Chinese Medicine as Hermeneutic Knowledge?
On the Role of Classical Works such as
*Huangdi neijing suwen* in Chinese Medicine

by
Maggie Ka-ying Tsang

M.A. (Philosophy), The Chinese University of Hong Kong, 2014
B.Sc. (Environmental Sci & Management), City University of Hong Kong, 2011

Thesis Submitted in Partial Fulfillment of the
Requirements for the Degree of
Master of Arts

in the
Department of Humanities
Faculty of Arts and Social Sciences

© Maggie Ka-ying Tsang

SIMON FRASER UNIVERSITY
Summer 2019

Copyright in this work rests with the author. Please ensure that any reproduction or re-use is done in accordance with the relevant national copyright legislation.
Approval

Name: Maggie Ka-ying Tsang
Degree: Master of Arts
Title: Chinese Medicine as Hermeneutic Knowledge? On the Role of Classical Works such as *Huangdi neijing suwen* in Chinese Medicine

Examinining Committee: Chair: Samir Gandesha
Associate Professor

Paul Crowe
Senior Supervisor
Associate Professor

Michael Hathaway
Supervisor
Associate Professor
Department of Sociology and Anthropology

Heesoon Bai
Internal Examiner
Professor
Faculty of Education

Date Defended/Approved: July 30, 2019
Ethics Statement

The author, whose name appears on the title page of this work, has obtained, for the research described in this work, either:

a. human research ethics approval from the Simon Fraser University Office of Research Ethics

or

b. advance approval of the animal care protocol from the University Animal Care Committee of Simon Fraser University

or has conducted the research

c. as a co-investigator, collaborator, or research assistant in a research project approved in advance.

A copy of the approval letter has been filed with the Theses Office of the University Library at the time of submission of this thesis or project.

The original application for approval and letter of approval are filed with the relevant offices. Inquiries may be directed to those authorities.

Simon Fraser University Library
Burnaby, British Columbia, Canada

Update Spring 2016
Abstract

The worldviews of Chinese and modern medicine are fundamentally different. Chinese medicine views the human body, not simply as a biological system, but as a holistic microcosm, whose health depends on maintaining harmonious function at the level of internal microcosm and in relation to the wider context understood as parallel macrosom. Without denying the success of natural science, philosophers have developed alternative epistemological conceptions that aim to better capture the nature of knowledge specifically related to human phenomena. Wilhelm Dilthey draws a distinction between understanding (Verstehen) and explanation (Erklären) as the specific form of knowing in human and natural sciences respectively. In contrast to positivistic knowledge of natural sciences, knowledge in human sciences is essentially hermeneutic in nature, knowledge that involves interpretation and understanding that takes into account variant contexts and perspectives. The thesis applies the hermeneutic conception to Chinese medical knowledge with the aim to develop a promising framework for understanding the nature of Chinese medicine and explaining the role of Chinese medical classics.

Keywords: Chinese medicine; Hermeneutics; Philosophy; Understanding and Explanation; Human and Natural Sciences
Acknowledgements

I would like to express my profound appreciation and gratitude to Dr. Paul Crowe, my senior supervisor, for his patient guidance, enthusiastic encouragement, and insightful critique of this research work. I would also like to give special thanks to Dr. Stephen Duguid for his advice and assistance throughout my research journey at SFU. My heartfelt thanks also extend to Dr. Chan-fai Cheung and Dr. Chong-fuk Lau for enlightening me on philosophy and life, as well as to Ms. Tracy Kit-wa Chu for the precious friendship which helped power me through the toughest challenges of this journey.
# Table of Contents

Approval...................................................................................................................... ii
Ethics Statement....................................................................................................... iii
Abstract.................................................................................................................... iv
Dedication.................................................................................................................. v
Acknowledgements................................................................................................. vi
Table of Contents.................................................................................................... vii
List of Figures ........................................................................................................... ix

## Chapter 1. Introduction......................................................................................... 1

## Chapter 2. Chinese Medicine and its Worldview................................................. 5
  2.1. Terminology: Chinese Medicine, “Traditional” Chinese Medicine and TCM .... 5
  2.2. Chinese Medicine in the Modern World ......................................................... 6
  2.3. Science and Science in Chinese Culture ....................................................... 9
  2.4. *Huangdi neijing suwen* and its Role in Chinese Medicine ....................... 10
  2.5. Cosmology in *Suwen* ................................................................................. 12
      2.5.1. Genesis and Transformation ............................................................... 12
      2.5.2. *Qi*, *Yin/yang*, *Wuxing* and *Wuyun liuqi* .................................. 13
      2.5.3. The Twofold Worldviews of the *Suwen* ......................................... 17
  2.6. The Non- Observable Nature of Chinese Medicine ..................................... 20

## Chapter 3. Modern Medicine and the Worldview of Natural Science............. 23
  3.1. Modern Medicine as a Discipline of Modern Natural Science ................. 23
  3.2. The Conceptual Foundation of Modern Medicine ...................................... 25
      3.2.1. The Shared Assumptions as a Discipline of Modern Science ........... 25
      3.2.2. The Underlying Assumptions of Modern Medicine – the Biomedical and Humanistic Models ............................................................ 27
  3.3. The Progress and Dominance of Modern Medicine .................................... 33

## Chapter 4. Challenges to Modern Science and Hermeneutic Conception of Science........................................................................................................... 40
  4.1. Criticisms of Modern Science and Scientific Rationality .......................... 40
      4.1.1. Kuhn’s Paradigm Shift ....................................................................... 40
      4.1.2. Rorty’s Anti-Representationalism ..................................................... 41
      4.1.3. Pragmatist Conception of Truth and Rationality ............................... 44
  4.2. Distinction between Natural Sciences and Human Sciences .................. 46
      4.2.1. *Naturwissenschaften* (Natural Sciences) ................................ .......... 48
      4.2.2. *Geisteswissenschaften* (Human Sciences) ....................................... 51
  4.3. What are Explanation (*Erklären*) and Understanding (*Verstehen*)? ...... 56
      4.3.1. *Erklären* and Natural Sciences ....................................................... 57
      4.3.2. *Verstehen* and Human Sciences ...................................................... 58
  4.4. What is Hermeneutic Knowledge? ............................................................... 62
      4.4.1. Gadamer’s Hermeneutic Circle ......................................................... 63
4.4.2. Temporal Distance and the Fusion of Horizons .............................................. 65

Chapter 5. Chinese Medical Theories as Hermeneutic Knowledge .................. 68
5.1. The Commentary Tradition on Chinese Medical Texts .......................... 68
  5.1.1. Classical Literary and Modern Chinese Texts ........................................... 68
  5.1.2. The Commentary Tradition of Suwen .................................................... 71
5.2. The Hermeneutic Nature of Suwen and Chinese Medical Theory ............ 75
  5.2.1. Brief Account on the Theoretical Development ..................................... 75
  5.2.2. Metaphysical Analysis on the Operation of Chinese Medicine .............. 81


References ................................................................................................................. 90

Appendix. Interview Questions .................................................................................. 99
List of Figures

Figure 1. A scanned page of the *Suwen* ............................................................... 70
Figure 2. A scanned copy of a selected commentary in the *Suwen* ...................... 73
Chapter 1.

Introduction

*Philosophy, though unable to tell us with certainty what is the true answer to the doubts which it raises, is able to suggest many possibilities which enlarge our thoughts and free them from the tyranny of custom. Thus, while diminishing our feeling of certainty as to what things are, it greatly increases our knowledge as to what they may be; it removes the somewhat arrogant dogmatism of those who have never travelled into the region of liberating doubt, and it keeps alive our sense of wonder by showing familiar things in an unfamiliar aspect.*

(Bertrand Russell)

It is generally assumed that medical science is making continual progress. What medical students learn nowadays differs significantly from what was taught a few decades ago. It may surprise many that medical theories developed by Galen of Pergamon, a second-century Greek physician, were still adopted and taught in medical schools in the nineteenth century (Scarborough 2012, 21); today his works are only of historical significance. In Chinese medicine, however, things are different. *Huangdi neijing suwen* 黃帝內經索問 (Yellow Emperor's Inner Classic: Basic Questions, hereafter as *Suwen*), which is dated to the second century BCE, continues to be accepted as a foundational work for those studying Chinese medicine. Regular courses on the *Suwen* are often compulsory or at least elective for students studying Chinese medicine in major universities of the Hong Kong SAR, the People’s Republic of China, and Taiwan.¹

Why do Chinese medicine practitioners continue to study the *Suwen* and do not treat it merely as a classic in the history of Chinese medicine, as in the case of Galen’s works for modern medicine. This thesis takes the question as a point of departure for pursuing a deeper understanding of Chinese medicine. While modern medicine is commonly recognized as the standard, or the sole legitimate form of medicine in the contemporary world, there exist different forms of alternative medicine that fulfill a kind of

¹ For example, the *Huangdi neijing* is a compulsory subject in the Chinese University of Hong Kong, Hong Kong Baptist University, Chang Gung University in Taiwan, and University of Technology Sydney, and it is an elective course in many other universities offering programs in Chinese medicine such as China Medical University.
complementary as well as competitive role in today’s medical practice. Compared to other alternative medicines such as homeopathy or naturopathy in the West, Chinese medicine seems to enjoy continued and considerable success, being widely practiced in Hong Kong SAR, the People’s Republic of China, Taiwan and among overseas Chinese. Key components of Chinese medicine such as acupuncture and cupping therapy have even been adopted to a certain extent by practitioners of modern medicine and have gained in popularity. A deeper understanding of the nature of Chinese medicine is not only of intrinsic value, but may help reveal important limitations of mainstream medicine.

Modern medicine is a subdomain of the hugely successful enterprise of natural science, which aims to deliver objective and value-neutral knowledge about the world. Theories in natural science are verified, or falsified, based on observable empirical evidence, supposedly irrespective of cultural and historical contexts. Modern medicine considers the human body as a biological system that can be studied and even manipulated in the same objective manner as other physical objects. Using the same scientific standard, the question of whether the theories in Suwen are valid in the eyes of modern science should be answered by empirical research that subjects them to critical scrutiny. While natural scientific methods have been increasingly adopted in research practices related to Chinese medicine, studies usually focus on Chinese materia medica, examining their effects or no-effects. Empirical research has rarely been done on the theoretical framework of Chinese medicine, as developed in the Suwen and other classics. A major reason for the lack of such research is that basic concepts used in Chinese medicine, such as qi 氣, yin/yang 陰陽, and wuxing 五行, are not easily translatable into empirically observable phenomena that can be put to experimental test. This intractable difficulty, however, does not provide insight into why classics such as the Suwen persist as a text foundational for the study and practice of Chinese medicine. A deeper investigation into the nature of Chinese medical knowledge has to be undertaken in order

---

2 A new physiotherapy system, Intramuscular Simulation (IMS), that was developed in Canada in 1970s was inspired by acupuncture in Chinese medicine. IMS considers itself to be grounded in Western Medical Science, but it makes use of acupuncture needles. See the introduction page of IMS on the website of the University of British Columbia. Retrieved 30 June 2019 from: http://ubcgunnimsm.com/what-is-ims/gunn-ims/. In addition, the cupping treatment of Chinese medicine has attracted worldwide media attention during the 2016 Olympics, after 23-time Olympic Gold Medalist Michael Phelps and other athletes were found receiving cupping treatment. The New York Times. Retrieved 30 June 2019 from: http://well.blogs.nytimes.com/2016/08/08/what-are-the-purple-dots-on-michael-phelps-cupping-has-an-olympic-moment/.
to understand how such knowledge differs from the scientific knowledge of modern medicine.

Without denying the success and reliability of natural science, philosophers of the nineteenth century have developed alternative epistemological conceptions that aim to better capture the nature of knowledge specifically related to human phenomena. Wilhelm Dilthey draws a distinction between understanding (Verstehen) and explanation (Erklären) as the specific form of knowing in human (Geisteswissenschaften) and natural sciences (Naturwissenschaften) respectively. Natural sciences take a detached stance towards their objects, resulting in positive knowledge about external causal relationships and mechanistic explanation of objectifiable phenomena. Applying this natural scientific model to the study of human phenomena, however, fails to take the essentially socio-historical and cultural nature of human existence into proper account. According to Dilthey, human sciences must acknowledge the interpretive or perspectivistic nature of their studies, in which understanding is achieved through a communicative and participatory exploration of human phenomena in view of their specific, culturally situated “nexus of life” (Lebenszusammenhang). In contrast to positivistic knowledge of natural sciences, knowledge in human sciences is essentially hermeneutic in nature, knowledge that involves interpretation and understanding that takes into account variant contexts and perspectives.

The hermeneutic conception of human sciences offers a promising framework for understanding the nature of Chinese medicine and explaining the role of classical works such as the *Suwen*. Chinese medicine is known to view the human body, neither simply as a biological system nor viewed from a strictly structural and functional perspective, but rather as a holistic microcosm, whose health depends on maintaining harmonious function at the level of internal microcosm and in relation to wider context understood as parallel macrocosm. The distinctive role of the *Suwen* in Chinese medicine may be traced back first to its conception of the body as a microcosm in a resonant and parallel relationship with the wider universe, but even more fundamentally to the fact that this view has practically shaped the medical cosmology in Chinese culture for two millennia. If Chinese medicine is essentially hermeneutic knowledge, it has to allow for a kind of understanding

---

3 The idea of hermeneutic knowledge has also started to gain attention in conventional Western medicine. See H. A. Ten Have et al. (ed.) *The Growth of Medical Knowledge* (Dordrecht: Kluwer, 1990), 82, 122-23; P. C. Gøtzsche, *Rational Diagnosis and Treatment: Evidence-
of patients that takes their cultural background and thus their psychosomatic conditions into serious account, for which the medical cosmology developed in the Suwen can function as a shared horizon in the communicative practice.

The thesis consists of the following five chapters: after this introductory chapter, Chapter Two gives an overview of the history and development of Chinese medicine. It discusses the cultural and philosophical frameworks of Chinese medicine with a specific focus on the twofold worldviews of the Suwen. Chapter Three addresses the dominant form of medicine in the modern world and its scientific background. It offers a critical analysis of the conceptual foundation and philosophical assumptions of modern medicine. Chapter Four introduces Dilthey’s idea of using explanation (Erklären) and understanding (Verstehen) to frame the distinction between natural and human sciences. After a critical analysis of the assumptions of modern science and scientific rationality, it discusses the alternative conception of different forms of human knowledge or science in the hermeneutic tradition from Dilthey to Gadamer. Based on the idea of hermeneutic knowledge, Chapter Five reviews the commentary tradition of Chinese medical texts and discusses how the hermeneutic circle can make better sense of the dynamic interactive nature of Chinese medicine. Chapter Six concludes the thesis with a discussion of the implications of the hermeneutic approach to the understanding and working of Chinese medicine.

Chapter 2.

Chinese Medicine and its Worldview

Chinese medicine heals in a world of unceasing transformation. This condition of constant change, this fluidity of material forms, stands in sharp contrast to a (modern Western) commonsense world of discrete entities characterized by fixed essences, which seem to be exhaustively describable in structural terms.

(Judith Farquhar)

2.1. Terminology: Chinese Medicine, “Traditional” Chinese Medicine and TCM

“Chinese medicine,” a term which is often used interchangeably with “Traditional Chinese Medicine,” can be an English translation of many Chinese terms linguistically: Zhongyi 中醫, Zhongyao 中藥, Zhongguo yixue 中國醫學 and Zhonghua yixue 中華醫學 can all be literally translated as “Chinese medicine” in English. However, neither of these terms can replace one another and one of them, Zhonghua yixue, even refers to Western biomedicine that was practised in China (Taylor 2005, 79-80). With such a complexity in the translation and using of terminology, it is necessary to make a careful distinction between the terms “Chinese medicine,” “Traditional” Chinese Medicine and TCM before we get into the main discussion.

Before the late nineteenth century, Chinese medicine, the kind of medicine that was indigenous to China, was simply referred to as “medicine” (Yi 醫 or Yixue 醫學) in China. When modern medicine arrived in China during the late nineteenth century, there was a need to distinguish this foreign medicine originated in the West from the native form of medicine in China. Hence, the terms Zhongyi (“Chinese medicine”) and Xiyi 西醫 (“Western medicine”) have developed for the distinction (Taylor 2005, 79). Linguistically,

4 Chinese medicine is also sometimes referred to as Jiuyi 舊醫 (old medicine) or Guozi 國醫 (national medicine), while Western medicine is as well sometimes referred to as Xiandai yixue 現代醫學 (modern medicine) or Yangyi 洋醫 (foreign medicine). Bridie Andrews has proposed a way to use the terms “Chinese medicine,” “Western medicine,” “national medicine,” and “modern medicine” without assigning a fixed meaning to each term apart from the implied contrast with its civilizational others (2014, 9). This thesis adopts the same way to use these terms with an awareness that the comparison of Chinese medicine and modern medicine is
Zhongyi and Xiyi can also mean practitioners of Chinese medicine and practitioners of Western medicine respectively. While “Western medicine” in Chinese is a term coined to contrast with “Chinese medicine,” it refers to what is commonly called modern medicine in English, which is known as the standard scientific form of medicine.

One may find it surprising that the term “Traditional Chinese Medicine,” which is commonly abbreviated as TCM nowadays, was coined in the 1950s by the government of Communist China as a political marketing strategy targeting foreign audiences. While the Chinese expression of Chinese medicine remained the same, its English translation turned from “Chinese medicine” to “TCM.” Thus, TCM refers merely to Chinese medicine after mid-1950s in mainland China (Taylor 2005, 79, 84). Though it is usually deemed synonymous with “Chinese medicine,” it is worth noting that the term “TCM” itself covers only the standardized and institutionalized version of Chinese medicine that was selected by the government of Communist China. By contrast, the term “traditional Chinese medicine” with “traditional” in uncapsulated form, generally refers to past or traditional forms of Chinese medicine which is quite different from the meaning of TCM (Taylor 2005, 84-86). In order to avoid confusion for the discussion in this thesis, both of the terms “TCM” and “Traditional Chinese Medicine” will be used exclusively to refer to the standardized and institutionalized form of Chinese medicine created by the government of Communist China, while the term “traditional Chinese medicine” with “traditional” in uncapsulated form will not be employed. Moreover, the term “Chinese medicine” will be employed to refer broadly to the medicine that was indigenous to China that includes the scope of Zhongyi and Zhongyao in the past, present, and future.5

2.2. Chinese Medicine in the Modern World

Today, TCM is considered to be a popular alternative medicine both nationally and internationally. Although the standardization, evaluation, and implementation of TCM in

---

NOT made under an assumption of a dichotomy between the two kinds of medicine. An attempt to contrast the worldviews between Chinese medicine and modern medicine in this thesis is for addressing the cultural assumptions that leads to different focuses in medical enqury.

5 I deliberately avoid the term Zhongguo yixue since it covers all kind of medical practices in China and the part related to Chinese medicine in it can be represented by the term Zhongyi. For the distinction between Zhongyi and Zhongguo yixue, see Taylor (2005, 80).
global health settings are still under constant discussion,⁶ Chinese medical treatment such as acupuncture is practiced worldwide.⁷ There are universities and institutions all over the world which offer courses on TCM and training for potential Chinese medicine practitioners. Scholars have also characterized the phenomenon of increasing adoption of Chinese medicine worldwide as the “globalization of Chinese medicine” (Hsu 2009, 461-64; Alter 2005).

Nevertheless, TCM is never a finished product but a complex creation that is ever evolving. Sean Hsiang-lin Lei has summarized the medical struggle in China into two aspects—“a policy struggle over the role of Chinese medicine in the national health-care system and an ideological struggle over the nature of China’s modernity” (2014, 10). It signifies the complexity of the formation and development of TCM in its historical context.⁸ Scholars generally agree that political intervention plays a crucial role in the modernization of Chinese medicine. Meanwhile, the ideological struggle over the modernity of Chinese medicine still occurs in one way or another. The framework of “science as modernity” has been leading the development of Chinese medicine by reforming Chinese medicine with scientific method. One famous example is the discovery and extraction of *Qinghao su* 青蒿素, also known as *artemisinin*, that led to a novel therapy against Malaria. This new therapy brought the Chinese scientist Youyou Tu the Nobel Prize in Physiology or Medicine in 2015. Tu discovered the herbs for curing Malaria in ancient Chinese medical texts and adopted the modern scientific approach to create a drug for the disease with *Qinghao su*. The discovery was taken as “a gift from Traditional Chinese Medicine to the world.”⁹ Tu herself believes that “Chinese medicine and pharmacology are a great

---

⁶ For example, there is a roundtable session in the 9th International Congress on Traditional Asian Medicine (ICTAM) in 2017 dedicated to the standardization, evaluation and implementation of Asian medicine in global health settings that includes detailed discussion on that of TCM.

⁷ According to the *WHO Traditional Medicine Strategy: 2014-2023*, there are 103 out of 129 countries recognized the use of acupuncture in 2013 (World Health Organization 2013, 22).

⁸ Scholars have been working on improving the understanding of the historical development of TCM and/or Chinese medicine. For detailed investigation, see Bridie Andrews, *The Making of Modern Chinese Medicine, 1850-1960* (2014); Kim Taylor, *Chinese Medicine in Early Communist China, 1945-63: A Medicine of Revolution* (2005); Sean Hsiang-lin Lei, *Neither Donkey nor Horse: Medicine in the Struggle over China’s Modernity* (2014).

It seems there is hope for creating more novel drugs from Chinese herbal medicine with modern scientific method and it is promising to develop Chinese medicine this way. However, there are also scholars who think that subsuming Chinese medicine within the framework of modern science is not the only way forward for Chinese medicine. Haifeng Li, vice professor of Department of Neijing at Shanghai University of Traditional Chinese Medicine, believes that it is not the best for the development of Chinese medicine to simply adopt the so-called “modern scientific” framework and then look for TCM treatments and *materia medica* that fit the framework. Li thinks that traditional Chinese culture and thought is the foundation of Chinese medicine; therefore, Chinese medicine may “lose its root” in the end if the modern scientific framework is applied to handle the problems of Chinese medicine. Li’s view on the development of Chinese medicine somehow represents a group of Chinese medicine practitioners and scholars in the field who think that the worldview of Chinese medicine should not be thrown away in the modernizing process of Chinese medicine. It is an indication that the ideological struggle over the modernity of Chinese medicine is not yet over. What, then, are these two worldviews of Chinese medicine and modern medicine that are involved in this ideological struggle? They will be examined later in Chapters 2.5 and Chapter 3.

---


11 Extracted from an interview with Dr. Haifeng Li on 17 October 2017. The interview was conducted in Mandarin. My translation in English reflects verbatim responses: “The worldviews of Chinese medicine and Western medicine are different. It is the modern scientific framework which has [been the foundation of] building up the worldview of Western medicine. We can precisely state that the development of Western medicine is dependent on the development of modern science, science is the foundation. And the development of Chinese medicine does not depend on the development of modern science. Its [Chinese medicine’s] worldview depends on some Chinese traditional culture and traditional thoughts; this is its [Chinese medicine’s] foundation. Therefore, if [we] use the modern scientific framework to handle these problems of Chinese medicine, ‘losing of root’ might happen to Chinese medicine in the end.” Transcription of Li’s statement: 「中醫學的世界觀和西醫學的世界觀是不一樣的。而現代科學的框架其實它是建立了西醫學的世界觀，我們可以準確的講，西醫學，其實它的發展是仰賴於現代科學的發展，科學是基礎。而中醫學的發展它並不是仰賴著現代科學的發展，它們的世界觀是仰賴著中國的一些傳統文化，傳統的思維，這些是它的一個基礎，所以呢，如果用現代科學的框架來這個處理中醫的問題，可能就會發生中醫學到最後呢就沒有根源了」. See Appendix for the Interview questions.
2.3. Science and Science in Chinese Culture

The word *science* is often equated with modern natural science in daily context. However, if *science* is to be used in this narrow sense, it would make no sense to speak of science before the seventeenth century. The modern English word *science* is derived from the Latin word *scientia*, which means knowledge. Meanwhile, in German, the word that corresponds to *science* in English, *Wissenschaft*, literally means “the systematic pursuit of knowledge.” It would be a misconception to assume the meaning of a word has always been the same throughout the history. The word *science*, as a shorthand of *natural science*, is an intriguing example of such a mistake. When a new form of knowledge was developed, which was called “new philosophy” by some in the late sixteenth to early seventeenth century, there was a need to search for a vocabulary for it. In the seventeenth century, the term “natural science” was commonly used along with other terms such as “natural philosophy,” “natural knowledge,” or “physicks.” Back then, the word *science* in English was too vague because there were a number of “sciences” already. In the medieval age, the term *art* referred to a practical skill while *science* referred to a theoretical system. Thus, the theoretical side of any discipline in the universities were called *science*. Interestingly, philosophy, a discipline that is assumed to belong with the arts today, once belonged to the sciences since there were no university courses in applied philosophy. It was not until the nineteenth century that the word *science* became habitually used as an abbreviation of “natural science” (Wootton 2015, 29-32). While the distinct characteristic of modern natural science is its rigorous experimental method, there was no such concept of scientific method in the ancient world. “The mark of science [in the ancient world],” as Geoffrey Lloyd and Nathan Sivin suggest, “lies in the aims of the investigation and its subject matter—the bid to comprehend aspects of the physical world—not in the degree to which either the methods or the results tally with those of later inquiries, let alone modern science” (2002, 4). Only under such interpretation can we discuss science in the ancient world.

---


13 David Wootton suggested that John Donne and Francesco Patrizi, for example, took up “new philosophy” to describe what we would call *science* today (2015, 7).
Every aspect of development in society has its specific cultural background, and science is no exception. Worldwide, increasing effort has been applied to Science and Technology Studies (STS) in academia, especially in North America and Europe, which indicates a growing awareness on the relationship between scientific knowledge, technological systems, and society. STS questions the habit of taking scientific facts as objective representations of nature and suggests viewing them as products of scientists’ socially conditioned investigations. Although the science that STS refers to is exclusive to modern natural science, the rise of STS marks the problems of idealizing the works in the field of modern science as completely objective and universal. Since ancient times, there has always been a close link between the concepts that scientists used and what they aimed to accomplish in the world around them. The science of Chinese culture began, as in other cultures, with the attempt to understand the world and to give explanations to various phenomena. Regarding the way in which ancient Chinese developed their science, Lloyd and Sivin have provided some intriguing insights; they pointed out that,

the principal (though not the sole) Chinese approach was to find and explore correspondences, resonances, interconnections. Such an approach favored the formation of syntheses unifying widely divergent fields of inquiry. Conversely, it inspired a reluctance to confront established positions with radical alternatives (2002, 250).

The Chinese approach to scientific investigation intertwines with Chinese philosophy and cosmology in its particular social-political context. The tendency to look for correspondences, resonances and interconnections in the process of pursuing knowledge systematically in Chinese culture gives us hints as to why classical works on Chinese medicine are still considered valuable sources of theoretical and practical knowledge in modern Chinese medicine.

2.4. *Huangdi neijing suwen* and its Role in Chinese Medicine

The inquiry into the nature of knowledge of Chinese medicine starts with an introduction to *Suwen* and the worldview of Chinese medicine that it represents. *Suwen* is commonly recognized as an important medical classic in Chinese medicine. It documents the

---

theoretical and practical knowledge in medicine that is still valued by Chinese medicine practitioners today. Despite *Suwen*'s name, literally “Yellow Emperor's Inner Classic: Basic Questions,” scholars suggest that Huang Di is not the author of the text, but a character in the text who begs to be taught by his more knowledgeable dialogue partners, except Lei Gong 雷公 (Unschuld 2003, 1-4). Suwen is principally composed of dialogues between Huang Di and his advisers Qi Bo 岐伯, Gui Yuqu 鬼臾區 and Lei Gong16 on cosmogony and transformation, dynamics of the human body as well as the medical diagnosis and treatments of diseases.

As a medical text, *Suwen* marks an important paradigm shift on the views of health and illness in ancient Chinese—from an old belief that human illness was caused by demons to a new perspective on “how to interpret illness and how to devise strategies to avert situations perceived as threats to one’s well-being or even to one’s life” (Unschuld 2003, 319-20). This paradigm shift did not happen by accident; it occurred with a basis in the first sustained blossoming of philosophy commencing in approximately the fourth century BCE.17 It is believed that Suwen was not compiled by a single person, but by numerous individuals over a long period of time commencing in the second century BCE. Although the earliest reference to *Huangdi Neijing* 黃帝內經 (Yellow Emperor’s Inner Classic) is in a work compiled by Liu Xin 劉歆 in the first century BCE, scholars believe that this version has been lost and the Suwen available today was compiled during the Eastern Han dynasty (25–220 CE). It is commonly assumed that Suwen was later revised significantly by Wang Bing 王冰 in the eighth century18 and then further edited by Lin Yi 林億, Sun Qi 孫奇, Gao Baoheng 高保衡, and their peers, who worked in the imperial editorial office in the eleventh century (Fan 2014, 58-94; Unschuld 2003, 3-5). The version of

---

15 See Unschuld (2003, 8-14) for a detailed introduction to Huang Di.

16 Most of the dialogues in Suwen are between Huang Di and Qi Bo, while Gui Yuqu and Lei Gong appear in chapters 66-67 and chapters 75-81 respectively.

17 Scholars of Chinese medicine such as Nathan Sivin and Paul Unschuld share similar views on this matter. See Sivin (1987, 43) and Unschuld (1985, 55).

18 Unschuld suggests that the content of chapters 1 to 65 and 75 to 81 of Suwen was transmitted before Wang Bing’s edition while chapters 66 to 71 and 74 were added by Wang Bing during the Tang dynasty and chapters 72 and 73 are apocryphal. This claim is supported by the imperial editorial office in the eleventh century (1965, 4). Catherine Despeux also gave a detailed analysis on the matter (2001,128-29).
Suwen that was amended and published by the imperial editorial office in the eleventh century remains the authoritative received text to this day (Despeux 2001, 128).

2.5. Cosmology in Suwen

2.5.1. Genesis and Transformation

Being compiled upon the philosophical reflections of ancient Chinese thinkers, the cosmology in Suwen is believed to be evolved from its foundation. The complexity of Suwen’s cosmology can be demonstrated by its description of genesis and transformation in chapter sixty-six.

Huang Di: "I should like to hear how the wuyun 五運 (Five periods) rule the seasons."

Gui Yuqu: “The periodical progression of each of the five qi spans the days of a complete annual cycle, they do not rule only a season.”

Huang Di: “I should like to hear what that is to say.”

Gui Yuqu: “[I, your] subject, have continuously studied the text of the Taishi tianyuan ce 太始天元冊 (Book on the Supreme Beginning and on the Principal [Qi] of Heaven) where it is stated: ‘The extension of the Great Void is boundless; it is the basis of [all] founding and it is the principal [source] of [all] transformation. The myriad beings depend on [the Great Void] to come into existence, [and it is because of the Great Void that] the five periods complete their course in heaven. [The Great Void] spreads the true divine of qi, and it exerts control over the principal [qi] of the earth. [Hence] the nine stars are suspended [in heaven] and shine and the seven luminaries revolve in a cycle. [This] is called yin; [this] is called yang. [This] is called soft; [this] is called hard. [Hence] when that which is in the dark and that which is obvious have assumed their positions, there is cold and summer-heat, relaxation and tension. Generation [follows upon] generation, transformation [follows upon] transformation; all the things come into open existence.’ [My forefathers and I, your] subject, have [transmitted] this [text] for ten generations; it explains what [you have asked].” 19

19 帝曰：願聞五運之主時也何如。鬼臾區曰：五氣運行，各終暮日，非獨主時也。帝曰：請聞其所謂也。鬼臾區曰：臣積考《太始天元冊》文曰：太虛寥廓，肇基化元，萬物資始，五運終天，布氣真靈，揔統坤元，九星懸朗，七曜周旋，曰陰曰陽，曰柔曰剛，幽顯既位，寒暑弛張，生生化化，品物咸章，臣斯十世，此之謂也。」(1965, 130). The English translation of Suwen in this thesis is generally based on Huang Di Nei Jing Su Wen: An Annotated Translation of Huang Di’s Inner Classic – Basic Questions: Volume I & II (Unschuld and Tessenow 2003), but I revised parts of the translation, when necessary, to reflect my understanding.
This passage captures the key moments in the formation and operation of the world. The gist of the world’s operation is that it has been constantly generating and transforming since the beginning. “All the things come into open existence” can be interpreted as myriad things that are formed from generation and transformation since the beginning submit to the patterns of generation and transformation, which may also be referred to as the “rhythms of the universe,” that govern all existence. In the above quotation, theoretical tools such as qi 氣, yin/yang 餘陽 and wuyun were employed to articulate the process of generation and transformation. Meanwhile, the concepts qi, yin/yang and wuxing 五行 are used extensively in the text for illustrating the medical theory and serve as the building blocks of the cosmology in the Suwen. Since the description of genesis and transformation in Suwen is very similar to that in Daoist cosmology, the key concepts in Suwen will be introduced here with reference to Daoist cosmology.

2.5.2. Qi, Yin/yang, Wuxing and Wuyun liuqi

Qi in Chinese can either be a noun or a verb. Its meaning varies with context; it can be interpreted as breath, air, temper, manner, demeanor or even odour when it serves as a noun, and as enrage or insult when it serves as a verb. Although “breath” is widely adopted as a way to translate qi, neither this word nor any other of the above contains the full meaning of qi in Daoist cosmology. Qi in Daoism, as Robinet describes, is a basic dynamic, which is neither matter nor spirit, but something that “existed before the world did, and everything that exists is only an aspect of it, in a lesser or greater state of condensation. Condensed, it becomes life; diluted, it is indefinite potential” (1997, 7). In Suwen, the word qi is used 1,803 times and the meaning of qi is further differentiated. It is not only a matter of lesser or greater state of condensation, but there are also different

---

20 The relationship between wuyun and wuxing will be explained later in this chapter.

21 The analysis of the word “qi” is based on a few Chinese dictionaries and texts on ancient Chinese, including Gudai Hanyu Zidian 古代漢語字典 (Wang ed. 2000), Kangxi Zidian: biaodian zhengli ben 康熙字典：標點整理本 (Zhang ed. 2002) and Gudai Hanyu: Volume I & II 古代漢語第一冊及第二冊 (Wang ed. 2013), with reference to the Chinese Character Database: With Word-formations Phonologically Disambiguated according to the Cantonese Dialect (2016) developed by The Chinese University of Hong Kong.

22 This count is based on the authoritative version of the Suwen that this thesis employs. In this version, chapters 72 and 73 are lost according to the imperial editorial office.
transitory forms of qi in the world. Qi in the body can be good or bad vis-à-vis health, appear in accordance with the fluctuations of the seasons, and be stored in depots.\(^{23}\)

Yin and yang, which are usually mentioned together as yin/yang in Chinese, are transformations of qi in Daoist theory. At the beginning of its transformation, qi divided into yang, a pure and light qi, and yin, an opaque and heavy qi. According to Daoist cosmology, yang moved upward and created Heaven, while yin moved downward and formed the Earth. Yang means “yes” and “to begin,” whereas yin means “no” and “to complete.” Neither yin nor yang can exist alone, but need each other to define their respective contours and limits. Different from heaven and the earth, which are made up of pure yang and pure yin, the world of man is made up of a union of yang and yin. Therefore, the existence of pure yang or pure yin is impossible in this mundane world. This leads to difficulty in defining yang and yin precisely. There are always yin and yang mingled in everything in the world. Nevertheless, even though yin and yang can be virtually within each other, one cannot exist at the same time as the other in the same place (see Robinet 1997, 8-14). The intermingling dynamics of yin and yang are the basis of change, development, and multiplicity in the world. Yin and yang are central to Daoist cosmology and their harmony is of crucial concern for Daoists. In the Zhuangzi, yin and yang are described as “not only parents to man.”\(^{24}\) According to the Zhuangzi, it is desirable for yin and yang to remain in a harmonious relationship: “when yin and yang move awry, heaven and the earth are greatly struck,”\(^ {25}\) and “when yin and yang are disharmonious, winter and summer do not come at proper time and it hurts numerous things.”\(^ {26}\) Hence, it

---

\(^{23}\) In Chinese medical theory, there are ideas such as zhenqi 真氣 (true qi), jingqi 精氣 (essence qi), tianqi 天氣 (qi of Heaven, also means “weather” today), diqi 地氣 (qi of the Earth), xieqi 邪氣 (evil qi), weiqi 禦氣 (protecting qi), si shi zhi qi 四時之氣 (qi of the four seasons), namely chunqi 春氣 (spring’s qi), xiaqi 夏氣 (summer’s qi), qiuki 秋氣 (autumn’s qi) and dongqi 冬氣 (winter’s qi), and wuzang zhiqi 五藏之氣 (qi of the five depots), namely xinqi 心氣 (heart’s qi), ganqi 肝氣 (liver’s qi), piqi 脾氣 (spleen’s qi, also means “temper” today), feiqi 肺氣 (lung’s qi) and shenqi 腎氣 (kidney’s qi). Although the translations of these five depots are literally correct, one should be aware of the fact that these five depots in Chinese medical theory are not equivalent to the anatomical understanding of them in modern science. Rather than adopting the common translation of zang as “organs,” I follow Unschuld to translate zang as “depots” due to the consideration that the nature of five zang consists in “fulfilling central administrative functions in the body’s economy” (2011, 17).

\(^{24}\) 「陰陽於人，不翅於父母」 Zhuangzi, chapter 6.

\(^{25}\) 「陰陽錯行，則天地大絈」 Zhuangzi, chapter 26.

\(^{26}\) 「陰陽不和，寒暑不時，以傷庶物」 Zhuangzi, chapter 31.
is implied in the *Zhuangzi* that the harmony of *yin* and *yang* is essential for nature to function properly. Similar ideas can be found in the *Suwen*; in the second chapter of the *Suwen*, it states that “thus, *yin*, *yang*, and the four seasons are the end and the beginning of the myriad beings, they are the basis of death and life. Opposing them results in catastrophe and harms life. If one follows them, severe diseases will not emerge.”

Therefore, the preventive measure for illness is to live in a way that follows the dynamic of *yin* and *yang*. The concepts of dynamics and harmony of *yin* and *yang* are further applied in the *Suwen* for the diagnosis of diseases. As *yin/yang* is the basis of degeneration and generation, it is also crucial to investigate the *yin/yang* dynamic during diagnosis and intervene by following the “rhythms of universe” to regulate them until a balance is reached.

The condition of the pulse regarding *yin/yang* is also important; an example in chapter eighteen: “if the pulse follows the *yin* and *yang*, the disease is easy to bring to an end; if the pulse runs against the *yin* and *yang*, it is hard to bring to an end.”

This example shows how the concepts of *yin* and *yang* are related to the pulse of human body and the level of severity of the illness that can be diagnosed by the *yin/yang* condition of the pulse.

*Wuxing*, usually translated as “Five Elements,” “Five Agents” or “Five Phases;” they are: Wood, Fire, Earth, Metal and Water. *Wuxing* is best translated as “Five Phases” because it properly grasps the feature of *wuxing* as a theory employed to illustrate the

---

27 「故陰陽四時者，萬物之終始也，死生之本也，逆之則災害生，從之則苛疾不起」 *Suwen*, chapter 2 (1965, 9).

28 Examples about the importance of investigating the *yin/yang* dynamic in the pulse or illness during the diagnosis can be found in chapters 5, 74 and 80 of the *Suwen*. It is told by the phrases such as *xianbie yinyang* 先別陰陽 (differentiate *yin/yang* first) *shenqi yinyang* 審其陰陽 (investigate its *yin/yang*) *xianhou yinyang erchi zhi* 先後陰陽而持之 ([to perform the diagnosis by examining which comes] first or second, [what is] *yin* or *yang*), *chayin yangsuozai er diaozhi* 察陰陽所在而調之 (investigate where *yin* and *yang* are present and regulate them until a balance is reached).

29 Pulse is the closest translation of *mo* 脈. However, it is misleading to interpret *mo* as pulse in modern biological concept, which refers to a rhythmical throbbing of the arteries as blood is propelled through them. *Mo* palpation in Chinese medicine is more than counting the throbs but feeling the forearm. There are a lots of different ways to describe *mo* in Chinese medicine. When a practitioner carries out diagnosis with *mo* palpation, one feels the forearm of the patient. See Shigehisa Kuriyama’s *The Expressiveness of the Body and the Divergence of Greek and Chinese Medicine* (1999, 37-60) for a thorough account on *mo*.

30 「脈從陰陽，病易已；脈逆陰陽，病難已」 *Suwen*, chapter 18 (1965, 41).

31 They are *mu* 木, *huo* 火, *tu* 土, *jin* 金 and *shui* 水 respectively in Chinese.
constitution and dynamics of the world. Each of the Phases is symbolically associated with numerous categories of things such as colour, direction and season, and the Phases can be analyzed by means of the yin/yang system. More concretely, Wood is young yang, Fire is great yang, Metal is young yin, Water is great yin and Earth is central harmony (Robinet 1997, 10-11). Wuxing functions under the xiangsheng 相生 (Mutual Production) and xiangke 相克 (Mutual Conquest) principles, which represent the orders of interaction between the Five Phases that lead to generation and destruction, and the universe is governed by a dynamic equilibrium between different Phases in wuxing theory (see Cullen 2008, 51-53; Needham 1985, 232-63). A summary of how wuxing is related to the human body can be found in chapter twenty-two of the Suwen:

As for wuxing, these are Metal, Wood, Water, Fire and Earth. Alternately they resume high and low ranks. Through them one knows [whether a patient] will die or survive. Through them one decides about completion or destruction and [through them] one determines the [status of the] qi in the five depots, the time when [a disease] is light or serious, and the time of [a patient’s] death or survival.

Another passage in chapter twenty-five describes the Mutual Conquest relationships in wuxing, it says

when wood meets metal, it is felled. When fire meets water, it is extinguished. When soil meets wood, it is reached. When metal meets fire, it is destroyed. When water meets soil, it is interrupted [in its flow]. These [five processes] apply to the [interactions among] all the myriad beings; their [validity] is never exhausted.

---

32 Joseph Needham points out that “the conception of the [five] elements was not so much one of a series of five sorts of fundamental matter… the five-element theory was an effort to reach a provisional classification of the basic properties of material things, properties, that is to say, which would only be manifested when they were undergoing change. It is often pointed out, therefore, the term ‘element’ has never been satisfactory for hsing” (Needham 1985, 243-44). For the word “agent”, it fails to embody the changes of Phases, as one “goes” to the other under the “mutual producing” and “mutual constraining” principles, which is the key feature of the wuxing system.

33 Wood is green, east and spring; Fire is red, south and summer; Earth is yellow, center and long summer (or none); Metal is white, west and autumn; Water is black, north and winter (Needham 1985, 262-63).

34 「五行者，金木水火土也，更貴更賤，以知死生，以決成敗，而定五藏之氣，間甚之時，死生之期也。」 Suwen, chapter 22 (1965, 51).

35 「木得金而伐，火得水而滅，土得木而達，金得火而缺，水得土而絕，萬物盡然，不可勝竭。」 Suwen, chapter 25 (1965, 57).
It implies that the *wuxing* theory does not only apply to human beings, but all myriad things in the universe. The association of *wuxing* to natural phenomena is further articulated with the doctrine of *wuyun liuqi* 五運六氣 (Five Periods and Six qi), a theoretical system evolved from the *yin/yang* and *wuxing* theories.

*Wuyun liuqi* is a complex doctrine outlined in the additional chapters in the *Suwen* by Wang Bing; it explains the assumed relationships between climate and a wide range of natural phenomena, including the health condition of the human body. *Wuyun* is a comprehensive classification which refers to the quality or nature of periodically recurring phenomena with close association to *wuxing*. An apparent connection between *wuyun* and *wuxing* is that *wuyun* basically refers to the Wood Period, Fire Period, Metal Period, Water Period, and Earth Period. These Five Periods are further associated with the five seasons in a year. *Liuqi* 六氣 (Six qi) principally refers to cold qi, summer-heat qi, dry qi, damp qi, wind qi, and fire qi when it is not being referred to in the context of the *wuyun liuqi* system. In *wuyun liuqi*, on the other hand, *liuqi* is used to characterize changes of climate over the course of a year and these changes differ from year to year. In short, the concepts of *wuyun* and *liuqi* were employed to differentiate specific climatic characteristics of clearly defined time periods.

2.5.3. The Twofold Worldviews of the *Suwen*

The metaphysical assumption of constant changes of myriad things through generation and transformation in the *Suwen* has also led to a twofold worldview reflected in its medical theory. The first two chapters of the *Suwen* form a foundation for the medical theory of the

---

36 However, it is believed that the seven additional chapters were not written by a single author or at one time, but rather were assembled from originally separate doctrines and traditions. (Unschuld 2003, 394)

37 That is, *muyun* 木運, *huoyun* 火運, *tuyun* 土運, *jinyun* 金運 and *shuiyun* 水運 respectively.

38 Five seasons refers to *chun* 春 (spring), *xia* 夏 (summer), *zhangxia* 長夏 (long-summer), *qiu* 秋 (autumn) and *dong* 冬 (winter).


40 It is not necessary to go into detail about *wuyun liuqi* here for the purpose of introducing the cosmology in *Suwen* since *wuyun liuqi* is an advanced theory based on *yin/yang* and *wuxing* theories. Basic understanding of *yin/yang* and *wuxing* theories is sufficient for the current discussion. For a very detailed account of *wuyun liuqi* in the *Suwen*, see Unschuld (2003, 393-489).
entire book. Chapter one describes the natural changes of the human body with aging, the causes of health, and the key to longevity; chapter two explains how to act in accord with the changes of the four seasons and the harm of not following or going against what is supposed to be done. Both of the chapters focus on the ways to maintain good health, and by doing so, to achieve longevity. Before going into the discourse on the diagnosis and treatments of diseases, the last paragraph of chapter two relates the core tenet of the book. It asserts:

Hence, [when it is said] “the sage did not treat those already ill, but treated those not yet ill, they did not put in order what was already in disorder, but put in order what was not yet in disorder,” then this means just the same.

Now, when drugs are employed for therapy only after a disease has become fully developed, when [attempts at] restoring order are initiated only after disorder has fully developed, this is like digging a well when one is thirsty, and as if weapons were cast when the fight is on. Would this not be too late, too?

This paragraph shows that illness in the Suwen’s medical theory is understood as having “a fully developed disease,” which is understood as having a disordered body. It also reveals the central idea of Chinese medical theory, which is “to heal before getting ill.” It implies that drugs have to be employed for therapy before a disease has become fully developed, just as actions have to be taken for restoring the order of the body before the treatment becomes too radical or complex. When treatment is needed, there is also a fundamental principle to follow. It is, “to treat illness, one must search for the basis.”

The basis here refers to the dynamics of yin/yang and the supposed patterns of universe that it represents. To look beyond the external phenomenon of the illness in order to determine the basis of an illness is to interpret the illness with the same set of figurative tools that are employed to explicate the “rhythms of universe.” Further, in the first chapter

---

41 「是故聖人不治已病，治未病，不治已亂，治未亂，此之謂也。夫病已成而後藥之，亂已成而後治之，譬猶渴而穿井，鬬而鑄錐，不亦晚乎。」 Suwen, chapter 2 (1965, 9).
42 Zhiwei bing 治未病.
43 「治病必求於本」 Suwen, chapter 5 (1965,15).
44 The above-quoted sentence is situated in a passage discoursing on the significance of yin/yang. The comment by Wang Bing on this sentence also suggests that ben 本 (basis) here refers to yin/yang.
of the Suwen, when Huang Di asked Qi Bo why the people of high antiquity had long and healthy lives, Qi Bo answered:

The people of high antiquity, those who knew the Way, they modeled [their behaviour] on yin and yang and they complied with the arts and the calculations. [Their] eating and drinking was moderate. [Their] rising and resting had regularity. They did not tax [themselves] with meaningless work.\(^{45}\)

From this passage, it is apparent that the vitally important thing to do to achieve a long and healthy life, as told in the Suwen, is to act aptly. Eating, drinking, rising, resting, and working are all essential in our lives, but it is crucial not to overdo these.

Thus, it can be said that the medical theory proposed in the Suwen can be divided into two levels. First, the foundation of all other medical ideas in the Suwen is “to act aptly to maintain health.” If we fail to follow this basic principle, there will be signs of abnormality. It is then, on the second level, crucial “to act aptly to help to restore the good order of the body.” These two levels can be understood as corresponding to two different aspects of the worldview contained in the Suwen: while the first foundational level reflects the underlying principle that guides one’s basic direction, the second remedial level is based on the practical measures for managing affairs. Accordingly, the first implicit principle is to stay healthy by acting aptly, and the second principle is to search for the basis of illness and take adequate action to restore the good order of the body whenever necessary. On both levels, the principle is to act aptly, which means to act according to the assumed patterns of universe. It is presumed in the Suwen that human being are not isolated from the dynamic of myriad things. Instead, the human body, in the Suwen, is taken to be a holistic microcosm, whose health depends on maintaining harmonious function at the level of internal microcosm and in relation to the wider context understood as parallel macrocosm. As in chapter twenty-five of the Suwen,

Qi Bo: “Now, man receives his life from the earth; his fate depends on heaven. When heaven and earth combine their qi, that is called ‘Human.’ If someone is able to correspond to the four seasons, heaven and earth are

\(^{45}\) 「上古之人，其知道者，法於陰陽，和於術數，食飲有節，起居有常，不妄作勞」 Suwen, chapter 1 (1965, 5).
[his] father and mother. If he knows the myriad beings, one calls him Son of heaven. 

This description implies that the existence and well-being of humans, as in the Suwen, is relational to heaven, the earth, the four seasons, and the myriad beings. Heaven and the earth can be translated into the yin/yang theory with heaven as clear yang and the earth as the turbid yin. An interpretation of this metaphorical passage could be: humans are born as a combination of yang qi and yin qi; if one is able to know and act in accordance with patterns of generation and transformation, one would be living in a harmonious relationship with the universe, which guarantees a long and healthy life.

2.6. The Non-Observable Nature of Chinese Medicine

The introduction of Suwen’s cosmology has also demonstrated one interesting feature of Chinese medical theory—it is constructed with “non-observable” conceptual tools that cannot be easily translated into empirically observable phenomena; it thus results in difficulties in putting Chinese medical theory to experimental test. The extensive use of the concepts qi, yin/yang and wuxing in Chinese medical theory make it impossible to comprehend Chinese medicine properly without prior knowledge of these concepts. On the contrary, there is a common criticism on these conceptual tools in which they are relatively flexible, or maybe even too flexible, when compared with medical concepts in modern medicine. The idea of yin/yang, for example, is profoundly relative, so that it might have been taken as an exemplar of fabled mysticism or fuzzy thinking of “the Orient.”

There is, hence, a tension built into the apprehension of Chinese medical theory through assumptions from modern medical knowledge.

Nonetheless, if the notions of qi, yin/yang and wuxing are to be taken as analogies that reflect the belief that people are living in an environment that is penetrated and governed by fairly comprehensible natural patterns, as it is assumed in Chinese culture,

46 「歧伯曰：夫人生於地，懸命於天，天地合氣，命之曰人。人能應四時者，天地為之父母；知萬物者，謂之天子。」 Suwen, chapter 25 (1965, 57).

47 In Suwen chapter 5, it is mentioned that “The clear yang is heaven; the turbid yin is the earth” (1965, 15). See footnote n. 50 for the original Chinese text.

48 Judith Farquhar touched on the examination of the concept yin/yang in her book Knowing Practice: The Clinical Encounter of Chinese Medicine. She has raised similar possible view on yin/yang in the subchapter “Yinyang Reexamined” (1994, 217).
the Chinese medical theory could make good sense to those who have prior knowledge of the notions. The interrelationship between \textit{qi}, \textit{yin/yang}, and \textit{wuxing} as well as their relations with the human body and the environment are described, though not very precisely, in the \textit{Suwen}. In chapter five of the \textit{Suwen}, for instance, it states that "yang transforms \textit{qi}, \textit{yin} completes physical appearance,"\textsuperscript{49} "The clear \textit{yang} is heaven; the turbid \textit{yin} is the earth,"\textsuperscript{50} and "Water is \textit{yin}; fire is \textit{yang}. Yang is \textit{qi}; \textit{yin} is flavor."\textsuperscript{51} Further, it asserts,

Now, speaking of the \textit{yin} and \textit{yang} of man, then the outside is \textit{yang}, the inside is \textit{yin}. Speaking of the \textit{yin/yang} of the human body, then the back is \textit{yang}, and the abdomen is \textit{yin}. Speaking of the \textit{yin} and \textit{yang} among the depots and palaces of the human body, then the depots are \textit{yin} and the palaces are \textit{yang}. The liver, the heart, the spleen, the lung, and the kidneys, all these five depots are \textit{yin}. The gallbladder, the stomach, the large intestine, the small intestine, the urinary bladder, and the triple burner, all these six palaces are \textit{yang}.\textsuperscript{52}

Apparently, even though most of the five depots and six palaces could find their corresponding organs in the modern morphological system,\textsuperscript{53} one can neither prove nor falsify the above description of the relationship between \textit{yin} and \textit{yang}, and the description of the five depots and six palaces with any empirical experiments.

Further, based on the metaphysical assumption of eternal constant changes of myriad things, medical diagnosis in Chinese medicine, unlike modern medical diagnosis, tends not to simply ascertain the health condition of the patient in accordance with the absence or presence of disease, although since ancient times there have been concepts such as \textit{bing} (medical disorder) and \textit{ji} (disease) in Chinese medicine.\textsuperscript{54}

\begin{footnotesize}
\begin{enumerate}
\item \textsuperscript{49} 「陽化氣，陰成形」 \textit{Suwen}, chapter 5 (1965, 15).
\item \textsuperscript{50} 「清陽為天，濁陰為地」 \textit{Suwen}, chapter 5 (1965, 15).
\item \textsuperscript{51} 「水為陰，火為陽，陽為氣，陰為味」 \textit{Suwen}, chapter 5 (1965, 15).
\item \textsuperscript{52} 「夫言人之陰陽，則外為陽，內為陰。言人身之陰陽，則背為陽，腹為陰。言人身之藏府中陰陽，則藏者為陰，府者為陽。肝心脾肺腎五藏，皆為陰。膽胃大腸小腸膀胱三焦六府，皆為陽。」 \textit{Suwen}, chapter 4 (1965, 13).
\item \textsuperscript{53} Nevertheless, the five depots and the six palaces (\textit{liufu} 六腑) are store houses that should be understood functionally but not structurally. See footnote n. 23 for details on five depots. The six palaces are seen as the supporting units to the five depots. While gallbladder, stomach, large intestine, small intestine and urinary bladder of the six palaces could be morphologically verified, \textit{sanjiao} 三焦 (triple burner), is believed to be morphologically non-verifiable.
\item \textsuperscript{54} It should be noted that the distinction between medical terms such as \textit{bing}, \textit{ji}, \textit{zheng} (symptom), \textit{hou} (symptom) in Chinese medicine, especially in the ancient time, is not quite
\end{enumerate}
\end{footnotesize}
contrary, medical disorder is preferred to be taken as a dynamic process that is not portrayed as something that could be conceptually isolated from human body as in disease classification in modern medicine. As Sivin puts it,

The preference of highly trained doctors for manifestation type determination over disease classification . . . amounts to an insistence on thinking about medical disorder as a dynamic process. Instead of choosing one pigeonhole in a large, rigid structure, the doctor assesses the multivariate relations of a small number of characteristics that apply to every clinical picture (1987, 110).

Manifestation type determination (*bianzheng* 辨證) is a process and also a methodology; it is considered to be a process of capturing the body condition of patients with certain methods. The captured condition is not taken to be definite or fixed, but it is only like one snapshot of the dynamic process that is happening in the patient. To capture the body condition, a "small number of characteristics" are employed in the diagnostic systems of Chinese medicine. Unsurprisingly, these characteristics are also articulated with symbolic expressions. There are several systems for characterizing manifestation (or syndrome). The most popular diagnostic system that is currently deemed to be basic in Chinese medicine is the *bagang* 八綱 (Eight Rubrics) system. It is constituted by four dyads, namely *biaoli* 表裏 (exterior/interior), *hanre* 寒熱 (cold/hot), *xushi* 虛實 (depletion/repletion), and *yin/yang* (see Chapter 5.2.1 for details). These concepts are, again, embedded with a way of interpretation that is neither provable nor falsifiable with modern experimental methods.

Notwithstanding of the "non-observable" feature of Chinese medicine, it has its own systematic—though not rigorous when it is viewed with an analytic lens—way to provide explanations for medical disorder and offer directions for treatments accordingly. The medical knowledge of Chinese medicine is built upon a cosmology that is seemingly not compatible with that of modern medicine. What, then, is the worldview of modern medicine? How is it different from that the Chinese medicine? Do these differences make Chinese medicine necessarily less practicable? How could these differences be better addressed? The coming chapters will provide some possible answers to these questions.

---

clear. *Bing* means medical disorder or disorder that includes the modern categories of traumas and diseases; it can also refer to certain symptoms, syndromes, and/or groups of related syndromes or diseases. See Sivin (1987, 106-09).
Chapter 3.

Modern Medicine and the Worldview of Natural Science

*Medicine in modern times has become so intertwined with science that it is taken for granted.*

*(William F. Bynum)*

3.1. Modern Medicine as a Discipline of Modern Natural Science

Medicine in the West has a long tradition traceable to the ancient Greeks; since the birth of natural science in around sixteenth to seventeenth century, the development of medicine in the West has been intertwining with that of natural science. Natural science, according to the *Oxford English Dictionary* (OED), means “the branch of knowledge that deals with the natural or physical world.” As stated by this definition, “natural science” is an ahistorical concept that is applicable to knowledge from the studies of the natural or physical world under different traditions. However, since the times of Galileo Galilei and Isaac Newton, the term “natural science” usually refers to more specific kinds of studies of the natural or physical world. Such studies are often referred to as modern science or modern natural science. Historians suggest that modern science, a shorthand for modern natural science, was invented in the period between 1572 and 1704 (Wootton 2015, 1). It is concerned with the description, prediction, and understanding of natural phenomena with the experimental method.

Today, it seems natural to view medicine as a scientific discipline, mainly as a branch of biology and chemistry. Nevertheless, medicine and science used to be considered as two fundamentally distinct kinds of knowledge. Although natural science, as it is known to us today, is a modern invention, the idea of a theoretical and systematic study of the natural world has its origin in Greek philosophy. The word “science,” as above-mentioned, comes from the Latin word *scientia*, which is a translation of the Greek concept

ἐπιστήμη (episteme). While scientia and episteme can both be rendered into English as “knowledge,” it only refers to one particular type of knowledge in the Greek tradition that is better specified as “theoretical knowledge.” Aristotle draws a systematic distinction between three kinds of knowledge: apart from episteme as theoretical knowledge, there are φρόνησις (phronesis) as practical wisdom or knowledge, and τέχνη (techne) as craft, art, or technical knowledge. While episteme refers to an attitude of understanding the world simply as it is, both phronesis and techne are related to how we interact with the world and/or other people. Phronesis as practical wisdom or knowledge is about the principles that guide us to act morally in different situations and to live a flourishing life. Techne, the Greek origin of the modern concept of technology, refers to the technique or craftsmanship that is needed to make shoes, to build houses or to construct other artifacts.

It is interesting that while modern science is a further development of the kind of knowledge called episteme, medicine used to be a paradigmatic example of techne or technical knowledge—it was not considered as a kind of theoretical knowledge, but rather a technical knowledge applied to the human body. Hence, science and medicine were thought to be two essentially different kinds of knowledge.

Nevertheless, since the beginnings of the modern era, medicine has been integrated into the vast enterprise of natural science. In the nineteenth century, the theory and practice of Western medicine underwent revolutionary changes with the aid of rapid scientific development. Since then, Western medicine has evolved into what is vaguely called modern medicine today. The definition of the term “modern medicine” is debatable; it is difficult to identify when exactly modern medicine began to exist as it is not a kind of medicine that was invented by a single person or a specific school, but a concept invented in retrospect to contrast it with the prescientific medicine that is also known as traditional medicine or folk medicine. It was a long process which began at around the time of the French Revolution when Western medicine began to take shape and gradually turned into what is presently understood as modern medicine (see Chapter 3.3). Complications in clarifying the definition of modern medicine are closely related to the perceived identity of the histories of science and medicine and the perspectives applied to the writing of such histories in the past. Notwithstanding, the term “modern medicine” can still be understood in a loose, general sense. Here, the term “modern medicine” is employed to refer to a particular form of systematic medicine that relies principally on scientific experimental method to understand the human body and illness as well as to develop treatments. As
the theoretical foundation of modern medicine is basically built upon knowledge from other disciplines of modern natural science such as biology and chemistry, modern medicine is also considered to be a branch of modern science.

3.2. The Conceptual Foundation of Modern Medicine

3.2.1. The Shared Assumptions as a Discipline of Modern Science

It is hardly deniable that modern natural science has been enormously successful and has had a huge impact on modern society and human civilization. This enormous success has led many to accept that scientific method is the most reliable way to study the events of nature. It is also a definitive feature of modern science that its research relies on the application of well-defined and carefully controlled experimental methods. Nonetheless, the scientific method is built on a number of underlying assumptions, which, on the one hand, allow science to generate knowledge and communicate it to other human beings, but may, on the other hand, reveal certain unavoidable limitations of science. Natural science looks for objective explanation of natural events based on reproducible experiments. Reproducibility is the key to understand the rationale of scientific method; for anything to be reproducible, it has to be not only observable and measurable, but also controllable. Thus, scientific method can only be applied to observable and measurable phenomena that can be reproduced in a controlled fashion under specific experimental settings. Experiments are employed as a tool for the scientific method to test or falsify hypotheses and theories. The scientific method as a procedure consists of systematic observation, measurement, and experiment for the formulation, testing, and modification of hypotheses or theories. In a sense, science is defined by its method, and the scientific method equals the definition of doing science. The scientific method unavoidably has its specific assumptions. With the above-mentioned observability, measurability and reproducibility, the scientific method assumes that what can be studied and accepted as an explanation does not include any supernatural or mystical phenomena or entities because supernatural or mystical phenomena are, ex hypothesi, something that cannot be observed in a controllable and reproducible way. Accordingly, science is committed to what is known as methodological naturalism in the sense that modern science confines its method and scope to natural explanations without presupposing the existence or non-existence of any supernatural or transcendental beings. Natural science only considers
naturalistic explanation. The central concern of methodological naturalism is the way to learn what nature is. Methodological naturalism can also be taken as a way of acquiring knowledge that is able to evaluate claims about knowledge and identify causal mechanisms that are responsible for the unfolding of physical phenomena effectively. As a kind of naturalism, methodological naturalism represents a framework for conducting scientific investigation into the laws of nature.

Another key assumption of modern natural science is that beneath the action of scientific investigation, it is believed that there are patterns or regularities in nature. These presumed patterns are usually referred to as the laws of nature. The centre of scientific investigation in modern science is to look for patterns in nature by searching for reproducibility or replicability in the observed phenomena. To be qualified as a valid pattern, testable explanations have to be capable of predicting the results of future experiments. When such a pattern is found, it may be conjectured to be universally valid. In other words, scientific investigation always seeks universally valid pattern. Thus, patterns that are discovered occasionally but cannot be replicated are not considered valid in modern science.

Modern science also presupposes reductionism in the broad sense; more concretely, there is an underlying assumption in modern science that complex phenomena can be better illustrated or explained in terms of simpler or more fundamental phenomena. This presumption can be described more precisely with a philosophical concept called supervenience. Supervenience refers to a dependence relation of more complex and higher-level properties on simpler and lower-level properties. Compared to physical properties such as mass and charge, chemical properties such as toxicity and flammability are considered to be more complex. There are physical and chemical properties for each compounds. As compounds are nothing but different combinations of atoms, the properties of compounds are considered to be dependent on, or in a technical term, supervene on the properties of the atoms of which the compounds are composed. Based on this reductive understanding, the scientific disciplines which study more complex phenomena, such as chemistry, are taken as reducible to or supervenient on the scientific disciplines which study simpler and more fundamental phenomena, such as physics. While chemistry is more complex and on a higher-level compared to physics, it is more fundamental and on a lower-level compared to biology because the properties of biological
entities such as cells are made up of compounds, which are more fundamentally made up of atoms.

In this regard, scientific disciplines are deemed to stand under a relation that could be understood as supervenience to each other. Some of the scientific disciplines supervene on other disciplines that deal with more fundamental phenomena. As briefly explained above, it is often assumed that biology, a scientific discipline that modern medicine heavily relies on, supervenes chemistry and then physics. The concept of supervenience depicts the relation of higher-level property and lower-lever property in a system—its upper level properties are determined by its lower-level properties. If biology really supervenes upon chemistry and physics, then biological knowledge will be ultimately determined by chemical and physical knowledge. In biological investigations, the actual functioning of living organisms, in essence, will have to be understood in terms of chemical and physical knowledge. The human body, for example, is comprehended as a physical entity that is subject to the laws of physics and, simultaneously, as an organism with certain chemical composition in which chemical reactions take place. Most, if not all, of the biological concepts should then be elucidated with other concepts developed in chemistry and physics. Osmosis, for instance, is a vital process in biological systems that is difficult to explain without recourse to principles of mechanics and thermodynamic; notions from the disciplines of chemistry and physics such as pressure and chemical potential are essential in understanding the mechanism of osmosis. The thermodynamic explanation of the movement of water molecules is then applied to illustrate the functions of more complex biological systems such as kidneys in vertebrates. It would then be used to illuminate certain phenomena such as kidney failure. Thus, a complex phenomenon, kidney failure, can be illustrated in terms of a number of simpler phenomena, osmosis and others. Meanwhile, kidney failure as a complex phenomenon is being reduced to a number of simpler phenomena. Accordingly, medical knowledge as a kind of biological knowledge, in the end, depends on other scientific knowledge such as chemical and physical knowledge based on the reductionistic assumption of modern science.

3.2.2. The Underlying Assumptions of Modern Medicine – the Biomedical and Humanistic Models

On top of the above general presuppositions of modern science, there are also more specific assumptions in the domain of modern medicine. These assumptions can be
illustrated by distinguishing between two possible models of modern medicine, namely the biomedical and humanistic models. The distinction is drawn with respect to their difference in core beliefs towards patients' subjective dimension in the decision making process for diagnosis and treatment. It has been argued that the biomedical model can be traced back to the Christian view of human body. Since the body is viewed as a temporary, fragile, and flawed container of the soul, dissection of human body was considered permissible by the Church (Engel 1977,130-31). While the Christian view of the human body is a prescientific understanding, the biomedical model gains a firmer scientific foundation in modern science since Newton. According to the Newtonian mechanical worldview, which is the foundation of modern science, everything in the universe, including the human body, operates according to deterministic mechanical laws. Even before Newton, Descartes also proposed that the human body is nothing but a machine, notwithstanding that Descartes accepts the existence of an immaterial, non-mechanical soul in addition to the physical body. The biomedical model, which views the human body basically as a very complex, but physical-biological and mechanistic system, is established under the influence of these ideas and continues to dominate the field of modern medicine to date.

On the other hand, the humanistic model is comprised of a group of modified versions of the biomedical model with inclusion of humanistic elements, such as recognizing that the psychological, social, and cultural dimensions of one’s life would impact on one’s health. There is a spectrum of humane approaches in the humanistic model with varying views on the degree of recognition and appreciation concerning the value of the mechanistic approach of the biomedical model. “The need for a new medical model: a challenge for biomedicine” (Engel 1977), for instance, is often cited in the debate over medical models. It indicated the historical origins of and critically reviewed the biomedical model with the proposal of a biopsychosocial model for the realm of psychiatry in particular. According to James Marcum, the biopsychosocial model is a conventional humanistic approach to reforming the biomedical model while there are also other approaches that attempt to replace the biomedical model (2008,10-11). Despite being a modification of biomedical model, the humanistic model is still thought to be, and expected

---

56 The use of the word *model* here generally means a specific way of thinking resulting from some fundamental beliefs. In this sense, one can apply a model without realizing the existence of such model.

57 See Marcum (2008) for a detailed account on the variety of humanistic approaches.
to continue to be, secondary to biomedical model in the realm of modern medicine (Alonso 2004).

As the humanistic model is a modification of biomedical model, the two are not mutually exclusive but share many basic presumptions. The fundamental difference between them is whether or not a person is simply the sum of separate body parts. Metaphysically, the biomedical model implies a mechanistic monistic view that a person is simply the sum of separate body parts while the humanistic model insinuates a holistic or dualistic view in which humans exhibit properties that surpass the aggregation of body parts.58 For example, the humanistic model tends to view the mind as a separate entity rather than a functional property of the brain as in the biomedical model. The divergence of metaphysical positions is also revealed through their differences in viewing illness—for illness is the opposite of health. The meanings of the notions “illness” and “disease” employed in this thesis are not equivalent—for “illness” means the absence of health whereas “disease” means structural or functional disorder in a human that affects a particular location and/or that results in specific signs or symptoms. The idea of health implies the absence of disease or the normal functioning of body parts in both models, but the absence of disease does not imply health in the humanistic model. More precisely, the meaning of illness is equivalent to the presence of disease or malfunctioning of body parts in the biomedical model, but it is more than that in the humanistic model. In the humanistic model, patients who have no particular disease may still be considered ill if subjectively they feel unwell. According to modern medicine, disease is an objective entity that can be isolated from a particular person. The cause of illness is identified with scientific analysis by looking for the disease in the patient’s body and then explored further in accordance within the dictates of biomedical model.59 Causation as understood in the acquisition and implementation of medical knowledge in biomedical model is basically mechanistic. As Marcum suggests, epistemic claims in the biomedical model depend on the logical relationship of propositional statements obtained from empirical laboratory experiments and clinical studies. The trajectory of medical knowledge and practice is

58 See Marcum (2008, 19-22) for a detailed account on the holistic or dualistic view of the humanistic model.

59 As Engel suggests, “the biomedical model was devised by medical scientists for the study of diseases” and “the scientific approach to disease began by focusing in a fractional-analytic way on biological (somatic) processes and ignoring the behavioral and psychosocial” (1977, 130-31).
from the laboratory to the bedside. There is often little, if any, room in this model for the intuitive or emotional dimensions of either the physician or patient and medical knowledge is therefore generally impersonal (2008, 12).

According to the biomedical model, medical knowledge is assumed to be universally valid and independent of social, cultural, or subjective parameters. Medical knowledge acquired in this model is considered to be objective and universally applicable. It is believed that medical practice with minimum human involvement and maximum utilization of technology would further promote the objectivity of the acquired or implemented medical knowledge. Physicians are expected to follow the clean and precise mechanistic procedures within the model in order to make the best decision. Thus, only physical factors are taken into account in the process of diagnosis and treatment.

The mechanistic orientation of the biomedical model fosters the domination of a pharmaceutically based approach to healthcare in modern medicine. The assumed mechanical physical worldview associated with the biomedical model is more determinate than in the humanistic model. The mechanical physical worldview takes the human body as a machine and it follows that all phenomena linked to the body, including behaviours and emotions, must be amenable to explanation through purely physical causes. The principal methodology to understand the human body in modern medicine is to reduce our body to a collection of separate body parts. Different body parts are like different components of a machine that are replaceable and interchangeable. The body is transformed into a scientific object to be studied part by part in order to determine the role of different parts in the functioning of the whole, as if the body is a mechanical system formed by assembling a collection of physical components. Generally, there is an assumed normal or optimal physiological state classified as healthy. All other body conditions out of the assumed range of normal functioning would be considered health problems. Theoretically, the standard “norm” is set by experimental methods that assume universal similarity among human bodies.

Given the conception of the body as an agglomeration of individual parts, it follows that health problems too can be localised in particular parts. The correlation between health problems and the body can be as visible as physical injuries such as wounds that may be reddened, bruised or bleeding. This assumption makes it easier to set up objective parameters for the matter and perform measurements accordingly. Health problems,
however, could be less visible such as behavioural and emotional problems. The less visible health issues are now generally accepted to be related to malfunctioning of the human brain, or even further narrowed down to the abnormal activities of neurons. In other words, extremely complex phenomena like human behaviours and emotions are reduced to neuronal activities in the biomedical model; it is believed that these phenomena could theoretically be understood fully one day through scientific investigation with the advancement of medical knowledge and technology. As a scientific object, the role of patients in the diagnostic process is to provide data for the doctor to make a diagnosis. Objective measurements are generated with the assistance of diagnostic and therapeutic machines built with advanced technology. Test results produce by, for example, the electrocardiograms, blood tests, and pictures produced by magnetic resonance imaging (MRI) are usually considered to be more reliable than patient self-reporting. Within the biomedical model, self-reporting by patients usually plays a role in the initial phase of diagnosis, in determining what kind of further measurements and tests need to be conducted. Physicians usually screen for the most relevant reported symptoms that match with the test results and measurements in their decision making. As a result, it is thought to be normal for some of the signs reported by patients to be discounted if they cannot fit into the diagnostic picture. In such cases, the patients are “seen as a veil between the physician and the disease, to be seen through rather than attended to” (Broadbent 2019, 14). Physicians are like technicians attempting to fix a broken machine—they locate the physical cause of the problem and then repair or replace the failed parts.

The emergence of the humanistic model was triggered by the struggle of physicians in strictly applying the biomedical model in clinical setting. One of the very first medical disciplines to encounter difficulties in conceptualizing diseases with adherence to the biomedical model was psychiatry. As the late psychiatrist George L. Engel pointed out, 60

---

60 Philosophically speaking, the patients are taught to alienate themselves from their body in the process of diagnosis; they are asked to detach themselves from their bodies in understanding physicians’ diagnosis. The patients are thus required to interpret their own bodies from an externalizing viewpoint rather than from their own “internal” feelings. It is similar to what Ivan Ilych did to himself in Tolstoy’s The Death of Ivan Ilych (2004). Ivan Ilych distances himself from any situation or relationship that does not advance his pleasant existence. While Ivan Ilych was forced to experience his own illness and death, he kept trying to rationalize his experience as if the illness and death were not his own. However, he could not distance himself from this experience; his emotions unavoidably intruded on his introspection; it made him feel no better to rationalize his experience of illness and death.
all medicine is in crisis and, further, that medicine’s crisis derives from the same basic fault as psychiatry’s, namely, adherence to a [biomedical] model of disease no longer adequate for the scientific tasks and social responsibilities of either medicine or psychiatry (1977, 129).

The humanistic model recognizes the limitations of the biomedical model and tries to make space for a more patient-focused process for diagnosis and treatment. Engel, for instance, formulated the biopsychosocial model as an attempt to resolve the problems caused by the reductionistic nature of the biomedical model (1977; 1980); it includes the patient’s psychological, social, and cultural dimensions in the process of diagnosis and treatment. The patient, in the humanistic model, is invited to participate as an informed cognitive agent; the information provided by the patient as a subjective dimension of the illness is taken as valid data. The type of causation operating within this process is thought to be informational rather than merely mechanical. The role of the patient is not as passive as in the biomedical model but can be rather active in the process of diagnosis and treatment. Notwithstanding, the rather holistic humanistic model does not overtake the dominance of the mechanistic biomedical model, even though it is a modified version of the latter. For example, Yolanda Alonso suggested that the conceptualization of health in medical research articles did not change at all over twenty years since the first proposal of the biopsychosocial model (2004). The successful application of the biopsychosocial model in obtaining a better understanding of the disease processes and etiology, in improving doctor-patient relationship, as well as in promoting public health did not help to extend its implantation into the design of treatment plans. As Alonso claimed fifteen years ago, “medical practitioners are still reluctant to incorporate it [the biopsychosocial model] into the treatment plan” (2004, 243). On a practical level, it is understandable for the physicians to refrain from fully adopting the biopsychosocial model since it implies a need for much greater effort to be focused on understanding the more subjective communication of a patient concerning an illness. It is imaginable that it would require broader and deeper knowledge as well as a greater investment of time as a result of taking into account a much wider spectrum of factors in the diagnostic and healing process. Further, the dynamic between the physicians and patients would be very different from that in the biomedical model and it would demand much more effort from the physicians to help their patients manage not only their disease but also their situations. It is also conceivable that the established Western healthcare system might not be able to afford the cost of operating fully under the biopsychosocial model. Interestingly though, insights from the biopsychosocial model are still under discussion and Engel’s article where he first
proposed the biopsychosocial model has been increasingly cited in the last decade. Nevertheless, the current dominant medical model is far from having fully adopted his suggestions (Fava and Sonino 2017, 257-58).

3.3. The Progress and Dominance of Modern Medicine

Nowadays, modern medicine is considered to be scientific and thus superior to other forms of traditional and alternative medicines. Even prior to the formation of modern medicine, the medical tradition from which modern medicine evolved also presented itself as superior to other alternatives since the Hippocrates. The Greek physician Hippocrates of Kos (c. 460–370 BCE), who is often considered “the Father of (Western) medicine,” is credited with his work to distinguish medicine from religious and magical beliefs by employing rational deduction in medical diagnosis and treatments. The Hippocrates are the physicians who derived inspiration from Hippocrates of Kos (Heilbron 2003, 505-06). Hippocratic medicine was deemed “scientific” since the physicians based their treatments upon close observations and rational conclusions. The Hippocratic theory, especially humoral physiology and pathology, would not be regarded as scientific by today’s standard. However, the theory of humours was the foundation of Western medicine until the nineteenth century. A few hundred years after Hippocrates, another Greek physician Galen (c. 129–216 CE) further developed the theory of humours; Galen’s medical works were considered authoritative until the Middle Ages and the theory of humours continued to dominate in Western medicine until the nineteenth century.

It is generally agreed that Western medicine started to take a very different turn near the end of the eighteenth century, although the degree of change is still under debate. It is taken to be a milestone in the history of Western medicine (Jacyna 2006, 13). In the fifty years after the end of World War II, as Anne Hardy and E. M. Tansey put it, the Western medical tradition, with its emphasis on science and education, and distinctive ways of thinking about the body, became widely influential even while certain features associated with that tradition disappeared. Notably, the strong awareness of the past that had been built into medical education vanished. Doctors no longer read Hippocrates, Sydenhan, or Paracelus, no longer looked to the past to validate their own standing and authority within the community. … Medicine now had no need to look to its past for authority – the world of the laboratory, of medical research, of therapeutic power seemed to have arrived, and justified a multiplication of interests and specialties within the discipline (2006, 405).
Some regard the medicine that emerged after the French Revolution as a break with the past (Heilbron 2003, 505-06). Historians believe that the rise of modern science in Western medicine happened between 1850 to 1913. Many features of modern medicine can be traced back to the development of Western medicine from the late eighteenth century to the first half of the nineteenth century. In physiology, for instance, structure and function began to be separated in comprehending living organisms; the goal of the discipline shifted from looking for the linkage between anatomical structure and physiological function to providing explanations of all living functions in terms of the physics and chemistry of organisms. The turn was initiated by the physiologists Carl Ludwig, Emil Du Bois-Reymond, Ernst Brücke, and Hermann von Helmholtz, who believed that it is necessary to reduce the functions of living organisms to the laws of physics and chemistry (Bynum 2006, 113-14). Some doctors proposed the idea of active experimental medicine in contrast with passive observational medicine. Observational medicine is considered to be passive because the conditions at the bedside are too messy for producing unambiguous results. Doctors have no control over the conditions at the bedside to test their ideas. It is believed that experimental medicine, on the other hand, brings medical questions to the laboratory, a place where experimental conditions can be mastered, to produce knowledge that could then be applied in clinical situations. Doctors can actively test their ideas in the laboratory and bring their insights to clinical settings. Experimental medicine is a product of the doctors’ pursuit of certainty and determinacy at a time when the center of biology began to shift to the laboratory (Bynum 2006, 116-20). Since then, laboratory science has been the gold standard of medical research. Experimental medicine that focuses on laboratory science is indeed an academic approach that aims to solve clinical problems by the intellectual application of basic scientific principles.

It was at the end of World War II that the importance of epidemiological research for clinical investigation was noticed and the well-known double-blind randomized control clinical trial was developed and introduced. From there, laboratory science has evolved into evidence-based medicine with randomized trials, today’s gold standard of medical research. By the end of the twentieth century, evidence-based medicine made its place in medical education and started to dominate modern medical science. The assessment of published accounts of the treatment of patients, trial data of therapies and the appraisal of relevant literature were included in the medical education curriculums (Hardy and
Tansey 2006, 415-62). Meanwhile, modern Western medicine continues to thrive and to claim the centre of the world stage. Historians Hardy and Tansey provide an account on the history of Western medicine from 1945 through the early 1970s that gives us an idea of what was happening; they say,

the therapeutic, organizational, and global reach of Western medicine extended to an unprecedented degree . . . New international bodies such as the World Health Organisation (WHO), the World Bank, and the United Nations (UN) Food and Agriculture Organization, began to promote the adoption of Western medicine in the developing world . . . Between 1945 and the early 1970s, Western society and Western medicine remained essentially buoyant, confident in the ideals of progress and prosperity, and the benefits of Western civilization (2006, 406).

Modern medicine has become influential around the world, especially in developing countries. Although the global sociopolitical condition does play a vital role in the wide acceptance of modern medicine, its efficacy has won the confidence of people accustomed to different medical cultures. The significant influence of modern medicine in China, for example, can be dated back to the 1910s. At the end of the Qing dynasty, modern medicine demonstrated its power to Chinese people by containing a deadly infectious disease—the Manchurian plague. The laboratory-based medical knowledge produced with the assistance of microscopes played a crucial role. This contingent historic event has triggered the formation of strategies in China that have profoundly influenced the development of both Chinese and Western medicine (Lei 2014, 21-44). Once rooted in a non-Western cultural context, the Western medical paradigm makes it nearly impossible for local medical developments to deviate from the global trend. That global trend is now dominated by the paradigm of evidence-based medicine.

The term “evidence-based medicine” was coined in the 1990s, but the concepts behind it are not as novel as they appear. The meaning of “evidence-based medicine” is often taken literally as “medicine that is based on evidence.” When it was first introduced by the Evidence-Based Medicine Working Group, it was stated that

Evidence-based medicine de-emphasizes intuition, unsystematic clinical experience, and pathophysiologic rationale as sufficient grounds for clinical

---

61 See Guyatt et al. (1992, 2425) for the members of the Evidence-Based Medicine Working Group.
decision making and stresses the examination of evidence from clinical research (Guyatt et al. 1992, 2420).

Evidence-based medicine is considered to be a new paradigm for medical practice by this group of doctors. They emphasized that “it is now accepted that virtually no drug can enter clinical practice without demonstration of its efficacy in [randomized] clinical trials” and proposed to train medical students with the new paradigm (Guyatt et al. 1992, 2420). It is believed that evidence-based medicine can help be culling the optimal diagnosis and treatment from “the barrage of clinical information in a systematic and reproducible fashion” (Guyatt et al. 1992, 2423). Further,

“[w]hen optimal care is taken to both record observations reproducibly and avoid bias, clinical and institutional experience evolves into the systematic search for knowledge that forms the core of evidence-based medicine” (Guyatt et al. 1992, 2423).

From the above quotations, it is obvious that systematic, reproducible, and unbiased are key words for understanding the “evidence” in evidence-based medicine. These criteria for producing medical knowledge are in line with what is required by modern science. Production of systematic, reproducible and unbiased (or objective) knowledge is, at the same time, the motto of modern science. The advocacy of evidence-based medicine is a movement to push the determining factor of diagnosis and treatment in medicine from the authoritative pronouncement of clinical “experts” to “objective” evidence for therapeutic effects. The highly valued evidence in evidence-based medicine is generated by randomized trials (RCTs).62

Over the past two decades, evidence-based medicine has colonized modern medical science, especially biomedical science.63 Under this evidence-based medicine paradigm, analysis of RCT results is now the principal means for determining the

---

62 Randomized trials are sometimes referred to as randomized controlled clinical trials, randomized controlled trials, randomized clinical trials, and randomized comparative trials as well. There may be subtle differences in experimental methods but they are all generally referred to as RCTs, a type of medical method which aims to reduce bias by randomly allocating the experimental units across the treatment groups.

63 As Jeremy Howick suggested, less than two decades after the introduction of evidence-based medicine (EBM) by the Evidence-Based Medicine Working Group, “there are at least seven journals, a dozen books, thousands of new citations to EBM each year, and a growing number of international research centres dedicated to the practice, teaching, and dissemination of EBM. Prominent medical journals, including the *British Medical Journal, Journal of the American Medical Association*, and *Annals of Internal Medicine*, endorse editorial policies encouraging researchers to follow the EBM rules of evidence” (2011, 4).
effectiveness of medicines and treatments. There is a basic evidence-based medicine hierarchy for “evidence” to be evaluated. RCTs are categorically ranked over observational studies, and expert judgment is located at the bottom of the hierarchy. That is to say, the results of RCTs are considered to be stronger evidence than observational studies, whereas expert judgment is the weakest evidence in the hierarchy (Howick 2011, 5, 187). Essentially, RCTs are commonly referred to as the “gold standard” or “best” evidence in evidence-based medicine. Nonetheless, this approach has been subjected to much debate and criticism. One of the common arguments is that the results of RCTs are averaged for the population under study. The so-called “best” is an average “best” in a group of people but it may not be best for certain individuals. There are also many treatments that are deemed highly effective that have never been supported by any RCTs (Howick 2011, 5). Even so, evidence-based medicine remains the leading paradigm in biomedicine. Thus, it is clear that a key feature of the philosophy of modern medicine concerns the problem of standardizing the criteria for measuring the efficacy of drugs and treatments. All the drugs and treatments are put on the same scale and placed in different positions in the hierarchy, and, hence, there is always the so-called “best treatment or drug” for certain diseases under the framework. This standardizing or unifying process is guided by the shared reductionist paradigm of many of the researchers and philosophers in the field.

It is obvious that the efficacy of drugs and treatments is a central concern in modern medicine. Nevertheless, a doctor cannot prescribe any treatments to the patient without a diagnosis. Diagnosis is a critical element in medical practice; it is a process through which physicians learn about a patient’s condition and make a judgement concerning the nature of the health problems the patient is encountering. Scholars have pointed out that diagnosis has been relatively neglected in Western medical research and education. They have tried to explain the phenomenon by indicating the uncertainty of diagnosis,

Statistics has revealed the dark side of diagnosis, citing biases and showing how conclusions go awry. Perhaps this had led clinicians to doubt their instincts in diagnosis and to hope that intelligence technology will somehow eventually make diagnosis at least as reliable as evidence evaluation (Stanley and Campos 2013, 301).

The complexity of diagnosis and its associated uncertainty is tricky to deal with under the modern medical paradigm, which always looks for certainty and determinacy. Since the mid-1970s, fuzzy set theory has been applied to explain the uncertainty found in the process of diagnosis (Dev, U et al. 2011). Among medical professionals and those in the field of medical informatics, it is commonly believed that medical diagnosis does indeed rely on some form of “fuzzy logic” that would enable the doctors to deal with fuzzy knowledge (see Barro and Marin 2002; Sadegh-Zadeh 2000). This can be taken as acknowledgment of the complexity nature of diagnosis, but there are other scholars who propose a model called differential diagnosis. Differential diagnosis can be understood as a systematic diagnostic method employing hypothetico-deductive logic to distinguish a particular condition from others which show similar clinical features. The theoretical foundation of this approach is based on a kind of reasoning that includes algorithms to identify a particular condition by elimination (Stanley and Campos 2013). The idea behind the development of differential diagnosis is the pursuit of an ideal diagnostic logic. It is reasonable to deduce that the algorithms for complex diagnosis would unavoidably involve computerization. The belief that humans are more prone to error than machines pushes modern medicine to develop in a way that minimizes subjective elements in order to be more “objective.” It is apparent that the development of modern medicine, for both diagnosis, especially differential diagnosis, and treatment, is now heading towards minimization of human involvement for the sake of minimizing human error. It is supposed that there is in fact such an “ideal diagnostic logic,” which is out there for us to discover and can help make diagnosis with the data from different measurements of “objective” manifestations. With such a paradigm, there is an assumption of a “most precise diagnosis” with the "best treatment" for anyone having the "same disease." This is a tendency to seek objectivity and universality.

Interestingly, there is also an unexpected drawback to placing evidence-based medicine at the center of medical education. A longitudinal study found that medical students’ empathy level declined significantly in the third year of medical school (Hojat, M. et al. 2009). Researchers concluded the study by stating that,
The erosion of empathy in medical school can be attributed to several factors, including lack of role models, a high volume of materials to learn, time pressure, and patient and environmental factors. In addition, students’ gradual overreliance on computer-based diagnostic and therapeutic technology limits their vision for the importance of human interactions in patient encounters. Changes in the market-driven health care system that have a ripple effect on medical education, combined with the belief that a controlled clinical trial is the royal road to advances in medicine, can also lead to a false idea that empathy is outside the realm of evidence-based medicine and, thus, has no importance in the education of physicians-in-training or in the practice of medicine (Hojat, M. et al. 2009, 1189).

It sounds that medical schools nowadays do not only fail to train future physicians to care for their patients as persons, the training itself makes it worse. Apparently some disciplines in modern medicine such as psychiatry require more empathy, or at least sympathy, towards patients and it is easier for the physicians to identify and address the problems. Nonetheless, it is more difficult for other medical disciplines to take care of the patients’ feelings since health problems are usually regarded as physical problems under the biomedical model. The minimization of human involvement in modern medicine leads to the so-called quality-of-care crisis in which patients are dissatisfied with the medical care they receive (Marcum 2008, v). Some look to the humanistic model in the hope that it may solve the looming crisis by replacing the biomedical model. Notwithstanding, the unifying tendency in modern medical science to systematically standardize the definition of efficacy is guiding its development in the opposite direction.
Chapter 4.

Challenges to Modern Science and Hermeneutic Conception of Science

…the Scientific Revolution is not like the American or French revolutions, which were called revolutions as they happened; it is a construction of intellectuals looking back from the twentieth century.

(David Wootton)

4.1. Criticisms of Modern Science and Scientific Rationality

4.1.1. Kuhn’s Paradigm Shift

No one can ignore Thomas Kuhn’s theory when it comes to the discussion of the nature of modern natural science. In his widely known book The Structure of Scientific Revolutions, Kuhn argues that viewing scientific development as “the piecemeal process by which these items [i.e. facts, theories and methods] have been added, singly and in combination, to the ever growing stockpile that constitutes scientific technique and knowledge” is a common misconception (Kuhn 1996, 1-2). It is based on selective and biased stories which are told and popularized by allegedly authoritative textbooks and philosophical works. These assumed authorities address themselves to an already predefined body of problems, data, and theory, and usually to a particular set of paradigms to which the scientific community is committed at the time those books were written. It gives the readers an impression that the history of science is linear or cumulative. Therefore, it looks like there is always progress in science and we are one step closer to the objective reality or the “truth” when there is a new discovery. However, Kuhn points out that science is not developing towards a single ultimate goal of finding the “truth” of the “objective” world as many have expected. Rather, the development of science should be understood as a series of paradigm shifts, which is usually characterised as scientific revolutions, for scientific revolutions are non-cumulative episodes of development, in which an older paradigm is replaced in whole or in part by an incompatible new one (Kuhn 1996, 92).
According to Kuhn’s theory, scientists in the normal-scientific tradition are constantly working in shared paradigms, which include preconceptions and established viewpoints that limit their experimental outcomes and/or interpretations of the results to expected answers (1996, 39). Thus, normal-scientific activities do not only fail to encourage novelty, but even tend to prohibit new discoveries. Scientific revolutions are the result of a new paradigm proven to be more useful or coherent in puzzle-solving (or “fitting the facts better”) than the old paradigm. Nevertheless, the competition between paradigms is not a kind of battle that can be resolved by proofs, since competing paradigms are often incommensurable. Hence, the transition between competing paradigms can neither be made one step at a time nor forced by logic and neutral experience. It involves rather a change in preconceptions (like the “Gestalt switch” in Kuhn’s words) that must occur all at once, but not necessarily in an instant, or not at all. This implies that scientific revolutions rely very much on the change of scientists’ perspectives which may somehow not obey rationality. Kuhn’s theory of scientific revolutions as paradigm shifts, therefore, suggests that the activities of scientific research are not as “objective” and “rational” as they appear. The results of these allegedly objective but in fact biased scientific researches were thought to constitute the “truth” that represents the objective reality out there in the physical world. Kuhn’s theory sees these “truths” as presumed answers that scientists consider adequate in explaining the world.

Modern medical science, as part of natural science, has succeeded in persuading people that it provides privileged access to objective truth and that it describes objective reality. It is perceived to be trans-cultural and universally applicable. It is claimed that medicines produced under the paradigm of modern medical science are effective in curing particular diseases regardless of who is treated. The modern medical paradigm has a tendency to seek objectivity and universality by assuming there is a “most precise diagnosis” with the “best treatment” for anyone having the “same disease.” It presupposes medical science to be rational and objective, which is unavoidably being questioned when the objectivity of science is being challenged.

4.1.2. Rorty’s Anti-Representationalism

Kuhn’s criticism of the view of scientific development fosters the debate on whether science is rational and objective. Ultimately it leads to the question of whether there is an
objective reality or “truth” out there for us to discover. If science, which claims to investigate and discover “truth” in the objective world, is not in fact doing that kind of work,

Then we may have to ask the more fundamental question concerning whether there is such a thing as “objective truth” for us to find or establish in principle. Just as Kuhn challenged the objectivity of science, there are commentators who criticize his theory as relativistic. A defense of Kuhn’s position against the charge of relativism can be found in Richard Rorty’s work. He proposed a new framework that he calls anti-representationalism. Anti-representationalism is a form of pragmatism that does not assume the traditional correspondence conception of truth. According to the traditional correspondence theory, which can be traced back to Aristotle, the truth of a statement or proposition consists in its agreement with the objective fact. This further presupposes a metaphysical realism, which means “the belief that statements of the disputed class possess an objective truth-value,” whereas anti-realism is the claim that there is no matter of fact which some particular true statements represent (Dummett 1978, 146).

Realists, traditionally, construe truth as correspondence to reality. They believe that procedures of justification of belief could be natural yet not merely local. As Rorty puts it,

On their view, the various procedures which are thought of as providing rational justification by one or another culture may or may not really be rational. For to be truly rational, procedures of justification must lead to the truth, to correspondence to reality, to the intrinsic nature of things (1998, 22).

Rorty describes realists as those who wish to ground solidarity in objectivity. Solidarity and objectivity, to Rorty, are “two principal ways in which reflective human beings try, by placing their lives in a larger context, to give sense to those lives” (1998, 21). By solidarity, he means a way to give sense to one’s life by telling the story of one’s contribution to a community, whereas by objectivity he means another way to do so by describing themselves as standing in immediate relation to a non-human reality. The common misconception of scientific development as heading towards the “truth” can be explained by the tendency to seek objectivity in the tradition of Western culture. As Rorty says,

The tradition in Western culture which centers around the notion of the search for Truth, a tradition which runs from the Greek philosophers through the Enlightenment, is the clearest example of the attempt to find a
sense in one’s existence by turning away from solidarity to objectivity. The idea of Truth as something to be pursued for its own sake, not because it will be good for oneself, or for one’s real or imaginary community, is the central theme of this tradition (1998, 21).

The search for truth is a central theme of Western tradition that has been leading the development of Western culture since Ancient Greece. Although natural science, as an area of inquiry, constantly emphasizes its “objectivity” and “universality,” it inevitably works under specific presuppositions. Even though it is not explicitly stated, there is actually a metaphysical assumption of realism in modern science. It presupposes that there is a reality out there to be investigated and discovered. Natural science’s strong abilities in prediction and manipulation lead to the thought that it can grasp the “objective truth”—the only sort of truth worthy of the name due to its correspondence to objective reality. The power of natural sciences, as Rorty points out, has even gone beyond the field and defined what “rationality” means. “We tend to identify seeking ‘objective truth’ with ‘using reason,’” he comments, “and so we think of the natural sciences as paradigms of rationality” (1998, 35). Further, our use of language reinforces the image of natural science as “objective,” “rational” and therefore “true.” When the paradigm of rationality applies to an area of inquiry other than natural science, such as humanities, the distinctions between objectivity and subjectivity, between hard facts and soft values, and between truth and pleasure create more difficulties than they resolve. These kinds of distinctions seem to imply that natural science possesses a superior status in culture, in which it is viewed as a medium to keep humanity in touch with something beyond itself.

Since Kuhn denies that there is an objective, context-independent and paradigm-free reality out there to which a scientific proposition can either correspond or fail to correspond, his theory is often seen as endorsing a kind of metaphysical anti-realism, which would finally lead to the undesirable consequence of relativism. In Rorty’s view, however, the traditional distinction between realism and anti-realism is misguided. Rorty thinks that this distinction, or the debate on whether there is an objective truth-value or not, only makes sense under the presupposition of representationalism. What Rorty favours is anti-representationalism, a pragmatic approach with the belief that no linguistic items represent any non-linguistic items. If linguistic items do not represent extra-linguistic reality, there is no issue as to whether linguistic statements can or cannot correspond to extra-linguistic reality at all. The move from representationalism to Rorty’s anti-representationalism shifts the focus of discussion from whether there is an objective “truth”
to whether there is any objective “thing” to be represented. The concept of anti-representationalism provides a better theoretical framework for understanding the pragmatist conception of truth and rationality.

4.1.3. Pragmatist Conception of Truth and Rationality

Although the conception of natural science as “objective truth” is rooted in traditional Western culture, the role of science can be more precisely redefined from the perspective of pragmatism without denying the contribution and success of science in predication and manipulation. Pragmatists view truth as “what it is good for us to believe.” It replaces correspondence with usefulness. The term “rational” also bears different meaning from a pragmatist’s point of view, and the desire for objectivity is not to be fulfilled by seeking the truth in an external reality out there. As Rorty writes,

To say that what is rational for us now to believe may not be true, is simply to say that somebody may come up with a better idea. It is to say that there is always room for improved belief, since new evidence, or new hypothesis, or a whole new vocabulary, may come along. For pragmatists, the desire for objectivity is not the desire to escape the limitations of one’s community, but simply the desire for as much intersubjective agreement as possible, the desire to extend the reference of ‘us’ as far as we can. Insofar as pragmatists make a distinction between knowledge and opinion, it is simply the distinction between topics on which such agreement is relatively easy to get and topics on which agreement is relatively hard to get (1998, 23).

The above passage is followed by a remark on the ethnocentric view of pragmatists, which is often referred to as relativism. On the pragmatists’ view, “there is nothing to be said about either truth or rationality apart from descriptions of the familiar procedures of justification which a given society—ours—uses in one or another area of inquiry” (Rorty 1998, 23). In other words, Rorty believes that there are no ahistorical and context-independent facts that can serve an objective basis for justification—justification, for Rorty, is always embedded in a specific context and environment. In opposition of realism, pragmatists think that there are no procedures of justification of belief which are natural and not merely local.

From this perspective, Rorty further proposes that there are two senses for the term “rationality.” The first sense of it is to be able to lay down the criteria for success in advance, namely, to be rational is to be methodical. This sense of rationality makes it plausible to take natural science as the paradigm of rationality. It is because science
seems to have a clear criterion for its success, that is, a theory’s ability to predict, and by that to enable humans to control certain parts of the world. However, this sense of rationality may not be applicable to other areas of inquiry such as humanities that are concerned with ends rather than means, and which do not evaluate their success in terms of precedent specified criteria. It is apparent that this sense of rationality gives science power over the determination of values in other areas of inquiry. Therefore, Rorty suggests us to take “rational” to mean something similar to “sane,” “reasonable,” and “civilized” rather than “methodical.” This broader and less restrictive sense of rationality provides more room for discussion, for which “to be rational is simply to discuss any topic . . . in a way which eschews dogmatism, defensiveness, and righteous indignation” (Rorty 1998, 37). It is better, on the other hand, not to confine rationality to its stronger “methodical” sense since it is implicitly associated with the questionable conception of objective truth as correspondence to reality.

Rorty further recommends us to drop the distinction between objectivity and subjectivity, for this distinction presupposes that there is an objective reality out there. In addition, the term “objectivity” should be synonymous with “unforced agreement.” To Rorty, we humans are inevitably ethnocentric since “beliefs suggested by another culture must be tested by trying to weave them together with beliefs we already have” (1998, 38). Thus, the traditional assumption of Western philosophy that there is an objective truth to be found out there as rising above all human communities is an illusion. Rorty has given us a possible explanation concerning the development of science. He says:

All that is worth preserving of the claim that rational inquiry will converge to a single point is the claim that we must be able to explain why past false views were held in the past, and thus explain how to go about reeducating out benighted ancestors. To say that we think we are heading in the right direction is just to say, with Kuhn, that we can, by hindsight, tell the story of the past as a story of progress.

But the fact that we can trace such a direction and tell such a story does not mean that we have gotten closer to a goal which is out there waiting for us. We cannot, I think, imagine a moment at which the human race could settle back and say, “Well, now that we’ve finally arrived at the Truth we can relax.” We should relish the thought that the sciences as well as the arts will always provide a spectacle of fierce competition between alternative theories, movements, and schools. The end of human activity is not rest, but rather richer and better human activity (1998, 39).
In summary, pragmatists challenge the realist’s correspondence theory of truth continuously. Anti-representationists, such as Rorty, propose to replace correspondence with usefulness; they point out that the realist view on truth cannot give a satisfactory explanation concerning scientific revolutions as paradigm shifts rather than cumulative development episodes. Instead, if we view the problem from the pragmatist’s perspective, scientific development can be understood as a process of seeking unforced agreements on how the phenomena in the physical world can be explained. Even though we can articulate a much more sophisticated explanation of the world than our ancestors did, it does not mean that we are closer to a final goal or the truth. For most, if not all, of the scientists do simply focus on solving their own puzzles rather than searching for an ultimate determinate truth of the world. Hence, if there is no external, purely objective reality to determine which theory is true or right, natural science should not be considered unquestionably superior to sciences from non-western culture in determining what is true. Rather, when the existing agreements within science encounter other agreements from other communities, the procedures of justification should be determined by the unforced agreement of the communities. In this sense, the theory or idea which turns out to be better than the available alternatives at a particular moment is identified as the truth, but it is always open to challenges from new evidence and arguments. These challenges provide more conceptual resources for us to understand the nature of natural science or even knowledge in general.

4.2. Distinction between Natural Sciences and Human Sciences

While discussing the nature of science or scientific rationality in general, the focus has often been on the model of natural sciences such as physics. However, science includes a variety of different disciplines and methodologies. A particularly important distinction is the distinction between Naturwissenschaften (natural sciences) and Geisteswissenschaften (human sciences), which was first proposed by Wilhelm Dilthey in the nineteenth century.65 In Introduction to the Human Sciences (henceforth Introduction), Dilthey defined Wissenschaft, the German word for science, by stating that

---

65 Although the method of verstehen is often considered to be developed by Dilthey, some argue that the credit for developing the method should be belong to Johann Gustav Droysen. See Frederick C. Beiser, The German Historicist Tradition, (Oxford, New York, 2011), 289-321.
[b]y a “science” we commonly mean a complex of propositions (1) whose elements are concepts that are completely defined, i.e., permanently and universally valid within the overall logical system, (2) whose connections are well grounded, and (3) in which finally the parts are connected into a whole for the purpose of communication. The latter makes it possible either to conceive a segment of reality in its entirety through this connection of propositions or to regulate a province of human activity by means of it. The term “science” is here used to designate any complex of mental facts which bears the above characteristics and which therefore would normally be accorded the name “science” (1989, 56-57).

Unlike contemporary assumptions about science as constituted by “objective facts,” Dilthey used science to name those complexes of mental facts that carry the three characteristics he listed above. According to Dilthey’s characterization of science, it can be understood as a system of knowledge which involves internally well-defined parts with corroborated relationships that constitute a whole. The concept of science, Dilthey suggested, which is fundamentally based on the idea of coherence, can be divided into two subdivisions that are called natural sciences and human sciences respectively. Dilthey described the development of natural sciences in a way that showed how it had enslaved the human sciences rather than liberating all the sciences. He believes that it was important to determine the conditions of possibility for the human sciences in the way eighteenth-century German philosopher Immanuel Kant had done for the conditions of possibility for the natural sciences. In order to preserve the autonomy of human sciences, it is critical for Dilthey to make a distinction between natural and human sciences. However, it is hard to draw a clear dividing line between them. The distinctions can only be illustrated by identifying the features of these sciences. Both natural and human sciences have their origin in the life-nexus (Lebenszusammenhang). It is a relational nexus, which is the link between each act of consciousness and the overall context, that is, a structure that always relates outer experiences to inner experiences.

Dilthey pointed out in the preface of the Introduction that modern natural science, due to its particular conditions, cannot gain adequate access to the totality of human nature.

All science is experiential; but all experience must be related back to and derives its validity from the conditions and context of consciousness in which it arises, i.e., the totality of our nature. We designate as “epistemological” this standpoint which consistently recognizes the impossibility of going behind these conditions. To attempt this would be like seeing without eyes or directing the gaze of knowledge behind one’s own
eye. Modern science can acknowledge no other than this epistemological standpoint . . . From this standpoint our conception of the whole of nature proves to be a mere shadow cast by a hidden reality; by contrast, only in the facts of consciousness given in inner experience do we possess reality as it is (Dilthey 1989, 50).

The notions of “mental facts” or the “facts of consciousness” were used by Dilthey to refer to everything that is being-there-for-me in my consciousness, that is, the experiences that are immediately given. For Dilthey, consciousness cannot be defined; it can only be exhibited as “an ultimate datum incapable of further analysis” (1989, 246). Rudolf Makkreel and Frithjof Rodi further elaborated that consciousness should be comprehended “as a continuum where no content can be understood in isolation from its larger context. For the human sciences this context is inner experience, for the natural sciences outer experience” (1989, 36). It is important, as Dilthey implied, to take the human psyche into consideration in order to comprehend science. The participation of human psyche is a necessary condition of our experiences, which can be divided into two modes, namely, inner experience and outer experience. These two modes of experience are not exclusive as they might seem, but dynamically interrelated as a whole with the facts of consciousness forming a totality of knowledge that is connected by thought (Dilthey 1989, 280). When the facts of consciousness are linked to the overall nexus of life as part of lived experiences (Erlebnisse), they are real; conversely, when they are divorced from the life-nexus, they are mere phenomena. These shall be further elaborated in the coming sections.

4.2.1. *Naturwissenschaften* (Natural Sciences)

Natural sciences are a branch of knowledge that deal with the study of the physical world. It is also a specific way of knowing that takes a detached stance towards its objects in understanding the natural world. It assumes order and consistency in the natural world that can be discovered by investigation, observation, and experimentation. All natural phenomena are the object of study of natural science. Empirical evidence from observation and experimentation is gathered to describe, predict, and understand the natural phenomena. In Dilthey’s time, the predominant picture of natural sciences was shaped by the Newtonian mechanical worldview, according to which nature is governed by blind, deterministic, and mechanical causal laws. As it is reflected in the famous thought-experiment of Laplace’s demon, if there is a super-intelligent or omniscient demon
who is capable of knowing all the precise physical information like location, momentum, and energy of every atom in the universe, it would be possible to calculate the exact state of the whole universe in any given moment of time in the past and even in the future. Every physical event or every state of any atom in the future would be exactly predictable just as with lunar or solar eclipses. The ultimate goal of the natural sciences would be to achieve the capability of Laplace’s demon; thus, the natural sciences, as a human endeavor, are to aim at revealing nature’s entire causal nexus.

The above scientific worldview has been given a rigorous philosophical foundation by Kant, who has had profound influence on generations of European, and especially German philosophers including Dilthey. More specifically, Dilthey draws substantially on Kant’s theory of substance and causality in order to understand the nature of the natural sciences. Dilthey suggests that the metaphysical concepts of substance and causality are derived from our individual lived experience as given in self-consciousness. This idea can be traced back to Kant’s groundbreaking idea that the objectivity of substance and causality are grounded on the subjective but necessary form of human cognition. Acknowledging the failure of previous philosophies in grounding the objectivity of human knowledge, Kant proposed a Copernican revolution for our understanding of the world:

Thus far it has been assumed that all our cognition must conform to objects. On that presupposition, however, all our attempts to establish something about them a priori, by means of concepts through which our cognition would be expanded, have come to nothing. Let us, therefore, try to find out by experiment whether we shall not make better progress in the problems of metaphysics if we assume that objects must conform to our cognition. — This assumption already agrees better with the demanded possibility of an a priori cognition of objects—i.e., a cognition that is to ascertain something about them before they are given to us. The situation here is the same as was that of Copernicus when he first thought of explaining the motions of celestial bodies (1996, B xvi).

For Kant, there is a certain basic structure to which every possible object has necessarily to conform. The basic structure is determined by the form of our cognition, which consists of two basic cognitive powers called sensibility and understanding. While sensibility is the faculty by which our cognition can be related to objects, understanding is the faculty for the application of concepts (1996, A 19/B 33). Since objects can only be given in sensibility, any possible object has to be subject to the forms of space and time, which Kant identifies as the forms of sensibility. Only physical objects have to appear in space and time, and they are further organized under a certain basic conceptual scheme, which
is determined by the categories of understanding. Kant demonstrated that there is a list of twelve pure concepts, including among others the categories of substance and causality, on which every cognitive judgment has to rely. For Kant, the forms of space and time together with the twelve categories jointly determine the basic skeleton of all physical objects and events. More specifically, the natural world is conceived as consisting of plenty of basic substances, which can undergo changes and movements, but are themselves not perishable. Moreover, every change has to be conceived under the law of causality. While every particular causal law has to be verified by empirical observation, the law of causality itself is an a priori law, which has universal objectivity prior to any empirical observation. With his theory of spatiotemporal sensibility and the categories of understanding, Kant aims to offer a philosophical foundation for the Newtonian mechanical worldview.

Drawing on Kant’s theoretical foundation, Dilthey suggests that the metaphysical concepts of substance and causality are the components of a logically necessary system that natural science seeks as an explanatory basis for the world (1989, 67, 193). In other words, natural science looks for a logically consistent explanation for the external world while presupposing the concepts of substance and causality as logically necessary conditions. The concept of substance, as Dilthey stated, “have arisen from cognitive demands to posit something stable amidst the changeability of things” (1989, 199). Natural science searches for the unchanging universality in the ever changing appearances. In order to give explanations to phenomena, natural scientists try to reduce their observations into a chain of causes and effects in their researches. The exclusion of everything that is not measurable contributes to the success of explanations in natural sciences. Substances are constructed as carriers of the process to illustrate the assumed causality and law. As Dilthey put it,

we see research into nature attempting to reduce the perceptual image of changes and motions in objects to a chain of causes and effects, to grasp and master their regularities, and to construct substances as carriers of this process—carriers not subject to the genesis and decay that sensory objects are (1989, 193-94).

Accordingly, natural science produces positive knowledge about external causal relationships and gives mechanistic explanation to objectifiable phenomena. This positive knowledge is, ex hypothesi, produced on the assumption that it is independent of human minds and beliefs. In other words, natural sciences provide descriptive explanations to the
outer experience, which is limited to sensory perception as well as the awareness of objects in space and time.

The mechanistic explanation of nature, however, only explains part of the external reality. Dilthey suggested that external reality is given to us as more than mere phenomena, but the totality of our self-consciousness that includes our inner thoughts and feelings (1989, 202-03). It is given to us as something dynamic that interacts with our inner reality or experience, that is, our senses, thoughts, and feelings. Concepts were developed as signs for the study of the external world through thoughts and they are usually used for comprehending our lived experience. Nevertheless, not all the concepts one encounters are within the realm of one’s lived experience. For example, atoms can be intelligible conceptually but not be comprehensible within one’s lived experience. One is dealing with an invented concept of atoms rather than the reality when one cannot practically experience anything with it. Many fundamental concepts in the natural sciences, especially physics, are generated from calculations and highly artificial abstraction of what is given in experience and lived experience. Meanwhile, the possibility of there being some constituents of nature that are even more fundamental than atoms can never be ruled out. These concepts are the products of rational thinking that are used as universal symbols to illustrate the overall order of natural events. Nonetheless, these symbols contain the perspective of unchangeable substances that limits the representation of reality to only one layer. As Makkreel and Rodi stressed, “the abstract constructionist systems of natural science tend to become totally independent of the life-nexus” (1989, 23). Thus, the world of natural sciences is a radical abstraction that is basically a phenomenal construct.

4.2.2. Geisteswissenschaften66 (Human Sciences)

To Dilthey, the categories of substance and causality are not formal relations projected by the mind as Kant suggested. Rather, they are derived from the lived experience of our own life as given in self-consciousness. Life, in Dilthey’s theory, is

66 The term Geisteswissenschaften was not invented by Dilthey, but was introduced as a translation for John Stuart Mill’s concept of the “moral sciences.” It was widely used in Germany by mid-century but Dilthey employed the term in his work Einleitung in die Geisteswissenschaften (Introduction to Human Sciences). Geisteswissenschaften was associated with Hegel’s Geistesphilosophie with metaphysical connotations implying disembodied spirits and metaphysical dualism, but Dilthey’s use of the term is strictly phenomenological without metaphysical connotations (Dilthey 1989, 57-58; Beiser, 2011, 327-28).
considered to be a fact of experience and the reciprocal relation between self and milieu that is available to all. The life-nexus of self and milieu is irreducible. Life "is the ultimate level of experienced reality, which we can apprehend only by a process of description and articulation" (1989, 21). As life cannot be derived from a more fundamental principle, human beings are the fundamental constituents of the human sciences. We, human beings, are given as partial realities and are not subject to a hypothetical regress as are the fundamental concepts of natural sciences. Unlike natural sciences, all the human sciences are concerned with are human beings and their practices. Thus, human sciences are built upon the foundation of lived experience. Lived experience is essentially individual; it comprises the whole of what we perceive, feel, and desire; it is our internal experience, which is the awareness of our own mental activities and states. The content of lived experience is determined by cognition, emotion, and volition. Makkreel and Rodi have summarized Dilthey’s view on the characteristics of the nature of knowledge of natural and human sciences as follows,

The traditional epistemology of the natural sciences has made our practical relation to the world seem derivative from the theoretical relation and ignores our original access to reality through reflexive awareness. The epistemology of the human sciences must reclaim this access and thus cannot be merely an extension of the epistemology of the natural sciences. The human sciences require a more basic self-reflection that is both theoretical and practical. The determinate ‘I think’ of representational consciousness must be rooted in an indeterminate ‘I think-feel-will’ of reflexive awareness, from which self-reflection then develops the proper framework of the human sciences (1989, 30).

Dilthey rejected the traditional epistemological approach that ignores the role of different modes of consciousness. He proposed an original form of consciousness, reflexive awareness (Innewerden), that is both theoretical and practical. Reflexive awareness is pre-reflective of what is possessed in consciousness; it is our prescientific awareness of reality. Anything perceived in reflexive awareness is not yet separated from the processes and feelings involved in perceiving it. The indeterminate reflexive awareness is the immediate awareness that something is a fact of my consciousness, an awareness that is from an undifferentiated unity of cognition, emotion, and volition. This proto-intentional sense of already being a part of the world, which is lost in natural sciences, is one of the defining characteristics of human sciences. Dilthey endorsed a kind of philosophical psychology that is very different from traditional explanative psychology. In explanative psychology, the action of human beings are reduced to a limited number of merely
physiological functions and are then analyzed to determine how these functions interrelate in terms of chains of cause and effect. In other words, particular psychic processes are derived from others by means of relations that can be reduced to causal series in explanatory psychology. Philosophical psychology, on the other hand, is descriptive and analytic in nature. It is a kind of psychological analysis that studies the facts of consciousness. The cognitive, emotional, and volitional functions operative in the totality of psychic life are articulated in the process of analysis. The "I think" refers to cognition or representational thought, which cannot be isolated from the totality of psychic life. In each single state of consciousness, there are three aspects, namely, representational thought, feeling, and willing from each other, that constitute the psychic life. They are taken as the three aspects of the psychic nexus that are not separable individual functions or capacities. "I think," "I feel," "I will" are the operation of cognition, emotion, and volition respectively.

The realities of real self and external world are differentiated on the basis of our experiences of realizing there are things that resist my will and these things are immediately felt as a reality independent of my will. The realities of self and the world are not independent but "are the equiprimordial poles of the totality of psychic life" (Makkreel and Rodi 1989, 9). To Dilthey, therefore, the world's relation to the self is not primarily representational. Instead, a theoretical relation of self / world is derivative from an experiential relation, for the world is directly real in both practical and theoretical senses. Thus, for Dilthey, there are independent realities of the external world that are being directly experienced and of the self as a product of temporal as well as spatial explication of the life-nexus of consciousness. Inner experience is oriented to an encompassing framework of life from which the external world is subsequently derived.

Dilthey basically concurs with Kant that time is a subjective a priori condition of perception and space is the ideal form of our external perception of phenomenal objects. However, to Dilthey, time is not merely a fact of the intellect; it is given in the totality of our self-consciousness as real. Outer perception is phenomenal, but inner perception, which consists of facts of consciousness that are undoubtable, is real. Hence, time as a form of inner perception must be real. The Kantian time is infinite and ideal; it takes each moment of time as homogeneous in perceptual terms. By contrast, Dilthey sees time as finite and real; it renders each moment of time as filled with its own sensed qualities. A phenomenological differentiation of the parts of time is permitted when time and inner perceptions are considered to be real.
The continuity of psychic life is thus given in the fact that in the smallest moment of time, let us say in every present, there occurs in consciousness a synthesis whose elements point both backwards and forwards to an objective nexus that encompasses what we know and do (Dilthey 1989, 318).

Our perception of time involves not only cognition, but also emotion, and volition as a totality of self-consciousness. The flow of time is dynamic in a sense that it is the unstoppable advance of the present. Time, as characterized by Dilthey, does not flow passively, but is given to our consciousness as an actively advancing process. Instead of taking the distinctions of past, present, and future as the products of reflective discriminations, Dilthey conceived the distinctions of three modes of time as immediately available through reflexive awareness. Nevertheless, it requires representational consciousness to isolate past and future from the present. Hence, our understanding of time is directed by reflexive awareness and representational consciousness, for the present is available to the former and the past and future are explicated by the latter. The present can be experienced as a continuum rather than one indivisible or unextended moment. The hermeneutic circle operates in the continuity of psychic life—an individual moment of the present as a part always informs the whole of past, present, and the future.

The life-nexus of consciousness can be split into two poles—the self and the world. The self is manifested as an outcome of the process of differentiating self and world. Through the reflexive awareness along with the acts of will during the process of differentiation, we learn to distinguish the reality of inner perception from outer perception. The external world, a reality that resists our will and is recognized as independent of us, is given by the reflexive awareness of the will. On the one hand, the world is projected by representational consciousness as a theoretical horizon for objects of natural science; on the other hand, the world is possessed by reflexive awareness as a temporal nexus in which I participate, while at the same time full of things and persons that actively resist my will. The distinction between natural and human sciences is then between outer and inner experiences. Since human sciences retain a closer relation to the original life-nexus of our experience, Dilthey considers them to have a more primordial status than natural sciences. The more inclusive inner experience that cannot be isolated from the life-nexus helps to form more open systems of human science. On the Contrary, the narrower focused of natural sciences in outer experience creates relatively closed systems that can be abstracted from the life-nexus. In this sense, natural sciences are more derivative than
human sciences. However, Dilthey also suggested that human sciences must take the results of natural sciences into account. Through his distinction between immediate knowledge (Wissen) and conceptual knowledge (Erkennen) Dilthey elucidates the dependence of the human sciences on the natural sciences at the level of conceptual knowledge, while human sciences have an advantage on the pre-reflective level of immediate knowledge. Immediate knowledge is rooted in the more inclusive “I think-feel-will” of lived experience, whereas the basis of conceptual knowledge is “I think.” The phenomenality of immediate knowledge confirms the independent realities of self and world. These realities cannot be reduced to mere representations of consciousness as phenomenalism suggests. Inner experience must refer to the self, but is not limited to the self. Thus, the self / world relation is preserved in the inner experience with which the human sciences are dealing.

It is, nevertheless, a misconception to assume that the primary difference between natural and human sciences are methodological. Given the diversity of human beings and complexity of human interactions, it is doubtful that the laws in human sciences would ever be as precise as those in the natural sciences. Still, Dilthey emphasized that human sciences also use methods of abstraction and attempt to formulate general laws to determine the interconnections (Beiser 2011, 325). Thus, the distinction between natural and human sciences should not be primarily methodological, nor should it be ontological as it is not about different kinds of substance or entity. Natural sciences treat outer experience and human sciences deal with inner experience that are given to us phenomenologically; they are not handling different kinds of materials, objects, events, or activities, but two different kinds of content. As Frederick Beiser stressed,

This is not a distinction between objects because one and the same object can have different content depending on the perspective of the inquiry; thus the same physical object can be the content of chemistry, physics and mathematics. What determines the content is the system of relations into which we analyze the object, and which system we develop depends on the specific enquiries we make (2011, 329).

In other words, the content of natural and human sciences is determined by the system of relations and the system of enquiry that are employed in the analysis. The systems of relations and enquiry are different approach to conceptualizing the object. Thus, conceptualization of the same object can result in different kinds of fact. Since the system of enquiry depends on our intentionality, the content of natural and human sciences can
be determined by identifying the aims of these sciences. The aim of natural sciences, as abovementioned, is to provide a mechanical explanation for the content of the outer experience. The aim of human sciences, however, is not to give a description of mental events or activities as they pass through human consciousness; it is to go behind the empiricistic outer experience to identify and analyze the content within our inner experience. The primary task of human sciences is practical; they should not be focusing merely on generalizations of what is the case, but also of what ought to be. Dilthey believed that it is impossible to have a so-called totalized human science. Each human science is partial and dependent on other human sciences. Dilthey reckoned descriptive psychology is the first and most fundamental of the particular human sciences. Nonetheless, individuals cannot construct the social and historical world on their own. Any psychological description of an individual human being or life-unit can only be partial, even though the life-unit is immediately given. As Dilthey said, “[t]he nature of knowledge in the human sciences must be explicated by observing the full course of human development” (1989, 57).

Due to his doubt about foundationalism, Dilthey no longer treated descriptive psychology as the foundation of human sciences in his later work. Instead, he reformulated his theory based upon his ideas in the Introduction with a more phenomenological approach to conclude that hermeneutics is the basis of human sciences (Beiser, 2011, 337-42). This conclusion turns away from foundationalism, as hermeneutics is not a particular field of study but a theory of understanding or interpretation. The distinction in the subject matters of human and natural sciences, i.e. inner and outer experiences, forces a respective distinction in the methodology employed to approach their content. The methods of understanding (Verstehen) and explanation (Erklären) are two different forms of knowing of human and natural sciences respectively.

4.3. What are Explanation (Erklären) and Understanding (Verstehen)?

“We explain nature, but we understand psychic life”⁶⁷ (Dilthey 1924, 144). Dilthey summarized two approaches to natural-scientific inquiry and the inquiry about human

---

beings—we use Erklären for natural-scientific knowledge and Verstehen for human-scientific knowledge. “In the realm of human affairs,” Dilthey noted, Verstehen “corresponds to what we designate as ‘explanation’ [Erklären] in the realm of knowledge of nature” (1989, 439). Erklären and Verstehen were first formulated by Dilthey as dualistic methods. It could either be Erklären or Verstehen when we approach the subject matter. However, in the Erklären-Verstehen debate, some philosophers, such as Max Weber and Karl-otto Apel, suggested that there are ways involving both Erklären and Verstehen to various degrees. Before getting into the discussion of the relations between Erklären and Verstehen, the question of what they are will first be addressed.

4.3.1. Erklären and Natural Sciences

The English translation of the German verb Erklären is “to explain” or “to declare.” Erklären refers not only to the act of explaining, but also a process of explanation by ascribing antecedent causes to events. The concept of Erklären can be understood as a method of causal or nomological explanation. It is a detached approach to engage the subject matter, a method of investigation from a third-person point of view. A detached approach means that a first-person perspective is not employed in the process of explanation; it is a defining feature of Erklären that makes it apparently objective and universal. The subject matters to be explained with Erklären are being extracted from particular subjective experiences and being generalized by comparing with other similar reports of phenomena in the process of articulation. For example, when I see an apple falling from a tree and try to give explanation for this phenomenon, the “I see” is eliminated in the process of generalization for the sake of comparison with others’ reports on the same event of apple falling from a tree. As particular first-hand experiences other than the subject matter are being subtracted in the process of generalization, Erklären is considered to be lawful explanation that is ahistorical and cross-cultural. That is, no matter when and where the apple is fallen from a tree, if other measured factors are similar, the explanation to the event should be the same. Thus, phenomena are reduced to data that are isolated from particular experiences in the process of Erklären. The law-governed or causal explanation of Erklären looks for regularity in phenomena. In order to yield a lawful explanation through Erklären, the phenomena to be examined have to be quantifiable and repeatable.

Due to the methodologically reductionistic nature of natural sciences, Erklären is considered to be the epistemological foundation of natural sciences. The foundation of
natural sciences is the theory of knowledge which is articulated through *Erklären*. The nature of natural-scientific knowledge is hypothetical and theoretical. It is a systematic attempt to transcend distorting effects of particular and subjective points of view that is reckoned to be biased. The conceptual relations of natural phenomena are formulated in the process of *Erklären*. Each natural phenomena can be described in total isolation from others with *Erklären*. It does not deal with meaning and purposes; that is, it does not provide teleological accounts or explanations of phenomena. Mental phenomena associated with purposiveness, such as personal beliefs and desires, that could not be put to use in providing lawful explanation and prediction are not taken into account in the process of *Erklären* in natural sciences. Thus, intentional explanations, which cite beliefs and desires, are beyond the realm of natural sciences.

### 4.3.2. *Verstehen* and Human Sciences

The German verb *Verstehen* literally means “to understand.” The concept of *Verstehen* was first introduced to philosophy and historiology as a method opposed to *Erklären* by the nineteenth-century historian Johann Gustav Droysen. Although the method of *Verstehen* is famously associated with Dilthey, some scholars argue that the credit should go to Droysen and claim that Droysen’s contribution is underrated (Beiser 2011, 289-92). Droysen focused on the distinction between nature and history while Dilthey extended the scope of comparison to the distinction between natural sciences and human sciences. Notwithstanding the debate on the father of the method of *Verstehen*, the respective applications of *Erklären* and *Verstehen* to natural sciences and human sciences were proposed by Dilthey in his *Introduction*.

The concept of *Verstehen* can be understood simply as “to understand,” that is, to engage the subject matter from a first-person participatory perspective. Unlike *Erklären*, *Verstehen* as a method is an engaged approach to investigation. It is an attempt to understand just as we do in ordinary life. Friedrich Schleiermacher used the word “*Verstehen*” in his hermeneutic approach to the interpretation of texts. It is believed that Schleiermacher’s work inspired Dilthey to develop the method of *Verstehen* to interpret human life and action in a way that is similar to interpreting texts rather than applying general laws of cause and effect (Beiser 2011, 347-48). The method of *Verstehen* is an attempt to analyze and reconstruct the patterns and structure of meaning involved in mental life by examining the relation of part to whole involved in the content of
representations. *Verstehen* does explain, but is an approach to explanation that differs from *Erklären*. The central concern of *Verstehen* is to provide explanation with context, especially social and cultural context, and *Verstehen* emerges directly from the context of practical life.

Dilthey called the explanation of phenomena by *Verstehen* “the externalizations of life” (*Lebensäußerungen*), an expression of something mental. Dilthey did not consider the relation of the expression to what it expresses as a cause to effect relation. The externalization, or expression, to Dilthey, sits in a closer relation to the state of mind than cause and effect explanations—it makes what is to be expressed transform from implicit to explicit, indeterminate to determinate, and potential to actual. There are three specific forms of externalization in Dilthey’s theory; they are linguistic expressions, actions, as well as gesture and movements. There are also various degrees of *Verstehen* in these forms of externalization depending on the intention to communicate. *Verstehen* is considered to be the most perfect in the form of linguistic expressions since there is an intention to communicate. It is less perfect in actions since an intention to communicate is not necessary, and one’s actions reveal only part of one’s character and thinking. The action itself does not reveal all the reasons for it and the thinking leading to it. There are also thoughts of acting that are not actualized in action and clues to the thoughts link to that unrealized action are not revealed in subsequent actions. In gestures and movements, *Verstehen* is the least perfect. It is believed that one’s gestures and movements often reveal more about a person than one knows of oneself. They are not intentional as actions but they can possibly be intentional as means to dissemble and deceive. Therefore, it is considered to be the least reliable among the three forms as an interpretative aid. The brief model provided by Dilthey is a necessary condition of *Verstehen* for one mind to understand another. Nevertheless, it is not a sufficient condition of *Verstehen*. Dilthey argues that a communal medium, a public sphere, is needed for each externalization of mind to take place in. He believes that each externalization of the mind reveals or embodies something communal between self and world, I and Thou. *Verstehen* of words, actions, and gestures is possible only because they have been formed by and take place in a sphere of commonality, an intersubjective dimension of *Verstehen*. Dilthey borrowed G. W. F. Hegel’s “objective spirit” to name the intersubjective dimension of *Verstehen* with a definition of “the manifold forms in which the communality among individuals objectifies itself in the sensible world” (Beiser 2011, 349). It is, however, neither the objectification of
reason nor a stage in the realization of absolute spirit as Hegel denoted. Objective spirit, to Dilthey, only means an intersubjective dimension of Verstehen within a particular community at a particular point in history (Dilthey 2002, 168-74).

There are also various complexities of Verstehen that can find their roots in the context of ordinary practical life. The primary forms of Verstehen emerge through the process of coming to understand each other’s needs through cooperation. They are the elementary building blocks of the complex forms of Verstehen in human sciences. The Verstehen of life and actions in human sciences is a more sophisticated and systematic form than that in ordinary life. In other words, human sciences stem from, and are based upon, reflections on lived experience. Such reflection is not external to the lived experience but constitutive of it. Thus, the empirical foundation for human sciences is the ordinary lived experience. Although Dilthey proposed the method of Verstehen, he did not provide a detailed account on Verstehen itself in the Introduction but defined Verstehen as “the interpretation of that psychic state in the context of the whole of psychic life and conditioned by its milieu” (1989, 439). By reading through Dilthey’s works, Beiser summarized the fundamental forms of Verstehen as follows,

Dilthey attributes a specific form of analogical or inductive reasoning to the elementary forms of understanding. He is explicit that they are a form of inference or reasoning, and he attempts to find for them “a logical construction.” Although he does not go into such detail, the reasoning he attributes to elementary understanding has the following structure: (1) There is a uniform connection between a specific kind of expression E and the mental state M that it expresses. (2) There is in this specific case C an expression of kind E. (3) Therefore, in case C, E is an expression of the mental state M. In the most elementary form of understanding we take some particular externalization—a sentence, an action or a gesture—and apply some more general law to it, so that we see it as an instance of that law. More complicated forms of understanding arise when we consider not only one particular externalization but many different kinds of externalization, and when we have to consider the changing circumstances and precise initial conditions under which the general law applies (Beiser, 2011, 350).

As the ultimate goal of human sciences is to understand human realities that include inner realities of all individuals, one can only understand others when the inner realities are externalized in observable forms. It is believed that the externalization of life involves certain kind of general law that attribute certain expressions to the respective mental states. Different expressions of mental states in the forms of languages, actions, or
gestures are considered to be generally universal. However, this kind of general law is distinct from the causal law of Erklären in a way that is more open to various expressions to a particular mental state or various mental states to a particular expression. The so-called general law here is a common understanding of certain kinds of mental states that certain expressions externalize. There could be many general laws that can be applied to one particular externalization. It would be up to the person who carries out Verstehen to decide on which general law(s) to be applied to analyze the whole situation. Hence, the key methodological difference between Erklären and Verstehen lies in the peculiar form of the generalities employed in the human sciences. Despite the fact that both natural and human sciences deal with general concepts and universals, there are distinct kinds of concepts and universals to be dealt with—the concepts and universals of Erklären are causal laws, while that of Verstehen are the content of representations and units of meaning.

It might seem that natural-scientific knowledge and human-scientific knowledge are two distinct domains with no overlap. Nevertheless, Apel suggested that there are sciences that are quasi-objective, which could be considered as having the essences of both natural sciences and human sciences. According to Apel, the methodology of sociological and psychological behavioural research, especially psychotherapy, have the characteristics of both Erklären and Verstehen (1980, 71-72). In other words, there is an objective and distanced behavioural explanation in the process of psychoanalysis, which cannot be used without translating “the language of psychological and sociological ‘explanations’ into the language of a deepened self-understanding that transforms their motivational structure and thereby robs the ‘explanation’ of its foundation” (Apel 1980, 71). Thus, there is a working of Verstehen in the process of psychoanalysis which helps to form its Erklären. Apel considers this a dialectical mediation of Verstehen and Erklären, which he calls “the critique of ideology” (1980, 72)—for ideology refers to a transcedental framework of what things mean and what it is like, the dialectical mediation of Verstehen and Erklären is constantly analyzing and assessing that transcendental framework. It somehow indicates that Verstehen and Erklären can be understood as two ends of a line and form a kind of spectrum, in which natural sciences are more inclined to Erklären while human sciences are closer to Verstehen.

All human behavioural reactions, as Apel stated, should be subject to hermeneutic analysis. To Apel,
hermeneutic analysis commences from the fact that intelligible human behavioural reactions, as linguistically-related intentional forms, themselves possess the quality of understanding. As a result, such an analysis would affirm that the data of the world, in whose context the behaviour that is to be understood emerges, must itself be understood from the intentional understanding of the behaviour that is to be understood. The world is then no longer the ‘existence of things inasmuch as [in the sense of the natural sciences] they form a law-like connection’ (Kant) but the ‘total situation’ of a specific ‘being-in-the-world’ (Heidegger) in which we can participate through the understanding of language (1980, 55–56).

Therefore, Verstehen cannot be achieved by distancing from the “objects to be studied.” Rather, we have to go into the total situation in order to understand human sciences. This is a typical antipositivistic view. The tenets of positivism include, as Wright indicates, the idea of the unity of scientific method and “the view that the exact natural sciences, in particular mathematical physics, set a methodological idea or standard which measures the degree of development and perfection of all the other sciences, including the humanities” (1971, 4). The positivists believe that the world should be explained by general laws, which presuppose causal relationship in explanations. Positivism even assumes that there are general laws of nature, including “human nature.” However, to antipositivists, there is a methodological dichotomy of Erklären and Verstehen. While Erklären is clearly guided by laws and theories, Verstehen operates with empathy-like involvement of the interpreter and connection with intentionality. The empathic verstehen should not be understood as “feeling”; instead, as Wright points out, “it is an ability to participate in a “form of life” (1971, 29). More precisely, the operation of verstehen is about getting to know “the aims and purposes of an agent, the meaning of a sign or symbol, and the significance of a social institution or religious rite” (1971, 6) and Apel echoes the idea by stating that “the historicity of the interpreter is one of the pre-conditions for the possibility of understanding in the human sciences” (1980, 63).

4.4. What is Hermeneutic Knowledge?

The use of the notion hermeneutics can be traced back to ancient Greek in Plato’s dialogues to address the understanding of religious intuitions to contrast with that of sophia, the knowledge of the truth-value of an utterance. Aristotle took on this sense of hermeneutics to name his work on logic and semantics Peri hermeneias (or De interpretation) and the Stoics employed the notion to describe something like a methodological awareness of the problems of textual understanding without developing a
systematic theory of interpretation. Although the term *hermeneutics* was part of the lingua franca since the beginning of the seventeenth century, it had already existed as a theory of interpretation earlier in the reflections of Philo of Alexandria (Bruns 1992). It was believed that systematic interpretation work is the only way to uncover deeper non-literal meaning that may be concealed in the literal meaning of the Old Testament. Scholars briefly classified the development of hermeneutics into ancient and modern. The role of hermeneutics in the ancient and medieval period was mainly to explain the true meaning of the Bible. Modern hermeneutics expanded the scope of inquiry beyond religious interpretation to a significant theme of study in philosophy. It started off as a historical and critical methodology for textual analysis applied to other discussions on the nature, role, and operation of hermeneutics in areas such as methodological, epistemological, ontological, and radical hermeneutics. Despite the debate on the content of hermeneutics, it is generally agreed that the notion *hermeneutics* means interpretation. For the purpose of this analysis, our discussion here will focus on the methodological and epistemological aspects with the aid of ontological hermeneutics.

Hermeneutics as a method of interpretation deals with problems that emerge while examining meaningful human actions and their products. The process of understanding a text hermeneutically is often described as the hermeneutic circle. The circular course of hermeneutic understanding involves back and forth movements between the parts and the whole of the text. The hermeneutic relationship not only includes the relationship between the parts and the whole of the text, it also includes the text’s relationship to historical tradition and culture at large, as well as the individuality of its authors. With the combination of a synthetic approach focusing on the whole with an analytic approach on the particular parts of which the whole consists, a hermeneutic circle is formed. Thus, *Verstehen* is the principal approach to engage the subject matter in the hermeneutic circle.

### 4.4.1. Gadamer’s Hermeneutic Circle

Although the concept of hermeneutic circle has been proposed by a number of philosophers including Dilthey and Friedrich Schleiermacher, the most seminal formulation and discussion was put forward more recently by the twentieth century German philosopher Hans-Georg Gadamer. Gadamer published his magnum opus *Truth and Method* in 1960, two years earlier than Kuhn’s *The Structure of Scientific Revolutions*. While Kuhn’s work completely reshaped and redefined the landscape of the philosophy of
science, especially but not exclusively in the Anglo-American academic world, Gadamer’s *Truth and Method* brought about an equally fundamental challenge to the positivist understanding of truth and knowledge first in continental philosophy, and later across different traditions. Drawing heavily on the philosophies of Dilthey and then Martin Heidegger, Gadamer offered an insightful analysis of the circular structure of understanding. According to Gadamer, understanding is characterized by its circular structure and the aim of the circle is to bring about agreement in content. “[T]he goal of all attempts to reach an understanding is agreement concerning the subject matter” (1989, 292). Gadamer further classifies two levels of circle—the methodological and the ontological.

The methodological circle, which is held by traditional hermeneuticists, emphasizes the relationship between the parts and the whole. When we study a work, the meaning of the parts can only be understood in terms of the anticipation of the meaning of the whole, but the meaning of the whole itself is also constituted by the understanding of its parts. The understanding of the whole and the parts can be adjusted accordingly and ceases when final unity is achieved. The whole is not restricted to a work, but can be an author or even the whole of literature. Following this direction, Schleiermacher has further elaborated this circle in both its subjective and objective aspects. However, Gadamer intends to transcend this kind of methodological circle by the insight given by Heidegger’s “ontological structure of understanding.” As understanding is determined by the anticipatory movement of fore-understanding, “[t]he circle ... describes understanding as the interplay of the movement of tradition and the movement of the interpreter” (1989, 293). This kind of circle differs from the methodological one that it is no longer formal in nature, but rather ontological and never ending. The anticipation of meaning is permanently determined by our fore-understanding, which is not an act of subjectivity, but from the commonality formed in relation to tradition. As long as we understand, we participate in the evolution of tradition which in turn determines ourselves. The circle is the constitutive being of understanding itself and that is what Gadamer means by ontological. This ontological circle is guided by the “fore-conception of completeness.” This fore-conception, according to Gadamer, is more than just acquiring the unity of meaning—it even demands the reader to accept it to be the truth. Gadamer tried to justify his theory by appealing to our everyday life in which we normally believe the news reported by a correspondent to be true. However, as Gadamer conceded that in the cases of deception or intentional
misleading, his theory is not fully justified. Despite this problem, his thesis presupposes that authority is generally justified and the distinction between the rational and irrational holds.

4.4.2. Temporal Distance and the Fusion of Horizons

Apparently, fore-understanding not only contains “positive” elements that enhance our understanding, but also “negative” elements which hinder our understanding or lead to misunderstanding. According to Gadamer, the “positive” and “negative” elements cannot be separated in advance; the separation can only take place in the process of understanding. This idea can be explained with the concept of historical or temporal distance. In romanticism, scholars affirm the superiority of the subsequent understanding over the original production. It is believed that the author and the interpreter are often separated by a historical distance, in which the author’s concepts are bounded by his historical situation and the true meaning of the author’s own text may not be revealed to him/her due to this limitation. Nonetheless, the interpreters can go beyond the author and achieve a better understanding based on their own situation in history. Therefore, Gadamer claims that understanding is not merely a reproductive activity, but also a productive one. It echoes Gadamer’s view on art—a work of art is not just a copy of the original, rather a presentation which in turn increases the being of the original (1989,133).

However, if we conceive the temporal distance between the interpreter and the author as a gulf to be bridged, the subsequent understanding is necessarily better; it can only be a different way of understanding. Gadamer then suggests that the hermeneutic productivity of temporal distance can be understood only under the framework of Heidegger’s interpretation on Dasein’s mode of being in terms of time. “[I]t [time] is actually the supportive ground of the course of events in which the present is rooted” (1989, 297). Hence, the temporal distance, where filled with the continuity of custom and tradition, is a positive and productive condition that enable understanding.

It is argued that temporal distance enables the discovery of the true meaning of a text through the infinite process of the hermeneutic circle. Negatively, it functions as a filter to filtrate the local and limited prejudices; while positively, it “allows those that bring about genuine understanding to emerge clearly as such” (1989, 298). The function of temporal distance is, nevertheless, more than a filter; it not only filters out the negative elements, there are new inputs that are fused to the understanding in the process. The interactive
process between the original text and the historical environment is, thus, a fusion through which the true meaning of the text emerges while the “negative” elements are left out. Notwithstanding, how can Gadamer ensure that better, rather than worse, understanding can be achieved through the fusing function of the temporal distance? Or, on what ground is the “positive” element preserved or on what grounds does it emerged, while the “negative” one is being overcome? This can be best understood by the Hegelian sense that the process is ultimately guided by historical reason. Gadamer follows the romantic tradition of German idealism which put faith in the progressive character of history and the manifestation of reason within it. It implies that there is a positive direct relationship between the level of understanding of a text and the temporal distance between the author and interpreter, that is, the greater the temporal distance, the better a text is being understood. Gadamer claims that a contemporary work cannot be understood well because we possess similar prejudices which are operating unnoticed. He argued that the situation is comparable to our frequent uncertainty about the value of some contemporary works of art. The unnoticed prejudices can only be provoked, as the logical structure of a question, by encounters with a text composed in another historical situation. The concept of historical situation was clarified by Gadamer with a significant notion in phenomenology—the horizon.

“The horizon,” according to Gadamer, “is the range of vision that includes everything that can be seen from a particular vantage point” (1989, 302). Within the horizon, one can know the relative significance of things. Romantic hermeneuticists suggested that different historical situations have different horizons and Verstehen means to transpose ourselves into that particular historical situation. However, Gadamer criticized this view as leading to a problem such that we may find the author’s ideas “become intelligible without our necessarily having to agree with him” (1989, 303). This implication violates Gadamer’s theory of understanding, for understanding, according to him, is always directed to an agreement in content. Gadamer attempts to resolve the problem by denying different historical situations represent multiple closed horizons. Nonetheless, the denial of multiple closed horizons may suggest one single horizon that covers the whole of history. Meanwhile, it is obvious that the horizon of the ancient cannot be the same as that of the present. To overcome this dilemma, Gadamer proposed that “[t]he horizon is, rather, something into which we move and that moves with us...Thus, the horizon of the past, out of which all human life lives and which exists in the form of tradition, is always in
motion” (1989, 304). It can be better articulated with the notions of hermeneutic circle and temporal distance. The present is rooted in the supportive ground of the past such that they are within one great horizon, but the hermeneutic circle between them makes the horizon to be a changing dynamic—what Gadamer refers to as the motion. With this remark on horizon, Verstehen is to move from our particular situation to a higher universality that overcomes our and others’ particularities. The different historical situations are disposed accordingly in the breadth vision of horizon, so that relative significance can be noted. They are to be fused into a unity and achieve the “fore-conception of completeness.”

Although Gadamer optimistically demands objectivity of Verstehen in the progress of history, his theory on hermeneutic circle, temporal distance, and the fusion of horizons can still be valid without necessarily endorsing his insistence objective reality or truth and the Hegelian sense of historical reason. Gadamer states explicitly that understanding seeks to reach an agreement in content and views what the author says to be true. The conflicts between the interpreter’s and the author’s thought are not a barrier, but rather provide a chance to provoke the interpreter’s own prejudices. This encounter directs towards a higher universality which overcomes the interpreter’s and the author’s particularities. With his romantic belief, Gadamer stated that the function of temporal distance is guided by historical reason so as to attain a better understanding. This statement hints that there is an objective truth we could be guided to by historical reason. However, Gadamer also stressed that the process of understanding is infinite, and the hermeneutic circle has no end, which means final objective understanding cannot be achieved. This tension can be resolved by the pragmatic theory of truth that has been discussed in Chapter 4.1.3—for the universality of understanding can be understood as unforced agreements on how the phenomena can be interpreted. Meanwhile, the diversity of understanding in retained in the process of Verstehen. Hermeneutic knowledge, therefore, can be understood as a kind of knowledge that is produced with the application of hermeneutic circle, temporal distance and a fusion of horizons that involve back and forth interactions between participating subjects in a concrete historical-cultural context.
Chapter 5.

Chinese Medical Theories as Hermeneutic Knowledge

...non-Western traditions differ from contemporary Mainstream Medicine in that the latter abandoned its classical roots, and based itself on scientific theory, while others did not do so.

(Alex Broadbent)

5.1. The Commentary Tradition on Chinese Medical Texts

5.1.1. Classical Literary and Modern Chinese Texts

It is commonly assumed that Chinese writing began in approximately the seventeenth century BCE, or late Xia to early Shang dynasty (Qiu 1978, 169). There is a profound unity of Chinese culture that has been transmitted in an unbroken line from the third millennium BCE down to the present day. The written form of Chinese language has always been one of the most powerful symbols of its cultural unity. It took around three thousand years for Chinese characters or graphs to evolve from their pictographic origin to classical Han clerical script, which is the standard script still in use today (Norman 2010, 58-67). It is estimated that there were between four to five thousand separate graphs in common use at the end of the Shang dynasty (1600–1046 BCE). The Eastern Han dynasty (100–121 CE) version of Shuowen jiezi 説文解字 (Explaining Graphs and Analyzing Characters) contained 9,353 different characters. The overall number of Chinese characters increased rapidly after the Han dynasty. The Jiyun 集韻 (Collected Rimes) dictionary held a total of 53,525 individual characters by the Northern Song dynasty (960–1127 CE). There are several reasons for the proliferation. Firstly, it was quite common to use the same graph to represent two or more words in earlier forms of the script. Secondly, there is the cumulative nature of the Chinese literary tradition that preserved and included the graphs which have been used to write ancient texts in dictionaries, even when the characters they represented had long since passed out of the lingua franca. Thirdly, there were new words coming from the vernacular and even foreign languages. Lastly, there was a significant number of variant ways of writing a single word. These variant ways often coexisted due
to the lack of standardization and a large number of them were included in the *Jiyun*. The number of characters in the dictionary peaked in the Northern Song dynasty and dropped in the process of standardization. It is believed that an ordinary literate Chinese person knows and uses somewhere between three to four thousand Chinese characters (Norman 2010, 70-73). However, the change of numbers itself does not tell the full story of the constant exclusion and inclusion of different Chinese characters in the lingua franca throughout the development of the Chinese language.

Despite the common practice of referring to Literary Chinese as Classical Chinese, sinologists and linguists employ “Classical Chinese” to refer to the written language from the end of Spring and Autumn period (476 BCE) to the end of the Han dynasty (220 CE), and “Literary Chinese” for that from the end of the Han dynasty to the early twentieth century respectively. Classical literary Chinese (*wenyan* 文言) survived as the predominant form of writing until the 1920s. The written vernacular (*baihua* 白話), which is often referred to as modern Chinese, has gradually replaced the Classical literary Chinese since then (Norman 2010). Notwithstanding the differences between classical literary and modern Chinese, one would not regard them as two utterly different languages. Far from being a static, fossilized form of writing, the Chinese writing system has been undergoing a constant process of adaptation throughout its history. Its ability to adapt to various written forms of Chinese reflects its versatility that contributes to its remarkable complexity. In the evolution of Chinese characters, a single word can refer to different meanings depending on the historical, geographical, and textual context. The complexity is even more prominent when the scarce use of punctuation in classical literary Chinese is taken into account. While modern punctuation is commonly in use for modern Chinese, readers of classical literary Chinese often find themselves reading an entire text without any punctuation, although different font sizes were employed for certain levels of distinction (see Figure 1). This setting provides the readers with plenty of space to interpret the texts by breaking the texts into sentences. Oftentimes, the meaning of the whole sentence would be different just by changing the position of the punctuation. Thus, the reader of Chinese literary texts has to read through the whole text to get a sense of the general idea in order to make sense of particular words and sentences.
Figure 1. A scanned page of the Suwen
Northern Song dynasty version published during the Ming dynasty in 1550; reprinted in a reduced format by Shanghai Commercial Press in 1965.
5.1.2. The Commentary Tradition of Suwen

The authoritative version of the *Suwen* from the eleventh century tells us a lot about its commentary tradition. Although there is no punctuation in the text, different font sizes of the Chinese characters signify different functions. The normal font-sized characters that share the same width as a column are the main text, while the smaller sized characters (usually a quarter of the normal size) are commentaries. These commentaries can be editorial notes on the editing or interpretation and elaboration of the text. There are two types of editorial notes in the *Suwen*. One type is merely editorial; it provides information about the editorial history, source(s), or notes on typographical errors. The preface of the *Suwen*, for example, includes a footnote on the editorial history of the *Suwen* by the imperial editorial office (Figure 2). It suggests with detailed evidence that Volume Seven, i.e. chapters sixty-six to seventy-four, of an older edition of the *Suwen* has been lost for a long time; the editor suspects that chapters sixty-six to seventy-one and seventy-four of this version are from another text which were added by Wang Bing. It says

The newly corrected version [by the Song imperial editorial office] says: Upon close scrutiny, Volume Seven of the *Suwen* has been lost for a long time. According to Huangfu Shian of the Jin dynasty in the preface of *Jiayi jing* (The Canon [of Acupuncture and Moxibustion]): “there are also lost [sections of texts of the *Suwen*].” *Liang shilu* (Record on the scholars of Liang) in *Suishu Jingji zhi* (Book of Sui: Gazette of Books) also mentioned that “there are only eight volumes [instead of nine].” The version commented upon Quan Yuanqi of the Sui dynasty missing the seventh volume. From Wang Bing, of the Baoying period (762–763) of the Tang dynasty, to Huangfu Mi, of the Ganlu period (256–259) of the Jin dynasty, already six hundred years [had passed]. Yet Bing thought he had obtained a scroll from the old corpus. Now I personally suspect that the seven chapters [that were not from the old corpus] are: *Tianyuan jida lun* (Comprehensive Discourse on Arrangements of the Principal [Qi] of Heaven, [Chapter 66]), *Wuyun hanglun* (Discourse on the Five Motions, [Chapter 67]).

---

68 More precisely, this version is usually called *Gu Congde fusong kanben* (A publication [that] copied the Song [version] by Gu Congde), which was published in 1550 CE.

69 Also, the first names of the members of the imperial editorial office were written in half the size of the normal font while having their last names written in normal font. Examples see *Suwen* (1965, 5).

70 It refers to Volume Seven of the lost *Suwen* but not the authoritative version we currently use.

71 Huangfu Shian is the courtesy name of Huangfu Mi (215-282). He was a Chinese scholar and physician.

Liuwei Zhilun 六微旨論 (Discourse on the Subtle Significance of the Six [Qi], [Chapter 68]), Qi jiao bianlun 氣交變論 (Discourse on Changes [resulting from] Qi Interaction, [Chapter 69]), Wuchang zhenglun 五常政論 (Discourse on the Five Regular Policies, [Chapter 70]), Liuyuan zhengji lun 六元正紀論 (Discourse on the Policies and Arrangements of the Six Principal [Qi], [Chapter 71]), and Zhizhen yaolun 至真要論 (Discourse on the Essentials of the Most Genuine, [Chapter 74]). Now four Volumes of the Suwen are extensive, [which] does not match with the volumes and chapters before and after. Also, what is recorded [in these chapters] is slightly inconsistent with the remaining chapters. I personally suspect these seven chapters are texts from Yinyang dalun 隱陽大論 (Comprehensive Discourse on Yin and Yang). Wang took [these seven chapters] to fill the lacunae of the lost chapters; it is similar to [the examples of] replacing the chapter of Dongguan 冬官 (The Official of Winter) in Zhouguan 周官 (The Official of Zhou) with Kaogong ji 考功記 (Records on the Examination of Work). Further, according to Zhang Zhongjing 張仲景 of the Han dynasty in the preface of Shanghan lun 傷寒論 (Treatise on Cold Damage), [he stated that he] compiled [the piece] by making use of Suwen, Jiujuan 九卷 ([Text in] Nine Volumes), Bashi yi nanjing 八十一難經 (Classic on Eighty-one Difficulties), and Yinyang dalun. Therefore, it is apparent that Suwen and Yinyang dalun are two books. It was Wang who incorporated Yinyang dalun in Suwen. In short, [although] Yinyang dalun is also a classic medical canon, it is not the seventh volume of the [old edition of] Suwen (1965, 4).  

---

72 Also called Zhouli 《周禮》 (Rites of Zhou).

73 The English text is my translation and the text below includes my punctuation.
Figure 2. A scanned copy of a selected commentary in the Suwen
Northern Song dynasty version published during the Ming dynasty in 1550; reprinted in a reduced format by Shanghai Commercial Press in 1965. The text in smaller font is translated in the above passage.

The footnote translated above contains a detailed textual account of the source of this edition of Suwen. The editorial team cited two medical classics, Shanghan lun and Jiayi jing from the Eastern Han dynasty (150–219 CE) and the Jin dynasty (256–259 CE) respectively. They also cited a historical text on the Sui dynasty that was compiled during the Tang dynasty (636 CE). This reflects a practice of cross-referencing relevant texts for correction. By “new corrected” in the Suwen, it means new commentaries added by the Song imperial editorial team. This distinguishes the commentaries that were added by the Song imperial editorial team from other commentaries added by other commentators such as Wang Bing and Quan Yuanqi. It also provided a critical account on the sources of the texts.

Another type of commentary is interpretive and/or elaborative. It elaborates on the main text with the commentator’s interpretation. In chapter three of the Suwen, for instance,
it says: “If one was harmed in winter by cold, in spring one will develop a warmth disease.” This main text is followed by two comments. One from Wang Bing states that “the winter cold still freezes; the spring yang qi effuses. When the cold fails to release, the yang smoulders within. Cold [yin qi] and smouldering [yang qi] hold each other. Hence a warmth disease emerges.” Based on Wang’s comment, the Song imperial editorial office added that “according to this [main text], it is repeated in the Comprehensive Discourse on Phenomena Corresponding to Yin and Yang [chapter five of the Suwen]; that commentary [in chapter five by Wang Bing] is quite detailed.” For the same main text in chapter five, Wang stated:

“any harm caused by qi associated with one of the Four Seasons may lead to disease. The poison of ‘cold damage,’ though, is the most fatal and violent qi. The moment one is struck [by cold], a disease sets in. [It is] thus called ‘cold damage.’ In those cases where [someone struck by cold] does not fall ill immediately, the cold poison is stored in the skin. When spring arrives, it converts to a warmth disease; when summer arrives, it converts to a summer-heat disease. Hence those who are concerned with nourishing their life must beware of the harm by evil [qi].”

From this example, we can see that the commentators tried to elaborate the original text of the Suwen, which consists of eight Chinese characters, with a lot more words. The idea of “harmed by cold” in the main text is interpreted as “cold damage” by the commentator, and the mechanism of development from “harmed by cold in the winter” to “warmth disease in the spring” is articulated. The notion of “cold damage” is also further elaborated in another Chinese medical classic, the Shanghan lun with reference to the Suwen. The commentary tradition continues today. According to Paul U. Unschuld and Hermann Tessenow, in the twentieth century, there are still over three thousand articles written by Chinese authors that provide interpretations on what is written in the Suwen (2011, 24).

74 「冬傷於寒，春必溫病」 Suwen, chapter 3 (1965, 12).
75 「冬寒且凝，春陽氣發，寒不為釋，陽怫于中，寒怫相忤，故為溫病。」 (1965, 12).
76 「按此與陰陽應象大論重，彼注甚詳」 (1965, 12).
77 The literal translation of jifu 肌膚 should be muscles and skin as ji 肌 refers to “muscles” and fu 膚 refers to “skin.” However, jifu often means skin only when the two characters are used together as a binome.
78 「夫傷於四時之氣，皆能為病，以傷寒為毒者最為殺厲之氣。中而即病，故曰傷寒。不即病者，寒毒藏於肌膚，至春變為溫病，至夏變為暑病，故養生者必慎傷於邪也。」 (1965, 16).
5.2. The Hermeneutic Nature of *Suwen* and Chinese Medical Theory

The hermeneutic nature of the *Suwen* and Chinese medical theory can be illustrated in two aspects of Chinese medicine—the theoretical development and its practical operation led by its worldview. The theoretical development of Chinese medicine can be analyzed by comparing the medical texts from different historical periods. In the coming section, I will give a brief account on the theoretical development through an example: by juxtaposing the *Suwen* with *Traditional Chinese Diagnostics* (henceforth *Diagnostics*), a textbook for overseas advanced university students of TCM published by People’s Medical Publishing House. The publisher is directly under the National Hygiene and Health Committee of People’s Republic of China; we can thus consider *Diagnostics* as an official narrative of TCM theory in the modern world. This account will be followed by a metaphysical analysis on the operation of Chinese medicine.

5.2.1. Brief Account on the Theoretical Development

The meaning of Chinese medical terms often changes over time, yet without undermining the continuity of Chinese medicine over the past two thousand years. *Bagang*, as mentioned in Chapter 2.6, is widely considered the most important diagnostic system in Chinese medicine, the foundational concept for clinical diagnosis in the system of *Bianzheng lunzhi* (Syndrome differentiation and therapy determination) in TCM. However, one might find it surprising that the term “*bagang*” was first used not long ago in 1947 to refer to the four dyads, namely *biaoli* (exterior/interior), *hanre* (cold/hot), *xushi* (depletion/repletion), and *yin/yang* (Wang et al. 1998). *Bagang*, as a basic diagnostic system in TCM, is the primary step to differentiate syndromes with reference to the four dyads. In this system, *biao* 表 (outer or exterior) and *li* 裏 (inner or interior) differentiate the illness location with reference to its shallowness or depth; *han* 寒 (cold) and *re* 熱 (hot) differentiate the quality of the illness syndrome; *xu* 虛 (depletion) and *shi* 實 (repletion) differentiate the manifestations of excessiveness of evil qi and deficiency of essence qi; *yin* and *yang* are the comprehensive rubrics that permeate the other six. *Bagang* is now commonly viewed as a well-established concept with similar meaning as *bayao* 八要 (“Eight Essentials”), *bazi* 八字 (“Eight Words”), and *bafa* 八法 (“Eight Rules”), which can be found in the medical texts of the Song, Ming, and Qing dynasties (Zhang 2011; Xue
Since the idea of the four dyads in bagang can be found in ancient medical texts such as Suwen and Shanghan lun, there is a common perception that the concept of bagang is originated from or at least closely related to these medical classics from as early as the second century BCE. Nevertheless, how can this recently established bagang system be related to the Suwen when the bagang system is not even mentioned in it? The connection can be unfolded with examples by comparing the Suwen with the bagang system of TCM.

The words biao and li were used both separately in the text and together as a term biaoli in the Suwen. With the seventeen times that biaoli were mentioned, they appear to express the meaning of exterior and interior. In chapter five, for example, it says “the correspondences of outer and inner, all have exterior and interior.” Among all uses, there was only one commentary by Wang Bing explaining what it was meant by biao and li. “All yang conduits and vessels are ‘biao,’” Wang stated, “all yin conduits and vessels are ‘li.’” This interpretation of biaoli is still included in the bagang system in TCM, but the term now covers a broader sense of “exterior” and “interior.” According to Diagnostics,

**Biaoli Syndrome Differentiation** is a syndrome determination principle that differentiates the location and tendency of the illness. Generally speaking, it is a biao syndrome when the illness is located at the superficialities such as the skin and hair, as well as the space between skin and muscle and between muscle fibres. It is a li syndrome when the illness is located deeper inside at the depots and palaces, blood, vessels, and marrow.

[It could be that] biao or li syndrome is identifiable [at the moment of] the onset of an illness; it also could be that biao syndrome transforms to li syndrome gradually, leaving no manifestations of any biao syndrome; or it could be li syndrome arises when biao syndrome still lingers; or [it could be] the illness originates from the inside that reaches the superficialities, which contributes to conditions of complex manifestations of biao and li syndromes, [they] should be clearly differentiated in the clinical setting (Wu 2000, 55).

---

79 「外內之應, 皆有表裏」 Suwen, chapter 5 (1965, 16).
80 「諸陽經脈皆為表, 諸陰經脈皆為裏」 (1965, 16).
81 The book is written in simplified Chinese with English translation. However, the English translation from the book tends to be inaccurate and/or inconsistent with the language of this thesis. Thus, I will not employ the English translation in the book, but my translation of the Chinese texts.
82 「表里辨証是辨别病变部位和病势趋向的一种辨証方法。一般地说，病在皮毛，肌腠，部位浅在者属表証，病在脏腑、血脉、骨髓，部位深在者属里証。
In TCM theory, the meaning of biao and li does not only cover the yang and yin conduits and vessels. The term now also covers the relative locations, shallowness or depth, of the illnesses and the dynamic relationship of biao and li. While the dynamic relationship might have been implied in the Suwen when they were used together as a term, it is now explicitly illustrated in the bagang system for syndrome determination. When we apply this expanded meaning of biaoli to the Suwen, the concept can partially facilitate our understanding of the Suwen as a whole. In chapter seventy-seven of the Suwen, it says

> When the sages treat an illness, they certainly knew the yin and yang [qi] of heaven and earth and the normal arrangements of the four seasons; the five depots and six palaces, female and male, exterior and interior, [as well as] piercing, cauterization, pointed stones, and toxic drugs with all [the illness] they master... [One must] search for its structures. If one is unable to find them, an excess [is present] in the exterior and in the interior.83

The meaning of “having to know the exterior and interior” and “an excess is present in the exterior and interior” in the Suwen can be interpreted with the enriched understanding of biaoli. The step before treating an illness is the diagnosis. It is supposed that the cause of an illness is assumed when a treatment is proposed. Therefore, the sages are supposed to have known all of the information necessary for diagnosis including exterior and interior. The basic syndrome differentiation of biaoli echoes the text here—“to know” the exterior and interior can now be understood as “to locate” the exterior and interior.

Hen and re appear together as henre forty-eight times in the Suwen. In all instances, hen and re bear their original meanings of cold and hot respectively when they are used together. It is only in a few sentences that henre seems to refer to a particular kind of illness in the Suwen. In chapter twenty, it says “those who suffer from henre illness, they die at dawn.”84 In chapter seventy-one, it says “people suffer from henre”85 and Wang attempted to define henre here as nue瘧 by the comment “‘cold and heat’ is nue.”86

83 「聖人之治病也，必知天地陰陽四時經紀五藏六府雌雄表裏刺灸砭石毒藥所主...循求其理，求之不得，窮在表裏」 (1965, 196).

84 「寒熱病者，以平旦死」 (1965, 49).

85 「民病寒熱」 (1965, 161).

86 「寒熱是瘧」 (1965, 161).
Unschuld suggested that by *nue*, Wang means malaria; as in chapter seventy, Wang made a comment saying "*henre* is to say: cold first and hot afterwards. This is *nueji* 瘧疾." The Chinese term *nueji* literally means "the illness of abuse;" it also refers to malaria specifically nowadays. However, it might be misleading to take *nue* or *nueji* as malaria here. When we look at *Shuowen jiezi*, the Chinese dictionary compiled in the Eastern Han dynasty, *nue* only means "hot and cold rests and rises [alternately]." Thus, it would be more appropriate to interpret *nue* broadly as illness that involves alternate rests and rises of hot and cold in the body than narrowly as malaria.

In the *Diagnostics*, *henre* is referred to as "the two rubrics to differentiate the quality of an illness." It says

As *henre* are the manifestations of the prosperous and declining tendencies of *yin* and *yang*, differentiating *henre* is actually differentiating the prosperity and decline of *yin* and *yang*. Generally speaking, *hen* syndrome reflects insufficient *yang qi* in the body or exposure to cold evil [*qi*]; *re* syndrome reflects preponderance of *yang qi* in the body or exposure to hot evil [*qi*].

Illness could be simply *hen* syndrome or *re* syndrome, a mix of *hen* and *re* manifestations, *re* syndrome turning into *hen* syndrome, or *hen* syndrome transforming into *re* syndrome; there is true-cold in the root of the illness but it manifests as pseudo-heat, and true-heat in the root of the illness but manifests as pseudo-cold. Meanwhile, *hen* syndrome and *re* syndrome are interrelated with *biaoli* and *xushi*, which leads to complex clinical manifestations, [it is] necessary to be differentiated in details (Wu 2000, 58).

The words *hen* and *re* are commonly used to indicate the cold and hot quality of myriad things in TCM theory. When *henre* is mentioned as part of the *bagang* system, it signifies the quality of an illness specifically. Apart from an illness that involves alternate rests and rises of hot and cold in the body, *henre* denotes a sophisticated system of diagnosis that

---

87 「寒熱謂先寒而後熱則瘧疾也」(1965, 155).
88 「熱寒休作」
89 「由于寒热是阴阳偏衰和偏盛的具体表现, 所以辨証之寒热, 实际上就是辨阴阳之盛衰。一般地说, 寒証是机体阳气不足或感受寒邪所表现的証候, 热証是机体阳气偏盛或感受热邪所表现的証候。

病有属于单纯之寒証或热証者, 有寒热错杂出现者, 有原为热証而转为寒者, 或原为寒証而化为热者, 有本病真寒而假热者, 也有本病真热而现假寒者。同时, 热証热证往往与表里虚实相联系, 致使临床表现错综複杂, 必须详辨。」
pays attention to the cold and hot nature of an illness as well as the manifestations of an illness. The dynamic relationship of hen and re is articulated through henre in the bagang system. Being part of the bagang system, henre syndrome differentiation has to be understood with the other six rubrics. Suwen also described the relationship between yin/yang and henre. It says “when the yang dominates, then there is re; when the yin dominates, then there is hen.”

Although the concepts of hen and re were not organized into a system in the Suwen, the words hen and re are used in the classic 581 and 594 times respectively. It is obvious that hen and re are highly significant concepts in the Suwen. It is thus reasonable to argue that the henre rubrics in the bagang system are a systematized understanding of the related parts in the Suwen; it requires a comprehensive understanding of the Suwen to systemize different interrelated concepts that are coherent in both the Suwen and TCM theory.

There is a clear connection of the xushi rubrics in TCM to their root in the Suwen. When Huang Di asked Qi Bo what xushi is in chapter twenty-eight of the Suwen, which is named “Discourse Thoroughly Deliberating upon Depletion and Repletion” (Tongping xushi lun 通評虛實論), Qi Bo responded: “when evil qi abounds, then [this is] shi; when the essence qi is lost, then [this is] xu.” Further, in chapter nineteen, the interactive relationship between xu and shi is suggested by the statement “when evil qi dominates, the essence qi is weakened.” In TCM theory, the descriptions of xu and shi in the bagang system are similar to that of the Suwen. “Xushi syndrome differentiation,” the Diagnostics states,

are the two rubrics to analyze and distinguish the abundance or deficiency of evil and proper [qi]. Xu refers to the deficiency of proper qi; xu syndrome is the manifestation of the deficiency of proper qi. Shi refers to the abundance of evil qi; shi syndrome is the manifestation of the abundance of evil qi (Wu 2000, 62).

From the above quotations, we can see that the meaning of shi in TCM theory correspond to the Suwen, while the meaning of xu seems to have changed from “the loss of essence

---

90 「陽勝則熱，陰勝則寒」Suwen, chapter 5 (1965, 15).
91 「邪氣盛則實，精氣奪則虛」Suwen, chapter 28 (1965, 62).
92 「邪氣勝者，精氣衰也」Suwen, chapter 19 (1965, 46).
93 「虚实辨証，是分析辨别邪正盛衰的两个纲领。虚指正气不足，虚証是由正气不足所表现的証候。实指邪气过盛，实証是由邪气过盛所表现的証候。」
“qi” to “the deficiency of proper qi.” Jingqi 精氣 (essence qi) and zhengqi 正氣 (proper qi) appear to be two different kinds of qi. It is evident that the concept of zhengqi is already employed in the Suwen as a concept that is distinct from jingqi. As in chapter sixty-four, it says: “when the zhengqi is not in disorder, jingqi does not circulate.”94 The essence (jing 精) as in jingqi, is considered to be “the basis of the body.”95 Essence is not equivalent to jingqi, but it transforms into jingqi through continual generation and transformation.96 The flow of jingqi appears to be correlated with zhengqi in the Suwen. Although the term zhengqi is used for only four times in the main text of the Suwen, it has been mentioned multiple times by Wang in his commentaries throughout the texts. Wang has also defined evil qi with its relation to zhengqi by stating that “as for what is called evil [qi], everyone says not flowing along with the zhengqi it encroaches upon it.”97 Hence, the definition of xushi in the Suwen and the revised interpretation of the meaning of xu in TCM theory illustrates the integrated understanding of Wang as well as the commentators and readers after him.

Yin and yang, as the comprehensive rubrics in the bagang system, permeate the other six rubrics to summarize illnesses in TCM theory. To put it more concretely, exterior, hot, and repletion are yang syndromes, while interior, cold, and depletion are yin syndromes (Wu 2000, 65-66). As discussed in Chapter 2.5.2, the intermingling dynamics of yin and yang are the basis of change, development, and multiplicity in the world. Suwen employs the term yin/yang heavily, 187 times to be precise, to narrate its cosmology and the constitution of humans and myriad things. The use of yin/yang in the diagnostic system can find its direct root in chapter seven of the Suwen. “The pulses are yin or yang; knowing yang one knows yin, knowing yin one knows yang.”98 Pulse palpation is one of the four examinations (sizhen 四診)99 for diagnosis in TCM theory. The syndrome differentiation of yin and yang as a summary of illness in TCM diagnosis unmistakably goes along with the worldview and theory in the Suwen. Therefore, the movement of the fragmented theories

94 「正氣不亂，精氣不轉」Suwen, chapter 64 (1965, 127).
95 「身之本也」Suwen, chapter 4 (1965, 13).
96 For example, in chapter 5 of the Suwen, it says 精化為氣 (essence transforms into qi).
97 「所謂邪者皆言其非順正氣而相干犯也」(1965, 99).
98 「脉有陰陽，知陽者知陰，知陰者知陽」Suwen, chapter 7 (1965, 21).
99 The other three are looking, listening/smelling, and asking.
in the *Suwen* containing the notions of *biaoli, henre, xushi*, and *yin/yang* to the articulation of the *bagang* system in contemporary TCM demonstrates the operation of the hermeneutic circle within a temporal distance. The result is a fusion of horizons, which involve oscillating interactions of the compiler, commentators, and readers.

### 5.2.2. Metaphysical Analysis on the Operation of Chinese Medicine

Without the conception of working toward one final goal or the truth, Chinese medicine is much more tolerant of diversity and flexibility than modern medicine. The classical texts such as *Suwen* on which Chinese medicine is based are not simply a source of determined or fixed truths, but represent a horizon on which Chinese medical knowledge is evolved and developed. This hermeneutic nature of Chinese medical knowledge is closely correlated with the conceptions of health and harmony in Chinese culture. The fundamental difference between Chinese medicine and modern medicine consists in their almost contrasting views on healthcare and illness. Unschuld formulated the difference as follows: Chinese medicine tries to deal with “perceived reality,” while modern medicine focuses on the “probable reality of illness and disease” (1985, 9).

“Perceived reality” means what Chinese medicine practitioners can observe from the patient, while “probable reality of illness and disease” means an abstract understanding of illness and disease by focusing on a conceptualization of observations.

Under the modern medical paradigm, symptoms are taken as signs of disease; if doctors cannot draw a conclusion from the symptoms, the cause, which is usually treated as a disease, is often considered indeterminate. In the Chinese medical world, according to Unschuld, there are only a minority of people who care about “the persistence of ‘pure’ conceptual therapy systems” (1985, 13). Rather, the majority of people who participate in the eclectic and syncretic systems of therapy show therapeutic plurality in their actual daily practice. In the world of Chinese medicine, as Unschuld puts it, “different, often antagonistic systems of ideas have been developed accounting not only for a diachronic but also for a synchronic plurality of competing concepts as to the character, causation, treatment, and prevention of illness” (1985, 8). In other words, the system can accommodate not only differing treatments, but also different diagnostic conclusions concerning the same set of symptoms. This can be called a pragmatic approach to the restoration of the balance of one’s body. Under this paradigm, the key issue is to help one particular person to restore the balance in their body. Chinese medicine practitioners, in
general, do not pursue the universality of a treatment; that is, they do not aim to have one treatment applicable to all the patients with similar symptoms. What is even more interesting is that, within the same Chinese medical world, “different systems of therapy not only deal differently with one and the same health problem but that they, in addition, frequently recognize or emphasize quite different health problems in the first place” (Unschuld 1985, 11). With a pragmatic attitude, Chinese medicine practitioners are always looking into the condition of human bodies in lieu of simply focusing on the diseases.

To summarize Chinese medicine as a whole, Unschuld’s concise account is worth referencing. He says,

Chinese civilization offers the analyst a wealth of primary sources, reflecting concern with the experience of human illness that stretches from the fifteenth century B.C. to the immediate present. During this period of nearly 3,500 years, oracular therapy, demonic medicine, religious healing, pragmatic drug therapy, Buddhist medicine, the medicine of systematic correspondence and ultimately, modern Western medicine either originated in China itself or were adopted from foreign cultures. The history of these seven major conceptual systems is not characterized by simple linear succession, in which practitioners exchanged each old system for a new one. Instead, the evidence reveals a diversity of concepts extending for more than two thousand years. New ideas were developed or introduced from outside and adopted by authors of medical texts, while at the same time older views continued to have their practitioners and clients (1985, 5).

The intracultural diversity of Chinese medicine reveals a completely different attitude towards medicine when compared with modern medicine. Unschuld constructed a conceptual framework to illustrate the system of Chinese medical knowledge. He proposes that there is a durable paradigmatic core with a “soft coating” of therapeutic knowledge in the system of Chinese medicine (1985, 7-8). The durable core of Chinese medicine, which consists of two paradigms, namely “the paradigm of cause-and-effect relations between corresponding phenomena” and “the paradigm of cause-and-effect relations between non-corresponding phenomena,” basically welcomes any kind of solution to health care problems. Although the two paradigms are fundamental in Chinese medicine, they are not exclusive to the Chinese medical system. On the other hand, the soft coating of medical knowledge, which is flexible and subject to frequent modification, refers to the “health care-related concepts that have changed over time” (Unschuld 1985, 9).
The relation between the paradigmatic core and the soft coating can be demonstrated by an example given by Unschuld: the durable core “contains the knowledge that there exists other-than-human beings that may influence human life,” whereas “the soft coating may identify these beings as permanently evil and malevolent” or “as capable of delivering both harm and cure” (1985, 9). Further,

The soft coating also includes perceptions of the functions and structure of the organism as well as the formulation of behavioural norms designed for the prevention and treatment of illness. These behavioural norms include those which, if violated, may create conditions activating any of the basic causative principles (1985, 9).

After analysing the history of ideas in Chinese medicine, Unschuld suggests that, unlike modern medicine, the basic validity of therapeutic concepts in Chinese medicine is primarily social and the efficacy of specific therapeutic concepts seems to be of secondary significance (1985, 12). However, even though the soft coating of medical knowledge changes with sociopolitical ideology, the non-dominating conceptual systems of health care are not totally eliminated from the field. Rather, these systems “survive in social groups that continue to follow a consistent sociopolitical ideology” (1985, 13). So, how could this be possible? Unschuld’s suggestion of the practitioner’s and patient’s eclectic and syncretic nature in Chinese medicine may hint at the answer. He says,

The eclectic and syncretic nature of patient and practitioner utilization of available ideas and tangible primary resources in pluralistic health care settings of complex societies is partly a result of the healer’s striving for secondary resources, that is, remuneration, and of the patients’ desire to maintain or regain health by all means. Eclectic and syncretic health care behavior are, thus, mainly goal oriented, not cognition based (1985, 14).

In short, the philosophy of Chinese medicine is to leave room for the patients and practitioners to look for the best possible solution for an individual. As there is such a space for the practitioners and patients to explore the best option for a particular patient, particular practitioners participate in each case as an unneglectable “I” in the process. The practitioner carries out Verstehen to decide which general law(s) are to be applied to analyze the patient’s whole-body condition. These general laws determine the possible interpretations of different expressions of the patient’s condition in the forms of languages, actions, gestures, or other information gathered from the four examinations, namely wang 望 (looking), wen 聽 (listening/smelling), wen 問 (asking), and qie 切 (pulse palpation), that is carried out by the practitioner. Unlike modern medicine, practitioners’ “I”s, not just the
medical knowledge one possesses, take an active and constitutive role in the process of diagnosis and treatment in Chinese medicine; their subjective participation are considered valuable rather than simply regarded as error-prone judgments that are dismissible.

[Chinese medical theory] has been greatly elaborated over the two thousand years of its history, incorporating new ranges of pathological detail and therapies. But its basis has remained concepts such as yin-yang and the Five Phases, defined at its very beginning. Again and again their meanings have been extended and their associations with particular phenomena altered (Sivin 1987, 20).

The above description from Sivin illustrates the operation of Verstehen with the Erklären in Chinese medicine. This process of constant Verstehen can be visualized as we imagine numerous Chinese medicine practitioners consulting and reinterpreting the classical texts relative to their accumulated knowledge, and past readings of the classics, after interacting with their patients. This dynamic interpretive process is a means for assisting their patients as they attempt to restore the balance within their bodies. Although the same kind of Verstehen is still at work in Chinese medicine today, it is more difficult for us to contrast it with that of modern medicine since the modern medical paradigm is now included in TCM. Nonetheless, when we look at the paradigm of Chinese medicine before TCM, which is immune from this complication due to the exclusion of modern medical paradigm, it was certainly hermeneutic in nature.

The principal concern for Chinese medicine practitioners is the well-being of individuals. There is no authoritative best treatment for patients with similar symptoms in the world of Chinese medicine, and practitioners are generally not interested in the persistence of so-called pure conceptual therapy systems. Instead, Chinese medicine practitioners would help each individual patient to maintain or regain health by different possible means based on their knowledge and experience. The involvement of the patient’s self-report as well as the practitioner’s understanding of the patient’s history, symptoms, and judgment plays a crucial role in diagnosis and treatment. This process entails the operation of Verstehen at many levels: between the patient and his/her own body, the practitioner and the patient’s self-report, the practitioner and the patient’s history, the practitioner’s interpretation of the patient’s situation and the medical texts, the practitioner’s understanding of the patient’s report on the effect of treatment and the medical texts, even between the patient’s interpretation of the practitioner’s prescription and the practitioner’s understanding of the same prescription, and so on and so forth. In
other words, Chinese medicine works hermeneutically. A key reason for the success of this hermeneutic process in Chinese medicine is that it favours *Verstehen* rather than *Erklären*. With a pragmatic approach to restoring balance within a patient’s body, different approaches to treatment of patients sharing similar symptoms could be considered equally effective, as long as they proved effective in each case. The world of Chinese medicine does not exclude any knowledge as long as it could be beneficial to the well-being of individuals. As a result, an intracultural diversity of Chinese medical knowledge is formed. When the interpreters, i.e. the Chinese medicine practitioners, work with the patients, their historicity is included in the process of diagnosis and treatment. Meanwhile, what the interpreters have learned in the process of trying to heal the patients reciprocally informs the historicity of the interpreters. Thus, the dialectical mediation of *Verstehen* and *Erklären* is integral to the healing process within Chinese medicine.

Classical texts such as *Suwen* play a vital role in this hermeneutic circle. They provide interrelating theories that are rich enough for *Verstehen* to operate on. It is fascinating that even though laws and theories may be taken as *Erklären* in nature, Chinese medical theory, as a knowledge about the human body, functions side by side with the pragmatic approach in Chinese medicine that makes Chinese medical knowledge, as a whole, closer to *Verstehen* in nature. The basic tenet of the *Suwen*, as discussed in Chapter 2.5.3, is to act aptly to maintain health and to act aptly to help to restore the good order of the body when there are signs of abnormality. It is apparent that the vitally important thing to do to achieve a long and healthy life, as told in the *Suwen*, is to act aptly. Eating, drinking, rising, resting, and working are all essential in our lives, but it is crucial not to overdo these. So, what exactly does “aptly” mean? *Suwen* includes some explanations that are subject to further interpretation. The interpreters’ attempts are sometimes recorded in a systematic manner as commentary on the classical texts; and many times incorporated in the process of diagnosis and treatment on an individual level.

The high tolerance of diversity in Chinese medicine results in a common phenomenon that would not be acceptable in the modern medicine paradigm; it is, as Volker Scheid put it: in Chinese medicine “[n]o two doctors diagnose, prescribe, or treat in quite the same way. It would be most unusual, for instance, if after consulting ten senior physicians for the same complaint one did not walk away with ten different prescriptions” (2002, 9). The practical operation of Chinese medicine makes the dialectical mediation of *Verstehen* and *Erklären* even more unique for each interpreter; as they have the flexibility,
within the framework of Chinese medicine, to propose whatever they found practicable in their own experience. Their experiences may, subsequently, influence their interpretation of the theory in the classical texts.
Chapter 6.

Concluding Reflection: Implications of the Hermeneutic Approach

While people wanted to be relieved and cured, they were also seeking far more from medicine—explanations of their troubles, a sense of wholeness, a key to the problems of life, new feelings, of self-respect and control. If the tenor of orthodox medicine was pessimistic, alternative medicine instilled hope.

(Roy Porter)

The substantial divergence between the worldviews of Chinese and modern medicines contribute to two distinct medical paradigms that produce knowledge with different natures. Without committing to the stability of objects and notion of objectivity, Chinese medicine endorses a doctrine of constant generation and transformation. Under such a doctrine, the world is being interpreted as a network of relationships that operates dynamically. Humans, our milieu, and the myriad things are intertwined with each other in this relational world. The twofold worldview of the Suwen indicates the fundamental principles of Chinese medicine: first, to stay healthy by acting aptly, and second, to search for the basis of illness. The network of relationships is explained by a set of figurative, but partly non-observable tools in Chinese medicine that is incommensurable with modern medicine. Medical disorder in Chinese medicine is taken as a dynamic process that is not portrayed as something that could be conceptually isolated from the human body as in disease classification in modern medicine.

On the other hand, modern medicine, as a discipline of modern science, assumes a mechanistic world, in which order and consistency can be discovered by investigation, observation, and experimentation. Within such a worldview, human bodies are taken as physical objects in the natural world to be studied by scientific method. The subtle pursuit of objectivity and universality in modern medicine leads to all sorts of standardization that looks for the “most precise diagnosis” with the “best treatment” for anyone having the “same disease.” The medical knowledge produced by modern medicine is considered to be positive knowledge about external causal relationships that gives mechanistic explanation to objectifiable phenomena. This positive knowledge is, ex hypothesi, produced on the assumption that it is independent of human minds and beliefs.
Whilst modern medical knowledge tends to be explanatory, Chinese medical knowledge is hermeneutic in nature. Hermeneutic knowledge can be understood as a kind of knowledge that is produced with the application of a hermeneutic circle, temporal distance and a fusion of horizons that involve back and forth interactions between participating subjects in a concrete historical-cultural context. The hermeneutic nature of Chinese medicine reveals itself through the commentary tradition on the medical texts, the theoretical development in the past two millennia, as well as its practical operation. The emphasis on studying the knowledge of classical texts in Chinese medicine provides a shared horizon for the practitioners from different time periods and even their patients to actively engage in understanding the condition of the patient’s body and the possible remedies. The principal concern of Chinese medicine practitioners centers around the well-being of their individual patients rather than looking for some authoritative best treatments for everyone. Simultaneously, practitioners participate in Chinese medicine as human beings with their “I”s rather than as merely containers of medical knowledge that are theoretically replaceable by machines.

Chinese medicine, with its language and figurative tools, embraces complexity and is highly tolerant of diversity which results in its flexibility. This flexibility, on the one hand, can be beneficial to the patients with more options provided, and, yet, on the other hand, can lead to problems of regulation in practical operation. Under such circumstance, trust between the patients and the practitioners plays an important part in the practical operation, and it relies very much on the practitioners’ personal morality in practicing medicine. Modern medicine tries to reduce this risk by minimizing the role of individual human beings, be it the patient or the physician, in the medical system. A particular physician can be seen as the carrier of medical knowledge, while a particular patient is regarded as the carrier of diseases. The reductionistic way of modern medicine makes it easier to standardize diagnosis and treatment, but at the same time leaves little space for the “I”s to participate and be seen. It may be the reason for the so-called quality-of-care crisis, in which there is difficulty in building trust between particular patients and their physicians. As for the patients, they are trusting the medical qualification of the physicians with little reference to the physician’s self; for the physicians, there are always some “objective best treatments” out there to refer to in making their judgment. As long as the physicians are practicing according to the objective standard, they would not be considered wrong. Thus, the patients may expect effective solutions from their physicians.
without realizing the limitations of their physicians as human beings under the existing power dynamics. Although this thesis did not touch on the issue of trust between patients and their practitioners with medical knowledge of different natures, it would be an interesting question to explore in future research.

Apart from the matter of trust, it would be worthwhile to look into the differences in power dynamics and relationships of patients and practitioners between Chinese and modern medicine. It seems that the role of Chinese medicine practitioners is less authoritative than that of modern medical practitioners due to the associated nature of knowledge and practical operation. It might also have an effect on patients’ sense of agency in the healing process. As Chinese medicine embraces constant changes, the role of Chinese medicine practitioners is like that of an advisor helping their patients to maintain health and to restore the good order of the body when there are signs of abnormality. Chinese medicine practitioners and their patients are working in the same team for the health of the patient, and the feedback of the patient is valued within this paradigm. The patients might have greater sense of agency and obligation in this relationship urging them to expend greater effort in maintaining their health rather than passively assuming the practitioners know better and relying on the practitioners to solve their health problems for them. The patient’s sense of agency and obligation in different medical paradigms would be a fascinating topic to study.

Further, the hermeneutic framework developed in this thesis can be applied to analyze the nature of knowledge of other alternative medicines. Ayurvedic medicine, for example, is also a learned tradition based on written texts with a long history. It would be meaningful to compare different medicines with similar conceptions of and approaches to knowledge to understand their positions, not only with reference to modern medicine, but also other traditional or alternative medicines. The importance of understanding the nature of knowledge of different medicines lies in the acknowledgement of different underlying assumptions of healthcare and illness. It also calls for deeper questions of what we think medicine is, and what medicine really is.
References


Lei, Xianglin. See Lei, Sean Hsiang-lin.


Appendix.

Interview Questions

1. Are there any courses that are related to the history of Chinese medicine in your program? If yes, what are they? If no, why?

你們有否教授有關中醫學歷史的課程？如有，是哪些課？如沒有，為甚麼？

2. Are there any Chinese medicine classical texts, such as *Huangdi neijing suwen*, that are included in the core courses?

在貴系的核心課程中，有否包含教授中醫學經典典籍（如黃帝內經素問）？

3. Do you know whether classical texts are included in the curriculum of other schools? If yes, where?

你會否知道其他學校有否在課程中包含教授中醫學經典典籍？如有，是哪所學校？

4. What are the classical texts about? What is the role of Classical texts in the curriculum?

那些經典典籍是關於甚麼？它們在課程中的角色又是甚麼呢？

5. How do you teach the classical texts? By reading the original texts with students or preparing a summary of the theories from the original texts for the students?

你會怎樣教授經典典籍呢？是直接與學生一同閱讀原典，還是會先總結原典中的理論再於堂上講解？

6. What do you expect the students to learn from the classical texts?

你期望學生從經典典籍中學到甚麼？

7. Is there any theory in the classical texts that is proven to be valid or still deem to be "useful" today? If yes, can you give me some examples?

是這些經典典籍中曾被證明有效的理論，還是至今仍認為「有用」的理論？如果是，你能舉出一些例子嗎？
8. Do you think it possible for someone to be a Chinese medicine practitioner without studying the classical texts? Why?

你認為一個沒有讀過中醫學經典典籍的人能否成為中醫？為甚麼？

9. In your opinion, why aren’t classical texts of Western medicine to be included in the curriculum of medical schools while those of Chinese medicine are included?

依你所見，為甚麼西醫課程中沒有教授經典典籍而中醫課程則會教授呢？

10. The Chinese scientist Youyou Tu won the Nobel Prize in Physiology or Medicine in 2015 due to the discovery and extraction of Qing hao su that led to a novel therapy against Malaria. The discovery was described as “a gift from Traditional Chinese Medicine to the world.” Do you think Chinese medicine should develop in this way of creating more novel drugs from herbal medicine with modern scientific methods?

中國科學家屠呦呦因發現及提取青嵩素並促成治療瘧疾的新配方而獲得 2015 年諾貝爾生理學或醫學獎。此發現被形容為「傳統中醫給世界的禮物」。你認為中醫是否應該循以現代科學方法由草本藥物製作更多新藥物的方向發展？

11. Do you think it is the best to simply adopt the so-called “modern scientific” framework, as what Western medicine practitioner do, and then look for TCM treatments and materia medica that fit the framework?

你認為直接採納所謂現代科學框架（如西醫現時的做法），然後在中醫治療和中藥學中找尋能夠配合此框架的元素是否最好的方法？

12. Do you think such an approach ignores potential strengths inherent in the underlying world-view that has shaped Chinese medical approaches for centuries?

你認為以上方法會否忽視了這幾千年來塑造了中醫學的世界觀所承傳的潛在優勢？
13. In your opinion, what are the essential difference(s) between Chinese Medicine and Western Medicine? What are the strengths and weaknesses of Chinese Medicine?

你認為中醫與西醫之間的關鍵差異是甚麼？中醫的強項和弱項又是甚麼呢？

14. Are the above strengths and weaknesses related to the way how Classical texts are treated in Chinese Medicine? If so, how are they related?

以上的強弱項與中醫學如何處理經典典籍有否關係？如有，它們如何關聯？