns used in discourse. The third set of items constitutes the study of the expressive values grammatical features have, including expressive modality. The fourth set comprises the analysis of the different types of sentences used; for example, simple, compound, or complex, as well as the relationship between the various structures of sentences. Fairclough's sets of items abound in grammatical aspects relevant to produce an ideology-loaded type of discourse. Pronouns and modality are discursively employed to express, produce and maintain agency, particularly in the field of ideological/critical discourse studies [35], [36], [37]. These studies clarified that the reason lies in the fact that agency is closely related to notions of power and domination, and it is difficult to find any ideological discourse that does not address issues of power, dominance, persuasion, and manipulation.

### D. Pronouns

Using pronouns in discourse is perceived as one way of communicating agency, which, in turn, operates as conduits of ideologies in discourse [38], [39]. The use of the pronoun 'I' serves to communicate the competency, authority and responsibility of the speaker, whereas the pronoun 'you' conveys domination among discourse participants. Concerning the pronoun 'we', Fairclough [11] argues that it is divided into two types: "inclusive 'we' and exclusive 'we'". The inclusive 'we' includes both the reader and the writer (speaker and hearer), whereas the exclusive 'we' refers to the writer (speaker) only without any reference to the other participants in discourse. Pinto [40] further affirms that the use of the inclusive 'we' indicates that the goals and benefits of the whole group is more important than the benefits of the individual, whereas the exclusive 'we' establish a border between the benefits of the individuals and those of the group. Pinto maintains that in the case of manipulative discourse, the inclusive 'we', once employed, masks imposition under the guise of cooperation, as it manipulatively shows that the benefits of the group is inferior than those of the individual. Therefore, the inclusive 'we' is discursively used to show unity, solidarity and competency, whereas the exclusive 'we' indicates distance and separateness between the speaker and his/her addressees.

### E. Modality

According to [11], modality is classified into "relational modality" and "expressive modality." Such categorization, for him, is based on the type of authority exercised by the speaker over his/her addressees. In relational modality, the authority is

practiced by one participant over another, while in expressive modality; the focus is on the speaker's authority in terms of the truth of the propositional content of the linguistic expression. He maintains that it is not only through modal verbs that modality can linguistically be communicated, but it can also be expressed by other grammatical tools, including adverbs and tense. For Fowler [41], modality has four types: truth, obligation, permission and desirability. Truth modality can be expressed by modal auxiliaries represented in 'will', adverbs of certitude such as 'certainly'. This type of modality shows that the speaker's assumption is completely true. Truth modals are used to express a high level of certitude. Obligation modality can be realized by the use of some modal auxiliaries, such as 'must', 'should' or 'ought to'. Obligation modality draws the recipient's attention to the necessity of carrying out the speaker's proposition. Permission modality can be presented by the modal auxiliaries, such as 'can' and is used to give their participants permission to carry out their propositions. As for desirability modality, it concerns itself to clarify the speaker's status of accepting or refusing what is communicated by his/ her proposition.

#### F. Previous Studies

The use and application of computer software in general and concordance in particular to the analysis of large data texts such as the fictional ones has been the focus of many studies within the field of linguistics. [42], for example, used data mining to investigate the semantics, rhythm and pace in narrative writing. They clarified the extent to which input data can significantly contribute to the final interpretation of fictional texts, and concluded that data mining via visualization can mirror the semantic categorization a fictional text carry. Another study conducted by [43] explored the extent to which concordance is effective in the analysis of fictional discourse. This study demonstrated that concordance can be applied to large data texts in order to generate authentic and credible results that contribute to the interpretation of texts. This study focused on two analytical variables generated by concordance: frequency distribution analysis and key word in context. The study concluded that the application of concordance to the study of literary genres contribute to the thematic and ideological understanding of texts.

Within the scope of translation studies, [44] showed the significance of using modern technological software in producing credible versions of translations. The study recommended the incorporation of computer software into the process of teaching and learning university courses of translation in the different academic institutions in Saudi Arabia. Furthermore, [45] conducted a research in which they explored the impact of CALL software (computer assisted language learning) on the performance of students who major English as a foreign language (EFL) in Saudi university. This study clarified that the application of CALL to EFL settings influences the various learning outcomes of EFL students positively. The study is based on testing the effectiveness of using the two computer programs of Snagit™ and Screencast on acquiring the skill of reading. The study revealed that the application of the two computer software serves to improve the academic level of students, by fostering the linguistic skills pertinent to the acquisition of the skill of reading. The study

also reported that such technological incorporation into EFL course functions to develop not only the linguistic competence of EFL students, but also their communicative skills. This study concluded by recommending the application of the different CALL software to the different EFL courses in the context of Saudi universities.

Within courtroom settings and legal discourse studies, [46] conducted a research in which they explored the extent to which concordance helps investigate the linguistics of opening statements, by decoding the various ideologies beyond the semantic proposition of the linguistic expressions. This study employed a frequency distribution analysis to arrive at the hidden meanings and the pragmatic purposes targeted as a result of the recurrent employment of particular lexical items in the analyzed texts. The aforementioned studies show the effective and contributive role computer software play in the field of linguistic studies, either on fictional texts or outside the scope of fiction, i.e., in EFL and courtroom settings. Such contributive significance is anticipated to be extended in this study to present a further dimension of the application of CATA to decipher the ideologies of function words in fiction.

It is perspicuously evident that all previous studies have employed CATA software into the linguistic analysis of texts. Some of these studies focused on fictional texts, whereas other studies have presented discussions on legal texts, EFL settings, etc. One observation concerning related literature is that it did not use CATA software within the scope of pragmatics; that is, none of the previous studies has employed CATA software to explore the different pragmatic purposes in discourse. This last point is the core concern of the current study, which constitutes the research gape attempted to be addressed in this article.

### III. METHODOLOGY

#### A. Data and Rationale

The data in this study encompasses Edward Bond's *Lear* [47]. The play is structured around 4 acts that constitute eighteen scenes forming the whole production of the dramatic work. The rationale beyond the selection of this play in particular is due to the fact that it witnesses a significant usage of some grammatical aspects that prove indicative in communicating different ideologies, varying from the persuasive to the manipulative. This has been marked by the frequency analysis added in this article, which displays an ideological weight for such grammatical aspects; they are not employed chaotically in the dramatic dialogue of the play, but are vessels of ideology. Significantly, Bond's *Lear* exhibits a remarkable ideological discourse that requires a concise linguistic analysis, specifically with regard to the dexterous employment of pronouns and modality to communicate ideologies.

#### B. Research Procedures

Three procedural steps were followed in the analysis of the selected play. The three stages revolved around the use of three variables of CATA: frequency distribution analysis (FDA), key word in context (KWIC), and content analysis (CA). The first stage constituted preparing the text of the selected play, by uploading it electronically so as to be ready

for analysis. This stage offered a general idea of the way the discursive atmosphere of the play is communicated via the conversational turns of its characters. In the second stage the four function words (I, we, will, must) were electronically highlighted to mark their occurrence in the play. This was conducted by using a frequency distribution analysis to the whole play-text, wherein occurrences of each searched item were monitored. The third stage presented an interpretative task in which all highlighted items were discussed in terms of their indicative occurrences within the particular contextual environment in which they occur. After the three analytical stages, findings were firstly reported, and then interpreted in terms of the extent to which the searched items were contributive to conveying specific persuasive and/or manipulative ideologies. Significantly, all emphases (italicized) in the selected extracts in the analysis part are made by the author for analytical reasons.

C. The Frequency Analysis

During the process of analysis, the work of concordance was confined to reflecting a frequency distribution analysis for the searched lexical items that marked as indicative in the study of pronouns and modality as ideology carriers. This frequency analysis is conducted by concordance. Concordance facilitates the process of accessing and examining large data texts in order to arrive at credible and concise results that could be difficult to be realized if the analysis is conducted without the help of computer software [48], [49]. The options provided in concordance here were only to mark the word in its contextual environment. This context was determined by only five words before and other five words after the searched item. This functions to give a brief about the nature of the linguistic context in which the word occurred in text. Kennedy [50] argues that concordance is a software that serves to generate all occurrences of a given word or lexis in a corpus. Further, Hockey [51] points out that a concordance or a frequency analysis is produced by virtue of the searched item and the contextual environment in which it occurs. Concordance, for him, offers what is called KWIC (Key Word in Context), that gives much information about the searched word in its different contexts in text. This, in turn, serves to extend the interpretative process, opening new horizons that help better interpret the linguistic expression.

IV. DATA ANALYSIS AND RESULTS

This part constitutes two analytical strands: pronouns and modality, both of which reflect the extent to which pronouns and modality are carriers of specific ideologies, persuasive and/or manipulative in the discourse of the selected play.

A. Pronouns

This part of the analysis presents two pronouns that are used in the discourse of Bond's Lear to communicate specific ideologies varying from persuasion to manipulation: the pronoun 'I' and the pronoun 'we'.

1) *The pronoun I*: The pronoun 'I' is used in Bond's play to communicate specific ideologies, whose core concern varies from persuasive ideology to manipulative one. The former aims to get the addressees persuaded of some particular idea, whereas the latter constitutes the realization of

the speaker's desire even if it runs counter to the recipients' attitudes. Thus, one can say that the first type is addresser-/addressees-benefit oriented, while the second type is only an addresser-benefit oriented. Consider the following extract:

Lear. I knew it would come to this! I knew you were malicious! I built my wall against you as well as my enemies! (Lear (henceforth, L)., p. 7)

Lear manipulates the first-person pronoun 'I' to persuade his participants of the legitimacy of building his wall. He employs the deictic 'I' to show that he was right when he decided to build the wall. Lear's use of the past tense in *knew* and *built* also serves to prove his competency, and to clarify that he was far-sighted when he started to build the wall. Lear puts himself in the position of the agent and puts his two daughters in the position of the patient. Through using agency, Lear tries to communicate that it is he who has the competency to foresee the future and to give judgment. In this way he tries to make them accept everything he is going to allege. The following tables present a frequency analysis of the thematic use of the pronoun 'I', through which the different types of ideologies communicated by the first person singular 'I' can be caught by the context in which it occurs.

TABLE I. A FREQUENCY DISTRIBUTION ANALYSIS OF THE MANIPULATIVE 'I'

I.....TF (555)			
context	word	context	line
when I was young.	I	stopped my enemies	103
my sworn enemies.	I	killed the fathers	176
me. And when	I	killed the fathers I	178
when I killed the fathers	I	stood on the field among	178
This is not possible!	I	must be obeyed!.	238
two bodies with them.	I	Knew it would come	289
It would come to this	I	Knew you were malicious!	289
you were malicious!	I	Built my wall against	290
That's how	I	crushed the fathers	341
O why did	I	cut his tongue out?	625

Note: TF means total frequency of the searched word

TABLE II. A FREQUENCY ANALYSIS OF THE PERSUASIVE 'I'

I.....TF (555)			
Context	word	context	line
So stay. LEAR .	I	could have a new life	1048
wall down, and	I	had to stop that	2001
hand.) And now	I	must move them	2003
Murderer. And now	I	must begin again.	2518
must begin again.	I	must walk through my life	2519
shivering in blood,	I	must open my eyes	2522
hurry on. LEAR.	I	am the King! I kneel	2765
what she's doing!	I	must tell her	2798
eyes, my eyes!	I	must stop her	2805
all my mistakes,	I	understand all that	3255
As fit as I Was.	I	can still make my mark	3662

As indicated from the two tables above, Table I shows that only 10 occurrences out of 555 are employed to convey manipulative ideologies. Table II clarifies that 11 occurrences are used to indicate persuasion. The contextual environment in which the deictic 'I' occurs reflects the extent to which it is employed to achieve persuasion and/or persuasion, which is clarified by the thematic and content analysis of the KWIC pertaining to the pronoun 'I'.

2) *The pronoun 'we'*: The pronouns 'we', 'us', and 'our' are used inclusively in Bond's play to establish relations of agreement, solidarity, and inclusion; and exclusively to show power, distinction and authority. These pronouns are among the main rhetorical strategies speakers used to communicate ideology, or as [52] puts it pronouns are "one of the major tools of persuasion used by politicians" (P. 37). Consider the following extract:

Cordelia. You were here when they killed my husband. I watched them kill him. I watched and I said we won't be at the mercy of brutes anymore, we'll live a new life you must stop speaking against us. (L., p. 83).

Cordelia tries to convince Lear to stop talking against the new government. She starts her persuasive ideology with clarifying a number of irrationalities committed against her on the hands of Bodice and Fontanelle. She involves Lear in her speech as a witness you were her when they killed my husband. Cordelia then uses the pronouns 'we' and 'us' both inclusively in we won't be at the mercy of brutes anymore and 'we'll live a new life; and, exclusively, in you must stop speaking against us to show intimacy and solidarity with the old king in the first two utterances, and to threaten the him in the third utterance so as to stop him talking against her. Cordelia's use of the first-person plural pronoun also indicates that she is authoritative enough to speak on behalf of others in the government, which reflects her power and domination. Cordelia's first utterance we won't be at the mercy of brutes anymore emphasizes her power and determination that she will never allow herself to be at the mercy of brutes again. Her second utterance we'll live a new life is an attempt to manipulate Lear's mind through a seductive promise of a new life in the future in which he will live in peace under her rule. The connection between the truth modal 'will' and the pronoun 'we' emphasizes her ability to carry out what she promises to do. Cordelia's exclusive 'us' in against us serves to show her power and domination over the situation. She establishes herself as a leader who has the complete access to speak on behalf of others in the government. Tables III and IV offer a frequency distribution analysis and a KWIC of both the inclusive and exclusive 'we'.

TABLE III. A FREQUENCY ANALYSIS OF THE INCLUSIVE 'WE'

WE.....TF (104)			
Context	Word	Context	Line
How could	we	ever be free?	105
and I said	we	Won't be at the mercy	3478
brutes any more,	we	will live a new life	3479
much suffering But	we	made the world	3531
and fragile and	we	have only one thing	3532

TABLE IV. A FREQUENCY ANALYSIS OF THE MANIPULATIVE 'WE'

WE.....TF (104)			
Context	Word	Context	Line
CORDELIA. When	we	have power these things won't	1867
don't build the wall. Cordelia	we	must. Lear.	3499
Tell her . CARPENTER.	We	came to talk to you	3508
There are things	We	have other opponents	3539
and tell you this before	we	put you on trial	3542

The two tables show that the pronoun 'we' is used inclusively 5 times (Table III), and exclusively 5 times (Table IV) out of 104 occurrences. In both cases the pronoun 'we' is employed to carry manipulative ideology. Again, this manipulative usage of the pronoun 'we' is demonstrated through the variable of KWIC. That is, by looking at the contextual environment in which this pronoun occurs in text.

*B. Modality*

Two types of modality are discussed in this section: obligation modality and truth modality. Both types expresses agency and are carriers of ideology.

1) *Obligation modality*: The obligation modals 'must' and 'should' are dexterously employed in Bond's Lear to reflect the power of the speaker over his participants. Speakers use these modals to impose their own ideology over their recipients and to direct their behavior towards a complete obedience and submission to their own purposes [53]. The use of obligation modality dominates the discourse of oppression in which powerful characters use these modals to practice their domination over those who are powerless. Notice the following extract:

Bodice. We must go to our husbands tonight. We must attack before the wall's finished. We must help each other. (L., p. 8).

Bodice is talking to her sister, Fontanelle, with regard to their plan to attack Lear's army and to wrest him from his kingdom. Bodice uses the obligation modal 'must' three times to convey the necessity of doing what they decide to do, and to emphasize that attacking their father becomes urgent so as to stop the acts of building on the wall. Bodice's use of the obligation modals in we must go to our husband, we must attack before the wall's finished, and we must help each other is to emphasize her power and domination over her sister. She directs her even in her relation with her husband. The first-person plural pronoun 'we' which precedes the modals emphasizes solidarity, which Bodice tries to communicate to Fontanelle in order to make her sure that she seeks her interest; this in turn functions to push Fontanelle to carry out what her sister demands quite willingly. The obligation modal 'must', thus, is manipulated to channel manipulative ideology. The following frequency analysis adds more clarification for the manipulative use of the obligation modal 'must', both in the affirmative and negative forms.

TABLE V. A FREQUENCY ANALYSIS OF 'MUST'

MUST.....TF (100)			
Context	Word	Context	Line
(To WARRINGTON.) You	must	deal with this fever.	64
the FIRING SQUAD). They	must	work on the wall	123
to help me, but you	must	let me deal with the	129
But the work's slow. I	must	do something to make	136
kind or merciful. I	must	build the fortress. Bodice	165
and now you	must	understand ! BODICE.	168
Wall , wall, wall this wall	must	be pulled down Fontanelle.	227
This is not possible! I	must	be obeyed! WARRINGTON.	238
Fontanelle are left alone. We	must	go to our husbands tonight	322
terrified of him. Bodice. We	must	attack before the wall's finished	324
the Council of war. We	must	help each other. Goodbye	327
know what she's doing! I	must	tell her - write to	2798
My eyes, my eyes! I	must	stop her before I die	2805

TABLE VI. A FREQUENCY ANALYSIS OF "MUSTN'T"

MUSTN'T.....TF (9)			
Context	Word	Context	Line
this act. Bodice. You	Mustn't	talk like that in front	151

Tables V and VI demonstrate that 13 occurrences of the affirmative 'must' and 1 occurrence of the negative 'mustn't' are used as carriers of manipulative ideology in the discourse of the novel. Despite its very low frequency, the negative obligation modal is highly indicative in communicating manipulative ideologies. The indication here lies in the fact that the high frequency of one word is not an indicator that this word is thematically indicative. However, low frequency words are also very indicative in many cases.

2) *Truth modality*: Many characters in Bond's play use the truth modal 'will' to reassert their trustworthiness, and to prove the validity of their speech. In Lear, the modal 'will' is used to communicate both persuasive and manipulative ideology. Here are some extract:

Fontanelle. I know you will get on with my husband. He's very understanding; he knows how to deal with old people.

Bodice. You will soon learn to respect them like your sons. (L., pp. 5-6).

Both Fontanelle and Bodice try to convince their father to bless their secret marriage from his hereditary enemies; the duke of North and the duke of Cornwall. Both of them know for sure that their father refuses their marriage, so they uses

the truth modal 'will' to influence their father's opinion towards their husbands. Fontanelle's utterance I know you'll get on with my husband signifies to state her determination to marry Cornwall. Bodice's utterance you'll soon learn to respect them like your sons is another trial to make her father bless her marriage from North. Bodice's use of the pronoun 'you' shows her power in delivering her message to her father. The two daughters try to remove the feeling of fear that occupies Lear's mind against the two husbands so as to accept their marriage without any objection. Tables VII and VIII present a frequency distribution analysis of the manipulative and persuasive 'will'.

TABLE VII. A FREQUENCY ANALYSIS OF MANIPULATIVE 'WILL'

WILL.....TF (77)			
Context	Word	Context	Line
keep our enemies out. People	will	live behind this wall	107
live in peace. My wall	will	make you free	109
you can be -because you	will	have my wall.	158
LEAR. My enemies	will	not destroy my work	264
When I'm dead my people	will	live in freedom and peace	271

TABLE VIII. A FREQUENCY ANALYSIS OF PERSUASIVE 'WILL'

Will.....TF (77)			
Context	Word	Context	Line
Fontanelle. I know you	will	Get on with my husband	206
Straighter! Bodice you	will	Soon learn to respect them	213
look after you. You	will	live in decent quietness	3235
LEAR. The wall	will	destroy you	3505

Tables VII and VIII show that the total frequency of the truth modal 'will' is 77; only 9 occurrences are indicative in expressing particular ideologies, 5 of which are employed to convey manipulative ideology (Table VII), whereas 4 occurrences are used to communicate persuasive ideology (Table VIII). These two tables further emphasize the complementary relationship between the two variables of CATA used here: the FDA and the KWIC variables. To clarify this point, one can obviously notice that despite its ability to offer us the total frequency of a specific word, FDA still inadequate to help us better understand the indicative occurrence of a given word. Only through the variable of KWIC one can identify what is indicative and what is non-indicative among occurrences. This complementary nature of the two variables further strengthens the whole interpretative process of the analyzed text.

## V. DISCUSSION

The analysis demonstrates that pronouns and modals, sometimes, and within particular contexts, go beyond their grammatical and semantic functions to communicate and maintain particular pragmatic purposes and ideological meanings, including persuasion and manipulation. The four function words under investigation convey a specific type of ideology in the discourse of Bond's Lear. The following table adds more clarification.

TABLE IX. PRAGMATIC IDEOLOGIES OF FUNCTION WORDS IN BOND'S LEAR

Type of function words	Linguistic manifestation	Type of ideology
Pronouns	Pronoun 'I'	persuasive manipulative
	Pronoun 'we'	manipulative
Modality	Obligation modality	persuasive manipulative
	Truth modality	persuasive manipulative

As indicated from Table IX, communicating persuasive and manipulative ideologies is realized in Bond's Lear through pronouns, which manifest themselves in the pronouns 'I' and 'we'; each pronoun is employed to achieve a specific ideological and pragmatic purpose. The table also demonstrates that truth and obligation modalities are very indicative in communicating both persuasive and manipulative ideologies in the discourse of the play.

Other findings are also demonstrated in this study as follows:

First, the application of CATA software proves useful in extracting ideologies from language and helps better understand the power of function words, which, in turn, accentuates the analytical integration between discourse studies and computer, particularly in the linguistic analysis of large data texts. It is analytically evidenced that the two variables of FDA and KWIC are complementary in nature in the sense that the latter is a context-oriented that target the identification of indicative words generated by the total frequency analysis of the former. Significantly, both FDA and KWIC contribute to the linguistic analysis of literary texts, particularly to decipher the hidden ideologies beyond the semantic propositions of the mere linguistic expressions.

Second, the analysis demonstrated that function words, manifested here by pronouns and modality, have ideological significance in discourse. This goes in conformity with Fowler's [54] argument that there is a reciprocal relationship between language and ideology in the sense that each single linguistic unit can communicate specific ideology of its user. Ideology is usually there in language and the employment of particular linguistic expressions rather than others is ideological in nature, that is, it is produced in this particular way and in such a specific linguistic expression to communicate particular ideological meanings of the speaker/writer. Consequently, every single word can mirror the ideology of its user. In the context of this study, it is not only content words that communicate and maintain ideologies in discourse. However, function words contribute significantly in communicating and maintaining ideologies. In particular discourse contexts, function words cease to maintain their common semantic meaning to convey further ideological purposes.

Third, manipulative ideology is presented by personal pronouns ('I' and 'we'), and modality (obligation 'must' and truth 'will'). The pronouns 'I' and 'we' are used to show the

speaker's power and domination over his participants which facilitate his persuasive task. Obligation and truth modals are also used to express necessity and certitude. All these strategies are more representative in the discourse of oppression. This correlates with previous studies, such as [11], [20], and [46], which emphasize the ideological weight of pronouns and modality.

Fourth, persuasive ideology is presented in Lear through agency (pronoun I) and modality (must, will). Using agency through the pronoun 'I' reflects the desire of the speaker to express competency. Obligation and truth modals are used to express necessity and certitude, while negation is employed to expose the daughters' violence, disobedience and cruelty. These linguistic strategies serve to convey a persuasive ideology that can be said to be based on facts and past experiences. This also goes in the same direction with Sornig's [55] argument that persuasion can be realized by means of the different linguistic levels, including the grammatical one which constitutes the employment of grammatical aspects, such as the use of modality, deixis, negation, and passive structures.

## VI. CONCLUSION

This study offered a computer-aided text analysis to decode the ideological significance of function words represented by the pronouns (I, we) and the modal verbs (must, will) in the discourse of Edward Bond's Lear. The study used three analytical strands: van Dijk's ideological discourse analysis, Fairclough's model of the grammatical aspects in the analysis of discourse, and a computer-aided text analysis, which is analytically enabled by the three variables offered by CATA: frequency distribution analysis (FDA), key word in context (KWIC), and content analysis (CA). The three approaches are analytically incorporated to explore the extent to which pronouns and modality contribute to the communication of specific ideologies that vary from persuasion to manipulation in the selected text. The analysis of the selected play has evidenced the employment of pronouns and modality for ideological purposes. In terms of the use of pronouns, the analysis identified their linguistic weight as carriers of ideological agency. Sometimes, these pronouns are used inclusively, as is the case for the inclusive 'we', and in other discursive cases they are used exclusively, as is the case for the exclusive 'we'. Also, the first person singular pronoun 'I' is analytically used to communicate competency. With regard to the use of modality, the analysis showed that truth modals are used to communicate the ideological agency of certitude on the part of the user, whereas obligation modals are employed to exercise agency via expressing a high level of commitment, both on the part of speakers/writers and the hearers/readers alike. The analysis further demonstrated that pronouns and modality in the current study are employed to achieve two types of ideology: manipulative and persuasive; the former always targets the benefits of speakers/writer, while the latter often serves the benefits of all discourse participants.

This paper recommends further applications of other variables of CATA, such as LWIC (Linguistic Inquiry and Word Count) and DICTION (software package that contains



31 predefined Dictionaries) to the textual and thematic analysis of other types of function words, such as prepositions, conjunctions, and demonstratives. This might reveal different and/or similar findings than what is approached in this paper.

#### ACKNOWLEDGMENT

The researcher would like to thank Prince Sattam bin Abdulaziz University in Saudi Arabia alongside its Scientific Research Deanship for all technical support it has provided to complete this study.

#### REFERENCES

- [1] A. F. Khafaga, "A computational approach to explore the extremist ideologies of Daesh discourse". *International Journal of Advanced Computer Science and Applications*, vol. 11, no. 8, pp. 193-199, 2020.
- [2] T. A. van Dijk, "Ideological discourse analysis," in E. Ventola and A. Solin (Eds.), *Interdisciplinary approaches to discourse analysis*. New Courant, 1995, pp. 135-161.
- [3] J. House, and D. Kadar, *Cross-cultural pragmatics*. Cambridge: Cambridge University Press, 2021.
- [4] T. A. van Dijk, "Discourse, knowledge and ideology: Reformulating old questions and proposing some new solutions," in P. Martin, J. N. Aertselaer, and T. A. van Dijk (Eds.), *Communicating ideologies: Multidisciplinary perspectives on language, discourse, and social practice*. New York & Oxford: Peter Lang, 2004, pp. 5-38.
- [5] R. Fowler, "On critical linguistics," in C. Coulthard, and M. Coulthard (Eds.), *Texts and practices: Readings in critical discourse analysis*. London & New York: Routledge, 1996, pp. 15-31.
- [6] A. Khafaga, "The perception of blackboard collaborate-based instruction by EFL majors/teachers amid COVID-19: A case study of Saudi universities". *Journal of Language and Linguistic Studies*, vol. 17, no. 2, pp. 1160-1173; 2021.
- [7] M. Eltahir, S. Al-Qatawneh, and S. Alsalmi, "E-Textbooks and their application levels, from the perspective of faculty members at Ajman University, U.A.E." *International Journal of Emerging Technologies in Learning*, vol. 14, no. 13, pp. 88-104, 2019.
- [8] G. Stockwell, *Computer-assisted language learning: Diversity in research and practice*. Cambridge: Cambridge University Press, 2018.
- [9] K. Beatty, *Teaching and researching computer-assisted language learning*. Harlow: Longman Pearson, 2010.
- [10] A. Khafaga, *Strategies of political persuasion in literary genres: A computational approach to critical discourse analysis*. Germany: LAMBERT Publication, 2017.
- [11] N. Fairclough, *Language and power*. London and New York: Longman, 1989.
- [12] A. F. Khafaga, "Exploring ideologies of function words in George Orwell's *Animal Farm*." *Pertanika Journal of Social Sciences and Humanities*, vol. 29, no. 3, pp. 2089 -211, 2021.
- [13] J. Charteris-Black, *Politicians and rhetoric. The persuasive power of metaphor*. Palgrave Macmillan, 2005.
- [14] A. Khafaga, and I. Shaalan, "Pronouns and modality as ideology carriers in George Orwell's *Animal Farm*: A computer-aided critical discourse analysis," *TESOL International Journal*, vol. 16, no. 4.2, pp. 78-102, 2021.
- [15] A. T. Frederiksen, and R. Mayberry, "Pronoun production and comprehension in American Sign Language: the interaction of space, grammar, and semantics". *Language, Cognition and Neuroscience*, vol. 36, no. 8, pp. 1-23, 2021.
- [16] J. Culler, *Literary theory*. Oxford University Press, 1997.
- [17] J. Culpeper, M. Short, and P. Verdonk, *Exploring the language of drama: From text to context*. London & New York: Routledge, 1998.
- [18] M. L. Heyden, J. Oehmichen, S. Nichting, and H. W. Volberda, "Board background heterogeneity and exploration-exploitation: The role of the institutionally adopted board model," *Global Strategy Journal*, vol. 5, no. 2, pp. 154-176, 2015.
- [19] D. Wiechmann, and S. Fuhs, "Concordancing software," *Corpus Linguistics and Linguistic Theory*, vol. 2, no. 2, pp. 107-127, 2006.
- [20] K. Romeo, "A web-based listening methodology for studying relative clause acquisition," *Computer Assisted Language Learning*, vol. 21, no.1, pp. 51-66, 2008.
- [21] A. Khafaga, and I. Shaalan, "Mobile learning perception in the context of COVID-19: An empirical study of Saudi EFL majors," *Asian EFL Journal*, vol. 28, no. 1.3, pp.336-356, 2021.
- [22] D. Krieger, "Corpus linguistics: What it is and how it can be applied to teaching," *The Internet TESL Journal*, vol. IX, no. 3, pp. 123-141, 2003.
- [23] J. Flowerdew, "Concordancing as a tool in course design," *System*, vol. 21, no. 2, pp. 231-244, 1993.
- [24] R. P. Weber, *Basic content analysis*. NewburyPark, CA: Sage, 1990.
- [25] I. Pollach, "Taming textual data: The contribution of corpus linguistics to computer-aided text analysis," *Organizational Research Methods*, vol. 15, no. 2, 263-287, 2012.
- [26] F. Yavuz, "The use of concordancing programs in ELT," *Procedia-Social and Behavioral Sciences*, vol. 116, pp. 2312-2315, 2014.
- [27] A. Barger, and K. Byrd, "Motivation and computer-based instructional design," *Journal of Cross-Disciplinary Perspectives in Education*, vol. 4, no. 1, pp. 1-9, 2011.
- [28] G. Fauconnier and M. Turner, "Conceptual blending, form and meaning," *Recherches en Communication [Communication Research]*, vol. 19, pp. 57-86, 2003.
- [29] T. A. van Dijk, J. Aertselaer, and M. Putz, Eds., *Introduction: Language, discourse and ideology, in Communicating ideologies: Multidisciplinary perspectives on language, discourse, and social practice*. New York & Oxford: Peter Lang, 2004, pp. xiii-xxx.
- [30] B. N. Perucha, "Ideology, cognition and discourse revisited: exploring counter-ideologies," in P. Martin, N. JoAnne, and T. A. van Dijk (Eds.), *Communicating ideologies: Multidisciplinary perspectives on language, discourse, and social practice*. New York & Oxford Peter Lang, 2004, pp. 175- 202.
- [31] A. Khafaga, "Linguistic and literary origins of critical discourse analysis." *Applied Linguistics Research Journal*, vol 5, no. 5, pp. 15-23, 2021.
- [32] T. A. van Dijk, *Discourse and knowledge: A sociocognitive approach*. Cambridge University Press, 2014.
- [33] T. A. van Dijk, "Political discourse and racism: Describing others in western parliaments," in S. H. Riggins (Ed.), *The language and politics of exclusion: Others in discourse*. Thousand Oaks, CA: Sage, 1997, , pp. 31-64.
- [34] A. F. Khafaga, "Linguistic representation of power in Edward Bond's *Lear*: A lexico-pragmatic approach to critical discourse analysis." *International Journal of English Linguistics*, vol, 9, no. 6, pp. 404-420, 2019.
- [35] R. Wodak, *Language, power and ideology: Studies in political discourse*. Amsterdam/Philadelphia: John Benjamins Publishing Company, 1989.
- [36] H. G. Widdowson, *Discourse analysis*. Oxford, Oxford University Press, 2007.
- [37] M. Thegel, and J. Lindgren, "Subjective and intersubjective modality: a quantitative approach to Spanish modal verbs." *Studia Neophilologica*, vol. 92, no. 1, pp. 124-148, 2020.
- [38] P. Dekker, "Pronouns in a pragmatic semantics. *Journal of Pragmatics*, vol. 34, no. 7, pp. 815-827, 2002.
- [39] H. Bergqvist, "Swedish modal particles as markers of engagement: Evidence from distribution and frequency." *Folia Linguistica*, vol. 54, no. 2, pp. 469-496, 2020.
- [40] D. Pinto, "Indoctrinating the youth of post-war Spain: A discourse analysis of a Fascist Civics textbook." *Discourse & Society*, vol. 15, no. 5, pp. 649-667, 2004.
- [41] R. Fowler, *Language in the news: Discourse and ideology in the press*. London: Routledge, 1991.
- [42] J. Reddington, F. Murtagh, and C. Douglas, "Computational properties of fiction writing and collaborative work." *International Symposium on Intelligent Data Analysis*, pp. 1-13, 2013.

- [43] A. Khafaga, and I. Shaalan, "Using concordance to decode the ideological weight of lexis in learning narrative literature: A computational approach," *International Journal of Advanced Computer Science and Applications*, vol. 11, no. 4, pp. 246-252, 2020.
- [44] A. Omar, A. F. Khafaga, and I. Shaalan, "The impact of translation software on improving the performance of translation majors," *International Journal of Advanced Computer Science and Applications*, vol. 11, no. 4, pp. 287-292, 2020.
- [45] A. Khafaga, and A. Alghawli, "The impact of CALL software on the performance of EFL students on the Saudi university context," *International Journal of Advanced Computer Science and Application*, vol. 12, no. 7, pp. 304-312, 2021.
- [46] A. Khafaga, and B. Aldossari, "The language of persuasion in courtroom discourse: A computer-aided text analysis," *International Journal of Advanced Computer Science and Application*, vol. 11, no. 7, pp. 332-340, 2021.
- [47] E. Bond, *Lear. In plays two*. London: Eyre Methuen, 1978.
- [48] A. Thabet, "Applied computational linguistics: An approach to analysis and evaluation of EFL materials." *Damietta Faculty of Education Journal*, Part 1. No. 13, pp. 7-39, 1990.
- [49] J. Sinclair, *Corpus, concordance collocation*. Oxford: Oxford University Press, 1991.
- [50] G. Kennedy, *An introduction to corpus linguistics*. London & New York: Longman, 1998.
- [51] S. Hockey, *A guide to computer applications in the humanities*. London: The Johns Hopkins University Press, 1980.
- [52] I. Inigo-Mora, "On the use of the personal pronoun 'we' in communities." *Journal of Language and Politics*, vol. 3, no. 1, pp. 27-52, 2004.
- [53] W. Abraham, *Modality in syntax, semantics and pragmatics*. Cambridge: Cambridge University Press, 2020.
- [54] R. Fowler, "Critical linguistics. In K. Malmkjar (Ed.), *The linguistic encyclopedia*. London & New York: Routledge, 1991.
- [55] K. Sornig, "Some remarks on linguistic strategies of persuasion," in R. Wodak (Ed.), *Language, power and ideology: Studies in political discourse*. John Benjamins Publishing Company, 1989, pp. 95-113.