Biased or balanced? ----A study of British and Chinese newspaper coverage of climate change in the 2009 United Nations Climate Change Conference

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Abstract

Nowadays, climate science communication is an issue not only discussed within a country but more like a global urgent task that needs wide perspective. This study investigated the prevalence of news frames in Climate change news coverage from the Guardian and China Daily during the 2009 United Nations Climate Change Conference in Copenhagen. Five news frames, attribution of responsibility, human interest, economic consequences, morality and conflict were applied to 59 Chinese news stories and 71 British news articles. By applying deductive framing analysis, the results showed that with slight variation, the proportion and pattern of reports on Copenhagen Climate Summit were similar across the two countries. This outcome extends the knowledge of developing and developed countries' news coverage on climate change.

Keywords: Climate change; UK; China; newspaper; Copenhagen

1 Introduction

Since the mass media first covered climate science in the New York Times in the 1930s (Boykoff, and Roberts, 2007) it has become one of the most pressing global issues in contemporary society. Over the past decades, there have been numerous studies examining the combined implications of climate science communication, mass media covering and the policy making (Schoenfeld et al, 1979; Bell, 1994; Wilson, 1995; Mc Comas and Shanahan, 1999; Benford and Snow, 2000). The mass media are key actors in the identification and interpretation of environment issues (Schoenfeld et al., 1979) as well as the main sources for people to receive climate change information from different countries (Bell, 1994; Wilson, 1995). Mc Comas and Shanahan (1999) suggested that because environmental issues are not directly related to people's daily life, the media largely shapes the public's perception of global warming. In addition, the media's role is significant in maintaining collective action to solve social problems (Benford and Snow, 2000). By framing them in a specific ways (e.g. how media choose stories and how they represent them), the media may have a great impact on public attitude and response to climate change.

In Copenhagen, the 2009 United Nations Climate Change Conference was expected to draft a new treaty that will limit temperature rise to 2C and force global green house gas emissions to peak and fall within the next 5-10 years. Its aim is to reach a global agreement of a framework for climate change mitigation beyond 2012. At the same time, leaders and representatives from 192 nations came together to discuss the issues, and journalists from around the world scrambled to cover the process. The central problem of anthropogenic climate change confronting scholars and policymakers is how to engage the international community to make emission reductions (Vandenbergh, 2008).

The world's top carbon dioxide emitters, China, as well as the most important developing country, is a key player in the Copenhagen climate change conference (Netherlands Environmental Assessment Agency, 2008). UK is the important developed country in the Europe, and has also paid a considerable amount of attention to climate change. This allowed us to make some potentially interesting comparisons. For example, would China's reporting of climate change similar to the UK? We want to provide a first insight of the news coverage on climate change between developing and developed countries. Therefore, a framing theory was applied to compare British and Chinese newspapers' report of 2009 United Nations Climate Change Conference. Next we reviewed literature from: the framing theory, the framing of climate change and cross-national study of climate change.

1.1 The Framing Theory
It has been long recognized that the mass media are not simply a random selection of articles and segments (Flwoer, 1991; Wilkins, 1993; Gans, 1979). Although there is no consentaneous definition of framing; its characteristics have been well defined. According to Gitlin (1980) and Tuchman (1978) story framing appears to

be a pattern of presentation which is persistently structured by journalists. A few years later, Entman (1993) defined "frame" as an intended selection of information from the real world in order to promote particular issue for interpretation or evaluation. He asserted: "Framing essentially involves selection and salience. To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition". Gamson (1992) gave the same kind of thought that framing is a way of packaging of news content, language or thematic structure and by doing so it can shape stories and create particular meaning which may have an impact on readers.

In terms of media frame-analyses, there are abundant studies on the framing of media coverage (Antilla, 2005; Hulme, 2009; Olausson; 2009); the impact of news frames on readers (Entman, 1993; McLeod et al., 2002; Iyengar, 1991); the relationship between media coverage and public opinion (Druckman, 2001; Chong and Druckman, 2007; Takahashi, 2010); journalistic norms and bias (Boykoff, 2007b; Boykoff and Boykoff, 2004; Boykoff, 2008; Smith, 2005); and the trends of media coverage (Trumbo, 1996; Boykoff and Roberts, 2007).

For example, the presence and absence of news frames would be likely to manipulate how people perceived, understood, processed and accumulated message to specific issues. McLeod, et al (2002) have come up with an overall review of which media frames may play a latent role in deciding how audiences understand political communication and policy-making process. In this line of work, its principle argument is that "news can courage particular trains of thought about political phenomena and lead audience members to arrive at more or less predictable conclusions" (Price, et al., 1997). Furthermore, news frames not only affect reader's thoughts, but his memories of issues. From Valkenbury et al. (1999)'s study, frames defined how readers were presented with social and political information and played a significant role in their thought-listing responses. It seems the manipulation of news frames can be thus expected to influence how people viewed the whole world (Iyengar, 1991).

1.2 Studies of climate change
As a vital link in network of information flow, mass media plays several crucial roles in environmental issue such as global warming, ozone holes and etc. Firstly, it helps maintain public interest by keeping the issues in public sight, which is the key of finding solutions to the problem (McComa and Shanahan, 1999). Second, the mass media generate as well as disseminate information, as an important mediator between science, public and politics (Carvalho, 2007). A range of scholars has contributed to a better understanding of media coverage and representation in the field of climate change.

Generally, the case for tackling global warming is not compelling enough to attract public attention. This phenomenon is nicely conforming to Downs' theory of"issue-attention cycle". It is a five-stage cycle: initially the public is unaware of the problem, then they begin to concern with it, and after a period people feel bored and begin to move to other problems (Ungar, 1992). Krosnick et al. (2000) argued that it was the President Bill Clinton's campaign for the Kyoto treaty that pushed the nationwide heated debate about global warming to an unprecedented level in the fall of 1997. No double, during the time, the increase in media coverage of global warming has made a difference and steered their attitudes. On the other hand, Corbett and Durfee (2004) tried to test audience's responses to journalistic discourse of global warming with more detail. They found that in the media's portrayal of its (un)certainty, readers' perceptions of certainty increased with the inclusion of context but decreased with the inclusion of controversy. Thus the journalistic tenet of how to report climate change should strike a balance in order to accurately reflect the prevalent scientific views (Wilson, 2000).

Meanwhile, the failures of communication between scientists and the media have been manifested in some other studies (Ungar, 1992, 2000; Zehr, 2000: Boykoff, 2008). As Ungar (2000) pronounced: "science is an encoded form of knowledge that requires translation in order to be understood". Firstly, in areas where people have rare real-world experiential conditions and knowledge it is a daunting task for public to understand. Second, lots of people obtain scientific knowledge through mass media, nevertheless, with a few exceptions like New York Times, most mass media failed to provide accurate, detailed and sufficient information beyond simple recognition of the issue (Ungar, 2000). Third, reporters themselves may lack the knowledge of global climate change. Wilson (2000) pointed out, in the media coverage, the most correct scientific knowledge about climate change came principally from those reporters sourcing scientists or people work in the science and environment institutions. Give all this, much research has analysed various aspects of the media's ability to report the scientific findings (Antilla, 2005; Hulme, 2009).

After that, a number of communication studies attempted to explore and identify factors that may result in inaccurate, or insufficient news coverage (Bell, 1994; McComas and Shanahan, 1999; Cottle, 2000). In the climate change report, typical types of inaccuracies are identified by Bell (1994). They include scientific or

technical errors, misquotations, exaggerations, noteworthy omissions of certain information, and distortions of prominence. McComas and Shanahan (1999) asserted that the news media actively construct narrative about global warming around certain dramatic claims such as implied danger, severe consequences and economics influence during their research of The New York Times and The Washington Post from 1980 to 1995. Other components of what news media consider as good story also played a part in the scientific news coverage. For instance, human drama, extraneous events or the interplay of outstanding news sources that are not primarily involve scientific discoveries (Mazur and Lee, 1993). In addition, Trumbo (1996) claimed that in the media coverage scientists, politicians, and special interest groups showed different tendency of quoting sources with the former often referring to the causes and problems and the late more likely quoted judgments on or prescriptions of global warming. Consistent with Cottle (2000), all these study documented that there were far more inaccuracies and mistakes when media deal with science reporting than other general news.

Finally, the examination of journalistic norms and bias of the coverage of environmental issue has offered another perspective. As Boykoff and Boykoff (2004) commented, the coverage of environment issues should be a mediation of the relationship between the society and people rather than simply a collection of news articles. However, journalistic norms of balanced reporting may lead to biased consequences. For instance, the US press tend to give equal treatment to climate change 'defenders' and climate change "sceptics" in the debate of anthropogenic contributions to global warming. As well as Boykoff (2007b), he claimed that because of framing, the media coverage of climate change depicted great confusion and intense conflict rather than scientific consensus. This is why Smith (2005) suggests that there is a need of accessibility in climate change science and policy communicates in the British broadcast media.

1.3 Cross-national study of climate change

In the literature, studies on developed countries far outnumbered those focused on developing countries. There are researches in the Unite States (Antilla, 2005; Boykoff and Boykoff, 2004, 2007; Boykoff,2008), the UK (Carvalho, 2007; Carvalho and Burgess, 2005; Hulme, 2009), France (Brossard et al., 2004), Japan (Sampeiand Aoyagi-Usui, 2009), Germany (Weingart et al., 2000) and others countries. However, few studies of developing countries were offered in the same period. For instance, only Takahashi (2010) conducted a study of mass media coverage of climate change in Peru. He suggested that the media fulfilled an important role in shaping public opinion about climate change in developing countries. Unfortunately, as the main player in the climate change, there is almost no literature on Chinese media's performance.

Some researchers have paid attention to cross-national study. For instance, a study analyzed the newspaper coverage of anthropogenic climate change in the US and the UK from 2003 to 2006, and suggested that there is a decrease in 'balance as bias' compared to the 1988 -2002 period in the US. This phenomenon is not happening in its counterpart –Britain (Boykoff, 2007a). Base on a comparative study of climate change coverage in Le Monde and The New York Times, Brossard et al. (2004) concluded that the American newspapers tend to present a more unrestricted range of viewpoints on climate change than the French newspapers. De Vreese et al. (2001) compared the framing practice of television news in the coverage of the launch of the euro in four European countries and found that economic consequences and conflict frame were most emphasized. Dirikx and Gelders (2010) then compared different news approaches between the US and the EU, and later in 2010, they conducted a comparative framing analysis within the EU between the Dutch and French. In the study of news frames in disaster news coverage by Chinese and American news agencies, Along with Beaudoin (2007), Luther and Zhou (2005) found that Chinese journalism tend to incorporate western-style news values and norm. It is a fact that there is no resourceful studies comparing China and other countries' media coverage, and there is almost no research on the topic of global warming.

Overall, communication research has focused almost all aspects of the framing of climate change. The role of mass media in communicating climate science is complicated: in some cases policy actors and the public may be blocked or confused by the media's inaccurate information while in other cases it plays a mixed or more positive role in climate change communication, mitigation and adaptation. Yet, the most lacking of all is studies of Chinese media and cross-national study between developing countries and developed countries.

2. Research questions and hypotheses

The UK can be viewed as a typical capitalist world, while China is the fastest-growing developing country with a past of Marxist materialistic determinism. These two countries have different journalistic traditions which some researchers reckon as contradicting each other (Beaudoin, 2007). The British news environment is similar to that of the US and can be attributed to the libertarian conceptualization of the role of the press (Siebert et al., 1956). In Britain, the press is regarded as a source of information, education, and a watchdog that keep those in power

on their toe. The pursuit of Libertarian ideals and freedoms are at the heart of the press in the UK and the government's influence on the mass media is negligible. Köcher (1986) had labeled the British journalists as "bloodhounds." Nevertheless, it has also been concluded that each British newspaper represents distinct ideological standpoint (Johnson et al., 2010). For instance, because the Guardian's central ideology is democracy and morality, thus they fostered a sense of worldwide connectedness and global responsibility in reporting the risks of climate change (Carvalho, 2007)

On the other hand, under the ideology of Marx, the Chinese press is alleged owned by the people and serves the purpose of contributing to the success and preservation of the Communist system and the Communist Party, and the mass media are supposed to maintain the stability and strong development of the Chinese economy (Liebman, 2005). It is worth noticing that after the economic reforms there are some improvements in the press freedom in China. News media no longer function solely as the institution that dishes out "propaganda designed to manipulate or indoctrinate the Chinese public mind" (Zhao, 2000, cited in Luther and Zhou, 2005). However, Freedom House (2004) still deemed Chinese press 'not free' in a ranking of press freedom among 172 nations. The same conclusion was also reported by Yin and Payne (2004) who contended that the Chinese government still places widespread restrictions in the form of editorial oversight and structural control over the news media.

Therefore, the Guardian and China Daily are chosen as the all-right scenario for comparing the news coverage in current study. With the above arguments, our research question is: what are the similarities and dissimilarities of media coverage on the topic of climate change between developing nations and developed states in terms of the five framers: responsibility, human interest, conflict, morality, consequences. Hypotheses are posted as follow:

H1: Both British and Chinese news reports adopted the responsibility and human interest frames more than (economic) consequences frame and the conflict and morality frames.

H2: The Chinese articles reflected the responsibility and conflict frames more than British articles.

H3: The conflict frame will be used more often in the latter half of Copenhagen conference than the early.

H4: The morality frame is least likely to appear.

H5: The British and China articles do not demonstrate significantly differences in their use of each of the five frames.

The first hypothesis was set up basis on the consideration that Chinese press tend to exercise the same sets of news frame in the media coverage because of their adoption of western values and practice. Second, most newspapers in China were considered the mouthpiece of the Communist Party and under the strict censorship control. Balfour (2003) even views the Xinhua News Agency as a synonymous as 'official propaganda'. Although China Daily is not as influential news outlets as Xinhua, it cannot be denied that comparing to most western international media; China Daily is still under strict control and supervises. Although Chinese newspaper may share the same material as do the British press, they may not put on their own spin. This review leads us to the hypothesis2.

However, the conflict will appear more frequently in the latter half of Copenhagen conference. Hypothesis 3 was based on the consideration that the negotiations were not going very smoothly. Key arguments were predominately focused on such areas as the degree of emission cuts, long-term finance and so on. Developed countries had been asked to reduce their emissions within a decade to very substantially less than their 1990 level and gave sufficient financial aid to the poor world. As the time pass by, lack of the commitment from industrialized world creates the atmosphere that both felt short of what some had hoped for. And the anticipation of a mere weak political statement may increase the conflict.

According to previous studies, we assume in hypothesis 4 that the morality frame may be used less often in this topic. Although the media system and operation method may greatly differ in the West and East, we presume that on our specific issue, the overall framing practices of British and Chinese newspapers will not significantly differ, which is the fifth and final hypothesis.

3 Methodology

3.1 Research Design

A deductive framing-analysis is adopted in this research. The primary data was collected from the Guardian – a quality British newspaper and the China Daily – a Chinese newspaper. China Daily was launched in 1981, and named as an authoritative provider of information including analysis, comment and entertainment for global readers within China. Nowadays, its total circulation accounts 900,000 around the world (China Daily, 2015). The Guardian had an average daily sale of 221,305 copies and with average issue readership of 963,000 in 2013

(Guardian, 2015). Among the British press, Carvalho (2007) quoted "the Guardian is the most leftist and only one that is not owned by a conglomerate"

3.2 Data Collection

Data from each newspaper was directly obtained from its official website. The Guardian stories were accessed www.guardian.co.uk/theguardian, while China Daily stories were selected from the news agency's online archive (www.chinadaily.com.cn). The articles during the period from 9th, December to 18th December 2009 were retrieved with the key words "climate change," "global warming" and "Copenhagen" (because there is a 7 hour time difference between China and Denmark, so the publication of Chinese newspaper was postponed to 19th December, 2009). Only news reports, columns, interviews were included with the exclusion of commentaries, opinions and letters. We finally yielded 59 articles from China Daily and 71 from the Guardian.

3.3 Data Analysis

This study resembles the cross-national studies by Dirikx & Gelders (2010); and the standard set of framing analysis indicators were developed by Semetko and Valkenburg (2000). Each item measures one of the five frame categories: conflict, human interest, economic consequences, morality or responsibility. The question associated with a particular frame can elicit a response with "don't agree", "largely agree" and "completely agree", representing and order of from 1.00 (frame absent) to 3.00 (frame present). Each article analysis primarily for key messages mentioned in the title, then the lead, the picture, and texts throughout the whole article. Previous studies (de Vreese et al., 2001; d'Haenens and de Lange, 2001; Kline et al., 2006) employed this method and successfully tested its reliability in reflecting underlying frames and their relationships. Following are measure questions to analysis content of collected articles.

Attribution of responsibility

❖ Does the story suggest that some level of government has the ability to alleviate the problem?
❖ Does the story suggest that some level of government is responsible for the issue/problem?
❖ Does the story suggest solution(s) to the problem/issue?
❖ Does the story suggest that an individual (or group of people in society) is responsible for the issue/problem?
❖ Does the story suggest that the problem requires urgent action?

Human-interest frame

❖ Does the story provide a human example or "human face" on the issue?
❖ Does the story employ adjectives or personal vignettes that generate feelings of outrage, empathy, caring, sympathy, or compassion?
❖ Does the story emphasize how individuals and groups are affected by the issue/problem?
❖ Does the story go into the private or personal lives of the actors?
❖ Does the story contain visual information that might generate feelings of outrage, empathy, caring, sympathy, or compassion?

Conflict frame

❖ Does the story reflect disagreement between parties/individuals/groups/countries?
❖ Does one party/individual/group/country reproach another?
❖ Does the story refer to two sides or to more than two sides of the problem or issue?
❖ Does the story refer to winners and losers?

Morality frame

❖ Does the story contain any moral message?
❖ Does the story make reference to morality, God, and other religious tenets?
❖ Does the story offer specific social prescriptions about how to behave?
❖ (Economic) consequences frame
❖ Is there a mention of (financial) losses or gains now or in the future?
❖ Is there a mention of the costs/degree of expense involved?
❖ Is there a reference to (economic) consequences of pursuing or not pursuing a course of action?

4 Results

There are five questions to measure responsibility frame, four for the human interest and conflict frame respectively; and three for the morality frame and consequences frame. All individual items composed each component was formed by averaging the unweight scores raking from 1.00 to 3.00.

Our results show that the morality frame was merely mentioned. Only three articles had mentioned moral-related

issue (one in the Guardian and two in the China Daily). The coding question "Does the story contain any moral message" became almost useless with just relating to two China Daily's reports whilst no article had associated in the Guardian. On the contrary, only one of Guardian's news stories "made reference to morality, God, and other religious tenets" and "offered specific social prescriptions about how to behave". This result was affirmatively confirmed the study from Semetko and Valkenbury (2000) as well as Dirikx and Gelders (2010). Given the low prevalence of morality frame, these three items were abandoned in the further analysis.

To make sure that our coding items reveals the underlying frames, calculate Cranach's alphas was chosen to measure the reliable correlation coefficients. Alpha values were 0.58 for the responsibility frame (5 items); 0.53 for the human-interest frame (5 items); 0.80 for the conflict frame (4 items) and 0.75 for the consequences frame (3 items). Some researchers regard alpha value of 0.80 as a sign of acceptable internal consistency, while we consider it should be at least 0.70. So we deleted one item of the responsibility frame and human-interest frame to text whether the scale value increased.

Since the question "Does the story suggest that an individual (or group of people in society) is responsible for the issue/problem?" remove from responsibility, "Does the story contain visual information that might generate feeling of outrage, empathy, caring, sympathy, or compassion?" take out from human interest frame; the alpha value increased to 0.64 and 0.58, respectively. Nevertheless, the results were unable to meet the demand of level 0.70, which means the group of question reflecting responsibility and human-interest frame have to amend or specify to some extent. Although the same method had been justified in Dirikx and Gelders (2010)'s research, the particularity of Copenhagen climate change summit maybe makes our results different. As a result, further study may have to fine-tune the questions and improve their accuracy.

The inter-correlation between those four frames also tested (Table 1). And the result showed: r = 0.195 (p<0.05; 2-tailed) between the responsibility frame and the human-interest frame; r = 0.242 (p<0.01; 2-tailed) between human interest and conflict frame; r = 0.383 (p<0.05; 2-tailed) between conflict and consequence frame; and r = 0.408 (p<0.05; 2-tailed) between responsibility frame and consequence frame.

Table 1 Inter-correlation between five frames

		responsibility	human interest	conflict	morality	consequences
responsibility	Pearson Correlatio	1	.195*	.215*	.077	.408*
	Sig. (2-tailed)	.	.026	.014	.381	.000
	N	130	130	130	130	130
human interest	Pearson Correlatio	.195*	1	.242*	.088	.256*
	Sig. (2-tailed)	.026	.	.006	.319	.003
	N	130	130	130	130	130
conflict	Pearson Correlatio	.215*	.242*	1	−.043	.383*
	Sig. (2-tailed)	.014	.006	.	.626	.000
	N	130	130	130	130	130
morality	Pearson Correlatio	.077	.088	−.043	1	.052
	Sig. (2-tailed)	.381	.319	.626	.	.561
	N	130	130	130	130	130
consequences	Pearson Correlatio	.408*	.256*	.383*	.052	1
	Sig. (2-tailed)	.000	.003	.000	.561	.
	N	130	130	130	130	130

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

H1 assumed that both British and Chinese news reports would reflect the responsibility and human interest frames more than they would did the (economic) consequences frame, conflict and morality frames. However, H1 was not affirmatively confirmed in our statistics and there were distinct representation between the British and Chinese newspaper. Firstly, the top two frames reflected in the China Daily were responsibility and human-interest frame that confirmed the hypothesis. Nevertheless, although the human interest frame stood as the second most used item in the Guardian, which used more often than other frames; the consequences frame as the favorite frame notably used instead of responsibility in our assumption. Meanwhile, the consequences frame employed by China Daily lies in between with used less often than the responsibility and human-interest frame but more often than the conflict frame.

According to H2, The Chinese articles would use the responsibility and conflict frames more than British articles. This is due to the British press' libertarian tradition that differed from China's censored press system. With slight higher record (Table 2), it supported that responsibility frame was used more often in the Chinese articles than the British reports. Somewhat surprisingly, the information in the table demonstrated the reversed situation in the usage of conflict frame: the Guardian used it clearly more than China Daily.

Table 2 Average appearance of the frames in the UK and China newspapers

	Responsibility frame	Human-interest frame	Conflict frame	Consequences frame
Guardian	2.06	2.17	2.00	2.33
China Daily	2.08	2.02	1.83	1.98

Scale from 1.00 (frame absent) to 3.00 (frame present)

H3 posited that the conflict would be used more often throughout the Copenhagen climate change summit. The average use of the conflict frame seems to have fluctuated in the British newspaper while appeared being used more often in the China Daily since December 12th and thereafter (Table 3). A slight increase in its use in the China Daily had confirmed that the conflict frame tend to use more often in the late of summit than the early.

Table 2 Average appearance of the conflict frame in the British and Chinese newspapers during the summit

December	7	8	9	10	11	12	13	14	15	16	17	18	19
Guardian	2	2.09	2	1.5	1.5	1.62	2.5	2.38	2	1.71	2.67	1.96	2.46
China Daily	1.67	1.13	1.67	1.79	1.61	2.5	1	1.71	1.85	2.45	2.1	1.84	2.12

Scale from 1.00 (frame absent) to 3.00 (frame present)

H4 stated that the morality frame would least likely to appear, which is the only hypothesis being empirically supported, as above mentioned. This result also confirmed by other researchers (d'Haenens and de Lange, 2001; Dirikx and Gelders, 2010).

H5 suggested the British and China articles would not demonstrate significantly differences in their use of each of the five frames. Considering the morality frame's position had already confirmed in the first place, so the frames we tested were the rest responsibility, human interest, conflict and consequence frame. According to the result yielded by Independent samples t-tests, the use of those four frames between the British and Chinese press did not significantly deviate except consequence frame. T-test showed that the use of responsibility frame $t(128) = 0.220$, $p > 0.05$, human-interest frame $t(128) = -1.620$, $p > 0.05$, and the use of the conflict frame $t(128) = -1.367$, $p > 0.05$ met the consistent anticipation. Whilst the consequence frame was $t(128) = -2.679$, $p < 0.05$ which indicated remarkable difference in the use of consequence frame between the Guardian and China Daily when they report Copenhagen climate change summit.

Table 3 Mean and SE in the China Daily

	Responsibility frame	Human-interest frame	Conflict frame	Consequences frame
Mean	2.081	2.024	1.831	1.983
Std. Error Mean	0.08	0.07	0.09	0.09

In the Chinese newspaper (Table 4), the most used frame was responsibility (M=2.081, SE=0.08), followed by the slight lower representation of human-interest frame (M=2.024, SE=0.07). Consequence frame (M=1.983, SE=0.09) stood in the between with the conflict frame (M=1.831, SE=0.09) recorded as the least used frame, which challenges our original assumption. The main distinction in use of these five frames between the British and Chinese newspaper was the consequence frame. In the UK (Table 5), consequence frame (M=2.333, SE=0.09) recorded as the most prevalent frame followed by human interest (M=2.169, SE=0.06) and responsibility frame (M=2.059, SE=0.06), respectively. Although the Guardian reflected conflict frame (M=1.996, SE=0.08) more often than China Daily, it also registered as the least used frame in the UK's

newspaper. Comparing to other three frames, the presence of conflict frame was relatively lower in both British and Chinese newspaper.

Table 4 Mean and SE in the Guardian

	Responsibility frame	Human-interest frame	Conflict frame	Consequences frame
Mean	2.059	2.169	1.996	2.333
Std. Error Mean	0.06	0.06	0.08	0.09

5 **Discussion**

The five frames we refer to are conflict, human interest, morality, responsibility and economic consequences. With regard to the appearance of these frames, the examined newspapers insufficiently supported morality frame. It is not surprising that the morality frame was not recognized as a consistent frame in present study. This is arguably because climate change is a scientific topic that bears little no relations to moral or religious tenets. Moreover, the Copenhagen climate change summit was aimed to come up with solutions to the problem of climate change problem at an international level, so it barely comprised moral message and specific social prescriptions.

It had been confirmed that the media tend to be more focuses on the responsibility for and consequences of climate change during the period of increased newspaper attention (McComas and Shanahan, 1999). Our findings are in accordance with this earlier research conclusion; nevertheless, in our study the *Guardian* used the consequences most often yet the responsibility frame was recorded as the most used frame in the *China Daily*. This result contradicts the Luther and Zhou (2005)'s finding in which developed nation's media (the USA) adopted the responsibility frames more often than the Chinese media. And in their analysis of SARS news report, the story prevalence of the economic consequences frame did not differ between the two journalistic systems. The reason may be the disparity in subjects. Beaudoin (2007) suggest that different news environments make sense to their various performances of news frames in media coverage. Moreover, although political and cultural power does influence news outlets, responsibility frame present generally in current study in terms of common human interest. Szerszynski and Toogood (2000) found that in order to address the global greenhouse effect, *the Guardian* even endorse "global citizenship" to foster the experience of globality. Such media discourse may be an appropriate way to promote citizens' environment-conscious and encourage their commitment to act.

On the other hand, both rich word and poor nations want to make a contribution and have their own voice heard in the Copenhagen Conference, so they invariably emphasized the responsibility for ecological problem and focused on possible solutions at the summit. Therefore, it is reasonable that responsibility frame appeared in a way that news stories suggests that government is responsible for the issue and called for urgent action (responsibility).

Additionally, economics consequence would be expected to be both prevalent in the *Guardian* and the *China Daily*. Studies showed that many articles reflected consequence frame mentioning possible losses or gains and making reference to the result of (non-) pursuing a course of action (consequence). However, the average un weighted scores in the item of 'whether refer to financial losses' scale as high as 2.51 reflected in *the Guardian* yet only 2.2 in the *China Daily*. That the world prevalence of this frame was higher in the *Guardian* may relate to the unique position of developed countries in the Copenhagen Conference. For decades, the only aid from developed world to developing nations for global warming was associated with mitigation of emissions. Nonetheless, now the debate is much more about the availability of funding and other aid mechanisms to the adaptation of climate change in poor countries (Roberts et al., 2008).In the Copenhagen summit, rich countries are under pressure to pledge long-term financial aid to help developing nations adapt to changing environment, which seems to be against their national interest. There was, after all, great concern about the impact of the treaty on those industrial countries' financial capability.

Contrary to the previous study, our result found that the use of human-interest frame was found moderate in both developing and developed countries' newspaper. Dirikx and Gelders (2010) has found that climate change news stories were hardly associated the information that reveals personal lives or emphasizes the individuals affected by the problem. Their result showed that environmental issues are always discussed on such a broader lever that it limits the use of the human-interest frame. However, in current study, the human-interest frame was highly

presented as recording the second most used frame. Both newspapers laid great stress on human-interest frame may due to that there is a great hope that the Copenhagen summit can reach the aim globally. Tracing back to the questions that forms human interest, one thing is worth to notice: many news articles employed adjective or personal vignettes that generate feelings of outrage, empathy, caring, sympathy or compassion. This outcome echoes MacKuen and Coombs (1981)'s conclusion that the public tends to respond to strong emotional feeling when stories reflect high degree of conflicts. In the context of Copenhagen summit, it is the time that people realized the global warming threat becomes looms larger.

The conflict was expected to be a frequently used frame in the case of Copenhagen climate change conference. At the time, the collective human interest was concern in the first place, which join the world's effort to limit global temperature rises to 2C. However, different kinds of conflicts were visible among countries, interest groups and non-governmental organizations. Among all kinds of contradiction, the disagreements between developing countries and developed seems to be the main problem. At the summit, the negotiators between developed world and developing countries failed to reach agreement in key areas, leaving more and more representatives in the conference and people around the world feel unsatisfied. Nevertheless, despite the debates and conflicts at the Copenhagen climate change Conference, the conflict frame was recorded as the least used frame in our case, having appeared only in a relative small number of news stories. These results are parallel to other subjects' framing analysis and confirmed Dirikx and Gelders (2010)'s finding that the frame of conflicts seems use less often in the climate change reporting. However, the conflict here is not the struggle between climate change 'believers' and 'sceptics' in previous studies. Only few articles in the *Guardian* were gave voice to climate change skeptics whilst none of news stories did in its counterpart – *China Daily*.

If we look more closely, however, the *Guardian* reflected the more conflict frame than did *China Daily,* which is quite unexpected. Possible explanations may be found in factors internal to journalism such as journalistic norms of balanced reporting and professional routines and values.Western journalistic tradition holds that news report should be as objective as possible, so they always try to give the equal opportunities to both sides during conflict. As Entman (1989) stated, "balance aims for neutrality. It requires that reporters present the views of legitimate spokespersons of the conflicting sides in any significant dispute, and provide both sides with roughly equal attention." The cross-national pattern of framing climate change in terms of conflict is in line with previous research on news values from other countries that pointed out the significance of conflict in journalistic reporting (Price and Tewksbury, 1997). Boykoff and Boykoff (2004) had asserted that the imbalanced reporting not only fail to translate accurate information but undermined the concerted international action to curb global warming.This journalistic practice still more visible in the British press than Chinese newspaper. Actually, European countries also were more likely to highlight conflict in framing general economic and political news in television (de Vreese et al., 2001). On the other hand, since the Communist Party is the ruling power in China, in regards to Copenhagen Summit, it appears that party leaders are more likely to call on developed nations to take on more responsibility. According to Bennett (1996)'s three normative orders, the political norms seems the chief factor in deciding the China Daily's tendency in the frame of conflict.

6 Conclusion.

Overall, this study examined characteristics and journalistic practices involved in the media coverage of climate change in the British and Chinese national press. Analysis indicated similarities and dissimilarities in the use of news frames that were then interpreted in terms of the political implication and news environment. The result revealed that there were no noteworthy differences in terms of the use of the responsibility, conflict and consequence frame between British and Chinese quality newspapers. Despite some consistencies, there are nevertheless interesting differences in journalistic tradition that manifested itself as far as the consequences frame is concerned. Even though media may have partisan bias and ideological standpoint, in the subject of climate change, there is no significant difference in the media coverage between developing world and rich countries. Although it has long been recognized that media in the China has strong political-orientation and authority-focused character, it displayed similar frame structures to the British newspaper towards the global environmental issues.

At the end, there are some limitations should be noted. Firstly, the determinative coding system may result in the possibility that crucial news frames may – or may not discovered in our research. Moreover, we only analyzed general media depictions and did not include visual images. Given the fact that the 2009 United Nations Climate Change Conference lasts for only 12 days and our sample focused only on newspaper news, so the results may be too small to provide authoritative outcomes. If more newspapers or other types of media can be covered in the

research, it may make the research result more reliable and replicable. Future research should go on to make cross-national comparisons between developing and developed countries and study their news frame. Beside of deductive approach, an inductive approach to coding might be useful to identify other themes and frames that could examine the related frame-building processes. In terms of media, researchers could extend the study to other media such as television or website. Furthermore, experimental research could be conducted to reveal how people may respond to media report of climate change. Finally, researchers should conduct longitudinal studies to compare changes and trends on the topic of climate issue. Nonetheless, the most important thing may be as Boykoff (2007a) emphasized, is a need of more realistic evolution on media's influence and policy interactions rather than increasing media coverage of anthropogenic climate change.

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