TOWARDS A WORLD DISCIPLINE: INTERNATIONALIZING TRADITIONAL CHINESE MEDICINE IN UNIVERSITIES IN MAINLAND CHINA AND HONG KONG

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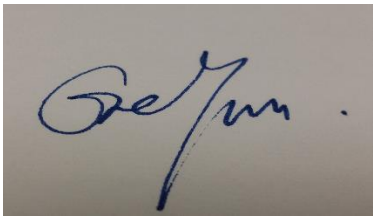
Declaration

I hereby declare that the thesis is my original work and it has been written by me in its entirety. I have duly acknowledged all the sources of information which have been used in the thesis.

This thesis has also not been submitted for any degree in any university previously.



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GE Yun

19 January 2015

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Summary

This study is driven by problematizing the tension between the process of globalization in higher education and the embedded nature of local knowledge. It explores how the ideology and norms of knowledge transmission and production of Traditional Chinese Medicine (TCM) have changed to adapt to the internationalizing institutional spheres. I deploy a neo-institutional lens and compare the developmental trajectories of TCM discipline in three university contexts in mainland China and Hong Kong. Qualitative methods (semi-structured in-depth interview and participant observation) are adopted to investigate the curriculum modification, research reorientation and organizational restructuring. Research findings point to three internationalization models of this local discipline, reflecting different types of organizational adaptation to the changing pluralistic institutional environment with competing rationales. This dissertation contributes to the understanding of how a local knowledge system in the form of TCM adapts as universities internationalize. By deploying key concepts from the institutional literature, my analysis highlights the agents involved in the evolutionary pattern of institutional change and identifies crucial factors that affect the adaptation behavior of organizational actors.

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Chapter 1

An Overall Introduction

1.1 Background

1.1.1 Globalization and Knowledge

In sociological scholarship, knowledge is often discussed along with the social and historical settings in which the producers and disseminators are situated. With the increasingly integrated global economy and interconnected cultures, question about how knowledge has changed is attracting more attention. No matter how the relation between the two is identified – whether knowledge is the precondition, consequence and/or a part of the globalization process – researchers share agreement that knowledge and globalization are closely related (Renn & Hyman, 2012).

The process of economic and cultural globalization has influenced knowledge production in many ways. First, with the advanced technology in communication, the speed and range of knowledge transmission have been improved dramatically. Much knowledge today is shared worldwide. This development puts forward new requirements for the multi-cultural validity and applicability of knowledge. Second, the process of knowledge production has entered an era of cross-national cooperation. With more porous boundaries of nation-states, multi-national enterprises and international organizations play

significant roles in producing new knowledge. Third, the economic value of knowledge has been further highlighted in the process of globalization. Knowledge is widely regarded as the key driving force of economic growth. And the value of a certain form of knowledge is often positively related to the range of its applications. Researchers have observed commodification and privatization of knowledge during recent decades (Lyotard, 1984; Giboons et.al, 1994; Maskus & Reichman, 2004). These and other new changes have increased competition in terms of resources and results in knowledge-production activities.

The required multi-cultural or even universal validity of knowledge matches the core spirit of the predominant modern knowledge system. Modern knowledge structure refers to the body of knowledge that arose starting with the Renaissance in Europe. This knowledge system builds upon the spirit of rationalism and emphasizes scientism, instrumentalism and secularism. Social scientists have argued that the modern knowledge system is the facilitator as well as the beneficiary of the globalization process (Ritzer, 1998; Mittleman, 2000). As has been pointed out by Jasanoff (2004), rational knowledge, especially with regard to scientific knowledge that emphasizes universality, is by nature and by intention expansive. The potentials of transnational ability and intrinsic demand for expansion underpin the central role of the modern knowledge system in the process of globalization. In the process, the social

structures and resources that support the global production, transmission and application of this knowledge are strengthened and further developed.

On the contrary, local forms of knowledge have long been regarded as being in a disadvantaged position. The nature of this type of knowledge is often characterized by tradition and locality and frequently consists of non-rationalist elements (Semali & Kincheloe, 1999; Berkes, 1993). As such local knowledge does not have an intrinsic impulse to expand. Furthermore, with the modern regimes and institutions that have built upon rationalism, added to the changing views of people and the dominant knowledge and culture, the survival environment for local knowledge is difficult.

Local knowledge has been challenged since the colonial period, when the Euro-centric modern knowledge system was spread to the rest of the world. The domestic legitimacy of local knowledge has been questioned by hegemonic scientific epistemology. Traditional knowledge systems in non-Western societies was gradually dismantled along with the localization of the modern knowledge system. While all forms of local knowledge face competition from the modern scientific knowledge, their fates are not similar. The different development trajectories of local knowledge thus become an important source of research for anthropologists and cultural historians. The central focus of this research lies in the ways certain types of local knowledge have been resilient

and have transformed in ways which enable them to carve out a niche.

1.1.2 China and Local Knowledge Preservation

China is an important case in this quest to understand the trajectories of local knowledge in a modern and globalized world. As a country with one of the oldest civilizations in the world, China possesses rich cultural legacies that are based on its local knowledge and values. In the current wave of globalization, China has been undergoing rapid changes since it joined the WTO (World Trade Organization) in 2001. If there is a measurement for the speed and depth of a country's involvement in the process of globalization, China is no doubt among the top-listed nations.

Having achieved a significant level of economic development, China has begun to stress securing and expanding its culture legacy. The central government has tactically incorporated two concepts in the state agenda during the past decade. First, the concept of *cultural security* is deployed to legitimize the national defense with regard to the protection of cultural systems, identities and knowledge (Shi, 2004; Pan, 2007). Second, the international promotion of Chinese culture – for instance, the establishment of Confucius Institutes and recruitment of international students – can be seen as initiatives that are associated with the discourse on China's *soft power* (Kurlamtzick, 2007; Yang,

2010). Local forms of knowledge in both cases are highly relevant.

The current situation in China corresponds with recent observations on the consequences of globalization. Globalization has increased new awareness of cultural protection and nation-state building. Local knowledge, as an important component of national culture and identity, has increasingly been given resources and institutional supports.

In addition, globalism creates an adverse effect on those have been affected (Beck, Giddons & Lash, 1994). The process of globalization has increased the reflexivity of society which led to reform and adjustment. Researchers have observed revivalism of religion (Kepel, 1993), rise of ecocentrism value (Eckersley, 1992) and the postmodernist thought (Anderson, 1990). Therefore, instead of sidelining non-rationalist knowledge, globalism provides survival and revival room for different forms of knowledge (Shamsul, Rumaizah & Haslindawati, 2004). The observations suggest that globalization not only presents challenges to local knowledge, but also new opportunities.

1.1.3 TCM and Institutionalized Knowledge Production and Dissemination

China is the cradle of the widely internationally circulated local knowledge – TCM. This form of medical knowledge has been practiced in East Asian

countries for a long time. During the colonial period, TCM traveled with the Chinese diaspora and was practiced within ethnic communities. Nowadays, the mobility of this local knowledge is increasingly through institutionalized channels. Not only individuals, but also nation-state governments and various social organizations such as universities, hospitals and pharmaceutical companies have been involved in the production, dissemination and practice of knowledge related to TCM. Therefore, the survival and developmental trajectory of this local form of knowledge needs to be investigated in the situated institutional structures and environment.

In terms of institutionalized knowledge production and dissemination, university has become the primary institution for the dissemination, examination and production Chinese medical knowledge both in China and elsewhere. Higher education institutes, therefore play a crucial role in preserving this local form of knowledge. Much research has been carried out to investigate how TCM knowledge had been changed in order to fit modern standardized education and the scientific research paradigm. It may be tempting to conclude that selected parts of TCM knowledge tend to be transformed and absorbed by the international knowledge system. Some anthropological writings on TCM, however, suggest that the nature of the knowledge may resist the integration pressures imposed by the institutional environment (Farquhar, 1995; Hsu, 1999; Scheid, 2002).

Under the impact of globalization, institutional structure of higher education is in the process of restructuring. Organizational structure, educational activities and academic work are changing in the name of internationalization. These changing dynamics are also reflected in the overseas demand of education from students. According to statistics released by the Ministry of Education of mainland China, more than 80,000 international students were attracted to study TCM in Chinese universities between the year 2000 and 2011.[1] However, the question – how a local discipline has been transformed to accommodate multi-cultural education and research, has not been sufficiently studied. The developmental trajectory of TCM can be used as a good case to investigate how local knowledge can be transformed to deal with the challenges and capture the opportunities that have been engendered by globalization.

1.2 Research Focus

The research question that I intend to answer in the current study, at the broadest level, corresponds to the inquiry – how changes in society (in this case, changes caused by the impact of globalization) generate forces that shape the production and transmission of knowledge. Globalization is considered as the

[1] The statistical information concerning international students was retrieved and combined from the website of China's Ministry of Education and its internally published book "Brief Statistics of International Students in China": http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/s5987/201303/148379.html.

critical background that affects the local forms of knowledge like TCM.

How the above intellectual question can be researched imperially? In sociology, it is believed that individual behaviors are governed by institutions which consist formal and informal rules. Knowledge institution – the rationales, norms and taken for granted beliefs that guide and monitor the behaviors of knowledge production, transmission and practice, present itself as a good research object. Tracing the institutional change of TCM knowledge in response to the impact of globalization allows us to discuss the mechanism of the social impact and knowledge change.

At what level, institutional change of TCM knowledge can be captured? My research views the university as a meso-level structure that is located between macro-level social forces and practical-level responses (Vaughan, 1999) and an open system adjusting its internal structure to adapt the external environment (Scott, 2002). As the key institution that carries knowledge production and transmission work, university plays a crucial role in reflect and reconstitute classifications of knowledge (Brown, 1993). Changes of TCM education and research h in universities help us to understand what counts for legitimated knowledge and how the criteria of legitimacy has formed and changed (Gumport & Snydman, 2002). In addition, university interfaces with local situations and international systems, providing a good arena to discuss local-

global interaction.

At the empirical level, this thesis seeks to explore and explain how TCM discipline in universities has changed in order to adapt the increasingly internationalizing environment. This study traces and analyzes how the standards, rules and norms of knowledge production and transmission have changed in order to adapt to the new institutional environment – and why certain strategies and standards have been adopted and institutionalized while other competing proposals failed.

There are two objectives of the current research. The first objective is to explore the pathways of TCM remodeling (models of internationalization). My thesis aim to provide an intensive description of what has been done for TCM to respond to the changing and complicated environment. I focus on the two pillars of knowledge transmission and production in universities: education and research. The internationalization process of TCM education, including the curriculum design and practices of teaching and learning, allows me to explore how changes in the name of internationalization make the culturally and historically embedded knowledge work to accommodate multi-cultural education. Research orientation and standards in universities can reflect how this local discipline has dealt with the epistemological issue and survives in the international academic system.

Secondly, for the explanatory objective, the analysis of the internationalization process of the discipline of TCM in universities shed light on the understanding of the mechanism of institutional change. I take a people-centric perspective and look at the process by which actors in universities (i.e., policy makers and TCM professionals) translate the perceived needs and pressures into the institutional structure (i.e., organizational structure, policies and standards in education and research activities), which, in turn guides their behaviors and collectively affect the developmental trajectory of the discipline. My analysis focuses on the actors who have been able to excise their agency and lead the process of change and seeks to understand what enables and empowers them.

1.3 Summary of Research Design

1.3.1 Multiple-site Study and Level of Comparisons

The nature of the research question requires an intensive description of the process of TCM internationalization in which the process itself is influenced by various environmental factors. The case study approach is very suitable for this research objective. As has been pointed out by Yin (2009), this research method is appropriate to study “a real-life phenomenon in depth,” especially when “such understanding encompassed important contextual conditions” that are “highly pertinent to the phenomenon of study” (Yin, 2009:18).

The current research is designed as a multiple-site study. The development trajectory of the discipline of TCM to a large extent is a path-dependent trend as well as the collective progress of institutional practices. The internationalization process of this discipline in higher education systems has a relatively short history. The research needs to keep open the possibility that coherent practices may not yet have formed. It is the task of this study to ascertain whether the changes in different universities have an apparent trend and how the similarities and differences affect the discipline as a whole. The research question requires comparisons and aggregations of strategy and practice among different universities and contexts.

This study takes a China-centric perspective to examine a broader question of how a traditional knowledge and practice paradigm, hosted by an emerging world power, respond to globalization and internationalization. With the enlarged scale of the usage of TCM, there have been increasing calls for the establishment of internationally recognized standards and norms (Griffiths, Chung & Tang, 2010). As the birthplace of this form of knowledge, Greater China is inevitably involved and consulted in important matters pertaining to TCM. A number of universities in mainland China, Hong Kong, Macao and Taiwan are involved in TCM education and research. Mainland China took the initiative in 1956. Later, in 1958, migrant TCM representatives from mainland China started a formal training college in Taiwan, which later developed into a

private university. One year after the handovers of Hong Kong and Macao (in 1998 and 2000, respectively), some local universities began to incorporate the TCM discipline.

With the aim of investigating the institutional change of TCM knowledge, the formal linkage between university training and state medical licensing system is considered as an important factor for context and case selection. After state regulation, the licensing systems of TCM practice have been tied closely to university training in mainland China, Hong Kong and Taiwan: a university degree or an equivalent is required in order to obtain TCM practitioner's license. In the case of Macao, TCM training remained in a decentralized form (i.e., master-apprenticeship and private education). University was not the predominant institution that produces TCM practitioners. Macao thus was not targeted because the production and transmission of this form of knowledge was not fully institutionalized in the local higher education and medical licensing system.

The decision of excluding Taiwan from the current research project was made after a preparatory field trip to Chang Gung University (长庚大学) in May 2011. Chang Gung University is a leading university of TCM discipline in Taiwan. It was developed from Chang Gung Memorial Hospital and Chang Gung Medical College and had been funded substantially by the local entrepreneur Yung-

Ching Wang since 1976.[2] In order to gather sufficient information to select research sites, I interviewed the dean of the School of Traditional Chinese Medicine and participated in a seminar which discussed the current situation and future prospects of TCM in Taiwan. According to the faculty members and students in Chang Gung University, the state support for TCM in Taiwan was very limited. The education and research of TCM were mainly provided by institutions from the private sector (i.e., Chang Gung University, China Medical University and the affiliated hospitals) while the public funded universities showed little interest in embracing this local discipline. With regarding to the survival and development of TCM discipline in Taiwan, internationalization was not considered as a major aspect at that time.

Universities in Taiwan were not selected for two reasons. First, the logic of case selection is not geographical coverage, but to capture the major types of leading players in TCM's internationalization process. The focus of this project is the remodeling of the TCM discipline under the impact of globalization. Therefore, the vision of internationalization and/or international visibility of the organizational platform (university) should be considered in case selection. Second, from a comparative research design perspective, the variable of university type needs to be controlled. Researchers have greed that research on academic work can be benefited through disaggregating the analysis by the

[2] The information of Chang Gung University is retrieved from its website on July 2015: http://www.cgu.edu.tw/files/13-1000-9388.php?Lang=en

type of university (i.e., private and public, specialist and comprehensive, educational and research-based universities) (Clark, 1987; Rhoades, 2008). Post-secondary vocational colleges and private universities are not the targets in this study as their orientation and the sources of funding could be very different from leading public universities.

With the above considerations in mind, Mainland China and Hong Kong were selected as the two research contexts for comparison. Conceptually speaking, mainland China was selected on the basis of its cultural power as the undisputed home of TCM. Because of this symbolic status, the domestic developmental trajectory of TCM in mainland China is heavily impacted by international interests. The state and society devoted much resources to protecting this heritage and maintaining China's central status in the TCM world. Hong Kong was selected as a contrasting context. While the internationalization process was initially driven by external interests in mainland China, it is primarily socially driven in the case of Hong Kong. The institutional logics and structures make Hong Kong an important case for the investigation of possible alternative developmental trajectories for the TCM discipline.

Three universities in Beijing and Hong Kong were selected. Beijing University of Chinese Medicine (BUCM) is one of the longest established TCM universities in

China as well as worldwide. Its establishment marked the entry of this traditional form of knowledge into the modern higher education system. The university has witnessed the transformation of knowledge in the name of modernization and now internationalization. According to Niu et. al (2010), there are 26 TCM specialist universities like BUCM in mainland China. This case represents the mainstream type of university where TCM education and research have been – and continue to be – undertaken. The discipline was incorporated into some Western universities specializing in biomedicine starting in the mid-1970s and later entered comprehensive universities. In the second case, the Department of Integrative Medicine at Peking University (PKU) represents the situation of how the local discipline survives in the medical schools of comprehensive universities in China. The two cases reflect the trajectory of how the local knowledge was institutionalized in the higher education system in mainland China.

In Hong Kong, three out of eight public universities – the Hong Kong Baptist University, the Chinese University of Hong Kong and the University of Hong Kong (HKU) – started TCM programs after 1997. Among the three, the Li Ka Shing Faculty of Medicine at HKU is recognized as an internationally top-ranked medical school. As the oldest institution of higher education in Hong Kong, the university is strongly influenced by British tradition. The case of HKU represents a local discipline's development in a highly internationalized university.

The cases selected in the current research are research-based public universities. It is because, in general, the leading universities in these societies of greater China are most likely to be the public universities. Choosing universities with a superior reputation in terms of disciplinary and/or overall academic status is important for the current research. Research in higher education has found imitative behaviors such as policy borrowing among universities (Halpin & Troyna, 1995). The practices of some universities can be institutionalized when they gain legitimacy in the system (Clark, 1960; Brint & Karable, 1989). In both cases, leading universities play important roles. The institutional change of TCM discipline could be led by these universities with needs, resources and potential disciplinary and institutional influence.

The three selected cases involve two types of universities and two social contexts (See Table 1.3.1.1). Accordingly, I will conduct comparisons at these two levels. At the organizational level, the different university type may play a role in the actors' behaviors. For the TCM specialist university, the local discipline holds full legitimacy and organizational support. I hypothesize that the institutional change in this type of university shows more respect to the nature of the knowledge. For the comprehensive universities, the internal environment of the organization is very different. The internationalization process of TCM may be affected by positional and resource competition within the organization. At the societal level, both mainland China and Hong Kong

have the cultural legitimacy of preserving and practicing TCM knowledge while the related social structures – the higher education and medical regulation systems – follow different traditions and rationales. Contrasting the situation of TCM in the two places can help us to better understand the role of social contexts and path dependency in the process of institutional change. Through the case studies and comparisons, my research aims to draw some conclusions and implications at the disciplinary level.

Table 1.3.1.1 Research Sites and Comparison Level

Selected University	**BUCM**	**PKU**	**HKU**
TCM Unit	BUCM	Department of Integrative Medicine	School of Chinese Medicine
University Type	Specialist university	Comprehensive university	
Socio-historical Context	Mainland China		Hong Kong

1.3.2 Research Methods

I employed in-depth semi-structured interviews as the main method for data collection, with participant observation as a secondary method. Through combining the two qualitative research methods, I aim to obtain a comprehensive understanding of the selected cases and conduct cross-case comparisons.

In-depth semi-structured interviews have shown advantages in collecting large amounts of detailed information, providing reliable and comparable qualitative

data and maintaining sensitivity to the situation in the field (Drever, 1995; Wengraf, 2001). After reviewing two renowned comparative studies on institutions of higher education that were conducted by Clark (1998) and Slaugher and Leslie (1997), Deem (2001) suggested that, in order to improve the empirical generalizability of the data, it is important to select interviewees "who would enable contentious or debatable statements to be interrogated and cross-checked" (Deem, 2001:17). It is important to respect diverse interests of actors and capture the tensions and solutions of this diversity.

By following the suggestion of Deem (2001), the current study targets three groups of interviewees (university officials, faculty members and students). For all, the interviews were structured under the same themes (See Table 1.3.2.1). The first group of interviewees represents decision-makers at the university level. They are the ones who design the university-level structures by balancing external pressures and internal resources and interests. According to Clark (1983), faculty members have "double loyalty" to the discipline and the university. They are the key actors in the process of institutional change and practitioners of the changes. International and local students can provide evaluation on internationalization. Their motivations, requirements and feedback on the TCM programs could shed light on the difficulties of TCM in cross-cultural transmission.

Table 1.3.2.1 Summary of Interview Guideline

General Research Objective	Specific Aspects	Official	Faculty	Student
Interpretation of TCM Internationalization	Need(s) and motivation(s) of internationalization	√	√	√
	Objective and goal	√	√	
	Formation/selection of strategy	√	√	
Education	Purpose of new program(s) and/or curriculum reform	√	√	
	Guiding principle(s) and standard(s)	√	√	
	Implementation of the principles and policies	√	√	√
	Daily practices of teaching and learning in classrooms and clinics		√	√
	Comparison between local and international standards for TCM education	√	√	√
	Feedback and Evaluation	√	√	√
Research	Research orientation and evaluation standards	√	√	
	Epistemological issue for local and international research	√	√	
	Implementation and practices (i.e., example projects)		√	
	Feedback and Evaluation	√	√	
Organizational Restructuring	Changes in university organizational structure	√		
	Incentive and promotion system (reinforcement)	√	√	
	Other related policies	√	√	√
	Feedback and Evaluation	√	√	√
Vision for the Future of TCM	Overall evaluation of the TCM internationalization in the home university and the host society	√	√	√
	Vision of the future role of TCM in local society	√	√	√
	Vision of the future international role of TCM	√	√	√
	TCM as a discipline in international education and academic system	√	√	√

Participant observation is a way of data collection in naturalistic settings. It is often adopted in cultural anthropology and educational studies (Bogdan & Bilken, 1982; DeWalt & DeWalt, 2010). In the current study, this method is employed to understand the ground-level practices in TCM education. The observations on teaching and learning in classrooms and clinics are expected to enrich understanding of how local knowledge has been taught in multi-

cultural environments and what are the challenges for efficient knowledge transmission. In practice, this research method played an important role in understanding the gap between the organizational logics of curriculum design and the disciplinary requirements in effective teaching and learning. It is especially helpful as the informants (e.g., professors and students) provided added-comments regarding to the observed scenes. A good example can been seen from the interview excerpt (BUCM_Faculty4_1) in Chapter 4. After the class, the instructor was able to explain the classroom dynamics to me. This would not have been possible if I had not attended her lecture. In addition, the observations of administrative meetings and casual gatherings of international students are able to provide useful information for evaluation and feedback on university policies.

1.3.3 Fieldwork and Positionality

My fieldwork in Hong Kong started on August 13, 2011 and ended on October 14 of the same year. I conducted research on the two universities in Beijing from October 17, 2011 to January 21, 2012. The fieldwork in all three sites received a great amount of support from various informants. With the awareness of my research purpose, they kindly cooperated and facilitated my data collection.

In terms of interviews, I completed 45 interviews with university officials, faculty members and students (See Table 1.3.2.2). The length of the interviews

ranged from one to about three hours. In addition, some of the respondents directed me to other groups of interviewees. Interviews with officials at WHO (the World Health Organization) and WFCMS (the World Federation of Chinese Medicine Societies) allowed me to investigate how the university connected with external organizations that are promoting the internationalization of TCM. The interviews with TCM practitioners in both societies then added insights to how the accreditation and knowledge they gained from their university education have been transferred to their practices.

Table 1.3.3.1 Summary of Completed Interviews

	University Official/Administrators	Faculty Member	Student	
			International	Local
BUCM	6	5	12	4
PKU	3	2	0	3
HKU	3	4	1	2

As for participant observations, with support from the faculty at HKU and BUCM, I was able to follow three groups of students and observe their teaching and learning in classrooms and clinics: the Year-4 TCM undergraduate students in HKU, the Year-3 TCM international students in the Chinese program (class group 2) and the English program in BUCM. I was also given permission to sit in feedback meetings in which the administrative representatives from the university gathered feedback from the students. Several trips. Other trips and visits to laboratories, clinics/hospitals and herb shops then enriched my understanding of TCM research, practices and beliefs as a layperson. About 100 pages of field notes have been written during the fieldwork. The field notes of interviews and participant observations were either taken onsite or through

reflections afterwards.

By reviewing the journey of data collection and thesis writing, I realize that my positioning as a mainland Chinese, an international researcher who was trained in mainland China, Macao and Singapore, and a TCM user yet a layman of this local discipline, has largely affected my relation with the respondents and my interpretation of the collected qualitative data. The positioning offered me a situated understanding of the TCM remodeling process in universities in mainland China and Hong Kong.

The access to the targeted respondents were benefitted from my knowledge on the research cultures in the two social contexts. High-level university official was an important group of interviewees. As a young PhD student, I was expecting difficulties in gaining access to this group of interviewees. Based on my previous studying and research experience in mainland China and Hong Kong, I developed different approaching strategies. In the case of Hong Kong, universities were quite open to researchers. I was able to retrieve the information of university staff from the HKU profile webpages and contact them via emails. As for the two universities in mainland China, I adopted the networking strategy to approach the university officials and senior faculty members. I started interviews with graduate students and junior faculty members and ask them to refer me to their supervisors or senior colleagues in person. As a result, all of the targeted respondents agreed to be interviewed except a faculty member who was on sabbatical.

My age and status as an international student granted me advantages in approaching the student group. Because of my overseas studying experience, the international students who enrolled in the TCM programs in BUCM believed that we had encountered common issues such as cultural shock and language barrier. They showed willingness to share their experience and feelings in studying in China. In both field sites, I stayed in the neighborhood of HKU and BUCM. This allowed me to be involved in the daily lives of the TCM students. Both international and local students invited me to join in their casual gatherings and meetings.

From the perspective of my respondents, I was treated as an insider. During the interviews, many of my interviewees often used the words like “we” (“咱们”) and “our” to include me as one of them. This “insider” identification could come from my Chinese nationality (in the case of mainland Chinese respondents), ethnicity (from the perspective of Hong Kong respondents) and the fact that I am a TCM user. As I speak fluent Mandarin, Cantonese and English, I was able to switch between languages in different research contexts. For instance, I approached mainland Chinese respondents by using mandarin and conducted interviews with Hong Kong TCM practitioners in Cantonese. My knowledge on ancient Chinese language as well as the bilingual ability to a large extent helped me to discuss the challenges that had been encountered in the process of teaching TCM in English, along with associated changes in instructional material. As a user of TCM, I was able to discuss the effects of

certain TCM treatments and how they are different from the Western medicine with my respondents.

The richness of the collected qualitative data were improved because of the "insider" identification. My respondents believed that my research project was for the sake of the survival and development of TCM. Internationalization of TCM is a common challenge that is facing these universities, faculty and students. I perceived willingness from them to share their experiences and seek for understanding. In addition, my respondents also assumed that I had the basic understanding on the cultural and institutional settings of TCM. With this assumption, most of my interviewees did not avoid comments or even complaints about the institutional settings. Many of the respondents not only shared detailed information during interview, but also provided great help to facilitate the research process.

As a researcher, I would identify myself as an insider of the research contexts and an outsider of TCM discipline. My knowledge of the selected research sites, for instance, the knowledge on the local cultures and my familiarity of the local universities, has provided me great advantages in conducting the current project. At the same time, I was also aware that I should try to avoid the convenient interpretation that caused by my taken-for-granted assumptions. Before embarking on the fieldwork, I carefully designed the questions for the semi-structured interview and asked advices from my thesis mentor and the fellow researchers (i.e., the graduated students from the Southeast Asian

countries) who were not familiar with the Chinese contexts. As a layperson of TCM discipline, my ability of analyzing the changes of this form of knowledge is limited. Unlike the medical anthropologists who have learnt the theories and practices of TCM, I was not able to provide analytical verification from the perspective of a practitioner. My understandings on the evolution and changes of this form of local knowledge mainly came from my interviewees.

1.4 Research Significance

This study is significant for several reasons. First, this research captures the crucial moment when the impact of globalization has generated forces that are reshaping the developmental trajectory of TCM. The developmental trajectory of TCM has long attracted attention from social scientists. Cultural and science historians have intensively written on the evolution and transformation of the medical profession and knowledge in imperial and contemporary China (see the work done by Croizer, 1968; Unschuld, 1985; Sivin, 1995; Taylor, 2005; Leung, 2012). My thesis builds upon the extant literature and continues to report on the new treatment of this form of knowledge under the new conditions of globalization.

Second, this dissertation directs attention on the remaking of TCM to the institutional imperatives that shape this form of knowledge towards a world discipline. With anthropological studies that have discussed the transformation

of TCM knowledge from the perspective of modernization (transformation within one nation-state) and transnationalism (migration of the knowledge from one nation to another), not much attention has been paid to how international interests and demands have affected and interacted with its domestic development. My thesis contributes to the extent literature by taking a China-centric perspective and looks at the multi-cultural capacity-building of the local discipline of TCM.

Third, my research contributes to the existing discussion on TCM transformation through sociological inquiry. The ambiguity of the epistemological identity may be one of the reasons why there has not been much sociological research on TCM. On the one hand, in the field of sociology of scientific knowledge, researchers have devoted abundant studies to the social conditions and effects of science (Joseph & Sullivan, 1975). The scientific identity of TCM, however, is still under debate. On the other hand, although this form of knowledge has drawn attention from anthropologists (see the work of Farquhar, 1995; Hsu, 1999; Scheid, 2002; Zhan, 2009), their perspective in analyzing the disciplinary change is often framed at the individual level practice rather than the mechanism of institutional change. The current study builds upon the two groups of literature and studies the social transformation of TCM knowledge from the perspective of institutional change. I take the debates on TCM's identity into account in the institutionalization process and

investigate how certain knowledge tradition are institutionalized or eliminated due to the particular socio-historical circumstances.

Fourth, by deploying key concepts from the institutional literature, my thesis contributes to addressing an important issues in recent scholarship. TCM in universities are facing increasingly complex environment which involves multiple stakeholders from both local and international layers (Gumport, 2000; Marginson, 2004) and competing/conflicting rationales that underlie the legitimacy of knowledge production and transmission. The current study on TCM internationalization brings in agency to discuss how actors deal with the heterogeneity and conflicts, modify the institutional structure and maintain stability. The research findings aim to enrich the existing literature on the relation between agency and institutional change in pluralistic environment (Meyer & Scott, 1983; Kraatz & Block, 2008; Lawrence, 2008).

Last but not least, although this research is rooted in universities, the discussion goes beyond the changes within institutions of higher education. It is a broad thesis that engages in broad socio-historical factors through the eyes of actors who seek to exercise their agencies in the process of institutional change. The qualitative research design (see Section 1.3) as well as the analytical framework (see Chapter 2) enables comprehensive writing on the developmental trajectory of TCM discipline that confronts the complexity of

the issue.

1.5 Organization of the Thesis

To bring the issues together coherently, this dissertation is divided into three parts. The first introductory part constitutes three chapters. **Chapter 1** provides an overall and brief introduction to the current study. It aims to establish the significance of the project and explain the research design and methodological considerations.

Following the first chapter, **Chapter 2** entitled "Two Waves of Institutional Change of TCM Knowledge" engages literature from historical and anthropological studies. The purposes of this chapter are two folded. On the one hand, it aims to further explain the research focus through substantial justifications. On the other hand, it also provides a historical and socio-contextual review on the development trajectories of TCM discipline in mainland China and Hong Kong during the 20th century. Through contrasting the pathway of TCM in the two places, the identity crisis – the struggle between its epistemological identity as science and the knowledge nature with embedded cultural elements – is identified as the crucial dilemma that affects the institutionalization of the discipline of TCM.

Chapter 3 moves ahead to construct the analytical framework for the data chapters. It brings in two strands of literature: one group from institutional studies, in particular those looked at the mechanism of institutional change; the other from studies on higher education which focus on changes of academic structure under the impact of globalization. The existing literature leads me to adopt a neo-institutional lens looking at *translation* – the process of interpreting the pressures for change, *solution* – the adopted institutional practices and *effects* – the intended and unintended consequences of the practices, of actors in adapting the heterogeneous environment facing by TCM actors.

The second part is consisted of three data chapters in which I present the selected cases chronologically: BUCM in **Chapter 4**, PKU in **Chapter 5** and HKU in **Chapter 6**. With respect to the individual characteristics of each university in responding to the perceived environmental pressures, I demonstrate the cases in an independent manner instead of arranging the data under several similar themes. The descriptions in these chapters aim to capture the institutional changes in which international elements have been incorporated into the orientation and practices of the discipline of TCM and summarize what has been achieved and what failed to be achieved. I also analyze how different groups of actors interact with each other, respond to the external and internal environment of their home universities and shape the policy-making and

implementation process. At the end of each data chapter, I provide a case summary of the organizational adaptation of the internationalization for the selected universities.

The third part is the discussion and conclusion. **Chapter 7** moves on to further comparisons and conclusions for the thesis. Following the level of comparisons that was discussed in Section 3.1, I compare the institutional practices among the three universities, the similarities and differences between mainland China and Hong Kong and discuss the implications of the study at the aggregate disciplinary level. I conclude that the institutional practices of the internationalization of TCM are subject to the institutional environment where the society and state governments hold different expectations for TCM. For those actors who are able to lead the institutional change process, their agency is empowered by adopting the institutional logic that has been embedded in the expected socio-historical role of the university. In terms of disciplinary development, my research observes that both scientific and cultural elements are crucial intrinsic features that enable TCM's survival in the globalization process. The successful adaptation of TCM to a large extent is no longer an issue of epistemology – the either/or debate on its disciplinary identity of culture and science – but rather an institutionalization issue – how the existing institutions can be changed to accommodate the two seemingly irreconcilable elements under one discipline.

Chapter 2

Two Waves of Institutional Change in TCM Knowledge

2.1 Introduction

Institutions are social structures, consist with formal and informal rules, norms and beliefs (Scott, 2001; Campbell, 2004) that define "what is or is not and what can be acted upon or cannot" (Hoffman, 1999:351). The institutional structure is supported by regulative (the rules imposed by coercive mechanisms), normative (the norms rely on a sense of appropriateness) and cultural-cognitive (culturally supported assumptions that are taken for granted) elements (Scott, 2001). In this study, institution of TCM knowledge refers to the formal and informal rules, norms and beliefs that organize, guide, monitor and enforce the knowledge production and transmission activities of TCM.[3]

The cotemporary development of TCM knowledge in China has been characterized by two interrelated waves of institutional change. In the first wave of change, the traditional set of methods of knowledge production and transmission, which relies on knowledge accumulation through individual practice experience and the transmission of knowledge through master-apprentice relationships, was transformed into a modern education and research methodology, undergirded by rationality and scientific norms. This

[3] In order to reduce the ambiguity and misunderstanding, institution in this thesis refers to the formal and informal rules while physical infrastructure of institutions is described as organizations or institutes.

wave of change, in the name of modernization preserved the knowledge in a revolutionary way. It resulted "epistemological inconsistence" of TCM (Farquhar, 1995). The second wave of change, driven by the impact of globalization, is now on-going.[4] The process of globalization has brought up new challenges for the survival of TCM knowledge. It requires this local form of knowledge moves towards a "world discipline" that can be transmitted and practiced in different cultural contexts. This wave of institutional change is often in the name of internationalization.

The two waves of institutional change are continually progressing and sometimes go hand in hand in the different social contexts of Chinese society. In mainland China and Taiwan, TCM has been assimilated into the higher education system since the late 1950s, when the two societies underwent the reconstruction of modern social institutions post-World War II. Hong Kong and Macao underwent the institutionalization process at about the time of the sovereign handovers (in 1997 and 1999 respectively). In these two places, TCM entered into universities, which were already quite internationalized. A better understanding of the disciplinary change of TCM requires a comparison of both situations.

[4] Social scientists define globalization and trace its starting point based on different criteria. However, most of them agree that the economic globalization process, marked by the emergence of transnational trade and facilitated by new technology since the 1970s, has brought dramatic social changes worldwide (Paul, 2006; Bordo, Taylor & Williamson, 2007). Therefore, in this study, "globalization" mainly refers to these changes.

Institutional change, especially evolutionary change, is path-dependent (Powell, 1991; Pierson, 2000). Earlier pathways of preservation and re-institutionalization may have profound influence on later developments. Therefore, this chapter provides a review that demonstrates the "historical continuity" of TCM knowledge in contrast with "epistemological inconsistency" and new social conditions in the era of globalization (Farquhar, 1995).

2.2 Modernization of TCM Knowledge in Mainland China

2.2.1 Epistemological Conflict

According to Renn and Hyman (2010), the globalization of local knowledge is a process through which a certain set of knowledge tradition (e.g., epistemology and norms) influences and transforms the others. In this sense, the internationally established modern knowledge system is also a local form of knowledge, originating in Europe. With the intrinsic driving force of universalization and the extrinsic condition of colonial expansion in the political and economic spheres, this European knowledge system has been adopted and localized in much of the rest of the world (Schemmel, 2012). As a result, the knowledge tradition of TCM has been challenged and influenced by this Western model of knowledge transmission and production.

What are the differences between the nature of TCM knowledge and the modern knowledge system? Many sociologists have discussed the process whereby modern disciplines are formed and developed (e.g., Max Weber and

Emile Durkheim). Weber (1905) deployed the term “rationalization” to analyze the development process of Western civilization. His analysis largely saw the modern knowledge system as an outcome of rationalization. He indicated that rationalism, which arose during the Renaissance and Enlightenment, had a profound influence on the formation of the modern knowledge system. It drove transformations in epistemology and ontology, and finally separated the production of knowledge from religion. Secular knowledge was able to be produced and transmitted according to rational rules and methods. The notion of rationalization well explains the rise and expansion of science and scientific methods since that time. The consequent transformation of the entire institutional realm of modern society was also organized according to the ideal of functional efficiency achieved through rational decisions and actions.

Durkheim (1893) began his analysis of knowledge from the angle of social transformation with the period of the Industrial Revolution. The social division of labor brought about by industrialization and economic development required specialized knowledge and activities to facilitate mass production. This requirement to large extent caused the process of professionalization. General and holistic knowledge gave way to professions through a process of specialization and standardization. These specialized knowledge domains were institutionalized in education and research. The divisions and categories of the modern knowledge system, which are often known as disciplines or subjects, can be seen as a reflection of the professions that developed in modern societies.

The two classic sociological analyses above demonstrate three important characteristics of the modern knowledge system. Firstly, rationalism and reasoning are at the center of this body of knowledge. Secularism, scientism, and universality, in contrast with religion, culture and locality, are the core principles that distinguish modern knowledge from other systems of knowledge (Jasanoff, 2004). Knowledge production in this system often aims at producing law-like principles and theories (Levision, 1974; Hanzel, 1999). Secondly, this knowledge system follows a logic of subdivision. A body of knowledge is divided and segmented into subareas. At the same time, the research philosophy follows reductionist logic (Magga, 2005). For instance, it is believed in science that the understanding of an object relies on reducing it to the smallest elements that constitute that particular object (e.g., molecules, atoms and ions). Thirdly, both sociologists imply an interaction and mutual reinforcement between knowledge evolution and social context. Knowledge systems are shaped by social changes and can be reflections of social context(s). New developments in knowledge can in turn transform society.

The body of TCM knowledge is different from the modern knowledge system in many ways. The differences are centered in epistemology—the theory of knowledge and the criteria for the evaluation of knowledge (Alston, 1989). As a form of medical knowledge, TCM is categorized as an “alternative medicine”. The term *alternative* suggests that this form of medical knowledge is fundamentally different from the mainstream allopathic medicine. While the production of biomedical knowledge relies on scientific norms and increasingly

emphasizes evidence-based practices (EBP), the TCM knowledge system was built upon ancient metaphysics and experience-based observation- a symptomological view of disease, before the encounter with its Western counterpart (Farquhar, 1987; Ashcroft, 2004; Kavoussi, 2007).

At a broader level, TCM can be classified under the category of local knowledge systems.[5] Studies on the emergence and evolution of knowledge in imperial China point out some distinctive characteristics of TCM knowledge. One characteristic is that TCM takes a holistic approach, as do many forms of traditional knowledge (Croizier, 1968; Veith, 1973). Various elements, which are now classified under subareas such as religion, philosophy and secular medical practice, were integratively connected under this particular system of medical knowledge. Compared with the modern knowledge system, TCM is neither fully rational nor fully secular, nor does it follow reductionist logic.

It is worth pointing out, however, that TCM does rely significantly on rational

[5] In anthropology, three terms are often used to identify other forms of knowledge, in contrast to the knowledge system within the European tradition: indigenous, traditional and local knowledge. In this study, I employ "local knowledge" to categorize TCM because this term is defined in relation to the internationally adopted modern knowledge system (Renne, 2012). In a talk given at Minzu University in China in 2008, Judith Farquhar pointed out that TCM should not be categorized as indigenous knowledge. She noted three features of TCM that do not fit the definition of indigenous knowledge: the production and transmission of TCM knowledge is highly institutionalized; the practices are commercialized; and its knowledge is not separated from the state(s). In addition, this body of knowledge, as will be reviewed later in this chapter, has gone through certain processes of transformation in the name of modernization. This makes the term "indigenous" not fully appropriate to represent this category of knowledge. Judith Farquhar's talk was recorded and translated by Wang Bo and retrieved on October 2014 from: http://www.cranth.cn/0903/00072.html

knowledge. Croizier (1968) highlighted that the secular aspect of the healing practices started to separate from the magico-religious tradition circa 500 B.C. and later became the foundation of rational medicine. The emergence of written theories of Chinese medicine marked the beginning of the development of academic scholarship out of a folkloric basis. Two classic works of canonical Chinese medicine, *Inner Cannon of Huangdi* (黄帝内经) and *Treatise on Febrile and Miscellaneous Diseases* (伤寒杂病论) were completed during the Warring States period (B.C.475-B.C. 221) and the Eastern Han Dynasty (A.D.25-A.D.220) respectively (Li, 2007a). These classics laid the foundation for both clinical and theoretical Chinese medicine and demonstrate the antiquity of this form of medical knowledge.

The rational part of TCM knowledge is not in terms of the scientific understanding of truth. The clinical parts which differentiate TCM practice from religious ritual are drawn from people' observations and accumulated through personal experiences (Li, 2007b). Through the history, scholars and practitioners of TCM have produced numerous academic writings of TCM. The typical forms of knowledge production in TCM were correcting the existing literature of TCM knowledge based on personal experience and developing new herbal formulas to address newly emerging diseases. Knowledge was produced by acknowledging the individual situation of patients and by adapting to differing geographical and climatic conditions. The theory of TCM is largely built upon the ancient Chinese philosophical understandings of man, nature and universe (Veith, 1973) (See Table 2.2.1.1).

Table 2.2.1.1 Basic Theoretical Concepts of TCM

Concepts	Explanations
Yin-Yang	- A dialectic and materialistic ideology based on the belief that the world is material and results from the mutual action of two complementary but opposite material forces, termed Yin and Yang. - In TCM, Yin and Yang is used to (1) classify body structure, (2) explaining clinical manifestations, and (3) guiding treatment.
Five Elements	- Wood, Fire, Earth, Metal and Water are five elements that are essential to life. - They symbolise patterns of motion, characteristics or states of phenomena or kinds of processes, and it was believed that all things came into being because of the motion of change of these five elements. - The five elements were seen as existing in a dynamic and balanced relationship with each other. They can also be seen as stages of the cycle of seasons and of human life. - In TCM, the theory is used to (1) explain physiological and pathological mechanisms, (2) guiding clinical diagnosis and treatment.
Zangfu (organ) Theory	- The concept of "organ" in TCM is not equivalent to that in WM. *Zangfu* organs are better thought of as complex functional systems that are interrelated to each other, with particular reference to the five elements theory. - The five *Zang* organs, Heart, Lung, kidney, Liver and Spleen, are considered to be solid organs that perform the production, transformation, regulation and storage of vital substances (essence, *qi*, blood and body fluid). - The six *Fu* organs, Small intestine, Large intestine, Bladder, Gallbladder, Stomach and the Triple Jiao, are considered to be hollow organs that perform digestion, absorption and excretion processes.
Vital substances: essence, *qi*, blood and body fluid	These are the four substances within the body that are fundamental to life and provide the material and functional basis of the body. A deficiency in any of these can led to dysfunction of various organs or systems in the body.

Source: O'Brien & Xue, 2003; Griffths, Chung & Tang, 2010

The second feature of TCM – locality, is how observations are linked to people and their environment. As was pointed out by Li (2007b), the clinical parts of TCM were drawn from observation and the various experiences of people's daily activities related to agriculture, food preparation and natural-resource management. These experiences and practices would vary from region to

region due to of differences among sub-cultures, geographical conditions and availability of natural resources. Unlike scientific knowledge, this form of knowledge does not have any intrinsic drive to geographical and cultural expansion.

Another characteristic highlighted by historians and anthropologists is related to the previous two characteristics: the pluralism of the TCM knowledge system (Scheid, 2002). As pointed out by Unschuld (2010), since its birth, TCM has taken shape under a discontinuous thought system. This decentralized quality was embedded in the nature of TCM due to the fact that its knowledge was accumulated through different peoples' practices and experiences, which varied among regions as well as among different historical periods due to variation in the diseases that were prevalent. Therefore, TCM did not emphasize standardization in its evolutionary process during the imperial period.

2.2.2 Institutional Reconstruction

The differences between TCM and modern science promised changes when the two systems encountered each other. At the practical level, the epistemological conflict was embodied in a process of institution formation and change. The transformation of TCM knowledge in 20th Century China was achieved by reforming the criteria of valid knowledge and institutionalizing its production, transmission, and practice in modern realms (Taylor, 2005).

TCM tradition lost the socio-political legitimacy after the collapse of feudal system in 1911. This form of knowledge was regarded as non-scientific and based on superstition. Radical reformists attributed China's underdevelopment and incompetence to TCM. TCM was criticized for its inadequacies in providing healthcare to the public. Western scientific knowledge as well as its educational model was expected by the nationalists to save and transform the Chinese society (Hayhoe, 1999). As a result, TCM was abolished twice by different governments in the first half of 20th century (Li, 2007a).

Unlike the Nationalist government (1927-1948), which tried to abolish TCM, the Communist government (from 1949 on) took an instrumental approach and made significant efforts to preserve this form of medical knowledge. The practical value and symbolic cultural significance of this form of knowledge may have been the two rationales for the Communist government to institutionalize TCM (Taylor, 2005). Comparing modern biomedicine (which was known as "Western medicine" by local Chinese people) to TCM, although the former enjoyed a significantly higher social status, there were neither sufficient nor widely enough distributed human and material resources to enact this medical approach.[6] TCM was much more affordable and accessible. Its approach to

[6] By 1949, there were about 12,000 scientifically trained western medicine doctors in about 500 hospitals throughout the country. However, 266,000 doctors are actually required for the population of 400 million at that time (based on the calculation of one doctor per 1,500 people). Only 500 graduates could be produced by the existing medical schools every year. Thus, the small number of Western medicine doctors was not able to fulfill the needs of the entire society. In contrast, the reported number of Chinese medicine doctors then was about 370,000 (Chen, 1961).

healing naturally possesses advantages in serving communities and thus was well suited to the needs of village medical care and the structure of working units in Communist China.[7] In addition, TCM knowledge was regarded as a significant aspect of Chinese civilization. Abolishing TCM would be a full denial of Chinese cultural identity.[8]

From the mid-1950s, mainland China took the initiative to reassemble TCM knowledge into modern higher education and research institutions. It was not the first time that TCM knowledge had been transmitted through training in formal schools. Many attempts to reform TCM education were made by elite practitioners and various governments since the late imperial period (Zhao, 1989). However, the re-institutionalization in the Communist period was the most thorough change. It was part of an overall top-down modernization of society, which involved changes in legislative processes and the establishment of nationwide public healthcare and higher education systems, which were maintained by institutional and financial resource support. It was also the most fundamental change in that a rational and scientific epistemology was applied to the transfer of the knowledge tradition.[9] Modernization was the

[7] Yang (2006) described the patient-doctor relation in TCM as family-like (拟家庭化). It is a healing process based on kinship and local networks, and requires the participation of patients and even their family members. Further, the results can be improved if the practitioner knows the lifestyle of his or her patients.

[8] From the point of view of the Communist government, ideological issues were a problem shared by both Chinese and Western medicine. Not only was TCM a feudal relic, needing to be rehabilitated, but Western medicine was a foreign import (Taylor, 2005).

[9] After the collapse of Qing Dynasty in the early 20th Century, TCM fell to the bottom of the heap, both epistemologically and socio-politically. Radical reformists attributed China's backwardness and incompetence to TCM by indicating its inadequacies in providing health care to the public. It was

predominant discourse in reconstructing the nation-state. In order to reestablish the legitimacy of TCM, many policies and actions including ideological rehabilitation and institutional change were enacted.

Scientific epistemology was highly promoted by the government. The rationale for legitimizing both Chinese and Western medicinal knowledge under one system was the pursuit of a Marxist science and "true knowledge" (Taylor, 2001). Earlier in 1944, Mao Zedong had already proposed the idea of a "new medicine." He suggested the need for the "scientization of Chinese medicine and the popularization of Western medicine" (中医科学化，西医大众化). The process of scientization basically disassociated TCM from its roots in feudal culture and from its more "superstitious" elements. Ideas such as unified theory and the scientific method were imported into the fields of research, training and practice. There was a trend of adopting theories and methods from biomedicine and pathology to explain and to evaluate the validity of TCM knowledge.[10] Most TCM physicians at that time agreed to communication and convergence with Western medicine for the sake of preserving TCM (Cai, 1988).

identified as feudal superstition. TCM lost its legitimacy in its mother society and was abolished twice by different governments in the first half of the 20th century (Li, 2007a). During the nationalist period, several training schools were established by TCM advocates with the aim of reviving the practice. There was a trend for Chinese physicians to learn Western medicine in order to better understand it and defend TCM. Therefore, the training schools often included some Western medical knowledge in the curriculum (Zhao, 1989).

[10] For example, Pavlov's theory of the higher function of the nerves was adopted to explain how acupuncture functioned (See "Learning from the Soviet Union: Pavlovian Influence on Chinese Medicine, 1950s" by Gao Xi 2014).

TCM was institutionalized in modern Chinese society, including at the levels of law, government agencies, research institutes and practice regulations. This form of medical practice has been officially recognized and under the protection of national law since the early 1950s. Governmental departments and regulatory agencies (e.g., the Department of Chinese Medicine in the Ministry of Health Bureau of Medicine Policy (医政局) and the Beijing Chinese Medical Institute) were established to deal with issues related to TCM. National-level professional associations such as the Beijing Chinese Medical Institute (北京中医学会) and later the Chinese Medical Institute (中医学会) were established. Regulation of TCM physicians and medical practices also began in 1950.[11] Through the mid-1950s, TCM gained a relatively stable position in the legal system and society (Taylor, 2005).

Inclusion of TCM in the higher education system was a top-down command with the aim of mass producing medical personnel.[12] Under the influence of

[11] The regulations on TCM practice have been intensively described by Zhu & Zhang (1990) and Cai, Li & Zhang (2000). For instance, in order to legally practice TCM, physicians were required to obtain a Chinese Medical Doctor Certificate issued by the Ministry of Health or a Temporary Chinese Medical Doctor Certificate issued by the provincial authority. Those who had been trained in formal schools during the republic era or had at least five years of practical experience were qualified to receive the licenses. The policies for regulating hospitals and private clinics were not stable during that period. Private clinics were allowed in the early 1950s, but were abolished later.

[12] There was not much intervention in master-apprenticeship training in the early years of the new China. The government, however, soon realized that traditional apprenticeship was not a productive way to cultivate physicians to practice public health. In 1956, Zhou Enlai, the premier at that time, took recommendations from a report compiled by the Ministry of Public Health ("A Report Concerning Improving Chinese Medical Work," "关于改进中医工作的报告") and decided to establish four TCM academies in Beijing, Shanghai, Guangzhou and Chengdu respectively. The establishment of the four academies marked the entrance of the discipline of TCM into the higher education system in mainland China. Later, after Mao proposed the slogan "Our Motherland's Medicine and Pharmacology Is a Great

the “Soviet model,” the discipline of TCM entered the national higher education system in the form of training at specialist academies. For a form of local knowledge with a long tradition of private/personal training, inclusion in a modern higher education system was a pioneering attempt. It required a full curriculum design including teaching content, methods of learning, program length and standards for admission and graduation. This design process is powerful as it determines what knowledge is valid, can be passed down to the next generation and in what way. Scientization, systematization and standardization were the guiding principles of the re-institutionalization of TCM.

Knowledge was segmented and filtered under the discourse of scientization. The components that could not be explained by or connected with scientific medicine were likely excluded from the textbooks. Different schools of thought within traditional medicine, such as *qigong* and *tuina*, were used as electives or seminars. Systematization aimed to sort out the existing writings of different schools and to compile a series of national textbooks. Many advocates of syncretism and modern education were invited by the government to compile the textbooks. In order to standardize the knowledge, the classical texts were translated from Classical Chinese and rendered into the modern vernacular, an example being the textbook called *New Edition of Seasonal Febrile Disease* (温病学新编).[13] Quantification of prescriptions was largely applied in these

Treasure-house” in 1958, the number of TCM colleges increased to 13 with wider geographical coverage.

[13] This is a book published by the People’s Press of Jiangsu Province (江苏人民出版社) in 1958. The

books. These “translations” later received considerable criticism that the aesthetics and essence of the classics were lost or skewed by the interpreters who carried out the translations. With the completion of the first edition of national textbooks in 1960, Chinese medical knowledge started to be disseminated in a standardized format in China’s education system.

Western medicine was used as the main reference for the program design for TCM. In order to better integrate the two forms of medicine and to make the clinical and hospital settings practicable, TCM was divided into subjects that paralleled Western medicine in the education system. Since the TCM academies were established during the period when the state orientation emphasized “Western Medicine Studies Chinese Medicine,” TCM knowledge was prioritized. The proportion of Chinese to Western medical modules was 7:3 (Zhu & Zhang, 1990). Notably, political courses with ideological education also occupied a significant proportion. Table 2.2.2.1 briefly summarizes the differences between the traditional methods of training and university TCM education.

Table 2.2.2.1 Brief Contrast between Master-apprenticeship and University Education of TCM

names of the authors are not listed in the book, but are described as the “Teaching and Research Group, School of Chinese Medicine of Jiangsu Province” (江苏省中医学校教研组).

	Traditional Way of Training	University Education
Disciplinary perspective	Holistic training	Breaking down to majors and subjects
Curriculum design	Flexible training depending on the master	Standardized curriculum with certain percentage of Western medicine modules
Duration of studying	Long period of training and lifelong learning	5-9 years programs depending on what degree the students pursue
Pedagogy	Oral teaching, mainly through learning by doing	Lecture and internship practice
Textbooks	Classics and personal manuscripts	Standardized textbooks
Assessment	Flexible evaluation based on cure rates	Exam-based evaluation and licensing
Recruitment of students	Student(s) selected by the master based on mutual understanding and agreement (often based on kinship)	Students selected by the university based on entrance exam results
Class size	1 master with 1 or few students	Several teachers teach different subjects for a class of students
Relation between master and student	Very close Based on affection and loyalty	Diverse and distanced Based on education service and employment

Source: table made by author

During the Great Leap Forward (1958-1960), when relations between China and the Soviet Union started to waver, calls for self-reliance became louder. TCM was included in the primary health care system. Both outpatient and inpatient departments in hospitals included TCM practices. The integrative healthcare system allowed practitioners of TCM and Western medicine to work in the same hospitals and to issue prescriptions from either or both modalities (Hesketh & Zhu, 1997). TCM physicians were encouraged to identify their specialties, for instance, as TCM gynecology and TCM internal medicine, in order to fit into hospital settings that were based on Western medicine.

The ten-year Cultural Revolution from 1966 to 1976 further highlighted the

scientization principle and suppressed traditional norms and practices of TCM. The old generation of TCM practitioners were labeled as enemies of the state and targeted as the object of criticism in the name of "getting rid of the four olds" ("破四旧"). The TCM training in the specialist academies stopped till 1972 as all the universities were closed. Political indoctrination was strengthened in the formal education of TCM after the Cultural Revolution (Jain, 1972).

After the opening of China, the official role of TCM was established in the national constitution in the early 1980s. Western medicine, TCM and integrative medicine have been identified as three aspects of healthcare delivery in mainland China.[14] In 1998, the state added legal regulations for the three types of clinicians (TCM practitioners, doctors trained in Western medicine and integrative medicine practitioners). Clear standards of licensing and a registration system were established to regulate the practice of medical knowledge (Griffiths, et. al., 2010). As an integrative medical system is highly promoted by the authorities, at the practical level, practitioners from different tracks are able to prescribe each other's medicines with certain restrictions.[15]

[14] Information retrieved from the website of The Beijing Journal of Traditional Chinese Medicine in October, 2014: http://www.bjtcm.net/CN/column/column105.shtml

[15] This conclusion is based on interviews with TCM and integrative medicine practitioners at the two selected universities in Beijing. They indicated that training of clinicians in mainland China often includes both Western and Chinese medical knowledge, although the emphasis and proportion of the respective forms of knowledge varies among majors. At the legislative level, practitioners of Western medicine, TCM and integrative medicine have separate requirements for licensing examinations and are registered under different categories. However, the "Law on Licensed Doctors of the People's Republic of China" ("中华人民共和国执业医师法") does not specify that cross-track prescription is prohibited. At the same time,

Existing research on the institutional change of TCM in mainland China demonstrates that instead of a well-defined or uniform body of knowledge institution, the behaviors of practitioners have been and still are shaped by the two sets of knowledge rationales and norms (Scheid, 2002; Zhan, 2009). Historians have noted dramatic changes at the state level and revolutionary changes in TCM's developmental trajectory (see Talyor, 2005; Lei, 2014).[16] These changes were achieved through the creation of institutional structures and allocation of resources, which had profound influence. However, state-level policy analysis is not sufficient to capture ground level practices, i.e. to what extent these policies influenced the behavior of TCM practitioners. Anthropological studies suggest that although imposed institutional structures are powerful in transforming knowledge, this does not mean the traditions of TCM have retreated completely. Scheid (2002) points out that although there has been a great deal of synthesis within the body of TCM knowledge and between TCM and biomedical knowledge, the adaptability, plurality and resilience of this form of knowledge and practice should be kept in mind.[17]

ordinances (No. 3 and No. 9) in the "Regulation of Traditional Chinese Medicine in the People's Republic of China" ("中华人民共和国中医药条例") protect and encourage integration between the two forms of medical practice. As a result, Western medical doctors can prescribe Chinese patent medicines (中成药) and herbal extract medicines (植物提取药品), but not Chinese herbal medicine (中草药); TCM practitioners are allowed to prescribe certain types of Western (biological and chemical) medicine; while integrative medicine practitioners are able to prescribe all types of medicine.

[16] Historians who have studied the modernization of TCM often agree that state support benefited the preservation of TCM (Taylor, 2005; Li, 2007). However, the way the state was involved in institutionalization has been criticized. Some indicate that the government adopted a "pragmatic value" (Crozier, 1968), which did not aim to "preserve TCM as body of knowledge in its own right" (Taylor, 2005: 152). The process of modernization to a large extent is a process of westernization (Hsu, 1999).

[17] In intensive studies of the daily practices of individual practitioners, researchers have noted that many traditions have been preserved. Firstly, personal experience remains highly respected. This respect is not

The review above also suggests that institutional change in TCM knowledge is a multi-dimensional process in which inconsistences may exist. The institutionalization process of TCM at the different institutional pillars (regulative, normative and cultural cognitive pillars) was uneven. At the regulative level, state policy and modern institutional realms exerted pressures to transform the traditional knowledge transmission and production mode of TCM into the modern scientific mode. At the same time, TCM practitioner community was suffering from identity crisis caused by contradictory ideologies. At the cultural cognitive level, the legitimacy of traditional understanding of TCM knowledge nature was impacted by the post-colonial understanding of modernization. Science and modernity became the taken-for-granted approach to preserve traditional forms of knowledge. It resulted contradictions at the normative level – norms from both traditional TCM mode and science influenced the behavior of TCM practitioners.

The recognition of the uneven progress of institutional change in different dimensions is crucial for the current study. The institutional change process

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only practiced at the individual level, but also manifests at the institutional and state levels. Renowned TCM practitioners are encouraged by the state to take on disciples and to transmit their experience to the next generation. Their practices have been documented by note taking and later by videotape and studied by researchers. Many TCM academic journals in China (e.g., The Journal of Traditional Chinese Medicine (中医杂志) and The Journal of Beijing University of Traditional Chinese Medicine (北京中医药大学学报)), include a section of analysis of personal practices. Secondly, though the master-apprenticeship model was marginalized it has not vanished in practice. Research from Hsu (1999) and Scheid (2002) has shown that even in standardized university training, traditions such as personal relationship remain important in knowledge transmission, and master-apprenticeship exists in informal ways. Less orthodox parts of TCM knowledge have been passed down through secret or personal trainings (Hsu, 1999).

may not be synchronous in each dimension. It is possible that changes in one dimension delay those in another dimension (Campbell, 2004). The lags and contradictions between dimensions are not necessarily resolved over time but could be institutionalized as well (Friedland & Alford, 1991; Skowronek, 1995). An understanding of institutional change needs to account for the interaction and interplay between these dimensions. The preference for either of the two sets of knowledge tradition may vary within different institutional dimensions and different individuals. Therefore, it is important to investigate how these inconsistences continue to shape the developmental trajectory of TCM and whether the conflicts are examples of asynchronous development or are tending to be institutionalized as part of TCM institutions.

2.3 Pathway of TCM in Hong Kong

The survival pathway of TCM in Hong Kong contrasts with the case in mainland China. The institutionalization process of TCM in Hong Kong demonstrates distinctive features that are relevant to this study: the criteria for what counts as legitimate knowledge and an efficient way of training may differ from those in mainland China. This inference is drawn from three observations: the preservation of the knowledge tradition during the British colonial period, the role of different groups of actors (in this case, the state government and local TCM practitioners) in the institutionalization process, and the parallel medical system that separates Western and Chinese medical practices since the post-colonial period.

The survival pathway of TCM during the colonial period suggests a high level preservation in terms of the knowledge tradition. Unlike mainland China where TCM experienced severe criticism, TCM knowledge and its practice survived within the Hong Kong Chinese community in a relatively peaceful way. Its epistemological validity was not strongly attacked.

For a long time, TCM in Hong Kong was not officially categorized as a form of healthcare modality but as a form of "Chinese cultural custom" (Topley, 1975). In 1841, Hong Kong became a British Crown Colony. The Treaty of Nanking, which was signed in 1842, stipulated that the British government would not intervene in Chinese customs and culture and their development. Chinese medical treatments and herbal medicines fell under this category. The practice of TCM and the usage of herbal medicines was not regulated by the British government. Locals were allowed to open Chinese medicine shops simply by applying for business registrations from the taxation department. TCM practitioners sold herbal medicine and practiced healing techniques such as bone-setting and acupuncture in their private medical shops.

Being categorized as cultural custom, the colonial government had left TCM alone. There was no state effort at developing TCM curriculum within a formal educational framework. Master-apprenticeship remained the mainstream training mode until 1997. Beginning in 1917, some private groups did, however, establish part-time training courses. After the Cultural Revolution in 1976, a number of TCM practitioners migrated from mainland China to Hong Kong and

opened several private training schools. Some of the local universities, including the HKU School of Professional and Continuing Education, started certificate courses for TCM students in 1992. By 1997, about 30% of the TCM practitioners were trained in these schools, while the majority were still trained through master-apprenticeship relationships (Xu & Huang, 1997).

The peaceful survival of TCM was gained at the cost of losing its official status as a form of medicine. During the colonial period, practitioners of TCM were not allowed to use the title "physician" (医师) or "doctor" (医生), but only "herbalist." Starting in 1894, TCM practitioners were no longer authorized to issue proof of death (Lin & Su, 2002). TCM was not able to secure an institutional position in the modern healthcare system in British Hong Kong. However, it was TCM that functioned as the main medical care system for the Chinese people in Hong Kong up to the early 20th century.[18]

The survival of TCM largely relied on the lifestyle and medical beliefs of the local Chinese community. The popularity of TCM usage has often been discussed along with the cultural changes in Hong Kong by historians (Liu, 2009). For instance, Yang (2009) suggested that the segregation policy adopted by the British government during the early colonial period resulted in cultural separation between the Chinese and European communities. Chinese

[18] The first hospital for the Chinese population–Tung Wah Hospital, which at that time mainly practiced TCM–was opened in 1872. According to Lu (1981), the TCM outpatient departments in Tung Wah Hospital served over 110,000 patients in 1896. During the previous year, the public hospital run by the government only served 1,157 patients, among which the Chinese occupied 19%.

population was expected to consult TCM practitioners while European used Western medicine (Choa, 1985). Accordingly, the local Chinese held suspicious attitudes toward Western medicine.[19] During World War II, the discovery and spread of antibiotics, as well as the advantage surgery offered for curing the wounded, dramatically increased the status of Western medicine. Also, Western customs were influencing the Chinese community over a wider and deeper range starting in the 1920s. Thus, the trend of cultural integration began growing in Hong Kong society. The two decades between 1940 and 1960 were described as the 20 years of "the ebbing of Chinese medicine and the expansion of Western medicine" ("中消西长").[20]

The comments from local practitioners on the absence of government regulation during the colonial period were often two-fold (Chen, 2010). On the one hand, they agreed that governmental tolerance gave room for the survival and preservation of TCM practice and tradition. On the other hand, many of them tended to attribute TCM's decline in market share to insufficient support from the British government. The major efforts of the colonial government, such as financial support for hospitals and colleges, and the institutional

[19] In Yang's book (1985), the author recorded the government's policy to control the plague in 1894 and how the Chinese community responded. Since disease control was based on Western medical approaches such as quarantine, the implementation encountered huge resistance among the Chinese population. Various rumors circulated among the Chinese about the dark secrets of quarantine.

[20] In a journal paper written by Zhang Gongrang in 1960, the author wrote: "20 years ago, one could easily find Chinese medicine shops in every street while there were only few Western pharmacies. Two decades later, however, the number of Chinese medicine shops is declining day by day while Western pharmacies are gradually increasing. It is the same in terms of the business of Chinese medicine. … The Western medicine doctors win more customers especially after the establishment of low-cost clinics."

regulation of medical professions, were concentrated on Western medicine (Yang, 2009). By contrast, TCM organizations and practices were sidelined from mainstream medical care and marginalized to the private sector.[21] Therefore, after one and a half centuries of being ignored by the British government, the first move that the TCM practitioner group took was asking that TCM be legislated as a form of medicine in Hong Kong Basic Law.

After the handover, the process of regulating TCM as a form of medical knowledge and practice started.[22] In his 1998 Policy Address, the Chief Executive and President of the Executive Council of Hong Kong, Tung Chee-hwa, established the goal of developing Hong Kong as an international center of Chinese medical treatment and herbal medicine. In 1999, the Chinese Medicine Ordinance was passed with the establishment of the Chinese Medicine Council of Hong Kong. Regulations, such as the incorporation of a TCM major into the higher education system in 1998, registration of local TCM

[21] In a study conducted by Sinn (2003), the author described how Tung Wah Hospital lost its autonomy as a result of plague control. She indicated that the hospital to a large extent played the role of political representative for the local Chinese during the late 19th century. The hospital spearheaded a petition to criticize the government's policy to control the epidemic. The advice, however, was not taken by the Colonial government. In addition, after the plague, the government started assigning Chinese doctors with Western medical backgrounds to the hospital and intervening in medical affairs.

[22] With the publication of the Sino-British Joint Declaration in 1984 returning Hong Kong to Chinese sovereignty, Hong Kong entered a transition period (December 19, 1984 – July 1, 1997). According to the record from the Chinese Medicine Council of Hong Kong, calls in favor of preserving TCM increased starting in the late 1980s. The British government adjusted its policy toward TCM and appointed a working party to review the use of TCM in Hong Kong and to advise the government on measures for its promotion, development and regulation. Information retrieved from the website of Chinese Medicine Council of Hong Kong in August 2014:
http://www.cmchk.org.hk/pcm/eng/#../../eng/main_deve.htm

practitioners in 1999, and legal recognition of sick-leave certificates issued by registered TCM practitioners in 2006, have been gradually put into effect. Nowadays, undergraduate degree course or equivalent are required for candidates to take the TCM licensing examination.[23] University has become the major institution that provides TCM training.

Scholars have noted that the institutionalization of TCM in Hong Kong has been closely associated with its decolonization process (Chiu, Ko & Lee, 2005; Yip, 2014). They pointed out that political reconstruction in Hong Kong empowered the group of local TCM practitioners and allowed them to mobilize resources to achieve the agenda of institutionalization. Unlike the top-down process in mainland China, the construction of a regulatory pillar in Hong Kong was driven from the bottom up. TCM professionals played a crucial role in pushing the process of legislation and regulation. The role of the special administrative government has been more like that of a facilitator than a regulator. For instance, although government agencies such as the Department of Health and Hospital Authority have responsibilities in TCM regulation, their scope of duties is mainly at the level of providing administrative support. The intervention of these governmental agencies in TCM is progressive and often involves third parties such as universities and non-governmental organizations (NGOs).[24]

[23] Information of TCM licensing and regulation in Hong Kong can be found from the website of Chinese Medicine Council of Hong Kong: http://www.cmchk.org.hk/cmp/eng/#main_rcmp02.htm

[24] From the current composition of the Chinese Medicine Council of Hong Kong, it can be seen that this council functions as a professional committee: only three out of 19 members on the board of Regulation of Chinese Medicine Practitioners and three out of 14 members on the board of Regulation of Chinese Medicine are government officials. Information retrieved from the website of Chinese Medicine Council

In terms of the medical system that regulates the practice of TCM and Western medicine, Hong Kong adopted a different strategy from mainland China. In mainland China, the government developed an integrative system. In the Hong Kong Special Administrative Region, the practices of TCM and Western medicine are on separate tracks. The government aims to establish a relationship between TCM and Western medicine that is collaborative yet distinct. Having different license and registration systems for the two groups of medical professionals encourages TCM practitioners to rely on their own methods of healing and treatment.

The historical pathway, social context and timing of government regulation make Hong Kong a valuable case for the study of institutional change of TCM. Since the early 1990s, Hong Kong has been considered a global city that possesses a highly international economy and integrated culture (Chui & Lui, 2004). The institutionalization of TCM in Hong Kong thus represents a situation where a local form of knowledge, which in this case remained largely in its tradition, was incorporated into formal social structures where international elements had already been deeply embedded. Therefore, comparison of the institutionalization of TCM knowledge in mainland China and Hong Kong under the impact of globalization allows certain level of generations that address the developmental trajectory of TCM discipline.

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of Hong Kong in September 2014: http://www.cmchk.org.hk/pcm/eng/#../../eng/main_intro03.htm

2.4 The Impact of the Recent Globalization Process on TCM

2.4.1 International Interest in TCM

Many forms of local knowledge remain in their cultural and geographical localities (Cheng, 2004). However, TCM is not such a case. It is a local form of knowledge that is moving towards an international or even global scale of practice. This movement has been driven by both international demand and domestic response.

International interest in this local form of knowledge is often associated with an unplanned incident in the early 1970s (Zhang, 2008). A journalist, James Reston, who was visiting China prior to President Nixon's trip there, was treated with acupuncture and later published a paper entitled "Now, let me tell you about my appendectomy in Peking" in *The New York Times* in July 1971. Later, in 1972, on the presidential visit, Nixon and his team observed an operation under acupuncture anesthesia and were surprised by the amazing utility of the ancient Chinese medical technique in modern surgery.

Through mass media, TCM, and especially acupuncture, attracted widespread outside attention resulting in an acupuncture boom in the 1970s. TCM knowledge itself attracted academic interest. Scientifically trained physicians, medical anthropologists, and cultural historians from the West started to systematically study and explore the theory, practice and historical background of this form of local knowledge (Sivin, 1987). Several basic books were

published during the 1980s to convey Chinese medical knowledge to the West, an example being *Chinese Medicine: The Web that Has No Weaver* (Kaptchuk, 1983). This was an international scale of discussion on TCM and biomedicine similar to the internal comparison that occurred earlier in China.

Mainland China's public health care system, which integrated Western and Chinese medicine, also attracted significant attention. Research reporting that the majority of the population in developing countries depends on local forms of traditional medicine to maintain health led the WHO (World Health Organization) to support the development of alternative medicine (Bodeker, 2007). Researchers were surprised by the dramatic improvement of China's public health during the first two decades of communist government; the integrated system increased the availability and quality of medical care. It suggested that using indigenous medicine and a decentralized medical care system could be a useful model for developing countries where there were insufficient resources and manpower for biomedicine (Risse, 1975; Sidel, 1982).

In order to facilitate the international circulation and even practice of TCM knowledge, international agencies such as the WHO (World Health Organization) and World Bank invested significantly in researching TCM. They played an important role in setting up basic standards for internationalization, such as creating standards for translation terminology and accreditation of

acupuncture.[25] It reminds us that internationalization requires agreements, standards and means of exchange. However, for most aspects of the knowledge that have deeper, specifically local cultural and historical roots, such as TCM theory and compound/patent medicines, the achievement of agreements on standards is much more complicated and difficult.

International interest in TCM has been welcomed by the state government. In mainland China, internationalization of TCM was, from the beginning, associated with a political agenda. After a long period of humiliation and war, the Chinese communist government was eager to rebuild the country's global image. TCM was regarded as a window of understanding into Chinese culture and civilization. Modernization of TCM in mainland China illustrated how the government was capable of preserving its traditional knowledge. In addition, it also reflected the government's capability in terms of building up a national public health system and effectively improving the health care of its population.

For the other ethnically Chinese societies (Hong Kong and Taiwan), international interest in TCM after the Reston incident resulted in a revival of this local practice. From the perspective of the broader international community, mainland China was the origin of TCM where the most authentic

[25] For instance, in 1979 the WHO recognized acupuncture as an efficient treatment for 43 diseases including migraine, constipation and cataracts. Later, in 1984, it was recognized as a branch discipline of medicine (Shi, 2005). The attempts at standardization can also be seen in "A Proposed Standard International Acupuncture Nomenclature: Report of a WHO Scientific Group" in 1991, and "International Standard Terminologies on Traditional Medicine" in 2007 (Shi, 2005).

knowledge remained. However, China had limited ties to the outside world at that time. Those researchers and students who were interested in TCM could only access this form of knowledge in Hong Kong, Macao and Taiwan (Taylor, 2004). These ethnically Chinese societies became the bridge between foreign explorers and mainland China. At the same time, the exchange between the mainland and other Chinese societies increased as well.[26] Therefore, the incident offered mainland China a key opportunity to reaffirm its central position among all societies that utilized TCM.[27]

As a result of these processes, TCM is now a widely internationally circulated form of local knowledge. And China has become the world center for the dissemination of this form of medical knowledge. By 1998 a study had already claimed that TCM in the United States was moving from marginal status to the mainstream (Cassidy, 1998). According to Liu Changlin, the director of the Chinese Medicine & Acupuncture Society of Australia (CMASA), TCM is now practiced in 162 countries/regions. Acupuncture has gained legal status in most

[26] Under the conditions of political severance, academic communication concerning TCM between the mainland and other Chinese societies represented a breakthrough. For instance, presidents from 10 TCM academies/universities were invited to Taiwan in 1994 for the "Symposium on Chinese Medicine Education and Academic Work on Both Sides of the Taiwan Straits" (海峡两岸中医药教育及学术工作研讨会).

[27] Why did mainland China become the world center of TCM in the process of internationalization? Why didn't other societies like Hong Kong and Macao with more advantages in terms of language and colonial ties or Taiwan take the lead? A partial answer may be that the legitimacy of TCM was in question under both colonial powers and the Chinese Nationalist Party government, which had already abolished TCM once in the early 1920s. Insufficient structural support from the state inevitably resulted in the marginalization of TCM. Medical professionals in these societies were not unified or strong enough to play a significant role in changing the overall situation. These dynamics to a large extent determined the fact that they lost their opportunity to be the center of TCM during the closure of mainland China.

of them.[28] Income from the export trade of herbal medicine in mainland China increased from U.S. $6.85 billion in 1996 to $23 billion in 2012.[29]

This process of the internationalization of TCM has drawn attention from scholars. For instance, in a recent book Mei Zhan (2009) describes intensive anthropological research on the transnational/translocal travel of TCM knowledge between mainland China (based on Shanghai) and the United States (based on San Francisco). Her study skillfully captures divergent forms of the refconiguration of clinical knowledge and authority during translocal encounters. However, not much research has been devoted to investigating how international interest and demand have impacted the domestic disciplinary institutions of TCM.

The question of a domestic response to international demands redirects the research focus from a transnational/transcultural perspective to a multinational/multi-cultural perspective. The transnational/transcultural perspective often focuses on the travel of TCM knowledge between two nations/cultures when this travel is based on bilateral agreements. The multi-cultural perspective focuses on the situation where these Chinese societies

[28] Information retrieved on October 2013 from Sina News that was published on July 20, 2012 and Sohu News that was published on April 28, 2012:
http://news.sina.com.cn/w/p/2012-07-20/031524808999.shtml
http://health.sohu.com/20120428/n341962875.shtml

[29] Information retrieved from the website of World Federation of Chinese Medicine Societies in October, 2013:
http://www.wfcms.org/menuCon/contdetail.jsp?id=5116

that are the origin of this local form of knowledge have to deal with a variety of foreign interests that are grounded in different cultural contexts and medical systems. It is a situation that calls for the establishment of standards, exchange agreements and systems with international validity to reduce the barriers caused by differences of culture and nation-state. It is a situation that further pushes this local knowledge to build up global capacities for knowledge transmission and production. The question is: how are the nature and institutions of TCM knowledge reshaped by this process?

2.4.2 Changing Discourses on Science and Culture

Globalization provides not only challenges but also opportunities for TCM to modify its current knowledge norms. New developments in globalization theory and debates in epistemology have resulted in changes in the discourse on science. These new developments to a large extent have created space for non-rationalist knowledge (Shamsul, Rumaizah & Haslindawati, 2004).

The epistemology of science has been challenged by the rise of postmodernism and research findings in the sociology of scientific knowledge. Postmodern analysis takes a deconstructionist approach and opposes the universality and objectivity of science. By analyzing scientific knowledge, its research paradigm and education methods, scholars have argued that scientific knowledge is in fact progressive and socially constructed (See the work from Kuhn, 1962; Lyotard, 1984; Lakatos, Worrall & Currie, 1980).

To a large extent, researchers in the field of sociology of scientific knowledge, especially those in the "strong program" have provided evidence that corroborates the postmodern conclusion (See work from Bloor, 1991; Burnes, 1974; Collins, 1993). The strong program researchers are mainly of two schools - the Edinburgh and the Bath School. The former took a historical approach to looking at the evolution of science, and the latter focused on the rules of knowledge production and actual activities in laboratories. Both schools highlighted the socio-contextual settings of knowledge production and concluded that social elements are inevitably involved in knowledge formation, even for science.

The work of several globalization theorists suggests that the belief in modern rationality has been challenged. In his book *The Global Age: State and Society beyond Modernity*, Albrow (1996) suggested that new developments in the global era such as the decline of nation-states, the decentralization of economic and cultural development, and the rise of global citizenship may erode the foundations of modernity. Other renowned theorists such as Giddens, Beck and Lash (1994) have developed the concept of "reflexive modernity", which largely sees globalization as the second stage of modernization. They also indicate that rationalism as the foundation of the first stage modernization is likely to be reflexed by the second stage. The process of globalization has increased the reflexivity of society, which has led to reform and adjustment. The religious revival may be an example that supports this theory. As remarked by Scholte, "modern knowledge is no longer taken-for-

granted" (Scholte, 2005:265).

In addition, the fear of losing cultural and national identity has increased the awareness and efforts of nation-states to protect local forms of knowledge. The fear is based on the group of globalization theorists who believe that the process of globalization brings a convergent trend to culture (see the work from Huntington, 1996; Meyer, et. al, 1997; Tomlinson, 1997). This group of researchers has pointed out that global economic integration, along with advanced communication and transportation technologies, has increased the range of expansion and speed of culture and cultural exports. The most referenced example is the global expansion of American culture, hand in hand with multi-national businesses such as McDonald's and Coca-Cola. The encounter and interconnection of different cultures may create dominance, which may be known as "global culture" and sideline non-dominant cultures. Research from Neo-institutional scholars also supports the convergence model/theory. Their theoretical model and empirical findings on institutional isomorphism suggest that the homogenization of culture is facilitated by institutional change worldwide.

The past few decades have witnessed the emergence of cultural imperialism and cultural protectionism in scholarly writings as well as in the political arena (Tomlinson, 1991). The French president Francois Mitterrand brought up the issue of cultural security, which resulted in the EU policy of "cultural exceptions" in the audio-visual trade agreement of the GATT (General Agreement on Tariffs

and Trade) in 1993 (Buzan, Wæver & de Vilde, 1998). The same rationale has been adopted by many member countries of the WTO (World Trade Organization) to go against the free trade agenda of the United States (Keane, 2002). The awareness of cultural protection was raised from the perspective of national security. A 2010 doctoral thesis by Xu Minghua analyzes how the term "cultural security" has been tactically deployed by the Chinese central government to legitimatize its media regulation policy.

As a form of culturally embedded knowledge, TCM could be affected both by the tolerance of non-rationalist knowledge, as well as by the rising awareness of cultural protection. Under such circumstances, the institutional changes in TCM knowledge could be more reflexive. Therefore, whether and how respect for the particular nature of TCM knowledge can be manifested on the institutional level requires further intensive analysis.

2.5 Concluding Remarks

Many historians and anthropologists who study this form of knowledge have adopted "Chinese medicine" instead of TCM as the name. One consideration is that the term TCM originally was a political term created by the Communist Party in mainland China (Scheid, 2002; Taylor, 2005). Another reason is that the *tradition* in this form of knowledge has been mixed with the *modern*, which makes the term TCM no longer appropriate.

In this study, I have decided to use the term TCM. This is because the review in this chapter suggests that the opportunities and dilemmas encountered by this form of knowledge are precisely reflected in the meanings attached to the three words – “traditional”, “Chinese” and “medicine.”

Its practical value as a form of “medicine” has preserved this form of knowledge in its societies of origin. It is now in international demand through person-to-person and, increasingly, institutional ties. During the institutionalization process, the social category of TCM as “medicine” determined the state’s involvement in its professionalization and practice. In the era of globalization, the international validity and applicability of TCM could be restricted by existing medical systems and standards that are largely based on the epistemology of life sciences.

The word “Chinese” highlights the connection to Chinese cultural and/or national identities, which contribute to secure its position within ethnically Chinese societies, even when the local knowledge system has been predominantly replaced by the modern knowledge system. In the current wave of international circulation, the word “Chinese” highlights the societies of greater China as the origin of this form of knowledge. It leads the current research to take a China-centric perspective and to investigate how the institutions of TCM knowledge have been changed by multi-cultural exchanges.

The word “traditional” refers to the nature of this knowledge in contrast to

modern reductionist and scientific approaches to knowledge. The word "traditional" is a convenient description that attempts to make an overall distinction, while the nature of this knowledge is much more complex. On the one hand, it implies the historical antiquity, cultural elements, holism and heterogeneity of this form of knowledge. These features of TCM knowledge have been embedded and embodied in the institutions that guide its accumulation, training and practice even today. On the other hand, the rational aspects of this knowledge have attracted modern scientific investigation. The complex nature of TCM knowledge contrasted with its classification as a form of modern knowledge is reflected in the divergent developmental trajectories. In mainland China, the survival of TCM largely relied on its adaptability to scientific epistemology, while in British Hong Kong, it was categorized as a form of culture.

In light of the new opportunities and challenges presented by globalization, this research intends to further trace how the two sets of knowledge tradition – the knowledge practice of TCM and scientific institution of knowledge, influence the formal production and transmission of TCM knowledge.

Chapter 3

TCM in the Wake of the Internationalization of Higher Education

3.1 Impact of Globalization and Internationalization of Higher Education

As a discipline formally included within higher education systems, the knowledge production and transmission of TCM have been influenced by higher education environments. This section provides an understanding of the institutional environments of higher education faced by the TCM discipline.

Recent scholarship on higher education has moved away from regarding it as a public good or social institution to viewing it as a global education service and knowledge production industry (Gumport & Sporn, 1999; Altbach, 2002). Globalization refers to “the reality shaped by an increasingly integrated world economy, new information and communications technology, the emergence of an international knowledge network, the role of the English language, and other forces beyond the control of academic institutions” (Altbach, Reisburg & Rumbley, 2009:7). This is seen as a key force and a context that is fundamentally reshaping the role and institutional structure of higher education (Maringe & Foskett, 2010).

Globalization has driven a large scale of student mobility through a greater awareness of information, opportunities, and increased propensity to travel. Neither education nor knowledge is restricted by the boundaries of nation-

states and/or regional cultures. Academics and students can select from a vast array of educational modes and research universities on a global scale. Cross-border education, including real and virtual movement of students, academics and educational programs from one country to another has become prevalent. According to the statistics shown by Gruzuz (2008; 2011), the total enrollment of international students in the whole world was only 0.11 million in 1950. The period from 1995-2010 witnessed a doubling of international student numbers from 1.35 million to 2.75 million.

The large scale of international student mobility is associated with the rise of the knowledge-based economy and the changing governance structure of higher education (Mok & James, 2005). In a knowledge-based society, talents and innovation are crucial for economic development and competitiveness. Driven by the requirements of economic and national development, the later part of 20th Century has witnessed a trend of massive growth of higher education in many nation-states. At the same time, there has been a trend toward decentralization and financial retrenchment in higher education. For instance, some industrialized countries, such as the United Kingdom and the United States, adopted neoliberal policies to restructure their public spheres (Calleja, 1995). In the sphere of higher education, the adopted polices concentrated on financial cuts (Beerkens, 2003). With the enlarged scale of higher education, the Chinese government decentralized its regulatory model from a “state control model” to a “state supervision model” (Mok, 2001; 2005). Universities have been pushed to seek and compete for new resources.

Production and transmission of knowledge are two crucial resources. As early as the late 1970s, Lyotard (1984) already predicted that knowledge would be produced for exchange just like any other good in the market. The commodification of knowledge allows universities to transfer the value of produced knowledge and to gain resources from related industries. Meanwhile, the privatization of higher education under neo-liberalism changed how education is viewed. In 1995, education was officially recognized as a type of tradable service in the General Agreement on Trade in Services of the World Trade Organization. This recognition enabled universities to sell their educational services for profit (Moe, Bailey & Lau, 1999). Consequently, the increasing numbers of international students has shaped the international education market (Hemsley-Brown & Goonawardana, 2007).

This description of higher education as an industry highlights two profound changes. Firstly, it recognizes the market dynamics of higher education. Universities have to behave like “quasi-corporate entities” (Gumport, 2000:71). They provide educational services and produce knowledge goods with students as the clients and consumers. As a result of marketization, various types of university and discipline rankings have become popular. These league tables quantify the quality of the “positional goods” (Hirsch, 1976) of universities and provide a reference for potential consumers in the market. The result of these ranking systems is increased inter-university competition, as universities jostle for the limelight, competing for better professors and students in their quest for recognition.

Secondly, the globalization and the internationalization of universities requires not just inter-university competition but also exchange and collaboration. Academic communication in the form of research collaboration as well as student exchange requires common elements to facilitate such activities. For instance, the rise of English as the academic language is a pertinent example of communication currency, while the mutual recognition of credentials and degrees is a prerequisite for exchange programs between universities. Increased international collaboration tends to lead to the formation of international norms, standards and systems to facilitate processes of exchange.

It is worthwhile to point out that increasing market elements do not necessarily lead to a decreasing role of the state in higher education. To designate higher education as an industry also reflects the attempt of government to regulate its development (Peterson et.al, 1997). The national institutional environment for any higher education system remains significant. However, the impact of globalization has increased international influences on universities. Universities nowadays, as indicated by Marginson (2006), are operating in a complex multi-level environment, where inter-institutional dealings affected by global flows and international networks, national systems shaped by law, history, resources and local conditions are combined.

Academic work is inevitably affected. Internationalization, with the aim of incorporating international dimensions into organizational structures, educational and academic work, was first proposed by some universities in

industrialized countries (e.g., Australia and the United States) where the domestic higher education systems were impacted by the flow of international students in the late 1980s (Knight, 2004; Brandenburg & De Wit, 2010). The past two and half decades have witnessed the widespread adoption of this concept—the internationalization of higher education (IHE) by governments and universities that are eager to adjust their systems to the rest of the world.

Despite the wide adoption of the concept, the precise definition of IHE is still under negotiation.[30] There are some agreements on the definition worthy of being highlighted. IHE is regarded as a response to globalization (de Wit & Knight, 1996; Altbach & Teichler, 2001; Altbach & Knight, 2007). It is a process of change that is voluntarily initiated by universities and governments to cope with new situations in the context of globalization. Internationalization emphasizes international cooperation and collaboration to facilitate coping and respects the individual situation of any given university and country (Knight, 1997; Scott, 1998; De Wit, 2002).

In practice, efforts from the university to state level that involve international

[30] Knight (2004) reviewed several definitions of IHE and proposed a frequently quoted version: "internationalization of higher education is the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education". Examples of IHE definitions reviewed by Knight are: "the multiple activities, programs and services that fall within international studies, international educational exchange and cooperation" (Arum & van de Water, 1992); "a change process from a national higher education institution to an international higher education institution leading to the inclusion of an international dimension in all aspects of its holistic management in order to enhance the quality of teaching and learning and to achieve the desired competencies"(Soderqvist, 2002); "specific policies and programs undertaken by governments, academic systems and institutions to cope with or exploit globalization" (Altbach, 2004).

elements and are made with the aim of dealing with requirements and challenges induced by the impact of globalization are often seen as initiatives of internationalization (Van de Wende, 1997). These efforts cover a wide range, including policy changes, organizational restructuring, curricular modification and so on. Although IHE is seen as an on-going process, researchers have noticed that internationalization is often viewed in terms of measurable objectives (de Wit, 2011). The level of internationalization is often measured by indicators such as the number of international students and faculty, the usage of English as the instruction language, and international reputation, and it increasingly drives competition among universities.

I consider IHE to be a concept that refers to the on-going process of institutional change of higher education in response to social changes brought on by the process of globalization. Meyer and his colleagues (2007) consider higher education as a "world institution" with scripts that have been institutionalized over centuries and enacted in local situations. The process of globalization has posed and is posing new challenges that motivate this "world institution" to incorporate international collaboration and competition in knowledge transmission and production into its institutional structure.

Although this is a thesis which deals with globalization as a central dynamic of change in my study, I did not intensively engage in the globalization literature because that globalization in the current research is seen as the background of TCM restructuring rather the focus of the study. Therefore, my treatment of

globalization in the thesis is in relation to the internationalization of higher education and how it creates room for exercise of agency.

IHE is regarded as an adaptive response to globalization. As highlighted by Knight, “internationalization is changing the world of higher education, and globalization is changing the world of internationalization” (Knight, 2008:1). However, the concept of globalization is often used with the assumption that it is a coherent external force while its material and discursive dimensions are largely neglected. Research from critical studies of globalization interrogated the commonplace understandings of globalization as a disembodied, top-down and “non-negotiable” process. Khondker (2004) and Robertson (2012) indicated that instead of a singularity understanding, the meanings of global influence are assigned by local culture. The work from Larner and Walters (2004), James and Steger (2014) further suggests that the institutional practices in the name of globalization are not inevitable but are assembled by actors mobilizing particular imaginaries to further their interests. Globalization can be used as a rhetoric discourse (Hay & Rosamond, 2002). Therefore, in order to understand the formation of TCM remodeling pathways, it is important to take a close look at the agency of the actors - in particular how the actors in higher education institutions translate the need of internationalization and mobilize resources to achieve their interests.

The understanding of IHE also requires more specific investigations that take disciplinary differences and *glonacal* conditions into account. The nature of this

institutional change process is complex due to the multi-dimensional and multi-level nature of higher education. This multi-dimensionality is in terms of a knitted system of enterprises (universities) and disciplines. Universities function as institutions that organize and manage two different sets of activities (education and research), while disciplines link up faculty under the same domain and connect to their respective professions and industries (Clark, 1983; Gumport & Snydman, 2002). In this case, universities as loci of the higher education system are by nature heterogeneous (Kzaatz & Block, 2008). The multi-level characteristics were reviewed earlier and conceptualized as "glonacal" (global-national-local) interactions by Marginson (2004).

To a large extent, this study regards the institutional change of the TCM discipline as a part of the general higher education restructuring process, yet with characteristics particular to the TCM discipline. As has been reviewed earlier, the knowledge tradition of TCM is very different from modern knowledge systems. The former has no intrinsic intention of expansion, while the latter seek to test validity and rationality cross-culturally. For the disciplines that emphasize universal validity, internationalization corresponds to the intrinsic intention of testing validity. With this in mind, it is not difficult to understand why disciplines such as science and business actively involve and promote the process of internationalization. However, for a local discipline like TCM, internationalization is likely a response to extrinsic demands and an adaption to changes in its institutional environment.

3.2 Researching Changes in TCM Made in the Name of Internationalization

3.2.1 Analytical Level and Theoretical Lens

The research focus of this study is the knowledge institutions of the TCM discipline—the formal and informal rules that govern the production and transmission behaviors of TCM practitioners, examining how these rules are maintained or change under the impact of globalization.

As reviewed in Chapter 2, the knowledge production and transmission activities of TCM are influenced by two sets of knowledge institutions. The literature from historical and anthropological studies suggests that there might be a certain level decoupling between state-level regulation and the daily practices of TCM practitioners. The policy review demonstrates revolutionary institutional change of TCM under the impact of scientific and modern knowledge traditions. Observation of how the policies have been implemented shows some preservation of the traditional methods of knowledge production and transmission. This gap calls for a meso-level perspective that allows further investigation of the interfaces between institutional environments and the practices of TCM representatives. Therefore, an organizational level analysis is able to help fill the gap.

Sociological studies of scientific knowledge have highlighted the role of organizational setting and social context in knowledge production. Their findings suggest that aspects of scientific knowledge work, such as choice of

research topic and the criteria of knowledge production, are partly socially constructed and affected by organizational settings via information flow and resource allocation (see work from Latour & Woolgar, 1979; Knorr-Cetina & Mulkay, 1989; Button & Sharrock, 1998). Situating the disciplinary development of TCM in university organizations allows a ground-level analysis, which acknowledges that knowledge production and transmission are not only about issues of epistemology, but may also involve institutional and social environments, resources and interests of various stakeholders and actors.

A neo-institutional approach, which offers a distinctively sociological view of the relationship between organizational structures and their environment, provides a suitable theoretical lens for this study. In an institutional framework, beliefs and behaviors of organized individuals are studied through how they interact with the environment where they are situated (Pfeffer & Salancik, 1978). In particular, this lens benefits the current study by "direct[ing] one's attention to the cultural scripts and organizational rules built into the wider national and world environments that establish the main features of local situations" (Meyer, et. al, 2007: 188).

Neo-institutional theory is founded upon the recognition that adopted structures and rules are not necessarily chosen out of consideration for increased efficiency of organizations, but can be chosen in an attempt to maintain organizations' legitimacy in the environments where they are

situated (Meyer & Rowan, 1977).[31] This recognition is crucial for the current study. As mentioned earlier, the nature of TCM knowledge is not intrinsically expansive. The extrinsically driven change of TCM under the impact of globalization requires an analytical lens that includes the motivation of *legitimacy*—considerations with regard to maintaining appropriateness as a formal discipline within internationalizing higher education systems. The organizational level analysis also allows an examination of *decoupling*—the fluid relationship between formally adopted policies or structures and the actual behaviors of individuals.

Furthermore, how can knowledge change be reflected in organizational change? Drawing from the new sociology of knowledge perspective (Swidler & Aditi, 1994), researchers in higher education studies have indicated that "changes in what counts as knowledge are reflected in the bureaucratic and programmatic structures of universities" (Gumport & Snydman, 2002: 376; see also from Clark, 1983). The university is the primary arena that creates, evaluates and transmits knowledge. Its structure—the organization of educational and academic work, manifests the criteria of what counts as legitimate knowledge as well as the classification of knowledge. Therefore, this dissertation traces changes in curriculums, research orientations and organizational structures in the name of internationalization and analyzes the effects and implications of these

[31] Legitimacy here refers to "generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate, within some socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995:574). The legitimacy consideration drives organizations to conform and to adopt certain practices in a symbolic way (Meyer & Rowan, 1977).

organizational changes for knowledge work.

3.2.2 From the Perspective of Diffusion to Translation

Neo-institutionalism looks at how certain institutional practices or principles diffuse to the whole population of organizations in a field (DiMaggio & Powell, 1983; Strang & Meyer, 1993). Abundant research, especially quantitative research, has been carried out to demonstrate the homogeneous pattern of institutional structures—institutional isomorphism in an ever more globalized world (Meyer, et. al, 1997). Neo-institutionalists have argued that organizations within the same field tend to adopt a certain dominant structure to gain legitimacy and/or maintain efficiency (DiMaggio & Powell, 1983).

From this perspective, the emergence and wide adoption of the concept of IHE can be seen as a process of diffusion. This concept of IHE was originally proposed by the universities that were feeling the greatest impact of international student mobility. These universities developed this concept with the aim of reducing conflicts, which were brought up by the new conditions of globalization, through modifying organizational structures and influencing the behaviors of academic workers. As the concept has traveled further and spread, more and more universities and disciplines have adopted the idea of IHE. It has been gradually institutionalized and become a legitimate part of higher education institutions. The establishment of legitimacy urges those who have not adopted this concept to conform via adoption (Tolbert & Zucker, 1983).

Neo-institutional studies have identified three types of pressure that drive the adoption of a diffusing institutional practice or principle: the pressure from coercive regulation, from peer organizations and from professional norms (DiMaggio & Powell, 1983). Research findings from higher education studies suggest that the spread of IHE is often accompanied by all three types of pressure. For instance, scholars who are interested in Asian higher education systems have noticed that state governments often play a crucial role in promoting and guiding the process of IHE and forming particular policies to achieve national agendas (Mok, 2003; Deem, Mok & Lucas, 2008). Universities in mainland China and Hong Kong may feel coercive pressure requiring internationalization. Peer pressure usually comes from competing universities. When some leading universities or departments adopt a given policy of internationalization, it is likely to drive mimetic behaviors from those other universities with similar goals or situations (Halpin & Troyna, 1995; Haunschild & Miner, 1997). Besides, universities have an innate international mission, as the social mission of education requires teaching everyone, including foreigners (Kerr, 2001). International exchange is considered a normative aspect of the academic and education profession. According to this professional norm, universities should facilitate the process of IHE.

Diffusion to an extent explains why and how IHE become prevalent among universities within a relatively short period. On one hand, multiple mechanisms of pressure generate imperatives that urge universities and disciplines to engage in the internationalization process. There seems to be no reason for

them to decline internationalization. This is especially the case when globalization has increased competitiveness within the field of higher education. On the other hand, a university or department's adoption of certain practices of internationalization may be driven by external pressures and considerations of legitimacy. This reminds us to pay attention to the motivations for internationalization.

However, an understanding the literature on the diffusion process is not sufficient for this study. The perspective of diffusion has limitations. It mainly applies to situations where the given principle or practice structure that is being spread is well defined and does not require much interpretation and modification (David & Foray, 1994). The response of organizations is often simply categorized as adoption/acceptance or rejection/resistance in empirical studies (Oliver, 1991; Lounsbury, 2001). The perspective of diffusion falls short of capturing the complex nature of IHE and TCM's response incorporating characteristics particular to the discipline.

Internationalization is a relatively autonomous and loosely monitored process. As reviewed in the previous section (Section 3.1), internationalization covers a wide range of practices and strategies. Many of the practices are guided by quantitative goals, such as number of international students, publications in international journals and signed agreements for exchange and collaboration. Universities and departments are able to choose from existing practical templates or even to create new approaches to achieve these goals based on

their individual situations (de Wit & Knight, 1996; Altbach, 2004). In this case, instead of simple adoption or rejection, internationalization requires a process of strategy selection, formation and implementation.

Furthermore, the institutional environments that face TCM actors are heterogeneous. As a formal discipline at universities, TCM is regulated by domestic higher education systems. Its educational work is influenced by the expectations of students, who are the consumers of the educational service. The research work of TCM follows the norms of its academic community. As an applied discipline, both educational and research work of TCM are linked to the medical standards in the related industries (i.e., pharmaceutical industry regulations and state regulation of medical professions). Under the impact of globalization, international stakeholders have become involved in exerting expectation on the way TCM knowledge is produced and transmitted.

Moreover, there is not necessarily agreement among these stakeholders on guiding principles for how TCM should be internationalized. For instance, the medical systems require TCM to be further standardized and examined by scientific methods, due to medical regulation considerations. Thus, the parts of TCM that have been scientifically validated are able to circulate to a wider range of international users. The TCM practitioner community and consumers who put weight on the effectiveness of treatment call for reform of university training and the amelioration of the overwhelming pressure on TCM to scientize. Other competing rationales that underlie the two sets of knowledge

tradition will be demonstrated later in the data chapters.

The internationalization of TCM represents a situation where actors at universities are required to respond and adapt to a pluralistic institutional environment in which there are competing rationales underlying change. There is as yet no dominant template for TCM internationalization. TCM actors have to develop new institutional responses or deploy existing practices from other disciplines. In this case, the perspective of diffusion is not able to explain the mechanisms of how institutional responses have been formed, or to capture possible variation (Brusson & Olsen, 1993).

To address the explanatory question of this study—an understanding of the mechanism of change or maintenance in TCM knowledge institutions, there is a need to borrow the notion of "translation" from Scandinavian Institutionalism. The "translation" metaphor in institutional research refers to an interpretation of the diffusing idea or institutional practice (Czarniawaska & Sevon, 1996). This perspective is sensitive to individual organizational situations and their context (Boxenbaum & Pedersen, 2009). It thus allows a close investigation of the mechanism of change—how new requirements from the environment are incorporated into the formal structure of an organization.

In this study, "translation" refers to the process of how actors in universities (e.g., policy makers and TCM professionals) translate the perceived needs and pressures of internationalization into organizational structures (i.e.,

organizational structure, policies and standards for educational and research activities). In particular, translation is a process of meaning making and objectification of these meanings (Czarniawaska & Joerges, 1996). For a local discipline like TCM, why there is a need for internationalization; what does internationalization mean for the knowledge and how is the discipline internationalized? Translation consists of recognizing a need, balancing the external and internal situation of the organization and forming a response—a new goal, strategy or practice for change.

The translation perspective brings agency into the discussion of institutionalization and institutional change (Lægreid, 2007). In fact, there has been a long debate on agency among neo-institutional researchers. A group of researchers regards the agency of individuals as restricted by the institutional environment, since the institutional structure defines roles, shapes beliefs and guides the behaviors of individuals (Scott, 1995, 2001; Wooten & Hoffman, 2008). An understanding of "embedded agency" has led institutional researchers to focus on the stability of institutions and has resulted in theoretical weakness for explaining the processes and mechanisms of institutional change and deinstitutionalization (Perrow, 1985; Hirsch, 1997; Lawrence, 1999).

With the introduction of the concept of the "institutional entrepreneur" by DiMaggio (1988), many studies followed that tackle the issue of institutional change and its relation to agency. "Institutional entrepreneur" refers to one

actor or a group of actors who are able to leverage resources to achieve their goals and interests and change existing institutional practices or create new ones (Garud, Jain & Kumaraswamy, 2002; Marguire, Hardy & Lawrence, 2004). Studies of institutional entrepreneurs often remind us that the agency of actors is simultaneously enabled and constrained by the environment (DiMaggio, 1988; Meyer, 1996; Campbell, 2004). Along this line of inquiry, research has been devoted to the enabling conditions for agency (Battilana & D'Aunno, 2009).

The level of heterogeneity in a situation has been identified as an enabling condition for agency (D'Aunno, Succi & Alexander, 2000; Lounsbury, 2007). The pluralistic interests of stakeholders can increase the possibility for incompatibility. Incompatibility requires actors to exercise agency and provide institutional responses to maintain organizational stability. As noted by Meyer (1996), research on agency often neglects the reality that there are some empowered actors and others whose agency is not exercised or has been oppressed. In addition, actors in different positions may interpret pressures in different ways and give priority to their own interests. Research on the mechanism of institutional change can be enriched by analyzing the reasons and conditions that some succeed and some attempt but fail to achieve their interests.

Based on the existing literature, my research seeks to understand the mechanisms for TCM disciplinary change through locating key actors or groups

of actors in the translation and response process. Through analyzing their positions, access to resources, interpreted meaning and proposed organizational solution for internationalization, I intend to identify the key factors that empower or repress the exercise of agency.

3.2.3 Typology of Organizational Adaptation

The analysis of the process of translation aims to address the explanatory question of the mechanisms of change in TCM knowledge institutions or the maintenance of TCM beliefs and practices. With regarding to the exploratory research question, investigation needs to be done into organizational restructuring and its effects. In the case of pluralistic environments and conflicting rationales, what institutional responses have been produced to deal with the situation? Do the responses tend to demonstrate isomorphism or variety? What are the implications of these responses and implementations for TCM knowledge?

Previous literature has discussed the difficulty of organizational response in pluralistic institutional environments. Since organizations need to cope with pressures from related institutional sovereignties and gain legitimacy, the more diverse the authorities, the higher the possibility of conflict and incompatibility (Meyer & Scott, 1983). For instance, stakeholders in different institutional sovereignties may operate according to competing rationales (Lounbury, 2007). This requires organizations to be sensitive to shifts in rationales. The situation

is tougher if these competing rationales have radical differences and are difficult to reconcile. Such a situation means that conforming to one rationale for legitimacy may lead to failure according another. To a large extent, the two sets of knowledge tradition—one characterized by local culture and the other underpinned by science, are in conflict with each other and thus represent a tough situation.

In a chapter written by Karraz and Block (2008), they proposed four types of organizational response to a heterogeneous environment. The first type of solution is to reduce the complexity of the situation. This refers to the strategy of some organizations, which try to reduce the number of responsible stakeholders by marginalizing some of the institutional sovereignties. The second type of organizational response relies on the rationale of "reining". This strategy seeks to find means of cooperation and connection to deal with heterogeneity. The third sort of solution represents the extreme situation where the organization itself claims it is an institution. This means the organization privileges itself and claims the authority to define the roles and standards of behavior. The fourth type is infrastructural pluralism. This requires the organization to compartmentalize its structure and to institute different rationales, standards and rules to gain legitimacy from different stakeholders. The distinction between the first three types and the fourth one is the unification of standards/rationales. The former three all tend to develop a consistent system of standards, although the particular way the system is formed varies. The fourth type, however, allows the coexistence of conflicting

standards/rationales within one organization.

Insufficient research has been devoted to the association of conditions (e.g., the characteristics of the heterogeneity of an institutional environment and organizational features) with the different types of response. It seems the first type of response may be applied when the heterogeneity in the environment coincides with clear power relationships. If there is a significantly more powerful authority among the stakeholders, it is easier for organizations to marginalize the relatively less powerful ones. For the second and third type of response, high status and confidence of the organization could increase the possibility of using these. A condition that leads to the third type could be irreconcilable requirements from salient institutional sovereignties. For the fourth type of response, pluralistic infrastructure requires sufficient resources and a relatively large organization. At the same time, the relative importance of stakeholders is likely to be even.

The three selected universities in this study provide two scenarios for comparison, which allows me to discuss both the issues of institutional conditions and response types. The two cases from China—BUCM as a TCM specialist university and the TCM department at PKU, represent the scenario in which the size and type of organizational unit are different while both TCM units share the same environment. The comparison between the TCM units at PKU and HKU represents the situation in which the organizational size is similar while the two institutional environments (both internal and external) differ.

After analyzing how these universities have dealt with the two sets of knowledge tradition in the process of internationalization (in particular curriculum and research standards), I will provide a typology of their responses and further discuss the process of response formation in relation to the translation process and organizational conditions.

3.2.4 Coupling and Decoupling

An important part of this study is how changes made in the name of internationalization have been implemented. This reflects to what extent internationalization policies actually affect the behaviors of knowledge producers. Given the externally driven internationalization of TCM and the historically and culturally embedded nature of the knowledge that creates difficulties for cross-cultural expansion, it is important to consider the situation of decoupling. The notion of decoupling refers to a situation where an organization adopts certain structures yet does not implement the real effects of the structural work (Meyer & Rowan, 1977). This notion draws attention to the gap between formal institutional structure and ground-level practices.

The existing literature indicates that decoupling can be a good strategy for coping with heterogeneity within institutional environments (Ruef & Scott, 1998; George et. al, 2006; Aurini, 2006). Since organizations often perceive multiple pressures, adopting practices and decoupling some of them could help with gaining legitimacy and maintaining internal stability. It thus is

important to identify whether decoupling is a strategic response or unintended consequence. In neo-institutional studies, a university has been characterized as a “loosely coupled” system, in which its technical environment is not closely coupled with its institutional structure (Weick, 1976). This means that university structure can function as a buffer zone between pressures from its environment and its actual internal behaviors (Meyer, 1981). If decoupling is a strategy, it reflects the intention of the actors to maintain the original way of doing things. In this case, decoupling is a part of the organizational response. If it is unplanned, it could reflect resistance from those who implement the organizational change.

How can we know if decoupling is planned or unplanned? In a review of the mechanisms of institutional change, Campbell (2004) highlighted two rationales for institutional change, which are not mutually exclusive: the symbolic and substantive rationales (see also in March & Olsen, 1989). The symbolic change is associated with the consideration of appropriateness, while the substantive change follows instrumental logic. The former aims to gain legitimacy from involved members such as stakeholders and practitioners inside the organization. With legitimacy as the major consideration for institutional change, there is a possibility of decoupling at the practical level. In contrast, the latter depends on effective implementation and thus has a lower possibility of decoupling.

Given this insight, the supportive structures for any institutional change, for

instance, the monitoring, evaluation and incentive systems, could be crucial indicators of the rationale(s) for change. If a university adopts a certain practice without developing a related monitoring structure, it implies the possibility of and gives room for decoupling. On the other hand, a severe monitoring system is often associated with close coupling (Fiss & Zajac, 2004). Therefore, in order to understand the reason for decoupling, it is important to evaluate supportive structures for the implementation of the policy.

Another issue that needs attention is the relationship between decoupling and translation. Most of the previous research considers decoupling as a type of organizational response to the diffusion of a given practice—the response of conformity but not implementation (Oliver, 1991; Boxenbaum & Jonsson, 2008). However, in situations such as the internationalization of TCM, where the organization possesses a certain level of agency in the selection and creation of practices, the emergence of decoupling needs to be investigated in relation to the translation process. In other words, the actors who are undertaking the translation and response matter.

At universities, the actors who participate in the translation and response formation process can be divided into two groups: the administrative personnel and the academic personnel. The two groups of actors are likely to be guided by different principles in making an internationalization prescription for TCM. Administrative actors follow an organizational logic. They tend to interpret the need for internationalization from the perspective of gaining

legitimacy from the institutional environment and/or increasing the overall competitiveness of the university. In the case of increasing competiveness, their considerations for the selection and formation of internationalization strategies and policies could be the internal efficiency of the organization (e.g., allocating resources to maximize results, while minimizing costs and effects of change).

Academic personnel are characterized as actors with “double loyalty” (Clark, 1983). On the one hand, their identity is shaped by the home university. On the other hand, their beliefs and behaviors are closely associated with the norms of their particular discipline. Moreover, they are the practitioners of the organizational response. The internalization of a certain principle requires a connection and appropriateness from the perspective of their discipline. In this case, the deeper the academic actors are involved in the meaning making and response formation process, the less likely their behaviors are to decouple during implementation. This hypothesis does not apply if decoupling is a strategic response. The power relationship between the two groups of actors can also be a predictor of decoupling.

3.3 Summary of Analytical Framework

In summary, this study seeks to understand the change of the TCM discipline made in the name of internationalization. The change refers here to how two competing knowledge traditions are maintained or reallocated in

organizational structures under the influence of globalization and how the modified organizational structures change the real behaviors of TCM practitioners.

I employ a qualitative case study approach to analyze disciplinary change at the organizational level. In particular, the analysis focuses on three aspects of change at universities. The first is the internationalization of the TCM curriculum, including program design and guiding principles for teaching, learning and evaluation. The second aspect is research orientation—whether and how the research topics and methods of TCM change to better communicate or compete in the international academic community. The third aspect is the supportive systems that monitor and evaluate the implementation of changes in education and research.

With regard to the exploratory research objective, I address the question of how the TCM discipline has changed to adapt to the internationalizing environment, by providing a typology of organizational responses for internationalization for the selected cases. This typology is based on how these universities have dealt with the competing and conflicting rationales (in this case, the two sets of knowledge tradition) that influence the changes in TCM education and research. The basic hypothesis is that there could be two broad types of organizational response: one is infrastructure pluralism, which places conflicting knowledge standards in segmented organizational structures; the other is developing a unified system by conforming to one rationale or

hybridizing different rationales.

The explanatory question of the mechanism of change of TCM knowledge institutions is tackled through analyzing the success and failure of actors in exercising agency in the process of translation and response formation. My research identifies the actors who have successfully put their ideas into organizational action, investigates how the organizational practices/solutions are formed by interpretation of environmental pressures and balancing these with the internal situation of the university, and analyzes what empowers these actors and their ideas and sidelines competing proposals.

In addition, I further analyze the implementation of internationalization in the daily practice of TCM professionals. The degree to which the adopted policies and rules have been implemented is used to justify the organizational behavior of adaptation. The relative difficulty of implementation allows us to examine the validity of the organizational response to internationalization from the perspective of TCM knowledge practitioners. Through interviews and observations of the implementation of adopted internationalization practices, my research explores the reasons for coupling and decoupling in relation to organizational responses and the nature of TCM knowledge. Through comparison of the three selected universities, I intend to address certain principles of the institutionalization of the local knowledge transmission and production and to draw some conclusions regarding its future in the international knowledge system.

Chapter 4

BUCM: A Leader in its Discipline and a Pioneer of Internationalization

4.1 Significance of the Case

BUCM is presented as the first case among the data chapters. It is used as a baseline for comparison among the three selected universities for two reasons. Chronologically speaking, this university was among the first group of TCM higher learning institutions to be established. Its establishment not only marked the entry of this traditional form of knowledge into the modern higher education system, but it also witnessed how the discipline was reshaped in order to fit into the system. The university played a crucial role in defining the academic norms of formal TCM knowledge. As the oldest TCM academy, this type of institute has had a profound influence on other universities that later embraced the TCM discipline. The academic professionals at PKU and HKU mostly received their TCM training at these early specialist universities.

Secondly, as a leader in its discipline, BUCM has received high external demand for TCM knowledge. The developmental history of the university has tracked the adaptation process of the discipline as it responds to changes in the related institutional environment. The structure of the university largely reflects the dilemmas and new directions TCM has taken under the impact of globalization. In the introductory chapter, I hypothesized that the institutional changes at TCM specialist universities might show a high degree of respect for the

particular nature and culture of the discipline and resist certain institutional pressures. However, the research findings in this chapter present a different story. The knowledge production and transmission activities at this university have been heavily influenced by multi-dimensional and double-layered institutional imperatives.

4.2 Brief Introduction to the University

BUCM, formerly known as the Beijing Academy of Chinese Medicine, was founded in 1956. The Academy was upgraded to university status in 1993.[32] It is now a key national university under the direct supervision of China's Ministry of Education, and is jointly administered by the Ministry of Public Health, the State Administration of Traditional Chinese Medicine and the city government of Beijing.

As a specialist university, all the subjects taught at BUCM are related to TCM. The university consists of 10 schools and divisions (including a School of Preclinical Medicine, a School of Chinese Materia Medica, a School of

[32] During the 1990s, China launched a second wave of higher education restructuring, which was guided by the principle of "co-building, adjustment, collaboration and amalgamation" ("共建,调整,合作,合并"). Many universities and specialist colleges were reorganized and merged into comprehensive universities. However, most of the medical higher education institutions remained in the form of specialist universities rather than being 'downgraded' to medical schools or departments. The Beijing Academy of Chinese Medicine and Shanghai Academy of Chinese Medicine were the first two institutions that were upgraded to universities. The majors at BUCM began to diversify from that time. There have been several TCM related, non-medical majors added (e.g. Nursing, English language for TCM, Medical Management and Law).

Acupuncture, Moxibustion and Tuina, a School of Management, a School of Nursing, a School of Humanities, a Graduate School, an International School, a Division of Hong Kong, Macao and Taiwan Students, a School of Continuing Education and Schools of Distance Education) and 4 teaching hospitals and clinics (including Dongzhimen Hospital, Dongfang Hospital, the Third Affiliated Hospital and Guoyitang TCM Clinic).

In terms of university size, BUCM hosted 9,279 full-time degree students in the year 2013. Of these students, 34.2% of them were postgraduate students. The percentage of non-local students (including international students and students from Hong Kong, Macao and Taiwan) was 13.3%. There were 4,422 staff members at BUCM. Of these staff members, 972 were full-time faculty.

The university identifies itself as a higher education institution concentrating on TCM education, research and medical care. The mission of the university encompasses four aspects: "To preserve TCM as a vital part of traditional Chinese culture; to train outstanding medical professionals; to further develop our understanding of TCM as a medical science, useful for both the prevention and the treatment of disease; and to promote the study and practice of TCM in China and around the world." The university's goal is to develop into "a distinctive, high level and internationally renowned research university" ("有特色，高水平，国际知名的研究型大学").[33]

[33] The information on BUCM in Section 4.1 was obtained from the BUCM website on February 2014: http://www.bucm.edu.cn/en

Since its establishment, the university has been seen as the leader in the TCM discipline. In mainland China, being included in one of the two national projects—Project 211 and Project 985—is often considered as an indicator of the quality and reputation of a university.[34] Among all the TCM specialist universities, BUCM is the only university that was included in Project 211 and recognized as a Project 985 Innovation Platform. However, the absence of other TCM specialist universities in the two national projects reflects the low status of this discipline in the domestic higher education system. Despite its leading position in TCM discipline, BUCM is indeed ranked in the second tier of universities in the country.

4.3 Formation of Internationalization Strategy

4.3.1 The Reverse Globalization Flow of Students

On the website of BUCM, internationalization is prided as one of the distinguishing characteristics of the university.[35] My interviews with

[34] The higher education in Mainland China began a massive growth process in the mid-1990s. According to the statistics released by the Ministry of Education, between 1999 and 2009, the number of universities in China increased from 597 to 1,090, while the number of tertiary level students increased from 4.23 million to 21.45 million. With the increased number of universities and students, there was a significant retrenchment of state level financial support and an increase in provincial and city level responsibility (Hawkins, 2000). Two national projects, Project 211 and Project 985, were launched by the government to evaluate and select a number of universities. The selected key universities would receive financial support from the central government. Universities therefore competed with each other to be included in these projects. At the same time, they were pushed to seek additional resource sources.

[35] In the website of BUCM, it says "one of the characteristics of BUCM is the focus on establishing an international platform for Chinese medicine exchange and cooperation". The information was retrieved from:
http://www.bucm.edu.cn/portal/media-type/html/group/en/page/default.psml/js_pane/P-

representative university officials, faculty members and students suggest that there is shared agreement on this international characteristic of BUCM. Almost all my interviewees used the term "university tradition" or "distinguishing feature" to describe the internationalization of BUCM. They believe that the university is a pioneer in the current wave of internationalization of higher education in China (See excerpts from BUCM_Official4_1):

> We have a long tradition of internationalization. Or I would say it has been a characteristic of the university since its establishment. BUCM started taking in foreign students during the second year of its existence. More importantly, unlike the other universities where their international students are most likely short-term, non-degree students, we began degree programs [for international students] in the 1990s. In 2009, there were only 13 universities that hosted over 1,000 degree students. Our university was listed as the 6th among the 13 universities. Many universities in China only started their internationalization process recently. In this sense, one could say that BUCM is a pioneer of international higher education in China (BUCM_Official4_1).

The description of an international tradition at BUCM is largely based on educational programs provided to international students. Figure 4.3.1.1 presents a general picture of international student enrollment at BUCM during the past five decades. The yearly enrollment of international students

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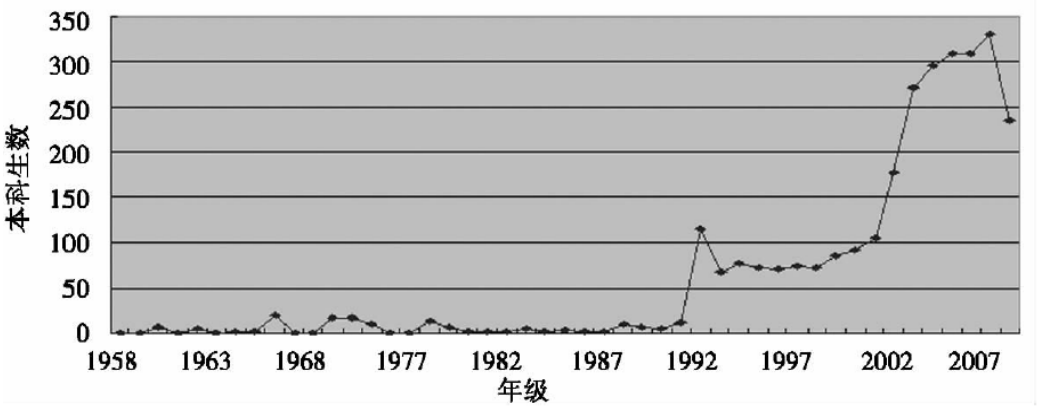
increased from 6 in 1958 to 337 in 2007 (Niu et.al, 2010). By the year 2010, the university had accommodated over 4,000 degree students and 14,000 non-degree students from 89 countries.[36]

Figure 4.3.1.1 Yearly Enrollment of International Students at BUCM (1958-2008)



Note: The lateral axis indicates the year and the vertical axis is the number of newly recruited international students.

Source: Niu et.al, 2010, retrieved online from: http://www.cafsa.org.cn/pdf/2010/10-D2.pdf

The view regarding BUCM as the pioneer of internationalization in China comes from a reading of reverse globalization mobility. After the reforms and opening up that began in 1979 and increased especially from the late 1980s, China became one of the largest sending countries in the world and suffered from "brain drain". Most of the universities and disciplines in China were not receiving or receiving very few international students at that time. However, in contrast to the overall pattern of student flow, TCM universities received a significant number of international students. In comparison with the previous

[36] Information source: BUCM_InternalDocumentNO.1

period, the number of international students at BUCM increased 5 to 6 times in the early 1990s, when the Chinese government liberalized policy to allow self-paid foreigners to enroll in the domestic universities (See Figure 4.3.1.1). TCM subjects became one of the most popular disciplines for international students in China (See BUCM_Offical1_1)[37]:

> They (international students) had always wanted to study TCM in China [since the acupuncture fervor in 1970s]. They believed that China held the *authentic knowledge* [of TCM]. However, the general policy of higher education [in China] was a barrier. Many of the students had to study in Hong Kong and Macao instead. …… The government issued a new policy, which allowed the self-paid students to study in Chinese universities in 1991. The international students began flowing into BUCM in 1992. …… Degree education became the main part of international education. Internationalization thus became an important task for our university from that time (BUCM_Offical1_1).

During the 1990s, BUCM saw significant international interest and demand for TCM knowledge. The international interest came not only from the individual level but also from the organizational level (e.g. non-governmental organizations and hospitals). For instance, the WHO was actively involved in promoting the usage of traditional medicine in less developed countries to

[37] By taking a China centric perspective, this study focuses on how TCM actors in China responded to the external international demands. It thus is not able to investigate the driving forces for the international students who came to study TCM in China during the 1990s.

improve healthcare. BUCM was invited to develop an international training curriculum for acupuncture with the WHO. Given the international interest, policy makers considered internationalization to be an important opportunity for university development. They experimented with different ways to promote the international dissemination of TCM knowledge and practice. However, many of these explorations encountered various levels of difficulty.

Two examples of such exploration were mentioned by my interviewees. During the 1990s, the university made efforts to open overseas hospitals/clinics. BUCM set up its first overseas hospital in Germany (See BUCM_Official4_2). However, operating a clinic/hospital of alternative medicine had a high-cost. Hospitals are required to operate based on local medical practice regulations. Since the medical status and regulatory policies on TCM vary among different countries, case by case adjustment is considered infeasible by decision makers at BUCM.

> As a public university in China, we are not allowed to set up branch universities in foreign countries. So we came up with this idea of opening hospitals. We thought it was a brilliant idea. Since foreigners are so interested in TCM, why don't we open hospitals in their countries? …… We started a hospital (TCM-Klinik Bad Kötzting) in Germany. That was a successful case. But the cost of the process was too high. Many issues were involved, [such as] legal issues with opening a hospital and practicing TCM. Operating medical institutes in foreign countries is not easy. …… Different countries have different

> policies with regard to TCM (BUCM_Offical4_2).

Another example is an international exchange program. BUCM has considered exchanging students with foreign partner universities. The interview quote from a university level official indicates that the purpose of such exchange from the perspective of BUCM is to improve students' knowledge of biomedicine (See BUCM_Official1_2). Since the curriculum for local students includes a significant proportion of biomedicine modules, policy makers at the university intend to exchange TCM training at BUCM with biomedicine training at foreign universities. However, very few biomedicine schools/faculty share mutual recognition of academic credentials and degrees with TCM specialist universities.

> Why would a student want to learn TCM in a foreign institute, when he or she can have high quality training at BUCM? …… For those foreign institutions that provide TCM training, they often send their students to learn from us. …… If there is a need for international experience, it should be Western medicine training. That is what they (universities in other countries) are good at, and that is what we should exchange for (BUCM_Offical1_2).

The results of different attempts at internationalization imply that on the one hand BUCM is endowed with unique advantages due to its TCM specialization; on the other hand, it is also restricted for the same reason. The cultural elements and image of TCM have attracted a large number of international

students to study the "authentic knowledge" in China. However, conflicts with internationally recognized standards for medical institutions (e.g., hospital operation, medical education, research and practice) to a large extent restrict the options for internationalization of TCM universities. As a result, the internationalization strategy at BUCM mainly focuses on bringing in international students and conducting internationalization activities "at home".[38]

4.3.2 Role of Government

The internationalization process at BUCM was initially driven by a bottom-up external demand for TCM knowledge. Much evidence, which will be elaborated in the following sections, can be found regarding how the university organization and curriculum has been changed in response to the changing population of international students. Nevertheless, the answers to questions regarding the motivation and goal of international student education suggest that the need to respond to international demand has been mediated by the state government.

As was reviewed in Chapter 2, the institutionalization of TCM was largely

[38] Knight (2004) indicates that efforts toward internationalization can be made "at home" and "abroad". By internationalization "at home", she refers to the changes and activities conducted in home universities such as the internationalization of teaching and learning and the recruitment of international faculty. For the "abroad" efforts, she suggests strategies such as sending local students and faculty abroad and opening branch universities overseas.

initiated by the state government. During the communist period, the higher education system in China was highly centralized. With limited ties to other countries, international academic exchange, including the exchange of students and researchers, was most likely to be facilitated at the governmental level. All of the international students at that time were selected and allocated by the central government (See BUCM_Official1_3):

> During the early years, there were only a few foreign students. Most of them came from North Korea and Vietnam—basically, communist countries with diplomatic relations to China. All of those students were government scholarship holders sent by their home countries' governments and allocated to our university by the [Chinese] government. …… Yes, I think the university at that time was not ready to take international students. …… Teachers at that time were still working on designing the curriculum and compiling textbooks. TCM was new to standardized formal education. Everything needed to be done from scratch. …… The only thing we could do was to learn through doing (BUCM_Official1_3).

In the last three decades, the higher education system in China has gone through a process of decentralization (Mok, 2004). Universities have a large degree of autonomy in recruiting international students.[39] However, the

[39] The government continues allocating international students to BUCM to this day. During my fieldwork at the university, two of my interviewees were international students who were bio-medicine doctoral students who came from the United States. Both of them were interested in TCM and successfully applied for a scholarship from *Hanban* (a Chinese government agency that provides scholarships for international students). They were assigned to BUCM by *Hanban,* even though there was not a specific program in

motivation and detailed recruitment plan for international students at BUCM shows a significant correspondence with the state agenda for internationalization of higher education and the international circulation of TCM.

More recently, the state government has become one of the major actors promoting the internationalization of higher education. In particular, the education of international students has been associated with the state discourse of *soft power*.[40] The state government considers the recruitment of international students to be a valid way of improving China's soft power. According to Zhang Xiuqing, the Head of the Department of International Cooperation and Exchange in the Ministry of Education, the main purpose of recruiting a large number of international students is to "expand the country's international influence and enhance its soft power".[41] In the year 2010, the Ministry of Education promulgated an official document entitled "The Scheme of Studying in China" ("留学中国计划") and revealed its ambition to attract

place for this type of student. A representative of the administrative staff used the term "paratroopers" ("空降兵") to describe the unexpected students from *Hanban*.

[40] The notion of *soft power*, which was coined by Joseph Nye (1990), refers to a country's "ability to get what you want through attraction rather than coercion or payment". After achieving a significant level of development in *hard power*, which is often equated with economic and military power, the Chinese government has begun to place heavy emphasis on the need to increase China's comprehensive power by promoting its soft power. Nye (2005) quoted a speech by Colin Powell, then Secretary of State of the United States of America, to demonstrate the relationship between education and soft power: "I can think of no more valuable asset to our country than the friendship of the future world leaders who have been educated here."

[41] Information retrieved from the website *Education in China* on May 4th 2013: http://edu.china.com.cn/2010-09/30/content_21045439.htm.

500,000 international students by 2020.

The past experience of BUCM naturally bridges the “international student education” (留学生教育) strategy with the state agenda of soft power (See BUCM_Official2_1). As the pioneer discipline for internationalization in China, TCM demonstrated its cultural attractiveness to international students. More importantly, as a medical discipline, it is able to reach beyond education. The following interview excerpt (See BUCM_Official1_4) demonstrates how training international students at universities may influence the regulation of TCM practice in other countries.

> As a TCM university, we bear special responsibilities. … China has a huge market to consume Chinese medicine. It would be much easier if we keep TCM within China. … We are responsible for using education at the university as a platform to disseminate Chinese culture, expand the influence of our country, and provide opportunities for the world to understand us. … This is something even universities like Peking and Tsinghua [the top two universities in China] are not able to achieve (BUCM_Official2_1).

> In the year 2000, there were over 50 Mexican students who graduated from our university. They went back and established an acupuncture association in Mexico. This association played an important role in facilitating legislation for acupuncture practice in Mexico. Because of their relationship with BUCM, the examination for practice licensure for acupuncturists in Mexico can be taken at

> our university. … Therefore, training one or two students may not make a difference. We need to train large numbers of international students to make a change (BUCM_Official1_4).

After the promulgation of “The Scheme of Studying in China”, the International Exchange and Cooperation Department of BUCM came out with a document entitled “Promoting Chinese Culture, Initiating a New Phase of TCM International Student Education” (“弘扬中国文化，开创中医药来华留学生教育新局面”) (BUCM_InternalDocumentNO.1). This document outlined the international student education experience gained by BUCM in the past five decades and set goals for the next phase, between 2011 and 2020 (See the excerpt below). The interview excerpt from BUCM_Official2_2 suggests that the recruitment plan for international student education is often associated with the goal of international recognition and expansion of TCM:

> [The university aims] to stabilize the population of international students. … In terms of the number of on-campus degree students, the plan is to achieve and maintain a level of 1,200 students per year. Over the next 10 years, the university intends to expand the postgraduate programs and enlarge the body of postgraduate students by three-fold. In order to provide qualified students for the undergraduate program, the size and quality of pre-university education should also be increased through the featured Chinese language program (BUCM_InternalDocumentNO.1, page 4).

> Currently, the body of international students is not diverse enough. Over 70% of the international students are from South Korea. We are making efforts [to diversify it]. Internationalization is not in terms of one or two nations. … We are targeting students from North America and Europe. This is because we believe that the development of TCM in the first world can better promote its development in other countries (BUCM_Official2_2).

The state government has been recognized as the most important stakeholder in the institutional environment of BUCM since the establishment of the university. This situation can be traced back to the lost legitimacy of TCM in mainland China and the change in relationship between the state and medicine from the early 20th century. Ever since TCM entered the national higher education system, BUCM has maintained a close relationship with the government. Located in Beijing, the university is able to garner extra support from the state government. For instance, high-level government officials in the Ministry of Education or the State Administration of Traditional Chinese Medicine are often invited to attend its events (e.g., opening ceremonies of TCM conferences and new programs). This behavior reflects the university's intention of gaining official support, which helps to consolidate the legitimacy of TCM and maintain the university's leading status among TCM specialist universities.

In addition, the institution of a public higher education system in mainland China has reinforced state power at the university level. The most obvious

manifestation of this is that the Ministry of Education has the power to appoint and remove university presidents. At the same time, a position of equal status, University Secretary of the Party Committee (“学校党委书记”), is appointed by the government at all the public universities in China. The decision makers at the public universities consist of government officials and university administrators. The administrative power within universities, through these appointments, often derives from state power.

4.4 Curriculum Design for International Students

4.4.1 An Overview of Programs Open to International Students

With such a diverse body of international students, in terms of cultural background, previous medical training and interest in TCM, how has the university designed programs to accommodate this diversity? Table 4.4.1.1 provides an overview of the educational programs for international students. The university provides a wide range of options, ranging from regular degree programs to special training and certificate programs.

Table 4.4.1.1 Programs Open to International Students in 2011

<table>
<tr><th></th><th colspan="2">Regular Programs</th><th>Special Programs</th></tr>
<tr><td rowspan="2">Undergraduate Programs</td><td>1-1.5 year Preparatory Program</td><td rowspan="2">5-year Bachelor Program in English
(1 major: TCM including acupuncture)</td><td rowspan="2">Joint degree programs with foreign universities
(e.g., Joint-degree program with Nanyang Technological University in Singapore)</td></tr>
<tr><td>5-year Bachelor Program in Chinese (2 Majors: TCM and Acupuncture, Moxibustion and Tuina)</td></tr>
</table>

Table 4.4.1.1 Continued		
	Regular Programs	**Special Programs**
Postgraduate Programs	3-5 year Master Degree (divided into research-focused and clinical-focused)	Joint degrees with foreign universities (Not open in 2011) Exchange programs
	3-5 year PhD Degree (divided into research-focused and clinical-focused)	
Non-degree Programs	1-2 year training programs (e.g., training programs in Chinese Materia Medica, Acupuncture and Moxibustion, and Basic Theory of TCM)	Special training programs based on agreements between BUCM and collaborative institutions

The university has held short-term training programs since its establishment. They aim to provide basic knowledge and techniques such as acupuncture training to foreign physicians who practice Western medicine. During the early period, the students were likely to come from other communist and third world countries. This type of short-term training continues to this day, thought the student body is more diverse.[42] In recent years, with an increasing number of countries that have their own TCM degree or certificate programs, some foreign universities have initiated joint programs with BUCM.[43] For both the short-term trainings and joint-degree programs, providing practical clinical experience is a major focus. Since the clinical experience of foreign students is

[42] Short-term training programs have a long history at BUCM and have attracted a significant number of international students. These programs were developed based on the "Western Medicine Studies Chinese Medicine" programs of the 1950s and used to be the primary international programs offered by the university. Since 1990s, the undergraduate degree program has outstripped the short-term training programs and become the main focus of the university. The training programs nowadays are less professional and more interest-based. According to the application instructions, anyone with an interest in TCM is eligible to enroll in the training programs.

[43] For instance, the university started its first joint program with Middlesex University in 1997. Nanyang Technological University started a dual-bachelor joint program with BUCM in 2005. Other examples include a PhD program collaboration with Mashad Medical University in Iran and exchange programs with Australian universities.

restricted by the availability of teaching clinics and legal regulations on TCM practice in their home countries, collaboration with specialist universities in mainland China provides opportunities to practice TCM in a less restricted atmosphere, in the teaching hospitals of these universities.

“Regular programs” refers to the programs that open for recruitment every academic year while “special programs” are held on a more flexible schedule, in response to demand. There are two regular degree programs open to undergraduate students: the 5-year bachelor program taught in Chinese and the 5-year bachelor program taught in English. The former program recruits international students for two majors: TCM and Acupuncture, and Moxibustion and *Tuina*. Students are able to study Chinese language and culture related courses in a preparatory program (between 1 to 1.5 years in length) before they enroll into the Chinese-language bachelor program. The English-language program was begun with only one major which is TCM (including training in acupuncture). Students in both programs receive education in basic theory and main schools of thought of TCM for the first 3 to 3.5 years and then start clinical practice in BUCM affiliated hospitals.

International students who have obtained bachelor or master degrees in TCM or biomedicine are qualified to apply for the regular master and PhD programs respectively. By the 2011 academic year, very few international students were enrolled in the postgraduate programs. Historically, the students who enrolled in the postgraduate programs were most often former BUCM international

students who had obtained bachelor degrees from the university and continued further study.[44]

The overview of programs in Table 4.4.1.1 suggests two significant features of the curricular system: coverage and flexibility. The variety of programs reflects the university's intention of attracting different types of international students. The needs and backgrounds of students vary. Also, the student market has contingency (see BUCM_Official3_1). Accordingly, the university developed a curricular system with regular core programs for a relatively stable student body and flexible programs for emerging and unstable demands.

> It is very difficult to predict [the student market]. Sometimes it could simply be because of a government document. If acupuncture has been recognized [as a medical practice] in a country, we may receive inquiries from several hospitals in that country, asking about opportunities for acupuncture training. … And we may never know why suddenly a certain type of student stops applying for our programs (BUCM_Official3_1).

In order to make an equivalent comparison cross cases, I select the regular undergraduate programs of Chinese Medicine subject (中医学专业) in

[44] Since the goal of tripling the number of postgraduate students by 2020 was set (see quotation BUCM_InternalDocumentNO.1 in Section 4.2.1), the university has begun systematic planning for postgraduate training. For instance, the university has published new and detailed versions of its Admission Brochures for potential applicants recently. In order to attract international students, English has been made the language of instruction for many majors. The 2014 Master and PhD Admission Brochures can be found on the website of the Graduate School of BUCM: http://202.204.32.121:8089/

BUCM.[45] Close investigation of the two 5-year undergraduate programs allows us to explore how a curriculum has been designed and put into practice in order to allow the transmission of a local form of knowledge in a multicultural classroom. Undergraduate degree training is considered the core of international student education at BUCM. The bachelor program taught in Chinese has a long history of operation. It overtook the short-term training program to become the most popular program among international students from the early 1990s. In the 2011/2012 academic year, there were about 200 students in each cohort, which is the largest cohort size amongst the programs open to international students. The curriculum design and implementation for this program sheds light on the actors' rationale(s) for the multicultural transmission of TCM. The bachelor program taught in English is a relatively new program. This program allows us to trace and compare changes in rationales regarding the internationalization of TCM education.

4.4.2 The 5-Year Bachelor Program Taught in Chinese

4.4.2.1 Principles of Curriculum Design: Applying Local Standards

The curriculum of the 5-year bachelor program with taught in Chinese is designed based on the model of the 5-year bachelor program for local students. The university used the principle of "the Four Sames" ("四个同一") in

[45] The degree program of this subject – bachelor of Chinese Medicine, is not only the mainstream program in BUCM but also in HKU. In the case of PKU, the university's focus is not at undergraduate training. It thus does not offer undergraduate degree program.

designing the curriculum. This principle has four aspects; international and local students were to be trained in the same classrooms, by the same teachers, using the same textbooks, and assessed by the same examinations.[46] Basically, this principle aims to treat international students no differently from locals.

Several considerations led to the adoption of this principle. With regard to the question of how international students should be trained, both university officials and faculty members agreed that local standards of TCM education should be applied. Since China is the origin as well as the world center of this form of knowledge, representatives of TCM believed that using local standards would be a reasonable approach. This approach was justified by comparing the case of international students who study TCM in China with the cases of international students enrolled in the international majors in "Western universities" (See excerpt from BUCM_Official4_3). This justification allows the university to apply local standards without being questioned by other stakeholders such as the Ministry of Education and competing universities:

> We adopted the 'Four Sames' strategy to make sure that our international students receive an equal education to the local students. It is the basic principle. Besides, this way of curriculum design also matches *international convention*. If you take a look at programs in the Western universities, they do not treat international

[46] The "Four Sames" principle is stated in an internal document entitled "Promoting Chinese Culture, Initiating a New Phase of TCM International Student Education" ("弘扬中国文化，开创中医药来华留学生教育新局面") (BUCM_InternalDocumentNO.1).

> students differently. … The [foreign] students need to learn the local language and study with the local students. … We are actually following the same rationale (BUCM_Official4_3).

The “Four Sames” principle also reflects the quality assurance considerations of the university. The interview excerpt above indicates that the university tends to use the principle as a policy support for equal education for international and local students. Traditional TCM training has a tradition of secrecy. The “Four Sames” principle that treats all groups of students in the same way demonstrates a spirit of openness in the university’s approach to knowledge transmission and accumulation. Therefore, this principle is expected to serve the interests of international students as well.

In addition, from an organizational perspective, the principle does not require much input from the university. The existing curriculum can be used. The faculty members are not required to make extra efforts to redesign or modify their daily classroom teaching. As a result, the “Four Sames” principle gained both internal support and external legitimacy.

4.4.2.2 Difficulties in Implementing the “Four Sames”

On a practical level, how has the “Four Sames” principle been implemented? The interview excerpt below suggests the “same classroom” principle has not been able to continue since the early 1990s, with the arrival of a large number

of international students (See BUCM_Official1_5). In the Figure 4.3.1.1, it can be seen that the number of international degree students at BUCM climbed significantly. At the same time, with the increased popularity of the 7-year straight master program among the local Chinese students, the number of the locals who enrolled in the 5-year bachelor degree dropped. Consequently, the number of international students in the 5-year bachelor program exceeded that of local students. The issue of the different learning paces of the two groups of students was raised and articulated by the local students. The local students required the university to separate them from the international student classes. In the face of conflict between local and international students, the response from the university implies that higher priority was given to the locals.

> The 'Same Classroom' strategy functioned well when the number of international students was small. After the TCM curriculum reform in 1991, the conflict between local and international student programs became significant. Before 1991, all the international students studied with the locals. In 1992, the number of international students exceeded 100, while there were only about 50 local students enrolled in the 5-year program. … They (the local students) came to us and protested strongly against 'same classroom' principle. By enrolling in the 5-year program, the local students learned less than their counterparts in the 7-year program. If the university put them in the same class with international students, they would learn even less as the teachers had to adjust their teaching to the learning

pace of the majority international students (BUCM_Official1_5).

Different TCM training needs for international and local students may have existed from the start of the program but were not given sufficient attention by the university. Before the 1990s, the classroom teaching and learning situation was that a small number of international students were studying in relatively small-sized classes. In this situation, international students were likely to interact with the TCM teachers and local students during the process of teaching and learning. However, the class size increased significantly along with the massive growth of higher education in China. The dynamics of teaching and learning changed due to enlarged class sizes and the increased proportion of international students (See BUCM_Faculty1_1):

> I started studying and later working in this university in 1977. At that time, we only had one major, which was TCM, and recruited about 60 students each year. The 60 students were divided into several groups [for teaching and learning]. Before the reform and opening up [of China], the ratio between teachers and students at BUCM maintained at about 1:2. Taking the School of Chinese Materia Medica for an example, there were 87 teachers while there were about 40 students in each cohort (6 cohorts at that time). … Now the ratio has decreased to 1:19. … The real standardization of TCM education happened due to the massive growth of China's higher education system (BUCM_Faculty1_1).

Compared with other disciplines, what requirements are made of TCM learners? Where does the different learning pace for international students come from? Based on the interviews with faculty representatives and classroom observation, the different learning pace is associated with the language ability and "way of thinking" ("思维方式") of international students. As mentioned earlier, the classic knowledge of TCM was recorded in ancient Chinese. Although textbooks provide modern interpretations of the classic texts, knowledge of ancient Chinese is considered advantageous for learning TCM. International students, in this case, are at a disadvantage compared with locals. Furthermore, faculty representatives pointed out that mastering TCM knowledge requires a holistic way of thinking. The pluralist nature of TCM knowledge, as well as the way that subjects are divided at the university, requires that the students digest and master the knowledge in a comprehensive and integrative way (See BUCM_Faculty4_1). As was expressed by a faculty member (BUCM_Faculty2), "there may not be one answer, but different approaches". However, international students often feel confused by the heterogeneity of the body of TCM knowledge (See BUCM_Int'lStudent_Singapore_1):

> You were in my class and you saw how the [international] students responded to my question. They responded with silence. This is something they should have learnt last year in the Basic Theory of TCM module. … They have to memorize the basic textbook knowledge firmly so that they can have reflections and make

connections between the knowledge they learned from different modules. After all, TCM is a holistic body of knowledge. The formulae are 'dead' knowledge, but the patients are 'living' people with different situations! … The [local] Chinese students are good at memorization. They understand [the importance of memorization]. But foreign students don't. They think reciting texts is difficult and boring. … For the international students, many of them have difficulty in understanding the texts; some are too lazy; only a few can achieve the average level of the Chinese students (BUCM_Faculty4_1).

There are various schools of TCM. … The diagnostic process, explanations regarding the causes of diseases, and curative methods could be different based on the school. For example, in the Basic Theories of Chinese Medicine module, the diagnosis is based on syndrome differentiation of *Zang-Fu* (脏腑辨证); in Treatise on Febrile Diseases, the diagnosis is based on syndrome differentiation of the six meridians (六经辨证); and in the Seasonal Febrile Disease module, the diagnosis is based on syndrome differentiation of the *San-Jiao* (三焦辨证). … The university disregards the differences and teaches us all the schools in a mixed way. … The situation of Traditional Chinese Medical Formulae is even worse. Formulae from various schools are mixed together in the textbook (BUCM_Int'lStudent_Singapore_1)

Furthermore, clinical experience is seen as the most valuable form of knowledge in TCM training. In contrast to biomedicine, TCM healing

emphasizes responding to the particular condition of the individual rather than standardization. Even for the same disease, the TCM prescription may be different due to the individual characteristics of the patient. Therefore, the experiential knowledge accumulated through clinical practice is valued highly in the discipline of TCM. “Experience-based knowledge”, in this regard, refers to knowledge of how different schools of medical knowledge and methods should be selected, integrated and adjusted in practice in accordance with the particular situations of individual patients. The more experience-based knowledge the practitioner has, the higher the possibility of accurate diagnosis and treatment. The effective transmission of experience-based knowledge through classroom teaching and learning requires students to master the basic knowledge first. However, language barriers and cultural differences create extra difficulties for international students in fulfilling this requirement.

With this understanding of the learning pace of international students, faculty members share the unwritten agreement that the objective of classroom teaching and learning for international students is to help them master basic TCM knowledge. This understanding is reflected in adjustments made to the organization of teaching content. The student body is culturally diverse and has different levels of language proficiency.[47] Class sizes for the 5-year bachelor

[47] There is a language proficiency requirement to enroll in the 5-year bachelor degree at BUCM. Students who hold an old Level 6 HSK (a Chinese language test) or new Level 4 HSK certificate or above are exempted from entrance language examinations and interviews. The highest level for the old HSK was 11 and for the new classification it is now 6. In both cases, the requirement set by BUCM is not high. The low recruitment requirement may be an attempt to maintain the number international students enrolled.

program taught in Chinese are often between 60-70 students. With the same number of teaching hours, the instructors are forced to reduce or simplify the teaching content (See FieldNote_Nov.15/2011), using more time to explain language-related knowledge. In addition, the principle of "same examination" cannot be fully applied as well. Although the examination papers are the same, instructors are likely to adopt different assessment standards (See BUCM_Faculty3_1):

> Usually, the instructors use the same PPT slides in classrooms for both local and international students. However, the questions they ask could be very different. An example question asked in the international students' class is: 'In the formulae *Yinqiao* Powder, 5 *liang* 6 *qian* (traditional Chinese unit of weight) equals how many grams?' In contrast, instructors in the local students' classroom are more likely to ask a series of questions such as: 'If the patient is in a condition of *yinxu* (deficiency of yin), how should the formula [that is written in the textbook] be adjusted?'; 'Tell me what type of pulse corresponds with *yinxu?'*; 'If we observe a yellow coating on the tongue, what does it mean and how should the formula be adjusted?' The latter group of questions represents real situations that the practitioners may encounter in practice. To deal with various and often complicated situations requires a combination and integration of knowledge from different modules (FieldNote_Nov.15/2011).

> Off course [there is an adjustment in assessment], it is inevitable! ……

> In the class, I always try to let them (international students) know what is important and should be memorized. …… Usually, I also arrange a review section before the final exam. I go through the key points that could appear on the exam. Even with that, there are still a lot of students who cannot pass. ……I grade their papers very nicely. Sometimes they write down 'pinyin' instead of Chinese characters. If it sounds right, I give full marks. Some students wrongly write the character "湿" instead of "温", and I also give full marks. That is would never happen for local students (BUCM_Faculty3_1).

This understanding of actual teaching practice in turn affects the university's policy regarding the allocation of teaching resources. Due to separation of local and international classes, the principle of "same teachers" is no longer fully applied. According to a faculty representative in the School of Preclinical Medicine, there is an unwritten but shared rule of teaching assignments among academic departments at BUCM. Senior faculty with more practical experience are more likely to be assigned to teach local students in their senior stage of training (See BUCM_Faculty3_2). This unwritten rule is a pertinent example demonstrating the differences between the rationales for division of labor in the university and in the TCM discipline. Within the TCM community, respect for senior practitioners is taken-for-granted. It largely reflects the shared respect for knowledge based on experience and how this respect has been institutionalized in the hierarchy of status within the professional community. With this in mind, assigning unqualified students to senior professors is an inappropriate arrangement:

Interviewer: Wouldn't the disadvantaged group of students receive more help? Why not send the experienced professors to improve the learning of international students?

Interviewee: Ur… That's a good point. I never think in this way. Why don't we send masters to teach international students? Ur… I cannot imagine what would happen if we were to send a master like Prof. Wang to teach international students. I myself want to learn from him. … Another reason could be, well, I don't think it would make a difference [in improving teaching and learning results]. The experience we are talking about now is the experience accumulated by practicing TCM, not teaching experience. In terms of teaching, junior faculty are often more patient and passionate. From this perspective, they are better teachers for international students (BUCM_Faculty3_2).

Most of my international student interviewees in this program expressed difficulties with learning. These difficulties can be grouped along two lines: difficulties related to the nature of TCM knowledge itself and difficulties associated with the design of the university's curriculum (See BUCM_Int'lStudent_Sweden_1 and BUCM_Int'lStudent_Indonesian_1):

I don't understand why I would have to learn chemistry, mathematics and other western medicine subjects. In the end, I am not going to

> practice any Western medicine in my home country. It is not allowed. Why don't they teach us more Chinese Medicine knowledge or give us more opportunities to practice acupuncture (BUCM_Int'lStudent_Sweden_1)?

> Why is there no tutorial? I have a lot of questions during class. But I couldn't ask at that time, because it takes time for me to form the question in Chinese. … I asked one of the teachers, and she said that universities in China do not have that kind of tutorials. I don't think the university would take this suggestion. I am just a student. Besides, they don't really care about us (BUCM_Int'lStudent_Indonesian_1)

However, the concerns of these international students are likely to be dealt with in a passive way. Two examples provide evidence to support this conclusion. The first example is the class separation policy of the 1990s. What policy solution was adopted by the university to make a violation of the "Same Classroom" principle amenable to international students? The university modified the curriculum based on the concerns of the international students. Because of a rigid "copy & paste" approach to curriculum design, international students at BUCM were required to take political and moral modules, such as Marxist Philosophy, just as the locals did. They had long complained about these modules and wanted to learn more TCM related knowledge. The university modified the curriculum by extending the class hours for TCM modules and deleting the political and moral modules (See BUCM_Official6_1):

> So the situation was that international students wanted to study with the locals while the local students fought for separation. In order to balance the different needs, we decided to increase the class hours for TCM modules for international students. Due to the difference in learning hours, the two groups could no longer study in the same classroom. In this way, the needs of both sides were fulfilled (BUCM_Official6_1).

Another recent example is the issue of "class integration" ("合班"). Many international students in the Chinese program strongly expressed their desire to study with the local students in the same classroom. In response, the university came out two new policies. Firstly, international students were re-grouped into three classes according to their choice. Students in the first two groups would have opportunities to study with local students, while the third group remained separate. Secondly, the students whose average academic scores surpassed 85 were allowed to enroll in the local students' classes (See BUCM_Official6_2). However, on a practical level, the two policies are rather superficial. The students in the first two groups told me that the integrated classes were mainly general courses such as chemistry and mathematics rather than TCM modules. For the second policy, very few of the students applied to study in the locals' classrooms:[48]

[48] With regard to the second policy, a qualified student explained the reason why he decided not to study with the locals: "The local students are nice. But they have their own circle. …… I belong to the group of international students. All my friends are here. If I join in the local students' classroom, somehow, I feel like I am a betrayer." The decision of this student suggests that a negative informal environment between

> For the advanced international students, they can apply to sit in the local students' classes. If they are good enough to follow the pace of local students' classes, they are more than welcome to study with the locals. … We should keep the channel open for advanced students. We understand that separating international students from the locals does not conform with common international practice of universities (BUCM_Official6_2).

The response from the university implies that modifications of the curriculum are not primarily motivated by an impulse to improve the quality of knowledge transmission. For instance, the excerpt above suggests that one of the considerations in developing the second policy was standard international practice in international student education. This consideration implies a greater concern with legitimacy in curriculum design rather than teaching and learning efficacy.

Why did the university rely on passive responses when a significant demand for curriculum redesign was perceived? The next section seeks to discuss this question from an organizational perspective.

4.4.2.3 Changes in Organizational Infrastructure

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the international student group and the university has formed. This negative attitude toward the university was expressed by a significant number of my interviewees in the 5-year bachelor degree program taught in Chinese. They believe the university gives priority to the local students and does not take their needs into consideration.

The way that the "Four Sames" principle has been implemented suggests that there has been certain level of decoupling in the university's internationalization strategy. At time that I conducted my fieldwork, the principle continued to be affirmed in a university issued document (BUCM_InternalDocumentNO.1). However, on a practical level, the principle was not being fully applied. What are the organizational factors that resulted in this decoupling? Is the decoupling a strategic response to perceived pressures or an unintended consequence? In order to better understand the reasons and mechanisms of decoupling, I trace the restructuring of the university's organization associated with internationalization.

From the point of view of the developmental history of the International School at BUCM, the organizational infrastructure has been sensitive to patterns of inbound international student mobility.[49] The university established an International Student Office in 1957 in order to handle the first batch of government scholarship students. During the decade after 1985, the office expanded into the "International Training Center of Traditional Chinese Medicine" and later the "Division of International Training". Since the 1990s, the number of self-paid foreign degree students and students from Greater China (Taiwan, Hong Kong and Macao) increased rapidly.[50] In order to adapt

[49] The history of organizational restructuring is summarized based on the BUCM_InternalDocumentNO.2, which was provided by the Department of International Cooperation and Exchange in November 2011.

[50] With the increase of ethnic Chinese students, in 1997 the "The Division of Chinese Medicine Program for Taiwan, Hong Kong and Macao Students" (台港澳中医学部) was established, specializing in the issues

to the new situation, the International School emerged out of the Division of International Training in 1996.

The International School is a relatively independent division. It includes three functional offices (the Office of International Students, the Office of Accounting and the Office of General Services) and was initially responsible for all issues related to international students, such as curriculum design and implementation, administration and logistics. After China joined the WTO (World Trade Organization) in 2001, the number of international students reached a new high (See Figure 4.3.1.1). The university then developed another two organizational units, the Graduate School and the Logistics Management Office, to help with work related to international students, in the years 2002 and 2009 respectively.[51]

Both the organizational restructuring and the "Four Sames" principle for curriculum design imply that decision makers' intention was to minimize the impact of international student education on the daily life of the rest of the university. The International School serves as the functional division in charge of the majority of affairs related to international student education. At the

related to students from Greater China.

[51] Nowadays, the work related to international student education is arranged as follows: the International School is responsible for the general administration, teaching and learning of international students (both degree and short-term training students); the Graduate School is in charge of recruitment and training of international postgraduate students; international alliances and promotion of BUCM are taken care of by the Department of International Cooperation and Exchange; the Logistics Management Office provides services such as dormitories and student cards for international students.

same time, it provides the physical infrastructure for classroom teaching and learning for international students, which happens in separate buildings from those used by the local students. Furthermore, the school does not have faculty members. The instructors for international students are faculty members who are affiliated with various other academic departments at BUCM. For these instructors, their main education and research duties are defined by their respective academic departments.

The incentive and evaluation systems reinforce decoupling behaviors at the ground level. Academic staff at BUCM can be promoted in three dimensions: teaching, research and clinical practice. Faculty are supposed to divide their work time into 60-70% teaching and 30-40% research. By regarding teaching as a default responsibility of teachers rather than a source of income, the university is able to offer low "class fees" ("课时费").[52] With the adoption of the "Four Sames" principle, the decision makers at BUCM believed there would be no need to provide extra incentives for instructors who teach international students. With higher reputational and economic rewards for research and clinical practice, faculty members are likely less motivated to make special efforts to improve how they teach international students or their learning outcomes.

[52] From the Interview of UnivFaculty2, the class fees are a part of faculty members' salary at universities in China. It is calculated based on number of classes. For instance, faculty members at BUCM receive 30 to 100 RMB (about 5 to 17 USD) per lesson they teach, depending on their academic title.

The evaluation system for international student education is also not well designed. For local students, the university has set up an anonymous online evaluation system. With this system, students are able to provide feedback on their learning experience without fear. The instructors, at the same time, are under the pressure of being evaluated. However, this online evaluation system is not open to international students. The International School uses face-to-face meetings with student representatives to collect feedback. This form of evaluation is less effective, both in monitoring the quality of international student education and in improving teaching and learning based on the needs of international students (See BUCM_Official5_1):

> We regularly organize feedback meetings with international students. … The representatives are the class leaders in different cohorts. … The other students seem not to be interested in this kind of meeting. … Most of the feedback that we collect is likely to be about logistic issues, such as electricity supply in the dormitory after 10pm (BUCM_Official5_1)

In addition, complex bureaucratic layers further discourage any initiative the instructors may have to modify the curriculum. There is a special board named the “Committee of Teaching and Learning Guidance”, which is in charge of modifying international programs at BUCM. The committee members are from the International School, the Department of International Cooperation and Exchange, and the Division of Academic Affairs. However, the effectiveness of this committee is diminished to a large extent due to complicated protocols for

curriculum modification (See BUCM_Official6_3). In addition, if there is a significant redesign of the curriculum, the university is required to gain approval from respective government agencies, such as the Ministry of Education:

> In principle, suggestions to modify the programs are usually proposed by the Division of Academic Affairs. The International School takes the suggestions and conducts internal discussions for a draft plan. The Division of Academic Affairs then verifies the proposed plan and hands it in to the President's Office for approval. … Once the plan has been approved, relevant documents are passed down to the Office of Academic Affairs at the department level. In each department, there is a subject secretary who is responsible for monitoring implementation. … Except for small adjustments, we usually conduct overall evaluations of the curriculum design every five years (BUCM_Official6_3).

Based on the analysis above, it seems that although international student education has been given great importance in the narratives of university officials and faculty members, the efforts to construct a supportive organizational structure do not confirm this importance. The "Four Sames" principle was initially a response to perceived international demand and top-down commands from the central government. International student education at that time was neither a TCM discipline driven initiative nor an organizational development with high reward. Decoupling, in this case, may

have been a strategic response. After the increase in the number of international students, new challenges arose for daily classroom teaching and learning. However, organizational structures, such as the incentive and evaluation systems, have restricted the agency of TCM faculty to improve the situation. Thus, the university on the one hand resists institutional control through decoupling and on the other hand restrains the agency of faculty members.

4.4.3 The 5-Year Bachelor Program Taught in English

4.4.3.1 The Need for a Program Taught in English

In 2006, BUCM launched the first TCM undergraduate program taught in English in mainland China. What motivated the university to use English as the instruction language for a local discipline? Why was the curriculum reformed through an add-on approach rather than the modification of existing programs?

The opening of this new program was highly associated with changing dynamics in domestic higher education. The current wave of IHE in China is often associated with its joining of the WTO in 2001. Education is identified as one of the twelve services in the GATS (General Agreement on Trade in Services). When it joined the WTO, China signed a partial agreement to education service trade, which is often seen as a crucial policy that has resulted in rapid international exchange since then (Wang & Rizvi, 2006). For instance, the partial commitment regarding higher education has led to the

development of a joint model of Sino-foreign cooperative education (中外合作办学). As a result, the number of international students has increased dramatically during the past decade (See Table 4.4.3.1.1). Internationalization has become a major trend that increasingly involves more and more universities. The domestic competition for international students has accelerated.

Table 4.4.3.1.1 International Student Enrollment in China (2000-2011)

Year	Total # of Int'l Students in China	TCM		Biomedicine	
		# of Int'l Students	Proportion of Total Enrollment	# of Int'l Students	Proportion of Total Enrollment
2000	52,150	3,700	7.09%	1,399	2.68%
2001	61,869	3,886	6.28%	1,626	2.63%
2002	85,829	4,070	4.74%	2,643	3.08%
2003	77,715	4,183	5.38%	3,001	3.86%
2004	110,844	6,283	5.67%	4,688	4.23%
2005	141,087	8,427	5.97%	9,605	6.81%
2006	162,695	7,130	4.38%	13,225	8.13%
2008	223,499	9,418	4.21%	19,233	8.61%
2009	238,184	11,022	4.63%	21,123	8.87%
2010	265,090	10,962	4.14%	25,203	9.51%
2011	292,611	11,822	4.04%	26,928	9.20%

Source: This statistical information on international student enrollment was retrieved and combined from the MOE website and its internal publication "Brief Statistics of International Students in China":
http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/s5987/201303/148379.html

In the year 2000, BUCM merged with the Beijing School of Acupuncture and Bone-setting, with the aim of better adapting to international demand in the post-WTO era. The statistics in Figure 4.3.1.1 show that the number of newly enrolled international students at BUCM has reached new highs since 2002. However, at the same time the statistics in Table 4.4.3.1.1 demonstrate that the TCM discipline's share of the overall pool of inbound international students

is declining. In 2005, the number of international students enrolled in biomedicine subjects for the first time exceeded that of TCM. This turning point sent TCM specialist universities a warning signal: they were losing the advantage in attracting international students. This worry came true as the number of international students began declining from 2008 levels (See Figure 4.3.1.1 and Table 4.4.3.1.2).

Table 4.4.3.1.2 Number of International Students Hosted by BUCM (2000-2011)

Year	# of Int'l Students At BUCM	Increase rate
2000	690	
2001	691	0.14%
2002	1,095	58.47%
2003	1,243	13.52%
2004	1,284	3.30%
2005	1,854	44.39%
2006	1,854	0.00%
2008	2,096	13.05%
2009	2,053	-2.05%
2010	1,820	-11.35%
2011	1,565	-14.01%

Source: This statistical information on international student enrollment was retrieved and combined from the MOE website and its internal publication "Brief Statistics of International Students in China":
http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/s5987/201303/148379.html

How to deal with increased domestic competition? Some of the policy makers at the university believed that international students were being diverted by programs taught in English in other disciplines. Based on the experience of the 5-year bachelor program taught in Chinese, they regarded the use of Chinese as the instruction language as a barrier to international student education. With this in mind, using Chinese as the instruction language could be a factor

that reduces students' motivation to apply for programs at BUCM. Therefore, some of the higher level university executives suggested using English as the instruction language. However, the proposal did not gain much support from the decision making board (See BUCM_Official2_2):

> When some of the leaders (high-level university officials) proposed using English as the instruction language, many of the other leaders disagreed. Several concerns were mentioned during the executive meeting. [For instance,] who can teach in English? What about textbooks? How to ensure the quality of training? Opening an English program would be a pioneering initiative. From an optimistic perspective, if we succeed, it would be a great investment. However, it is also risky (BUCM_Official2_2).

In order to convince the rest of the group, the advocates for teaching in English skillfully linked their proposal to university goals. For instance, they related teaching in English to attracting of international students from English speaking countries.[53] This potential benefit fit the university's intention to attract students from "developed countries" such as the United States (See the excerpt of BUCM_Official2_2 in Section 4.2.2). Using English as the international academic language is believed to increase the university's reputation (See BUCM_Official1_6). In addition, they noted the increasing importance of English language ability as a skill for university faculty to master,

[53] Information summarized from the interview BUCM_Official2

in order to legitimatize the use of a foreign language to teach a local form of knowledge.

> It is now the era of globalization. We can no longer close the door and practice TCM by ourselves. Eventually, TCM professors have to be able to teach TCM in English. The new program allows us to push our faculty members to learn English, and to practice teaching in English, so that they can give lectures abroad. … It could directly increase the influence (reputation) of our university [by using English as the medium of instruction in TCM training] (BUCM_Official1_6).

In order to minimize the uncertainty generated by such change, the advocates suggested opening a separate, experimental program rather than modifying existing programs. The university was able to select faculty members with an interest and experience teaching TCM in English. The add-on approach to curriculum development was able to minimize resistance from the majority of the faculty members, since they would not necessarily be involved.

4.4.3.2 Teaching TCM in English

To a large extent, the English program is a market-oriented program. Therefore, the curriculum design of this program responds to the particular needs of international students and aims to reduce their learning difficulties. Compared with the Chinese program, many general modules, such as mathematics and chemistry, are not included in the English Program. The 5 year training

primarily covers TCM knowledge (i.e., TCM, acupuncture, *moxibustion* and *tuina*).

As expected, most of the students in the English program are from Anglo-European countries. However, the program has not made a significant difference in attracting international students. Only a few students, about 10 to 15 students per year, have enrolled in the English program. These students often enroll with a pragmatic motivation and a clear plan for after graduation (See BUCM_Int'lStudent_Netherland_1). For most of the international students who choose TCM over other disciplines and China over other countries, learning Chinese is often a crucial draw (See BUCM_Int'lStudent_German_1):

> I want to open an acupuncture clinic in Amsterdam. I chose the English program over the Chinese one because I don't want to waste my time in the language barrier. … I can learn Chinese when I am in China. But after all, I will practice TCM at the Netherlands and use Dutch. The most important thing is to master the knowledge rather than the language (BUCM_Int'lStudent_Netherland_1)

> I would not choose the English program. The knowledge of TCM is deeply rooted in the language and culture. TCM and Chinese language, from my perspective, and especially after I started learning the knowledge, is impartible. This is also the reason why I came to China. … If one prefers to study TCM in English, why not go to

> Australia and the United States? I heard that there have been TCM training programs (BUCM_Int'lStudent_German_1).

The International School has organized a teaching team which consists of two groups of instructors. One group is from the faculty of BUCM. Several local faculty members with overseas experience have been invited to teach in the English program. Most of them are associate professors. A foreign faculty, made up of previous graduates from BUCM, has also been invited to teach biomedicine modules for international students. In order to incentivize teaching in English, faculty members in the English program can receive 30% higher class fees. The other group is made of external part-time instructors. Qualified instructors from other universities and institutions in China or abroad are employed with high salaries.[54]

Compared to the Chinese program, the teaching and learning progress in the English program has been transformed. The standards of knowledge selection and the ways this knowledge is presented are different. There are relatively few books in English on TCM subjects. There is no agreement on standard translations of terminology and theory.[55] The quality of English translations varies and is often criticized. Therefore, the teaching content in the English

[54] Information is from interview with Official1.

[55] Zhang et. al (2006) used an example to explain the evaluation process for translating TCM terminology in English: Zeifeng (贼风) was literally translated into "thief wind" at first; then it was changed into "wind evil" and later finalized as "pathogenic wind".

program is often prepared and translated by the instructors themselves. An interview excerpt from one of the instructors in this program demonstrates how the knowledge of TCM has been repackaged according to the backgrounds of students and the English language (See BUCM_Faculty5_1).

> Most of the international students do not have a TCM background. When I was preparing the handouts for them, I usually started with the introduction of a disease by using Western medicine terminology. Then I moved on to how the certain disease was documented and treated by TCM. This is a more acceptable way for the international students in the English Program. … It is not difficult for me to decide what are the fundamental and important [knowledge] that should be taught in class. The difficulty is that what I want to teach is restricted by what I am able to express in English (BUCM_Faculty5_1).

Feedback from international students in the English program indicates that they are satisfied with the curriculum design and the learning experience. Because of the reduced language barrier, students are more confident about their ability to master the knowledge content. In addition, small class sizes due to low enrollment helps the teaching and learning process. Faculty in the English program tended to provide more help to improve students' learning as they know their students more personally. Observation in the second year students' classes revealed that students were actively participating in the learning process. They often interrupted ongoing lectures to ask questions.

Many of my interviewees, including faculty members in both the English and Chinese programs and university officials who do not support teaching TCM in English expressed their worries with regard to the training quality. Most of them believed that for the TCM discipline, adopting a foreign language for training is a fundamental change. The worries were largely expressed via one of two narratives. One group of faculty criticized the English language proficiency of the instructors in the English program (See BUCM_Official1_7). The original texts of Chinese medicine are often in ancient Chinese, which varies from dynasty to dynasty, and the cultural and historical elements embedded in TCM knowledge create extra difficulties for TCM practitioners to explain TCM in another language. The other group insisted that translation changes the knowledge from its original meaning. The translation process itself is a process of knowledge making. It largely involves selection and adaptation. Both groups believed that there is a necessary reduction of learning in the curriculum of the program taught in English due to the change in instruction language (See BUCM_Faculty2_2):

> Not many of our faculty can speak fluent English. We are trying to push the junior faculty to learn and practice their English. … But you have to understand that for those who can speak English, it does not mean they can teach TCM in English. It requires professional training (BUCM_Official1_7).

> If you understand TCM and compare the teaching content between

> the Chinese and English programs, you will see the difference. The students in the Chinese program suffer from the language barrier, but it is worth it. They learn more than those who enrolled in the English program. … If the low efficiency of knowledge transmission in the Chinese program is because of the learning ability of international students, the simplification of training in the English program is the problem of teachers (BUCM_Faculty2_2).

4.5 New Programs for Local Students

In contrast to the English program for international students, recent curriculum development for local students is headed in the opposite direction. The university mode of training has been criticized by the TCM community (See BUCM_Official2_3). A commonly made comment is that university education is able to ensure basic standards of quality, while in the old days there were no assurances of the quality of practitioners. However, the traditional master-apprenticeship model has advantages in laying a good foundation of basic knowledge and transmitting experience-based knowledge (See Table 2.2.2.1 in Chapter 2). For instance, the close master-apprentice relationship ensures the teacher's willingness to pass on his or her experience-based knowledge to the apprentice. This training method, a combination of theoretical learning and clinical observation and practice, helps the apprentice to learn by accumulating his or her own experience. In addition, the flexible, and often long, length of the training period allows adjustments for different learning paces.

> Many people, especially the old masters (‘老先生们’, refers to senior practitioners), believe that a university can only produce medical workers but not cultivate TCM masters. They attribute the decline of TCM usage among patients to the training quality in the university mode. No good practitioners, no patients. … We acknowledge the advantages of master-apprenticeship. So what we are trying to do now is to integrate these advantages into the university mode of training (BUCM_Official2_3).

Since the 1980s, specialist universities in China have started developing longer length curriculum designs. BUCM began a 7-year straight master program. This program has become the mainstream program that has attracted the most local students since the 1990s. The popularity of the 7-year program among the local students reflects their recognition of the importance of accumulating clinical experience during TCM training. However, the longer length training is not favored by international students. A 5-year overseas education is already a strong commitment from the perspective of international students. With high economic and time costs, most of them have not shown interest in the 7-year program.

Two recently opened experimental programs further demonstrate the university’s intention to integrate traditional TCM training into the university mode of education. In 2011, BUCM started a new program named “*Qihuang* Experimental Class of Chinese Medicine” (“岐黄国医实验班”). It aims to test a new mode of training that integrates the advantages of “university, master-

apprenticeship and family tradition" ("院校-师承-家传") to cultivate a new generation of TCM masters. The university plans to enroll 30 students each year, based on their performance on the national university entrance examination and their family tradition of TCM. Students with a family tradition of TCM have priority in the selection process. Each student in this program is assigned to a supervisor from the time of enrollment. In this program, in addition to normal practical modules, students are able to begin clinical observation and practice earlier, by shadowing their supervisor in the clinic. This is a 9-year straight PhD program. The students are expected to achieve the research level of Medical PhD (医学博士) and the clinical level of Attending Physician (主治医师) by graduation.

In another experimental program, the "Xinglin Program" ("杏林班"), instead of lengthening the program, BUCM adopts the strategy of "cultivating from youth" ("从小抓起"). The interview excerpt with a university official below suggests that the university intends to deliver TCM's knowledge and holistic way of thinking to younger students in order to prepare them for further learning at BUCM (See BUCM_Official1_8). Students who enroll in this class will receive extra education in traditional Chinese culture and basic TCM theory. BUCM is collaborating with a school named "Hongzhi Middle School" in Beijing. About 40 junior high school students have been selected for the experimental class. These students are eligible to take an entrance examination set by BUCM

after their graduation from high school.[56]

> Students nowadays are influenced by the reductionist way of thinking. They are educated through learning mathematics, physics and chemistry. By the time they enter the field of TCM, their mind has largely been shaped. … We test the 'Xinlin Program' with the aim of drawing interest in TCM from young students. And more importantly, [we aim to] cultivate their holistic way of thinking (BUCM_Official1_8).

The decision makers at BUCM may have long planned to integrate traditional ways of training into the university mode of education. However, the intention, as well as the action of curriculum modification was restricted by the institutional environment of higher education. The excerpt below suggests that a university official has tactically used the government's interest in TCM to achieve the interests of the university (BUCM_Official1_9). From the perspective of the government, the most important consideration for TCM internationalization is to maintain the status of China as the world center of TCM knowledge and practice. The official at BUCM skillfully reminded the representatives in the government bureau that the leading role of China may be challenged by localization of TCM in the other countries. The two experimental programs, which aim to cultivate TCM masters, are considered

[56] Public universities in China can recruit a certain number of students on their own. This system is called the "Autonomous Enrollment System of Higher Education" (高等教育自主招生). BUCM started the Xinglin Program by using the student quota from this system. It allows the university to select and enroll students using their own admission examinations.

efforts to consolidate China's world-leading status, and thus are supported by the government.

> We know there are limitations to the university mode of training, maybe ever since the discipline was included in the higher education system. ……The training length and quality of students are two major issues. The higher education system has restrictions in terms of the length of program and selection of students. … The two new programs (*Qihuang* and *Xinlin* program) gained support from the government. … In a talk with a leader of the State Administration of Traditional Chinese Medicine, I told him that we need to have programs that are able to cultivate TCM masters. Many countries have now started having TCM training programs. If China cannot produce the best TCM doctors—the real TCM masters—people will stop coming to China for knowledge and treatment (BUCM_Official1_9).

4.6 Standards for Research

What counts as new knowledge? The papers that are accepted in the university-published journal, the Journal of Beijing University of Traditional Chinese Medicine, suggest that the research standards at BUCM fall into two groups. One group follows the rationale of traditional means of knowledge accumulation, which emphasize the development of TCM theory and research based on personal experience. This group of research standards aims to

modernize TCM knowledge by interpreting and modifying ancient theories and systematically studying the personal experience of high cure rate masters. For instance, in a journal published by BUCM, the first section of papers is entitled "the collection of theory research" (理论研究). An example paper is "Influence of *Qi*-monism Ideology on the Theory of the *Neijing*" (He, 2014). Personal experience research papers are often published under the section "Experience of Renowned TCM Masters" (名老中医经验), an example being "The Clinical Experience of Professor Liu Du-zhou in Treating Gout Diseases" (Yan et al., 2012).

The other group of research standards follows the scientific research tradition. This body of research aims to modernize knowledge by applying scientific methods and standards to examine the validity of TCM knowledge. Pharmacological and clinical studies are two vibrant research areas. Examples of published papers are "Influence of *Bushen Shengxue Fang* on Expressions of Erythropoiesis-related Factors in Mice with Aplastic Anemia" (Dong et al., 2014) and "Curative Effect of Needling in 3 Acupoints around the Eye and *Fengchi* (GB20) for Optic Atrophy" (Yan et al., 2014).

The two groups of research standards demonstrate that both the personalized experienced-based approach and the universalized evidence-based approach are acknowledged at BUCM. However, this acknowledgement is not articulated in a contrasting manner, even though the two sets of standards are in epistemological conflict. Instead, researchers who study TCM theory or

personal experience often claim they are conducting their research according to systematic and scientific logic (See BUCM_Faculty2_2). For the pharmacological and clinical research, there is also shared agreement among the domestic researchers recognizing the complex and holistic nature of TCM treatment and compound formulae. This shared agreement is manifested in domestic academic journals (See BUCM_Faculty4_2):

> We study the experience of renowned masters in a scientific way. Advanced technology allows us to record the details of their practices through video-taping. … Through disease-based and cross-case analysis, we systematically summarize and compare their experiences (BUCM_Faculty2_2)

> How to define science? Does it mean evidence-based research, or the scientific method, or as you said, universal application of the knowledge? I would not say the papers published in the TCM journals are not science, and I also would not say they are pure or strict science. If the knowledge is pure science, it means medical scientists from any country could understand, accept and repeat our research. It also means that the papers we publish in TCM journals would be able to be accepted by Western medicine journals or even top scientific journals like Nature. But the research standards of the domestic journals are adapted to TCM. We study the effects of compound formulae, while Western medicine studies herb extracts. An international mainstream medical journal would not even look at our paper if we could not tell what every chemical constituent of a

formula is (BUCM_Faculty4_2).

During recent years, BUCM has felt pressure calling for international publication. The discipline of TCM is categorized as a form of medicine. The interview excerpt below suggests that the pressure to publish in internationally reputable journals comes not only from competition among TCM specialist universities, but also competition with universities specializing in biomedicine (See BUCM_Official5_2). As a response, the university began encouraging publication in international journals.

> International publication has been included in the ranking systems recently. They use the publication in SCI (Science Citation Index) and SSCI (Social Science Citation Index) journals as the indicator of the internationalization level of research. … As a medical university, we are compared with the Western medicine universities. These universities push hard to publish in SCI journals (BUCM_Official5_2).

Although an increasing emphasis has been attached to international publication, BUCM has not adopted research internationalization as its main internationalization strategy.[57] According to interviews with both official and faculty representatives, the value of international publication, in particular SCI,

[57] The emphasis on international publication could be increasing at BUCM more recently. This inference is based on a recent leadership change at the university. In 2014, the Ministry of Education appointed a new president to BUCM. The new president, Professor Xu Anlong, specializes in Animal Biology. After his inauguration, the phrase "internationally renowned research university" was included in the development vision of the university (see BUCM website: http://www.bucm.edu.cn/en).

has been under debate. Due to the nature of TCM knowledge, what would gain publication in international scientific journals would not likely be new TCM knowledge. In the majority of cases, if not all, these SCI papers adopt scientific methods to investigate the mechanism of a given treatment or medicine. Many of my interviewees at BUCM believed that publishing in SCI journals was an indicator of mastery of scientific methods and English language, but not necessarily an indicator of excellence in TCM (See BUCM_Faculty3_3):

> There are basically two types of SCI journals that accept TCM research. One group is the journals with titles like alternative or complementary medicine. These journals often do not have a high degree of influence. And there are not many of them. … If you ask someone who understands TCM to compare the research quality of the domestic journals and the international journals of alternative medicine, they will tell you that the papers we publish in Chinese journals are of a much higher quality. In this case, publishing in international journals merely demonstrates that one is able to write in English. … The second group is the mainstream medical science journals. They are very strict [in scientific research standards]. … One can claim the knowledge published in these journals is biomedical science (BUCM_Faculty3_3).

The composition of the academic staff at BUCM largely affects the university's system of research standards. Table 4.6.1 briefly divides the profile of the academic staff into three groups based on the time period when they received training. There are a few TCM masters who gained national recognition as

"renowned masters" ("名老中医")—examples being Professor WANG Yu-chuan and Professor WANG Mian-zhi, at BUCM. They were born between the 1920s and 1930s and were trained in traditional master-apprenticeship relationships. BUCM has set up a special work studio (名老中医工作室) to study their practices. These masters are highly respected in the TCM community and often act as consultants for university development. University and faculty level officials are likely to be senior professors who received training after the Cultural Revolution (post-1976). They were trained in the university mode of education and were often the pupils of the masters' generation. The third group is the junior faculty who were trained in the late 1990s and 2000s, when the higher education system in China was going through a process of massive growth.

Table 4.6.1 Academic Profile at BUCM

	Training Period
TCM Masters	Trained before the Cultural Revolution (before 1966) in the traditional mode of master-apprenticeship or in the early period of the university mode
Senior Professors	Trained in universities between the late 1970s and early 1990s
Junior Faculty	Trained in universities between the late 1990s and 2000s

On a practical level, it is not feasible to adopt international publication as the main strategy for internationalization. The majority of the faculty in the master group and the group of senior professors are unlikely to be capable of publishing in English. In an attempt to tap into the faculty who are competent to publish internationally, the internal pressure for international publication is given to the younger generation of TCM practitioners, such as junior faculty

and graduate students. For instance, an interview excerpt from a PhD student at BUCM shows that publication in SCI journals is valued more highly than publication in domestic academic journals (See BUCM_LocalStu1_1):

> The university sets up strict graduation requirements for PhD students. We have to get published in order to obtain our degree. …… SCI papers are definitely highly valued. One SCI paper equals 3 papers in key national journals. …… The university is pushing us to publish in international journals, especially SCI journals (BUCM_LocalStu1_1).

4.7 Case Summary

To summarize the case, I highlight three aspects. First, how have the two sets of knowledge norms (scientific and traditional TCM norms) been manifested in the curriculum design and research orientation? The BUCM case demonstrates a coexistence type of reallocation of these knowledge norms (See Table 4.7.1). Regarding research orientations, multiple standards of knowledge accumulation and production are recognized at the university. The traditional way of knowledge accumulation, such as records of personal experience-based practice, have been institutionalized in the modern format of academic publications. Meanwhile, the evidence-based research orientation has influenced clinical research on TCM by the mainstream academic community, both domestically and internationally. Biomedical basic research is seen as the most rigorous standard for understanding the mechanisms of TCM treatments

and medical formulae. In terms of curriculum design, traditional elements of training, such as long training periods, can be found in programs such as *Qihuang* and *Xinlin*. At the same time, the university has adopted a strategy which removes certain cultural elements from the 5-year bachelor program taught in English.

Table 4.7.1 Summary of Curriculum Design and Research Standards at BUCM

Curriculum Design	**For Local Students**		**For International Students**	
	9-year *Qihuang* Program and *Xinlin* Program	7-year straight master program	5-year bachelor program taught in Chinese	5-year bachelor program taught in English
Research Standards	**Standards recognized by local academic journals**		**Standards recognized by both local and international academic journals**	
	Personal experience-based research	Modernization of TCM theory	Clinical research on the effectiveness of TCM treatment and formulae	Research on the mechanisms of TCM treatment and formulae

Second, how has the university organizational structure changed accordingly? The coexistence of different rationales and standards is achieved through structural compartmentalization within the university organization. For educational standards, traditional elements have been restored to the local students' programs and have been detached from the international students' programs. The segregation of local and international students' training allows two opposing curriculum design rationales to coexist at BUCM. Similarly, different research requirements can be found among different generations of faculty members. In order to cope with the increasing pressure for international publication, the university encourages the younger generation of researchers to publish in English, while not much pressure is placed on senior

faculty members.

Third, who are the translators and how have they translated the perceived pressures facing the organizational structure? At BUCM, university officials, in particular executive administrators, played a key role in interpreting the external environment and providing solutions for adaptation. Because of their administrative role, their translations are often based on the principles of organization. On the one hand, the officials at BUCM intend to maximize the potential of the discipline to gain resources for development. This rationale is reflected in the university's various experiments with methods for internationalization (e.g., opening overseas TCM hospitals and recruiting international students). As a result, the complexity of the institutional environment of the university has increased along with the expansion of the number of involved constituents. BUCM experiences multiple pressures, which are often exerted by different stakeholders at different points in time.

In order to adapt to the perceived multiple pressures, actors in BUCM adopted an add-on approach on the organizational level. They sought to respond to newly emerging pressures and situations by adding new structures, such as new programs and administrative offices. Since prior pressure continued to exist, the old structures were kept even though they are inconsistent with the new ones. Consequently, the organizational structure has developed toward pluralism. This structural pluralism is able to accommodate conflicting needs and different standards of education and research.

On the other hand, the organizational rationale for decision making is also reflected in the process of solution formation. Considerations of external legitimacy are often prioritized. This is especially the case with regard to how the university responds to the expectations of the state government. The university officials'/administrators' status as translators and decision makers is inherited from the institutional structures of the public higher educational system. In order to maintain their power, the solutions provided by university officials may reinforce the influence of state power in the knowledge institutions of the TCM discipline, since they consider the government to be the most important stakeholder. In such a situation, the independent power of the TCM discipline is suppressed. Respect for the particular nature of the knowledge is not given high priority when adaptive solutions are formed. Decoupling of adopted solutions from actual implementation is expected.

However, this is not to say that the development of the TCM discipline is fully determined by external institutional imperatives in the case of BUCM. Despite resistance in the form of decoupling, the recent development of curriculum modifications shows that the actors at BUCM are increasingly navigating institutional conflicts and mobilizing resources to achieve their own interests. After all, they are aware that the status of their organization is closely attached to the fate of the TCM discipline.

Chapter 5

PKU, Integrative Medicine at a University Striving to Become World Class

5.1 Significance of the Case

PKU is an important case for understanding the developmental trend of the TCM discipline in mainland China, as an increasing number of comprehensive and biomedical universities have begun to incorporate TCM research and/or education. As a comprehensive university, PKU provides a different organizational platform for the discipline that contrasts with specialist universities. At BUCM, organizational status largely relies on a single discipline. TCM thus is able to enjoy full support from the university. However, the intra-organizational position of the TCM discipline is not the case for comprehensive universities. Investigation of PKU reveals how a multi-disciplinary environment can affect the developmental trajectory of this local discipline. A comparison of the similarities and differences between the two types of universities enable an effective comparative analysis of institutional change for the TCM discipline in mainland China.

Furthermore, the analysis in the last chapter suggests that BUCM has relatively little ability to resist external pressures. PKU contrasts with this situation as it possesses a high status in the field of higher education and in China. Previous studies have indicated that well-established and high-prestige universities are likely to be able to resist environmental changes (Clark, 1983; Hearn, 2007).

Can this particular organizational platform empower TCM actors in the case of PKU? How is this reflected in its strategy of adaptation to a pluralistic institutional environment?

5.2 PKU and the Making of China's World-Class University

PKU is the first comprehensive university in China which was founded as early as 1898 under the Qing government. Before 1912, the university was known as Imperial University of Peking ("京师大学堂"). In the early days of PKU, it is not only the highest institution of higher learning, but also functioned as the ministry of education. The dual function of PKU, on the one hand inherited the traditional "Taixue" ("太学") education system of imperial China, one the other hand, marked the start of modern higher education in China. For over a hundred years, PKU is deemed as the "brain" of China which represents the highest level of China's higher education intuitions. PKU now prides itself as "the nation's cradle of cultivating high quality and innovative talents", "the frontier of scientific research and the base of knowledge production", and "the bridge and window of international exchange"[58].

PKU enjoys the high reputation in China because of its role in social development. The university played a crucial role in leading the political

[58] The information related to the historical development of PU and PMU in the first two paragraphs of this section was obtained from the PU websites: http://www.pku.edu.cn/about/bdjj.jsp ; http://www.gotopku.cn/data/detail.php?id=3212

revolution during the nationalist period. As has been indicated in the webpage of the university, "PKU has contributed irreplaceably to national revival and liberation, state building and development, social civilization and improvement; and played the pioneer role in the modernization process of China".[59]

During the late 1990s, PKU along with Tsinghua University were hand-picked by the state government to lead the internationalization process among the Chinese universities. In a speech on the centennial anniversary of PKU on May 4, 1998, former president Jiang Zemin said: "In order to realize modernization, China must have a number of top-class universities that reach the level of the advanced world" (为了实现现代化，中国要有若干所具有世界先进水平的一流大学). Between 1999 and 2001, PKU received from Project 985 RMB 1.8 billion (approximately USD 22 million at the time) in special grants to contribute to the making of a world-class university (Ngok, 2008). The special grants have continued and increased during the past decade.

In addition, in order to increase the overall competitiveness of the university, PKU merged with Beijing Medical University in 2000. Beijing Medical University was the medical school of PKU during the 1940s. It was separated from PKU during the first wave of the restructuring of national higher education in 1952. The excerpts from a speech given by PKU Vice President Ke Yang on May 18

[59] Information retrieved from the Chinese version of introduction of PKU (on October 2013). The original Chinese version is "北京大学为民族的振兴和解放、国家的建设和发展、社会的文明和进步做出了不可替代的贡献，在中国走向现代化的进程中起到了重要的先锋作用": http://www.pku.edu.cn/about/bdjj.jsp

2005 suggested that the reunion of the two universities was largely driven by the desire to create a world-class university (see excerpt below). Profiles of the world's top universities, for instance, Harvard University or the University of Cambridge, had revealed that their medical schools contribute significantly to the overall reputation of the university.[60]

> The purpose of the amalgamation is clear: to improve the comprehensive strength of the university, to reform the model of medical education, and to work to become a world-class university. … The university leaders believe that medical education requires the environment of a comprehensive university. … After the merger, the number of key national disciplines at Peking University Health Science Center (formerly Beijing Medical University) increased to twenty-one. … Our SCI publications and other evaluation indicators reveal that in 2004 we ranked in first place, both in terms of quantity and quality, among all the medical schools and universities in China. International cooperation during the past several years has also been unprecedentedly active.[61]

After the amalgamation, Beijing Medical University was renamed as Peking University Health Science Center and became the medical faculty of PKU. It

[60] In 2000, also based on the rationale of improving their comprehensive strength, several Project 211 universities were also amalgamated: Shanghai Medical University was merged with Fudan University; Shandong Industrial University was merged with Shandong University; Western China Medical University was merged with Sichuan University; Jilin Industrial University was merged with Jilin University; and two specialized universities in Wuhan were merged with Wuhan University.

[61] The full speech, entitled "Thoughts on the Practices in Medical Education Five Years after the Amalgamation," was published on the news webpage of PKU, at http://pkunews.pku.edu.cn/xwzh/2005-12/29/content_104819.htm (accessed April 2014).

now accommodate over 10,000 students, "including 1,082 doctoral students, 1,962 master program students, 3,115 undergraduates, 537 junior college students, 3,500 adult learning program students, and 549 international students".[62] There are 6 schools under the medical faculty: School of Basic Medical Sciences, School of Pharmaceutical Sciences, School of Public Health, School of Nursing, School of Distance Education, and Faculty of Foundation Education.

After about one and a half decades' efforts, PKU has make the top 50 university worldwide according to the Quacquarelli Symonds (QS) rankings. [63] Internationalization has become the important aspect of the university. Based on statements in the following article by PKU president, it appears that PKU's current strategy largely focuses on internationally recognized publications, recruitment of foreign faculty and students, and the promotion of English (See the quotation below).

> For China's integration into the "global village" and for the rest of the world to understand, respect, and accept China, conversation and exchange are the first steps. We not only teach students about the magnificent and diverse human civilizations, but we also provide

[62] Information of the Peking University Health Science Center was retrieved from its webpage on December 2014:
http://english.bjmu.edu.cn/administration/aintroduction/index.htm

[63] For instance, in the QS World University Rankings, academic reputation and the number of citations per faculty member account for 40 percent and 20 percent of the rankings, respectively, whereas the number of international faculty and students together account for only 10 percent. The ranking indicators and their weights can be found on the QS webpage, at http://www.iu.qs.com/university-rankings/rankings-indicators/ (accessed May 14, 2014).

> numerous opportunities for faculty and students to go abroad. At PKU, about 60 percent of the students and 90 percent of the faculty have had overseas experiences. Similarly, PKU recruits high-quality faculty and students from all over the world. Take the year 2012 as an example. There were over 1,000 foreign experts teaching at PKU; … about 2,400 international students pursuing degrees; and more than 6,000 exchange students. PKU currently plans to develop the campus into a homestead that gathers outstanding international scholars, researchers, and entrepreneurs. In order to achieve this goal, we are building a new English curriculum for local and international students.[64]

From the perspective of TCM actors, such an organizational platform provides both opportunities and challenges. The national and international reputation of the university may benefits the disciplinary development with regards to the access to financial, institutional, network and human resources. Meanwhile, the university's overall goal in pursuing international excellence may also influence the motivation of and the developmental trajectory of TCM in PKU.

5.3 Developmental Trajectory of TCM Units in PKU

5.3.1 A Marginalized Unit in a University Focusing on Western Medicine

The TCM discipline was first introduced to Beijing Medical University in 1975 in the name of Integrative Medicine.[65] Dr. Li Shuncheng, who was a graduate

[64] PKU President Wang Enge, "Universities in China need to sail through the wind and waves in the world tide" (世界大潮中中国大学需乘风破浪), *Guangming Daily*, November 16, 2013.

[65] The boundaries between TCM education programs and research and Integrative Medicine education

from the second cohort in the program "Western Medicine Studies Chinese Medicine," established a Teaching and Research Section on the integration of Chinese and Western Medicine (中西医结合教研室) at the School of Basic Medicine.

This was a typical case, both in terms of the timing and the disciplinary focus, of how TCM entered Chinese universities that specialized in biomedicine. After the 1972 incident elaborated upon in Chapter 2, China perceived a significant trend in terms of international interest in TCM. To a certain extent, the domestic status of the TCM discipline was influenced by this international interest. In 1980, the government modified its medical policy by identifying three mainstream practices—Western Medicine, Chinese Medicine, and Integrative Medicine. Accordingly, some biomedical universities incorporated TCM into their programs by setting up small units of integrative medicine. Such units often carried out teaching and research activities with the aim of connecting TCM with biomedicine.

Nevertheless, the Teaching and Research Section on the Integration of Chinese

programs and research are ambiguous. It seems that the major difference between the two focuses on the training and the research. In terms of the research, Integrative Medicine stresses collaboration and communications between TCM and biomedicine. In terms of the training, the TCM programs often have fewer biomedical modules than the Integrative Medicine programs. However, the research topics and methods often overlap. One of my interviewees at BUCM (BUCM_vOfficial01) noted: "TCM researchers are supposed to modernize the traditional knowledge whereas the task of researchers in Integrative Medicine is to bridge TCM and Western Medicine, mainly through scientization (科学化). In practice, they often carry out similar research."

and Western Medicine at Beijing Medical University remained marginal. Two of my interviewees have been in the section since the late 1980s. Both of them described the section as an isolated unit at the university. The establishment of the section can largely be seen as a symbolic reaction to the government's promotion of TCM. The university provided very little substantial support. The promotion and evaluation system of the section was based on the biomedical system of knowledge. Although the TCM unit carried out comparative research on the two forms of medical knowledge, there was very little collaboration between the faculty in this unit and faculty in other biomedical sciences at the university. As revealed in the interview excerpts below, the teaching of TCM at PKU was quite frustrating (see in particular the excerpts from PKU_Faculty1_1 and PKU_Faculty2_1):

> The size of our section was small. Because we were in a university focusing on Western medicine, we were always pushed to the sidelines. This teaching and research section was never really regarded as part of the mainstream. … The university arranged for students who were enrolled in the Western medicine program to take elective courses in TCM, such as the Basic Theory of TCM, the Diagnostics of TCM, and the *Chinese Materia Medica* (PKU_Faculty1_1).

> Most of my students at that time saw the TCM module as a source of course credits rather than as a source of knowledge. ... Our students had been taught mathematics, physics, and chemistry since they were quite young. Naturally, they had been taught to believe that the

> essence of an object can be understood through its decomposition. ... This mode of thinking, which is known as deductive reasoning, is consistent with the development of Western medicine. ... TCM takes a different approach, emphasizing a balancing of a holistic way of thinking (PKU_Faculty2_1).

From the perspective of the faculty in the section, the merger between PKU and Beijing Medical University in 2000 was an important opportunity for the development of TCM. The faculty believed that "PKU will provide an incentive for the further development of the TCM discipline."[66] The new organizational platform not only leveraged the overall reputation of the TCM unit, but it also began to provide substantive support for the unit.

In 2001, a new research center, called the Modern Research Center for Traditional Chinese Medicine, was established at PKU. This research center was based on the TCM section and an experimental research institute of integrative medicine that had existed during the later years of Beijing Medical University. Due to the efforts of the university, the Center attracted a team of researchers. The leader of the research team, Dr. Huang Xi, who had obtained a doctoral degree in integrative medicine, was recruited from the Fourth Military University. Other team members included TCM faculty in the section and researchers from the School of Pharmacy and the School of Chemistry at PKU.

The purposes of PKU's initiatives were clear: to transform the TCM unit from a

[66] The quotation is from faculty interview PKU_Faculty1.

teaching-based unit to a research-based unit and to encourage collaboration between the faculty in the two medical disciplines. However, despite financial and institutional support from the university, the experimental reform did not achieve the expected results. The excerpts below show that in debates on the developmental trajectory of TCM researchers could not reach a consensus on a research methodology and standards. The divergent opinions stifled the research process. Within one year the newly recruited director of the section resigned from his position at PKU.

> The university established the goal that we would be a leader in research that integrated Chinese and Western medicine. With the upgrading to a Project 985 university, we were promised that we would receive over 10 million RMB (approximately USD 1.2 million at that time) in development funds. Although our expectations were quite high at the time, the results were disappointing. ... The backgrounds of the research team members were very diverse. They each had different views as to how the TCM discipline should be developed. This resulted in many problems in our collaboration ... [and] sparking heated debates. We were not able to reach a basic agreement on issues such as what kind of research we should do and by what means (PKU_Faculty2_02).

> The accuracy of TCM knowledge does not rely on standardization and repetition of laboratory experiments but rather on individualization and repeated practice. If we really want to do research on TCM, we need to respect the nature of the knowledge. ... The so-called scientific research on Chinese herbal medicine (*zhongyao*), for

> instance, basically involves reducing the compound of the TCM formula to extracts and components. The formulas often consist of a number of herbs and thousands of ingredients. ... They have been experimented with and used on humans for over one thousand years and now we had to experiment with them on rats. ... In my opinion, the TCM discipline became stuck mainly because we were on the wrong track (PKU_Faculty1_02).

The failure of early reforms were due to two organizational issues. On the one hand, the reform of the TCM unit was carried out during the period of the merger when the organizational environment of the university was perceived by the faculty to be relatively unstable. At the time, PKU was undergoing a series of organizational and institutional changes as part of its goal of becoming a world-class university, such as the university amalgamation (in 2001) and the reform of the university personnel system (in 2003). On the other hand, the reform was put forward as a top-down initiative by the university. The original TCM faculty members did not play a significant role in the decision making process. The establishment of the Modern Research Center for Traditional Chinese Medicine was associated with the leadership change in the original section. The initial purpose of recruiting a new team was to encourage enthusiasm. However, it also ran the risk of creating resistance from among former faculty members in the section.

5.3.2 A Turning Point: The Establishment of Tasly Microcirculation Research Center

The turning point for TCM at PKU began in 2004 when the university recruited a new faculty member, Professor Han Jingyan, who had obtained his bachelor's and master's degrees in TCM and had earned his PhD in biomedicine in Japan. Prior to being recruited by PKU, Professor Han had been working at Keio University. His research on microcirculation was supported by the Tasly Group, a Chinese pharmaceutical firm.[67] When he joined PKU, he continued his research and collaboration with the Group.

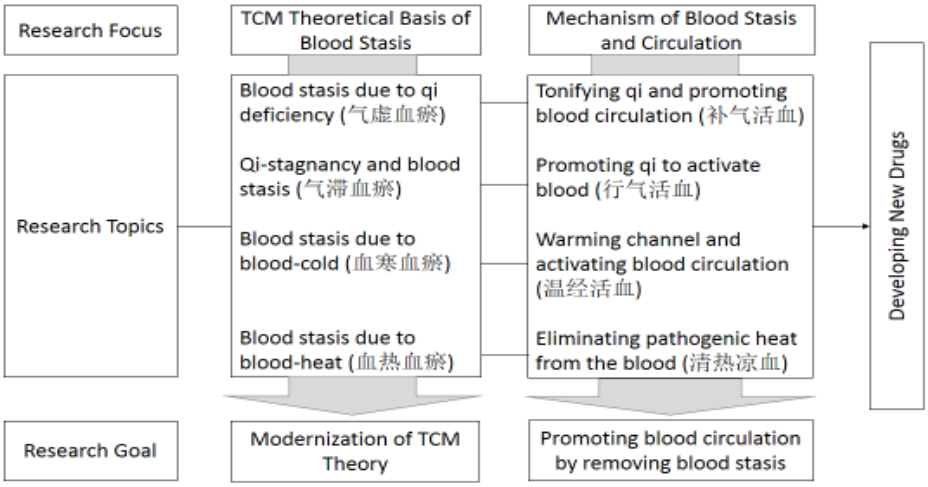
The Tasly Microcirculation Research Center under the leadership of Professor Han was established in the same year as his arrival at PKU. It is based on a cooperative model composed of "industry, university, and research" (产学研) (IUR). The university signed a ten-year cooperation agreement with the Tasly Group that recognized the firm as the proprietor of any new products and the researchers at the university as the inventors. Due to the director's network of contacts and efforts by the university, a number of microcirculation experts from Keio University, PKU, and China Union Medical University (now known as Peking Union Medical College of Tsinghua University) were recruited to

[67] "Tasly Holding Group was established in 1994, the enterprise dedicates to build a top, modern, and international TCM brand with the concept of 'To pursue harmonization between human and nature, to improve life quality' and the mission of 'To share the joy of health with all'. … Tasly, through innovations in standards and technologies, has created a manufacturing process for TCM modernization and set up an internationalized advanced, standardized, digital and intelligent big industrial system which produces high-quality, stable and controllable TCM products. Tasly's total asset has reached 26.2 billion Yuan (approximately 4.2 billion USD) by 2013, sales volume has reached 24 billion Yuan (approximately 3.9 billion USD) and income tax was 3.6 billion Yuan (approximately 0.6 billion USD)." Introduction of Tasly Group is retrieved from its website on December 2014:
http://www.tasly.com/en_web/about_tasly.aspx

collaborate on research.

Based on the agreement between the Tasly Group and the research team, the Tasly Microcirculation Research Center adopted an applied orientation that focused on clinical practice and drug development. The research team mainly carried out medical research on microcirculation problems, focusing on TCM compound prescriptions and extracts as preventative and curative mechanisms (see Figure 5.3.2.1). This means the researchers indeed adopted the rigorous biomedical scientific standards to study the TCM herbal medicine. They focused on extracting the effective compound(s) from the herbal medicine and examining the mechanism of action.

Figure 5.3.2.1 Research Foci at the Tasly Microcirculation Research Center



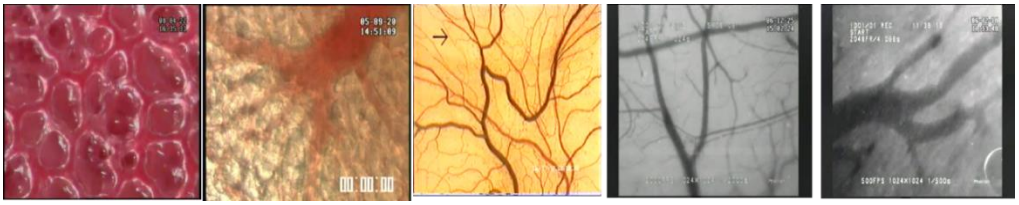
Source: Internal document No.2, provided by the Tasly Microcirculation Research Center.

Between 2004 and 2009 the Tasly Group invested about RMB 23 million (about USD 2.8 million) to construct microcirculation, cellular biology, and morphology laboratories. The research center was equipped with cutting-edge

research equipment, most of which was imported from abroad (see Pictures 5.3.2.2 and 5.3.2.3). For instance, it was the first research laboratory in China to import a medical speed camera. This camera, which is able to take 10,000 pictures per second, allows constant observation and recording of changes in blood cells.

Picture 5.3.2.2 Research Equipment at the Tasly Microcirculation Center

Picture 5.3.2.3 Pictures Captured by the Speed Camera



Their research results were expected to guide the development of new drugs and new health-care products. At the research center, high priority was attached to publishing in international journals, especially in SCI (Science Citation Index) journals (see interview excerpts PKU_Faculty3_1 below). Between 2004 and 2011, faculty members and researchers at the center published twenty-six SCI papers. Taking into account the size of the center, within the general TCM community the output of publications was considered to be very high.[68]

[68] In 2011 there were eighteen research staff members and nineteen postgraduate students at the Tasly

> We aim to publish 100 SCI research papers on Blood Stasis and Circulation and to obtain twenty patents—so far we have already received authorization for six patents—and to publish a monograph summarizing our research findings (PKU_Faculty3_1).

The academic work at the research center is highly valued by both TCM and biomedical professional associations. The center became an affiliated institution of the Microcirculation Committee of the Chinese Association of Integrative Medicine in 2008 and was awarded the title of a high level (level three) laboratory by the State Administration of Traditional Chinese Medicine in 2009. Professor Han was the first Asian associate editor of the journal *Microcirculation.* A paper published in 2008 by the research team in *Pharmacology and Therapeutics* (entitled "The Ameliorating Effects of Compounds Derived from Salvia Miltiorrhiza Root Extract on Microcirculatory Problems and Target-Organ Injuries by Ischemia-Reperfusion") was identified as among the top 100 most influential academic papers in China.

5.3.3 A New Chapter: Be in the Line with the International Standards

By the time I arrived at PKU for my fieldwork in 2011, internationalization, with a major focus on research and publication, has become the official foothold for TCM at PKU. On September 19, 2010, PKU established the Department for the Integration of Chinese and Western Medicine (中西医结合学系). The

Microcirculation Research Center. According to one research staff person, the average annual output of international publications by the research center was greater than that of BUCM.

university appointed Professor Han as the first department head with the expectation that he would expand the successful practice of international research and publications of the Tasly Research Center to a wider range of the TCM community.

This new department had been established from three former TCM units at PKU: the original Teaching and Research Section on the Integration of Chinese and Western Medicine, the Tasly Microcirculation Research Center, and the clinical departments and research institutes at the teaching hospitals of PKU.[69] According to a speech by the department head, Professor Han Jingyan, at the inaugural ceremony for the new department, the mission the department was: 1.) to form a first-class teaching team that would make a contribution to medical training at PKU; 2.) to cultivate research personnel capable of integrating TCM and Western medicine; 3.) to modernize TCM; and 5.) to internationalize TCM for the benefit of humankind.[70]

In terms of educational programs, the focus was given to graduate student training. Three postgraduate programs has been launched in the new

[69] The new department is not a superior-level organizational unit that integrates all existing TCM units. Faculty members in the department are likely to also have other affiliations within the university. The department gathers TCM faculty members and practitioners from the various units at PKU to provide training to the medical students.

[70] In addition to the normal track for applying to postgraduate programs, biomedical students who enrolled in the eight-year PhD program at the School of Basic Medical Science were able to pursue a degree in Integrative Medicine. This group of students would be trained in Western medicine during their first four years and then would receive four years of training in the Department of Integrative Medicine. This information is gained from the interview with PKU_Faculty1 and from the PKU news website, at http://www.bjmu.edu.cn/art/2010/9/24/art_4866_49242.html (accessed May 2013).

established department: two master's programs in Integrative Medicine (research-based and clinical-based) and one PhD program in Clinical Integrative Medicine. According to the department head, the goal of these post graduate programs is to cultivate international research personnel for TCM to be in conversation with mainstream life science research community. An interview with a student enrolled in this program reveals that research and publishing in international journals were important components of the training (see the excerpt PKU_LocalStudent1_1).

> There are nineteen master's and PhD students. Many of us intend to work at universities or research institutions [after graduation] rather than to practice at hospitals. ... Our training is divided into two parts. We learn and practice TCM in the teaching hospitals. At the same time, we work closely with professors at the [Tasly Microcirculation] Research Center, learning how to carry out research and how to publish in international journals. ... I think it will not be difficult for us to find jobs at universities in North America or Europe (PKU_LocalStudent1_1).

The department in PKU has adopted a different strategy from BUCM. It does not open bachelor degree programs of TCM. For undergraduate training, the department only provides TCM modules for enrolled biomedical students (see Table 5.3.3.1). This avoidance of training undergraduate students was achieved through differentiating the development goal of the department from that of specialist universities (See PKU_Faculty3_2). Although the absence of an undergraduate program could be associated with considerations of the

organizational costs and the availability of resources, the results, which differentiate the educational objectives of PKU from those of other specialized universities, have been beneficial to TCM faculty members. In this case, training international students is not considered as an option for internationalization of TCM in PKU. The TCM unit is able to reduce the complexity of the professional role and focus on research.

Table 5.3.3.1 TCM Modules for Undergraduate Students at PKU

Title of Modules	**Number of Hours**	**Type**
General Introduction to Clinical TCM	48 hours	Compulsory
Basic TCM Theory	38 hours	Elective
TCM Diagnostics	18 hours	Elective
Chinese *Materia Medica*	18 hours	Elective
Pharmacology of the TCM Formulae	18 hours	Elective
Theory of Channels and Collaterals	18 hours	Elective
TCM Health Maintenance	18 hours	Elective

> The educational objective of our department is not to train TCM practitioners, but rather, consistent with the educational goals of PKU, to cultivate medical leaders. The mission of universities like BUCM and Shanghai University of Chinese Medicine is to train TCM practitioners. ... But what the country is short of now is not clinical experts on integrative medicine, but rather personnel who can take the initiative to globalize TCM. Therefore, we aim to cultivate high-level research personnel who are in contact with the international medical community and who can explain to international academics the significance of integrative medicine. …The current PhD program in our department is designed to achieve this goal. Our PhD students receive four years of solid training in biomedicine. Thereafter they are trained in TCM and in how to carry out integrative medical

research (PKU_Faculty3_2).

Most of my interviewees in the department had a positive impression of this organizational restructuring. Among the faculty members in the original section, the department was regarded as symbolic acknowledgment of the discipline by the university and an improvement in its status within PKU. Terms like “breakthrough” and a “new chapter” were often used to describe the establishment the new department. The department is regarded as a “new chapter” because it initiated a research orientation and legitimized internationalization as a guide for TCM academic work.

To a large extent, the establishment of the new department was the result of continued attempts to reorient the academic work of the TCM community at PKU. The Tasly Microcirculation Research Center was successful in achieving what the Modern Research Center for Traditional Chinese Medicine had failed to achieve. The questions are why the recent reform is able to put forward the new orientations in research and education; and how has the changes gained supports from the faculty who used to resist scientific research?

5.4 Seeking for the Match between Industry, University and Research

5.4.1 The Cooperative Model

Both the university level officials and faculty in TCM department attribute the success of recent shift of research orientation to the adoption of IUR model.

What is IUR model? How can this model benefit the institutional change of TCM knowledge in PKU?

The IUR model that enabled the establishment of the Tasly Research Center has operated at Chinese universities for over two decades. Promoted by the government since the 1990s, it was first known as a "cooperative educational model."[71] The model was adapted from the idea of "cooperative education" that was first proposed by Herman Schneider in 1901. Universities were encouraged to establish their own factories and firms that could provide practice and internship opportunities for students (see PKU_Official1_1):

> The early IUR model refers to the model implemented at the University of Cincinnati that linked teaching and learning with practice. During the 1990s many institutions of higher education started to open university-run factories. These were helpful to students as they provided them with internship and practical opportunities. Additionally, universities were able to earn some extra income (PKU_Official1_1).

It is not surprising that PKU was a pioneer in instituting the IUR model because the government often selects flagship universities to start pilot programs before a policy is implemented nationwide. PKU opened its first university-run and state-owned enterprise in 1986. It is now known as the Peking University

[71] The National Association of IUR Cooperative Education was established in 1991 with the participation of about 130 institutions of higher education and over 20 firms. In 1997 the Ministry of Education issued the "Notice on Pilot Universities for IUR Cooperative Education during the Ninth Five-year Plan" and selected 28 universities to participate in the pilot IUR-model program.

Founder Group Corporation. According to information released by the Founder Group, it consists of five industrial groups, with more than 35,000 employees. By 2012, total assets of the Founder Group totaled RMB 78.2 billion (approximately USD 12.4 billion at the time).[72] There are also many other well-known corporations run by PKU, for instance, the Jade Bird Group, which is one of the most influential IT companies in China, and Sinobioway Group, which is a national leader in biological medicine.

By the time that the Tasly Microcirculation Research Center was founded, the IUR model had reached a new stage. In 2001 PKU was selected by the government to be a pilot university for the IUR model.[73] The reform mainly involved clarification of ownership and property rights and modification of the cooperative system. It aimed to transform the former administrative style of management to a capital-based system and it further encouraged IUR-model practices. By 2004, the three largest university-run enterprises, the Founder Group, PKU Resources, and the Sinobioway Group, had all been transformed into shareholding systems. After the IUR reform, enterprise autonomy was increased. In addition, the functions and emphases of the IUR model were shifted to R&D and knowledge transfer (see PKU_Official1_2):

When we now talk about the IUR model (or sometimes the GIURP

[72] Information on the Founder Group can be found at http://www.founder.com/templates/T_Second_EN/index.aspx?nodeid=129, accessed May 20, 2015.

[73] Document No. 58 (dated November 1, 2001) of the General Office of the State Council stated that PKU and Tsinghua University would be pilot universities to participate in the IUR reform.

> model [Government+Industry+University+Research+Practice]), we have already moved to a further stage in university transformation. We have learned from the recent transformations in Western universities. ... It is now more of an entrepreneurial model that emphasizes transferring research findings into applications and industrial products and serving the needs of economic and social development (PKU_Official1_2).

With the existing supporting policies and institutions, such as the conditions for cooperation and issues related to the protection of intellectual property, the establishment of the Tasly Microcirculation Research Center in 2004 was timely and efficient. By benefiting from the earlier reform of the IUR model, the research center enjoyed a great deal of autonomy in terms of personnel recruitment, design of its incentive system, and allocation of the research funding provided by the Tasly Group.

The research team was recruited from two tracks. One group of researchers consisted of faculty members at PKU. The other group consisted of non-faculty researchers who were employed at the research center. They had initially been hired as staff persons under the rules of the Personnel Bureau of Tianjin Municipality.[74] Members of the second group included assistant researchers, associate researchers, and researchers. The research team was not less diverse than that at the Modern Research Center for Traditional Chinese Medicine.

[74] The Tasly Group is registered under Tianjin municipality. Hence, its staff promotion system follows the rules established by the Personnel Bureau of Tianjin municipality.

However, the flexibility in personnel recruitment allowed the Tasly Microcirculation Research Center to assemble a team that had reached a basic agreement and shared goals regarding research.

The entrepreneurial model contributed to the high research output of the center and the guaranteed financial support from the Tasly Group formed a stable research environment. The ten-year contact allowed for systematic and long-term research. Furthermore, the entrepreneurial ideas that had been adopted in designing the incentive system effectively motivated the research team. Promotion standards and monetary rewards were based on research outcomes, measured mainly by the quality and quantity of international publications. The combination of all these factors created a stable and effective research environment (see PKU_Faculty3_3):

> The government and university currently make large investments in research. But output remains low. Why? This is because although there are many funding channels, few of them provide sufficient and sustained support. The attention of the researchers is likely to be sidetracked because of efforts to secure new grants. Furthermore, university promotion standards are neither stable nor clear. They only produce confusion among faculty members. Therefore, what we have attempted to do at the research center is to stabilize the research environment so as to allow the researchers to focus on their research rather than worrying about other things (PKU_Faculty3_3).

The success of Tasly Microcirculation Research Center has benefited from the entrepreneurial model. The faculty in Tasly Microcirculation Research Center

enjoyed more stability and autonomy particularly in terms of finance and institutional structure (i.e., incentive and promotion system). However, from an institutional perspective, the involvement of an external firm and the imposition of foreign-market standards complicated the institutional environment for the transmission of TCM knowledge and production. How have the actors in the center dealt with the heterogeneous environment? The next section further analyzes how current research topics and methodology gained legitimacy among the various stakeholders—representatives of the university, the firm, and the discipline.

5.4.2. Match between PKU and Tasly Group

Interview excerpts from one of the leaders in Tasly Microcirculation Center suggest that the "match" (*qihe* 契合) between different stakeholders in the institutional environment is the key to the success of cooperation and reform (see excerpts from PKU_Official1_3). The term *qihe* in Chinese has a combined meaning of fitness, correspondence and agreement.

> There are many examples of collaboration between the university and firms, but there have not been many successful cases. If the university is only interested in the funding provided by the firm, or if the firm only intends to use the reputation of the university for its own purposes, the collaboration is doomed to failure. ... The sustainable collaboration [in the case of the Tasly Microcirculation Center] was based on consensus, or I would say a match (契合)

between the Tasly Group and the university. We shared the same vision to globalize TCM (PKU_Official1_3).

At a fundamental level, the match was based on the market value of the field of TCM. The university regarded TCM as an applied discipline whereby the knowledge could be transferred into economic value. This view increased the feasibility of applying the entrepreneurial model. The firm's high-tech image and reputation may also have been an important foundation for the collaboration. The Tasly Group is one of the largest pharmaceutical firms in China. It has a long tradition in carrying out medical research. The firm often uses academic publications both for the development of new drugs as well as for marketing. Although the business scope of the Tasly Group covers various types of medicine and health-care products, the firm has a high reputation with respect to modern TCM drugs.

As pointed out by a PKU official (see interview excerpts from PKU_Official1_3 above), the internationalization of TCM represented the shared vision and goals that linked the university and the firm. With the goal of creating a world-class university, internationalization is increasingly important to PKU. The Tasly Group also has international ambitions. One of its main strategies for expanding into international markets is to have its products enter the mainstream market in the developed countries as prescription medicines.[75]

[75] The blueprint and strategies for internationalization of the Tasly Group can be found on its website: http://www.tasly.com/en_web/about_tasly_Worldwide.aspx

The Tasly Group was among the first firms in China that submitted an application to the U.S. Food and Drug Administration (FDA). Its brand-name compound product, the *Danshen* Dripping Pill (复方丹参滴丸), began FDA clinical trials in 1997. The main component in this medicine, *danshen* (Radix Salviae Miltiorrhizae), has long been used in China to prevent metabolic diseases and to cure coronary heart disease. By collaborating with PKU to establish the research center, the Tasly Group hoped to explore the scientific mechanisms behind its products.

The internationalization process for Chinese compound medicine can be exceedingly frustrating. For a long time Chinese medicine had been sold in foreign markets as food and health supplements. But during the past decade, an increasing number of countries have begun to regulate such herbal medicines. For instance, in 2004 the European Union issued a document entitled the "EU Directive on Traditional Herbal Medicinal Products" to control the quality of over-the-counter herbal medicines.[76] The document required that all herbal medicine companies complete registration procedures prior April 23, 2011. Registration, which is based on biomedical standards, can be extremely costly both financially and in terms of time. As a result, none of the Chinese pharmaceutical companies were able to complete the process. In 2012 the export volume of TCM was USD 2.5 billion. However, among the three categories of TCM, exports of compound medicines remained deadlocked, with

[76] For the content of the directive, see http://www.legislation.gov.uk/uksi/2005/2750/contents/made, accessed May 15, 2015.

a trade deficit of USD 3 million.

In fact, there are very few pharmaceutical firms expanding its international market of TCM through the channel of prescription medicines. In the case of BUCM, the university also have a number of industrial collaborations with external firms, the attracted collaborators focus on the domestic market though. TCM actors in PKU purposely allied with one of the few firms that take the challenging approach of internationalization. Frustration over the export of TCM compound medicines from China was a background factor affecting the "match" between the Tasly Group and PKU. Treating the export of Chinese compound medicines as a national problem, the university felt that it had a social responsibility to succeed in its internationalization. Interviews with a university official (PKU_Official01_5) as well as with a representative of the faculty (PKU_Faculty3_4) both suggest that awareness of the problem made the university more supportive of the collaboration. The traditional role of PKU to serve national development may have played an implicit but crucial role in driving the university to accept the challenge of supporting the collaboration.

> It is difficult for TCM compound medicine to enter the American market as registered medicine. ... Recently, China also lost the European market. This can be seen as a warning. The regulation process [for TCM in foreign countries] is likely to be accelerated in the future. In order for TCM compound medicine to be used in foreign countries and to be covered by health insurance, we need to pass the scientific examinations and the legal procedures. ... The

> American legal system is based on case law. This means that once we pass the first case, it will be easier to pass the later cases (PKU_Official1_5):

> It was the dean of Peking University Health Science Center (the medical school of PKU) who took me to visit the Tasly Group in Tianjin before we signed the contract. He [the dean] was a vice chairman of the Standing Committee of the National People's Congress. This shows that the university leaders were very supportive of the cooperation (PKU_Faculty3_4).

Therefore, at the symbolic level, PKU shares the same motivation as that of BUCM – to promote TCM internationally as a cultural legacy of China (see PKU_Official1_4). With its practical value and curative effects, this form of cultural treasure is considered as a powerful resource to improve China's international image. The intension of both TCM actors in PKU and Tasly Group matches the national agenda of soft power promotion. The collaboration between the two has gained social supports and resources. As a result, it is not surprising that the internationalization and standardization have attracted a great deal of social attention and other forms of support (e.g., media reports and government subsidies) for both the university and the firm. In 2006 research on the effects of the Compound Danshen Dripping Pill on cardiac microcirculation that was conducted at the Tasly Microcirculation Research Center received funding from the Ministry of Science and Technology. More recently, the Tasly Group has begun FDA testing for three other products. Luye Pharmaceutical Co., Ltd of Shandong province, another pharmaceutical firm

with which PKU also cooperates, was also a beneficiary of such support.

> Many people acknowledge that TCM is an essential part of Chinese culture. They refer to China's three precious treasures: Chinese opera, traditional Chinese painting, and TCM. However, only TCM can be regarded as an industry, a medical industry that is capable of resolving [health-care] problems in many countries. TCM is the only treasure that concerns development, whereas the other two treasures are examples of purely artistic culture (PKU_Official1_4).

5.4.3 Transformation of the Identity of TCM Faculty Members

The previous two sections demonstrate how the orientation toward international research won institutional and financial support from related stakeholders (i.e., the university, the Tasly Group and the government). Compared with the 2001 reform, changes in the education and research orientations during the recent wave of reform have been much more profound. According to a faculty member who was in the original teaching and research section and then later joined the research team at the Tasly Microcirculation Center, the latest transformation has been associated with a process of building an identity. Faculty members who were asked to "think and behave as a part of PKU" were required to embrace and internalize the organizational mission and orientation of the university. This identity-building process provided an opportunity for the needed adjustments in the objectives of the TCM unit.

The faculty members adjusted their identity by regarding themselves as a unit of PKU and by differentiating themselves from the specialized TCM universities. They readjusted their position in the domestic TCM academic community by using their positions at the university as a point of reference. Changes in the educational activities of the newly established department can be regarded as an example. The university goal of training medical leaders was adopted to legitimize the research-based postgraduate training in TCM (see excerpts from PKU_Faculty3_2 in Section 5.3.3).

The purpose of the change in strategy was also to legitimize internationalization as the foremost task of the TCM group. By situating the group in an organizational platform like that of PKU, the TCM faculty members felt they were better able to improve the international profile of TCM than if they had been at a specialized university. Exchanges and collaboration among universities are often based on equal status and reputation. The international reputation of PKU is beneficial to the internationalization of TCM by enabling contact with top-level foreign universities (see excerpts PKU_Faculty3_5). Thus far, the department has established training and research collaborations with six foreign universities/institutions, for instance, Trinity College at Cambridge University, the Department of Physiology and Pharmacology at West Virginia University, and the Institute of Natural Medicine of the University of Toyama.

Let’s look at the internationalization of our department in a different

> way. PKU provides many extraordinary opportunities to increase the international visibility of TCM. International exchanges usually take place among equal-level universities. John's Hopkins University would not send their students to BUCM; rather they would send their students to us at PKU. The associate provost of John's Hopkins University recently visited our laboratories because they plan to build a Chinese medicine research center. ... PKU is not only a first-class university in China but it also is a first-class university internationally. When a university like PKU establishes a Department of Integrative Medicine, it will have international effects. Other Asian universities, like Tokyo University, National University of Singapore, and National Taiwan University, may also start to think about whether they too should establish a department of traditional medicine (PKU_Faculty3_5).

Embracing the university identity as a part of its academic orientation is beneficial to the TCM group by creating an organizational community. As noted earlier, during the PMU period the TCM unit was an isolated unit. Insufficient organizational support discouraged faculty motivation for teaching or research. The rationale of "Thinking and behaving as a part of PKU," which has been embraced, has contributed to organizational recognition and institutional support for the TCM group, and has guided the teaching activities of faculty members (see PKU_Faculty1_3). Faculty who expressed difficulties teaching biomedical students during the PMU period of PKU (see PKU_Faculty2_1 in Section 5.2) have gradually adjusted their teaching focus and content (see PKU_Faculty2_3):

> Why do we have to teach TCM to students of Western medicine? Because they are the future medical and health-care leaders of medicine in China. One of the disadvantages we [the TCM community] have face is that health-care policy makers in the government do not understand TCM (PKU_Faculty1_03).

> In most cases, students at PKU will work at tertiary-level [top-level) hospitals after graduation. They will face diseases that cannot be easily cured by biomedical treatments. The students thus need to acquire some TCM knowledge. This will improve their ability to deal with complicated diseases. ... I decided to change the content of my teaching. Instead of teaching students the similarities and differences between TCM and Western medicine, I teach them to understand how TCM diagnoses and cures diseases. This works very well. Students are motivated to learn because they realize that they may need some of this knowledge in their future practices (PKU_Faculty2_03).

The TCM group was motivated to conform to international standards due to the differences in status between TCM and Western medicine. The unequal status of the two forms of medical knowledge that existed during the Nationalist period continued to exist at PMU and later at PKU. By conforming to international standards, there was a reorientation of the status of the TCM faculty members. This was based on the idea that international standards are superior to domestic standards, thus enabling a leveraging of the position of TCM at PKU.

In addition to the pressures from the university and the dynamics of internationalization in higher education, how does internationalization affect the nature of the field of TCM? The fundamental problem is really about what counts as new knowledge and how should new knowledge be produced. This is exactly what was debated during the 2001 reforms. As a local field of study, the content of TCM knowledge and the method of knowledge production are affected by both the culture and the locality. Unlike the science disciplines that are emphasized by the university, there is no intrinsic driving force to internationalize or standardize TCM.

Many of the interviewees in Department of Integrative Medicine made similar statements with respect to the rationale for internationalization and the importance of SCI publications in the research approach. During the past several years, the department head has played a key role in organizing formal and informal discussions on such issues. It appears that a relatively coherent understanding and agreement has been reached among the faculty members from the original section and those affiliated with the research center and the related hospital.

Faculty members supported the role of medical knowledge as the overall legitimacy of the internationalization TCM. In particular, the economic and market rationales, which were highly valued by the firm and the university, were unrelated to the motivation of the discipline. Internationalization was regarded as an intrinsic responsibility of TCM: the skills, drugs, and philosophy

of TCM should benefit people in other countries (see PKU_Faculty1_4 and PKU_Faculty2_4):

> You have to understand, TCM does not have to be internationalized. TCM has a potential foreign market, but this does not mean that this is our motivation for internationalization. ... The internationalization of TCM is really about resolving health-care problems for humans. We should not let institutional and cultural boundaries block effective treatment. People in other countries should also be able to benefit from TCM (PKU_Faculty1_4).

> The disease spectrum has changed rapidly. One hundred years ago, infectious diseases were major killers. The pathogenesis of those diseases was often simple and direct. Therefore, the disease process could be easily terminated by something like penicillin. ... However, cardiovascular diseases and cancers are now afflicting mankind. These ailments are caused by numerous factors and have a complicated pathogenesis. To fight these diseases requires collaboration between TCM and biomedicine (PKU_Faculty2_4).

Along with the above rationale, the strategy of emphasizing international publications is both logical and convincing. The TCM unit used to conduct theoretical research by connecting TCM knowledge with biomedical knowledge. However, this had little practical impact. In contrast, applied research and SCI publications are a more effective way to promote TCM in the mainstream academic community (PKU_Faculty4_1):

> We still have a long way to go for TCM to internationalize. Even though China has recruited many international students to study TCM, the mainstream Western medical community shows little

> interest. We are trying our best to promote the internationalization of TCM. However, the fact is that in many countries medical students and doctors have no idea about TCM. Maybe some of them have heard about TCM, but they won't consider practicing it. ... Therefore, an efficient way to promote TCM is to publish in the most influential international journals (PKU_Faculty4_1).

This research method has gained legitimacy by positioning TCM knowledge in a disadvantaged but superior position in the international system. In this case, even faculty members who held conservative opinions regarding adopting a scientific approach tended to support the new academic orientation of the department. For instance, some of the faculty members share the view that from a theoretical perspective, TCM's holistic focus on balance and motion is superior to the biomedical research philosophy. The weaknesses of biomedicine in curing cancers and AIDs (Acquired Immune Deficiency Syndrome) have been used as supporting evidence. In order to "upgrade" the epistemology of mainstream medical research and to facilitate further collaboration, researchers have attempted to show the advantages of TCM in a way that the biomedical researchers can understood and accept (see PKU_Faculty4_2):

> Mainstream medical experts need to be updated regarding philosophy [for curing]. If you take a look at the papers promoted by medical journals, you only find points —one ingredient works for one point of a disease. ... On this I agree with the director [of the Tasly Research Center]. The research philosophy of Western medicine

> cannot be fully applied to TCM. The strength of TCM is that we look at disease in a stereoscopic and dynamic way. We believe that this is a superior philosophy because it recognizes the complexity, motion, and variety of the human body. Our current research visualizes the dynamics [of microcirculation]. It allows us to show them [biomedical researchers] how TCM compound medicine works to improve microcirculation. More importantly, we intend to upgrade the overall philosophy of curing (PKU_Faculty4_2).

In summary, the field of TCM at PKU has been able to survive in the international system by fully conforming to international standards. Because the ultimate goal is to make TCM part of the mainstream international academic research community and to modify existing standards that evaluate medicine, the first step is to join in the conversation. TCM faculty members are more supportive than critical of the recent reform. To a large extent, in practice they actually embrace the new academic orientation. The TCM faculty is willing to be measured insofar as they can communicate with international scientific researchers and promote TCM.

Although the options of the reform strategy are constrained by connecting the firm, the university, and practice in the discipline, the heterogeneous institutional environment has been beneficial to the reform process. The different institutional emphases have been tactically used by institutional entrepreneurs (i.e., the director of the Tasly Microcirculation Center and university-level officials who are engaged in promoting the reform) to legitimate the changes. For instance, the entrepreneurial model has been used

to deal with the low research output and the status differences between TCM and biomedicine have been used to promote the internationalization strategy.

5.5 Case Summary

In contrast to BUCM, the case of PKU demonstrates a different adaptation model of TCM discipline – a model of conformity. In both curriculum design and research orientation, the local traditional knowledge norms has given way to international scientific standards (See Table 5.5.1). International scientific standards here refer to content that is internationally valued and the rationales and norms of scientific knowledge production, such as internally recognized way of knowledge presentation, standardized scientific research methods and working in English. The Department of Integrative Medicine in PKU designed the graduate programs for local students with the aim of training scientific research personnel with the international academic capability for TCM discipline. With regards to research orientation, high priority was given to rigorous life science (biomedical) research criteria. International publication, especially SCI journals with high impact factor, is adopted as the indicator to measure the quality of research work.

Table 5.5.1 Summary of TCM Curriculum Design and Research Standard of PKU

	Programs for Local Students	Educational Goal
Curriculum Design	Two master's programs (research-based and clinical-based) PhD program in Clinical Integrative Medicine	To cultivate international research personnel for TCM to be in conversation with mainstream life science research community
	Research Standards	**Disciplinary Goal**
Research Orientation	High priority given to scientific research on the mechanism of TCM treatment and formula	Short-term disciplinary goal: be in the conversation with the mainstream life science community Long-term disciplinary goal: transform the philosophy and institution of medical research

In terms of the internal restructuring, the university has adopted a transformative approach to exert pressures with the aim of implement scientific research standards. PKU has exerted expectations and pressures on this unit through resource allocations, organizational restructuring, and the recruitment of personnel. The strategies for the two reforms have been quite similar. The university established a new research center as an experimental unit. Once the experiment succeeded, the university integrated the units, thus allowing for an expansion of the orientation and the rules for the experimental center.

More recently, the key translators at PKU have been shifted from university level officials to institutional entrepreneurs among the faculty members. In recent reforms, leaders in the discipline at the departmental level have played a crucial role, mediating between requirements from the university and the professional identity of TCM researchers. Their translation of the need for conformity tactically linked the developmental goals of the discipline to PKU's organizational role and successfully reduced the resistance that appeared early

in the reform.

In dealing with the external environment, the TCM actors at PKU were able to exercise their agency to reduce undesirable institutional pressures and to ally with stakeholders who share the same goal as them. Unlike BUCM, the department did not take undergraduate training or international student education as its responsibility. At the same time, the TCM professionals purposely allied with a pharmaceutical firm, which had the intention of international expansion. As a result, the complexity of the institutional environment has been simplified. The department has been able to establish a clear and unified goal for development.

The agency of TCM actors at PKU is closely related to the established university role and prestige level. The local and international reputation of the university allows TCM actors to establish legitimacy and mobilize resources to overcome external resistance and achieve internal transformation. By being situated at a university that is working to become world class, it is a given that the TCM faculty members pursue international excellence in education and/or research. The TCM community at PKU has thoroughly conformed to international standards, thus changing the identity of the community. It has repositioned itself in the international academic community and has established new international goals to guide its research and education practices. The institutional structure has been rebuilt upon this new orientation.

Chapter 6

HKU: Traditional Medical Discipline at an International University

6.1 Significance of the Case

The HKU case differentiates itself from the two Beijing cases in two ways. First, the institutional environment in which the university is situated is different from mainland China. Although Hong Kong is politically under the sovereignty of the People's Republic of China, the special administrative region operates with a separate institutional structure and different sets of institutional logic under the policy of "one country, two systems" ("一国两制"). In the field of higher education, professional power is highly respected by the state and the society of Hong Kong. Academic autonomy is a shared principle and is protected by the institutional structures of the higher education system. This environment gives more room for TCM actors to reconstruct the institutions of the discipline based on the particular nature of its knowledge and needs.

Second, the motivation for the internationalization of TCM in the two social contexts is different. In mainland China, the domestic development of the discipline, to some extent, is connected with its international status. The previous two cases have demonstrated that international expansion is articulated as a goal for the development of the discipline. In Hong Kong, the linkage between internationalization and TCM is not explicit. If the internationalization of TCM in mainland China can be characterized as

following an expansionary model, the situation in Hong Kong follows a model of internal adaptation, as the society itself is already highly internationalized as a city state. The addition of international elements that has been observed at HKU is an adaptation of the TCM discipline to local institutional ideologies and structures.

In addition, the institutionalization of the TCM discipline at HKU connects to mainland China, as the academic personnel and curriculum design were imported from universities in mainland China. The connection and difference between the mainland China research contexts make HKU an important case. The comparisons between the Hong Kong case and the two mainland China cases are able to enrich the understanding of the shared issues and the possibility for different pathways.

6.2 Introduction to the University and the Li Ka Shing Faculty of Medicine

HKU was established in 1911, under British colonial rule, and is the oldest institution of higher learning in Hong Kong. Since its founding, the university has used English as the primary language of instruction. The first Chinese department was not added to the university until 1927. During its early years, the university heavily emphasized science over the humanities. Only three faculties—medicine, engineering and the arts—were in existence. The social sciences and law were included after World War II, when the university was reconstructed and expanded into a comprehensive university. HKU had

followed the British tradition of educating only the elite, but when higher education in Hong Kong began a massive growth process in the late 1980s, the university began significantly increasing the number of places for local students.[77]

HKU describes itself as the first and foremost institution of higher education in Hong Kong.[78] This description is based on the local and international profiles of the university. At the local level, the university recruits the best students, who perform well on the Hong Kong Diploma of Secondary Education Examination. Compared with other local universities, HKU excels at providing quality education and at winning research funds from the University Grants Committee. Internationally, it also enjoys a high reputation. According to the QS University Ranking, HKU is ranked 2nd in Asia and 28th in the world. Its level of internationalization is also reflected in the diversity of its faculty and student body. Of the academic staff in 2012, 57.8% were non-local. Of the 12,847 students in the same year, 34.4% were non-local.[79]

The current faculty of medicine at HKU, the Li Ka Shing Faculty of Medicine, in fact has a longer history than the university itself. This faculty of medicine was originally known as the Hong Kong College of Medicine for Chinese (香港华人西医书院) and was founded in 1887 by the London Missionary Society. When

[77] The information on the early history of HKU is derived from "A Brief History of Hong Kong" (Lau, 2009).
[78] See the profile webpage of the university: http://www.cpao.hku.hk/publications/firstandforemost/first-and-foremost/en/research.htm
[79] The statistics for the faculty and student profile were retrieved from the university website in December 2013: http://www.cpao.hku.hk/qstats/staff-profiles

HKU was established in 1911, the College of Medicine for Chinese became a core part of the university. The faculty of medicine has been regarded as one of the most reputable medical faculties, famous for the Western medical (biomedical) education and research. According to rankings such as the QS University Ranking and the Times Higher Education World University Ranking, the medical faculty of HKU ranks in the top three in Asia.[80]

In terms of the size, the Li Ka Shing Faculty of Medicine is now the largest faculty at the university. According to information released on its webpage, there are about 300 full-time teaching staff and 600 research support staff in the medical faculty. The number of undergraduate students is about 2,900, while the postgraduate student population is about 1,500. There are 17 departments, 3 schools and a number of research centers affiliated with the faculty. In 2002, the School of Chinese Medicine was established and became the newest member of the faculty.[81]

This brief overview of HKU and its medical faculty suggests that the university shares a similar status to PKU and the Peking University Health Center in mainland China. Both universities are domestic flagship universities with high international reputations. They are also both public comprehensive universities receiving subsidies from the state government. Nevertheless, two

[80] The ranking information for the Li Ka Shing Faculty of Medicine was retrieved from the website of QS and Times Higher Education: http://www.topuniversities.com/institution/university-hong-kong; http://www.timeshighereducation.co.uk/world-university-rankings/2014-15/world-ranking

[81] The information on the Li Ka Shing Faculty of Medicine was retrieved from the website of the faculty in December 2013: http://www.med.hku.hk/v1/about-the-faculty/ http://www.topuniversities.com/institution/university-hong-kong;

differences that may have implications for the developmental trajectory of the TCM discipline need to be highlighted. The first difference relates to the higher education systems in which they operate. The system in Hong Kong largely follows the British tradition. Unlike the situation of mainland China, where the government holds great power to influence university work, the University Grants Committee in Hong Kong plays a crucial role in mediating the power relationship between the state and its public universities. Secondly, HKU has enjoyed the advantages of internationalization since its establishment. Using English as the language of instruction is helpful for establishing an international profile. Previous colonial ties with the United Kingdom and its colonies may have also been beneficial in terms of academic networking, international exchange and educational collaboration.

6.3 Including TCM at HKU

6.3.1 Motivations for Embracing the Traditional Medical Discipline

As was reviewed in Chapter 2, the Hong Kong government began regulating TCM after the handover in 1997. After recognizing TCM as a form of medicine, licensing was the first step of regulation. In order to continue practicing TCM in Hong Kong, practitioners were required to become Registered Chinese Medicine Practitioners. Existing practitioners, who had been continuously practicing TCM in Hong Kong for less than 15 years before January 3rd of 2000, might have to pass a Registration Assessment and/or Licensing Examination.[82]

[82] For the detailed "Transitional Arrangement of Chinese Medicine Practitioners", refer to the webpage

In December of 2001, the Chinese Medicine Council received 7,707 applications for Registered Chinese Medicine Practitioner status. About 67% of these applicants were required to undergo assessment.[83] The first Licensing Examination was held in 2003. As most of the practitioners in Hong Kong were trained via master-apprenticeships before 1997, there was need for school training to facilitate the transition to licensing.

As early as 1991, the School of Professional and Continuing Education at HKU was opening TCM training programs, in response to demand from local practitioners (See excerpts from HKU_Official2_1). These training programs were not government-funded degree programs but self-funded part-time continuing education programs. During the transition period, the school opened certificate and diploma programs, which were able to provide the qualifications as well as the school training required for practitioners to take the Licensing Examination. The diploma programs ceased in 2013, since the Hong Kong Chinese Medicine Council stopped allowing part-time degree students to take the Licensing Examination.

> HKU in fact started the first sets of TCM training programs. However, there was no university degree program initially. We opened adult training programs for local practitioners. …… There were not enough facilities for the local Chinese Medicine practitioners to learn more

of the Chinese Medicine Council of Hong Kong:
http://www.cmchk.org.hk/cmp/eng/#main_rcmp09.htm

[83] The statistics on TCM practitioners during the transition period were retrieved from the Xinhua News (September 6, 2002) from the following website on December 9, 2014:
http://big5.china.com.cn/chinese/health/200270.htm

> about TCM. There was also no guarantee with regard to the quality of practitioners in Hong Kong at that time. We wanted to facilitate the regulation process and to help improve the quality of practitioners (HKU_Official2_1).

Such motivation to serve local society continued, and was the major consideration in opening the full-time TCM degree programs at HKU. After the transition period, the responsibility carried by institutions of higher education in the TCM professionalization process changed from facilitating the transition to licensing to cultivating new practitioners. In 1998, two universities—the Hong Kong Baptist University and the Chinese University of Hong Kong—opened TCM undergraduate and postgraduate programs. HKU was the third university in Hong Kong to include TCM. The interview excerpt below suggests that the establishment of the School of Chinese Medicine at HKU was motivated by a consideration of the realities of medical usage by Hong Kong residents (See HKU_Official2_2). The university aimed to facilitate collaboration between TCM and Western medicine to benefit the local community.

> TCM and Western medicine have been and will be co-existent in Hong Kong society. There are practical demands; a lot of patients are using TCM. We cannot neglect it and pretend nothing happened. We must find out the best way to use it. …… In reality, people often seek help from both types of medical practice. …… Having TCM and Western medicine education and research in the same medical school could be the best way to facilitate communication between

> these two groups of people. …… [Hong Kong] Baptist University and Chinese University of Hong Kong had already started TCM programs. However, neither of them put TCM under the medical school [with Western medicine]. …… Baptist University did not have medical departments before opening the School of Chinese Medicine. TCM was under the Faculty of Science instead of the Faculty of Medicine in the Chinese University of Hong Kong (HKU_Official2_2).[84]

Including TCM in the medical faculty of HKU was supported by faculty members of Western medicine as well as the TCM staff in the School of Professional and Continuing Education. From the perspective of the faculty in the Li Ka Shing Faculty of Medicine, scientific inquiry on the effectiveness and mechanisms of TCM motivated them to explore this traditional form of medical knowledge (See the interview excerpt from a Western medicine professor: HKU_Faculty5_1). The teaching staff at the School of Professional and Continuing Education, who later became the faculty members of the School of Chinese Medicine, believed that the overall professional image of TCM practitioners could be improved by being included at the best university in Hong Kong and collaborating with top biomedical scientists (HKU_Faculty4_1):

> Our faculty members are beyond the stage that some of us do not believe in Chinese medicine. In fact, we do believe in TCM. …… We believe there is something in TCM which is worthy to be researched. Otherwise the knowledge and practice could not survive the test of

[84] The School of Chinese Medicine in the Chinese University of Hong Kong moved from the Faculty of Science to the Faculty of Medicine on July 1, 2013.

time (HKU_Faculty5_1).

> In the past, many Western medicine practitioners believed that we (the TCM practitioners) prescribe medicine without evidence or reference (乱用药). The programs at the School of Professional and Continuing Education had already changed this misunderstanding to some extent. We need to further increase the communication and mutual understanding through collaboration in education, research and clinical practice. …… Including TCM at the best university in Hong Kong means we have the best students to learn this form of knowledge. It not only benefits the transmission of TCM knowledge to the next generation, but also improves the status and image of the TCM profession in Hong Kong (HKU_Faculty4_1).

6.3.2 Organizational Setting: Continuity and Flexibility

In 2002, HKU restructured the TCM section of the School of Professional and Continuing Education and established the School of Chinese Medicine under the Li Ka Shing Faculty of Medicine. This organizational restructuring focused on building the educational, research and clinical dimensions of the TCM discipline. HKU already had experience in managing expansion and the inclusion of new disciplines and subjects.[85] According to interviews with university officials (HKU_Official1 and HKU_Official2), the consistency of

[85] After the Second World War, HKU went through a series of expansions. The Department of Extra-Mural Studies (later to become the School of Professional and Continuing Education) was established in 1956. Several other new faculties, such as the Faculty of Social Science, the Law Department, the Faculty of Dentistry and the Faculty of Business and Economics, were established in 1967, 1969, 1982 and 2001 respectively.

institutional policies and maximizing the usage of existing resources (e.g., institutional structures, facilities and human resources) were the two major principles guiding the setup of the new school.

The first and most important step in the organizational restructuring was to recruit TCM faculty members. As there had been no formal higher education or equal level training system for TCM education and research personnel in Hong Kong before 1998, the faculty members of the newly established school were non-locals. HKU made an open call for the faculty positions at the School of Chinese Medicine. The recruitment requirements and procedures were inherited from the general policy of the university. Applicants could apply for tenure track positions, with high research experience requirements. The non-tenure track position has the title of "teaching consultant". The responsibility of a teaching consultant is to focus on lecturing and clinical instruction. Both track positions are evaluated by the same standards as the other faculty in the Li Ka Shing Faculty of Medicine.

As mainland China has the largest pool of TCM academic personnel, the recruitment call from HKU attracted a number of academic staff from mainland China, most of whom had training and research experiences in TCM specialist universities. According to one of the officials, many full professors from the mainland accepted teaching consultant positions (See HKU_Official2_3). Based on the profile of current tenure track faculty at the School of Chinese Medicine, it seems the university gives priority to faculty members who have a

background of TCM training in mainland China and overseas study or work experience. As a result, the vast majority of the faculty members recruited by the new school are from mainland China. The director of the school, Professor Tong Yao, was formerly the vice president of Shanghai University of Chinese Medicine.

> Several professors, who were Ph.D. supervisors on the mainland, are now working as teaching consultants at HKU. The tenure track here has high standards and is very competitive. They are required to be able to communicate with the Western medicine professors in English, supervise post-graduate students, and publish in international journals. Most of the professors from TCM specialist universities on the mainland cannot keep pace with the requirements of HKU. …… But these faculty members [who used to work on the mainland as full professors] are very experienced in clinical practice. We are more than happy to have them to train our students (HKU_Official2_3).

The university played a facilitator role in the restructuring process. The interview excerpts below suggest that TCM faculty enjoyed a great deal of autonomy in designing the educational, research and clinical domains of the school (See HKU_ Official1_1). The academic tradition, as well as the organizational structure of HKU, provided a platform for TCM faculty to be institutional actors in defining valid knowledge and valid means of knowledge transmission. The relationship between different faculties/departments, according to interviews with university officials, is federal rather than hierarchical. The organization of HKU has a clear division of labor and open channels of communication. This not only allows faculty members in different

departments to develop their own interests, but also helps the collaboration process.

> The university is an organizational platform. We believed that the university should be run by professors (教授治校). The administrative sections should serve educational and academic work. ……The strategy is to facilitate our faculty staff if they are interested in research, teaching and clinical service. Each dimension is not decided by the university administration. We believe that the TCM faculty are the best persons to design the curriculum, choose the research topics. The university's role is to facilitate the process, stimulate research interests and increase cross-disciplinary collaboration (HKU_Official1_1).

The special characteristics of the TCM discipline are also respected by the university. The following two examples demonstrate how the university flexibly uses institutional structures and organizational resources to support the development of TCM. Insufficient funding was a significant problem when the TCM discipline was first included at HKU. The number of TCM students was too small to ask for more funding to recruit instructors. In order to solve the problem, the School of Chinese Medicine proposed opening its own teaching clinic. The university supported the proposal and allowed the school to use income from the clinic. Nowadays, about 40% of the faculty members of the School of Chinese Medicine are funded by income from the clinic. Another example which shows how the university is supportive of the research needs of TCM can be seen below (See HKU_Faculty1_1):

> At the beginning, the university [officials] thought there was no need to give TCM a separate laboratory. They believed that the research we do, like the analysis of ingredients, could be completed in existing Western medicine laboratories. We explained to the committee board that the philosophy that guides the research of TCM is not the same as that of Western medicine. The instruments we need are different, and the experiments we do are not necessarily the same. Having our own research lab is very crucial for TCM research, as well as the increase of productivity. …… The university supported our request and helped us to build our own lab, while we are also able to share facilities with other departments (HKU_Faculty1_1).

In summary, the case of HKU represents a situation in which TCM faculty members, who previously worked at mainland Chinese universities, moved to a new institutional environment. The new environment empowered them to be major actors and provided them more room to exercise their agency. In such a case, how do the behaviors of these TCM representatives change? What are the implications for TCM knowledge institutions?

6.4 Curriculum Design and Practice: Dependency and Adjustment

6.4.1 Learning from Existing Models

Starting a new TCM program requires a full curriculum design, which includes program length, selection of modules and textbooks, teaching and learning methods, internship arrangements and even arrangements for practice after graduation. To design a new curriculum or to produce a new set of textbooks

for Hong Kong's TCM degree program would have been a high-cost, time-consuming and difficult to implement strategy. As a relatively late developer, HKU was able to learn from existing models. There was already about 40 years of history for TCM higher education in both mainland China and Taiwan at that time. The experiences of these two regions provided a good reference for the School of Chinese Medicine. The question was only from whom to learn.

When the three regions' medical systems are compared, Hong Kong's and Taiwan's have the most similarity. The licensing regulations for TCM and Western medicine practitioners are on separate tracks. Each group is restricted to using its own medical treatments and prescriptions. In Taiwan, TCM students at universities are often trained in both TCM and Western medicine. In such cases, the university programs are seven to eight years long. After graduation, students can choose to practice either TCM or Western medicine. This model of curriculum design is aimed at increasing collaboration between the two forms of medical practice, as TCM graduates are well trained in both TCM and Western medicine.[86] Similarly, the Hong Kong government adopted a collaborative model, which on the one hand separates the two tracks, and on the other hand encourages collaboration between the two groups of practitioners.

However, all three universities in Hong Kong used the mainland Chinese

[86] The information regarding TCM training in Taiwan's higher learning institutes was obtained from interviews with two TCM faculty members at Chang Gung University, Taiwan, on May 25 and 26, 2012.

educational model, instead of Taiwan's, as their major reference. Based on interviews with faculty level officials at the School of Chinese Medicine, two main considerations led to this decision: resource dependency and socio-political legitimacy.

From the perspective of the faculty of HKU, China possesses abundant resources, which were crucial for opening HKU's TCM educational programs (See HKU_Official2_4). For instance, the TCM universities in mainland China are able to provide good clinical practice opportunities for Hong Kong students. Clinical practice is considered an essential aspect of TCM training. However, opportunities for clinical practice for students majoring in TCM subjects in Hong Kong are restricted. Students' medical practice with patients is restricted, as they are not licensed practitioners. In addition, the existing facilities at that time were not sufficient to provide good clinical training for TCM students. The Hospital Authority was planning to set up one Chinese Medicine Center for Training and Research in each of the 18 districts in Hong Kong, in accordance with the Chinese Medicine Ordinance. One of the roles of these public TCM centers is to provide clinical practice opportunities for university students.[87]

[87] The educational function of the Chinese Medicine Center for Training and Research is made clear in the quoted description from the Hospital Authority Chinese Medicine Website: http://www.ha.org.hk/chinesemedicine/intro.asp?lan=en&cid=
"A structured program of in-service training has been designed for Chinese Medicine Practitioner Trainees. This consists of pre-service orientation and internship; 3-year in-service clinical rotation and commissioned training in special topics. Hospital Authority has further collaborated with renowned TCM universities in Beijing, Shanghai and Guangzhou, to establish Junior and Senior scholarship and Fellowship programs. Through the Visiting Scholar scheme, TCM masters from China are invited to conduct clinical teaching with a view to expedite specialist service development."

However, these centers were not yet fully established during the late 1990s and early 2000s. Also, these centers do not have in-patient departments, but only out-patient services. In contrast, TCM specialist universities in mainland China usually have well-equipped teaching hospitals. The variety of patients and diseases in these hospitals provides rich opportunities to develop clinical experience for students.

> When we were designing the curriculum, we considered [the models from] both mainland China and Taiwan. Taiwan is an important reference for us. But we believed that there would be more collaboration between the universities in mainland China and Hong Kong in terms of education and training..... It is easier for the TCM instructors from mainland [China] to start working as they are very familiar with the teaching content. ..... Students at HKU could encounter less difficulties when they do internships in TCM teaching hospitals [of TCM specialist universities in mainland China] because the similarity of curriculum (HKU_Official2_4).

The previous working experience, as well as the social and educational networks of TCM faculty members at HKU naturally linked the school with TCM institutions in mainland China. The final year internship of TCM students in the School of Chinese Medicine is conducted in the Shuguang Hospital and Longhua Hospital in Shanghai. The two hospitals are the teaching hospitals of Shanghai University of Chinese Medicine. At the same time, the school also arranges fieldtrips to the cultivation centers in Yunnan and Sichuan Provinces, where the raw materials of herbal medicine are produced.

In addition to resource considerations, socio-political considerations

contributed to the selection of the mainland as the reference for curriculum design (See the excerpt from HKU_Faculty2_1). For TCM practitioners in Hong Kong, mainland China is not only the world center of TCM knowledge, but is also the regime that supports the status of TCM. As was reviewed in Chapter 2, the recognition of TCM's medical status was an action catalyzed by the sovereign handover from the British colonial government to China. Social legitimacy for TCM actors to ask for support from the state government comes from the political and cultural identity of Hong Kong—as a part of China. Referencing China's curriculum to some extent consolidates the legitimacy and status of TCM while learning from other models does not have the same effect. Therefore, socio-political legitimacy, as a background consideration, eliminated the possibility of adopting Taiwan's system as the primary reference.

> To a large extent, the legislative and regulatory processes for TCM were associated with [Hong Kong's] sovereign handover. After 1997, Hong Kong wanted to develop Chinese culture. Therefore, TCM was recognized as a form of medicine that shares the same status as Western medicine in the Basic Law [of the Hong Kong Special Administrative Region]. …… So, when we think about collaborators or learning models, [the selection of collaborators and models from] mainland China was almost taken for granted. …… Taiwan from the beginning was not an option (HKU_Faculty2_1).

6.4.2 Curricular Adaptation at HKU

The 5-year undergraduate program at TCM specialist universities was adopted as the major reference for curriculum design at HKU. Table 6.4.2.1 briefly compares the bachelor degree programs at HKU and BUCM. The linkage and

similarity between the two programs exists in three aspects: the design of the training progression and length, the set of textbooks used, and the instructors, who came from mainland Chinese universities. However, there are several practical differences. These differences are called "localization" ("本土化") by the TCM faculty members at HKU (See HKU_Faculty4_2):

> If you only look at the teaching content, not many differences can be found [between the curriculum of mainland China and Hong Kong]. We use the same textbooks as the mainland TCM universities do. However, the curriculum is indeed 'localized'. If you take a look at how we arrange the educational activities and how we practice teaching and learning, you will see a big difference (HKU_Faculty4_2).

Table 6.4.2.1 Comparison of the Undergraduate Programs at HKU and BUCM

	HKU	BUCM
Program Design	5-year program: Year 1-2, mainly learning TCM theory Clinical training from Year 3 Year 5, internship at teaching hospitals	
Textbooks	Standardized national edition	
Teaching Content	Similar: many teachers at HKU formerly taught at mainland universities	
Proportion of Western Medicine Modules	20%-25%	35%-40%
Class Size	24	60-100
Classroom Teaching and Learning Methods	Multiple methods: problem-based learning, teaching with practice, interactive teaching and learning	Primarily one-way instruction
Instruction Language	Chinese for TCM English for Common Core Curriculum and Western medicine modules	Chinese

Source: table made by author

The first aspect of localization is adaptation to the local medical system. As has been mentioned earlier, due to licensing regulations, TCM practitioners in Hong Kong are not allowed to practice Western medicine. Such a situation requires more attention and emphasis on training TCM diagnosis skills, treatment techniques and prescription writing. Besides, as of yet there is no separate licensing track for TCM pharmacists. Therefore, in contrast to the curriculum in mainland China, the training of TCM practitioners in Hong Kong is more general and covers not only knowledge of medical treatment but also knowledge of herbal pharmacy – the knowledge of how to identity and dispense herbs. The proportion of learning hours devoted to TCM courses is greater than in the curriculum in mainland China. In order to prepare graduates for potential collaboration with Western medicine, the university still includes a certain percentage of biomedical modules for TCM students.

The emphasis on TCM training in the university curriculum, which is due to the medical regulation system in Hong Kong, actually coincides with the intentions of faculty members from mainland China. The interview excerpts below indicate that these TCM instructors believe that Hong Kong provides a better institutional environment for preserving the TCM knowledge tradition (HKU_Faculty2_2). The institutional environment in Hong Kong allows improvement upon the perceived defects of the curriculum in mainland China.

> In mainland China, as the two forms of medical practice are under the same license, a doctor can prescribe both Chinese and Western

> medicine, while a TCM practitioner can use Western medical tests to diagnose diseases. It is no good for the development of TCM. On the one hand, we don't know what kind of medicine is working. On the other hand, TCM practitioners cannot accumulate experience. In Hong Kong, since the practitioners can only rely on the TCM methods, our job is to train practitioners who can make TCM treatments and prescriptions more effective. Only in this way can we preserve the nature and tradition of TCM knowledge. …… The curriculum and medical system have been implemented for decades in mainland China. It is not possible for us to conduct significant reform. The TCM hospitals in mainland China now are not able to survive without Western medical diagnostic equipment. …… Hong Kong has a better chance to preserve and develop the essence of TCM (HKU_Faculty2_2).

The second aspect of localization is how the TCM training has been modified in accordance with institutional arrangements in the higher education system. In Hong Kong, the University Grants Committee assigns student recruitment quotas to public universities based on a determination of the needs of local society. In the case of the TCM discipline, the committee assigns 24 undergraduate positions to HKU each year.[88] Student quality is assured by the high score on the university entrance examination needed to enroll.

The TCM faculty makes good use of small class sizes to facilitate TCM teaching

[88] The yearly student recruitment quota given by the University Grants Committee has resolved training quality concerns. In mainland China, class sizes in TCM programs in specialist universities are often between 60 and 100. The large class sizes reduce the possibility of interactive teaching and learning and classroom practice.

and learning. In the School of Chinese Medicine, TCM students have their own stable classrooms. Each cohort of TCM students is arranged in a particular classroom where the majority of their specialized modules a taught. Due to the stable classroom environment, TCM students are able to build close relationships and have more opportunities to share and resolve learning problems. Furthermore, the classroom training is very interactive. Based on my observation in the 4th year students' classes, the instructors often asked students to move freely so that they could better observe. During lectures, students would often interrupt the instructors to raise questions. The small class size enabled more classroom demonstration and on-site practice, which are important in facilitating the mastery of TCM knowledge (See HKU_Faculty3_1):

> When the class size is big, it is not feasible to use the learning-by-doing strategy in classroom education. Therefore, practice is likely to be shuffled into the later parts of the program, such as internships. This is a bad arrangement that reduces the efficiency of learning TCM knowledge. …… Now there are only 24 students in my class. I often spend one hour to teach the theory and demonstrate the acupoints and leave an hour for the students to practice in groups (HKU_Faculty3_1).

The third aspect of localization is how the teaching methods of TCM are diversified under the influence of the general teaching philosophy of the university. As has been mentioned earlier, the teaching is incentivized through the teaching track arrangement. In traditional TCM training, due to respect for

the masters, the educational process is often determined by the teacher. Apprentices are the ones who are supposed to work hard and gain recognition from the master. To some extent, this tradition continues to affect the informal teaching and learning dynamics at the universities of mainland China. However, in the case of HKU, the university promotes holistic education (全人教育) and outcome-based learning. The student-centered teaching philosophy focuses on the students' mastery of knowledge. There is no restriction in terms of style of teaching or assessment in outcome-based education. This allows TCM instructors to explore effective ways of knowledge transmission in TCM training and to experiment with multiple teaching and assessment methods. According to interviews with faculty members and teaching consultants, they intend to integrate the best methods from traditional TCM training and Western medical training (See interview excerpts from HKU_Faculty2_3 and HKU_Faculty3_2):

> We think highly of the educational philosophy of HKU. Teaching should be student-oriented. …… We try to integrate different teaching and learning methods to help the students to master the knowledge and skills. For instance, problem-based learning is a popular learning approach in Western medicine. It is also beneficial for TCM training. For instance, we can describe the disease situation, ask students to work in groups to discuss how to diagnose and treat the disease. …… Experience is crucial in TCM training. So we increase the opportunities for students to do observation and practice. For instance, we take second year students to the places, such as Yunnan and Sichuan province, where raw herbal materials are produced—for fieldtrips (HKU_Faculty2_3).

> The teaching and learning is much more flexible as well as effective compared with my previous experience in mainland China. I use various teaching methods in the classroom. I organize group work, discussions and presentations for students. In order to help the students to understand certain cases, I sometimes bring my patients into class—of course, with the agreement of the patients (HKU_Faculty3_2).

The diversification and integration of teaching methods in TCM training are supported by the university. HKU attaches great importance to the quality of education. Teaching and learning is one of the core missions of HKU.[89] On a substantive level, two organizational policies shed light on the university's emphasis on teaching and learning. Firstly, the university respects both teaching and research positions. The salary gap between teaching consultants and tenure track faculty is not large—the salary of a high level consultant is similar to an associate professor on the tenure track. This policy encourages professional efforts to improve teaching and learning outcomes for various subjects, including TCM (See HKU_Facilty3_3). Secondly, the university set up an administrative department (The Center for the Enhancement of Teaching and Learning) to evaluate and improve the curriculum (See HKU_Faculty4_3):

[89] According to the webpage of HKU: "Teaching and learning is central to the University's Mission, which together with the University's Vision and Role statements articulate HKU's position as an English-medium, research intensive institution, committed to providing a campus-based education in a comprehensive range of academic disciplines for outstanding students by world-class academics." The quotation was retrieved in December of 2014 from: http://tl.hku.hk/tl/

> I used to be in the research (tenure) track and I shifted to the teaching track after I came here. HKU emphasizes curriculum development heavily and the teaching consultants are respected here. …… [By transferring to the teaching track,] I am able to focus on my educational responsibilities. I spend more time exploring pedagogy for TCM training as well as clinical practice. …… My time with students has also increased significantly (HKU_Faculty3_3).

> The teaching evaluation is at the university level. The university collects feedback from the students through an online survey. So we know the evaluation score of each faculty member as well as the average score of the whole school among the other departments. The salary of faculty is associated with the evaluation score. Every teacher at HKU needs to do the performance review. The purpose of the review is to help the teachers to improve their teaching. We call the process 'performance review and development' (HKU_Faculty4_3).

Finally, the localization of the curriculum is also reflected in the instruction language. The School of Chinese Medicine adopted an integrative policy for instruction language—integrating the two written languages (Chinese and English) and the three spoken languages (Cantonese, Mandarin and English) ("两文三语") in the training of TCM. For the Common Core Curriculum and Western medicine modules, students are taught in English. For the TCM modules and clinical training, Mandarin and Cantonese are used. According to faculty members at the school, this policy was adopted in accordance with the university's emphasis on cultivating students' "international capacity" and

providing “holistic education” (See HKU_Faculty2_4):

> HKU is an international university and cultivating students’ international vision and capacity is heavily emphasized by the university. …… We tried to think like this: what does international capacity mean for our TCM students? …… Mastering TCM knowledge requires high ability in Chinese language, especially ancient language. Chinese language is thus a part of the training. …… In their later daily practice, students are likely to use different languages to communicate with their patients, Western medicine colleagues and TCM colleagues from mainland China and Taiwan. Therefore, the mastery of both English and Chinese as academic skills and the three spoken languages as communication skills are seen as the international capacity that TCM students in Hong Kong need to have (HKU_Faculty2_4).

6.5 Research Orientation: Compromise and Development

HKU is a research university. Since its establishment, the School of Chinese Medicine has had a strong research orientation. According to interviews with faculty members, the school has established four overall research areas: aging related diseases, cancer, mental disorders, and quality control of herbal medicines. In terms of research collaboration, the school has a wide network of partners. TCM faculty members at HKU often ally with Western medicine researchers in the Li Ka Shing Faculty of Medicine. For instance, the project entitled “Novel Pathway of Modernization of Chinese Medicine” is a collaborative project between Dr. Shen Jiangang from the School of Chinese

Medicine and Professor So Kwok-fai from the Department of Anatomy. For clinical research that requires large sample sizes, TCM researchers at HKU often seek collaborators from mainland China. In addition, the school also collaborates with New Mexico University in researching brain tumors.

In terms of methodology, evidence-based research methods prevail in the projects conducted at the School of Chinese Medicine. The research orientation at the school developed based upon the idea of "walking on two legs" ("两条腿走路"). One "leg" that supports the "walking" of the department is conformity to western medicine research paradigm which follows a reductionist logic and seeks to understand the mechanism of TCM effects. The other is to conduct what they called "pure Chinese medicine research" ("纯中医研究") which basically adopts evidence-based rationale to prove the effectiveness of certain treatment or medicine, at the same time respects the holistic nature of TCM. In both ways, international publication holds higher credibility than Chinese journals. And English is adopted as the major academic language.

The need for TCM internationalization is closely associated with the university culture. All of my interviewees from among the HKU's TCM faculty members shared a similar experience of changing professional identity. They described this change as a natural process of cultural assimilation. Being situated in a university like HKU, international capacity is a taken-for-granted requirement for the professional role (See HKU_Faculty4_4). These researchers, who used

to work at universities in mainland China, perceived significant differences in the organizational culture of HKU versus the institutions in mainland China. TCM actors integrate this aspect into their professional identity through daily encounters with international work. International skills (e.g., use of the English language), became a crucial part of their everyday professional life. As a result, this group of researchers conforms to international standards of research with greater ease.

> In mainland China, internationalization follows the evaluation standards given by the government. For decades, we have not been able to achieve internationalization. It is because we [the universities in mainland China] do not have the atmosphere. At HKU, nobody tells us that we need to internationalize. However, I feel that we are much more international than before. It is the culture of the university that changes us. And it changes us in a natural way. I receive information about international conferences, invitations to be the editor of SCI journals and communicate with other colleagues in English every day (HKU_Faculty4_4).

With the changing professional identity, the rationale and purpose embedded in research also give weight to the areas that are recognized by international academic community. The traditional ways of knowledge accumulation, in particular studies based on personal experience, have been given up by TCM researchers at HKU (See HKU_Faculty1_2):

> The basic difference between TCM and Western medicine is simple:

> TCM personalizes treatment and medication according to the situation of the individual, while Western medicine cures through dealing with diseases. So if we stick to the traditional ideology of TCM medication, we can only do research as individual case studies. Generalization is not possible. We do research, and we do it for groups of people, not for a single person (HKU_Faculty1_2).

The conformity to Western medicine research paradigm is largely an unintended result of institutional pressure. As has been mentioned earlier in Section 6.2.2, the administrative level actors at HKU, and more specifically in the Li Ka Shing Faculty of Medicine, intend to provide an autonomous environment for the School of Chinese Medicine. This governance logic is well manifested in the well-developed facilitating platform of academic work. This platform is responsible for providing institutional and financial support for research projects. The university has developed a mature system to develop research interests within the academic community and to encourage collaboration across specialties and disciplines (See Faculty Official1_2). Compared with the heavy research funding given by the Ministry of Public Health and the Ministry of Science and Technology in mainland China, specific financial support from the Hong Kong government for the development of TCM is much less. Therefore, the TCM researchers at HKU are driven to join in research grant competitions such as the APF (Association of Professional Fundraising) and the RGC (Research Grants Council).

> The role of the [Li Ka Shing] Faculty is facilitating and encouraging. We do not decide which area should have a research team. The

> research interest—what deserves to be researched in a particular area, should come from the faculty members. …… We have a system of selection and evaluation. Once there is a research project application, we will organize a team from those who have relevant knowledge or experience in the areas to conduct selection and assessment (HKU_Official1_2).

However, although the university intends to respect the particular nature of the discipline, the existing evaluation system exerts institutional imperatives that affect the research direction of TCM. The evaluation criteria for academic credits and research grant competitions are based on the research standards of Western medicine (HKU_Official1_3). In order to increase the possibility that their proposal will be accepted, TCM researchers often collaborate with Western medical researchers. The research focus and methods are thus often adapted to Western medicine standards (See HKU_Faculty1_3). In addition, the primary indicator of academic performance used in evaluation is publication. The university has largely set up the promotion system to be based on SCI publication by medical research faculty:

> The thing is how we (from the perspective of the university) are going to set the mode of the research methods. There are two schools of thought. One group thinks that it is important to isolate the ingredients from medicines; the other school thinks the correct approach is put all the things together and see the outcomes. The former is the Western medicine approach. It is easy to perform because all the rules and procedures to test the basic ingredients have already been set up. The latter approach was more difficult to

> support. It is also more difficult to interpret from the perspective of Western medicine researchers (HKU_Official1_3).

> The committee members [of the RGC] are experts from various Western medicine areas. When they see our applications for research on compound medicines, they think we cannot even tell what ingredients are in the medicines. So they would not even consider our proposals. …… During the past several years, the researchers in our school have made efforts [to fulfill the requirements for RGC grants]. We submitted eight applications. And three of them were accepted. ……The possibility [of wining the grants] for pure TCM research (纯中医研究) is very low. So we have to collaborate with Western medicine, and focus on the extraction of single substances (HKU_Faculty1_3).

There is an increasing call for the development of new standards and benchmarks for TCM. Both university level officials and TCM researchers were in agreement that the existing evaluation standards for research largely neglect the nature of TCM knowledge. Thus there is a need to set up new standards or to modify existing ones (See HKU_Faculty4_5). There have been successful examples in the case of TCM (See HKU_Faculty4_6). Therefore, researchers in the School of Chinese Medicine intend to conduct research and to provide evidence that facilitates the establishment of new evaluation standards that take the particular characteristics of TCM into account.

> We have to do something to improve the current situation. TCM researchers have long complained about the existing standards. We

> all know these standards do not fit TCM. But talking does not make any changes. We need to set up our own standards—standards that take the advantages and characteristics of TCM into account (HKU_Faculty4_5).

> Nowadays, new indicators of quality of life have been included in the international evaluation scale for cancer treatment. These indicators are set based on the intervention results of TCM treatments in cancer. By comparing different groups of patients, there is evidence showing that the quality of life of patients who received TCM treatments is higher. They reported a lower level of physical and psychological suffering (HKU_Faculty4_6).

At the same time, researchers at HKU also devote efforts and resources to conducting "pure Chinese medicine research". This body of research acknowledges the importance of the complexity of compound medicines and does not try to extract and separate individual components. Adopting the standards of alternative medicine, the research rationale for these studies is not to understand the mechanism of action of TCM, but to provide evidence of its effectiveness as actually practiced. Following this rationale, TCM researchers at HKU have taken on the goal of modifying existing medical practice standards or establishing new ones that take the nature of TCM into account.

TCM actors at HKU believe that they are in a unique position to develop the benchmarks and standards for TCM treatments and medication. The Hong

Kong government encourages collaboration between TCM and Western medicine. Government agencies, such as the Food and Health Bureau and the Hong Kong Chinese Medicine Council, have actively cooperated with the universities to establish norms for clinical practice and the manufacture of Chinese medicines. The separate licensing regulation system requires TCM to establish institutional processes that maintain professional norms and monitor the safety of practices. Compared with mainland China and Taiwan, the institutionalization process of TCM in Hong Kong began fairly recently. As a late developer, Hong Kong has been able to learn from the experience of others.

6.6 Interpretation of Internationalization

At HKU, the linkage between internationalization and TCM education and research is not explicit. In the other two cases that were presented earlier in this thesis—the cases of BUCM and PKU, internationalization was articulated as a slogan guiding principle and a goal by the actors at these universities. Perceived demands from foreign entities, as well as the Chinese government's intent of cultural expansion, motivates TCM actors in mainland China to embrace internationalization as a crucial part of the development of the TCM discipline. In the context of Hong Kong, the above two motivations are not applicable. However, the cultivation of the international capacity of students and faculty is indeed an important principle organizing educational and research activities (See the quotation stating the developmental goal of the School of Chinese Medicine below).

> The School of Chinese Medicine, sharing resources of the University and the Faculty, aims at delivering quality teaching and nurturing graduates with international perspective and professional knowledge in the modernization of Chinese Medicine. …… The School aspires to become a modernized and international institution dedicating to Chinese Medicine education and research through an integration of Traditional Chinese Medicine culture and modernized approach, a combination of teaching, research and clinical services, and professional training in both Hong Kong and Mainland (Introductory Message from the Website of the School of Chinese Medicine, HKU).[90]

How do TCM actors at HKU interpret the necessity and meaning of internationalization? From interviews with TCM faculty members and university officials, the interpretation can be summarized as having three aspects. At the most immediate level, internationalization is a distinctive characteristic of the culture of the university. Integrating international elements and goals is perceived as necessary for the transmission and production of TCM knowledge, due to the way that the discipline is situated in the organizational culture. According to officials and faculty members at the School of Chinese Medicine, internationalization is not viewed as a goal, because it is already taken for granted as a part of the university tradition and culture. The interview excerpt below, from a TCM faculty member who once worked at a mainland Chinese university, suggest that localization of the TCM

[90] http://www.scm.hku.hk/english-school_intro_page_1.html

discipline to HKU is largely seen as a process of internationalization (See HKU_Faculty4_7):

> There is no such slogan known as 'internationalization of TCM'. The university or the [Hong Kong] government does not push us to internationalize. However, we do feel the need for internationalization. It is because HKU is very much an internationalized university. The need naturally comes from being a part of the university. …… In mainland China, internationalization is required, while here, internationalized is a natural adaptation (HKU_Faculty4_7).

Secondly, TCM actors consider internationalization to be a response to the social demands and realities of Hong Kong. Both university officials and TCM faculty members agree that curriculum design and research at the university should take the characteristics of Hong Kong society into the consideration and be conducted with service to the community as the goal. Hong Kong is an international society. Recognizing this, the international capacity of TCM practitioners is by default a goal of education and a part of the professional identity of TCM researchers.

Given the distinctive nature of Hong Kong, as a society that integrates Eastern and Western cultures, TCM actors at HKU consider the question: "Does internationalization necessarily mean eliminating tradition?" The interview excerpt below suggests that they believe the answer to the question is no (See HKU_Faculty1_4). Observing how Hong Kong society has developed its

international capacity while preserving Chinese cultural customs, TCM actors tend to adopt an integrative approach to the development of the TCM discipline. The TCM curriculum design at HKU is a good example of implementing such an integrative approach.

> Hong Kong is a quite westernized society. However, if one takes a look at its traditional [Chinese] culture, I would say, it is preserved better than that in mainland [China]. TCM, in this sense, is an example. This traditional and local form of 'science' has been preserved in its classic form in Hong Kong. ..... I believe that TCM can be modernized and internationalized with respect for its tradition and own characteristics. It is difficult, but not impossible. And Hong Kong has an advantage in achieving this goal, because the society itself is a good example (HKU_Faculty1_4).

Furthermore, the integrative approach is discipline-centered. This means that changes in the knowledge institution of TCM, including innovative and adaptive changes, are all oriented toward the development of the discipline. The nature of the knowledge and the overall social context where the knowledge is practiced are identified as the two crucial aspects determining the survival and development of the discipline. Therefore, the two guiding principles—respect for TCM tradition and adaptation to the local environment—are embodied on the policy level, as well as at the daily practical level of educational and academic work. Internationalization, in this case, is seen as an adaptation to the local environment.

Thirdly, the formation of the internationalization strategy for TCM at HKU is affected by how the TCM actors view Hong Kong's position on the world map of the TCM discipline. An interview excerpt from a university level official, given below, shows that the strategy adopted by HKU is not to compete with mainland China, but to seek recognition for Hong Kong based on its own strengths (See HKU_Official1_4). For instance, Hong Kong does not have strength in the large scale international circulation of TCM knowledge. International student education thus is not the focus of HKU.[91] The strength of Hong Kong is in developing a collaborative model between TCM and Western medicine. In most of the other countries in the world, TCM is considered a form of complementary medicine. It is unlikely that these countries will set up medical systems similar to mainland China—so deeply integrating mainstream biomedicine with TCM. For countries that intend to incorporate TCM, Hong Kong's professionalization process, licensing regulation system and standards for medical collaboration and practice might be a good reference.

> In terms of internationalization, we should not compete with them (the universities in mainland China), because of their established status. The reality is the students will always go to mainland China for the better setup and longer history. Our TCM school should not try to compete with mainland China but to develop complementary aspects. …… We want to explore the collaborative model between

[91] In fact, there was no restriction on nationalities in the criteria for admission to TCM programs. However, very few non-local students enrolled in the School of Chinese Medicine. In the academic year 2011/2012, there were two Taiwanese students in the 3rd year and one overseas Chinese student from Japan in the 4th year of the undergraduate program.

> Western medicine and TCM: how to build up the basic trust between the two groups of practitioners; what are the bases for collaboration. And we want to develop the norms and standards for collaborative practice (HKU_Official1_4).

6.7 Case Summary

How have the two knowledge traditions (scientific and TCM) been assembled in the rules that guide the education and research activities of TCM? In contrast to the coexistence and conformity at BUCM and PKU respectively, HKU demonstrates a type of bricolage—ideologies and norms from both sides have been selected, reorganized and integrated to construct a "new" set of institutional standards. The notion of bricolage was deployed by Campbell (2004) to explain evolutionary institutional change. It refers to an innovative process through which "the actors craft the new institutional solution by recombining elements in their repertoire … whereby new institutions differ from but resemble old ones" (Campbell, 2004: 69). In the case of HKU, actors adopted the idea of "adapting the ancient forms for present use and letting foreign forms serve Chinese needs" ("古为今用, 洋为中用") as the guiding principle defining valid training and research approaches.

The curriculum design and the daily practices of teaching and learning at the School of Chinese Medicine have combined educational principles and teaching methods from both traditions. Effectiveness of knowledge transmission is the overarching principle for organizing and implementing

educational activities in the TCM program. Following this principle, any effective training practice is welcomed. For instance, the strengths of traditional training methods, such as small class sizes and learning through practicing are integrated into the university curriculum. At the same time, the disease-based training that is often used in Western medical training is used in TCM classes as well.

As for research, TCM faculty members have conformed to scientific standards and highly value international publication. However, unlike the situation at PKU, where the group of researchers have fully committed to biomedical standards and approaches, researchers at HKU also devote efforts and resources to conducting what they called “pure Chinese medicine research” (“纯中医研究”). This body of research is indeed a compromise between TCM knowledge nature and the scientific norms. It acknowledges the importance of the complexity of compound medicines and does not try to extract and separate individual components. Adopting the standards of alternative medicine, the research rationale for these studies is not to understand the mechanism of action of TCM, but to provide evidence of its effectiveness as actually practiced. Following this rationale, TCM researchers at HKU have also taken on the goal of modifying existing medical practice standards or establishing new ones that take the nature of TCM into account.

Compared with the two cases from mainland China, the movement toward change in HKU’s knowledge institution is much more of a bottom-up

adaptation. At HKU, TCM faculty members have enjoyed a great level of autonomy in decision making related to educational and academic affairs. This organizational environment provides room for TCM actors to exercise their agency in dealing with the requirements of different groups of external and internal stakeholders. TCM faculty members have been the main actors in the adaptation process. They have played the primary role in recognizing the necessity for adaptation as well as in providing solutions in response to this perceived necessity. There is not much resistance to implementing the adopted policies. Instead, more cooperative and creative behaviors are observed.

In response to the requirements of different institutional systems, the TCM actors at HKU adopted an adaptation strategy that aims to rein tensions among stakeholders. They carefully designed the structure of the TCM discipline based on two basic agreements they found within the institutional environment. On the one hand, all of the stakeholders agree that the particular characteristics of TCM knowledge should be respected. On the other hand, there is agreement that the ultimate purpose of preserving and developing TCM knowledge is to serve the needs of local society. The former agreement creates room for exceptions for TCM within existing institutional structures. The latter allows the TCM discipline to integrate new principles, standards and approaches that further its development. These two agreements provide a basis for communication and adjustment between the disparate knowledge institutions.

Chapter 7

Towards A World Discipline

7.1 Returning to the Research Objectives

This research project is driven by problematizing the tension between globalization of higher education and the fate of local knowledge. Following its earlier wave of social transformation, often known as modernization, globalization further articulated a requirement for transcultural utility and multicultural validity of knowledge. Local forms of knowledge have been challenged due to their nature, which is culturally and historically embedded and attached to particular localities. My thesis is devoted to understanding the mechanisms and implications of how the social environment is reshaping the ideological beliefs of local forms of knowledge and the institutional structures of their production and transmission. TCM, as an internationally disseminated form of local knowledge, is taken as a case to explore how its international/multicultural capacity has been constructed.

The objective of this research— to discover how this local discipline has adapted to the new requirements of globalization— has been examined by comparing the internationalization process of TCM education and research at three universities in places where TCM has originated and widely practiced. I investigated two interrelated aspects of adaptation to the changing environment. The first adaptation is the formulation of responses by TCM

actors to the unresolved epistemological debate between the science and traditional culture that has been ongoing since the earlier wave of modernization. The second adaptation is the negotiation of the dynamic relationship between existing domestic institutional structures, which carry out the production, transmission and practice of TCM, and international demands for multicultural validity and circulation of knowledge. These two adaptations interplay with each other as responses to the debate between science and traditional culture are developed during the process of negotiating local-global dynamics. The models that are developed to harmonize the local-global nexus are based on the reallocation of norms from science and the classic TCM knowledge tradition.

My study seeks to understand the mechanisms of the institutional change that is happening in the TCM discipline. At the organizational level, my research has conceptualized three models for internationalization, which manifest three types of organizational response to contradictory guiding principles (principles underlying science and TCM tradition) heterogeneous environment. The models and typology will be elaborated in the later part of this chapter. The research findings in this study show that even within the same national environment, organizations sometimes develop very different adaptive strategies. By analyzing the process of response formation, my research contributes to the existing literature on institutional pluralism by identifying crucial external and internal conditions for the development of different types of adaptive response.

The comparison between universities in mainland China and Hong Kong suggests that actors in both societies share similar understandings of the future of TCM as a world discipline. However, the model for internationalization of TCM in these two places differs. In order to understand how different models have been developed, I situate an analysis of agency in particular organizations that are themselves embedded in broader social-historical contexts. My analysis contributes to neo-institutional theory by explaining how agency plays a role in the process of institutional change, as well as in the maintenance of stability and consistency.

To better summarize the research findings and to facilitate discussion, this chapter is organized into three parts. Section 7.2 summarizes the major research findings. I present the models of internationalization developed by the three universities and analyze how the two sets of knowledge norms and principles have been allocated in different models. In Section 7.3, I move on to analyze how changes have happened over time and what factors lead to the adoption of certain types of organizational response. In the last section, I conclude the thesis with an overall description of the evolutionary institutional change of the TCM discipline. The implications of what this study of the case of TCM has revealed for the fate of local disciplines in an era of globalization will be discussed as well.

7.2 Three Models of Internationalization

In regard to how the universities have responded to the impact of globalization, this study discerns three models of adaptation (See Table 7.2.1). In order to internationalize, BUCM has developed a dual system model with overlap between systems. In this model, work related to internationalization is loosely connected with local affairs. The rationales, standards and norms adopted to deal with affairs related to internationalization are sometimes different from those that guide the local development of the TCM discipline. Abundant evidence for this has been given in Chapter Four. New programs for international students and the research orientation that has developed under the pressure for internationalization have developed towards conformity with existing internationally recognized norms and standards.[92] At the same time, there is a movement to restore the traditional norms of TCM in domestic

[92] The internationalization model of BUCM, to a large extent, represents the general situation of TCM specialist universities in mainland China. My study is not able to intensively compare the 26 TCM specialist universities all over the country. However, from a brief investigation on the curriculum design and publication standards of several representative universities locating in different parts of China, these universities are likely to adopt the similar model as that of BUCM (please refer to the website links provided below for the information of international programs at these universities). According to the interviewees in my study, most of, if not all, the specialist university have adopted the separate-classroom policy in international student education. Shortly after BUCM started the TCM undergraduate program with English as the instruction language, Shanghai University of Chinese Medicine and several other TCM specialist universities opened similar English programs for international students. This policy-borrowing strategy among the same type of universities conforms my case selection strategy – flagship universities in the field are likely to lead the trend of change with their reputation and resources.

(a) Tianjin University of Traditional Chinese Medicine: http://www.tjutcm.edu.cn/

(b) Shanghai University of Traditional Chinese Medicine: http://iec.shutcm.edu.cn/en/

(c) Guangzhou University of Chinese Medicine: http://www1.gzucm.edu.cn/bumen1/gjxy0807/en/

(d) Chengdu University of Traditional Chinese Medicine: http://eiceo.cdutcm.edu.cn/

training. There is also an overlapping group of norms which are recognized both locally and internationally—for instance, the 5-Year bachelor program taught in Chinese for international students and research standards for alternative medicine (See Table 4.6.1 in Chapter Four) bridge the two systems. Such a dual model leaves room for local and international systems to develop separately in certain areas, while allowing for communication between the local and international systems.

In the case of PKU, internationalization has been heavily emphasized. The TCM unit has transformed its organizational structure and redesigned its research and educational orientation to fully facilitate the adoption of internationally recognized standards, norms and practices of knowledge production. It has developed a one system model with internationalization as the dominant orientation and organizational goal. “Being in the line with international standards” (“与国际接轨”) could be an accurate expression summarizing the strategy for the internationalization of TCM at PKU.

TCM professionals at HKU have adopted an integrative approach for internationalization. The most pertinent example is the curriculum design at the School of Chinese Medicine—English, ancient and modern Chinese, Mandarin and Cantonese are all incorporated in the training, and there is no separation between local and international students. In terms of research, the difference between PKU and HKU is that PKU conforms to strict biomedical principles while professionals at HKU have an intention of establishing new

standards for international production of TCM knowledge based on the particular nature and strengths of the discipline. Therefore, TCM researchers at HKU may prefer to undertake research under the category of alternative medicine, as this type of research has a certain level of tolerance for the holistic nature of TCM. The difference between the alternative medicine research at BUCM and HKU is that professors at BUCM largely publish in local journals, while those at HKU publish in international journals.

Table 7.2.1 Summary of Internationalization Models

Case	BUCM	PKU	HKU
Model of Internationalization	Dual system (local-international) model with overlap	One system model transforming the local system into an internationally oriented system	One system model integrating both international and local elements
Response to Two Sets of Knowledge Norms	Spectrum-like co-existence	Conformity to scientific norms	Integration of both

When one compares the three cases, one finds a difference between the models in Beijing and Hong Kong. It seems universities in mainland China tend to develop a system that separates the local and international or conforms to one side, while the university in Hong Kong has been able to construct a system that incorporates standards and norms from different levels. This distinction between the two places may be explained by the relative gap between the internationalization requirements and the local systems of each society.

In the case of Hong Kong, the gap is relatively small. The society itself is quite internationalized in terms of its institutional logic and structure. Unlike

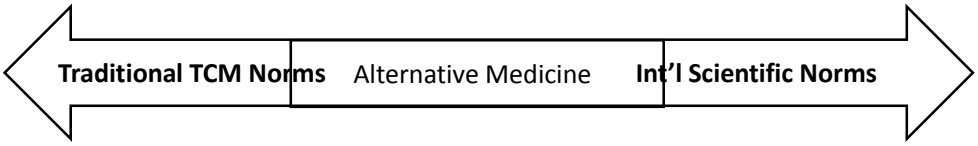
mainland China, the international impact (i.e., the impact from international students and foreign organizations) on the domestic construction of TCM institutions is less severe. As a newly institutionalized discipline within the higher educational and medical systems, TCM professionals regard internationalization as a natural process of institutional adaptation to the local system.

The gap between the local systems and requirements of internationalization in mainland China is larger due to its role as the world center of TCM. As the place of origin for this knowledge, the local system of TCM is built upon and operated according to deeply embedded cultural assumptions. Some of the norms of knowledge production and transmission are only legitimate under these assumptions. However, as internationalization proceeds, these assumptions and the associated local knowledge norms are not applicable to international stakeholders. For instance, personal experience-based research is not valued highly by the international academic community. Local students are willing to compete for to be recruited into long-term programs, as they believe such lengths of training help with the mastery of the knowledge, while international students prefer efficient programs and standardized knowledge content. For the same reason—that mainland China is the origin of TCM knowledge—international/multicultural demand generates forces that drive the formation of a system with international legitimacy. As a result, a certain level of separation between the local developmental trajectory and the international expansion of TCM has occurred.

The above analysis suggests that the construction of models for internationalization is largely based on to what extent and how the two sets of knowledge norms, with different underlying rationales, can be assembled in a given institutional structure (See typology summary of the responses to the two sets of knowledge norms in Table 7.2.1). The universities in mainland China developed spectrum-like standards (See Graphic 7.2.1). One end of the spectrum points to the classic norms and epistemology of TCM, while the other end points toward scientific and international academic norms. The middle part of the spectrum, which is often known as the norms of alternative medical knowledge, incorporates and connects the two ends.

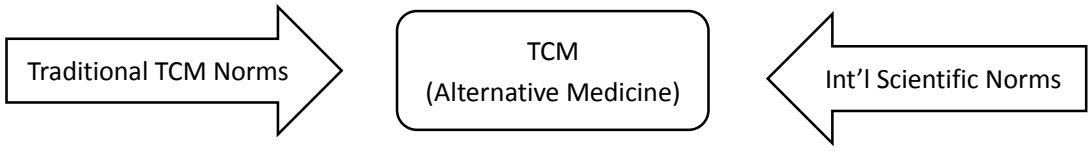
TCM practitioners and/or organizations are grouped into different parts of the spectrum. For instance, PKU has conformed to the scientific end of the spectrum, while BUCM accommodate a wide range of norms. During the process of internationalization, not only have the local TCM practitioners been rearranged in order to adapt, but the knowledge recipients such as students, professional audiences and patients have been compartmentalized. For instance, local and international students are trained differently; editors of international biomedical journals see Chinese medicine in bits and pieces suitable to scientific study.

Figure 7.2.1 Spectrum of TCM Knowledge Norms in Mainland China



HKU represents the bricolage approach to dealing with contradiction—developing a set of rules that selectively integrates and rearranges elements of contradictory norms and principles (See Graphic 7.2.2). Instead of developing a system of differentiation, actors in Hong Kong have adopted an integrative approach. They have deployed the idea of "adapting the ancient forms for present uses and letting the foreign forms serve Chinese needs" ("古为今用, 洋为中用") in the construction of the institutional structures of the TCM discipline. Existing educational and research rationales and principles from both the TCM and scientific traditions have been recombined to construct new institutions. International elements, such as English language and international academic norms, have been included as well. An overarching ideology—to develop TCM along lines that show respect for the unique nature of this form of knowledge, has been adopted to integrate different elements.

Figure 7.2.2 Bricolage of Two Sets of Norms at HKU



In summary, the research findings of this study demonstrate an evolutionary trend of institutional change in the TCM discipline at the normative level. The TCM actors at the universities in mainland China and Hong Kong share the same goal, which is to build the international capacity of this local discipline. They share the same goal because the knowledge of TCM is facing the same

challenges that posed by the impact of globalization, in different ways for the two societies though. As the world center of this form of knowledge, mainland China has been impact as an exporter regarding to its role in training foreign TCM practitioners and fighting for the international status of TCM. The institutionalization process of TCM in Hong Kong presents a certain level of internationalization due to its adaptation to the existing institutional structures and logics which have embedded with international elements.

This trend of institutional change has appeared in a relatively decentralized form. Universities have played an important role in this wave of change. Different models have been developed to achieve the same goal of internationalization. The process has been evolutionary as the changes have been made by adding or assembling new practices to institutional structures as organizations adapt to the changing external environment. As a result, a high degree of organizational stability remained, and changes occurred gradually. In the next section, I will further elaborate the mechanisms of change. In particular, I will focus on explaining how the evolutionary change occurred and why it has manifested in a variety of ways.

7.3 Mechanisms of Change

7.3.1 Conditions for Institutional Change in TCM

What are the conditions that have triggered and enabled the observed institutional changes in the TCM discipline? The review in Chapter Two

suggests that the institutional structures of TCM were not stable in either society. In mainland China, the institutionalization process for TCM at the different institutional levels (the regulatory, normative and cultural-cognitive levels) was uneven. At the regulatory level, state policy and modern institutional realms exerted forces to transform the traditional knowledge transmission and production modes of TCM into the modern scientific mode. At the normative and cultural-cognitive levels, traditional beliefs and norms were suppressed but they were not fully given up. In Hong Kong, the regulatory institutional pillar was missing until around 1997. Since being institutionalized as a form of medical knowledge and practice, the institutional structures for knowledge production, transmission and practice have been under reconsolidation and adjustment.

At the same time, there are two competing epistemologies influencing the behaviors of TCM actors. One adopts a breaking-down (reductionist) approach to knowledge production and has an intention toward universal applicability, while the other largely builds upon a holistic approach and respects the uniqueness of individual cases. Stakeholders from different institutional spheres (e.g., the government, the medical regulation system and the academic community) and layers (e.g., local and international systems) exert expectations and influences drawing from both epistemologies and create a pluralistic and contradictory institutional environment for TCM practitioners.

The process of globalization has provided new challenges as well as

opportunities for change in TCM institutional structures. The most direct impact has been on the mobility of people and knowledge. Foreigners have been flowing into the country for TCM knowledge and treatment. This external social demand greatly impacts knowledge transmission and production. It creates new roles for TCM practitioners to fulfill. Some local practitioners are required to develop international understandings and skills as a crucial part of their professional role. With the increase in intercultural communication and transmission of knowledge, local systems that are embedded with cultural assumptions are sometimes modified in response to international interest. Furthermore, the mobility of people and knowledge is accompanied by a flow of capital and resources. This motivates various interest groups to facilitate the internationalization of TCM.

The involvement of international stakeholders and foreign institutions has linked the domestic status of TCM to its international utility. When the competition for resources and legitimacy for institutional practices is internationally based, status and power relationships are beyond the control of nation-states. In order to continue development or to maintain the status quo, institutional actors often take adaptive action. The impact of globalization thus tends to create instability in existing institutional structures. Change at the organizational level has played a crucial role in this wave of institutional change. In particular, TCM professionals have been empowered as key actors in the internationalization of the TCM discipline. The institutional changes often proceed from the bottom up.

With the increased diversity of interest groups and increasing population flows, there is an increasing need to develop a set of internationally recognized standards, norms and rules to better facilitate the knowledge transmission process. Essentially, the need is to construct an institutional framework for TCM knowledge as a world discipline. The question is how this can be accomplished.

7.3.2 Organizational Responses to Pluralistic Environment and Contradictions

TCM actors are facing pluralistic institutional spheres. As a formal university discipline, the roles and behaviors of TCM professionals are defined by the institutions of the higher educational system. As a form of medical knowledge, TCM training, knowledge production and practice are monitored by the medical regulatory system. With the increasing international exchange and circulation of TCM knowledge, new stakeholders, as well as the pressures from foreign institutions, are involved. As summarized in Section 7.2, the universities examined this study each developed different responses to such plurality. The questions are: How are the different types of response developed? What are the factors affecting the process of response formation?

Existing literature has largely seen organizational change as a process of adaptation to the external environment. In order to address the issue of the mechanisms of organizational change, the first step is to investigate perceived

external pressures. Research findings from this study suggest that the TCM actors in the selected cases were responding to different institutional pressures. Table 7.3.2.1 briefly summarizes the stakeholders and sources of institutional pressure that were responded to by the selected universities. In terms of quantity, BUCM perceived significantly more relevant stakeholders and institutional pressures from both the domestic and international levels. PKU, in contrast, experienced the fewest sources of pressure. The difference between these two universities demonstrates an interesting phenomenon—even within the same institutional environment, organizations may perceive different pressures. In terms of how the expectations and pressures were exerted, the two universities in mainland China perceived coercive pressures from state agents, while TCM actors at HKU enjoyed a higher level of autonomy from the institutional environment.

Table 7.3.2.1
Summary of Identified Stakeholders and Relevant Institutional Pressures

Stakeholders & Institutional Constituencies		**BUCM**	**PKU**	**HKU**
State Government		Expectation for international expansion of TCM knowledge		Institutionalization of TCM
Field of Higher Education	Domestic	-Status and resource competition -Internationalization of higher education -TCM training and Academic norms	-Internationalization of higher education	-Resource competition (i.e., RGC grants)
	International	-International students -Foreign TCM training institutes -Academic norms (journal publication)	-Academic norms (journal publication)	-Academic norms (journal publication)

Table 7.3.2.1 continued				
Stakeholders & Institutional Constituencies		**BUCM**	**PKU**	**HKU**
Field of Medical Systems	Domestic	-Resource and status competition with Western medicine		-Practitioner licensing and medical regulations -Collaboration with Western medicine
	International	-Legislation and regulation of TCM practice in foreign countries	-Regulation of drugs/medicine in USA (FDA standards)	

How do the differences with regard to stakeholders and institutional pressures among organizations occur? The differences could be the result of idiosyncratic responses from organizations. Translators at each university—those who are in the position of receiving and interpreting information from external environment, play an important role in identifying and selecting relevant inquiries. Situated in heterogeneous and multi-layered institutional spheres, translators have to exercise their agency in a way that ensures external legitimacy while also maintaining the internal stability of the organization. This study has observed a significant amount of the exercise of agency in the process of translation, response formation and implementation.

The most adopted strategy is institutional politics—using the interests of one group stakeholders or institutional sphere(s) to counterbalance another or to enable a practice which would not be considered legitimate in given institutional sphere(s). For instance, officials at BUCM tactically utilized the

state's intention of maintaining the status of China as the center of TCM. This enabled the university's new programs for local students, which did not match the standard national higher educational curriculum structures. In the example of PKU, the university's social role of taking on difficult tasks in service of state development was used to legitimize full conformity with biomedical research standards and SCI publication. Professors at HKU asked for institutional support and resources from the university (e.g., to open the clinic and request a laboratory) by highlighting the unique nature of the TCM discipline.

The successful practice of institutional politics is often determined by the extent to which a given practice can be associated with an organizational identity. "Organizational identity" is used here to conceptualize the various facets of the comprehensive positioning that were mentioned by interviewees in this this study, such as organizational role(s), image, status, vision and goals. The identity of a particular organization is accumulated over time, with deep roots in the given social and institutional context. Therefore, in a situation where the institutional environment is changing, adaptive behavior that fits well-established organizational identities is likely to gain legitimacy and resources both internally and externally. Since organizational identities can be vague, they are often adopted by actors to legitimize their interpretations and proposed responses. For instance, when the translators are identifying key stakeholders and whether there is a need to respond to a given institutional pressure, organizational identity is deployed tactically to legitimize their choices.

At the same time, organizational identities also restrict the pathways of organizational change. For a radical proposal of change that cannot be connected to an organizational identity, there is difficulty for acceptance and implementation unless there is a redefinition of the role of the organization. Organizational identity also reflects the power relationships between stakeholders and the organization. For organizations with high status and reputation, there is more capacity for resistance. In the case of PKU, its internationalization strategy avoids training international students. However, BUCM has to demonstrate its commitment to the state government. Resistance thus can only happen in an indirect form such as decoupling.

In addition, the restriction also comes from expectations from the external environment. Stakeholders may select and exert different expectations and pressures on an organization based on the image and reputation of the particular organization. For instance, foreign research institutes are more likely to contact HKU and PKU for research collaboration and BUCM for training.

Given the interactive reinforcement between stakeholders and translators, the difference in perceived institutional pressures can be understood. BUCM, as a disciplinary leader, is deemed responsible for all requirements and expectations related to TCM. The overwhelming task of PKU is to be a world-class university. Research-focused international excellence thus is the orientation for TCM professionals at PKU. The other institutional spheres that

have different emphases are not considered to be relevant stakeholders for PKU. In the case of HKU, the major task for TCM actors is to adapt to the already internationalized higher educational and medical institutional environments. According to such filtering and translation, organizational responses vary.

The way that the selected cases in my study dealt with pluralistic institutional environments corresponds to the adaptation typology summarized by Kraatz and Block (2008). The case of BUCM demonstrates a structural pluralism type of adaptation. Actors at the university compartmentalize different norms and rationales within the same organization to fulfill multiple expectations from the external environment. PKU adopted a reduction strategy. Actors were able to reduce the complexity of the institutional environment by allying with important stakeholders who share goals that fit the university's role. TCM actors at HKU integrate institutional spheres by finding basic agreement and an overarching goal of cooperation.

My research complements the existing literature by investigating key factors that affect the formation of different types of organizational adaptation (See Table 7.3.2.2). Established organizational identities to a large extent determine the number of relevant stakeholders and the power relationships between these stakeholders and organizations. If the sources of institutional pressure are powerful, it is difficult for organizations to reduce the number of relevant stakeholders. In such a situation, when the demands of different stakeholders are heterogeneous, the organization is likely to develop a

compartmentalization strategy in order to adapt. In the case of BUCM, in order to respond to a changing institutional environment, the university adopted an add-on approach to deal with newly involved stakeholders—new administrative departments, training programs and policies were created over time. Another condition for a compartmentalization strategy is that the organization be able to bear the transitional costs of organizational complexity.

Table 7.3.2.2 Summary of Organizational Responses

	BUCM	**PKU**	**HKU**
Accumulated Organizational Identity	Multiple, embracing	With clear focus and goal	
Contradiction Level among Relevant Institutions	High		Low
Adaptation Strategy to a Pluralistic Institutional Environment (Kraatz & Block, 2008)	Pluralism through compartmentalization	Reduction through allying with key stakeholders	Integration through finding an overarching cooperative goal
Allocation of Contradictory Norms	Co-existence	Conformity	Bricolage

Organizations that adopt a reduction strategy tend to have an organizational identity that is well recognized and has a clear focus. In such a case, it is easier for actors in the organization to ally with stakeholders who share the same principles and goals. With alliances, the organization is able either to claim the irrelevance of other institutional pressures or even to go against contradictory demand(s). Compared with the add-on approach of BUCM, PKU has taken a transformative approach by changing the standards of knowledge for TCM professionals in accordance with its clear organizational goal. The university reduces conflicting demands by conforming to only one side of contradictory

standards.

Whether multiple institutional environments can be integrated, or not, depends on the level of conflict among these institutional constituencies. When the contradiction level is high, organizations may choose reduction or compartmentalization strategies. In the case of HKU, although the TCM actors are standing at the intersection of institutional spheres, such as the higher educational and medical regulation systems, these institutional constituencies share basic agreement on issues such as respecting the professional power of TCM and the particular nature of TCM knowledge. As the Hong Kong institutional structures and viewpoints preserve the agency of TCM actors, they are able to integrate various demands and request institutional support from different spheres.

Notably, all three cases show conformity to scientific and international academic norms. This suggests that organizations are likely to compromise when institutional standards are rigorous and well-established.

What are the implications of the present research findings for neo-institutional theory? Neo-institutional theory has captured the isomorphic phenomenon of organizational practices in the same field. Does the diversity of organizational responses observed in this study imply that pluralistic or heterogeneous environment in which the organizations statute may lead to divergence rather than isomorphism? There is not enough evidence from my study to answer this

question. The observed institutional changes in the TCM discipline are at an early stage. Dominant organizational practice(s) have not yet been formed, recognized or diffused. Organizations are experimenting with ways to deal with new changes in the environment. However, as the pluralism of institutional environment creates uncertainty, as well as room for individual translation and response, further research is required to examine the patterns of institutional change in a heterogeneous environment.

In summary, a pluralistic institutional environment empowers the agency of translators while restricting the pathways for organizational response at the same time. It provides room for actors to exercise their agency by using strategies such as institutional politics. Well-recognized organizational identities affect the type of response, as these identities are often deployed by actors to legitimize their proposals. Institutional environments may not be stable. New stakeholders may be involved. The reinforcement of an organizational identity as a shared agreement between the external and internal environments thus is an important mechanism that maintains organizational stability and legitimacy. As a result, organizational change takes a more consistent form and evolutionary pattern.

7.4 Conclusion

This study has observed an evolutionary pattern of institutional change in TCM knowledge in the era of globalization. The process is reflexive, because the

meaning of the two sets of knowledge norms and principles are reconsidered and reassembled within institutional structures. However, the reflexivity is not fully self-driven by actors of TCM discipline. Evidence from this study indicates that it is the globalization process which has increased the importance of both sets of knowledge norms. The impact of globalization raised the awareness of the importance among TCM actors through contractions, requirements for adaptation as well as unintended consequences.

Drawing from the selected cases, recent developments in the name of internationalization demonstrate that the adoption of scientific principles and research methods has been reinforced. In terms of epistemology, increased international communication and exchange have increased agreement that the utility of knowledge should not be restricted by culture, race or locality. Research should be conducted for groups rather than for individuals. Also, the existing institutions and standards often exert pressure on TCM institutions by asking for conformity to scientific norms.

The international academic community and standards for medical treatment are built upon scientific principles and norms. In order to improve the competitiveness of TCM for status and resources, conformity and mimetic behaviors often increase. Due to an intrinsic intention toward universality, scientific norms for research and education go hand in hand with the process of globalization. Adopting scientific norms thus helps TCM to survive in a multicultural environment. In addition, TCM must fulfill these standards so that

the knowledge and practice can be applied internationally. This is particularly the case when issues of what counts as valid knowledge in international systems are involved.

The increased conformity to scientific principles does not, however, result in further abandonment of the classic knowledge traditions of TCM. On the contrary, the importance of the traditional TCM norms is reviving simultaneously with the intensification of internationalization. Practitioners realize that to fully conform to science would be to abandon the most important part of TCM knowledge. For instance, there is a shared understanding among Chinese TCM practitioners that acupuncture is able to be widely circulated and practiced internationally because it is a TCM technique that can be easily standardized. However, for aspects of TCM such as compound formulas, adopting the reductionist approach of identifying the functional mechanism of ingredients is not feasible.[93] Therefore, my research has noted the rising ideal of a TCM with its own integrity and standards. This ideal was embodied in TCM actors' narratives in phrases such as "respect for the nature of the knowledge", and "modification of existing standards to accommodate the advantages of TCM".

The demands of internationalization and rising awareness of the particular needs of the TCM discipline have triggered a new wave of institutional change.

[93] In the PKU case, Tasly Group has spent over ten years on one compound formula. However, the formula has not yet passed the third stage of examination by the FDA.

The recent development of TCM knowledge institutions thus shows a reflexive adjustment of existing institutional structures that mainly takes scientific principles and norms into account. A trend of restoring the local knowledge tradition has also been observed in both societies. Compared with the earlier wave of modernization, the developmental trajectory of TCM has moved away from epistemological debate to the issue of institutional response—how can two contradictory sets of principles and knowledge norms be institutionalized within one system.

Culture has conventionally been adopted by TCM actors as an umbrella to preserve and integrate the traditional knowledge norms of TCM. Interviewees did not use academic terms such as “knowledge norms” to describe the traditional ways that this local knowledge is transmitted and accumulated. Instead, they used terms such as “culture” and “tradition” to differentiate the nature/characteristics of TCM knowledge from that of science. These terms are deployed in a very broad way. The parts of TCM that do not fit scientific principles or norms are often categorized as cultural elements. For instance, TCM theories based on metaphysics, ancient language, holistic ways of thinking, and ambiguous expressions of knowledge content are all considered to be culturally embedded aspects of TCM knowledge.

The symbolic cultural meaning of TCM as a local discipline empowers the rising respect for the standards and integrity of the TCM discipline. In Hong Kong, institutionalizing TCM as a medical discipline at the state regulatory level has

been closely associated with the decolonization process of the society (Chiu, Ko & Lee, 2005; Yip, 2014). The legitimacy of institutional regulation is largely supported by the Chinese cultural identity that is symbolically attached to TCM. During the institutionalization process, professional groups such as practitioners and university researchers repeatedly claimed that TCM is a "local science" ("本土科学"). They asked for institutional exemptions as well as support to define this form of knowledge as an independent medical discipline that is different from but able to collaborate with Western biomedicine.

In mainland China, TCM actors have conformed to the government's intention of exporting this local discipline as an aspect of the excellent cultural legacy of China. The recent state agenda of soft power has been closely incorporated into the development goals of TCM at universities. Previous literature about the state role in the developmental trajectory of TCM knowledge in mainland China has often emphasized the state's authoritarian power and instrumentality (Taylor, 2005). Research findings from this study suggest that although the state remains powerful in the current wave of internationalization, the agency of TCM actors should not be neglected. TCM actors agree to cooperate because international expansion helps to strengthen the domestic status of the discipline and increases the professional power of TCM community. They not only identify TCM as a crucial source for China's soft power under the categories of cultural legacy and medical service, but also use the same rationale to restore the cultural elements back to existing

institutional structures.[94]

Near to the ground of institutional change, active agency is in play. The TCM actors, especially the translators in the organizations – those who identify the relevance of stakeholders, interpret the meaning of external pressures, provide solutions for adaptation, and mobilize resources to implement the proposals of solution - played an important role. This translation process allows the actors to exercise their agency in maintaining organizational stability, obtaining external and internal legitimacy, and even achieve their own interests. The agency of TCM actors is empowered by the ambiguity and contradictions created by the pluralism of the external institutional environment. Institutional politics thus becomes a popular form of agency exercise in such environment.

This wave of institutional change for TCM knowledge is evolutionary. It happens at the normative level in a decentralized form. Although there is a shared agreement on the overarching goal of developing TCM to become a world discipline, there has not arisen a dominant practice or structure that has diffused throughout the field. The change occurs through organizational adaptation to a globalizing environment. As mentioned earlier, the role of the

[94] The new curriculum development for local students at BUCM is pertinent evidence. As a matter of fact, the same rationale for the *Qihuang* and *Xinlin* Programs was adopted to modify the regular degree programs after my fieldwork. There is a significant trend toward restoring traditional training norms in the primary structure of local student education. Please refer to the curriculum description for academic year 2014/2015 from the following website:
http://www.bucm.edu.cn/eapdomain/ViewNote?nid=65067&pid=7353&ptid=2&unchecked=true

state is less powerful in an international system. The construction of international standards and regulatory mechanisms depends on the professional power of TCM practitioners. Organizations with professional actors that interface with the local and international spheres thus play an important role for change made in the name of internationalization. The pattern of change is also considered evolutionary because recent developments in the norms for the TCM discipline are not new innovations but adjustments and rearrangements of existing norms. The changes often begin at the margins of an organization and expand gradually into the larger range of practices.

The rising agreement on the integrity and particular needs of the discipline may guide institutional change towards an eventual claim of independence in the future. In the fourth type of organizational adaptation summarized by Kraatz and Block (2008), organizational actors may identify the organization as a "self-directing entity" that is "capable of legitimating its own actions with limits" (Kraatz & Block, 2008:19). In the case of TCM, such self-directness was not able to be established based on its traditional knowledge norms. Power and interest may determine the resistance to adopting scientific norms as well as the preference to integrate both paradigms. The two waves of institutional change in the TCM discipline since the early 20th Century have demonstrated a twisting trajectory—the subordination to science for survival in modern societies and a reflexive modification during the process of becoming a world discipline. The independence of TCM as an internationally recognized discipline is likely to be

a hybrid of norms from both science and its own tradition.

Looking into the future of TCM, with the wide usage of this form of medical knowledge, institutional structures are likely to be constructed and localized in an increasing number of countries all over the world. With China's rise to power, the state as well as various interest groups of TCM actors will continue promoting TCM as an instrument of its cultural power as it remains one of the major icons of Chinese civilization. Arguably, as an icon, TCM is able to reach more people than silk or Confucius because of its healing properties. And it is also because of the same reason, the world will continue looking to China for TCM. The halo effect attached to China's rise as an emerging world power may incline other countries to see TCM as a respectable alternative of medical practice.

Universities in China, including those from both the mainland and Hong Kong, will play a crucial role in the process of localization. As a worldwide established institution that carries formal knowledge transmission and production, university holds the most legitimate professional power to facilitate the international development of the discipline. The universities with well-established international reputation or ambition of international achievement are likely to act actively in training foreign practitioners and facilitating the construction of international standards and norms for TCM knowledge.

What are the implications of the case of TCM for the survival and development

of local disciplines? It may be difficult to generalize the trajectory of institutionalization of TCM to other local forms of knowledge. However, the case of TCM does indicate one important principle, which is adaptation. The survival and development of TCM is largely a result of its resilient adaptation in the societies in which it is situated. The adaptation is processed through institutional changes at the cultural-cognitive, normative and regulative levels. The changes at each level may not be even. However, the processes at these levels are able to acquire different aspects of legitimacy as well as resource for the survival and development of local knowledge in response to the context of social transformation.

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