The Coverage of Chinese Medicine in Major World English Publications

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Abstract

Chinese Medicine as a treasure of Chinese people is a health care system used in China for more than four millenniums. Chinese Medicine has also been recognized as a popular complementary and alternative medicine in overseas countries. Media coverage usually reflects the attentions of society, because of the wide spread of Chinese Medicine, media around the world have a lot of reports concerning it. This study uses the media coverage downloaded from Nexis news media archive as data to build a corpus and conduct social survey on Chinese Medicine. The major purpose of this study is to see what topics are frequently included in the News Mentioning Chinese Medicine (NMCM) in order to find foreigners' interests in Chinese Medicine and the overseas development of Chinese Medicine, and further analyze their specific fields. It is an attempt to apply corpus-based critical discourse analysis in the field of social survey.

Key words: Chinese medicine; Media coverage; Corpus; Keyword analysis

INTRODUCTION

Chinese Medicine originated in ancient China and has evolved over thousands of years. Practitioners use a variety of methods, like herbs, acupuncture, and massage to treat a wide range of conditions. The medical system of Chinese Medicine is quite different from that of western medicine because of the great cultural difference. The approach adopted in Western medicine is strictly based on inferences made from laboratory examinations while Chinese Medicine is on the experience of hundreds of years of observations and researches. Unlike western medicine, which attempts to pinpoint a specific disease or infection as the cause of the illness and treat it, Chinese Medicine takes a wide, holistic view of both symptom and treatment. It regards the human body as an organic entity in which the various organs are all interdependent and it focuses on the recuperation of the whole body and prefers natural remedies.

With the development of globalization, worldwide communication in medical science is enhanced to find better ways of healing. China, as the origin of Chinese Medicine is making efforts to introduce the Chinese science and culture to the world. Meanwhile, policy-makers around the world regard Chinese Medicine as a popular complementary and alternative medicine and find ways to incorporate Chinese Medicine into public health system. Over the past decades, Chinese Medicine has gained more and more attention from people all over the world. This ancient Chinese medical system also attracts attention from the media because of its wide spread.

1. LITERATURE REVIEW

Most of the studies concerning Chinese Medicine are in the field of medical science. Among the linguistic studies of Chinese Medicine, researches mainly focus on the translation of terminology in Chinese Medicine in order to spread it fully and accurately (Wiseman, 2002). Some studies combine Chinese Medicine with sociology, but the methodology they adopt are mainly questionnaire and interview (Lee *et al.*, 1998). This study is a social survey

using a corpus of Major World English Publications. The main focus is to reveal the topics that frequently occur in the News Mentioning Chinese Medicine (NMCM). With the rapid globalization, Chinese Medicine has moved to the international platform. It is important for us to know which parts of Chinese Medicine have caught foreigners' interests and what they think of Chinese Medicine. The results of this study may give a clue to the spread of Chinese Medicine and provide some suggestions for its development.

The media plays an important role in promoting globalization and shortening the distance between countries to deliver latest information to people around the world. In addition, the increasingly rich online resources and advanced language processing tools facilitate us to do researches on certain subject. Therefore corpus-based critical discourse analysis has become a new trend in linguistic studies. Critical discourse analysis (CDA), unlike other forms of discourse-based research, does not begin with a fixed theoretical and methodological stance. Instead the research process begins with a particular topic, the theoretical and methodological tools are then developed as the object of research is progressively refined (Mulderrig, 2011). Corpus linguistics is a computer-based method for analyzing large bodies of textual data (McEnery & Wilson, 1996). Its combination with CDA has become a relatively recent development. Because corpus linguistics is based on large quantities of authentic text, and CDA aims at making transparent the connections between discourse practices, social practices, and social structures, connections (Sheyholislami, 2000). The combination of the two approaches can be both objective and critical. A lot of studies which adopt the method of corpus-based critical discourse analysis choose news as data, but the selected news are all on the same topic. The news coverage in this study are not confined to one topic, every piece of news mentioning the search words will be collected. So the news coverage in this study may have various topics, for example, travel, agriculture, trade and so on.

2. METHODOLOGY

The news texts are downloaded from the Nexis news media archive, which is an online database service for news research. Nexis contains about 35,000 publications, and Major World English Publications is the publication category chosen for this study. Major World English Publications include a wide range of publication types, for example, newspapers, newswires and press releases, news transcript, magazines, web-based publications and so on. Newspapers account for the largest proportion in publication types, and they cover not only the famous ones (*The Sun, The New York Times*), but also some newspapers which are not heard of quite often (*Waterloo Region Record, Bray People*). The reason for using Chinese Medicine as search word instead of Traditional Chinese Medicine is that nowadays people sometimes tend to simplify Traditional Chinese Medicine into Chinese Medicine, so the search on Traditional Chinese Medicine may reduce the data significantly. We collect news texts published before the year 2012. In the Nexis, the first article mentioning Chinese Medicine was published in 1978, so the time span is from 1978 to 2011. News mentioning Chinese Medicine besides articles about Chinese Medicine is selected, so the topics of these articles vary a lot. The main purpose of this study is to see the development of Chinese Medicine in foreign countries and the interests among them; therefore, publications based in Hong Kong and Taiwan are excluded. The final corpus contains 14,689 articles and 11,113,025 tokens.

The instrument in this study is Wordsmith Tools 5.0. Splitter splits all the news texts downloaded from the Nexis into one piece a file. Wordlist and Key Word are used to produce the Key Wordlist, which may show some clues to the key interests of the media. Concord facilitates us to view the source text.

3. RESULTS AND DISCUSSION

3.1 Analysis on the Amount of NMCM

3.1.1 Changes of the Amount of NMCM in the Past Two Decades
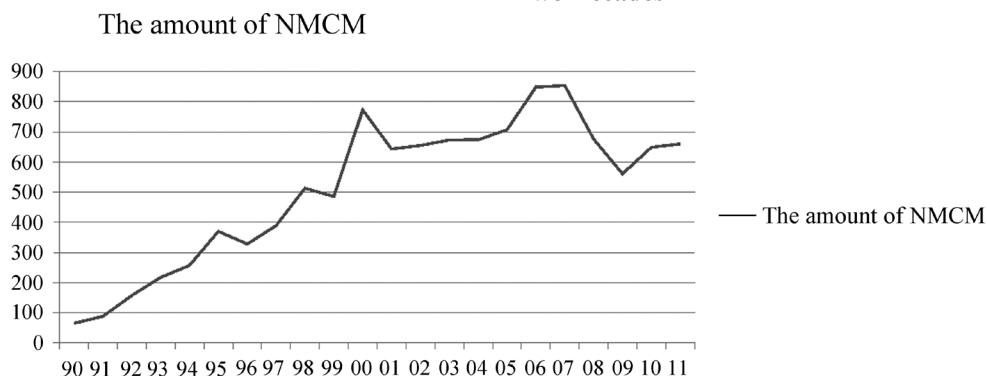
The amount of NMCM

Figure 1
The Amount of NMCM

We can see a continuous rise in the number of news texts during the past two decades. It indicates the growing attention paid to Chinese Medicine. Before the year 1990, the total number of the news texts is 495. As the curve shows, we can see a steady increase before the year 1999, and it comes to a sharp increase and arrives at a peak in 2000. After a small drop in 2001, the curve goes steadily in the following five years. It ascends slightly in 2006, and suddenly plunges from 2008. In 2009, the number reaches the bottom and picks up again in the next two years. We can explore the changes by detailed analysis of the news. The overall trend of rising indicates the increasing popularity of Chinese Medicine in media around the world.

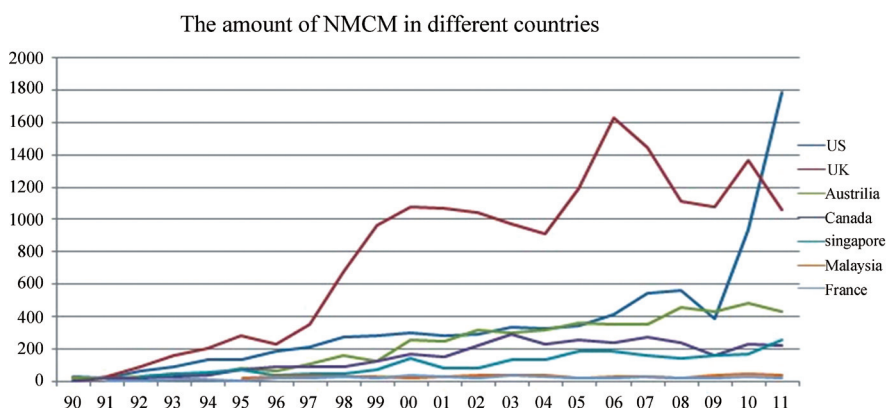### 3.1.2 Distribution of the Number of News Articles in Different Countries

Figure 2
The Amount of NMCM in Different Countries

With the rapid globalization, Chinese Medicine has walked into different regions of the world. Not only Asian countries but also western countries have done a lot of reports on NMCM. Figure 2 shows the major trend of the amount of news in seven different countries. The curves represent the countries which have continuous NMCM. UK covers a significant large proportion, and US ranks the second. Two reasons account for the prominence of UK news texts. One reason is the growing exchange of views in medical field. People are eager to try and absorb different approaches in medical treatment, and the effectiveness and wide use of Chinese Medicine sell itself to people in different cultures. The main reason lies in the large proportion UK reports take up in the Major World English Publications. The amount of reports is greatly affected by the proportion of the media in database. Despite the uneven proportion, the curves show us the change of Chinese Medicine's attraction. On the whole, the trend of the curves in Figure 2 is in accordance with the overall tendency in Figure 1. The number of the news texts ascends steadily except for UK and US. The number of UK reports is prone to big fluctuation. With a dramatic rise in 1997 and a slight descent in 2004, it resumes its ascent from 2005 then collapses after 2007. The number goes up and down from 2009 to 2011. As to US, before 2008, it rises at a steady pace, after a drop by 2009, it soars up in the following years. There are a few news texts in media in France and Malaysia.

3.2 Key Wordlist and Key Key Wordlist of the News

Corpus linguistics employs a range of procedures in text analysis, like Collocations, Frequency Lists and Concordances. One statistical procedure that has proven to be popular involves the creation of Keyword List (Baker, 2004). The Wordlist is produced by wordsmith tools 5.0 with Wordlist of BNC world corpus[1] as a reference. Table 1 lists the top 20 Keywords.

Table 1
Key Wordlist of NMCM (Top 20)

Key word	Keyness	Key word	Keyness
CHINESE	165,465.88	PG	31,427.04
MEDICINE	129,330.81	LENGTH	31,321.76
CHINA	55,103.38	HERBAL	30,760.65
COPYRIGHT	48,030.43	BYLINE	30,661.82
ACUPUNCTURE	48,022.04	LIST	28,375.09
LOAD	38,318.68	MEDICAL	26,853.45
TRADITIONAL	36,590.93	TCM	25,703.27
SINGAPORE	36,439.59	YUAN	24,804.41
DOCUMENTS	36,090.71	MEDICINES	23,058.03
HEALTH	33,302.94	RETURN	22,184.36

Some Keywords like COPYRIGHT, LOAD, PG, BYLINE are in the list with high frequency. The main source of the data comes from newspaper, and these words show up frequently at the head or the end of the news. However, they are irrelevant to the study because they do not show the content of the articles. Therefore, we need the Key Key Wordlist in order to get rid of these

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[1] Retrieved from http://www.lexically.net/index.html

interfering words and lay emphasis on the Keywords closely related to the content.

Table 2
Key Key Wordlist of NMCM (Top 20)

KW	Texts	%	Overall Freq.
CHINESE	3,109	38.00	25,920
MEDICINE	2,330	28.00	17,815
CHINA	1,267	15.00	10,798
SINGAPORE	1,080	13.00	6,607
ACUPUNCTURE	1,011	12.00	7,354
SAYS	903	11.00	10,609
HERBAL	830	10.00	4,610
HEALTH	719	8.00	7,364
TCM	673	8.00	4,434
MEDICAL	643	7.00	5,341
HERBS	547	6.00	3,083
MEDICINES	532	6.00	2,991
TRADITIONAL	522	6.00	3,912
DR	512	6.00	4,454
PRODUCTS	477	5.00	4,921
TREATMENT	470	5.00	3,548
BEIJING	444	5.00	2,251
TREATMENTS	432	5.00	2,108
STRAITS	428	5.00	1,054
BODY	387	4.00	3,462

*Notes: "Texts" refers to the number of texts where the key word is key. "%" is the proportion of the texts where the word is key in all the texts. "Overall Freq." is the total number of occurrences in Key Key Wordlist.

There are altogether 27,446 Key Keywords. It is really difficult to analyze them in detail. Grouping the words may help us to see the main topics of the news more easily. In the following part, the top 500 key keywords are grouped into nine categories, Key Keywords concerning healthcare, names of countries or cities, theories and therapies in Chinese Medicine, human body, diseases, persons, organizations, economy and ingredients.

3.3 Categorizing Top 500 Key Keywords

3.3.1 Key Keywords Concerning Healthcare
This category consists of words related to treatment method (HOMEOPATHY, CHIROPRACTICE, CHEMOTHERAPY, NATUROPATHY, AROMATHERAPY, SPA), medicines (PHARMACEUTICAL, DRUGS, PILLS, PLACEBO), treatment (THERAPY, REMEDIES, HEALING, CURE), health protection (DIET, IMMUNE, VITAMIN, NUTRITION), and some other words about healthcare (HEALTH, CLINIC, SYMPTOMS, FERTILITY, VIRUS, PREGNANT). The articles mentioning the treatment method may talk about the combination of Chinese Medicine with these kinds of therapies. And the high frequency of FERTILITY and PREGNANT suggest Chinese Medicine's common use in treating diseases related to fertility.

Key Keywords related to healthcare account for the largest proportion in top 500 words. It indicates that most of the NMCM are within the field of healthcare. The result is not beyond our expectation because Chinese Medicine belongs to healthcare system and its main purpose is to help people maintain health.

3.3.2 Key Keywords Concerning Names of Countries or Cities
To see the spread of Chinese Medicine more clearly, we mark the Key Keywords concerning place names in a world map, countries are marked to represent the cities.

Figure 3
Distribution of the Places in Key Key Wordlist

The high frequency of the place names in the Key Key Wordlist indicates the attention Chinese Medicine attracts in these places. As Figure 3 shows, the distribution is mainly in Asian countries, especially Southeast Asia. We can also find countries in Oceania, Africa, America and Europe. Three main reasons may contribute to the distribution. First, geographical position has always been one of the advantages for communication between countries through all ages. The location advantage provides conveniences to countries in Asia to know and to popularize Chinese Medicine. Second, the Ethnic Chinese account for a great proportion in popular immigration countries like Canada, Australia, and New Zealand. Their migration plays an important role in spreading Chinese Medicine worldwide. Third, openness and culture diversity influence the popularity of Chinese Medicine. Openness reduces the existence of distance and foster public acceptance of a different medical system. And culture diversity determines the nation's pubic acceptability to Chinese Medicine. The large proportion of Asian countries in the map also suggests that Chinese Medicine is not actually as international as what we expect. Although some states far from us give attention to Chinese Medicine, it has not rushed throughout the world indeed. There is still a long way for us to introduce our ancient medical system to the world.

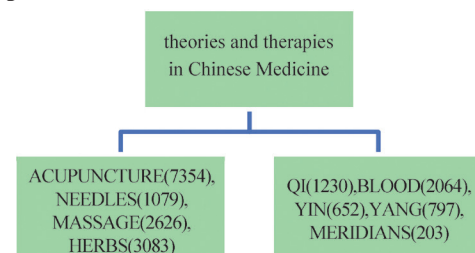### 3.3.3 Key Keywords Concerning Theories and Therapies in Chinese Medicine

Figure 4
Key Keywords Concerning Theories and Therapies in Chinese Medicine and Their Overall Freq. (Total Number of Occurrences in Key Key Wordlist)

Chinese Medicine related key keywords can be further divided into two groups. The first group consists of words about therapeutic method. There are several kinds of treatment methods in Chinese Medicine. Acupuncture and massage are more ready to be accepted than other therapies because they are natural therapy rather than drugs. They focus on the acupoints and meridians of the whole body. Needles are indispensable apparatus in acupuncture. Furthermore, herbal therapy accounts for the majority of treatments in Chinese Medicine. The ingredients are natural materials with few side effects. To the people who get used to western medicines, these three kinds of natural therapeutic methods may seem fresh and special.

The second group contains some basic concepts. Yin, Yang, Qi, blood, and meridians are the most fundamental concepts in Chinese Medicine, as it is the foundation of diagnosis and treatment. Yin and Yang represent two abstract and complementary aspects that every phenomenon in the universe can be divided into Qi and blood nourish the body. Qi is a kind of energy, flowing around the whole body to maintain its life activities; blood is the nourishing substances, circulating in every corner of our body. The meridian is a path through which the life-energy Qi flows.

The concepts introduce the theories of the ancient Chinese medical system. Their Keyness shows media's efforts to introduce and explain the theoretical system of Chinese Medicine. The broad and profound culture in China is sometimes hard for those ignorant of Chinese culture to understand. The substantial cultural differences between the East and the West also impede the acceptance of Chinese Medicine by the West. Therefore, the philosophy of Chinese Medicine must be actively promoted to ensure its smooth international expansion.
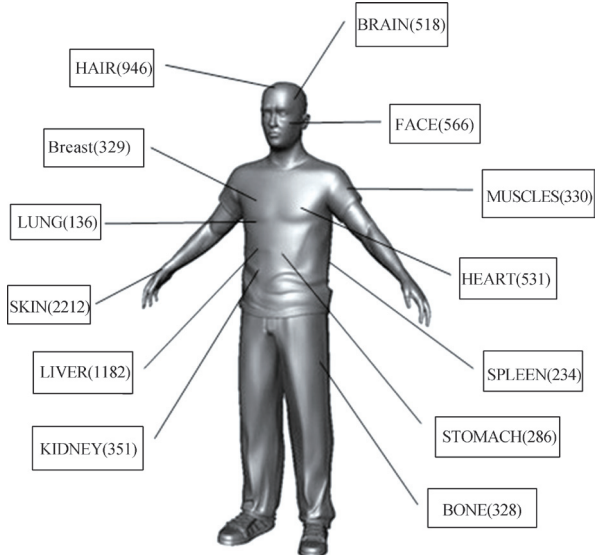
3.3.4 Key Keywords Concerning Human Body

Figure 5
Body-Related Key Keywords and Their Overall Freq.

One of the theories in Chinese Medicine is the systematization of bodily function in terms of the Five Zang (five entities: heart, liver, spleen, lung and kidney). The concept of Five Zang is developed on the basis of Wu Xing theory (five elements: fire, wood, earth, metal and water) in Chinese philosophy. Each zang is assigned to one of the five elements and the five entities constitute the organ network. Detailed knowledge of the dynamics and interrelationship of the organ network is considered the foundation for successful practice. Therefore, Chinese Medicine usually uses the five entities to explain the function system of human body. The high frequency of the other body-related words shows Chinese Medicine's common use in treating or toning these parts of body.

3.3.5 Key Keywords Concerning Diseases

A variety of diseases are involved in this category, including skin diseases (ECZEMA), gynaecological disorders (INFERTILITY, MENOPAUSE), Chronic fatigue syndromes (STRESS, PAIN), respiratory diseases (ASTHMA), rheumatological conditions (ARTHRITIS) and infectious diseases (SARS, AIDS). The category also contains some diseases which we are familiar with, like FLU, COLD, DIABETES and CANCER. We can infer from the frequent occurrences of these disorders that people often treat them with Chinese Medicine. The variety of diseases the words related to suggests Chinese Medicine's wide use in different kinds of disease treatment, from common cold and flu to cancer. Moreover, one of the major challenges in the world – the epidemic of AIDS is treated with Chinese Medicine. People even consider using Chinese Medicine to treat newly appearing disease – SARS.

3.3.6 Key Keywords Concerning Persons

The words related to persons can be divided into several groups as follows.
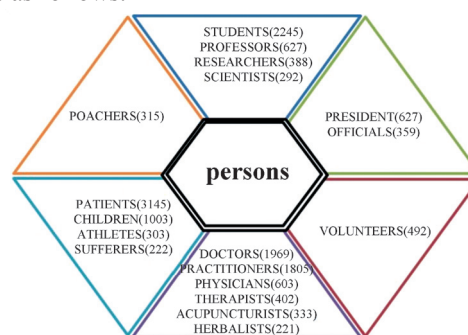

Figure 6
Person-Related Key Keywords and Their Overall Freq.

Person related words are mainly composed of three parts, people who practice Chinese Medicine (DOCTORS, PRACTITIONERS, PHYSICIANS, THERAPISTS, ACUPUNCTURISTS, HERBALISTS), who receive Chinese Medicine as therapeutic method (PATIENTS, CHILDREN, ATHLETES, SUFFERERS) and who

do researches on Chinese Medicine (STUDENTS, PROFESSORS, RESEARCHERS, SCIENTISTS). The high frequency of CHILDREN indicates the recognition of Chinese Medicine to some degree. Officials and president are merged into one group. Governments have some impacts on the development of medicines. One the one hand, they promote the spread of Chinese Medicine because it provides patients with alternatives and is beneficial for improving the whole medical system. On the other hand, in order to ensure the safety of medicines and be responsible for people's health, the governments of some countries hold tight restriction on the import, which greatly hinder their access to Chinese Medicine. Concordance shows VOLUNTEERS refer to both the practitioners who help to offer treatment with Chinese Medicine and the people who are willing to participate in experiments on Chinese Medicine. The word POACHERS is quite distinctive in this category. It can be connected with the use of animal ingredients in Chinese Medicine which we will discuss later.

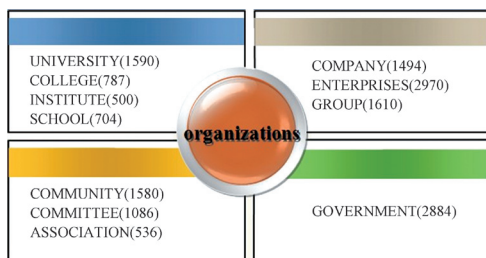### 3.3.7 Key Keywords Concerning Organizations

Figure 7
Grouping of Key Keywords About Organization and Their Overall Freq.

We divide words related to organizations into four groups. The first group is about the education. More and more people are turning to alternative medicines to keep them healthy and to treat diseases that modern medicines have failed to treat. Every year, a lot of people come to China to study Chinese Medicine. Among the international students studying natural science in China, those major in Chinese Medicine account for the largest percentage (He, 2002). Chinese government has always given high priority to the education of Chinese Medicine, because education is of great importance to Chinese Medicine's globalization. However, there are still some barriers to build a Chinese Medicine education system on a global basis. The second group concerns the Chinese Medicine industry. The popularity of Chinese Medicine brings many opportunities for overseas investment. In addition, the demand for Chinese Medicine abroad fuels the growth of the industry. Some communities and associations are included in the third group. The Chinese culture is so different from western culture, so Chinese Medicine may not have high approval in western countries. Chinese communities or associations provide some knowledge to accelerate the spreading

of Chinese culture, and therefore, enhance the Chinese Medicine industry worldwide. Government, the last group, we have talked about in section 3.3.6. It is the indispensable part for the development of Chinese Medicine.

3.3.8 Key Keywords Concerning Economy

Key Keywords on the topic of economy are MARKET, TRADE, ECONOMIC, PRODUCT, INDUSTRY, BUSINESS, INVESTMENT, SALES, PRICES, SHARES, INCOME, OUTPUT, EXPORT and FINANCIAL. These key keywords are closely connected with the Chinese Medicine businesses. We already have Chinese Medicine retail outlets out of China and some of them show excellent performance. Like Tong Ren Tang, the largest and best-known producer of Chinese Medicine, plans to further expand its investment in Japan, Europe, America, and Middle East in the next few years, and it aims to increase the number of its overseas outlets to 100 by 2015 (WANG, 2012). There are still great opportunities for the overseas development of Chinese Medicine, but it faces many challenges at the same time. The main challenges are the language barrier, policy barrier and uncertain therapeutic efficacy. Target Language skill of Chinese practitioners is an important issue that must be addressed. Some countries set up harsh language proficiency requirements for the registration of Chinese Medicine practitioners. Moreover, high target language proficiency would help Chinese Medicine practitioners to communicate smoothly with the patients and better understand their conditions and offer appropriate treatment suggestions. Chinese Medicine also faces many regulation barriers. Since 2011, the European Medicines Agency (EMA) has required all Chinese Medicine products to undergo a registration process before they enter the European market. In addition, good efficacy is the fundamental assurance of Chinese Medicine businesses to survive in the long run. Therefore, Chinese Medicine practitioners must demonstrate trustworthy medical skills and build up their credibility in order to enhance their viability in market competition and overseas development.

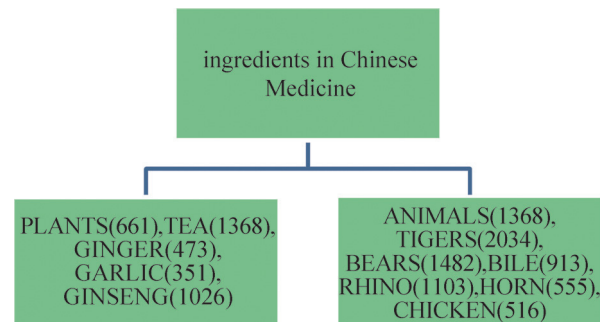### 3.3.9 Key Keywords Concerning Ingredients in Chinese Medicine

Figure 8
Key Keywords About Ingredients in Chinese Medicine and Their Overall Freq.

The Chinese have long used natural ingredients as medicinal. From Figure 8, we can see the ingredients in Chinese Medicine contain both plant and animal. Some foreigners may have the misunderstanding about Chinese herbs, they think herbs only consists of plant elements and extracts. In fact, besides plant elements and extracts, Chinese herbal remedies also use animal parts and minerals (Hempen & Fischer, 2009). There are thousands of substances used as ingredients in Chinese Medicine. Plant elements and extracts are by far the most common elements used (Foster & Yue, 1992). Ginseng is one of the most precious herbs in Chinese Medicine. We can notice that the animals in Figure 8 are all endangered animals except the livestock – CHINCKEN. The Concordance shows that the use of these endangered animals has triggered controversy worldwide. Some people believe that the harvesting of these animals is the major contributor in pushing these animals to the edge of extinction. Ginger and garlic and the livestock-chicken are ingredients in Chinese cooking. The high frequency of these cooking materials reflects the popularity of food

therapy in Chinese Medicine. Chinese food therapy is a practice in the belief of healing through the use of natural foods instead of medicines. For example, chicken is always boiled together with some plant herbs to make nourishing tonic soup. Ginger and garlic are regarded effective in treating common cold. Tea, a drink with a variety of types, is also believed to have many functions. Chinese food therapy, as opposed to medicines, uses common food to serve as medicines.

3.4 Controversy on Animal Ingredients Used in Chinese Medicine

The prescription in Chinese Medicine uses far more plants than animals, but in the Key Key Wordlist we find many words related to animals with high frequency. To investigate the words concerning animals, firstly, I list the animals in the Keyword List. Some words, different from those occurring mainly in several texts, distribute in a large number of different news texts, so they are not key enough in the Key Key Wordlist. Then we use the Concord to see the collocation of each animal. Table 3 shows the names of animals and their Keyness.

Table 3
Keywords Concerning Animals and Their Keyness

Medicinal protected animal	Protected animals	Unprotected animals	Livestock
TIGER (20,496.58) RHINO (5,975.82) BEAR (2,447.46) SEAHORSE (1,837.00) DEER (1,112.41) TURTLE (620.62) SNAKE (543,79) SEAL (191.74)	LEOPARD (876.51) SHARK (536.69) CROCODILE (182.52) ELEPHANT (360.6)	CAT (57.01)	CHICKEN (1,519.29)

Keywords related to animals are categorized into four parts. Medicinal animals are ingredients used as medicine. A variety of animals are used as ingredients in Chinese Medicine, some of them are common, like livestock, but some are precious species. In Table 3, we can see all the animals with medicinal values are key protected species, some of them are endangered animals. The use of some endangered animals in Chinese Medicine has triggered

great controversies. The main controversy lies in animal protection. Therefore, some protected animals which are not ingredients in Chinese Medicine also occur in Key Wordlist. Concordance results show that a very small number of CAT refer to cat itself, most of them mean tiger. Tiger is sometimes called "big cat" in the news. Chicken, as mentioned in section 3.3.9, is a common ingredient in Chinese food therapy.

Table 4
Medicinal Protected Animals and Their Collocates

Keywords	Tiger	Bear	Rhino	Deer	Snake	Seal	Turtle	Seahorse
Collocates	bone skin	bile gall bladder paws	horn	musk antlers velvet penis gland	blood meat skin bile venom	penis fur pelt	blood shell eggs flipper	

Common collocates wildlife, endangered, trade, rescue, hunt, illegal, trafficking, poaching, extinct

The trade in animal life, including creatures protected by international conventions, has skyrocketed over the past decade, largely because of big profit and the soaring demand from mainland China and many other parts of Asia (Wassener, 2012). Because poaching can be as lucrative as the narcotics trade, offenders are often willing to take the risks. What's more, with rising levels of

affluence, many people are now able to buy coveted items like rare animals which are thought to have medicinal benefits. At the same time, the considerably improved transportation and trade facilitate the flow illegal goods.

Almost 90 percent of people in developing countries rely on traditional medicine, based largely on different species of plants and animals, for their primary health

care. Still more drugs are derived from animals and microorganisms (Taylor, 2004). Furthermore, modern medicines and remedies contain animal derivatives. With the growing population, increasing wealth, and the popularity of natural remedies in Chinese Medicine around the world, the demand for medicinal endangered animals is rising. The rising demand, combined with rapid growth in profits, has caused an alarming increase in the number of animal species at risk. And the rarer the animal species become, the more people want them, and what's worse, poachers will try everything they can to win the profit. The trade finally becomes a vicious cycle, and one day in the future we may only see these animals in pictures.

Some endangered animal species are widely used in Chinese Medicine. Among the animal species shown in Table 4, tiger, rhino, bear, seahorse and deer are the most common. The bones of tiger are usually used in wines, plasters and manufactured medicines to treat joint ailment. Rhino horns can treat fever and the powder is used as an aphrodisiac. Bear bile is used to treat a wide variety of illnesses and injuries. As to seahorse, the entire dried body is often used to treat some ailments and impotence. Velvet antler is also common material for health remedy and health maintenance. As these animal raw materials bring a lot of debate among people, and attract the media's attention worldwide, now there are two solutions to the problem. One is to find therapeutic alternatives, the other is animal farming.

The Chinese Medicine production unavoidably involves certain rare and endangered animals. But these animal ingredients have been prohibited under international wildlife protection agreements. So whenever possible, practitioners of Chinese Medicine should strive to replace ingredients from endangered species with herbal or chemical remedies. Some practitioners in China say it is hard to find substitutes, because the valuable medicinal materials will lose their original effectiveness if their chemical structure is changed, thus making it a long and difficult process to find their substitutes. Chinese researchers once tried to substitute natural animal parts with synthetic alternatives, but the experiment turned out to be a failure. However, several experiments have proved the same effectiveness of some substitutes. For instance, rhino horn is still occasionally prescribed to treat male impotence. By viewing the associates of rhino horn, we find Viagra has high frequency. Many western reports say that Viagra has proved to have similar effect to rhino horn and can replace the use of rhino horn, therefore save endangered animals.

A study published in Environmental Conservation suggests that the drug's wide availability is easing demand for other impotence remedies, including traditional Chinese medicines derived from exotic animals ("Viagra ally of conservationists", *The Times*, October 17, 2005).

Viagra has surely had many unintended consequences, but one of the strangest is the help it might bring to vulnerable animal species. Since the drug was introduced in 1998, the trade in some wild animal parts traditionally used in the creation of "impotence cures" has fallen drastically ("Viagra Saves Wildlife", *The New York Times*, December 15, 2002).

The anti-impotence drug Viagra has become an unexpected hero in the fight against the hunting of endangered animals for traditional Chinese medicine. The global success of Viagra since it went on sale in 1998 has led to a decline in the trade of animal parts for their supposedly anti-impotence properties, scientists have found. Viagra is cheaper than many traditional animal-parts remedies – such as dried seahorses or crushed rhino horn – and it visibly works whereas the natural cures do not ("Viagra helps to save endangered animals", *The Independent*, November 18, 2002).

Finding the substitutes of the ingredients from endangered animals not only can protect endangered species from threatening the existence, but also for better experiments to test the efficacy and safety of the medicines.

Animal farming, though a way to reduce the demand for endangered wild animals, brings heated debate among the public. The focus of the debate lies in animal cruelty. On the farms, the bears are kept in tiny, cramped cages and milked for their bile through crude holes cut into the abdomen wall and the gall bladder. The wounds are deliberately left open, leaving the bears exposed to infection and disease. Bears rescued from farms are found to be suffering from many diseases and the contaminated bile from sick bears also poses a threat to human health. A small number of tigers are also been farmed in terrible conditions for their bones and other parts to be made into tonics and potions. Nowadays animal farming is considered inhumane and unethical, not only animal welfare campaigners but also common people worldwide pose strong opposition to the practice.

Depending only on these solutions may not stop the use of the endangered animals completely. Regulations must be put in place and there should be efficient enforcement from governments and international agencies. Actually, the most important and urgent thing is to raise people's awareness to reject remedies that contain parts of endangered and protected animals. Both the practitioners and the consumers should avoid the use of those ingredients and try to think of the effective alternatives.

CONCLUSIONS AND IMPLICATIONS

This study is an attempt to cope with large numbers of news by corpus-based critical discourse analysis in the field of social survey. The wide spread of Chinese Medicine, combined with the critical role media plays

provides us sufficient data to build corpus and do a social research based on media coverage. The number of news text indicates the increasing attention Chinese Medicine attracts worldwide. In addition to media portrayals, certain themes are frequently covered in the news. By putting the Key Keywords into different categories and analyzing each category in detail, we know the distribution, the current development and the problems existing in Chinese Medicine in foreign countries. Exploration on the words related to animals makes us discover the concerns about the endangered animal ingredients in Chinese Medicine. The results of the study also give the overseas development of Chinese Medicine some clues. For one thing, language barrier, policy barrier and uncertain therapeutic efficacy should be fully considered. For another, the controversial ingredients used in Chinese Medicine have to be dealt with as soon as possible. Only by solving the problems and uncertainties existing in Chinese Medicine, can we better introduce our culture and medical system to the world. The limitation of the methodology is that Keywords analysis only assesses the salient words or word group. The content of the news is not considered here. As a result, we deal with only lexical-thematic aspects of news.

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