A Corpus-based Contrastive Study of Online News Reports on Economic Crisis — A Critical Discourse Analysis Perspective*

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Abstract—**This paper qualitatively and quantitatively analyzes the English coverage of economic crisis in China Daily and The New York Times from the perspective of critical discourse analysis based on corpus linguistics. A detailed contrastive analysis between China Daily corpus (CDC) and New York Times corpus (NTC) is conducted from various aspects, including concordance analysis and lexical comparison. We arrive at two conclusions: (1) Chinese reports convey the general information about the global economic crisis, whereas American reports seem to be more concerned with the details. (2) Chinese journalists use more neutral expressions to report the causes of the crisis, the impacts of the crisis on China and the attitudes to China's Stimulus Plan, while American media employ more emotional and evaluation-laden words and expressions to convey the information.**

Index Terms—**critical discourse analysis, coverage of economic crisis, contrastive study**

I. INTRODUCTION

We are experiencing a financial crisis more severe and unpredictable than any in our lifetime since the September of 2008. And almost all the main news agencies home and abroad reported this crisis. Fairclough (1995) holds that "newspapers tend to offer sometimes contending (thought often harmonizing) version of the truth…This myth underpins the ideological work of the media: offering images of and the categories for reality, positioning and shaping social control and reproduction." Therefore, the present study will make an effort to apply the framework of Critical Discourse Analysis (CDA) to the contrastive analysis of the news discourse about economic crisis in China Daily and The New York Times. This research adopts the corpus-based approach. Two mini-corpora are involved: China Daily corpus (CDC) and The New York Times corpus (NTC). All the relevant news reports are retrieved from the archives of the two websites: http://www.Chinadaily.com.cn and http://www.nytimes.com. The time span is supposed to be set from September 2008 to September 2009.

The research questions are as follows: (1) Do the news reports on economic crisis in China Daily and The New York Times show the same concern? If not, what are their distinct concerns? (2)Are the news reports on economic crisis in China Daily and The New York Times value-free? If not, how are they ideologically invested?

II. LITERATURE REVIEW

This section will give a brief survey of previous studies of news discourse with the emphasis on the critical approach and review the literature of CDA by discussing the development of CDA on news discourse and its relationship to the ideology.

Critical linguistics is known as critical language study or critical discourse analysis, which was first proposed by Roger Fowler in the book of language and control published in 1979. CDA research dated back to the 1970s and originated from critical linguistics started from the UK and Australia. Researchers of critical linguistics see the world as a social structure with ideology. Critical linguists attempts to uncover the unperceived relation between language and ideology, and to reveal how the power bloc controls people's ideology with language in order to protect their own interests and the current social structure. Fairclough (1989) sets out the social theories underpinning CDA and, as in other early critical linguistic work, a variety of textual examples are analyzed to illustrate the field, its aims and methods of analysis. Critical discourse analysis aims to reveal the relationship between ideology and power which is hidden in public discourse and to uncover the counteraction of public discourse on forming people's ideology.

The critical trend of media studies can be traced back to the early 1970s, when scholars asked questions about media and power, and explored the relationship between news discourses and cultural context. Then with the development of the critical discourse analysis, more scholars and researchers paid attention to news discourse. Among them, Norman

Fairclough, Teun van Dijk, Roger Fowler and Allan Bell are the most notable. Adopting CDA to do media discourse analysis has been very popular abroad since 1980s. However critical analysis of news discourse began to draw academic attention in China since the 1990s, and most of work are introduction rather than real research.

Corpus linguistics is playing a more and more important role in linguistic research. Hunston (2003) holds that it is no exaggeration to say that corpora and the study of corpora have revolutionized the study of language, and of the applications of language over the last few decades, and that the improved accessibility of computers has changed corpus study from a subject for specialists to something that is open to all. According to Biber et al. (1998), the essential characteristics that capture the corpus-based approach are the followings: (1) it is empirical, analyzing the actual patterns of use in natural texts; (2) it utilizes a large and principled collection of natural texts, known as a 'corpus', as the basis for analysis; (3) it makes extensive use of computers for analysis, using both automatic and interactive techniques; (4) it depends on both quantitative and qualitative analytical techniques.

III. Research Design and Methodology

In this research, two mini-corpora are involved: China Daily corpus (CDC) and New York Times corpus (NTC). The CDC consists of 196 sample texts with a number of 117,565 tokens; while the NTC consists of 108 sample texts with a number of 117,847 tokens. All the sample texts, sentences or words employed in this research come from the above two corpora.

A quantitative study is carried out firstly in news reports in order to find out the linguistic features. After that, a qualitative study is conducted. Based on the qualitative and quantitative analysis, the conclusions will be achieved and summarized.

The research procedure is as follows: (1) Two corpora, which are labeled as CDC and NTC, are constructed to make qualitative and quantitative analysis of English news reports on the economic crisis. (2) Wordsmith is employed to generate the wordlists and keyword lists of the two corpora and necessary data like type, token, corpus size, TTR, standardised TTR, mean word length(in characters), number of sentences, mean sentence length (tokens) and mean text length will be extracted. (3) For those data can't be directly provided by software such as lexical choices, random sampling and manual work are adopted. And 8 sample texts are selected from the two corpora respectively to make analysis and comparisons in the thesis. (4) After collecting the necessary data for the research, the interpretation and comparison on the thematic, lexical levels will be presented.

IV. Analysis and Findings

A. Thematic Analysis of the CDC and the NTC

The Brown Corpus is employed as the reference corpus. Based on the keyword list and key key word database, the observation is made for thematic analysis first.

The general comparison of two corpora

CDC is a corpus including 196 articles and 117,565 tokens. NTC is a corpus including 108 articles and 117, 847 tokens. The length of the articles in CDC is comparatively shorter than those in NTC. According to standardized TTR, it (45.77) is a bit higher in NTC than that in CDC (42.96). Therefore, it implies that the news texts in NTC are more heterogeneous in lexical choices in terms of the issues covered than those in CDC. The reason is that English proficiency of natives is better than Chinese reporters. It can also be proved by the 1-letter words to 5-letter words distribution in the two corpora.

The top 50 keywords comparison between CDC and NTC

By using the software wordsmith (version 4.0), the key words of CDC and NTC can be extracted. There is the frequency, the text number and the percentage of the reoccurrence of the key words in two key word lists. Comparing the two lists we can see clearly that there are many words in common in the two corpora, such as financial, economic, crisis, government, percent, president, leaders, countries, market, bank, credit, world, investment, growth, recession, global, China, international, companies, capital, said. These words shared by news reporters home and abroad depict a distinct map concerning this global economic crisis. Among them some words indicating news' foci like financial, economic and crisis, which give us the first impression of what the news is about. Government, president, leaders play the most influential and representative roles and should take active measures to deal with the difficulties of the economic crisis. Words like percent, capital, companies, bank, credit, investment indicate the range affected by the economic crisis. Recession and growth are two words with strong comparison effects, which suggest the big change of the economy. Two adjectives international and global show the worldwide scale of this economic crisis. Said, the only neutral reporting verb in the top 50 key word list is very conspicuous, which indicates the great objectivity and credibility of the reporting at the first sight. In a word, these key words show the readers the map of the event: What had happened? What was involved? How did China and America leaders and government deal with the crisis?…

The top 30 key key words comparison between CDC and NTC

Then Brown is employed as the reference corpus. And the key key words in the two corpora can be extracted. After observing the two lists, we can find that some of the key key words are preferred by Chinese reporters and others by American ones. Such as growth, international, world, cooperation, Yuan, summit, development, recovery, trade,

stimulus, reform, domestic, Wen, consumption and monetary are more frequently employed by Chinese reporters. These words are used to convey the information about the global economic crisis, and the responses and measures of our government. However, in the coverage of American reporters, the words like Obama, president, leaders, European, credit, loans, securities, bailout, mortgage, reserve, administration, treasury, prices, debt, companies and Lehman are quite distinctive. It seems that they are more concerned with the details of the economic crisis.

As for the measures to cope with the economic crisis, reform in Chinese texts constitutes a large proportion, occurring 117 concordances, such as move forward the reform of the current international financial and economic system, advance reform of the international financial system, urges reform of global financial system, speed up reform. The words that co-occur with reform here are positive ones: urge, speed up, promote, push for, deepen, persist in, implement. The similar words employed by Chinese reporters are stimulus and consumption.

However in American news reports bailout is more frequently used to represent the corresponding measures to deal with the economic crisis. The sample concordances are selected below: European leaders came up with a financial bailout plan; With the Long-Term Capital bailout as a precedent, creditors came to believe that; The United States Congress approved a $700 billion bailout package; The bailout plan released yesterday is a lot better.

In addition, Lehman is another key key word appearing in American news reports. As we all know, Lehman Brothers is the name of a famous company in the USA. Lehman Brothers Holdings Inc. was a global financial-services firm which participated in business in investment banking, equity and fixed-income sales, research and trading, investment management, private equity, and private banking. It was a primary dealer in the U.S. Treasury securities market. However in 2008 because of the secondary mortgage market crisis, the fourth-largest U.S. investment bank Lehman Brothers announced the bankruptcy protection. The bankruptcy of Lehman Brothers had a disastrous impact on the U.S. economy. So American media shows particular concerns on it.

B. Lexical Comparison

This part will be conducted from two aspects. One is concordance analysis of three key words, and the other is about the differences of lexical choices between the two corpora.

Concordance analysis: China

In CDC, 968 concordances containing China as the search word are extracted. The words that co-occur with China here can be classified into 3 types: the adjectives indicating the role of China confronting the difficulties of the economic crisis (crucial, significant, important, leading, increasing); the collocations indicating the measures taken by China as a state during the crisis (making efforts to spur domestic demand, taken robust measures, enhance the flexibility and sustainability); the collocations in which China serves as the noun modifier (China's banking, China's economic and ratings outlook, China's goal). Some sample concordances are selected below: China's role in the recovery will be crucial; Additional cooperation with China is particularly significant; China takes its global responsibilities; China would make its macroeconomic regulation measures; some developing countries, including China, are making efforts to spur domestic demand; since the beginning of this year, China had taken robust measures to; China urges efficient measures against financial crisis; China's contribution to boosting the world economy. These words and expressions can produce a prosody of "goodness" and convey the information to the readers that China not only has the ability to handle a variety of domestic economic issues but also is competent in promoting the sound development of the international economy.

In NTC, 101 concordances containing China as the search word are extracted. The number of the concordances is a little bit fewer than that in CDC. After observing all the concordances carefully, we can easily find that China is usually found in negative environments. Typical collocates are weaken, worries, decrease, sufferings. These words not only create a prosody of "badness", but also link China to the image of incompetence in dealing with the economic crisis. Some sample concordances are selected below: China's economy is beginning to weaken; China's package is not comparable to fiscal stimulus; because of worries about China's suffering with the global economy; China's position on regulations is a mystery; U.S. or Europe or major emerging economies like China slow down; policy makers in China mistakenly abandon their pursuit of financial; a decrease in China's current account surplus.

After the further contrastive analysis, a fact can be seen that American media employ more impartial and biased words and expressions to depict the unreal image of China. That reveals the unfriendly attitude of the American media toward China.

Concordance analysis: Growth

In CDC, 511 concordances containing growth as the search word are extracted. From the amount of the concordance lines occurring in CDC, we can know that growth is one of the most frequent words employed by Chinese reporters. After the careful observation and further analysis, the collocates co-occurring with the node word growth can be classified into two groups: one group indicating a positive prosody of "development", such as achieve, promote, stimulate, sustain, maintain, boost, ensure, guarantee, improve, spur; the other group suggesting a negative prosody of "obstacle", such as reduce, slow, gloomy, drag, curb, affect. However, the frequency of the occurrences of the positive prosody is relatively higher than that of the negative prosody. The usage of the node word growth reflects the optimistic attitude of Chinese reporters toward the current global economy. Probably they believe that China is sure to surmount the difficulties caused by the economic crisis and the global economy will be better and better, which can be shown in the following: This will promote economic growth and mitigate the effects of the global financial crisis; supports

inclusive and sustainable growth; promote global economic growth; China's sound economic growth is in itself a major contribution to global financial stability and economic growth; efforts to revitalize the growth of their national economies; promote sustainable economic growth in the region in energy conservation; social development to boost economic growth.

In NTC, 93 concordances containing growth as the search word are extracted. In terms of the number of the concordance lines, it is almost one fifth of that in CDC. In NTC, growth clearly has a negative prosody, collocating with words indicating "impediment" ,such as slow, weaken, drag down, hamper, lower, hurt ; as well as with words indicating "burden" , such as drag, laggard , threat. The implicit message transmitted by American reporters is that economic development has become sluggish during the economic crisis and the growth of economy seems to be unlikely and impossible. Here are some selected examples illustrating the use of the word growth: therefore suffering from weak growth and Euro-sclerosis; Europe has been a laggard in terms of growth over the last few years; economic crisis, which has dragged down Russia's growth rates and drastically reduced its revenue; struggling to cope with rapidly slowing economic growth; because of slowing export and investment growth; Debt can also act as a drag on economic growth; the cost will become a bigger burden as growth returns and interest rates rise; the crisis has already hurt job growth.

Concordance analysis: Confidence

The confidence of the public should be strengthened and enhanced immediately during the economic crisis. How this work has been done is one of the major concerns of government and the public. A fact can be seen that Chinese and American media spent lengthy coverage on the restoring confidence works conducted by the government and leaders. In CDC, 101 concordances containing confidence as the search word are extracted. In NTC, 42 concordances containing confidence as the search word are extracted. Through comparable observation and analysis of the concordances in the two corpora, we can see that confidence as the node word always occurs in the positive environment in CDC, while in the negative environment in NTC. That is, in CDC the collocates which co-occur with confidence create a prosody of "achievement", such as promote, stimulate, sustain, maintain, strengthen, boost, beef up, have, restore ,regain ; in NTC a prosody of "loss", such as a sharp drop in confidence, confidence in such short supply, go into a tailspin, drop, dip, fall, falter, wane, crash, lose, release.

After a thorough analysis, it is not difficult to understand why the confidence works had been reported intensely in China. Government plays an extremely leading and crucial role in the coping with crisis as the most advanced form of social organization. As the policy-maker, it acts as the leader, coordinator, and supervisor in the battle against crisis. Once the crisis has been handled properly and effectively, the harmony of the nation can be improved, and harmonious social order maintained; once the crisis has not been coped with properly and effectively, the consequence of the crisis can be magnified, even the former social order can be collapsed. Whether to handle the crisis effectively and efficiently is a means to demonstrate the ability of the governmental administration, therefore to strengthen its governing.

In summary, Chinese government and people have more confidence in tackling a variety of problems and difficulties in the process of economic crisis, as is conveyed by Chinese media. Maybe one reason can explain this phenomenon. The news pattern of Chinese media is mainly positive as mentioned above. This positive pattern is reflected in three aspects: to report positive events, to employ positive words and expressions, to adjust the proper time of the coverage. The benefits of the positive news pattern can be summarized into three: firstly, government can benefit from it because it is conducive to establish the positive image of the government home and abroad; secondly, it can strengthen the confidence of the people when crisis occurs so that the cohesion of the nation can be guaranteed; thirdly, it is helpful to maintain the sustainable and harmonious social order.

Lexical Classification

This part will make a detailed comparative analysis on the lexical choices of news reports on the economic crisis from a critical perspective. For those data and information can't be directly provided by software, random sampling and manual work are adopted. And 8 sample texts are extracted from the CDC and the NTC respectively to make analysis and comparisons of the qualitative research in the thesis.

Words fall into three categories according to their affective coloring: commendatory, derogatory and neutral. Commendatory words are those with positive evaluations that show favorable attitudes. Derogatory words are those with negative evaluations that denote negative attitudes. Neutral words are those with zero evaluations, that is, no positive or negative comments or attitudes embedded in the descriptions. Since commendatory and derogatory words are evaluation-laden, reporters always consciously take advantage of them and employ them to show their ideology.

Media coverage concerning the causes of the crisis

The different lexical choices in analyzing the roots of the global economic crisis include important information about the attitudes and positions of news reporters on this issue and therefore influence the opinions of readers on the matter. Chinese reporters focus on the excessive consumption and financial leverage in the US and the imbalance of the global economy. China indicates that the crisis is unprecedented because the epicenter is the richest and strongest country in financial terms and this evidences the weakness of the current international financial architecture to prevent crisis of these sorts. China also notes that the crisis cannot be dealt with effectively within the current institutional framework– there is a gap that needs to be filled through comprehensive review and reform of a systemic nature.

In contrast, on American side, a completely different picture emerges. The U.S. media generally agree that the root of the economic crisis exists in China and China should be responsible for the occurrence and spread of the economic crisis. Why do the US media have such views and comments? One reason can explain this phenomenon. In America it has also been debated that the root cause of the crisis is overproduction of goods caused by globalization and especially vast investments in countries such as China and India by western multinational companies over the past 15–20 years, which greatly increased global industrial output at a reduced cost.

Meanwhile American reporters also recognize that the explosion of debt over the previous quarter-century and irrational exuberance make the U.S. economy vulnerable and result in the rising of unemployment and bankruptcies of financial institutions. In America an empirical study by John B. Taylor concludes that the crisis is: (1) caused by excess monetary expansion; (2) prolonged by an inability to evaluate counter-party risk due to opaque financial statements; and (3) worsened by the unpredictable nature of government's response to the crisis. The root cause of this economic crisis is due to the abuse of the American financial system and the inability of the US government. The US media have to avoid the government-related matters. Thus the American reporters center on external factors, such as too much savings, sluggish domestic demand and excessive investment and export in China. It is evident that the American reporters employ more emotional words and expressions to express their attitudes toward the current economic crisis: America is also the victim of the crisis as well as other countries in the world and China and other developing countries should be responsible for the crisis.

Media coverage concerning the impacts of the crisis on China

The ideological conflicts also can be perceived through different lexical choices for describing the impacts of the crisis on China. The late-2000s recession is shaping up to be the worst post-war contraction on record. In China Daily and New York Times there are many comments on the ill effects of the crisis. As other countries in the world, China is also affected by the current financial recession. China media admits that the Chinese are feeling the ill effects of the economic downturn. Including notably shrinking external demand, overcapacity in some sectors, difficult business conditions for enterprises, rising unemployment in urban areas and greater downward pressure on economic growth, the Chinese are facing severe challenges.

But after a further analysis a fact can be gained that these two news media also show striking differences in addressing the impacts of the crisis on China. American media pay more attention to the social instability of China. Moreover, American reporters are more inclined to describe the negative image of the Chinese Government. The comments on the ill effects of the crisis occurring in New York Times can be divided into two categories: the economic level and the political level. As for the economic level, the rising rate of unemployment and layoff, slowing export and investment growth, declining consumption and severely depressed stock and property markets are stated to describe the weakening economy of China affected by the crisis. Even on the economic level, many emotional words are preferred by US media. Two examples may illustrate it.

1. The Chinese economy has hit a wall.

2. Beijing is struggling to cope with a rapidly slowing economy.

Here "hit a wall" and "rapidly" are used to show the readers that China's economy has been badly hit by the crisis and seems to be on the edge of collapse. The word "struggling" depicts a picture of inability and incompetence of Chinese government in handling the economic decrease and other difficulties caused by the crisis. On the political level, many comments on the stability and unity of the domestic environment of China can be seen in the coverage of US media. Most of the comments are negative. The argument can be reinforced with the following evidences.

3. Factory closings in southern China have led to mass layoffs and even sporadic protests by workers who complained that owners disappeared without paying them their wages.

4. threatening the expansion to which the communist party has linked the credibility of its one-party rule

5. One of China's more outspoken periodicals has also warned that the country may face social unrest in 2009 as unemployment rises because of the global financial crisis.

6. In 2009, Chinese society may face more conflicts and clashes that will test even more the governing capabilities of all levels of the Party and the government.

"Unrest" and "protest" indicate a state of trouble, confusion and turbulence, especially in a political context. They contain the connotation of "riot" and "violence", which give us the impression that Chinese government is incompetent in dealing with the conflicts and challenges such as unemployment and layoff and the Chinese are very dissatisfied with their government.

Compared with the words and expressions chosen by the two presses, Chinese media employ more neutral expressions which are consistent with the reality. However, American media use more biased and emotional expressions to show concern on the negative image of China which is not accordance with Chinese actualities and does harm to the harmony and stability of China. Thus the coverage of American media is not as objective and unbiased as they boast.

Coverage concerning China's stimulus plan

These two presses also show striking differences in addressing China's Stimulus Plan. The 2008-2009 Chinese economic stimulus plan is a RMB¥4 trillion (US$ 586 billion) stimulus package announced by the central government of the People's Republic of China on 9 November 2008 in its biggest move to stop the global financial crisis from

hitting the world's third largest economy. Concerning the economic stimulus plan of China, many comments and reports are found in China Daily and New York Times. However, there are many significant differences among them.

Chinese reporters make objective and unbiased analysis of the contribution of the stimulus plan. The positive impacts can be summarized into the following: shore up economic growth, promote social harmony, improve people's life, contribute to the stock jump, help store up some investors' confidence in world economy, a great contribution to world, play that vital role in world's economic recovery. These words and expressions are all commendatory. In all, the information conveyed by Chinese reporters is that the economic stimulus plan is the most active, direct and efficient way to expand domestic demand and helps to cushion the blows of world economic downturn.

In contrast, American media show different attitudes towards the economic stimulus plan of China. Their concerns can be categorized into two aspects: one is the negative effects and the other the positive ones. It seems that more attention is paid to the negative ones, such as corruption, leading to more shoddy works, raising the stakes, a big fiscal burden. By choosing these derogatory and evaluation-laden words, the journalists of American press show pessimistic attitudes to the stimulus plan of China. Besides, the positive aspects of the stimulus diagram are also mentioned by American media, such as contributing to China's productivity growth and improve its long-term competitiveness. However, it is not the voice of the mainstream and US media are intended to downplay the positive impacts of the plan. They cast doubt on some of the sunny pronouncements about China's economy. With regard to the negative sides, US media employ lengthy reports to elaborate and to a certain extent they exaggerate the negative impacts which are inconsistent with the status quo in China. These reports are not conducive to establish the good image of China in the international arena.

To sum up, the contrastive analysis of lexical classification reveals that there are many differences on the part of news reporters on the crisis, including the causes of the crisis, the impacts of the crisis on China and the attitudes to China's Stimulus Plan. American media employ more emotional and evaluation-laden words and expressions to convey the information which is inconsistent with the reality while Chinese journalists use more neutral expressions to conduct objective and unbiased reporting.

V. SUMMARY

In summary, we arrive at two conclusions. The first one is that Chinese reports in China Daily convey the brief information about the global economic crisis, and the responses and measures of our government. American reports in The New York Times seem to reveal that they are more concerned with the details of the economic crisis. The second one is that American media employ more emotional and evaluation-laden words and expressions to convey the information which is inconsistent with the reality while Chinese journalists use more neutral expressions to conduct objective and unbiased reporting in the coverage about the causes of the crisis, the impacts of the crisis on China and the attitudes to China's Stimulus Plan.

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