

2009

Inter-media agenda-setting effects among Chinese newspapers, Chinese blogs and the New York Times during coverage of the Beijing 2008 Olympic Games

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**Inter-media agenda-setting effects among Chinese newspapers, Chinese blogs and
the New York Times during coverage of the Beijing 2008 Olympic Games**

by

Xiaomin Qian

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
MASTER OF SCIENCE

Major: Journalism and Mass Communication

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2009

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ABSTRACT

The unique characteristics of blogs make them a new important media outlet. As the population of Internet users grows rapidly, blogging has become one of the most popular online activities in China. To examine whether blogs have an inter-media agenda-setting function similar to the traditional media, this study applies content analysis, cross-lagged correlation analysis, and Rozelle-Campbell baseline analysis to explore the causal relationship among Chinese newspapers—the *Southern Metropolis*, the *Beijing News*, the *Modern Express*—Chinese blogs, and the *New York Times* on issues related to the 2008 Beijing Olympics both for a short term (1 week) and a long term (1 month) time lag. The results indicate that Chinese newspapers set the issue agenda for Chinese blogs for both time lags; the *New York Times* set the agenda for Chinese newspapers for both time lags, but it had no influence on Chinese blogs for the short term time lag, and the results are mixed for the long term time lag. So far, there is no agreement on the optimum time lag for inter-media agenda-setting research of the Internet. Besides examining blogs' agenda-setting effects, this study also provides useful tests about the optimum time lag for blogs and two types of newspapers, regionally and internationally.

CHAPTER 1

INTRODUCTION AND STATEMENT OF THE PROBLEM

Developed for more than three decades, agenda-setting research has expanded from testing basic hypotheses about the influence of the news agenda on the public agenda to investigating who sets the media's agenda. Although the number of potential sources shaping the media's agenda is large, one important factor is known as "inter-media agenda-setting." It is commonly defined as the influence that the news agendas of different news organizations have on each other (Roberts & McCombs, 1994, p. 250). A medium, because of its elite leadership status and the pervasive norms of professional journalism, may affect the agenda of other media (McCombs, 2005). Scholars have examined, for example, how newspapers, magazines, and television networks affect each other's agenda (Golan, 2006; Reese & Danielian, 1989), the influence of political advertisements on newspapers' agenda (Lopez-Escobar, Llamas, McCombs, & Lennonnet, 1998) and on the news agenda of television networks (Boyle, 2001). Several have explored the impact of cyberspace media on the agenda of traditional media (Delwiche, 2005; Lee, Lancendorfer, & Lee, 2005; Li, Xuan, & Kluver, 2003). However, few have looked at the agenda-setting dynamics between online blogs and the traditional print media. Does inter-media agenda-setting happen between blogs and newspapers? If so, what sets the agenda? This study attempts to answer these questions.

Most previous studies investigated the inter-media agenda-setting relationship in democratic countries where information flow is free. However, this study chose Chinese media in order to see whether inter-media agenda-setting happens in places where media freedom is not completely achieved and the government has power to control or at least partly control the media. In addition, China merits study because the population of Chinese Internet users is huge, as well as that of bloggers. According to the China Internet Network Information Center (CNNIC, 2008), China ranked second in number of Internet users after the United States, with an estimated 210 million people online in 2007. By the end of June 2008, the total number of Internet users on the Chinese mainland reached 253 million, which would rank it first in the world. The United States stays in the second place, where 220 million people use the Internet on a regular basis (Internet World Stats, 2008). The Internet penetration rate in China is 19.1%, slightly below the 21.1% average Internet penetration rate in the world. CNNIC's data also indicate that use of writing blogs is one of the main activities when Chinese Internet users are online. The present proportion of Internet users with personal blog space is 42.3%, and the number of Internet users who own blogs has surpassed 100 million, reaching 107 million. The number of Chinese Internet users who have updated their blogs within half a year surpassed 70 million, which accounts for 28% of all Chinese Internet users. This presents challenges for the Chinese government to control the online sphere, including how to control people's access to certain Web sites, how to control

people's online actions, and specifically how to control their blog contents. Thus far, blogs have had relatively more freedom than traditional print media in China.

Because of their ubiquity, it is possible that blogs have the potential to influence traditional media, like newspapers, magazines, radio, and television. This study investigates the relationship between blogs and newspapers within the theoretical framework of inter-media agenda-setting. Three regionally circulated but nationally influential Chinese newspapers—the *Southern Metropolis*, the *Beijing News*, and the *Modern Express*—are selected as study objects. Blogs analyzed in this study come from *sina.com*, one of the most popular Web sites in China.

Because of the Chinese government's censorship of the mass media, negative coverage of a big national event such as the Beijing 2008 Olympic Games is seldom seen in traditional Chinese newspapers. However, negative coverage might be expected to be found in internationally circulated newspapers such as the *New York Times*, as well as blogs. In order to examine the interplay among them, the *New York Times*, Chinese blogs and the three traditional Chinese newspapers will be studied. It is easy for Chinese journalists to access the online version of the newspaper, and most of them give higher credit to the *New York Times* compared with Chinese newspapers. Former studies (Gilbert, Eyal, McCombs, & Nicholas, 1980; Golan, 2006; Reese & Danielian, 1989; Roberts, Wanta, & Dzwo, 2002) showed that the *New York Times* can set agenda for other newspapers, television networks, and electronic bulletin boards in the United States. This

study also attempts to find out whether a free speech newspaper like the *New York Times* can influence Chinese blogs.

Do blogs, as McCombs (2005) assumes, have an inter-media agenda-setting role? Do they lead or do they follow the newspaper agenda? This study tries to extend inter-media agenda-setting theory to the frontier of the Internet. Additionally, blogs are a part of the journalism landscape. The results of this study might help journalists understand the function of blogs in news collection and diffusion.

CHAPTER 2

LITERATURE REVIEW AND THEORETICAL FEAMEWORK

This chapter begins with a brief history and development of blogs in China, the media system in China, and news coverage of the Beijing 2008 Olympic Games. The theory underlying the research, inter-media agenda-setting, is then discussed. The last part of the chapter introduces this study's research questions.

Blog's History and Development

The modern blog's history can be traced back to the early days of military conflict in Iraq. Back then, United States soldiers stationed in the Middle East created online web pages to share their experiences and feelings with readers. These Web pages were similar to online diaries (Landphair, 2005). The oldest known blog prototype is the "What's New" Web site, which belongs to the University of Illinois' National Center for Supercomputing Applications (NCSA), created in June 1993. It was last updated in June 1996 (Fang, 2002). Justin Hall is generally recognized as the world's pioneer blog author whose blog was inaugurated in 1994, and grew to more than 4,800 pages. For Hall, nothing seemed to be too personal to write about. He shared almost everything about himself with readers (Harmanci, 2005).

In 1997, Jorn Barger first used the two words "Web" and "log" to describe Web pages that are frequently updated with a series of archived posts, typically in reverse

chronological order. In 1999, Peter Merholz combined the two words to coin the currently used term– blog (Fang, 2002). Thus, a “blogger” refers to a person who writes and owns blogs. “Blogging” is a verb that refers to blog writing.

Blogs have many functions. Bloggers can upload text, pictures, music, and video clips. They can also add Web links to their blogs. Many blogs allow readers to comment on the issues of the day. Most Web sites provide a free blogosphere.

Nowadays, blogs have been featured extensively in the popular media and have entered political campaigns, news organizations, businesses and classrooms. They provide a new place and new way to express opinions and sentiments. They blur the distinction between creators and consumers of media because bloggers can play the role of journalists, pundits, critics, and self-promoters as they wish (Landphair, 2005).

Blogs first appeared in China in 2002 when Xingdong Fang set up *blogchina.com*. As of February 2009 there were 118,313 bloggers and 4,985,932 blog articles on this site (www.blogchina.com). In 2006, four delegates of the National People’s Congress and twelve delegates of the Chinese People’s Political Consultative Conference started their political blogs to introduce the issues discussed at the session. About 100,000 people read the blogs every day during the session time (Liu, 2007). These might be the earliest political blogs written by government officers in China. Nowadays, almost all news sites provide free or commercial blogosphere to Internet users. Jinglei Xu, a movie star, owns perhaps the most prominent blog in the country that registered close to 227 million hits

by February 2009 (www.sina.com.cn). Chinese bloggers, however, come from all walks of life.

As a new information technology, blogs have demonstrated the capability of sharing information and encouraging self-expression of common people. However, there is no agreement on whether blogs belong to mass media or not. McQuail (2000) defined the term “mass media” to “describe means of communication that operate on a large scale, reaching and involving virtually everyone in a society to a greater or lesser degree” (p. 4). Bloggers share their posts online, but not everyone can get thousands of hits. Usually, blogs of public figures draw much more attention than those of unknown names. Blood (2003) concluded that the four blog types most frequently cited are those written by journalists; those written by professionals about their industry; those written by individuals at the scene of a major event; and those that link primarily to news about current events. Wallsten (2007) noticed that blogs not only record an audience’s feedback but also become a news source for mainstream media. He found that besides popular blogs, less popular blogs can exert influence on the mainstream media agenda too. Here, we consider a blog as a combination of mass media and an audience’s feedback.

Media System and Press Freedom in China

According to Siebert, Peterson, and Schramm (1956), media systems in the world can be categorized into four models—authoritarian, libertarian, communist and social

responsibility systems. Each model describes certain countries' mass media and government relationships, media ownership, and media's role in the society.

Based on the conception, the Chinese media fall somewhere between the authoritarian and communist model. Government control of media is one of the major characteristics of China's political system. The news media are tightly controlled by the Central Propaganda Department of the Chinese Communist Party. Compared with democratic countries where news media are relatively independent of government control, the Chinese government owns all news agencies and has monopoly power over the press through administrative sanctions and policies. The central idea that underlies the government control is "the Party principle." The media should accept the Party's leadership, abide by the Party's organizational rules, and propagate its policies, ideologies, and directives (Zhao, 1998). Criticism of party leaders, sensitive issues related to the minorities living in Tibet and Xinjiang, religious freedom, human rights, and other politically controversial news are routinely taboo topics. Journalists who violate the regulations are warned, removed, or even put into jail in the name of harming social stability, endangering national security, or inciting separation of ethnic groups. As the Internet becomes an important information outlet, the government applied filtering, blocking, and surveillance systems into online information. Several state-run Web sites require Internet users to provide their real names when posting or blogging. Foreign IT companies also cooperated with the Chinese government on censorship. Search engines

like Google and Yahoo automatically filter search results and restrict access to sensitive issues (Freedom House, 2008). However, the Chinese government's control of the media is not constant. It changes with replacement of the Party leaders and changing of the state of affairs. Under current president Hu Jintao, government control of the media has become tighter than in the time of former president Jiang Zemin. Because of preparation for the 17th Party Congress, press freedom was further restricted in November 2007. A new emergency response law came into effect that when a medium reports "false information" on natural disasters, accidents, or government responses to them without obtaining prior authorization, its license can be revoked (Freedom House, 2008). Before the Beijing 2008 Olympic Games were held, Chinese media also received instructions from the Central Propaganda Department emphasizing the need to positively report daily news.

Despite strict adherence to Party principles, the Chinese media have undergone subtle and significant changes over the past 30 years. The media system has been gradually transformed from a pure mouthpiece to an "amalgamation of various identities" (Chang, 1989). The majority state-owned media are no longer receiving state subsidies and rely on advertising revenues now. The new media reform policy allows commercialization of outlets without privatization of ownership. Chinese media are in the transition stage from ideology-driven to market-driven. A small number of elite journalists and media outlets like the *Southern Metropolis* are known to push the limits of

permissible coverage, particularly in cases of local government corruption and malfeasance. As a result of scientific and technological progress, the Chinese government's ability to suppress information flow has become smaller and weaker. People who know foreign languages are able to browse accessible foreign Web sites (including www.cnn.com, www.Chinese.wsj.com, www.nytimes.com) to have alternative news coverage and perspective besides official media in China. In urban areas, the number of proxy server users to circumvent Internet restrictions and receive illegal satellite signals is growing. Still, Freedom House's global press freedom ranking rates China as "not free" (Freedom House, 2008).

Media Coverage of the Beijing 2008 Olympic Games

Inter-media Agenda-setting theory deals with the transfer of issue salience from one medium to another. Agenda-setting studies analyze either one issue or a list of issues that appear in the media to determine whether these same issues are perceived by the public as the top issues facing a nation at some point in time (Boyle, 2001; Ku, Kaid, & Pfau, 2003; Li et al., 2003; Lee et al., 2005; Lopez-Escobar et al., 1998; Meraz, 2007; Sweetser, Golan, & Wanta, 2008). Because even individual topics are often multi-faceted and offer several dimensions, they can be divided into a number of perspectives to attract and sustain prolonged public attention. The Beijing 2008 Olympic Games is an example.

On July 13, 2001, at the 112th International Olympic Committee (IOC) Session in

Moscow, Beijing was elected to host the 29th Olympiad in 2008 (www.olympic.org), the first time a Chinese city was chosen to do so. It is not surprising, therefore, that the topic has dominated the Chinese media agenda. The distinction has been, and continues to be, the subject even of online blogs. Both media coverage and blog postings talk about the issue from many angles: environment protection, facility construction, security provision, traffic control, the Olympic torch relay, human rights protest, Olympic songs and arts, clothing design, opening and closing ceremony, services during the games, sports competition, anti-doping, Sichuan earthquake, press relationship, Olympic business, special exhibitions, changes to people's mind, controversies of competitions and among others.

Unlike news reports, the blog entries are more opinionated. Although some blogging sites are considered more credible than others, many have observed that bloggers' comments have generally found their way into mass media reports. If such is the case, to what extent does public opinion expressed in those blogs influence the issues and tone of newspaper coverage?

According to Roberts, Wanta, and Dzwo (2002), the agenda-setting function can vary dramatically depending on media type, certain contingent conditions among the receivers of that information, and the issues themselves. The impact of the large number of blogs now available, and their vast reach, is probably expanding in a country like China whose Internet penetration is exponentially growing and whose interest in the

Beijing Olympic Games can be described as fever-pitched. This study therefore asks:
Can blogs set the issue agenda about the Olympics for newspapers?

Inter-media Agenda-Setting Research

Since McCombs and Shaw (1972) formally laid out its axioms of agenda-setting research, three research directions have been explored— public agenda-setting, policy agenda-setting and media agenda-setting studies. Inter-media agenda-setting is a component of media agenda-setting studies. Media agenda-setting studies seek to investigate who sets the media agenda and how such an agenda is set. A variety of factors, including personality characteristics, news values, organizational norms, politics and external sources were found to affect decisions about what constitutes news (Gans, 1979; Whitney & Becker, 1982; Turk, 1986). Recent studies within this tradition have shown, for example, that (a) the *New York Times*, (b) the White House, (c) scientific journals, and (d) public opinion polling results play a particularly important role in putting an issue on the U.S. media agenda (Dearing & Rogers, 1996).

While media agenda-setting studies, in general, are concerned with media routines, including news diffusion, selection, and emphasis, inter-media agenda-setting studies examine the relationship among different media, and determine media influence on each other. This phenomenon has been recognized long before the concept of agenda-setting was developed. One of the seminal works on this area was done by White (1949), who

examined the news selection behavior of a Midwest wire news editor named Gates. The same editor was studied 17 years later by Snider (1967), who found a strong correlation of news categories between newspapers and a wire service. In a replication study, McCombs and Shaw (1976) supported White's findings. Breed (1955) investigated why the news content of the U.S. daily newspapers is similar. He found an arterial process which indicated that small newspapers sought guidance from wire services and large newspapers.

The early studies of the inter-media agenda-setting process focused on the relationships among traditional media like newspapers, television, and news agencies (Gilbert et al., 1980; Golan, 2006; McCombs & Shaw, 1976; Proress & McCombs, 1991; Reese & Danielian, 1989; Reese, Grant, & Danielian, 1994). Gilbert et al. (1980) first found the *New York Times* leads other newspapers' agenda across the United States. Reese and Danielian (1989) did further study. They looked at the coverage of cocaine use in five elite newspapers (*New York Times*, *Los Angeles Times*, *Washington Post*, *Wall Street Journal*, and *Christian Science Monitor*), two magazines (*Newsweek* and *Time* magazine), and three television networks (ABC, CBS, and NBC) over a two-year period (1985 and 1986). They found that major media coverage tended to be similar both in content and amount. The results also showed that the print media led the television networks; the *New York Times* played an initial agenda-setting role with respect to the other newspapers and the TV networks. Golan's (2006) study once again provided

evidence to support the *New York Times'* leading role. This newspaper was found to have significant inter-media agenda-setting influence on three American evening newscasts concerning international news coverage.

Scholars also explored the inter-media agenda-setting process in the political advertising area (Boyle, 2001; Lopez-Escobar et al., 1998; Roberts, Anderson, & McCombs, 1994; Sweetser et al., 2008). Roberts et al. (1994) provided one of the first empirical tests. They analyzed the 1990 Texas gubernatorial campaign and showed evidence for the inter-media agenda-setting effect of political advertising on the news agendas of the three local television stations and one local daily newspaper. Lopez-Escobar and colleagues (1998) used cross-lagged correlation analysis to examine the inter-media agenda-setting influence of political advertising on television and newspapers during the 1995 Spanish elections. They found that the newspaper agenda did influence the agenda of issues in television news; newspaper political advertising influenced both the television and newspaper news agendas in substantive attributes; TV news influenced the TV political advertising agenda in substantive attributes; and all of them had reciprocal relationships in affective agendas. Since then, the cross-lagged correlation analysis method has been widely used in inter-media agenda-setting research. By adopting cross-lagged correlation analysis method, Tedesco (2005) investigated the inter-candidate issue agendas during the 2004 Democratic

primary campaign and studied inter-candidate agenda-setting effects in each month of the campaign.

Recently, a few studies have extended inter-media agenda-setting research to cyberspace. Roberts, Wanta, and Dzwo (2002) examined online media coverage and Internet Bulletin Board discussion. They traced the influence of news media (The *New York Times*, the Associated Press, Reuters, *Time* magazine, and CNN) coverage for time lags ranging from one day to one week and found a correlation between online news and discussion topics of online political forums. Li, Xuan, and Kluver (2003) compared the news coverage of the *People's Daily* on the spy plane incident between the United States and China to the discussion on the *People's Daily's* online chat room – *Qiangguang* forum. They found that the online forum picked up news from foreign news agencies more quickly than the newspaper, and can set agenda for the *People's Daily*. Lee and colleagues (2005) chose two time periods to examine the influence of Internet bulletin boards on newspaper coverage of the 2000 general election in South Korea at both the first and the second levels of agenda-setting. The results indicated that newspapers and Internet bulletin boards had a reciprocal inter-media agenda-setting influence over each other's news agendas. Lim (2006) examined the causal relationships of issue agendas from three online news media in South Korea during two time periods using cross-lagged analysis. This study showed that the leading online newspaper influenced the issue agendas of both the secondary online newspaper and the online wire service. By

examining the role of campaign blogs and political advertising in shaping the media agenda, Sweetser, Golan, and Wanta (2008) found evidence of a reciprocal inter-media agenda-setting effect between blogs and television news. Their findings reinforced the Lopez-Escobar et al. (1998) results, which suggested inter-media agenda setting is not always unidirectional but may be multidirectional.

Time Lag

One important consideration in agenda-setting studies is the time lag. How long will an issue remain salient in people's minds? What is the time gap between the appearance of an issue on the media agenda and the appearance of that issue on the public agenda? Usually, the "optimum effect span" for examining agenda-setting effects is between 4 and 6 weeks in traditional agenda-setting research (Winter & Eyal, 1981). Stone and McCombs (1981) found that it takes 2 to 6 months for changes in the media agenda to be fully translated to the public agenda. The optimum time lag varies for different types of media. Shaw and McCombs (1977) argued that newspapers may have a more consistent effect across longer periods of time. By examining five news media's entire agenda of issues, Wanta and Hu (1994) reported that the optimal time lag for national network newscasts is 1 week, for local newscasts is 2 weeks, for regional newspapers is 3 weeks, for local newspapers is 4 weeks, and for national news magazines is 8 weeks. The optimal time lag for a combination of these five news media is 3 weeks. Roberts et al. (2002) concluded that "the time lag for traditional news media to affect online

discussions should be relatively short” (p. 455), because individuals discuss issues within just a few days of seeing coverage in the traditional news media. They also suggested that the optimal time lags for media influence on the Internet should vary “across issues and across media” (p. 458). Lee et al. (2005) did a preliminary analysis and found that the time lag for examining inter-media agenda-setting influence between newspapers and the Internet should be shorter compared to examining that between traditional media, because information between traditional media and the Internet is rapidly exchanged. He also suggested that the four time periods provide stronger evidence than two time periods when examining the inter-media relationship between newspapers and the Internet.

Besides the influence of media type, issues themselves have impact on the agenda-setting time lag. McCombs (1977) pointed out that “a few issues and topics move almost instantaneously from the press to the public agenda” (p. 92), while others take a long period. For the Beijing Olympics, some topics like the opening ceremony and sports competitions naturally draw more attention than topics such as special exhibitions and traffic control, because only people living in Beijing pay close attention to the city traffic.

This study investigates the inter-media agenda-setting function among three regional Chinese newspapers, Chinese blogs, and one international newspaper (the *New York Times*) on the topic of the Beijing Olympics. Based on the literature review, the optimal time lag for regional newspapers is 3 weeks, but when counting impact on blogs the time lag is short, usually 1 to 7 days. Here, we expect the time lag is 1 week for issue agendas

transfer between the Chinese newspapers and Chinese blogs. There is no research on international newspapers' optimal time lag. However, 4 to 6 weeks is the optimum time lag in traditional agenda-setting research. Considering the speed of information exchange is increasing nowadays, we expect 1 month (4 weeks) is the time lag for issue agendas transfer among the *New York Times*, Chinese newspapers, and Chinese blogs. Thus, both a short term and a long term gap were examined.

Research Questions

Based on the foregoing literature review, the present study investigates the following questions:

RQ1: What is the relationship among Chinese newspapers, Chinese blogs and the *New York Times* at 4 time periods?

RQ2a: Did Chinese blogs set the issue agenda about the Beijing 2008 Olympic Games for the Chinese newspapers after a 1 week gap and after a 1 month gap, or vice versa?

RQ2b: Did the *New York Times* set the issue agenda about the Beijing 2008 Olympic Games for Chinese blogs and Chinese newspapers after a 1 week gap and after a 1 month gap, or vice versa?

CHAPTER 3

METHODOLOGY

This study focuses on the relationships among Chinese newspapers, Chinese blogs and the *New York Times* for news coverage of the Beijing Olympics. Articles from the three Chinese newspapers and the *New York Times* were selected during four week long time periods. All articles from the newspapers relating to the Beijing Olympics were selected. For blogs, the same time periods were used, but only the top 10 blog articles were analyzed. Data were gathered using content analysis. Cross-lagged correlation was used to measure inter-media relationships.

Study Design

Sampling

In order to measure the traditional media agendas, three regional circulated newspapers— the *Southern Metropolis*, the *Beijing News*, and the *Modern Express*— were selected as representative of Chinese newspapers. The Guangzhou-based *Southern Metropolis* was founded in 1997 and belongs to the Nanfang Daily Group. It is issued in the Pearl River Delta Region with more than 100 pages published daily on average with a daily circulation of 1.58 million. It is Guangdong province's largest integrated daily newspaper. In 2006, the General Administration of Press and Publication of China issued a national evening newspaper competitiveness test result. The competitiveness of the

Southern Metropolis was ranked No. 1. Its advertising amount reached 1.4 billion RMB in 2006. The newspaper is famous for its report about the Sun Zhigang case which caused Chinese asylum system reform later (www.nddaily.com). The *Beijing News* is a mainstream daily newspaper based in Beijing with a daily print edition of 88 pages on average and a circulation of 576,000. It was co-founded by *Guangming Daily* and *Nanfang Daily* Group in 2003. It is China's first mainstream newspaper to adopt a shareholding system. Abiding by relevant policies, the newspaper has set up a company-oriented managing framework. Its publication advertising revenue amounted to 612 million RMB in 2006. It is considered as "the most pioneering medium" and "the most influential political newspaper" by Chinese readers (www.thebeijingnews.com). In July 2008, a picture of 1989 Tiananmen Square protests published in this newspaper shocked the whole nation. The *Modern Express* was founded in 1999. It belongs to Xinhua News Agency, which is the biggest state-owned news agency in China. The newspaper is based in Nanjing with a daily circulation of 1.46 million in the Yangtze River Delta Region. In 2007, the newspaper ranked 57th in the world's newspaper circulation list of the World Association of Newspapers. In 2006, advertising in the *Modern Express* ranked fourth among all Chinese newspapers (www.xinhuanet.com). This newspaper is famous for reporting corruption and other social problems. These three newspapers are all circulated in China's most economically developed areas and also can be accessed by Internet in other places of the nation. Their online visions are exactly the

same as their paper versions. Because of their uncommon perspectives, they are popular among Chinese readers and can be considered as Chinese pioneer media.

One global newspaper—the *New York Times* (in the United States) was selected as an outside China newspaper. Former studies (Gilbert et al., 1980; Golan, 2006; Reese & Danielian, 1989; Roberts et al., 2002) provide strong evidence that the *New York Times* has agenda-setting power on other newspapers, television networks, and electronic bulletin boards in the United States. Logically, we assume that the *New York Times* also may have influence on Chinese newspapers and blogs.

The unit of analysis for measuring the newspaper agenda is each news article related to the Beijing Olympics. News articles are defined here as reports that portray straight news or features, opinions and editorials. No pictures were included. The title and the first paragraph of each article were checked. If key words “Beijing Olympics” were found, the article was selected. Chinese newspaper articles were downloaded from each newspaper’s Web site. These Web sites provide PDF files of the newspapers. Articles in the *New York Times* were collected from Access World News.

Blog articles at www.sina.com were chosen in order to measure issue agendas of Chinese blogs. This Web site belongs to SINA Corporation, which is listed on the NASDAQ. There are more than 280 million registered users worldwide, and more than 900 million daily page views. In the “Internet Guide 2007 China Internet Survey” conducted by Internet Society of China, SINA was ranked No. 1 in users reached in the

fields of blog, sports, news and finance. Net revenue of SINA was \$246 million in 2007 (www.sina.com). Key words “Beijing Olympics” were searched by *sina.com*’s internal search engine. Then a blog article list ranked by hits came out. The blog article with most hits was listed first, with fewer hits listed in descending order. Each day’s top 10 blog articles with the most hits were downloaded to analyze. In all, 280 blog articles were selected. The unit of analysis for measuring the blog agenda is each blog article related to the Beijing Olympics.

Time Frame

One important consideration in testing the inter-media agenda-setting hypothesis is the time frame used in studies. Former studies provide empirical guidelines for choosing the time frame (Lee et al., 2005; Roberts & McCombs, 1994; Roberts et al., 2002; Stone & McCombs, 1981; Wanta & Hu, 1994; Winter & Eyal, 1981). In this study, four time periods were chosen (Time 1, Time 2, Time 3, and Time 4). Three cross-lagged correlation analyses can be performed: Time 1- Time 2, Time 2- Time 3, and Time 3- Time 4. Each time period contains 1 week, 7 days. Two time lags were tested. The short term time lag is 1 week, and the long term time lag is 1 month. The Beijing Olympics was held from August 8 to August 24, 2008. News coverage of the Olympics reached a peak right before August and in August. Time 1 was selected from May, Time 2 was selected from June, Time 3 was selected from July, and Time 4 was selected from August 2008. The starting date of the first time period was selected from a random number table.

There is a one-week gap between the last day of the first time period and the first day of the second time period, a one-month gap between the last day of the second time period and the first day of the third time period, and a one-month gap between the last day of the third time period and the first day of the fourth time period. The Time 1 period is May 20- May 26, the Time 2 period is June 1- June 7, the Time 3 period is July 11- July 17, and the Time 4 period is August 18- August 24.

Content Analysis

To investigate the research questions, the issue agendas for both newspapers and blogs during the Beijing Olympics were examined. A content analysis was conducted to determine the Olympics news agenda of newspapers and blogs. Each medium's issues were counted and compared with other media's issues.

“Content analysis is a summarizing, quantitative analysis of messages that relies on the scientific method (including attention to objectivity-intersubjectivity, a priori design, reliability, validity, generalizability, replicability, and hypothesis testing) and is not limited as to the types of variables that may be measured or the context in which the messages are created or presented” (Neuendorf, 2002, p. 10). Traditionally, this method is often applied to examine articles in newspapers and magazines. Online blogs are frequently updated, which causes some challenges for analyzing content in cyberspace. McMillan (2000) observes that applying this method to the analysis of online content may be like using a microscope to examine a moving target. As a solution, she

recommends “identifying the units to be sampled.” After examining 19 studies that applied content analysis techniques to studies conducted on the World Wide Web, she concluded that “the stable research technique of content analysis can be applied in the dynamic communication environment of the Web” (p. 91) , for example, online blogs.

The heart of any content analysis is the classification system used. To establish this study’s content categories, news articles and blogs of the first two time periods were looked at and the resulting coding method was adopted for the remaining two periods. This coding method “establishes categories after a preliminary examination of the data” (Wimmer & Dominick, 2006, p. 159). In total, 18 categories were constructed and coded: environment protection, facilities construction, security provision, traffic control, the Olympic torch relay, human rights protest, Olympic songs and arts, clothing design, opening and closing ceremony, services during the games, sports competition, anti-doping, earthquake, press relationship, Olympic business, special exhibitions, changes to Chinese people’s mind, and controversies of competitions. Several examples were used for each category to guide coding and enhance intercoder reliability (see Appendix). Among all 18 categories, 17 of them were constructed based on the examination of the first two periods, and 1 of them—controversies of competitions was added based on the last two periods. The new category was added after 10 articles were found alleging that Chinese gymnastic athletes were too young to participate in the games and doubting the justice of competition results. These articles were focused on

controversies instead of sports competitions. A new category needed to be added. Each collected article was coded into one category. Articles were coded according to their main themes if they had more than one theme.

Intercoder Reliability

A study is reliable only when repeated measurements on the same material get similar results. To test intercoder reliability, independent coders code the same material and measure agreement levels. A total of 20% of collected news articles and blog articles (337 news articles and 56 blog articles) were manually coded by two graduate students to test intercoder reliability. Those articles were randomly selected. Intercoder reliability was computed using Holsti's (1969) reliability formula, $CR=2M/(N1+N2)$, where M is the number of times the coders agree, and N1, N2 represent the total number of each coder's coding decisions.

Since independent variables like "source" and "time" were fixed, only the dependent variable "category" was tested. The intercoder reliability for this variable in this study is 86.3%. One reason for disagreement was that some articles had more than one theme, and selecting the central theme was difficult. For example, a blogger introduced his visit to the Bird's Nest and explained the energy saving strategies of that gym in the blog. It was hard to decide whether it could be coded into environment protection or facility construction when the blogger devoted equal attention to each theme. In another example, several wood houses with Chinese minority styles were

exhibited in the Olympic park to welcome visitors. This could be either coded into Olympic songs and arts or special exhibitions. According to Wimmer and Dominick (2006), intercoder reliability greater than 75% is desired, so 86.3% is acceptable in this study.

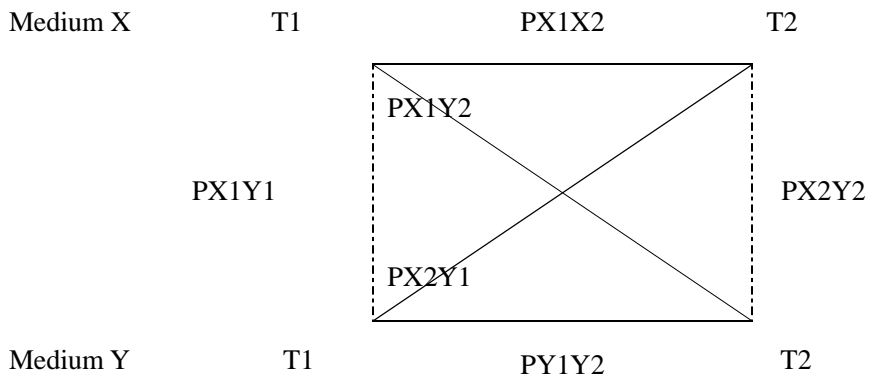
Statistical Analysis

This study chose cross-lagged correlations with the Rozelle-Campbell baseline as its statistical analysis model. Because issue frequencies were used rather than ranks, Pearson correlation was used to assess relationship significance for issue agendas across newspapers, blogs and time periods (Tedesco, 2005). The Rozelle-Campbell baseline is “the level of correlation to be expected on the basis of the autocorrelations and synchronous correlations alone” (Lopez-Escobar, et al., 1998, p. 322). These are reliable approaches to examine the causal relationship between two variables during two time periods (Lim, 2006; Lopez-Escobar, et al., 1998; Roberts & McCombs, 1994).

In order to explore the causal relationship between two different media X and Y at Time 1 and Time 2, this model requires three pairs of correlations to be calculated: the synchronous correlations PX_1Y_1 and PX_2Y_2 , the autocorrelations PX_1X_2 and PY_1Y_2 , and the cross-lagged correlations PX_1Y_2 and PX_2Y_1 . The formula for calculating the Rozelle-Campbell baseline is $[(PX_1Y_1+PX_2Y_2)/2]\{[(PX_1X_2)^2+ (PY_1Y_2)^2]/2\}^{1/2}$. The range of the baseline is from -1 to 1. The logic behind cross-lagged correlation analysis is

that if one variable is a possible cause of another, then two requirements need to be satisfied: first, the correlation between X (the cause) at Time 1 and Y (the effect) at Time 2 should be greater than the correlation between Y at Time 1 and Y at Time 2, and second, the correlation between X (the cause) at Time 1 and Y (the effect) at Time 2 should exceed the Rozelle-Campbell baseline (Tedesco, 2005). Thus, if $PX1Y2 > PY1Y2$ and $PX1Y2 > RCB$, we conclude that X has influence on Y (see Figure 1).

Figure 1. Statistical analysis model



CHAPTER 4

RESULTS AND DISCUSSION

Results of Content Analysis

The *Southern Metropolis* Agenda

A total of 445 news articles were identified and analyzed in the *Southern Metropolis*. The number of news articles increased across each time period and reached a peak at Time 4. As Table 1 reveals, sports competition (314 news articles out of 445 or 70.6% of total articles) had the most issue salience in each time period. Its proportion almost doubled from Time 1 (40%), Time 2 (47.2%), and Time 3 (36.1%) to Time 4 (86.9%). Its frequency was also far beyond other issues at Time 2, Time 3, and Time 4. At Time 1, special exhibitions got the same coverage as sports competition (40%), the Olympic torch relay got 20%, and other issues had no coverage at all. At Time 2, the Olympic torch relay was the second most salient issue. In Time 3, Olympic business was the second most salient issue. At Time 4, anti-doping was the second most salient issue. Generally, sports competition (314 out of 445, 70.6%), Olympic business (22 out of 445, 4.9%), and security provision (17 out of 445, 3.8%) received most coverage, while press relationship (1 out of 445, 0.2%) and controversies of competitions (1 out of 445, 0.2%) received almost no coverage.

The *Beijing News* Agenda

There were 872 news articles related to the Olympics in the *Beijing News*. As Table 2 reveals, sports competition (13 out of 45 or 28.9% at Time 2, 61 out of 215 or 28.4% at Time 3, 398 out of 563 or 70.7% at Time 4) was the most frequent issue except at Time 1. The Olympic torch relay (10 out of 49, 20.4%) was the most frequent issue at Time 1. However, the percentage for the Olympic torch relay declined over time, while the coverage of sports competition increased over time and reached a peak at Time 4. The second most salient issue by time period was sports competition (9 out of 49, 18.4%) at Time 1, the Olympic torch relay (12 out of 45, 26.7%) at Time 2, security provision (32 out of 215, 14.9%) at Time 3, and services during the games (61 out of 563, 10.8%) at Time 4. Generally, sports competition (481 out of 872, 55.2%), services during the games (105 out of 872, 12%), Olympic business (44 out of 872, 5%), and security provision (44 out of 872, 5%) were the top four most salient issues, while clothing design (4 out of 872, 0.5%) was the least covered issue in the *Beijing News*.

The *Modern Express* Agenda

As Table 3 shows, the *Modern Express* had 305 news articles related to the Olympics. The Olympic torch relay (25 out of 35, 71.4%) was the most frequent issue at Time 1, followed by earthquake (3 out of 35, 8.6%). Sports competition was the most salient issue at Time 2 (5 out of 10, 50%), Time 3 (19 out of 33, 57.6%), and Time 4 (179 out of 227, 78.9%). Its frequency increased across each time period. The second most salient issues were the Olympic torch relay and earthquake (both are 2 out of 10, 20%) at

Time 2, security provision and Olympic business (both are 3 out of 33, 9.1%) at Time 3, and services during the games (14 out of 227, 6.2%) at Time 4. Generally, sports competition (205 out of 305, 67.2%), the Olympic torch relay (27 out of 305, 8.9%), and services during the games (16 out of 305, 5.2%) were the top three issues receiving the most coverage, while clothing design (1 out of 305, 0.3%) and press relationship (1 out of 305, 0.3%) received the least coverage in the *Modern Express*.

Chinese Blogs Agenda

There were 280 blog articles selected and analyzed. As Table 4 reveals, the Olympic torch relay was the most frequent issue in blogs at Time 1 (20 out of 70, 28.6%), Time 2 (31 out of 70, 44.3%), and Time 3 (19 out of 70, 27.1%). Sports competition (50 out of 70, 71.4%) was the most frequent issue at Time 4. Overall, the Olympic torch relay (70 out of 280, 25%) was the most frequent issue, followed by sports competition (67 out of 280, 23.9%) and services during the games (30 out of 280, 10.7%). Anti-doping and controversies of competitions were not mentioned in Chinese blogs.

The New York Times Agenda

As Table 5 reveals, the *New York Times* had 63 news articles on the Olympics. From Time 1 to Time 4, sports competition (5 out of 9, 55.6%; 2 out of 3, 66.7%; 11 out of 16, 68.8%; 18 out of 35, 51.4%) received more coverage than other issues. Overall, sports competition (36 out of 63, 57.1%) was the most salient issue, followed by Olympic business (8 out of 63, 12.7%) and human rights protest (5 out of 63, 7.9%). Traffic

control, the Olympic torch relay, Olympic songs and arts, clothing design, press relationship, special exhibitions, and changes to Chinese people's mind received no coverage in the *New York Times*.

The Pearson correlation matrix in Table 6 shows within-newspaper and between-newspaper issue agenda correlations between different time periods. For example, analysis of the *Southern Metropolis*' correlations between Time 1 and Time 2 ($r = .743, p < .01$), between Time 2 and Time 3 ($r = .865, p < .01$), between Time 3 and Time 4 ($r = .878, p < .01$), between Time 2 and Time 4 ($r = .960, p < .01$) showed significant and high correlations between issue agendas.¹ The correlations between Time 1 and Time 3 ($r = .515, p < .05$), between Time 1 and Time 4 ($r = .635, p < .01$) represented significant and moderate correlations. We can say the *Southern Metropolis* maintained consistent issue agendas throughout all four time periods. The *Beijing News* was not consistent between Time 1 and Time 3. Its other correlations between time periods were significant. Issue agendas of the *Modern Express* at Time 1 were not consistent with other three time periods, and two of them were negatively correlated, but the correlations among Time 2, Time 3, and Time 4 were relatively high. Most correlations between newspapers were significant. For example, the most correlations between the *Southern Metropolis* and the *Beijing News* at different time points were significant except for two correlations which

¹ Williams' (1986) Reasoning With Statistics defines correlation strength: < .20 slight, almost negligible relationship; .20 to .40 low correlation, definite but small relationship; .40 to .70 moderate correlation, substantial relationship; .70 to .90 high correlation; marked relationship; > .90 very high correlation, very dependable relationship.

were between the *Southern Metropolis* at Time 4 and the *Beijing News* at Time 1 ($r = .447$), and between the *Southern Metropolis* at Time 1 and the *Beijing News* at Time 3 ($r = .400$). Correlations between the *Southern Metropolis* at all time periods and the *Modern Express* at Time 2, Time 3, and Time 4 were significant. Most correlations between the *Beijing News* and the *Modern Express* were significant except those between the *Beijing News* at Time 3, Time 4 and the *Modern Express* at Time 1 (negative correlations), and the *Beijing News* at Time 1 and the *Modern Express* at Time 3. It can be noticed that issue agendas of the *Modern Express* at Time 1 were not only inconsistent with itself at Time 2, Time 3, and Time 4, but also had statistically non-significant correlations with other two Chinese newspapers. If the issue agendas of the *Modern Express* at Time 1 are excluded, issue agendas of the three Chinese newspapers were statistically significantly correlated with each other at most time points. The results indicate that 81.3% of the between-newspaper correlations were significant, and 80.3% of the overall correlations were significant. Thus, we can consider that these Chinese newspapers have similar news agenda coverage of the Olympics, with the slight deviation of the *Modern Express* at the first time period. They can be combined to compare relationships with Chinese blogs and the *New York Times*.

As Table 7 reveals, there were 1622 Olympic news articles in the combined three Chinese newspapers. The number of articles increased over time and reached a peak at Time 4. The greatest issue coverage in the newspapers was given to sports competition

(1000 out of 1622, 61.7%), followed by services during the games (139 out of 1622, 8.6%), and Olympic business (77 out of 1622, 4.7%). Clothing design (9 out of 1622, 0.6%), press relationship (9 out of 1622, 0.6%), and controversies of competitions (9 out of 1622, 0.6%) were the least covered issues.

The Pearson correlation matrix in Table 8 shows the relationship among Chinese newspapers, Chinese blogs, and the *New York Times* at four time periods. Issue agendas of the combined three Chinese newspapers and Chinese blogs were not consistent with themselves at the four time periods while agendas of the *New York Times* were. Correlations of Chinese newspapers at Time 1 with Time 3 and Time 1 with Time 4 were not significant. Correlations of Chinese blogs between Time 4 and the other three time periods were not significant. There were 16 correlations between Chinese newspapers and blogs. Seven of them were statistically significant: Chinese newspapers at Time 1 with Chinese blogs at Time 1 ($r = .855, p < .01$), Time 2 ($r = .834, p < .01$), and Time 3 ($r = .743, p < .01$); Chinese newspapers at Time 2 with Chinese blogs at Time 1 ($r = .559, p < .05$); Chinese blogs at Time 4 with Chinese newspapers at Time 2 ($r = .880, p < .01$), Time 3 ($r = .879, p < .01$), and Time 4 ($r = .989, p < .01$). Most correlations between the *New York Times* and Chinese newspapers were significant except those of Chinese newspapers at Time 1 with the *New York Times* at all four time periods. Most correlations between the *New York Times* and Chinese blogs were not significant. Chinese blogs at Time 2 were even negatively correlated with the *New York Times* at all four periods.

Correlations of Chinese blogs at Time 4 with the *New York Times* at four periods were significant. The results indicate that the *New York Times* and Chinese newspapers had the closest relationship, and Chinese newspapers and Chinese blogs had a closer relationship than the *New York Times* and Chinese blogs.

As Table 9 shows, the top three salient issues in the three Chinese newspapers were similar, except anti-doping and special exhibitions appeared only in the *Southern Metropolis* top agenda, opening and closing ceremony appeared only in the *Modern Express* top agenda. By comparing agendas of the three types of media outlets, we found that Chinese newspapers covered all 18 issues of the Olympics; Chinese blogs covered 16 of them (anti-doping and controversies of competitions had none); the *New York Times* covered 11 of them (traffic control, the Olympic torch relay, Olympic songs and arts, clothing design, press relationship, special exhibitions, and changes to people's mind had none). Table 10 shows the top three salient issues in these three types of media outlets. Human rights protest never appeared in Chinese newspapers and Chinese blogs top agendas, while it was one of the top three salient issues in the *New York Times* for two time periods. Generally, the top three salient issues were slightly different for these three types of media: sports competition, services during the games, and Olympic business for Chinese newspapers; the Olympic torch relay, sports competition, and services during the games for Chinese blogs; sports competition, Olympic business, and human rights protest for the *New York Times*.

Table 1. Olympic news agenda in the Southern Metropolis

	Southern Metropolis (n=445)									
	T1		T2		T3		T4		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Environment protection	0	(0)	2	(3.8)	0	(0)	2	(0.7)	4	(0.9)
Facility construction	0	(0)	2	(3.8)	0	(0)	0	(0)	2	(0.4)
Security provision	0	(0)	2	(3.8)	12	(12.4)	3	(1)	17	(3.8)
Traffic control	0	(0)	0	(0)	4	(4.1)	1	(0.3)	5	(1.1)
Olympic torch relay	1	(20)	5	(9.4)	5	(5.2)	0	(0)	11	(2.5)
Human rights protest	0	(0)	1	(1.9)	0	(0)	1	(0.3)	2	(0.4)
Olympic songs & arts	0	(0)	1	(1.9)	2	(2.1)	0	(0)	3	(0.7)
Clothing design	0	(0)	0	(0)	1	(1)	3	(1)	4	(0.9)
Opening & closing ceremony	0	(0)	1	(1.9)	4	(4.1)	5	(1.7)	10	(2.2)
Services during the games	0	(0)	2	(3.8)	11	(11.3)	5	(1.7)	18	(4)
Sports competition	2	(40)	25	(47.2)	35	(36.1)	252	(86.9)	314	(70.6)
Anti-doping	0	(0)	0	(0)	6	(6.2)	9	(3.1)	15	(3.4)
Earthquake	0	(0)	4	(7.5)	2	(2.1)	0	(0)	6	(1.3)
Press relationship	0	(0)	0	(0)	1	(1)	0	(0)	1	(0.2)
Olympic business	0	(0)	3	(5.7)	13	(13.4)	6	(2.1)	22	(4.9)
Special exhibitions	2	(40)	4	(7.5)	1	(1)	1	(0.3)	8	(1.8)
Changes to people's mind	0	(0)	1	(1.9)	0	(0)	1	(0.3)	2	(0.4)
Controversies of competitions	0	(0)	0	(0)	0	(0)	1	(0.3)	1	(0.2)
Total	5	(100)	53	(100)	97	(100)	290	(100)	445	(100)

Table 2. Olympic news agenda in the *Beijing News*

	Beijing News (n=872)									
	T1		T2		T3		T4		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Environment protection	1	(2)	2	(4.4)	17	(7.9)	5	(0.9)	25	(2.9)
Facility construction	2	(4.1)	1	(2.2)	8	(3.7)	3	(0.5)	14	(1.6)
Security provision	1	(2)	1	(2.2)	32	(14.9)	10	(1.8)	44	(5)
Traffic control	1	(2)	1	(2.2)	19	(8.8)	18	(3.2)	39	(4.5)
Olympic torch relay	10	(20.4)	12	(26.7)	7	(3.3)	0	(0)	29	(3.3)
Human rights protest	1	(2)	0	(0)	4	(1.9)	2	(0.4)	7	(0.8)
Olympic songs & arts	0	(0)	0	(0)	3	(1.3)	2	(0.4)	5	(0.6)
Clothing design	0	(0)	0	(0)	2	(0.9)	2	(0.4)	4	(0.5)
Opening & closing ceremony	1	(2)	0	(0)	2	(0.9)	16	(2.8)	19	(2.2)
Services during the games	8	(16.3)	7	(15.6)	29	(13.5)	61	(10.8)	105	(12)
Sports competition	9	(18.4)	13	(28.9)	61	(28.4)	398	(70.7)	481	(55.2)
Anti-doping	1	(2)	1	(2.2)	7	(3.3)	4	(0.7)	13	(1.5)
Earthquake	8	(16.3)	2	(4.4)	0	(0)	2	(0.4)	12	(1.4)
Press relationship	0	(0)	0	(0)	3	(1.4)	5	(0.9)	8	(0.9)
Olympic business	2	(4.1)	2	(4.4)	17	(7.9)	23	(4.1)	44	(5)
Special exhibitions	4	(8.2)	3	(6.7)	1	(0.5)	3	(0.5)	11	(1.3)
Changes to people's mind	0	(0)	0	(0)	2	(0.9)	5	(0.9)	7	(0.8)
Controversies of competitions	0	(0)	0	(0)	1	(0.5)	4	(0.7)	5	(0.6)
Total	49	(100)	45	(100)	215	(100)	563	(100)	872	(100)

Table 3. Olympic news agenda in the *Modern Express*

	Modern Express (n=305)									
	T1		T2		T3		T4		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Environment protection	0	(0)	0	(0)	0	(0)	2	(0.9)	2	(0.7)
Facility construction	0	(0)	0	(0)	1	(3)	2	(0.9)	3	(1)
Security provision	0	(0)	0	(0)	3	(9.1)	2	(0.9)	5	(1.6)
Traffic control	1	(2.9)	0	(0)	0	(0)	1	(0.4)	2	(0.7)
Olympic torch relay	25	(71.4)	2	(20)	0	(0)	0	(0)	27	(8.9)
Human rights protest	1	(2.9)	0	(0)	1	(3)	0	(0)	2	(0.7)
Olympic songs & arts	0	(0)	0	(0)	0	(0)	3	(1.3)	3	(1)
Clothing design	0	(0)	0	(0)	0	(0)	1	(0.4)	1	(0.3)
Opening & closing ceremony	0	(0)	0	(0)	2	(6.1)	5	(2.2)	7	(2.3)
Services during the games	0	(0)	1	(10)	1	(3)	14	(6.2)	16	(5.2)
Sports competition	2	(5.7)	5	(50)	19	(57.6)	179	(78.9)	205	(67.2)
Anti-doping	1	(2.9)	0	(0)	1	(3)	3	(1.3)	5	(1.6)
Earthquake	3	(8.6)	2	(20)	0	(0)	2	(0.9)	7	(2.3)
Press relationship	0	(0)	0	(0)	0	(0)	1	(0.4)	1	(0.3)
Olympic business	1	(2.9)	0	(0)	3	(9.1)	7	(3.1)	11	(3.6)
Special exhibitions	1	(2.9)	0	(0)	0	(0)	2	(0.9)	3	(1)
Changes to people's mind	0	(0)	0	(0)	1	(3)	1	(0)	2	(0.7)
Controversies of competitions	0	(0)	0	(0)	1	(3)	2	(0.9)	3	(1)
Total	35	(100)	10	(100)	33	(100)	227	(100)	305	(100)

Table 4. Olympic news agenda in Chinese blogs

	Chinese Blog articles (n=280)									
	T1		T2		T3		T4		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Environment protection	0	(0)	3	(4.3)	2	(2.9)	1	(1.4)	6	(2.1)
Facility construction	3	(4.3)	3	(4.3)	3	(4.3)	2	(2.9)	11	(3.9)
Security provision	4	(5.7)	3	(4.3)	2	(2.9)	0	(0)	9	(3.2)
Traffic control	0	(0)	0	(0)	2	(2.9)	1	(1.4)	3	(1.1)
Olympic torch relay	20	(28.6)	31	(44.3)	19	(27.1)	0	(0)	70	(25)
Human rights protest	2	(2.9)	3	(4.3)	4	(5.7)	0	(0)	9	(3.2)
Olympic songs & arts	8	(11.4)	11	(15.7)	9	(12.9)	0	(0)	28	(10)
Clothing design	0	(0)	0	(0)	2	(2.9)	1	(1.4)	3	(1.1)
Opening & closing ceremony	0	(0)	0	(0)	4	(5.7)	7	(10)	11	(3.9)
Services during the games	6	(8.6)	5	(7.1)	11	(15.7)	8	(11.4)	30	(10.7)
Sports competition	9	(12.9)	3	(4.3)	5	(7.1)	50	(71.4)	67	(23.9)
Anti-doping	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
Earthquake	15	(21.4)	1	(1.4)	0	(0)	0	(0)	16	(5.7)
Press relationship	1	(1.4)	0	(0)	0	(0)	0	(0)	1	(0.4)
Olympic business	1	(1.4)	4	(5.7)	6	(8.6)	0	(0)	11	(3.9)
Special exhibitions	1	(1.4)	2	(2.9)	1	(1.4)	0	(0)	4	(1.4)
Changes to people's mind	0	(0)	1	(1.4)	0	(0)	0	(0)	1	(0.4)
Controversies of competitions	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
Total	70	(100)	70	(100)	70	(100)	70	(100)	280	(100)

Table 5. Olympic news agenda in the *New York Times*

	New York Times (n=63)									
	T1		T2		T3		T4		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Environment protection	0	(0)	0	(0)	1	(6.3)	1	(2.9)	2	(3.2)
Facility construction	0	(0)	0	(0)	0	(0)	1	(2.9)	1	(1.6)
Security provision	0	(0)	0	(0)	1	(6.3)	0	(0)	1	(1.6)
Traffic control	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
Olympic torch relay	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
Human rights protest	0	(0)	0	(0)	1	(6.3)	4	(11.4)	5	(7.9)
Olympic songs & arts	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
Clothing design	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
Opening & closing ceremony	0	(0)	0	(0)	0	(0)	2	(5.7)	2	(3.2)
Services during the games	1	(11.1)	0	(0)	1	(6.3)	2	(5.7)	4	(6.3)
Sports competition	5	(55.6)	2	(66.7)	11	(68.8)	18	(51.4)	36	(57.1)
Anti-doping	1	(11.1)	0	(0)	1	(6.3)	0	(0)	2	(3.2)
Earthquake	1	(11.1)	0	(0)	0	(0)	0	(0)	1	(1.6)
Press relationship	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
Olympic business	1	(11.1)	1	(33.3)	0	(0)	6	(17.1)	8	(12.7)
Special exhibitions	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
Changes to people's mind	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
Controversies of competitions	0	(0)	0	(0)	0	(0)	1	(2.9)	1	(3.2)
Total	9	(100)	3	(100)	16	(100)	35	(100)	63	(100)

Table 6. Olympic news agenda correlation matrix for three Chinese newspapers

		Southern Metropolis				Beijing News				Modern Express			
		T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4
Southern Metropolis	T1	1	.743**	.515*	.635**	.566*	.689**	.400	.613**	.322	.627**	.577*	.631**
	T2		1	.865**	.960**	.624**	.770**	.766**	.952**	.163	.920**	.939**	.962**
	T3			1	.878**	.517*	.693**	.912**	.904**	.043	.778**	.920**	.887**
	T4				1	.447	.650**	.790**	.990**	-.007	.852**	.979**	.998**
Beijing News	T1					1	.882**	.433	.488*	.598**	.808**	.401	.471*
	T2						1	.635**	.679**	.633**	.849**	.608**	.665**
	T3							1	.835**	-.047	.664**	.826**	.804**
	T4								1	-.027	.855**	.974**	.996**
Modern Express	T1									1	.364	-.049	-.016
	T2										1	.803**	.859**
	T3											1	.978**
	T4												1

* $p < .05$. ** $p < .01$.

Table 7. Olympic news agenda in three Chinese newspapers

	Chinese Newspapers (n=1,622)									
	T1		T2		T3		T4		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Environment protection	1	(1.1)	4	(3.7)	17	(4.9)	9	(0.8)	31	(1.9)
Facility construction	2	(2.2)	3	(2.8)	9	(2.6)	5	(0.5)	19	(1.2)
Security provision	1	(1.1)	3	(2.8)	47	(13.6)	15	(1.4)	66	(4.1)
Traffic control	2	(2.2)	1	(0.9)	23	(6.7)	20	(1.9)	46	(2.8)
Olympic torch relay	35	(39.3)	19	(17.6)	12	(3.5)	0	(0)	66	(4.1)
Human rights protest	2	(2.2)	1	(0.9)	5	(1.4)	3	(0.3)	11	(0.7)
Olympic songs & arts	0	(0)	1	(0.9)	5	(1.4)	5	(0.5)	11	(0.7)
Clothing design	0	(0)	0	(0)	3	(0.9)	6	(0.6)	9	(0.6)
Opening & closing ceremony	1	(1.1)	1	(0.9)	8	(2.3)	26	(2.4)	36	(2.2)
Services during the games	8	(9)	10	(9.3)	41	(11.9)	80	(7.4)	139	(8.6)
Sports competition	13	(14.6)	43	(39.8)	115	(33.3)	829	(76.8)	1000	(61.7)
Anti-doping	2	(2.2)	1	(0.9)	14	(4.1)	16	(1.5)	33	(2)
Earthquake	11	(12.4)	8	(7.4)	2	(0.6)	4	(0.4)	25	(1.5)
Press relationship	0	(0)	0	(0)	4	(1.2)	6	(0.6)	10	(0.6)
Olympic business	3	(3.4)	5	(4.6)	33	(9.6)	36	(3.3)	77	(4.7)
Special exhibitions	7	(7.9)	7	(6.5)	2	(0.6)	6	(0.6)	22	(1.4)
Changes to people's mind	0	(0)	1	(0.9)	3	(0.9)	7	(0.6)	11	(0.7)
Controversies of competitions	0	(0)	0	(0)	2	(0.6)	7	(0.6)	9	(0.6)
Total	89	(100)	108	(100)	345	(100)	1080	(100)	1622	(100)

Table 8. Olympic news agenda correlation matrix for Chinese newspapers, Chinese blogs, and the *New York Times*

		Chinese Newspapers				Blogs				New York Times			
		T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4
Chinese Newspapers	T1	1	.631**	.217	.232	.855**	.834**	.743**	.227	.260	.193	.213	.176
	T2		1	.819**	.891**	.559*	.338	.397	.880**	.871**	.802**	.873**	.818**
	T3			1	.894**	.189	.003	.180	.879**	.873**	.850**	.898**	.856**
	T4				1	.210	-.042	.082	.989**	.951**	.898**	.985**	.936**
Blogs	T1					1	.757**	.670**	.201	.272	.145	.194	.129
	T2						1	.896**	-.050	-.067	-.026	-.048	-.056
	T3							1	.108	.070	.101	.055	.113
	T4								1	.930**	.859**	.970**	.921**
New York Times	T1									1	.905**	.936**	.911**
	T2										1	.862**	.955**
	T3											1	.921**
	T4												1

* $p < .05$. ** $p < .01$.

Table 9. Top three salient issues in three Chinese newspapers

Newspapers	Salient issues	T1	T2	T3	T4	Overall
Southern Metropolis	1 st	Sports competition, special exhibitions (40%)	Sports competition (47.2%)	Sports competition (36.1%)	Sports competition (86.9%)	Sports competition (70.6%)
	2 nd	Olympic torch relay (20%)	Olympic torch relay (9.4%)	Olympic business (13.4%)	Anti-doping (3.1%)	Olympic business (4.9%)
	3 rd	None	Earthquake, Special exhibitions (7.5%)	Security provision (12.4%)	Olympic business (2.1%)	Services during the games (4%)
Beijing News	1 st	Olympic torch relay (20.4%)	Sports competition (28.9%)	Sports competition (28.4%)	Sports competition (70.7%)	Sports competition (55.2%)
	2 nd	Sports competition (18.4%)	Olympic torch relay (26.7%)	Security provision (14.9%)	Services during the games (10.8%)	Services during the games (12%)
	3 rd	Services during the games, Earthquake (16.3%)	Services during the games (15.6%)	Services during the games (13.5%)	Olympic business (4.1%)	Security provision, Olympic business (5%)
Modern Express	1 st	Olympic torch relay (71.4%)	Sports competition (50%)	Sports competition (57.6%)	Sports competition (78.9%)	Sports competition (67.2%)
	2 nd	Earthquake (8.6%)	Olympic torch relay, Earthquake (20%)	Security provision, Olympic business (9.1%)	Services during the games (6.2%)	Olympic torch relay (8.9%)
	3 rd	Sports competition (5.7%)	Services during the games (10%)	Opening & closing ceremony (6.1%)	Olympic business (3.1%)	Services during the games (5.2%)

Table 10. Top three salient issues in Chinese newspapers, Chinese blogs, and the *New York Times*

Media	Salient issues	T1	T2	T3	T4	Overall
Chinese newspapers	1 st	Olympic torch relay (39.3%)	Sports competition (39.8%)	Sports competition (33.3%)	Sports competition (76.8%)	Sports competition (61.7%)
	2 nd	Sports competition (14.6%)	Olympic torch relay (17.6%)	Security provision (13.6%)	Services during the games (7.4%)	Services during the games (8.6%)
	3 rd	Earthquake (12.4%)	Services during the games (9.3%)	Services during the games (11.9%)	Olympic business (3.3%)	Olympic business (4.7%)
Chinese blogs	1 st	Olympic torch relay (28.6%)	Olympic torch relay (44.3%)	Olympic torch relay (27.1%)	Sports competition (71.4%)	Olympic torch relay (25%)
	2 nd	Earthquake (21.4%)	Olympic songs & arts (15.7%)	Services during the games (15.7%)	Services during the games (11.4%)	Sports competition (23.9%)
	3 rd	Sports competition (12.9%)	Services during the games (7.1%)	Olympic songs & arts (12.9%)	Opening & closing ceremony (10%)	Services during the games (10.7%)
New York Times	1 st	Sports competition (55.6%)	Sports competition (66.7%)	Sports competition (68.8%)	Sports competition (51.4%)	Sports competition (57.1%)
	2 nd	Services during the games, Anti-doping, Earthquake, Olympic business (11.1%)	Olympic business (33.3%)	Environment protection, Security provision, Human rights protest, Services during the games, Anti-doping (6.3%)	Olympic business (17.1%)	Olympic business (12.7%)
	3 rd	None	None	None	Human rights protest (11.4%)	Human rights protest (7.9%)

Results of Cross-lagged Correlation Analysis

Research Question 2a asks whether there is evidence of inter-media agenda-setting between Chinese newspapers and Chinese blogs after either a short term or a long term gap. To answer this question, Rozelle-Campbell baseline cross-lagged correlations were performed between pairs of media types across each time period. As Figure 2 shows, the newspapers' Time 1 agenda correlated at .834 with blogs' Time 2 agenda, which exceeded the Rozelle-Campbell baseline ($r = .416$), and was greater than the blogs' own Time 1-Time 2 correlation ($r = .757$). This indicates the newspapers had influence on the blogs issue agenda. Meanwhile, the correlation of the blogs at Time 1 with newspapers at Time 2 ($r = .559$) exceeded the Rozelle-Campbell baseline ($r = .416$), but was smaller than the newspapers' own time-lag correlation ($r = .631$), so the blogs did not set the issue agenda for the newspapers. At the Time 2-Time 3 period, the Newspapers' Time 2 agenda correlated at .397 with blogs' Time 3 agenda, which exceeded the Rozelle-Campbell baseline ($r = .222$), but both between-media correlations ($r = .397$ from newspapers to blogs, and $r = .003$ from blogs to newspapers) were smaller than the within-medium correlations ($r = .896$ for blogs, $r = .819$ for newspapers) respectively. Therefore, no agenda-setting effects were found. At Time 3-Time 4, cross-lagged correlation .879 from newspapers at Time 3 to blogs at Time 4 exceeded the Rozelle-Campbell baseline ($r = .466$), and it also exceeded the blogs' own correlation from Time 3 to Time 4 ($r = .108$), which indicates there was agenda-setting from

newspapers to blogs. The opposite direction between-media correlation ($r = .082$ from blogs to newspapers) was smaller than the Rozelle-Campbell baseline ($r = .466$) and the newspapers' correlation of Time 3-Time 4 ($r = .894$). Thus, influence from newspapers to blogs was found but there was no reciprocal influence. The results from the three time periods above provide evidence of Chinese newspapers' agenda-setting influence on Chinese blogs during two time periods, from Time 1 to Time 2 (short term gap) and from Time 3 to Time 4 (long term gap). There is no evidence that Chinese blogs can set the issue agenda for Chinese newspapers during any of the time periods.

Research Question 2b concerns whether there is an agenda-setting relationship between the Chinese newspapers and the *New York Times*, or between the *New York Times* and Chinese blogs after both a short term and a long term gap. Figure 3 shows Rozelle-Campbell baseline tests for Chinese newspapers and the *New York Times*. At the Time 1-Time 2 period, one between-media correlation ($r = .871$ from the *New York Times* to the Chinese newspapers) exceeded the Rozelle-Campbell baseline ($r = .414$); the other ($r = .193$ from the Chinese newspapers to the *New York Times*) did not. The correlation of the *New York Times* at Time 1 with the Chinese newspapers at Time 2 ($r = .871$) was greater than the Chinese newspapers' own Time 1-Time 2 correlation ($r = .631$). Thus, the *New York Times* at Time 1 had influence on the Chinese newspapers at Time 2, and there was no reciprocity. At Time 2-Time 3, the between-media correlations ($r = .873$ from the Chinese newspapers to the *New York Times*, and $r = .850$ from the *New York*

Times to the Chinese newspapers) were both greater than the Rozelle-Campbell baseline ($r = .715$), and also greater than the within-medium correlations ($r = .819$ for the Chinese newspapers, $r = .862$ for the *New York Times* across Time 1 and Time 2) respectively. Thus, mutual influence was found during the time 2-Time 3 period. At Time 3-Time 4, the between-media correlations ($r = .856$ from the Chinese newspapers to the *New York Times*, $r = .985$ from the *New York Times* to the Chinese newspapers) both exceeded the Rozelle-Campbell baseline ($r = .832$), and the correlation of the *New York Times* at Time 3 with the Chinese newspapers at Time 4 ($r = .985$) was greater than the Chinese newspapers' own time-lag correlation ($r = .894$), but the correlation of the Chinese newspapers at Time 3 with the *New York Times* at Time 4 ($r = .856$) was smaller than the *New York Times*' own time-lag correlation ($r = .921$). The results indicate that the *New York Times* at Time 3 can set the issue agenda for the Chinese newspapers at Time 4. To summarize the three tests, cross-lagged correlations provide evidence of agenda-setting by the *New York Times* on the Chinese newspapers on the Beijing Olympics issues for both the short term and the long term.

Comparing between-media correlations in Figure 3, except correlation of Chinese newspapers at Time 2 with the *New York Times* at Time 2 ($r = .193$) was not significant, other between-media correlations were all significant. Looking back to Table 8, correlations of Chinese newspapers at Time 1 with the *New York Times* were not significant for any of the four periods. These two results are consistent, which means the

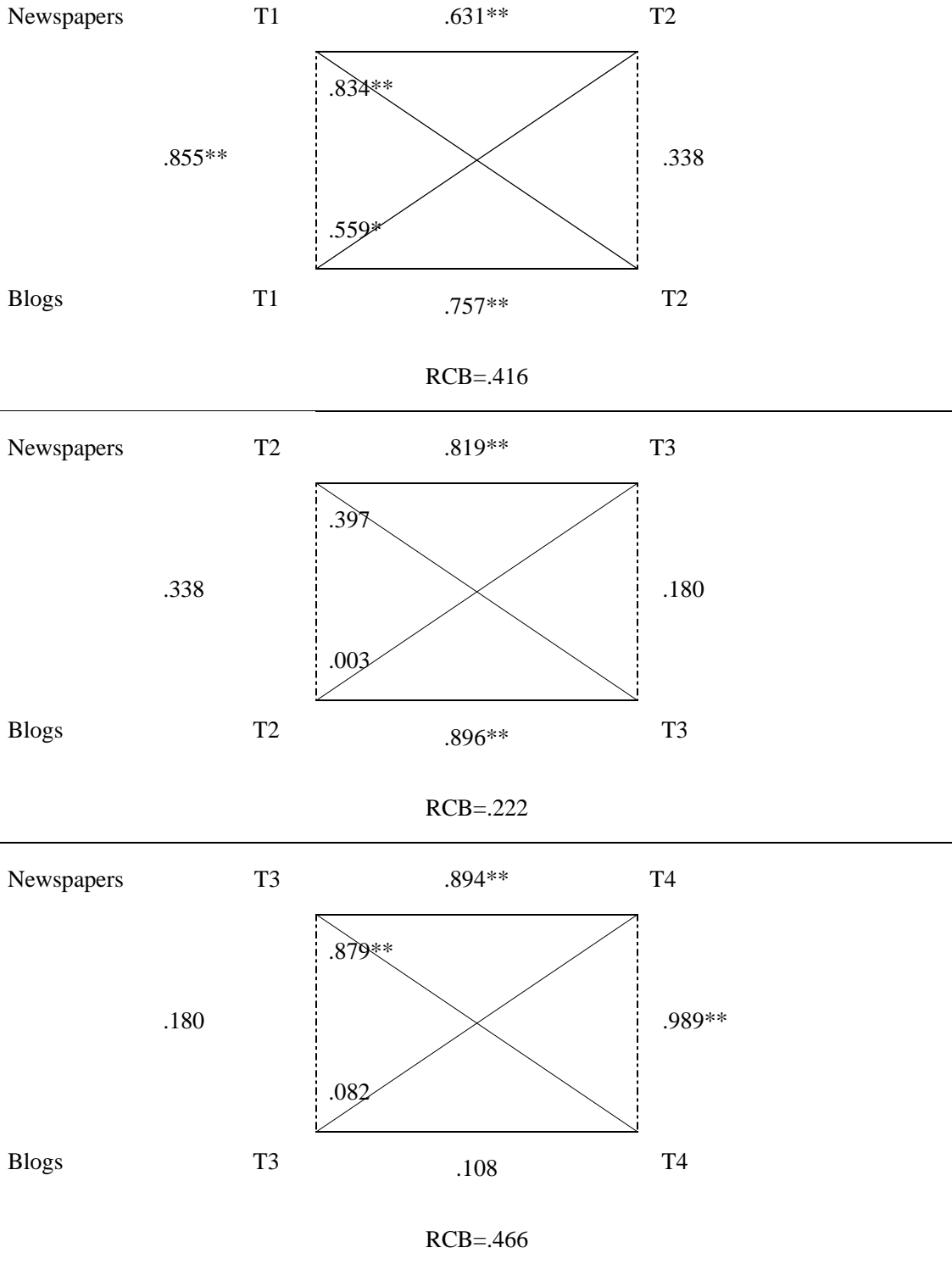
news coverage of Chinese newspapers at Time 1 was different from that of the *New York Times*. The most salient issue in Chinese newspapers at Time 1 was the Olympic torch relay, which describes the torch relay in different cities without any mention of protests. By Time 1, the Olympic torch had already returned to China and had been relayed to Chinese cities. The *New York Times* had no coverage of this issue at all.

Figure 4 shows cross-lagged correlations between the *New York Times* and the Chinese blogs. At the Time 1-Time 2 period, the *New York Times* Time 1 agenda correlated at -0.067 with the Chinese blogs' Time 2 agenda, which was smaller than the Rozelle-Campbell baseline ($r = .103$). The blogs' Time 1 agenda correlated at $.145$ with the *New York Times* Time 2 agenda, which exceeded the baseline ($r = .103$), but was smaller than the *New York Times*' own time-lag correlation ($r = .905$). Thus, no agenda-setting relationship was found between the two media. For Time 2-Time 3, the correlation from the *New York Times* at Time 2 to the blogs at Time 3 ($r = .101$) exceeded the Rozelle-Campbell baseline ($r = .013$), but was smaller than the blogs' Time 2-Time 3 correlation ($r = .896$). The correlation from the blogs at Time 2 to the *New York Times* at Time 3 ($r = -.048$) did not exceed the Rozelle-Campbell baseline ($r = .013$). Thus, there was no agenda-setting relationship for either medium at this time period. For the Time 3-Time 4 period, the correlation from the *New York Times* at Time 3 to the blogs at Time 4 ($r = .970$) exceeded the Rozelle-Campbell baseline ($r = .320$), and exceeded the blogs' own time-lag correlation ($r = .108$). The blogs' cross-lagged correlation with the *New*

York Times ($r = .113$) was smaller than the baseline ($r = .320$) and the *New York Times*' own time-lag correlation ($r = .921$). Therefore, the *New York Times* set the issue agenda for the blogs at Time 3-Time 4. The results indicate that the *New York Times* did not influence the blogs' issue agenda for the first two time pairs, but it had an influence on the blogs during the last time period. The answer to Research Question 2b is that the *New York Times* set the agenda for Chinese newspapers on Olympics topics for both the short term and long term, but it had no significant influence on the Chinese blogs issue agenda for the short term. For the long term gap, results were mixed.

By examining Figure 4 and Table 8, it can be found that the Chinese blogs' agenda was not consistent from the first three time periods to the last time period. The most salient issue for the Chinese blogs at the first three time periods was the Olympic torch relay, but at Time 4 it changed to sports competition, while the Olympic torch relay received no coverage during the last time period. It might be explained that the games started at Time 4 so people's attention was focused on the game competition. Blog coverage also changed.

Figure 2. Rozelle-Campbell baseline (RCB) issue agenda correlations for Chinese newspapers and blogs



* $p < .05$. ** $p < .01$.

CHAPTER 5

CONCLUSIONS

This study assessed inter-media agenda-setting relationships among Chinese newspapers, Chinese blogs, and the *New York Times*. The Beijing 2008 Olympic Games was chosen as a topic to measure media's issue agendas, since it is an event of national importance for China and offers several report dimensions for mass media. Content analysis was used to determine the category of news articles and blog articles from the four time periods. Pearson correlations, cross-lagged correlations, and the Rozelle-Campbell baseline were applied to test agenda-setting.

The content analysis results indicate that the *Beijing News* had the heaviest coverage among the three investigated Chinese newspapers (872 vs. 445 and 305). This makes sense because the Olympics happened in Beijing. Both Chinese newspapers and the *New York Times* had similar most salient issues. For example, sports competition was the most salient issue in the *Southern Metropolis* and the *New York Times* for all four time periods, as well as in the *Beijing News* and the *Modern Express* for the last three time periods. It can be understood that sports competition was the central topic during the Olympics. Previous studies suggest that agenda-setting may not occur all the time. Wanta and Mahmoud (1990) concluded that there are eight obstacles to agenda-setting effects. One of them is historical events, which draw public attention and interfere with the

agenda-setting process. This reason may explain why sports competition dominated the media agenda. Here, sports competition drew public attention from other issues like Olympic business, and thus interfered with the normal agenda-setting process.

While sports competition was the number one issue reported in the newspapers, the Olympic torch relay was the most salient issue in Chinese blogs for the first three time periods. The Olympic torch relay happened in 116 cities and places in China, which provided a great opportunity for ordinary Chinese to closely approach the Olympics. It is no wonder bloggers recorded and made hundreds of comments on this issue. Compared with blogs, newspapers focus on bringing news to the public. The Olympics' essence is sports competition. This characteristic determined that sports competition was newspapers' dominant issue.

By comparing the top three salient issues in the newspapers and blogs, it can be found that human rights protest was heavily covered in the *New York Times*, but it was ignored by Chinese media. The "3.14" Tibet riot which happened five months before the Beijing Olympics caused global concerns on human rights problems in China. Many organizations and individuals suggested boycotting the Beijing Olympics to pressure the Chinese government. Various protests happened during the overseas Olympic torch relay. Therefore, the human rights issue became a focus of international newspapers. In contrast, this is one of the routinely taboo topics for the Chinese press. It can be understood that governmental censorship and media's self-censorship made this issue absent from

Chinese newspapers. However, even Chinese blogs covered this issue lightly. There might be two possible explanations. First, the selected time frame is two months away from the riot, and the Olympic torch was relaying inside China during the time. Bloggers were too excited to record things that happened far away. Second, blogs with controversial contents may have been blocked.

The study of Research Question 2a shows that Chinese newspapers set the issue agenda for Chinese blogs, Chinese blogs followed the Chinese newspapers' agenda. McCombs (2005) assumed blogs may have an inter-media agenda-setting role. However, this was not the case in this study. Newspapers are still major information sources for Chinese. They provide a number of topics for readers including bloggers. Bloggers pick up certain topics and make their comments or provide further explanations in their blogs. Newspapers continue to set the agenda for blogs even though the Internet is widely spread in China.

The study of Research Question 2b shows that the *New York Times* can set the agenda for Chinese newspapers, but had very limited influence on Chinese blogs. Considering the answer to Research Question 2a, it seems that since the *New York Times* can set the agenda for Chinese newspapers, and Chinese newspapers can set the agenda for Chinese blogs, then the *New York Times* should also have an indirect influence on blogs, but this was found at only one time period. This phenomenon can perhaps be explained in part by the language barrier. The *New York Times* is an English language

newspaper. Only people who received higher education in China can read English newspapers. Editors and journalists at least with a college diploma can overcome this barrier. On the other hand, journalists tend to seek news from international elite media. This makes the *New York Times*' agenda-setting function possible. The finding also supports former studies' conclusions: the *New York Times* has initial agenda-setting ability to secondary newspapers and television networks (Gilbert et al., 1980; Golan, 2006; Reese & Danielian, 1989).

Statistical tests show that Chinese newspapers can set the agenda for Chinese blogs, and the *New York Times* can set the agenda for Chinese newspapers on the Olympic issues. However, did the newspapers really have an agenda-setting effect? Are there other reasons that might explain these results? Table 8 indicates that inter-media correlations depend on when the Olympic torch relay shifted to sports competition. The Olympic torch relay led by a wide margin at Time 1 for the *Modern Express*, and by a small margin at Time 1 for the *Beijing News*. By Time 2, the most salient issue in all Chinese newspapers had shifted to sports competition (see Table 2 and Table 3). In the blogs, the Olympic torch relay led at Time 1, Time 2, and Time 3. Only at Time 4 did it shift to sports competition (see Table 4). The *New York Times* was strong in sports competition in every single time period (see Table 5). Therefore, it is possible that Chinese newspapers and Chinese blogs came to the same agenda because the blogs shifted their own issue agenda, and the *New York Times* and Chinese newspapers came to the same agenda

because Chinese newspapers shifted their own agenda.

Limitations

There are several limitations in this study. First, inter-media agenda-setting research for the Internet lacks agreement about the optimum time lag for measuring effects. Many studies required more than one week as the time lag to examine inter-media agenda-setting effects. Some argued that when issues on electronic bulletin boards or blogs were correlated with news coverage of traditional media, the time lag could vary from one day to seven days. As such, the optimum time lag for examining inter-media agenda-setting relationship between online media and traditional media needs to be theoretically checked and tested in future studies. This study provided tests either on a short term (1 week) or a long term (1 month) time lag for a combination of international newspaper, regional newspapers, and online blogs.

Second, the method of choosing blogs needs to be improved. This study analyzed all articles appearing in the newspapers related to the Olympics and each day's top 10 blog articles in terms of hits for the Olympics during short and long time lags. Those blogs with fewer hits might cover several issues that were ignored by blogs with the most hits. The relationship between newspapers and blogs might be more accurately presented if blogs were randomly selected.

Third, the content analysis category for sports competition may have been too general. As coded, it was the dominant issue for most time periods. This may have

reduced the power of agenda-setting effects of other coded items.

Future Studies

This study analyzed three regional Chinese newspapers which were considered relatively independent from government control. The results might be different if other types of newspapers were selected. Future studies can be conducted to compare blogs' agendas with national newspaper agendas or local newspaper agendas. For example, the *People's Daily* has the largest circulation in China and is often studied by communication scholars outside China. Foreign media and politicians tend to search clues for Chinese government policy changes from this newspaper. It would be interesting to study its influence on Chinese blogs.

Last but not least, this study focused solely on issue frequencies. Agenda-setting investigations that merge with framing analysis to uncover different ways newspapers and blogs present the same issue would also provide an interesting research ground for future studies.

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APPENDIX

CONTENT ANALYSIS CODING SHEET

Variable	Instructions and values	Code
ID	Number each individual story consecutively	
Coder	Enter coder's name	
Source	Where does the story come from? 1=The Southern Metropolis 2=The Beijing News 3=The Modern Express 4=The New York Times 5=blog	
Time	The publication date of the story 1=Time 1 2=Time 2 3= Time 3 4= Time 4	
Category	Theme of the story 1=environment protection (e.g., closing heavy polluted factories, air quality report, recycling, energy saving, city's appearance, plant and flower decoration) 2=facility construction (e.g., introduction and opening of gyms, process and problems during construction, test facilities before the games, new airport terminal construction for Olympics, rules in Olympic facilities) 3=security provision (e.g., anti-terror policies and rehearsing, safeguard athletes, crimes, preventing fire, safety of utilities and foods)	

	<p>4=traffic control (e.g., priority for Olympic bus, control vehicle numbers on the road, new traffic lines for Olympics, changing working hours to avoid crowded traffic)</p> <p>5=Olympic torch relay (e.g., torch relay in different cities no protest included, design of the torch, celebrities participate in the relay, ways and vehicles using during the torch relay)</p> <p>6=human rights protest (e.g., protest human rights in Tibet, discussion of boycott Beijing Olympics, discussion of foreign leaders' attendance of opening ceremony and the games, human rights organizations or individuals robbing Olympic torch, athletes or guards protect Olympic torch from robbing, protest during the torch relay)</p> <p>7=Olympic songs and arts (e.g., songs with Olympic themes or written specially for Olympics, Olympic arts like drawing, sculptures not for commercial use)</p> <p>8=clothing design (e.g., clothing design of delegations from different countries, athletes' clothing, volunteer's clothing)</p> <p>9=opening and closing ceremony (e.g., performance at the opening and closing ceremony, costs for the ceremony, that day's weather, people's feedback and comments of the ceremony, editors and designers talking about stories behind the stage, flagman of each delegation, broadcast of the ceremony) * everything about the ceremony except the</p>	
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	<p>earthquake</p> <p>10=services during the games (e.g., special regulations related to Olympic service; registration requirements for foreigners; hotel, dining, tour, language, information and medical services for athletes, coaches, foreign leaders and journalists; signs for directions, cheer leader and volunteer training)</p> <p>11=sports competition (e.g., winner of the game and bonus prize, golden medal list, introduction of athletes, elimination competitions for Olympics, injury during the games, sports history, preparing for the games, competition schedule)</p> <p>12=anti-doping (e.g., drug test during the Games, anti-doping policies, athletes' testimony of anti-doping)</p> <p>13=earthquake (e.g., Sichuan earthquake's influence on Olympics, conditions of athletes from earthquake area, donating Olympic torch to earthquake foundations) * everything related to the earthquake</p> <p>14=press relationship (e.g., improving freedom of speech, freedom of interview and report)</p> <p>15=Olympic business (e.g., business opportunities brought by Olympics, sports ticket sale, hotel book rate, souvenirs like stamps, coins or other commercial goods, advertising, broadcast right sale)</p>	
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	<p>16=special exhibitions (e.g., special exhibitions for Olympics like panda, arts, science and technologies exhibition)</p> <p>17=changes to Chinese people's mind (e.g., citizen spirit)</p> <p>18= controversies of competitions (e.g., argument of athlete's age, argument of judge's decision)</p>	
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ACKNOWLEDGEMENTS

This thesis would not have been possible without the support of my program of study committee members, faculty in the Greenlee School of Journalism and Communication, my family and friends. I appreciate everyone who guided, helped, and encouraged me during these two years when I was pursuing my Master's degree.

I would like to say a special thank you to my POS committee for their insightful feedback and contributions to this thesis. Without the expertise and guidance of my major professor Dr. Abbott, this study would still be only an idea. My research interest in the inter-media agenda-setting theory was first formed in his Communications Theories class. Since then, his patience, in-depth knowledge, creative ideas have impressed me a lot. His thoughtful comments and suggestions, from the perspective of an agenda-setting research scholar, greatly aided in my writing and studying process. Words alone can not express my gratitude to his critical eyes applied to my thesis, draft by draft. The idea of studying blogs was inspired by Dr. Dimitrova's course Communication Technology and Social Change. Another course of her World Communication Systems gave me directions when writing the literature review part of this thesis. Her academic achievements and amazing personality make her a role model of mine. Dr. Shelley is famous among communication students for his expertise both in statistics and political science. He has proven to be an important voice on my committee. It is my honor to have him as my minor

representative.

I also want to thank the faculty in the Greenlee School who taught me and gave me generous help during the last two years. They are Dr. Blevins, Dr. Newell, Dr. Rodriguez, Dr. Smith, Mr. Sheng Ly, and Ms. Kim Curell.

I due many thanks for my family. Without the love of my parents and my husband, I would have no chance to study aboard and accomplish my Master's program. This thesis is dedicated to them.