INTRODUCTION

to

NATURAL LANGUAGE PROCESSING

CRITICAL DISCOURSE ANALYSIS

SURVEY

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1. INTRODUCTION

Knowledge, assessments, experiences gained about world are expressed by means of discourse. Discourses are predefined ways of expressing oneself. We have the notion of how to use it to explain our pragmatics, power relationships and aims in particular cultural, historical and political context. Words used in community are never neutral, means they have some practical aims and convey some power and political relationships. Even if we are not consciously doing, our words are politicized because they carry power originated by interest of the person who speaks. Discourse analyze is way of analyzing our words as having meaning in a particular historical, social, and political conditions. Adding a critical dimension to Discourse analyze help us to studying and analyzing written texts and spoken words to convey sources of power, inequality, dominance, bias and how these are initialized, reproduced and transformed within particular cultural and economical context. The name of systematic ways of investigating these relationships is called Critical Discourse Analyses (CDA)

This paper introduces some of the ways that critical discourse analyst use to reveal power relationships and inequalities in a text and use these techniques and analyze them in computational approach. In the second following introduction part, more detailed information about CDA is given. Third section introduces two examples of CDA. Fourth section introduces the how CDA conducted. Fifth section presents CDA more Computational linguistics viewpoint. Sixth section concludes the conversation.

2. A CLOSER LOOK AT CDA

As mentioned in introduction, CDA, made within a certain cultural and economic assumptions, is revealing power relationship, inequalities and biases in a text or utterance. Purpose of CDA is to help the analyst reveal social problems that are generated by dominant ideology and power relationships. Critical Discourse (CD) analysts think, for example, media as manipulators that inject some particular idea of mainstream ideology to receivers of media. The objective of CDA is to convey ideological assumptions that are hidden in the words of our written text or oral speech to realize and see the power over community. The opaque relationships in texts and speech are systematically navigated by means of CDA.

There are three central tenets of CDA [5]. Discourse is shaped and constrained by

1) Social structure- like class, status, age, gender- determines the discursive practice. For example, residents and immigrants have different set of discursive habits.

2) Culture, that puts constrains on discursive practices. Our professional culture determines our discursive boundaries.

3) Discourse shapes and constrains our identities, relationships, knowledge. Knowledge and belief system is determined language and words we used or we are exposed.
The three levels of analyses that is to be united and determined in terms of relational aspects are

a) The actual text that is linguistic features and organizations of discourse, vocabulary choices (wording, metaphor, etc.), grammar (transitivity, modality), cohesion and text structure should be systematically analyzed.

b) discursive practices that the text to be written about

c) The social context in which discursive practice occurs.

The Critical approach to discourse analyze tries to find links between actual text and social context in which text is written through discursive practices from which the text is drawn. In other words the text is interpreted under certain rules, norms, and mental models that depend on the social context. The discursive practices associate to these rules. These rules determine how we think, act and speak in all the social position that we may occupy. In other words we are learned to be in a particular social context. The discourse the use cannot be independent of this social context. For example, a person form an elite class, for example a politician, use particular words to express him(her)self.

If the text is not critically analyzed, oppression repression and marginalization that is embedded in power relationship in the text cannot be revealed. Discourse and language can impose the community as if unbalanced power relationship is normal and natural in spite of the reality that is they are all prejudice and injustice. By power of words one can persuade the community as if one of the important members of our social life is absent. Unless we critically analyze these written and spoken discourses we can be misled by the dominant worldview. Critical Discourse Analyses focuses on how social relations, knowledge and power relationship constructed through written and spoken discourse in different parts of community.

### 3. SOME EXAMPLES OF CDA

This section illustrates 2 examples of CDA

Example 1

According to a study about violence in Nova Scotia Schools conducted by Canadian Broadcasting Corporation, the foundations published with following data [3].

The researchers asked 1,800 teachers to take part. About 600 responded:

- 94 had been hit by a student
- 59 had been kicked
- 116 had been shoved
- 26 had either been threatened or assaulted by a student with a weapon

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the data is presented with numbers instead of statistics. At first glance it can be thought as author wanted us to do that student violence in school I common and teachers need support to work in such a dangerous place. If we look from statistical perspective, we get the data as:
%15 had been hit by a student
%9.8 had been kicked
%19 had been shoved
%4 had either been threatened or assaulted by a student with a weapon

if we make a simple change the picture changes dramatically. So that:
%85 had not been hit by a student
%90 had not been kicked
%81 had not been shoved
%96 had not either been threatened or assaulted by a student with a weapon

each presentation of data has a different types of messages. However, the author of the report made a choice and presented the report with low numbers that reveals the message that students are work hazard.

Example 2
Let’s analyze the difference between following two sentences.
a) Demonstrators are shot.
b) Police shoot demonstrators.

In b the agent of action is police and the action is clearly active shoot. In (a) the agent deleted by passivization and the recipient of the action ‘demonstrator’ is in focus. Demonstrator is almost the responsible for the event. [4]

4. HOW TO APPLY CDA

It is acknowledged that CDA does not have a unitary theoretical methodology because it is more than a discipline having multidiscipline characteristics [2]. There are many approaches to CDA. The way we write and what we say are not arbitrary and this is one of the key principles behind CDA. Independent of what we say is conscious or unconscious, they are all purposeful.

One of the approaches belongs Huckin [1], it should be firstly approach the text in uncritical manner as a ordinary reader then manipulate it again in critical manner. The text should be manipulated without discarding its type. Each type of text has its own style and structural elements. An advertisement or a journal article can be recognized from its style characteristics. For example, a scientific Journal article typically includes a problem statement, hypothesis, literature review, theoretical context, sampling and methods, results analysis and conclusion probably with some recommendation. Deducing such a conclusion is framing the text.
After determining the type of text and how the messages are framed, then the next stage is ready to be conducted so that the text now can be analyzed in sentence, phrase and words level. Several techniques of CDA are mentioned below in order. These examples are derived from Huckin[1].

1) Sentences can be framed as text with the process called topicalization. A viewpoint that influences the reader perception can be accommodated by writer that chooses what to place in the topic position. For example, in a media piece about peace protestors, if 15 sentences refer to protester and 4 refer to the official, then the text is clearly about the act of protestors but not about the issue that cause the protest.

2) Sentences can also reveal data about power relationships. Here the concern is who exerts power and why, who objected in passive position. The agencies in a sentence can reveal information if they are analyzed critically, otherwise remain at the subconscious level. The example 2 in previous section can be associated to this property of sentences.

3) Omission of information about agent can be accommodated in sentence level by means of nominalization which is converting a verb into noun. For example, the headline “Row Over Iraqi Signposts”, here the word “row” can be associated with the words “racket” and “riot”, nominalization of action here, where the action represented with noun, hides agency, responsibility and causality. “25 villagers massacred” is an example of passive verb revealing agentlessness. The sentence ignores who did the killing which is a major omission of fact done actually on purpose.

4) Presupposition can occur in sentence level in the form of persuasive utterance that aims to convey impression that the words of the agent of powers are more significant. For instance a demonstrator sign that states “give peace a chance” presupposes that government is currently not doing so. On the other hand, a government spokesman that is stating “some of demonstrators were a bit more aggressive” reveals the impression that all demonstrators are aggressive in some level.

5) Using some of the truth to mention something as if only variable that determine its value is that truth by means of implications. For example, suppose that the reporter writes a competition failed (200 people) to match a former, larger contribution few years ago (500). The utterance conveys that the competition failed because the number is lower. This takes power away from the people organized the event even if they are satisfied with the organization, and a success for the people against the organization.

6) Some word can convey meaning by connotations. These connotations are assigned by cultural knowledge of the participant that they are not mentioned in dictionaries. For the selection between the words protestor and demonstrator reveals a message. A protestor is against something where the demonstrator is trying to make something perceptible. Media could convey a negative image on those supporting peace when it shows them protestors against government.

7) Modality is another characteristic of discourse worth to give attention for critical approach. Modality is tone of statements in terms of certainty and authority. It is
done mainly by words and phrases like may, might, will, must, it seems to me. With their use some text can convey a feeling of heavy-authority, while others convey a tone of defense.

8) Some words can convey register. Registers can be affected by choice of person. For instance, quoting directly from university spokesman using first person, and using third person for a student criticizing university policy, can convey the message that the university is more objective than the student, therefore more legitimate.

In addition to these ways there is some other approach to be mentioned. Finding key words in a text and making a deep analyze around these sentences that includes the word is important. For instance, the word Brussels can be seen as a key word in a text about EU.

5. COMPUTATIONAL APPROACH

The approach form natural language processing point of view to the methodology of CDA is can be satisfactory to some degree if some more data about world knowledge. Some artificial senses should be accommodated in programs to apply some methods of CDA. For example, when parsing a sentence like “some of demonstrators were a bit more aggressive” would yield a semantic meaning as just we understand this sentence. Then the demonstrators in the text should be assigned a lower power to reveal power relationship in the text. To do that the word aggressive should have sensation value or direction.

Some methods of CDA can be used to assign some sensation values to the characters in the text. It is straightforward to check which character is more legitimate or official from authors’ point of view by checking how registers are affected in a sentence.

CDA methods are important to interpreting the text pragmatically. Some methods can be computationally easy to apply and these methods could give ubiquitous sensational values about the component of text.

6. CONCLUSION

Critical Discourse Analyses and its methodology show us a systematic way of analyzing texts critically. As dominant ideologies tries to penetrate our life, they use media (written and visual) to inject their ideas to the community. Therefore, linguists try to find out that how people use linguistic characteristics to manipulate community or other person. Discursive practices show that, what we say is all the time has a purpose and we sometimes try to persuade to gain more about life. However some Critical Discourse Analyses convey our pragmatics to some level in a systematic way.

Computational linguists should use these methods to derive some pragmatically conclusions about texts. To make better pragmatically interpretation of text while processing it, the methods of CDA could be used to derive power relationships and inequalities in a text.
REFERENCES


