

Where Did the Concept of Environment Come from and Where Is It Found?

- A Conceptual History of Environment in Modern China

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ABSTRACT

This thesis addresses when and where the modern concept of environment arose in human history, as well as the shifts in people's perception of the environment and environmental change in modern China, by applying conceptual history to Chinese discourse. Thus, I use conceptual history as a methodology for studying the history of forming, using and developing the concept of environment in Euro-America and its integration and interaction with traditional Chinese ideas and the Chinese responses to the concept and environmental change in the 20th and early 21st centuries.

Before the term *environment* became a modern concept (*i.e.* before the 19th century in Euro-America and the 20th century in China), its use first as the state of being surrounded and then life circumstances was similar in Euro-American and Chinese discourses. The shifts in the use of the term (*i.e.* English *environment*, German *Umgebung* and *Umwelt*, and Chinese *huanjing* 环境) started from the formation of the biological concept of interaction between living creatures and the environment via the English term *environment* in the mid-nineteenth century.

The significance of such conceptual change is that the development of a modern biological idea changed the way that people look at the surrounding world. Before the formulation of modern biology, people viewed the surrounding world as nature, while after it, people see the surrounding world as the environment. More importantly, in the development of scientific knowledge, starting from modern biology, the concept of environment has become more and more abstract and complex – as it includes the thinking of philosophy, sociology, biology, ecology, economy, etc.

In Chinese discourse, before the modern environmental concept (*i.e.* biological sense of the environment) was introduced from the West to China, the use of the ancient term *huanjing* (environment) was the same as it was in the ancient western world (*i.e.* the surroundings). After the introduction, the Chinese perception of the environment basically followed the same path of development as the western region had experienced. The reception of the new concept of environment coming from Euro-America was a complex combination of western environmental concepts, Japanese *kankyō* (環境, environment), western knowledge of hygiene and the Japanese hygiene administration system, as well as the global and China's own domestic environmental movements. The conceptualization process for *environment* in Chinese discourse was also closely associated with the conceptualization of the two Chinese ancient terms *weisheng* (hygiene) and *wuran* (pollution). Moreover, the concept of environment is still changing. It started in the 1910s, but the greater shifts appeared in the 1920s, 1970s and 2000s.

People's perception of the surroundings, the natural environment, life circumstances, public hygiene and health, pollution, as well as the virtual environment (such as information environment), reflects a process of human recognition of the environment, in which the human self-centered tendency becomes more and more exposed. Ideas of the human-environment relationships (e.g. ecological development and sustainable development) reflect the political ideology at both local and global levels. The concept of environment is of course connected with the term *environment*, but it is far more than a term. Not only has it become more and more abstract and keeps expanding, but it abides in people's ideologies and serves as a weapon in social and political movements toward achieving a particular goal in human history.

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CONTENTS

Abstract	i
Acknowledgements	ii
Introduction	1
Part I: Background of the Research, Theoretical Framework and Methodology	5
1. Background of the Research on the Environment in the Field of Conceptual History	5
2. Theoretical Framework – Conceptual History	7
3. Methodology	10
Part II: Conceptualization of Environment in Euro-America	12
4. The Concept of Environment in Euro-America and the Environmental Movement	12
The origins of the English term <i>environment</i> and the German terms <i>Umgebung</i> and <i>Umwelt</i>	12
The development of the concept of environment in the 19 th century	14
The environmental movement and history	17
Part III: The Chinese Perception of and Responses to Modern Concept of Environment	22
5. What is the role of Japan in the conceptualization of environment in China?	22
The formation of the modern concept of <i>kankyō</i> (環境, environment) in modern Japan	22
Japan's impact on the introduction of the modern concept of environment in China	25
6. Conceptualization of Environment in China in the 20th and Early 21st Centuries	28
The origin and changing meanings of <i>huanjing</i> (环境, environment)	28
The development of the concept of <i>huanjing</i> (environment) since the 20 th century	33
The Chinese responses to environmental changes – the environmental movement from the 1970s	38
Environmental education since the 1970s	41
Summary	42

7. The Chinese Perception of the Environment via <i>Weisheng</i> (卫生, hygiene) starting in the 1920s	44
The changing meanings of <i>weisheng</i> (hygiene)	44
The perception of environment via the conceptualization of <i>huanjing weisheng</i> (environmental hygiene)	46
8. The Further Perception of Environmental Change via <i>Wuran</i> (pollution)	50
The formation of the modern concept of <i>wuran</i> (pollution)	50
The significance of the Chinese perception of the modern concept of <i>wuran</i> (pollution)	54
9. Conclusions	55
Bibliography	59
Appendix: Dictionaries consulted	65

Introduction¹

In recent decades, government, media and the public, at both the local and global levels, have become concerned with environmental pollution, and as a result have begun to promote sustainable development. Environmental issues in large developing countries such as China are a growing concern in a global society. However, in environmental research, few scholars have paid attention to the environmental concepts. Nevertheless, environmental concepts reflect people's perception, diverse experiences and expectations of the future in environmental discourse. How environmental terms were conceptualized and how people have used them differently in historical context reveal people's changing understanding and attitude towards the environment in the past and present, which also indicate the rationale of people's future behavior regarding their environment. Without a conceptual history of the environment, it is not possible to gain a fundamental understanding of the shifts in people's perception and expectations of the environment in a cultural, social and political context. In other words, environmental research requires an interdisciplinary approach, which includes a conceptual history of the environment.

The main research question of this thesis is thus: What is the trajectory of the concept of *environment* and how did the Chinese perceive and respond to it in the 20th and the early 21st centuries?

People's perception of the environment keeps changing in the process of making modernity. People's view of their environment in ancient times differs from that in the 20th and the early 21st centuries, and this reflects the shifts in their perception of the environment and environmental change in modern times. The main objective of this thesis is to study the shifts in people's perception of the environment and environmental change in modern China by applying conceptual history to Chinese discourse. Thus, I use conceptual history as a methodology to study the history of forming, using and developing the concept of environment in Euro-America and its integration and interaction with traditional Chinese ideas and people's responses to the concept and environmental change in modern China.

¹ All translations from Chinese, Japanese and German in this thesis (without a specific note) are done by the Author.

a) Concept vs. term

Concepts and terms are closely connected, but they are different. Koselleck stated that “The meaning of words can be defined more exactly, concepts can only be interpreted.”² In response to Koselleck’s distinction, Richter and Richter explain that a concept combines both historical experiences and various meanings, and therefore words may be defined while concepts can only be interpreted.³ Bödeker believes that the distinction lies in their capacity to have a fixed meaning.⁴ When it comes to the differentiation between a concept and a term or word in the field of conceptual history, scholars in most cases quoted Koselleck’s definition. However, the differentiation is still an ongoing debate.

Based on the study of conceptual history and my case studies of a conceptual history of smog and pollution, as well as the study of a conceptual history of environment in modern China, I distinguish a concept from a term as follows. A term, a pure term (not endowed with concepts) can be defined and not vague (e.g. *chair*). However, a concept is not simply a term, but a conceptualized term, which is like an open picture that can only be elaborated. An open picture indicates that the riches of its content can be extended toward an intended goal depending on the discourses and times. More importantly, a concept is often endowed with the thinking of philosophy, politics and sociology, etc. For these reasons, modern concepts can carry and reflect people’s experiences of modernity in a cultural, social and political context.

Table 1: Selected environmental concepts:

Environmental concepts		
environment	hygiene	pollution
环境	卫生	污染
huanjing	weisheng	wuran

Why select these three terms, *huanjing* (environment), *weisheng* (hygiene) and *wuran* (pollution) to study the conceptualization of environment in China?

These three terms are not pure terms, but have become concepts in modern China. After conceptualization, they became more and more abstract and connected with the thinking of philosophy, politics and sociology, etc. Pollution (condition of being polluted) and hygiene

² Brunner, Otto; Koselleck, Reinhart and Conze, Werner. (ed.) 1972 – 1997. pp. xxiii.

³ Richter, Melvin and Richter, Michaela W. 2006 (April). Vol.67. No.2. pp.345.

⁴ Bödeker, Hans Erich. 1998. pp.58.

(conditions as of cleanness) are the two opposite states of the environment. Examining how the Chinese look at pollution and hygiene can help in understanding their perception of the environment and environmental change. Moreover, the modern concept of *huanjing* (environment) is closely associated with the conceptualization of the two ancient terms *weisheng* (hygiene) and *wuran* (pollution).

Table 2 shows the number of times the selected environmental concepts appeared in the titles of the articles in China's national database from 1833-2016. What can we learn from it?

Chinese *huanjing* (environment), *wuran* (pollution), *weisheng* (hygiene) are not modern terms, but had existed in ancient China. So, they are ancient terms with a long historical background. A significant increase in the frequency of usage of the two terms *huanjing* (environment) and *weisheng* (hygiene) first appeared in the 1920-40s. The second significant change in the frequency of usage of the words *huanjing* (environment), *weisheng* (hygiene) and *wuran* (pollution) started in the 1970s. The frequency of the appearance of these three terms has increased dramatically since the 2000s. This indicates that topics about environmental hygiene became popular already in the early 20th century, and that environmental issues increasingly gained attention from the 1970s, and that they have been even more frequently discussed in Chinese society since the 2000s.

Table 2. The frequency of appearance of the selected environmental concepts in the titles of the articles in China's National Newspaper and Periodical Index Database from 1833-2016

Year	Environmental concepts		
	environment	hygiene	pollution
	环境 <i>huanjing</i>	卫生 <i>weisheng</i>	污染 <i>wuran</i>
1833-1899		55	
1900-1909		1890	1
1910-1919		664	2
1920-1929	415	11452	5
1930-1939	2082	32042	5
1940-1949	1346	11870	7
1950-1959		656	1
1960-1969	36	950	
1970-1979	569	5079	229
1980-1989	3798	3899	1177
1990-1999	19464	3340	3919
2000-2009	67340	9331	15236
2010-2016	45627	5374	13739

Source: *Quanguo baokan suoyin* (QGBKSY), National Newspaper and Periodical Index Database⁵

⁵ QGBKSY is a comprehensive search tool of Chinese newspapers and periodicals in China. It provides the Late Qing Dynasty Periodical Full-text Database (1833-1911), Chinese Periodical Full-text Database (1911-1949) and Chinese Periodical Index Database (1950-). It is provided by Shanghai Library. <http://www.cnbkcsy.net/home>

b) The thesis is divided into three parts:

Part I contains the background of current research on the environment in the field of conceptual history, as well as the theoretical framework and methodology adopted in this thesis. It aims to show the contribution of this thesis to current environmental research in the field of conceptual history.

Part II is about the conceptualization of the term *environment* – perception of modern environmental ideas in Euro-America. The purpose is to explore when the concept of environment arose in Euro-America and where it came from, as well as the significance of the appearance and development of the modern concept of environment.

Part III discusses how the Chinese received the modern concept of environment and how they responded to it and environmental change in the 20th and the early 21st centuries. It aims to give a picture of how Chinese *huanjing* became a modern concept of environment from its original root and how the Chinese responded to environmental change in modern times. It could be a complex result of the introduction of western scientific knowledge and the Japanese sanitary system, China's own environmental awareness, and the environmental movements in a global context.

Part I: Background of the Research, Theoretical Framework and Methodology

1. Background of the Research on the Environment in the Field of Conceptual History

Despite their importance, there is little research on environmental concepts in the West.⁶ Although conceptual history is relatively new to China, the attention to this field has increased in the last two decades. In the discourse of environment in China, the book *Concepts of Nature* contains a series of papers discussing the understanding of nature in China in comparison to Europe up to the 18th century. In this book, Schmidt-Glintzer argues that the discourse about nature in China is a part of how the elite have spread their knowledge of nature and influenced the ways of thinking of the population;⁷ Svarverud investigates the history of terminology of the Chinese *kongqi* (air), which is a result of the introduction of western knowledge via Japan; Cao Wei gives a brief introduction of the development of the idea of modern environment in Asia and argues that it was introduced to China through translating Japanese books in the fields of education, biology, geography, etc.; Ruth Rogaski's book *Hygienic Modernity* postulates that changing meanings of *weisheng* (hygiene) reflect Chinese experience of modernity. "Its meaning shifted away from Chinese cosmology and moved to encompass state power, scientific standards of progress, the cleanliness of bodies, and the fitness of races."⁸ Yu presents modern meanings of *weisheng* (hygiene), which came from the reception of western hygienic knowledge, the Japanese hygienic system and the word's original meaning.⁹

In the current research, most scholars focus on exploring the emergence of a concept (*i.e.* when and where and by whom a new concept was formed in modern China, compared to its original use in antiquity), while the social political contexts are less explored, and the study of the reception is mainly limited to the elite. How the modern concepts were formed and used in the West is also important for understanding the environmental movements in a global context, which continuously influence and interact with Chinese society, but it is seldom studied together. Moreover, the

⁶ In *Geschichtliche Grundbegriffe*, German terms for environment, *Umgebung* and *Umwelt*, are discussed. In Trevor Pearce's his article, "From *circumstances* to *environment*: Herbert Spencer and the origins of the idea of organism-environment interaction," he presents that Herbert Spencer popularized the idea of organism-environment interaction in the late 20th century. Besides, Jessop, Ralph. "Coinage of the term environment: a word without authority and Carlyle's displacement of the mechanical metaphor."

⁷ Schmidt-Glintzer. 2010. pp.538.

⁸ Rogaski, Ruth. 2004. pp. 1

⁹ Svarverud, Rune. 2014; Cao Wei 曹炜. 2012.03; Yu, Xinzhong 余新忠. 2008.

emergence of modern concepts in Chinese discourse, in many cases, after the introduction to China from the western countries (via Japan or not), did not happen within a national context alone but was an ongoing process of interaction between national and global contexts, especially for environmental concepts. However, further development of the use of a concept, and people's response to it in recent decades, is seldom compared to how it was perceived in the past.

The modern concept of environment did not come from China but from the West. Modern environmental concepts flowed into China and changed the way the Chinese see their environment. It influenced the way that the Chinese responded to their environment and environmental change in modern times. This thesis brings contributions to current environmental research in that it 1) studies the conceptualization of environment in Euro-America contexts; 2) explores how it was formed in Chinese through interaction with traditional Chinese ideas; and 3) tracks the reception of, understanding of and response to it among the population until 2016. It aims to widen the scope in studying the environmental concepts in Chinese discourse.

2. Theoretical Framework – Conceptual History¹⁰

Conceptual history is the study of basic concepts in a historical time, and has become a method for studying modern concepts. It provides a semantic check and investigates the present-day understandings of and responses to the modern concept that has been generated in a historical time, revealing the shifts of social, political and economic structures.¹¹

The term *conceptual history*, or *Begriffsgeschichte* in German, was coined by Hegel.¹² Scholars in Hegel's time used it to explore the fundamental meanings of philosophical terms. *Begriffsgeschichte*, derived from older German traditions of the history of philosophy, later developed its own distinctive methods. The modern concept of *Begriffsgeschichte*, founded by Reinhart Koselleck as a distinctive research method, arose in the 1950-1960s in West Germany, which specialized in the investigation of historical change and the making of modernity in the German context.¹³ The concept *Begriffsgeschichte* is closely connected to the ideas of the book *Geschichtliche Grundbegriffe* (GG), edited by Reinhart Koselleck, Otto Brunner and Werner Conze.¹⁴ In the 20th century, in parallel to the GG project, there were two other projects that practiced *Begriffsgeschichte*: 1) the *Historisches Wörterbuch der Philosophie* (*The Historical Dictionary of Philosophy*),¹⁵ and 2) the *Handbuch politisch-sozialer Grundbegriffe in Frankreich, 1680-1820* (*A Handbook of Basic Political and Social Concepts in France, 1680-1820*).¹⁶ The great success of these three publications and their application of *Begriffsgeschichte* in the late 20th century has, to a large extent, set high standards for the study of conceptual history.

Conceptual history, which differed from earlier philological analysis, concentrates on concepts as a unit of analysis and links conceptualized thoughts to the shifts in political and social structures. It identifies a transactional period (called *Sattelzeit*, created by Reinhart Koselleck), during which the basic concepts were endowed with new meanings reflecting on the shifts in social and political contexts. During this transactional period, Koselleck pointed out that political and social concepts experienced four major shifts; 1) *Verzeitlichung* (temporalization): “The concepts of progress,

¹⁰ The texts of this chapter are mainly from my exam paper for the course EAST4010 in the University of Oslo.

¹¹ Müller. 2014. pp.76.

¹² Ibid. pp.77.

¹³ Ibid.

¹⁴ *Geschichtliche Grundbegriffe: Historisches Lexikon zur politisch-sozialen Sprache in Deutschland*. 1972 - 1997

¹⁵ Ritter, Joachim. Bien, Günther. Gründer, Karlfried. Gabriel, Gottfried (ed.). 1980.

¹⁶ Reichardt, Rolf and Schmitt, Eberhard (ed.). 1985.

development, and emancipation are among the best known of those put into temporal frames of movement towards what were regarded as the goals of human history.”¹⁷ 2) *Demokratisierung* (democratization): social and political concepts were no longer exclusive to the elite but widely spread in society via various media. 3) *Ideologiesierbarkeit* (concepts were able to abide in ideologies): concepts became more general in the social contexts and more abstract in meaning. The term with “-isms” belong to this category. 4) *Politisierung* (politicization): concepts were continuously used as rhetorical weapons in political movements and conflicts. Moreover, in the transactional period, social and political concepts were changed according to one or more of these four characteristics. The result was that the social political concepts became more abstract than the terms can explain by their literary meanings.

The most influential work in the field of conceptual history is the GG project. The GG project was accomplished with a book collection of 8 volumes, which covered the study of around 120 concepts in over 7000 pages. It presents how the basic concepts used in the political and social language in the German-speaking world changed in the transactional period to modernity during the period 1750-1850. *Begriffsgeschichte* is used to present the existence, perception and impact of modernity in the German-speaking world, which treats concepts as both an agent and an expression of structural changes. The method of the GG project is to combine the history of concepts with social history. It demands that the resources of conceptual history and social history must be used in a combined manner in order to modify and detect the conceptual shifts. It requires a distinctive methodology for studying the history of concepts by analyzing concepts in both diachronic and synchronic discourse. As for selecting materials, it selected as wide and broad a range of materials as possible, which covered the sources written by major German thinkers in various fields - such as philosophy, politics, economics, theology, etc. The information is collected from newspapers, journals and speeches, governmental documents and memoirs, diaries, etc. In addition, it demands a thorough and systematic comparison of the entries in German, bilingual and multilingual dictionaries in each period, and in encyclopedias, handbooks and thesauri.¹⁸

Using Conceptual history as a theoretical framework, it is possible to conduct an interdisciplinary study for exploring people’s perception of the environment and environmental change in social

¹⁷ Richter and Richter. 2006. pp.349

¹⁸ Richter. 1987. pp.253-254.

political contexts from antiquity to modern time, through the experience of human beings that the environmental concepts carried and carry. More importantly, it can provide a fundamental understanding of the shifts in people's perception of and responses to the environment in the process of modernity.

3. Methodology

In this thesis, I will use conceptual history as a methodology for selecting and analyzing sources. The research is conducted on the basis of four layers. Firstly, I systematically check and compare the entries in German, English, Japanese, Chinese, bilingual and multilingual dictionaries published in the 1850s-2000s, as well as in encyclopedias and handbooks in the 20th century. It aims to find out in which period the changes in meanings of the selected terms occurred in the German, English, Japanese and Chinese languages.

Secondly, in order to explore the rise and development of the modern concept of environment among the elites in both Euro-America and China, I select as wide and broad a range of materials as possible. The selection covers the sources written by major thinkers in various fields of philosophy, biology, meteorology, education, politics, etc. in German, English and Chinese discourses in the years 1820-2016. The information is also collected from historical school textbooks, newspapers, journals, speeches and governmental documents, etc.

Thirdly, I explore the history of modern biology, hygiene and environmental movements in Euro-America and China. It aims to find out the specific social political contexts in which the modern environmental concepts developed.

Finally, I use databases to sort out primary sources in Japanese and Chinese discourses from the late 19th century to the early 21st century. It aims to find out the influence of Japan on the Chinese reception of the modern environmental concept, as well as the Chinese population's (not limited to the elites and government) responses to it and environmental change in the 20th and early 21st centuries.

In Japanese discourse:

- Japanese database: *Digital Library from the Meiji Era* (近代デジタルライブラリー)¹⁹
- Japan's online web archive: *JapanKnowledge Lib.*²⁰

¹⁹ *Digital Library from the Meiji Era* contains books and periodicals published after 1868 <http://kindai.ndl.go.jp/>

²⁰ *Japan Knowledge Lib* contains around 50 different sources including encyclopedia, dictionaries, reference compilations and periodical sources.

In Chinese discourse:

- Books in Late Qing and Republican period: *Jindai wenxian* (literature in Late Qing and Republican period) database provided by Shanghai Library (only accessible by visiting the Shanghai Library)
- National newspapers and periodicals database: *Quanguo baokan suoyin* (全国报刊索引) and *People's Daily* database²¹

²¹ *People's Daily* (1948-) is a governmental newspaper, and reflects the central government's attitude.

Part II: Conceptualization of Environment in Euro-America

4. The Concept of Environment in Euro-America and the Environmental Movement

The more environmental issues became a growing concern in a global context, the more environmental concepts kept abiding in people's ideologies and changed people's behaviors toward the environment. However, when did the concept of environment arise and where did it come from in the first place? In this chapter, I will investigate the process of conceptualization of environment – when the concept of environment arose in Euro-America and where it came from. First, I trace the origins of the English term *environment* and German terms *Umgebung* and *Umwelt*. Then, I seek to find out in which period their meanings became changed and what caused such changes in meanings in a social political context. Finally, I discuss how the modern concept of environment was used and how people responded to the environment and environmental change in the western context, in connection to the environmental movement since the 1960s.

4.1. The origins of the English term *environment* and the German terms *Umgebung* and *Umwelt*

In English discourse, *environment* borrowed the Old French term *environ*. It first appeared in the early 17th century and referred to the act or fact of the surroundings. In the 19th century, the content of this term started changing. In 1828²², its meaning was extended to “the surrounding things and conditions affecting an animal or plant”, as defined by the Scottish philosopher and writer Thomas Carlyle (1795-1881). In 1887, the adjective term *environmental* appeared. In 1923, the term *environmentalism* was coined to refer to “emphasizing on environment in the development of an individual or group”. In 1972, it was further developed and referred to as “the ecological sense of living things.” (see Table 3)

²² An error here in *The Barnhart Dictionary of Etymology* regarding the year of publication. Carlyle's translation work was published in July 1828 in the *Foreign Review*, instead of 1827. See Jessop, Ralph. 2012. pp.711.

Table 3. Entries of environment related terms in *The Barnhart Dictionary of Etymology*²³

Term	Part of Speech	Year of Appearance	Meanings of the Term	How or Where was the Term Formed
environ	verbs	about 1350	surround, beset	borrowed from Old French <i>environner</i> , surround
environment	noun	1603	the act or fact of surrounding	formed from English <i>environ</i> , +ment
		1827	the surrounding things and conditions affecting an animal or plant	in Carlyle's writings
environmental	adjective	1887		formed from English term <i>environ</i> , +al
environmentalism	noun	1923	emphasis on environment in the development of an individual or group	formed from English <i>environmental</i> , +ism
		1972	The ecological sense of living things	

In German discourse, *Umgebung* is an ancient term, which first appeared in the 16th century and referred to the state of circling and hanging around. Since the beginning of the 19th century its meaning has developed to its current meaning – landscape, a place or group of people surrounding someone.²⁴ In the beginning of the 19th century, *Umwelt* was borrowed from the Danish word *omverden* by the Danish poet Jens Baggesen (1764-1826), who used it as a description for the surrounding world in his poem *Ode an Napoleon* (1800). “It transforms the flood into fire; fog in Northern lights; Rain in radiance that appears from afar, the surroundings; An etheric firmament, the destiny of the poet”.²⁵ Further, *Umwelt* was often delineated by the poet Johann Wolfgang Goethe in his works. For example, “*Wie ich in mir bin, so gestalte ich, mich ins Leben hinaus, so will ich die Umwelt sehen (1822)*”²⁶ (As I am in myself, I configure myself out of life, so I want to see the surroundings.) However, it didn’t refer to the biological sense of environment that affects a living being until it was used in 1909 by the German biologist Jakob von Uexküll (1864-1944). In the second half of the 20th century, environmental education in preventing environmental pollution and promoting environmental friendliness and protection was widespread in Germany.²⁷

In short, before the English *environment* and German *Umgebung* and *Umwelt* became three modern environmental concepts, they were used in a similar way – they referred to the

²³ Barnhart, Robert and Sreinmetz, Sol. 1988. pp.334-335.

²⁴ *Umgebung: 16 Jh. in der Bed. “das Herumgeben, Umhängen”; seit dem Beginn des 19. Jh.s in der heute üblichen Bed. “Landschaft, die einen Ort, Personenkreis, der jemanden umgibt”*. 2014. Duden Bd. 7. pp.318-319

²⁵ *und es verwandelt die fluth in feuer sich, nebel in nordlicht, regen in strahlenerguss, dass von fern erscheint der umwelt, ein ätherische feste die schicksalshölle des dichters*. (Baggesen poet. W.2,102) Deutsches Wörterbuch von Jacob und Wilhelm Grimm. 16 Bde. in 32 Teilbänden. Leipzig 1854-1961.

²⁶ Ibid.

²⁷ *Umwelt: Das seit 1800 bezeugte Wort ist eine Lehnübersetzung von dän. omverden “umgebendes Land; umgebende Welt” die wohl erstmals vom dt. schreibenden dän. Dichter J. Baggesen geprägt wurde. In der 2. Hälfte des 19. Jh.s wurde Umwelt als Ersatzwort für fanz. Millieu gebräuchlich. Im biologischen Sinne von “Umgebung eines Lebensbedingungen beeinflusst”, wurde es zuerst 1909 von dem deutschen Biologen J. von Uexküll (1864-1944) verwendet. Zu Umwelt stellen sich in der 2. Hälfte des 20. Jh.s zahlreiche Bildungen wie Umweltbelastung, umweltfreundlich, Umweltschutz*. 2014. Duden Bd. 7. pp.881

surroundings (not necessarily surrounding human beings, though). The shifts in the use of the term (*i.e.* English *environment*, German *Umgebung* and *Umwelt*) started from the formation of the concept of the interaction between creatures and their changing external circumstances via the English term *environment* in the mid-nineteenth century.

4.2. The development of the concept of environment in the 19th century

The emergence of the modern concept of environment started from Carlyle's translation of Goethe's work published in the *Foreign Review* in July 1828. Carlyle selected the English term *environment* to express his understanding of the content of the German term *Umgebung* in Goethe's work.

*In einem solchen Element, bei solcher Umgebung, bei Liebhabereien und Studien dieser Art, von unbefriedigten Leidenschaften gepeinigt, von außen zu bedeutenden Handlungen keineswegs angeregt, in der einzigen Aussicht, uns in einem schleppenden, geistlosen, bürgerlichen Leben hinhalten zu müssen, befreundete man sich, in unmutigem Übermut, mit dem Gedanken, das Leben, wenn es einem nicht mehr anstehe, nach eigenem Belieben allenfalls verlassen zu können, und half sich damit über die Unbilden und Langeweile der Tage notdürftig genug hin.*²⁸

Carlyle's translation:

*In such an element, with such an environment of circumstances, with studies and tastes of this sort, harassed by unsatisfied desires, externally nowhere called forth to important action; with the sole prospect of dragging in a languid, spiritless, mere civic life, we had recurred, in our disconsolate pride to the thought that life, when it no longer sited one, might be cast aside at pleasure; and had helped ourselves hereby, stiltedly enough, over the crosses and tedium of the time.*²⁹

In Goethe's writing, *Umgebung* appeared to be a reflection of various life circumstances, internal and external, physical, psychological, mental and spiritual, etc. Carlyle chose the term *environment* to express such a complex atmosphere, which was abstract and left some space for the imagination of even more complex life circumstances Goethe might have been facing. Before Carlyle used *environment* in this manner, this term was simply regarded as the physical surroundings. It, however, started to be used for complex life circumstances in Carlyle's writings after that.

²⁸ Goethe, Johann Wolfgang von. 1984. Vol. 3. pp.488.

²⁹ Carlyle, Thomas. 1828 (July). Vol. 2. pp.98.

In what manner was the concept of environment connected to the concept of modern biology, deriving from the meanings of the surroundings and complex life circumstances of human beings? The further conceptualization of the term *environment* and its popularization was associated with Herbert Spencer (1820-1903), an English philosopher, biologist, anthropologist and sociologist, and his work, *Principles of psychology* (1855).

In Pearce's article "From *circumstances* to *environment*: Herbert Spencer and the origins of the idea of organism-environment interaction", he postulates how the concept of the interaction between organism and environment was formed and popularized via the term *environment* by Spencer through his intellectual trajectory in the mid-nineteenth century. Spencer had broad exposure to biological ideas in the 1840s that changed his views of the relationship between organism and the changing external circumstances. In the 1850s, after Spencer moved to London and encountered the intellectual circle around the publisher John Chapman there, he encountered Auguste Comte's work about correspondence between organism and environment in George Henry Lewes and Harriet Martineau's translations.³⁰ Pearce argued that "Spencer inherited the idea of organism-environment interaction directly from Comte" and "it was Comte who first used *milieu* in the singular to mean an organism's external circumstances more generally, coming close to a dialectical conception of the relations between organism and milieu".³¹

In Harriet Martineau's translation of Comte's work, he used the term *environment* for the French singular term *milieu*. The significance of the use of the term *environment* is that "This is the advantage of a singular term like *environment* – it is a whole variety of circumstances, but *abstractedly regarded*".³² Later, through the publication of Spencer's *Principles of psychology* (1855), he popularized the term *environment* and its new concept of interaction between organism and environment in the English-speaking world.

*But it was Spencer's Principles of psychology that brought the word 'environment' and the idea of organism–environment interaction to much of the world. The idea of environment has a history, and its ubiquity today conceals the work of metaphysical abstraction that produced it.*³³

³⁰ Pearce, Trevor. 2010. Vol.41(3). pp.246-247.

³¹ Ibid. pp.247.

³² Ibid. pp.248.

³³ Ibid. pp.250.

Spencer popularized the term *environment* through endowing it with a new concept of organism-environment interaction in his work, and its influence continued. However, the concept of environment had yet to be developed in an ecological sense (*i.e.* idea of environmental protection) by the end of the 19th century. In this regard, Pearce's conclusion about the origin and development of the concept of environment is not yet complete. Therefore, in order to investigate the origin and development of the concept of environment, focusing only on studying the history of ideas about organism-environment interaction is not sufficient. Further research on how the concept was expanded to work towards the goal of creating an ecological sense in human history in the 20th century and the specific social political context behind are needed.

During the 19th century, the conceptualization of the term *environment* went through two stages. In the early 19th century, the term *environment* was extended from the surroundings to the more abstract and complex life circumstances through Carlyle's translation of Goethe's work, and it later was endowed with a new concept of organism-environment interaction through Spencer's *Principles of psychology* in the mid-nineteenth century and it got popularized since the late 19th century.

The same happened to the conceptualization of *Umwelt* in the German-speaking world as well, but it was conducted later than *environment*, namely in the early 20th century instead. Moreover, there appears to be no clear connection between the newly endowed biological sense of *environment* and the formulation of the biological sense of the German *Umwelt*. Therefore, it appears that in the first place, the development of the biological sense of the modern concept of environment in the English-speaking and German-speaking worlds was rather conducted in parallel and independently in their worlds.

In brief, in the early 20th century, the term *Umwelt* was used as a concept of organism-environment interaction through the environmental theory developed by the German biologist and philosopher Jakob Johann Baron von Uexküll. In his *Umwelt und Innenwelt der Tiere* (1909), he differed *Umwelt* ("the system of distinctions by which that species orients itself functionally in its world") from *Umgebung* (surroundings),³⁴ and contributed to the coinage of the modern concept of *Umwelt* in the German-speaking world.

³⁴ Uexküll, Jakob von. 2010. pp.36.

In the late 19th and the early 20th centuries, the concept of environment was formed through the terms *environment* and *Umwelt* in the English-speaking and German-speaking worlds respectively. The more the concept of environment developed, the more abstract it became. However, the recognition of the importance of environmental protection was still quite limited. The reasons for this are: 1) this new idea of the interaction between environment and creatures circulated mostly among intellectuals; and 2) an ecological sense of environment had yet to be developed at that time. So, how has the environmental concept spread among the population in the western countries? For what reasons was it further endowed with an ecological sense and used widely in a global context?

4.3. Environmental movement and history

The spread of the modern concept of environment among the population was a result of the environmental crisis and movement in the mid-20th century. The environmental movement in the western countries has gone through three stages (see Figure 1). The first stage was in the 1850s-1900, starting from the emergence of an environmental concept that explores the interaction relationship of organism and the environment. However, the new concept of environment was limited to the elite. The second stage was in the 1900s-1960, during which the ecological sense of the environment started to arise. The third stage began in the 1960s when the environmental movement first started in the USA and expanded to the rest of the world. During this stage, the modern ecological idea of the environment was firmly formed and spread in a global context.

In the early 1960s, the wind of the environmental movement began to blow in the western countries, starting from the United States. Samuel P. Hays, a pioneer in the field of environmental history, pointed out that after World War II, large social and economic changes happened in American society, which shifted people's values so that they demanded a higher quality of their surrounding environment, *i.e.* the air, water and land.³⁵ "Much of the initial interest concerned aesthetics; smoke made cities unattractive, and raw sewage floating in streams, such as the Potomac River at Washington, D.C., was both unsightly and offensive to human smell".³⁶ As a result, federal laws

³⁵ Samuel P. Hays. 1981. pp.219.

³⁶ *Ibid.*

were passed in the 1960s, which gave a strong support for passing the Clean Air Act and the Clean Water Act in the 1970 and 1972. Rachel Carson's *Silent Spring* (1962) also challenged the American chemical industry concerning the indiscriminate use of pesticides. The concerns about harmful chemicals increased among the American public and it led to the environmental movement, which resulted in the establishment of the U.S. Environmental Protection Agency in December 1970.³⁷

In the late 1960s, various types of environmental pollution became part of a global awareness: "Noting the continuing and accelerating impairment of the quality of the human environment caused by such factors as air and water pollution, erosion, and other forms of soil deterioration, secondary effects of biocides, waste and noise..." (see Figure 2).³⁸ Since the late 1970s, various environmental affairs have become global issues (see Figure 1). In June 1972, the UN Conference on the Human Environment was held in Stockholm, which led to the establishment of the United Nations Environment Programme (UNEP). The term *environmentalism* in 1972 was thereby associated with some sense of ecology.³⁹

³⁷ Ibid. pp.219-220.

³⁸ "Economic and Social Council resolution 1346 (XLV) of 30 July 1968 recommended the General Assembly consider convening a UN conference on problems of the human environment" from United Nations online documentation, <http://research.un.org/en/docs/environment/conferences> pp.8.

³⁹ Barnhart, Robert and Sreinmetz, Sol. 1988. pp.335

Figure 1. The environmental movement in Euro-America

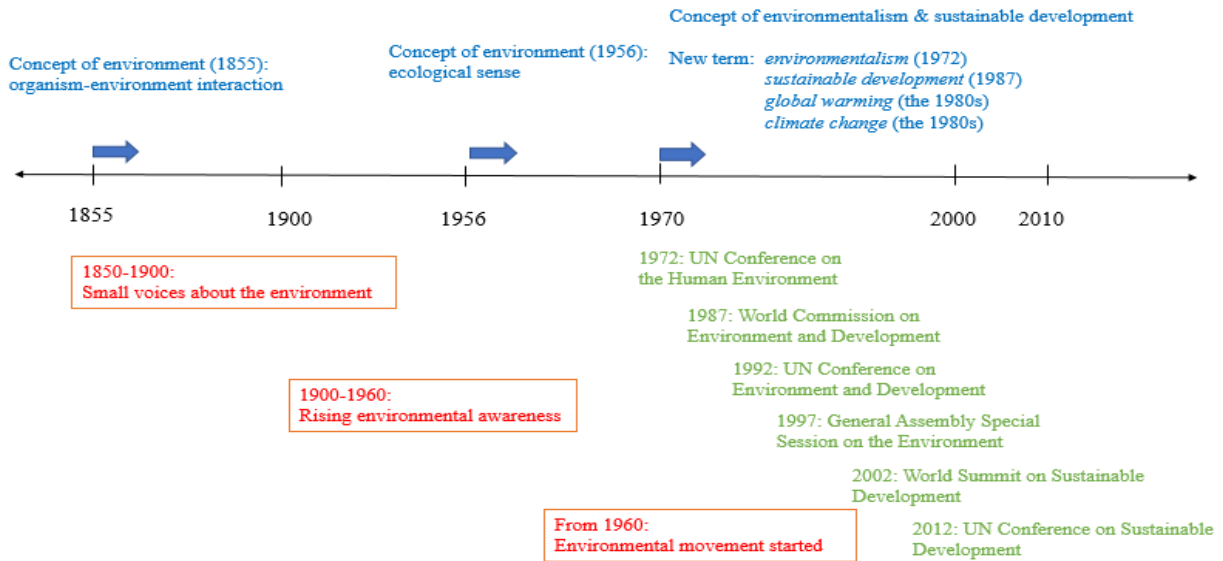


Figure 2. “Economic and Social Council resolution 1346 (XLV) of 30 July 1968”

1346 (XLV). Question of convening an international conference on the problems of human environment

The Economic and Social Council,

Noting the continuing and accelerating impairment of the quality of the human environment caused by such factors as air and water pollution, erosion, and other forms of soil deterioration, secondary effects of biocides, waste and noise,

Concerned with the consequent effects thereof on the condition of man, his physical and mental well-being, his dignity and his enjoyment of basic human rights in developing as well as developed countries,

Convinced of the urgent need for intensified action, at the national and international level, in order to limit and, where possible, to eliminate the impairment of the human environment and in order to protect and improve the natural surroundings in the interest of man,

Convinced also that due attention to problems of the human environment is essential for sound economic and social development,

Bearing in mind the important work on some problems of the human environment at present being undertaken by organizations in the United Nations system, in particular the United Nations (including the Economic Commission for Europe), the International Labour Organization, the Food and Agriculture Organization of the United Nations, the United Nations Educational, Scientific and Cultural Organization, the World Health Organization, the World Meteorological Organization, the Inter-Governmental Maritime Consultative Organization and the International Atomic Energy Agency, as referred to in the report of the Secretary-General on activities of United Nations organizations and programmes relevant to the human environment,³⁴

In the 1970-80s, the increasing perception of global warming and climate change in Euro-America resulted in the popularity of the terms *global warming* and *climate change*. In 1983, the UN World Commission on Environment and Development was established. Dr. Gro Harlem Brundtland (1939- , the first woman prime minister of Norway) was appointed as chairperson, and she coined the term *sustainable development* in the Brundtland Report (1987)⁴⁰. Since then, its concept has widely spread out around the world as a slogan.

Source: <http://research.un.org/en/docs/environment/conferences>

⁴⁰ “Our Common Future” (the Brundtland report 1987). UN documentation: A/42/427. http://www.un.org/en/ga/search/view_doc.asp?symbol=A/42/4274

In June 1992, the United Nations Conference on Environment and Development was held in Rio de Janeiro, Brazil, and led to the establishment of the UN Commission on Sustainable Development. Global warming and climate change were the major issues at the Conference. In 1997, the UN General Assembly Special Session on the Environment was held in New York, followed by the World Summit on Sustainable Development held in Johannesburg in 2002. Since the 1990s, sustainable development has been the focus at each global environmental conference. In 2012, the UN Conference on Sustainable Development (Rio+20) was held in Rio de Janeiro. It called for implementing sustainable development at all levels and in various aspects: food security and nutrition, sustainable agriculture, water and sanitation, energy, sustainable tourism, transport, sustainable cities and human settlements, health and population, oceans and seas, small island developing states, least developed countries, Africa, disaster risk reduction, climate change, forests, biodiversity, chemicals and waste, mining, etc.⁴¹

We therefore acknowledge the need to further mainstream sustainable development at all levels, integrating economic, social and environmental aspects and recognizing their interlinkages, so as to achieve sustainable development in all its dimensions.⁴²

Along with the environmental movement in a global context, environmental history as a study of the interaction between human and the natural world emerged in the 1970-80s. Recent research in this field is quite dynamic. Some provides a brief overview of the history of the earth and the environment;⁴³ 2) some discusses complex interaction among the environment, society, economy, cultures and political power;⁴⁴ and some explores how people think of nature.⁴⁵

In recent decades, environmental problems have developed quickly and have spread out across the whole world. The situation has become worse in large, developing countries such as China. In the second part of this thesis, I will explore the reception and development of western environmental concepts in China in the 20th and early 21st centuries. This aims to give a picture of how the western modern idea of environment was introduced and interacted with Chinese classical ideas of

⁴¹ "The future we want", UN documentation: A/CONF.216/16.
http://www.un.org/en/ga/search/view_doc.asp?symbol=A/CONF.216/16

⁴² Ibid.

⁴³ McNeill, John.2003, Hughes, J. Donald.2006.

⁴⁴ Holdren, John P.2008; *The Oxford Handbook of Environmental History*. 2014; *The Oxford Companion to Politics of the World*, Krieger, Joel.2001.

⁴⁵ Weller, Robert P.2006; Wulf, Andrea.2015.

environment, as well as the Chinese perception of and responses to their environment and environmental change in the 20th and the early 21st centuries.

Part III: The Chinese Perception of and Responses to the Modern Concept of Environment

After the modern idea of environment was formed and developed in Euro-America, in what manner was it introduced to China, and what was the Chinese reaction to it? Part III discusses how the Chinese received the modern concept of environment and how they responded to it and environmental change in the 20th and early 21st centuries. It aims to give a picture of how Chinese *huanjing* became a modern concept of environment from its original root and how the Chinese perceived and responded to the environment and environmental change in modern times.

5. What Is the Role of Japan in the Conceptualization of Environment in China?

After Japan's success in the Meiji Reform, in the early 20th century in particular, Japan played an important role in introducing modern western concepts and their advanced science and technology to the rest of the Asian countries. How was the modern concept of environment introduced to China, via Japan or not? In this chapter, I explore the formation of the modern Japanese *kankyō* (環境, environment, which uses the same Chinese characters to refer to the English *environment*) and the use of it in the 20th century in Japanese discourse. The purpose is to discover any connection between the formation of the modern concept of environment in Japan and the conceptualization of the modern sense of environment in Chinese discourse.

5.1. The formation of the modern concept of *kankyō* (環境, environment) in modern Japan

In *Dictionary of the Japanese Language (Nihon Kokugo Daijiten 日本国語大辞典)*,⁴⁶ published in 1972-76, the Japanese *kankyō* (環境, environment) has two meanings (see Figure 3). One refers to the surrounding areas. The other means the surrounding world that influences and interacts with the organism. Interestingly, it points out that the origin of the Japanese *kankyō* (環境, environment) was from a Chinese historical book, *Yuanshi* (The *History of Yuan*, 元史), composed in the Ming

⁴⁶ *Dictionary of the Japanese Language* contains 12 volumes, compiled by the Nihon Daijiten Kankōkai 日本大辞典刊行会, published in 1972-76. It includes etymology and history of usage of the words. It also contains more definitions of words dating from post-medieval Japan than many of its predecessors and more illustrative source citations than any other dictionary currently available. Entry for the term *kankyō* (環境, environment), see: <http://japanknowledge.com/resources.asiaportal.info/lib/display/?lid=200200f7e2572N2d56X1>

dynasty in 1370. The second meaning of *kankyō* came from translating the English term *environment* in the book *Tetsugaku Jii* (哲学字彙, *Philosophical Dictionary*).⁴⁷ The examples from the period 1900-1947 given in the *Dictionary of the Japanese Language* reflect what people's understanding and experience of *kankyō* (環境, environment) was like in the first half of the 20th century.

Figure 3. Entry of *kankyō* (環境, environment) in *Dictionary of the Japanese Language* (日本国語大辞典)

日本国語大辞典

かん-きょう [クワンキヤウ] 【環境】

解説・用例

〔名〕

(1)四方のさかい。周囲の境界。まわり。
*元史・余闕伝「環境築『堡者』」

(2)まわりの外界。まわりをとり囲んでいる事物。特に人間や生物をとりまき、それとある関係を持って、直接、間接の影響を与える外界。自然的環境と社会的環境とに大別する。
*パーカー氏統合教授の学理(1900)〈市川源三〉ニ「故に人類進化の歷程を明かにせんとするは、其の環境、事情、勢力等の、彼の動作に影響したるものを討究するの必要がある」
*新しい言葉の字引(1918)〈服部嘉香・植原路郎〉「環境 Milieu (仏) 外界又は周囲のこと」
*秋立つまで(1930)〈嘉村磯多〉「互に狂風的な環境から解放された母と娘とは」
*学校教育法(1947)七七条「幼稚園は、幼児を保育し、適当な環境を与えて、その心身の発達を助長することを目的とする」
*自由学校(1950)〈獅子文六〉都会の谷間「第一に、環境が幽雅である。こんなに、樹木が多く」

語誌

漢籍に見える(1)が原義。(2)の意は、はじめ「境象」(「哲学字彙」のenvironmentの訳語)あるいは「境遇」(同じくcircumstanceの訳語)という語で表わっていた。「環境」が一般化したのは大正期。

In 1900: *Mr. Parker's pedagogical principles* (パーカー氏統合教授之学理) by Genzo Ichikawa 市川源三:

Therefore, in order to explain the evolution of human beings, it needs to be discussed what affects his action, including his environment, things and force.

In 1918: *Dictionary of new lexicon* (新しい言葉の字引) by Yoshika Hattori, Roro Uehara 服部嘉香・植原路郎:

The French word Milieu was translated to the surroundings.

In 1930: *Until the coming of autumn* (秋立つまで) by Isota Kamura 嘉村磯多:

The mother and daughter are set free from their narrow life circumstances.

In 1947: *Regulations of school pedagogy* (学校教育法), Item 77:

The purpose of kindergarten is to protect and raise the children and provide them with suitable environment to be helpful for the growth of their body and psychology.

In 1950: *School of Freedom* (自由学校) by Bunroku Shishi 獅子文六:

(The city in the valleys is) first, environment is very quiet. There are so many trees.

Based on the examples above, it appears that in the early 20th century, the meanings of *kankyō* (環境, environment) developed from the surroundings to life circumstances and to interaction between

⁴⁷ Tetsujirō, Inoue 井上哲次郎 and Ariga, Nagao 有賀長雄. 1884.

organism and environment. Furthermore, in order to find out how the new concept of environment has been used among the Japanese population, I searched for *kankyō* (環境, environment) in the database *Digital Library from the Meiji Era*, and got the frequency of how often *kankyō* is used in the titles of books and periodicals from 1868-2016.

Table 4. List of topics of *kankyō* (環境, environment) in the titles of the articles in *Digital Library from the Meiji Era*

Year	Frequency	Topic
1900-1909	3	biological environment, natural environment
1910-1919	32	environment of the time, life circumstances, natural environment, social environment
1920-1929	368	residential condition, environmental hygiene
1930-1939	707	geographical environment, natural environment, life circumstances, environmentalism (physical environment, economic environment,
1940-1949	464	metropolis environment, biological environment, life circumstances, physiological environment
1950-1959	221	environmental hygiene, family condition, geographical environment
1960-1969	806	environmental pollution, environmental engineering (pollution, hygiene), urban pollution (air pollution)
1970-1979	1554	environmental pollution, environmental hygiene, environmental science , environmental damage
1980-1989	1681	ocean environment, atmospheric environment
1990-1999	5492	road traffic environment, light environment, workplace environment, global environmental problems
2000-2009	62017	environmental pollution, environmental protection, marketing environment, IT environment, investment environment
2010-2016	37781	natural environment, environmental degradation, financial environment, consumption environment

Although the database covers the Meiji Era (1868-1912), there is no record of that the term *kankyō* (環境, environment) appearing in the titles of the articles from 1868-1899 in the database. The significant change in frequency of this term happened in the 1920s, 1960s and the 2000s.

Before 1920, *kankyō* was mostly used in reference to social environment and natural environment. In the 1920s, a new term *kankyō eisei* (環境衛生, environmental hygiene) appeared. And in the 1960s, yet another new term, *kankyō osen* (環境汚染, environmental pollution), appeared. Since the beginning of the 21st century, environment has been used in a very wide range of contexts: environmental pollution, marketing environment, information environment, economic environment, investment environment, etc. In short, it appears that the modern concept of environment continued to develop after the 1920s. It has developed from a biological sense of environment (*i.e.* interaction between organism and the environment) to environmental hygiene and environmental pollution, and further to other types of environment.

5.2. Japan's impact on the introduction of the modern concept of environment in China

Cao Wei in his Chinese article “The brief description of the evolution and development of the ideas in the terms of *environment* and *environmental design*,”⁴⁸ postulates that the modern concept of environment was introduced to Japan through translating western books. Moreover, he argues that it was via Japan that the modern concept of environment was further introduced to the rest of Asia, including China, through the translation of Japanese books in the fields of education, biology, geography, etc.

Although Cao does not give detailed references regarding his claims, there are nevertheless some points to look at in his narrative of the formation and development of the modern concept of environment in Japan.

The English term *environment* was introduced to Asia through Japan. In 1872, Shinpei Kobayashi 小林新兵 first added this term into his *English-Japanese dictionary* 《英日对译辞书》. In this dictionary, the English term *environment* was translated to the surroundings. Since then, the English term *environment* has appeared in other major Japanese dictionaries as well.

Japanese scholars once tried to pick Chinese words such as *huanxiang* (環象, to circle), *waijie* (外界, outward world), *jingyu* (境遇, circumstances) and *baowei* (包圍, to surround) to translate the English *environment*. However, these words cannot fully express the modern meaning of *environment*. In 1900 when western Darwinism was introduced to Japan, the Japanese scholar Genzo Ichikawa 市川源三 used *kankyō* (環境, environment) to refer to environment in a sense of environmental hygiene in his translated book⁴⁹, *Mr. Parker's pedagogical principles* 《帕克氏综合教授原理》. After the Meiji Reform, *kankyō* (環境, environment) as an environmental concept was accepted and began to be widely used in society.

Since 1900, *environment* has become a key concept to be discussed by renowned Japanese scholars in every field. Among them, the Japanese geographer Michitoshi Odauchi 小田内通敏 translated Ellen Churchill Semple's book, *Influences of geographic environment* in 1917; the artist Sumida Shigetaro 墨田重太郎 published his book, *Look forward to the land – environment of art* 《憧憬之地—艺术环境》 in 1920; and the journalist Yoshitane Tochinai 柄内吉胤 published the book, *On the studies of urban problems from an environmental perspective* 《从环境角度看都市问题的研究》 in 1922. Since then, environment was not only used in the field of education, biology, geography and city planning, but also applied to the field of art design, which resulted in a new discipline of Environmental Design.⁵⁰

⁴⁸ Cao Wei 曹炜. 2012.03, No.88, pp.37-39.

⁴⁹ There is an error in Cao's article here. This book was originally written by Francis Wayland Parker, and the Japanese scholar Genzo Ichikawa 市川源三 translated Parker's book. However, in Cao's article, he mentioned the Japanese scholar Genzo Ichikawa 市川源三 was the original author.

⁵⁰ Cao Wei. 2012. pp.37-38.

When the modern concept of environment was first introduced to Japan, the English *environment* was not translated to *kankyō* (環境) yet, but *kansho* (環象, surroundings) and *kyōgū* (境遇, circumstances), as recorded in the Japanese translated book *Tetsugaku Jii* (哲学字彙, *Philosophical Dictionary*), published in 1884. It was the same situation in Chinese discourse. *An Etymological Glossary of Selected Modern Chinese Words*, published in 2001, recorded new terms that were mainly coined in 1800-1949. *Huanjing* (环境, environment) was regarded as a new term and referred to the English sense of *environment* – surrounding circumstances and conditions. However, the original Chinese text used *huanxiang* (环象, surroundings) instead of *huanjing* (环境, environment) to refer to environment. “儿童之志趣，知识及将来所操之职业，与其所处之环象 Environment 甚有关系。”⁵¹ (Children’s aspiration and interest, knowledge and future career is rather closely related to their living surroundings.)

In the English-Chinese dictionary published in 1913, *A Dictionary of Philosophical Terms* (edited by Dr. Timothy Richard and Donald MacGillivray) and the first Chinese philosophical dictionary (*Zhexue cidian*, 哲学辞典) published in 1926 (edited by Fan Bingqing 樊炳清, used English and Japanese books as references), there was no appearance of *huanjing* (环境, environment) - but rather *waiwei* (外围, surrounding) and *jingyu* (境遇, circumstances) for the German *Umgebung* and English *environment*.⁵² Therefore, it shows that before *huanjing* (环境) became a formal term for the modern concept of environment, other Chinese terms were used. Then, what eventually led *huanjing* (环境, environment) to be endowed with modern concept of environment?

In *A Dictionary of Loan Words and Hybrid Words in Chinese*, published in 1984, *huanjing* (环境, environment) is regarded as a loan word for English *environment* and *circumstances*. It was borrowed from Japanese *kankyō* (環境, environment) to refer to; 1) surrounding jurisdiction area, and 2) surrounding circumstances and conditions.⁵³ In addition, as the same word was recorded in the *Dictionary of the Japanese Language*, this Chinese dictionary also points out that the origin of Japanese *kankyō* (環境, environment) came from the ancient Chinese historical book *Yuanshi* (The

⁵¹ Xu, Wenkan 徐文堪 et al. 2001. pp.110-111.

⁵² Modern Chinese Scientific Terminologies, a repository of Chinese scientific, philosophical and political terms coined in the 19th and early 20th century. Accessed on 17 March 2017 from <http://mcst.uni-hd.de/procSearch/procSearchMCST.lasso>

⁵³ Liu, Zhengtan 刘正琰, et al. (ed.) 1984. pp.143.

History of Yuan, 元史). This means that because of the modern use of the Japanese *kankyō* (環境, environment), which had the same root as the Chinese *huanjing* (环境), the Chinese term *huanjing* replaced the other terms and became the term for the modern concept of environment.

So far, I have shown that the modern idea of Japanese *kankyō* (環境, environment) was introduced from the modern western environmental concept through translation. The spread of the modern concept of environment in Japanese discourse was closely associated with the introduction of western knowledge about environmental hygiene and the environmental issues regarding industrial pollution (see also Chapter 7). More importantly, the development of the modern idea of Chinese *huanjing* (environment) was introduced from the modern western concept of environment through translation, and it was also closely connected with the modern use of the Japanese *kankyō* (環境, environment).

6. Conceptualization of Environment in China in the 20th and the Early 21st Centuries

Before *huanjing* became the modern concept of environment, other Chinese terms were used for the English *environment* in the translations. However, influenced by the conceptualized Japanese *kankyō* (環境, environment), the Chinese *huanjing*, which had the same root of the Japanese *kankyō*, replaced other terms for the modern concept of environment. In this chapter, I explore the conceptualization process of the Chinese *huanjing* (environment). I track the changing meanings of *huanjing* from antiquity to modern China, and explore its conceptualization trajectory and relate it to the social political contexts in both Chinese and global discourses. The purpose of it is to present how *huanjing* became a modern concept of environment in a social political context, and the Chinese perception of and responses to environmental changes in the 20th and the early 21st centuries.

6.1. The origin and changing meanings of *huanjing* (环境, environment)

The early use of the term *huanjing* (environment) can be traced to the Northern Song Dynasty (the 11th century). It referred to the surrounding places⁵⁴ (interestingly, it is not necessarily the surrounding places of human beings). Among the English-Chinese dictionaries published before the 1900s (See Table 5.), there was no entry for the English term *environment*. In the 1910s, in the two dictionaries *The Anglo-Chinese handy dictionary* and *English-Chinese dictionary of the standard Chinese spoken language* published in Shanghai, *environment* was included and referred to the surroundings, which still maintained its ancient meaning.⁵⁵ In the 1920s, something new happened. In *An English-Chinese dictionary of Peking colloquial*, published in 1920 in Shanghai, *environment* was translated into circumstances. In 1926, in *A Chinese-English dictionary*, published in Shanghai, the Chinese term *huanjing* was translated to environment and surrounding conditions.⁵⁶ However, no other dictionaries published in the 1930s-1940s literally equaled environment with *huanjing*.

⁵⁴ *Hanyu dacidian* 汉语大词典. 1986. Vol.4. pp.640.

⁵⁵ Zia, H.L., et al. 1915. pp.415; Foster, A. 1916. pp.465.

⁵⁶ Zhang, Tiemin 张铁民. 1926. pp.246.

Table 5. English-Chinese & Chinese-English & Chinese-Chinese dictionaries published in the 1850s-1910s

Nr.	Year	Name of dictionary	Place of publication	Editor	environment	huanjing (环境)
1	1856	A tonic dictionary of the Chinese language	Guangzhou	S. Wells Williams	N	
2	1862	An English and Cantonese pocket-dictionary 英粵字典	Hong Kong	J. Chalmers	N	
3	1865	A dictionary of the Chinese language 五车韻府	Shanghai & London	R. Morrison	N	
4	1868	An English and Chinese lexicon	Hong Kong	K. T. Fuk	N	
5	1872	A vocabulary and handy-book of the Chinese language 英华萃林韻府	Foochow (Fuzhou)	Justus Doolittle	N	
6	1877	A Chinese and English vocabulary in the Pekinese dialect 汉英合璧相连字彙	Shanghai	G. C. Stent		N
7	1887	An English and Chinese dictionary	Shanghai, London, etc.	K. K. Chiu	N	
8	1896	A Chinese and English dictionary	Shanghai	P. Poletti	N	
9	1906	Little dictionary Chinese-French-English	Peking	Printed at the Lazarist Mission Press	N	
10	1909	A syllabic dictionary of the Chinese language	Tung Chou, near Peking	S. Wells Williams		N
11	1915	The Anglo-Chinese handy dictionary 袖珍英汉辞林	Shanghai	H.L. Zia, Zung-zien Zoo & Tso-ling Kan	√ weirao 围绕 (surrounding) siwei zhi qingkuang 四围之情况 (condition of the surroundings)	
12	1916	An English and Chinese pocket dictionary in the Mandarin dialect (5th edition) 英华字典	Shanghai	A. Foster	N	
13	1916	English-Chinese dictionary of the standard Chinese spoken language	Shanghai	K. Hemeling	√ waiwei 外圍 (surroundings)	
14	1917	The student's four thousand [characters] and general pocket dictionary	Shanghai	W. E. Soothill		N
15	1918	A new Chinese-English dictionary, comprising about 10,000 words 50,000 phrases 汉英新辞典	Shanghai	Yuwen Li, Wei-ko Li, & Kuang-chien Wu		N

Note: "N"= no entry; "√"= have an entry

Table 6. English-Chinese & Chinese-English & Chinese-Chinese dictionaries published in the 1920s-1940s

Nr.	Year	Name of dictionary	Place of publication	Editor	environment	huanjing (环境)
16	1920	An English-Chinese dictionary of Peking colloquial	Shanghai	W. Hillier	√ yujing 处境 (circumstances)	
17	1926	A Chinese-English dictionary 汉英辞典	Shanghai	Tiemin Zhang 张铁民		√ environment: the surrounding conditions or influences
18	1930	A Mandarin-romanized dictionary of Chinese 英华成语合璧字集	Shanghai	D. Macgillivray	N	
19	1932	Xin mingci cidian (New terms dictionary) 新名词辞典	Shanghai	Chao Hong 洪超		√ 外围所影响的事情 (the things that affect the surroundings)
20	1944	An English-Chinese romanized dictionary	Minnesota	D. Nelson	√ huanrao 环绕 (to surround; surrounding)	
21	1945	A concise English-Chinese dictionary	Nanking	E.M. Chang & S. Maxwell		N
22	1947	A beginner's Chinese-English dictionary of the national language 初级中英国语字典	London	W. Simon		N

Note: "N"= no entry; "√"= have an entry

Table 7. English-Chinese & Chinese-English & Chinese-Chinese dictionaries published in the 1950s-2000s

Nr.	Year	Name of dictionary	Place of publication	Editor	environment	huanjing (环境)
23	1952	Yinghan yixue cidian (English-Chinese medicine dictionary) 英汉医学辞典	Hong Kong	Shizhen Zhao 赵师震	√ huanjing 环境	
24	1964	Chinese-English glossary of current affairs, words and phrases 汉英时事用语词汇		Waijiao ganbu xuexiao 外交干部学校		√ circumstance; environment ; conditions
25	1965	A pocket dictionary Chinese-English and Pekingese syllabary	Hong Kong	C. Goodrich	N	
26	1966	Dictionary of spoken Chinese	New Haven	Yale University		√ environment ; circumstances
27	1966	A new English-Chinese dictionary 英华大辞典	Hong Kong	Yili Cheng	√ baowei 包围 zhouwei 周围 huanjing 环境	
28	1968	A modern Chinese-English dictionary for students	Lawrence, Kansas	C. C. Huang		√ surroundings; environment ; circumstances
29	1974	An English-Chinese meteorology dictionary 英汉气象学词汇	Beijing	Kexue chubanshe 科学出版社	√ huanjing 环境	
30	1976	Astronautical multilingual dictionary 宇航飞行学辞典	Beijing	Guofang gongye chubanshe 国防工业出版社	√ huanjing 环境 Umgebung & Umwelt (German)	
31	1979	Cihai: 1965 new edition 辞海1965新编本	Shanghai	Shanghai cishu chubanshe 上海辞书出版社		√ 1) 周围的情况 (surrounding conditions) 2) 环绕辖境 (surrounding territory)
32	1980	Chinese translated sociology vocabulary 中译社会学词典	Hong Kong	The Chinese University of Hong Kong Press	√ huanjing 环境	
33	1993	New Vocabulary Dictionary 新词语词典	Beijing	Renmin youdian chubanshe 人民邮电出版社		√ huanjing baohu 环境保护 (environmental protection) huanjing daode 环境道德 (environmental moral)
34	1994	Cihai: 1989 version 辞海1989年版	Shanghai	Shanghai cishu chubanshe 上海辞书出版社		√ 1) 环绕所辖的区域 (surrounding areas) 2) 环绕着人类的外部世界 (outward world surrounding human beings)
35	1998	An English-Chinese dictionary of science and technology 英汉科技大辞典	Shanghai	Guanghua Wu 吴光华	√ 1) 周围 (surroundings) 2) huanjing 环境 3) 环境艺术作品 (works of environmental art) 4) 围绕物 (the things surrounding)	
36	2003	Xin ciyu da cidian : 1978-2002 (A new vocabulary dictionary) 新词语大词典:1978-2002	Shanghai	Shiyong Kang 亢世勇 Hairun Liu 刘海润		√ 引申指可作用于某一系统的其他系统 (The meaning is extended to refer to the other system that can affects a certain system)

Note: “N”= no entry; “√”= have an entry

The change occurred in the 1950s (see Table 6. & 7.). In 1952, a medical English-Chinese dictionary, *New Medical Lexicon*, was published. The editor, Zhao Shizhen 赵师震, was a medicine specialist and an editor for medical dictionaries. He graduated from a Japanese medical institution and after his studies in Japan, he worked in hospitals in Nanjing, Shanghai, etc. In his dictionary, *environment* was translated to *huanjing*.¹ In *A Modern Chinese-English Dictionary for Students*, published in 1968 by the University of Kansas in the USA, *huanjing* (environment) was combined with *weisheng* (卫生, hygiene) to refer to environmental hygiene.² In *Chinese translated sociology vocabulary* (中译社会学词彙), published by The Chinese University of Hong Kong in 1980, *huanjing weisheng* (环境卫生) and *huanjing wuran* (环境污染) were included, and referred to environmental health and pollution respectively.³ In *New Vocabulary Dictionary* (新词语词典), published in Beijing in 1993, no entry of the term *huanjing* was included, but *huanjing* related terms such as *huanjing baohu* (环境保护, environmental protection) and *huanjing daode* (环境道德, environmental morality).⁴ In *Cihai* 1989 version (辞海), published in 1994, *huanjing* (environment) refers to the outward world that is surrounding human beings.⁵ In 1998, in *An English-Chinese dictionary of science and technology*, *environment* was extended to more meanings including environmental surroundings and works of environmental art.⁶ In the Chinese dictionary, *A new vocabulary dictionary:1978-2002*, published in 2003, *huanjing* was extended to refer to the other system that affects a certain system.⁷

The collection of dictionaries of English-Chinese, Chinese-English and Chinese-Chinese in the 1850s-2000s, shows that *huanjing* still retained its original meaning as the surrounding places until the 1910s. The first change came in the 1920s when *huanjing* was extended to circumstances from the surrounding places. The second change appeared in the 1950s when *huanjing* (environment) was connected with *weisheng* (hygiene, 卫生) to refer to environmental hygiene, and the third change occurred in the 1970-1980s when it was associated with *wuran* (pollution, 污染) in

¹ Zhao, Shizhen 赵师震. 1952. pp.306.

² Huang, C.C. 1968. pp.173

³ Hong Kong University Press. 1980. pp.42

⁴ *Xinciyu cidian*. 1993. pp.370.

⁵ *Cihai* 辞海. 1999. pp.3150.

⁶ Wu, Guanghua 吴光华. 1998. pp.804.

⁷ Kang, Shiyong 亢世勇 and Liu, Hairun 刘海润. 2003. pp.495.

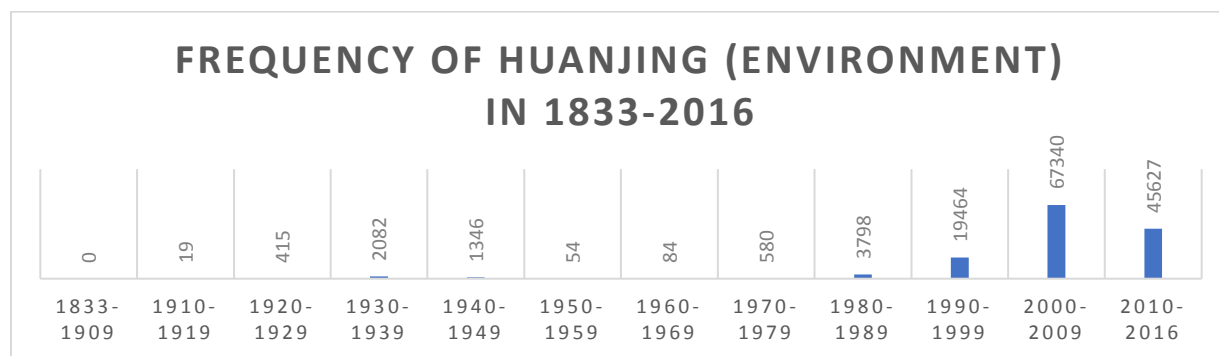
reference to environmental pollution. Nevertheless, dictionaries usually only include a new word when it has been firmly established in a language and in active use. In this sense, the results from the dictionaries can give a general picture of the changing meanings of *huanjing* (environment), but it is normally not able to precisely show the years of the changes and the causes behind the changes. Therefore, in order to discover a more accurate timeline of the shift from a word to a concept and the social political contexts in relation to the changes, it is necessary to look at the primary sources – how people used *huanjing* (environment) differently in the 20th and 21st centuries.

6.2. The development of the concept of *huanjing* (environment) since the 20th century

What can we learn from the frequency of appearance of *huanjing* (environment) in China’s national database?

No record of *huanjing* (environment) was found in the title of the articles in QGBKSY database from 1833-1909. The significant changes of the frequency happened in the 1920s-1930s, the 1970s and onward. In the 1910s, *huanjing* (environment) appeared 19 times, while there was 0 before 1910. In the 1920s, the frequency became 21 times as high as it was in the 1910s. In the 1970s, it appeared 580 times, and since then, it has been continuously increasing.

Figure 4. Frequency of *huanjing* (environment) in the titles of the articles in QGBKSY database in 1833-2016




The findings in the search results from the database (1833-2016) are basically in line with the ones from the dictionaries (1868-1999). Based on the statistics and findings in the dictionaries and the national database, I postulate that the big changes in frequency of appearance of *huanjing* (environment) first happened in the 1910s-1930s, and happened again since the 1970s.

Table 8. List of topics of *huanjing* in the titles of the articles in the QGBKSY database in 1833-2016

Year	Frequency	Topic
1910-1919	19	forces of environment, life circumstances, social environment
1920-1929	415	natural environment, social environment, environment and air, environmental hygiene
1930-1939	2082	environmental hygiene, time and environment, geographic environment, human beings and environment, environmental education, global environment, environment and health, Japanese environmental hygiene administration
1940-1949	1346	human beings and animals and environment, environmental hygiene project
1950-959	54	natural environment, peaceful environment, war environment, geographic environment, environmental hygiene
1960-1969	84	village environment, natural environment, social environment, language study environment
1970-1979	580	environmental protection, environmental pollution, environmental protection law, language environment, social environment, global environmental hygiene
1980-1989	3798	environmental management, environmental quality, environmental knowledge, energy and environment, Japanese environment declaration
1990-1999	19464	economic environment, environment auditing, environmental education, asthma and environment, Hong Kong talent environment, environment awareness education, environment diplomacy, business environment
2000-2009	67340	financial environment, consumption environment, career environment, cultural environment, new media environment, internet environment, economic environment, environmental tax and environmental protection, environmental education
2010-2016	45627	environmental history, environmental view, environmental aesthetics, macro environment, imagination of environment, environmental infringement, citizen environmental prosecution

Table 8. contains *huanjing* (environment) related topics in the titles of the articles in the QGBKSY database from 1910-2016. Interestingly enough, similar to the conceptualization of the Japanese *kankyō* (環境, environment) in Japanese discourse, the significant changes in frequency of appearance of the Chinese *huanjing* (environment) were also associated with the appearance of the new terms such as *huanjing weisheng* (environmental hygiene), *huanjing wuran* (environmental pollution) and *huanjing baohu* (environmental protection). Then, which social political contexts nurtured the emergence of these environmental related terms?

In the 1910s, due to China's tribulation because of the invasion from Japan and domestic conflicts, *huanjing* became a concept for various life circumstances and forces of the outward surrounding world that restricts or influences human beings in the society. The articles about *huanjing* in that period strongly expressed such forces of the environment.

 In 1911 – about the forces of complex life circumstances to human beings in Chinese society

Those who having the strongest forces in the world are human beings, but the most unfree, painful and idle are also human beings. Why say so? You see that people in the world are judged by the law and restricted by systems. How can they be so free as animals? Human beings are also under the force of money, the persecution of politicians and overbearing of warriors. One is seeking for a clean space, but cannot find it. How can men become as independent as animals that they can survive by themselves? Therefore, people in the world eventually end up with the situation that one desires for peace but cannot have it, seeks for food but cannot get it, while gathering thorns in every place. However, now that it is so unfortunate to be born as a human being, one never wants to suffer long, or struggle just for survival. Therefore, one has to take away the thorns and fight a strong

battle against them to change such a terrible environment and not let the next generations experience the same bitterness.⁸

✚ In 1913 – about the impact of environment on the development of children

Environment is the nature and things outside of and surrounding the human beings. Thereby, environmental education is so urgent and important. Education specialists shall add environment [the discipline] into the education system. The relationship between the environment and children is similar to that between shape and shadow – a shape has its shadow, while a shadow changes according to its shape. Environment is like the shape and children are like the shadow.⁹

In the 1920s, a new term, *huanjing weisheng* (environmental hygiene), appeared in China. Discussion about the emergence of this new term and promotion of environmental hygiene became popular among the general population.

In recent years, there appeared a four-character-term *huanjing weisheng* (environmental hygiene) among many popular terms! The term has frequently been used in texts and in speech, so we have often seen it and heard it. In the previous speeches via radio, we the Bureau of Hygiene have introduced to the audience many issues involving environmental hygiene.

Huanjing weisheng is a kind of science and technology. It is a reasonable management of the environment and facilities that people live in and use in order to make a comfortable environment, a healthy and strong body, and a happy life and to protect them from diseases and infections. The result is to maintain and prolong the lifespan.

(...)

Therefore, as I mentioned in the beginning, if the four-character-term *huanjing weisheng* refers to a thing or an object, then this object has existed since ancient times. However, it was not until recently that the term appeared and people knew how to use it, which is the shame of human beings. Moreover, it wasn't until the very recent time that the term was introduced to China, which is the shame of the Chinese people. In the beginning of this speech, I mentioned, "In recent years, there appeared a four-character-term *huanjing weisheng* among many popular terms!" Actually, from the beginning of mankind, this term shall have been there, but it wasn't until recently that it appeared. However, "surprisingly" it came to exist now!¹⁰

In awareness of the success of Japan's implementation and adaptation of a western hygiene administration system, as well as the domestic need for keeping environmental hygiene for preventing infectious diseases and prolonging people's life, the Chinese government actively promoted the idea of environmental hygiene in society. The governmental promotion included the

⁸ Yang, Lu 杨露. 1911. pp.31-32.

⁹ Yi, Wu 异吾. 1913. Vol.5. No.1. pp.1-6.


¹⁰ Liu, Binglu 刘丙廬. 1935. Vol.1. No. 7. pp.6-8.

introduction of the knowledge of hygiene in elementary and high schools, and the management of institutional environment hygiene through regulations. In the elementary school textbooks, for example, education in environmental hygiene recommended opening the windows in the classrooms for fresh air and how to correctly wash hands to prevent infectious diseases. The texts below show the different aspects of promoting environmental hygiene in society.

 In 1930 – about checking the status of environmental hygiene in schools

Chapter 4: School Hygiene

This institution is responsible for seven schools' hygiene, in total 1831 people. The tasks are: body check, correct shortcomings, immunization for preventing infectious diseases, heal diseases, hygiene education and management of environmental hygiene. ¹¹


 In 1936 – about the introduction of Japanese hygiene administration

The target of the Japanese hygiene administration obviously lies in the implementation of the following three steps:

A: Prevent acute gastrointestinal infectious diseases

B: Prevent respiratory organ infections

C: Enhance national citizens' general health¹²

 In 1940 – *huanjing weisheng* (environmental hygiene) was introduced in elementary school textbooks

Environmental hygiene: purification is the basis of a strong body, while defilement is the source of diseases. Everybody can keep clean, and then everybody is healthy and happy and all can prevent sickness and prolong the years of life. Westerners often laugh at us because we cannot keep clean that they despise our nation. We shall reform our old habits and have new ones – to be simple, plain, neat and clean. ¹³

In the 1970s, the new terms *huanjing wuran* (environmental pollution) and *huanjing baohu* (environmental protection) appeared due to the industrial pollution and the government's awareness of the damages and costs of the pollution. People's understanding of the environment has gradually changed with the development of scientific knowledge of the natural environment and the perception of the needs for sustainable development in both domestic and global societies. In the governmental newspaper *People's Daily*, messages about the importance of environmental

¹¹ Anonymous. 1930. pp.3.

¹² Liu, Binglu 劉丙廬. 1936. Vol.2. No.1. pp.1-3.

¹³ Dai, Weiqing 戴渭清(ed.) 1940. pp.5.

awareness and protection expressed the rising concern of the Chinese government about environmental pollution and its negative effect on economic growth. The topics on the environment gradually changed from protecting the natural environment in the development of agriculture, to promoting sustainable development.

✚ In 1974 – about the importance of environmental protection

In implementing environment protection, it is especially necessary to pay attention to protecting and improving the natural environment of the large socialist villages. Agriculture is the basis of the national economy. Both socialist industry and the all national economic development must be based on the development of agriculture. As agriculture develops, industry can have a bigger development. Therefore, it is a strategic affair to protect and improve the natural environment of the large socialist villages, to protect them from pollution and to assure that they go forth in a faster manner.¹⁴

✚ In 1989 – about the governance of environmental pollution and keeping the ecological balance

Facing the deteriorating situations of (environmental) pollution and destruction, what scientific and effective measures will people adopt in order to reduce and control environmental pollution and protect the ecological balance? Regarding the measures, here are three views:

- a) In order to reduce and control environmental pollution and protect the ecological balance, the development and adaption of modern scientific technology must be the premise.
- b) In order to reduce and control environmental pollution and protect the ecological balance, guidelines of comprehensive prevention and remedy must be adopted.
- c) Conduct international cooperation because joint action is the basic requirement for reducing and controlling the environment and protecting the ecological balance.¹⁵

✚ In 1998 – about the ecological environmental protection and sustainable development

Zou Jiahua (邹家华) spoke: Since the establishment of People's Republic of China, especially since the reform and opening-up to the rest of the world, our nation has issued a series of laws regarding developing and protecting land resources, water resources, mineral resources, ocean resources, energy, biological resources, climate resources, travel resources, cultural relics resources, etc. Many local governments have promulgated administrative regulations according to the local conditions. These laws have played a very important role in protecting the natural resources of our nation. With the development of the society, more related laws will be issued. In addition, the existing laws will be revised and supplemented to make them more scientific, reasonable and complete. We need to strengthen the publicity and education of abiding by the law, which makes the idea of scientifically and reasonably utilizing resources and protecting environment become natural consciousness to more people.¹⁶

¹⁴ Guo, Huan 郭寰. 17 September, 1974. pp.2.

¹⁵ Li, Zhi 黎志. 1989. No.6. pp.32-35.

¹⁶ Yang, Zhaobo 杨兆波 and Wang, Yiming 汪一明. 27 September, 1998. pp.2.

Since the 2000s, *huangjing* (environment) as a modern concept has become even more dynamic. More new terms have appeared in relation to the modern idea of environment in various contexts, such as *wenhua huanjing* (cultural environmental), *xinxi huanjing* (information environment), *rencai huanjing* (talent environment), *xinmeiti huanjing* (new media environment), *wangluo huanjing* (internet environment), and *jingji huanjing* (economic environment).

About the information environment

The information environment refers to the sum of human beings' activity of information including natural, social and psychological elements. Human beings always live in a certain environment. The outward environment and its changing objective information forms a virtual "environment effect" in people's brain through all kinds of information, which causes corresponding reactions, *i.e.* having a subjective information to adapt to the changing environment and control the development of the environment. Therefore, the information environment is the outcome of people's recognizing and changing the nature and society.¹⁷

About the cultural environment

Urban culture is the sum of material and spiritual riches that people created in the process of formulating and developing a city. Urban cultural environment is then the outward expression of such sum.¹⁸

6.3. The Chinese responses to environmental changes – the environmental movement from the 1970s

The Chinese perception of the modern idea of environment mainly went through four stages. The first stage was in the 1910s when the idea of environment was about complex life circumstances and their forces. The second stage started in the 1920s, during which people's understanding of the environment developed through the introduction of a western idea of environmental hygiene and implementation of Japan's hygiene administration system. The third stage started in the 1970s when the idea of environment became connected with the idea of ecological balance and sustainable development, as a result of the global environmental movement and China's own awareness of rising environmental issues. The fourth stage began in the 2000s when the idea of environment was applied more widely - either life circumstances, work environment, information environment or the environment of anything in relation to human beings.

¹⁷ Li, Yuan 李渊. 2005. Vol. 18. No.2. pp.74-76.

¹⁸ Zhang, Jinqiu 张锦秋. 2005. No. Vol.1. pp.73-75.

More importantly, modern ideas of environment developed from the 1910s in China. However, it wasn't until the 1970s that the Chinese gradually started to perceive the serious problems that environmental changes can bring to human beings, through various types of pollution caused by industrialization and modernization. In parallel to the development of the concept of environment, how have the Chinese responded to environmental issues since the 1970s?

The environmental movement in China started in the 1970s, as a result of the government's recognition of the demands of environmental protection and control domestically, as well as the environmental movement in the global society. In June 1972, China's delegation attended the First United Nations' Conference on the Human Environment. In 1973, the State Council held a national environmental protection meeting and formulated a few principles and measures for protecting the environment. In 1974, an Environment Protection Leading Group of the State Council was established. On 30 March 1979, the China Environmental Science Society was established in Chengdu.

In September 1979, at the Eleventh Meeting of the Standing Committee of the National People's Congress, the plan for implementing environmental law on a trial basis was announced. The director of Environment Protection Leading Group of the State Council, Chen Chaobo (李超伯), pointed out in the meeting that implementing environmental law was the common aspiration of the people and must be enforced, because it was related to people's health, the happiness of the next generations and it affected China's international reputation.¹⁹

On 7 January 1984, the 8-day Second Meeting of the National Environmental Protection was completed. The *People's Daily* used nearly three pages to report from the Meeting. On the second page, it gave a summary of Deputy Prime Minister Li Peng (李鹏)'s speech made at the Meeting. Minister Li stressed the importance of environmental protection to China in a new historical era. He pointed out that 1) environmental protection is China's basic state policy; 2) economic development and environmental protection must be done with one accord; 3) reasonable development and full use of natural resources shall be the basic policy in environmental protection; 4) he would strengthen the scientific management of environment protection; and 5) further strengthen the guidance of environment protection nation-wide.

¹⁹ Xinhuashe Beijing 新华社北京. 12 September, 1979. pp 1&4.

In the Editorial of the *People's Daily*, the newspaper mentioned that it is necessary to enhance the awareness of environmental protection, especially the governmental officers' awareness. It pointed out some things that hinder governmental officers from taking actions to reduce and control environmental pollution: some officers had superficial conceptions that taking charge of environmental protection might affect production and economic development, which was a false mindset. For example, a small paper mill next to the ocean had only around RMB100,000 in profits but their emission of polluted water into the ocean could pollute over 10,000 acres of the ocean and cause the death of fish. Counting the fish alone, the loss could reach over RMB4 million. Moreover, the editorial stressed that the environmental protection law should be strengthened and amended alongside the implementation.²⁰

In the 1990s, a new term, *huanjing shenji* (environmental auditing, 环境审计), appeared in China. It audits the implementation of environmental policies and laws, the use and preservation of natural resources, the negative effects of environmental pollution and the cost and profits of environmental governance.

In June 1998, the State Bureau of Environmental Protection was upgraded to a State Environmental Protection Administration, as a department directly under the State Council. In 2008, the State Environment Protection Administration was further upgraded to a Ministry of Environmental Protection, as an independent ministry of the State Council.

Since the early 21st century, environmental awareness is rising among the population in China, especially through the Chinese direct experience of environmental problems and the dissemination of the social media. For example, in the past decade, due to the serious air pollution across China, the term *smog* has frequently appeared in the media, in people's daily life and even in the agenda of the National People's Congress and the Chinese People's Political Consultative Conference. In 2014, smog was hovering over China. In each city with heavy smog, people couldn't see beyond the range of 5 meters, and even public buses got lost because of low visibility caused by smog. Smog has become one of the most popular topics in daily life among the public, entrepreneurs, government officers, scientists, etc., in relation to how smog may cause health problems, and affect economic growth and sustainable development in China.

²⁰ XinhuaShe Beijing 新华社北京. 18 January, 1984. pp.1 &3.

In northern China - for example Beijing, where the air pollution was severe - in 2014, the number of days with heavy smog reached 175²¹. It means that for nearly half a year people in Beijing were living with no fresh air to breath, people had to wear masks when going out, parents were afraid to let children play outside and be exposed to air pollution, and people were afraid of getting lung cancer from exposure to smog in the long-run.

6.4. Environmental education since the 1970s

As a part of the environmental movement, education in environmental protection started in China in the 1970s. It can be divided into three stages²²: 1) from 1973-1992: basic knowledge of environmental protection; 2) from 1992-2007: environmental education for sustainable development; and 3) from 2007- now: environmental education for an ecological civilization. During the first stage, the focus of environmental education was to promote scientific knowledge of the environment among governmental officers, through setting up environmental protection related majors in the higher education system. During that period, there were 38 universities that offered bachelor and master degrees in environment.²³ Environmental journals such as *Huanjing Baohu (Environmental Protection)*, *Huanjing (Environment)* and *Zhongguo Huanjingbao (China Environment Newspaper)* were issued from the 1970s and 1980s. In 1980, the China Environmental Science Publishing House was established to publish and disseminate knowledge of environmental protection.

In the second stage, influenced by the global environmental movement in promoting sustainable development, China moved its focus on environmental education to the connection between environmental protection and ecological, economic and social development. Subjects in energy, environmental protection and ecology were for the first time required to be set up in elementary and high schools in China in 1987, by order of the State Education Commission. In 1992, non-governmental organizations started to appear and began to work on raising the environmental awareness of the public.

²¹ “Chai Jing's review: Under the Dome – Investigating China’s Smog.” 2014. (4 min, 23 seconds)

²² Wang Min 王民. 2016. 07. Vol.18. pp.58-60.

²³ Wang, Zhongxiang 王忠祥 and Xie, Shicheng 谢世诚. 2013. No.10. pp.184-189.

During the third stage, the Chinese government regarded environmental education among the population as an important part of developing an ecological civilization. Saving energy and promoting ecological development, together with economic growth and optimizing the usage of natural resources, are the main contents of building an ecological civilization. With the rise of the social media, information transparency and public participation in environmental protection and control, environmental education among the population has been gradually progressing.

Although environmental education in the past 40 years has developed to a certain extent, and Chinese environmental awareness has continuously increased, especially in the 21st century, when environmental pollution across the nation has become a serious issue, a mindset regarding environmental protection and control has however not been widely rooted in the population. The author Wang Min, in his article, pointed out that many Chinese link the idea of ecological consumption to purchasing green or ecological products. In this case, some on the one hand purchase ecological products to promote ecology, while on the other hand they eat rare animals and throw out plastic bags. The latter actions have nothing to do with environmental protection but lead to the opposite, environmental pollution.²⁴

6.5. Summary

Huanjing in the ancient time was a word referring to the surrounding places (importantly, it is not necessarily the surroundings of human beings). It became a concept since the 1910s and continued to be developed during the 20th century. Since the 1910s, *huanjing* has referred to the interaction between humans and the environment, with an emphasis of the influence of the environment on human life, including the social, political, physical, natural and biological aspects. For example, *shenghuo huanjing* (life circumstances), *shidai huanjing* (circumstances of the time/age), *ziran huanjing* (natural environment) and *shengwu huanjing* (biological environment). Since the 1920s, *huanjing weisheng* appeared as a new term to refer to environmental hygiene. Since the 1970s, two related new terms, *huanjing wuran* and *huanjing baohu*, appeared which refer to environmental pollution and protection respectively.

²⁴ Wang Min 王民. 2016. 07. Vol.18. pp.60.

Since the 2000s, *huanjing* (environment) has been applied to even wider scopes by freely combining other terms with it. The conceptual change of *huanjing* (environment) is a complex result of the introduction of the western modern concept of environment and Japanese *kankyō* (環境, environment), the introduction of western hygiene and Japanese hygiene administration systems, as well as global and China's own domestic environmental movements.

Since the 1970s, an environmental movement in China has taken root. At the institutional level, the first governmental group that looked over the environmental issues, - the Environment Protection Leading Group of the State Council, was established in 1974. Along with its upgrade, it was changed to the State Environmental Protection Administration as a department directly under the State Council in 1998, and further to a Ministry of Environmental Protection as an independent ministry of the State Council in 2008.

In parallel, environmental protection laws and policies have been developed and implemented, environmental education as a subject has been added in the education systems from elementary to higher education, environmental journals have been issued, and the China Environmental Science Publishing House was established to publish and disseminate knowledge of environmental protection. Environmental NGOs arose during the 1990s. These developments have step-by-step increased the Chinese environmental awareness and led to certain actions for environmental protection and management from government to industries to citizens, and the other way around. The focus on environmental development has been shifted from promoting scientific knowledge of the natural environment in the 1970s to environmental sustainability in the 1990s, and further to implementing an ecological civilization in the early 21st century.

Through the media exposure and the Chinese direct experience of various types of pollution, the Chinese are very much concerned about poisonous soil, water containing overwhelming chemical material, and smog, etc. In responses to the environmental pollution, there is no lack of actions toward environmental protection among the government, media, industry and population, for example, through implementing laws, promotion in various media, developing new technology and the population's participation in supervision. However, the question remains as to what extent the government, media, industry and population are willing to make the necessary sacrifices for improving the environment.

7. The Chinese Perception of the Environment via *Weisheng* (卫生, hygiene) starting in the 1920s

The previous chapters have shown that the introduction and development of a modern concept of environment in Chinese discourse was closely connected with the modern ideas of *weisheng* (hygiene) and *wuran* (pollution). In this chapter, the conceptualization process of *weisheng* (hygiene) will be discussed. The purpose is to analyse the Chinese perception of the environment via the new idea of environmental hygiene in the 20th century.

7.1. The changing meanings of *weisheng* (hygiene)

In the western world, the origin of *hygiene* is from the Latin and Greek *hygieina*, in reference to the art of healthy living. In 1671, the English borrowed the French word *hygiène* in a translation of Greek *hygieina*, and used the English *hygiene* to refer to health.²⁵ In ancient Greece and Rome, the idea of hygiene was related to medical treatment that preserves human life. Starting from the mid-19th century, hygiene became a branch of knowledge that “deals with the maintenance of health, especially the conditions and practices conducive to it; the conditions and practices of a place or person in so far as they promote health.”²⁶ The formulation of modern hygiene was contributed by Edmund Alexander Parkes (1818-1901). Early in his life Dr. Parkes had been a military medical officer, and in 1860, he acted as the first professor of hygiene in the Army Medical School. His work *Manual of Practical Hygiene* became the first publication in the subject of hygiene in the world.²⁷

The original use of Chinese *weisheng* (hygiene) was similar to English *hygiene* in its ancient use. *Weisheng* (hygiene) is an ancient term. In ancient China, it mainly referred to “guard life” or “preserve one’s life”.²⁸ The earliest usage of the term can be found in *The Zhuangzi* (庄子), an ancient Chinese collection of anecdotes and fables by the philosopher Zhuangzi (369-286 B.C.)

²⁵ Barnhart, Robert K. (ed.) 1988. pp.500.

²⁶ Brown, Lesley (ed.) 1993. pp.1290.

²⁷ De Chaumont, F.S.B.F. 1883. pp.991.

²⁸ Yu, Xinzong 余新忠. 2008. pp.556.

and his followers: “卫生自有经” (to preserve one’s life certainly has principles).²⁹ In many ancient contexts, *weisheng* and the Chinese *yi* (医, to cure or treat) were interchangeable.

However, the changes in the meanings of *weisheng* (hygiene) started to happen in the late 19th century when modern western scientific knowledge was introduced to China through translating western books about chemistry, biology, physics, medicine and bacteria. Hygiene, a modern western discipline that deals with maintaining health, was introduced to China and it was translated as *weisheng*. The earliest records of *weisheng* as a sense of modern hygiene can be found in *Huaxue weishenglun* (化学卫生论, *The Chemistry of Common Life*), published in 1881, and *Juzhai weishenglun* (居室卫生论, *Sanitary Engineering to Cure the Poor*), published in 1890.³⁰ However, in the late 19th century, in these two translated works, *weisheng* (hygiene) was emphasized by John Fryer and his Chinese colleagues as a western way of keeping individuals healthy (*i.e. geren weisheng*, private hygiene, 个人卫生) through modern scientific and hygienic knowledge. Although *Juzhai weishenglun* contained a notion of public hygiene, hygiene as a sanitary system was given much less attention in China at that time.³¹

Although western hygienic knowledge was first introduced to China through translation in the late 19th century, the perception of its importance did not happen until the 1910-20s. In the early 20th century, after China’s defeat in the Sino-Japanese war, Chinese modernizing elites recognized the bad hygienic conditions in China and the success of Japanese sanitary administration systems through Japan’s adoption of western medical knowledge and a well-established sanitary system. Many of them traveled to Japan in order to study western medicine and the Japanese sanitary system, in hope of saving the whole Chinese nation through promoting hygiene. Ruth Rogaski’s book *Hygienic Modernity* states that the changing meanings of *weisheng* (hygiene) reflect the Chinese experience of modernity. “Its meaning shifted away from Chinese cosmology and moved to encompass state power, scientific standards of progress, the cleanliness of bodies, and the fitness of races.”³² *Weisheng* (hygiene), in Rogaski’s narratives, was a central concept that was promoted by the modernizing elites to save the nation. As a result, a Chinese sanitary administration system

²⁹ Ibid. pp.557.

³⁰ Ibid. The translation of the book’s title, *Juzhao weisheng lun* 居室卫生论 was quoted from Yu, Xinzhong 余新忠’s article.

³¹ Rogaski. 2004. pp.131.

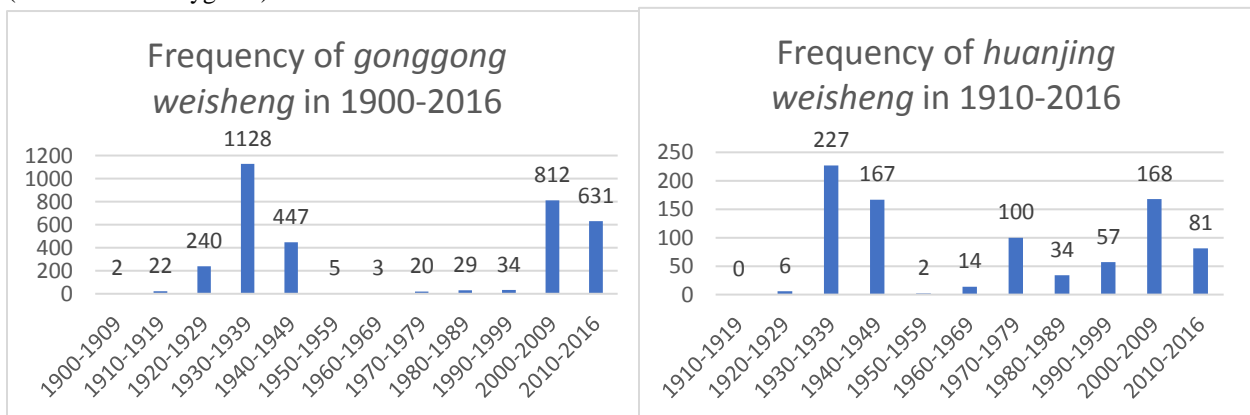
³² Rogaski, Ruth. 2004. pp. 1.

was set up in the 1920s. The significance of this change is that the Chinese government took on the responsibility for public health. *Weisheng* (hygiene) since then was not only a concept of keeping personal health but, more importantly, it became a concept of public service. After this change, there was active promotion of keeping public hygiene and health by the Chinese government across the whole country. Making the population recognize the importance of keeping the public environment clean and tidy was the major part of the work of the public health service. In this case, *gonggong weisheng* (first referred to public hygiene, and later was extended to include also public health³³) and *huanjing weisheng* (environmental hygiene) as a matter of course became new terms, and were frequently used.

There are also other terms in relation to public hygiene, such as *gongzhong weisheng* (public hygiene) and *gonggong huanjing weisheng* (public environmental hygiene). The two terms *gonggong* and *gongzhong* are synonymous (*i.e.* public). The frequency of *gongzhong weisheng* (public hygiene) and *gonggong huanjing weisheng* (public environmental hygiene) in the titles of articles published from 1900-2016 are 201 and 24 times respectively, which is much less than *gonggong weisheng* and *huanjing weisheng*. It is for this reason that I selected *gonggong weisheng* and *huanjing weisheng* in my analysis.

7.2. The perception of environment via the conceptualization of *huanjing weisheng* (environmental hygiene)

Figure 5. Frequency of appearance of *gonggong weisheng* (public hygiene and health) and *huanjing weisheng* (environmental hygiene) from 1900-2016



³³ *Gonggong weisheng* refers to public health; its contents have many aspects including environmental hygiene. *Huanjing weisheng* refers to environmental hygiene. Environmental hygiene is an important part of public health.

The frequency generated from the QGBKSY database shows that the first appearance of *gonggong weisheng* (public hygiene) occurred in the 1900s, and *huanjing weisheng* (environmental hygiene) in the 1920s. The frequency of both terms increased in the 1930-40s, compared to the first decades. *Gonggong weisheng* (public hygiene) came first and was followed by *huanjing weisheng* (environmental hygiene), and their frequency had a similar curve from 1920-2016, except the 1970s when *huanjing weisheng* (environmental hygiene) was used much more frequently. This was probably because of the environmental movement in China in the 1970s. Why were there two terms rather than *gonggong weisheng* (public hygiene) or *huanjing weisheng* (environmental hygiene) alone? What are the similarity and difference between these two terms and what does it indicate?

When *gonggong weisheng* (public hygiene) first appeared in the 1900-1910s, it was the term for public sanitation or hygiene. It was about the studies of diseases, education of public health, calculation of death rate, hygiene of water and food, cleanliness of playgrounds and parks, elimination of flies and mice, and inspections of the boats carrying infectious diseases, etc.³⁴ In addition to the periodicals, it was also presented in school textbooks. In an elementary textbook, *gonggong weisheng* was presented as a separated chapter and referred to public hygiene.

No. 9: Public Hygiene

Hygiene is not just a matter to an individual. It shall also be the responsibility of the public. Moreover, the public's responsibility to hygiene is more important than the individual's.

What cannot be lacking for all people to preserve one's life is air, sun, food and drink, place to live, and ditch. Air and light are for human beings. If either air gets polluted or sunlight gets blocked that will be sufficient to cause one to be unhealthy and will affect his eating, drinking and living. Although it only profits one family, if one can keep [air] clean and [sunlight] adequate, it is sufficient to prevent diseases and the public will also benefit from it. Regarding sewers and rivers, it is normally shared by the local people, and people [living there] are particular affected by it.³⁵

The idea of *gonggong weisheng* (public hygiene and sanitation) come from the idea of hygiene, and is mainly contrasted with *geren weisheng* (individual hygiene) - individual hygiene is important for prolonging one's life, but public hygiene and sanitation were even more important because they were seen as a way to save the nation. At that time, a slogan such as *weisheng jiuguo*

³⁴ De, Qin 德钦. 1917. Vol. 3. No.1 pp. 83-84.

³⁵ Wu, Jin 武进 (ed.). 1912. pp.6-7.

(save the nation through setting up institutions for public health) was strongly promoted by the elites. With people's increasing perception of the importance of public hygiene or sanitation in the 1910s, discussions on setting up institutional management of public hygiene increased. In the 1920s, articles about *gonggong weisheng* (public sanitation or hygiene) were mainly about the demands for setting up institutions to carry out the work of preventing the spread of infectious diseases and improving water quality, etc.

Interestingly enough, in the 1920s *huanjing weisheng* (environmental hygiene) started to appear - 6 articles with the title of *huanjing weisheng* were published in 1929, including 5 articles about keeping school environmental hygiene, and one article about hygiene. Starting from the 1930s, the frequency of *huanjing weisheng* (environmental hygiene) appearing in the titles of the articles greatly increased. It was not limited to school hygiene, but was extended to environmental hygiene of the army, factories and cities, etc.

More importantly, in the 1930-40s the content of *gonggong weisheng* (public hygiene) and *huanjing weisheng* (environmental hygiene) became very similar. Both were associated with keeping the public healthy through maintaining good quality of drinking water, food, living places and the public area, as well as preventing people from catching infectious diseases. One major difference was that *gonggong weisheng* (public hygiene and health) became an administrative term – in relation to public health service or facilities, while *huanjing weisheng* (environmental hygiene) was not an administrative term. It rather became a part of *gonggong weisheng* (public hygiene and health) after *gonggong weisheng* had been upgraded to an administrative term – public health.

Huanjing weisheng (environmental hygiene) is a part of *gonggong weisheng* (public health). In general society, the work such as pouring out water and cleaning the streets, is just a perspective of social environmental hygiene. One shall also work on environmental hygiene in families, schools, factories and armies. It includes the management of households, roads, drinking water, pests and polluted materials.³⁶

The time of the appearance of *huanjing weisheng* (environmental hygiene) was the time when the concept of *weisheng* (hygiene) developed from focusing on personal hygiene (*geren weisheng*) to public hygiene administration (*gonggong weisheng* or *huanjing weisheng*) and further to China's development of a national health administration (*gonggong weisheng*). *Huanjing weisheng*

³⁶ Anonymous. 1934. No.190. pp.106-109.

(environmental hygiene) then became a part of *gonggong weisheng* (public hygiene and health). The reason that *huanjing weisheng* (environmental hygiene) is a crucial section of public health is that *gonggong weisheng* (public hygiene) started from the work of keeping the environment hygienic, and then developed to cover a wider scope – public health, which includes environmental hygiene and the administration of hospitals and medicines, etc.³⁷

In short, the reason that the conceptualization of environment was closely connected with *weisheng* (hygiene) is that during the course of its conceptualization, *weisheng* (hygiene) was developed from a concept of keeping individuals clean and hygienic to public hygiene and health service, in which the public environment was the essential part. As a result, a new term, *huanjing weisheng* (environmental hygiene), as a part of public hygiene and health was born - and through the active use of this term in society, it strengthened the modern sense of environment.

³⁷ Qi, Shugong 齐树功. 1949. Vol.11. No. 3-4, pp.9.

8. The Further Changes in the Perception of Environmental Change via *Huanjing Wuran* (environmental pollution)

In the 1920-40s, the new term *huanjing weisheng* (environmental hygiene) appeared. One of the main causes was the Chinese modernizing elites and government's promotion of environmental hygiene, which was an important part of developing public hygiene and health. Through further discussion and debates on what *huanjing weisheng* (environmental hygiene) was in newspapers and journals, as well as campaigns of environmental hygiene around the nation, a modern sense of the environment was strengthened in society. In the 1950-60s, apart from environmental hygiene, *huanjing* (environment) was often discussed in relation to topics such as natural environment, geographic environment, social environment and language study environment. No further change of the concept of *huanjing* (environment) appeared until the 1970s when environmental pollution became a serious problem in both the global and domestic contexts. In this chapter, the appearance of the new term *huanjing wuran* (environmental pollution) in the course of the conceptualization of *wuran* (pollution) will be discussed. The aim is to find out what led the Chinese to further perceive environmental change after the 1970s.

8.1. The formation of the modern concept of *wuran* (pollution)

Wuran (pollution) is not a modern term but has existed since ancient times. The early use of *wuran* (pollution) can be found in the Three Kingdoms period (220-28AD). The *Book of Wei* (魏书) is a historical book, which describes the situation of the society at the end of the Han dynasty (202 BC-220 AD). In this book, *wuran* referred to making things dirty by coloring or defiling them: "Due to the chaos caused by the wars, fighting among soldiers and war horses, the blood of the armies 'polluted' the mountain Qiu." (或因汉末之乱，兵马扰攘，军尸流血，污染丘山。)³⁸ The whole mountain was defiled by the blood, which revealed the heavy casualties in the war.

The original use of *wuran* (pollution) remained until the early 20th century. However, in the 1920-1940s, it started to be endowed with the idea of environmental pollution. Different from the ancient idea of staining, the modern concept of environmental pollution has strong emphasis on mixing

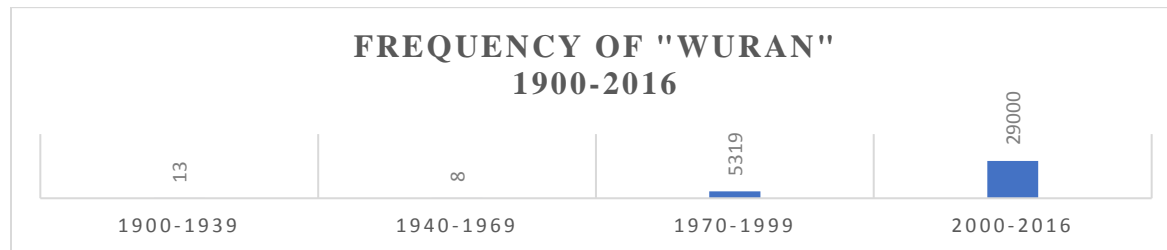
³⁸ *Hanyu da cidian* 汉语大词典. 1986. pp.911.

harmful substances in the environment where people are living, and it further causes damage or negative efforts to the environment and people. The introduction of this new concept was influenced by the Japanese term *osen* (污染, pollution) that was used in relation to hygiene. In the QGBKSY database, I found three articles in which *wuran* was used as a concept of environmental pollution in the 1920-40s. Although the number was small, these three articles were all published in medical magazines. In 1928, an article about air pollution in Japan was published in *Tongrenhui Medical Magazine* (同仁会医学杂志). *Tongrenhui* was a medical group established in Japan in 1902. Its purpose was to introduce Japanese advanced medicine to Qing China and other Asian countries³⁹.

In the 1930s and 1940s, *wuran* (endowed with pollution) continued to appear in Chinese medical articles⁴⁰. In 1935, the article “Beijing water well pollution and its improvement” (北平饮用水井之污染来源与其改善方策) was published in the *New Medical Magazine* (新医药杂志). Terms such as *wuran lai yuan* (污染来源, source of pollution) and *dimian wuran* (地面污染, ground pollution) were used to define where the water pollution came from.

The modern concept of pollution started to be formed in *wuran* in the 1920s. However, this modern concept was not frequently used in China until the 1970s. The frequency in the QGBKSY database shows that *wuran* (making things dirty or pollution) appeared 13 times from 1900-1939 and 8 times from 1940-1969 in the title of the articles published in periodicals. The change of the frequency started from the 1970s. Moreover, from 2000-2016, the frequency reached 29,000 times, compared to 5319 times from 1970-1999. What caused such change in frequency?

Figure 6. Frequency of *wuran* (pollution) in the titles of the articles in 1900-2016 in QGBKSY database



³⁹ Ding, Lei 丁蕾. 2004 (4). Vol.34. No.2. pp.99-100.

⁴⁰ Jing, Jiang 镜江. 1936. Vol.1. No.4. pp.388.; Anonymous 1944. Vol.29. No.2. pp.297.

A short answer is the environmental movement in both China and the global context. In the 1970s, western countries, including the UK, U.S. and Germany, as well as Japan in Asia, experienced various kinds of pollution that was caused by industrialization. In the global context, calling for actions for environmental protection (proposed and implemented laws and regulation, and held global meetings of environment protection, etc.) became an urgent task on the agenda in the 1970s⁴¹. Increasing numbers of articles reporting such global news were published at the same time in China, and *wuran* (pollution) has since then been widely used in connection with industrial pollution. In China, the needs for infrastructure development were great after the Cultural Revolution. In 1973, the first environmental protection meeting was held in China, and big cities like Shanghai implemented the environmental protection plan: monitor the quality of environment regularly. In parallel, research on the relationship between environment quality and health started across China.⁴²

In 1978, China's policy of opening up to foreign business was announced by Deng Xiaoping (邓小平). In 1980, the first four Special Economic Zones (*i.e.* Shenzhen, Zhuhai, Xiamen and Shanghai) were set up for promoting international trade and attracting foreign direct investment in China. With the opening up of more industries and sectors to foreign investors, an increasing number of foreign companies have come to China to set up factories for production in various sectors. In the 1990s, when the Chinese started to experience industrial pollution in daily life to a larger extent, new terms and topics related to pollution frequently appeared, such as *huanjing wuran* (环境污染, environmental pollution), *daqi wuran* (大气污染, air pollution), *gongye wuran* (工业污染, industrial pollution), *shuiwuran* (水污染, water pollution), *turang wuran* (土壤污染, soil pollution) and *shiping wuran* (食品污染, food pollution).⁴³

Moreover, what *wuran* (pollution) means to Chinese people in modern times has even further changed through everyone's own experience of various types of pollution in daily life. Because environmental pollution such as water pollution, food pollution and air pollution is no longer something that is happening somewhere else, but in the city and the very environment where

⁴¹ Wang, Lili 王莉丽. 2005. pp.58.

⁴² Wang, Ximeng 王希孟, et.al. 1986. pp.194.

⁴³ Analysis based on the frequency and articles found in QGBKSY database with *wuran* as a key term appeared in titles of the articles in 1970-2016.

everyone is living, people's understanding of *wuran* (pollution) has further developed. In the early 21st century, people's idea of pollution is closely related to its negative effect on human life circumstances and health.⁴⁴ Not only limited to the four types of pollution given below, but definitions of various types of pollution emphasize the damage caused by the pollution to human health.

✚ In 2000, "Electromagnetic pollution" (电磁污染)⁴⁵

"According to recent research from different countries, electromagnetic pollution is a type of pollution, even more serious and dangerous than chemical pollution. It causes great damage to human beings both physically and psychologically."

✚ In 2000, "Light pollution and prevention" (光污染及其防治)⁴⁶

"Pollution refers to a phenomenon that has a negative effect on a human's life circumstances and the production environment.

✚ In 2008, "Brief discussion about indoor air pollution" (浅谈室内空气污染)⁴⁷

"Definition of indoor air pollution: sources of harmful substances coming into the interior, or poor indoor ventilation causes the increase of indoor harmful substances in numbers and types. It can produce a series of symptoms. It is said that the interior air is polluted".

✚ In 2015, "Definition of the damage from noise pollution" (噪声污染损害的定义)⁴⁸

"Noise pollution refers to a phenomenon that noise in environment exceeds national standards and disturbs a human's normal life, work and study."

The concept of *wuran* has been extended from making things dirty and unclean by coloring them (from ancient China to the early 20th century) to environmental pollution (since the 1920s, and it became frequently used since the 1970s), and further shifted to emphasizing harmful effects of pollution on human health and life circumstances in recent decades (in the early 21st century in particular). In the process of its conceptualization, what makes *wuran* (pollution) different is its endowed concept of environmental pollution. The significance of the conceptual change of *wuran*

⁴⁴ Ibid.

⁴⁵ Li, Xiang 李祥. 2000. pp.13.

⁴⁶ Yang, Shiguan 杨世光.2000. pp.25.

⁴⁷ Liao, Cunjie 廖存杰. 2008.9. pp.102.

⁴⁸ Liao, Wenting 廖文婷. 2015.11. pp.112.

(pollution) is that the Chinese recognized the environmental change caused by industrialization, and that environmental pollution can bring serious damage to human life and health.

8.2. The significance of the Chinese perception of the modern concept of *wuran* (pollution)

The significance of the Chinese perception of modern concept of *wuran* (pollution) is that people recognized the harmful impact of environmental pollution on human life. Through such a perception, their understanding of the environment developed. From the surroundings to life circumstances and the interaction between creatures and the natural environment, and further to environmental hygiene and pollution, the concept of *huanjing* (environment) has developed step by step since the late 19th century in the process of China's modernity (see Chapter 6, 7 and 8). After *huanjing* became a concept, its meanings turned more and more abstract (*i.e.* its idea developed from the surroundings to the natural environment, to social environment and to more abstract environmental concepts, such as information environment), but the center of its concept has been more and more directed toward human beings. In ancient China, *huanjing* (environment) was used about the surroundings – around a boundary, a geographic area, not necessarily around human beings. In the late 19th century and 20th century, *huanjing* (environment) was extended to a complex of life circumstances of human beings. About the same time, *huanjing* (environment) was endowed with the idea of interaction between creatures and the environment. Later, *huanjing weisheng* (environmental hygiene) made Chinese people recognize the importance of keeping good personal hygiene and the development of public hygiene and health. At the center is human beings. The goal of it all is to prolong human life. *Huanjing wuran* (environmental pollution) further woke up the Chinese people to perceive the damage caused by industrial pollution to the environment – the polluted air, soil, ocean and rivers, etc. can bring damage to human health and life.

From the surroundings, to natural environment, life circumstances, public hygiene and health, as well as to environmental pollution, it reflects a process of the human being's recognition of the environment, in which a human's self-centered tendency becomes more and more obvious.

9. Conclusions

Before the term *environment* became a modern environmental concept (*i.e.* before the 19th century in Euro-America and the 20th century in China), its use first as “the state of being surrounded” and then as “life circumstances” was similar in both Euro-American and Chinese discourses. The shifts in the use of the term (*i.e.* English *environment*, German *Umgebung* and *Umwelt*, and Chinese *huanjing*) started from the formation of the biological concept of interactions between creatures and the environment via the English term *environment* in the mid-19th century.

At that time in English discourse, the term *environment* was extended from “the state of being surrounded” to more general and complex “life circumstances” through Carlyle’s translation of Goethe’s work, and it was later endowed with a new concept of organism-environment interaction through Spencer’s *Principles of psychology* in the mid-19th century, and it became more popular after the late 19th century.

In German discourse, before a modern concept of environment arose, both *Umgebung* and *Umwelt* referred to the surroundings. In Goethe’s works, the use of *Umwelt* was extended to elaborate complex life circumstances. In the early 20th century, the term *Umwelt* was used as a biological concept of organism-environment interaction through the environmental theory developed by the German biologist and philosopher Jakob Johann Baron von Uexküll in his *Umwelt und Innenwelt der Tiere* (1909). He differentiated *Umwelt* from *Umgebung*, and contributed to the coinage of the modern concept of *Umwelt* (environment) in the German-speaking world.

The significance of such conceptual change is that the development of a modern biological idea changed the way that people look at the surrounding world. Before the formulation of modern biology, people viewed the surrounding world as nature, while after it, people see the surrounding world as the environment. More importantly, in the development of scientific knowledge, starting from modern biology, the concept of environment has become more and more abstract and complex – the environment is something that includes the thinking of philosophy, society, biology, ecology, economy, etc. In this respect, further studying a combination of the history of science and technology, the history of modern biology (started from the early 19th century), the history of hygiene (hygiene became a discipline in the mid-19th century) and the history of ecology (ecology as the branch of biology developed in the late 19th century) would be necessary and could lead to a deeper and clearer picture.

In the late 19th and the early 20th centuries, the modern concept of environment was formed through the terms *environment* and *Umwelt* in the English-speaking and German-speaking worlds respectively. However, the recognition of the importance of protecting the environment was still quite limited – mostly by intellectual elites at that time. It was not until the mid-20th century, when environmental issues (e.g. water and air pollution, soil deterioration, waste and noise) caused by industrialization became a global issue, that calls for environmental awareness and protection became an urgent task in the global society. In the 1960s, the environmental movement started first in the United States, and later extended to the whole world. In June 1972, the UN Conference on the Human Environment was held in Stockholm, which led to the establishment of the United Nations Environment Program. The term *environmentalism* was associated with ecological sense in 1972, and new terms such as *climate change* and *global warming* were coined in the 1980s. The environmental concepts have served as social political weapons for driving the environmental movement at both local and global levels.

In Chinese discourse, before the modern environmental concept (*i.e.* biological sense of the environment) was introduced from the West to China, the idea of the ancient term *huanjing* was the same as it was in the ancient western world (*i.e.* the surroundings and life circumstances). After its introduction, the Chinese perception of the environment basically followed the same path as in the western countries. The reception of the new concept of environment from Euro-America was based on a complex combination of western environmental concepts, Japanese *kankyō* (環境, environment), western hygienic knowledge and the Japanese hygiene administration system, as well as global and China's own domestic environmental movements. The conceptualization process of *environment* in Chinese discourse was also closely associated with the conceptualization of the two Chinese ancient terms *weisheng* (hygiene) and *wuran* (pollution). Moreover, the concept environment is still changing. It started in the 1910s, but the greater shifts appeared in the 1920s, 1970s and 2000s.

Huanjing (environment) in the ancient times was a word that referred to the surrounding places. During the Late Qing era, the Opium wars and the Sino-Japanese war made China recognize the rise of western power and their science and technology, as well as Japan's success in reforms. The translation of western scientific books and Chinese elites' trips to Euro-America and Japan in the

early 20th century became two effective channels for the modern concept of environment to be introduced in China.

Since the 1910s, *huanjing* has referred to the interaction between the human being and the complex environment, with an emphasis on the influence of the environment on human life, including social, political, physical, natural and biological aspects. For example, this goes for *Shenghuo huanjing* (life circumstances), *shidai huanjing* (circumstances of the time/age), *ziran huanjing* (natural environment) and *shengwu huanjing* (biological environment).

Since the 1920s, *huanjing* was endowed with a sense of environmental hygiene. In the course of the conceptualization of *weisheng* (hygiene), *weisheng* developed from a concept of keeping private hygiene to public hygiene and service, in which the public environment was the essential part. As a result, a new term, *huanjing weisheng* (environmental hygiene) as a part of public health, was born, and through its use, the term strengthened the modern senses of environment.

Since the 1970s, *huanjing* has been frequently used in the context of environmental pollution and protection due to the environmental movement in both China and the global contexts. In the Chinese context, environmental protection laws and policies have been developed and implemented, environmental education as a subject has been added in the education systems from elementary to higher education, and environmental development actions have been promoted. It has increased environmental awareness and led to certain actions for environment protection and management, from government to industries and to citizens, and the other way around. The focus of environmental development has been shifted from promoting scientific knowledge of the natural environment in the 1970s to environmental sustainability in the 1990s, and further to implementing an ecological civilization in the early 21st century.

Since the 2000s, *huanjing* has been applied more widely by freely combining it with other terms, such as information environment (*xinxi huanjing*) and cultural environment (*wenhua huanjing*). The more the concept of *huanjing* developed, the more it became abstract. Moreover, it is no longer exclusive to the elite but widely spread among the population via various media.

People's perception of the surroundings, the natural environment, life circumstances, public hygiene and health, pollution and the virtual environment (such as information environment), reflects a process of the human recognition of the environment, in which human self-centeredness

becomes more and more exposed. Ideas of the human-environment relationships (e.g. ecological development and sustainable development) reflect the political ideology at both local and global levels. The concept of environment is of course connected with the term *environment*, but it is far more than a term. Not only has it become more and more abstract and keeps expanding, but it abides in people's ideologies and serves as a weapon in social and political movements toward achieving a goal in human history.

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