

HISTORY OF SCIENCE

Editor: LISSA ROBERTS, Department of Science, Technology and Policy Studies, University of Twente, Enschede, 7522 NB, Netherlands

Advisory Editors: CARIN BERKOWITZ (Chemical Heritage Foundation, UK); JANET BROWNE (Harvard University, USA); JORGE CANIZARES-ESGUERRA (University of Texas, USA); PETER DEAR (Cornell University, USA); DAVID EDGERTON (Kings College London, UK); FA-TI FAN (Binghamton University, USA); MYLES JACKSON (New York University, USA); ADRIAN JOHNS (University of Chicago, USA); PATRICK MCCRAY (University of California, USA); IWAN MORUS (Aberystwyth University, UK); CARLA NAPPI (University of British Columbia, Canada); SIMON SCHAFER (University of Cambridge, UK); V. BETTY SMOCOVITIS (University of Florida, USA)

Publisher: Sage Publications Ltd, 1 Oliver's Yard, 55 City Road, London, EC1Y 1SP, UK. Tel: +44 (0)20 7324 8500; fax: +44 (0)20 7324 8600 [email: subscription@sagepub.co.uk; website: www.sagepublications.com/ejournals]; and in North America from SAGE Publications Inc, 2455 Teller Road, Thousand Oaks, CA 91320, USA.

Submission: By email attachment to l.l.roberts@utwente.nl

Copyright: © The Author(s) 2015. Apart from fair dealing for the purposes of research or private study, or criticism or review, and only as permitted under the Copyright, Designs and Patent Act 1988, this publication may only be produced, stored or transmitted, in any form or by any means, with the prior permission in writing of the Publishers, or in the case of reprographic reproduction, in accordance with the terms of licenses issued by the Copyright Licensing Agency. Enquiries concerning reproduction outside those terms should be sent to SAGE Publications.

Subscriptions: *History of Science* is published quarterly in March, June, September and December. A subscription to Volume 53 (2015) is £180.00 (US \$360.00 in the Americas and Japan) for institutions (paper plus online access via www.ingentaconnect.com), £49.00 (US \$98.00 in the Americas and Japan) for individuals subscribing direct (paper only), including postage. Single parts cost £45.00 (US \$90.00 in the Americas and Japan), including postage. The prices of previously published volumes may be had from the publisher on request.

ISSN: 0073-2753 (print), 1753-8564 (online)

Print Management: Printed in the UK on acid-free stock by Page Bros Ltd. Norwich, Norfolk, UK.

Contents

Editorial

- Ordering the social: History of the human sciences in modern China 4
Howard Chiang

Articles

- Disciplining China with the scientific study of the state: Lu Zhengxiang and the Chinese Social and Political Science Association, 1915–1920 9
John H. Feng
- From palaeoanthropology in China to Chinese palaeoanthropology: Science, imperialism and nationalism in North China, 1920–1939 21
Hsiao-pei Yen
- Pavlovianism in China: Politics and differentiation across scientific disciplines in the Maoist era 57
Zhipeng Gao
- Too young to date! The origins of *zaolian* (early love) as a social problem in 20th-century China 86
Yubin Shen
- Translating culture and psychiatry across the Pacific: How koro became culture-bound 102
Howard Chiang

Ordering the social: History of the human sciences in modern China

History of Science

2015, Vol. 53(1) 4–8

© The Author(s) 2015

Reprints and permissions:

sagepub.co.uk/journalsPermissions.nav

DOI: 10.1177/0073275314567431

hos.sagepub.com

**Howard Chiang**

University of Warwick, UK

In *The Order of Things* (1966 [1970]), Michel Foucault unearths the discursive redistribution of the *episteme* underlying the process ‘when man constituted him-self in Western culture as both that which must be conceived of and that which is to be known’.¹ His investigation into the historical epistemology of what he called *sciences humaines* (a term that dates back at least to the 17th-century) has prompted historians of western science to dig deep in a growing body of literature on the history of the related disciplinary subjects.² Two landmark volumes that have encapsulated the evolving historiography of the human sciences are *Modernist Impulses in the Human Sciences, 1870–1930* edited by Dorothy Ross (1994) and *The Cambridge History of Science Volume 7: The Modern Social Sciences* coedited by Theodore Porter and Dorothy Ross (2003).³ With the notable exception of one chapter in the latter volume, historical research on the sciences of social organization and human experience in China, unlike its western counterpart, has only begun to mature in recent years.⁴ This special issue pushes the field in new directions by highlighting the latest research of an international company of early career researchers. Whereas Foucault’s later work on sexuality and power has invited many scholars to wrestle with its Eurocentric burdens, the omission of a parallel mode of historical inquiry for his work on the human sciences denotes precisely what this special issue aims to recalibrate.⁵ To achieve that goal, the following essays share an attention to the mutually generative relationship of politics and scientific inquiry in 20th-century China.

John Feng’s opening essay probes the science–politics nexus by focusing on the rise of a discipline in the scientific study of the state in early republican China. Building on the life of Lu Zhengxiang (1871–1949), China’s Ambassador Extraordinary to The Hague Peace Conference, it reconstructs the early years of the Chinese Social and Political Science Association (CSPSA), a replica of the American Political Science

Corresponding author:

Howard Chiang, Department of History, University of Warwick, Coventry, CV4 7AL, UK.

Email: h.h.chiang@warwick.ac.uk

Association, and analyzes the heated discussions of state-building in its official publication (in English), the *Chinese Social and Political Science Review*. Already in the final years of the Qing, Lu had submitted a memorial to Empress Dowager Cixi urging China to become more attuned to the new international order of law and constitutionalism. Lu's effort to modernize China through legal and constitutional reform culminated in his collaboration with Paul Reinsch to found the CSPSA in December 1915. The meanings of democracy, state sovereignty, international relations, law, politics, and other key terms in legal science carried significant weight in the visions of CSPSA members, most of whom were cultural elites educated in the west and thus fluent in English. Feng's essay captures an important episode in early 20th-century China during which science, culture, and politics intersected in the envisioning of a new social order that paved the way for the May Fourth Movement.

Hsiao-pei Yen's meticulously researched essay extends the investigation of the role of international politics, especially in terms of the antonymous friction between imperialism and nationalism, in the development of republican-era Chinese science. Specifically, it traces the historical transformation of what Yen calls 'from paleoanthropology in China to Chinese paleoanthropology', or simply the Chinese indigenization of the internationally oriented scientific study of ancient human fossils. Yen provides a detailed account of the different archaeological expeditions conducted by scientists of various national origins in central Asia. Between the May Fourth Movement and the Japanese occupation periods, these international scientists acquainted themselves with one another and other like-minded Chinese scientists (who were, again, often fluent in European languages) in cosmopolitan Beijing. However, after their research agenda came to public attention, the foreign scientists were drawn into joint expeditions with Chinese scientists, such as the Sino-Swedish scientific expedition to northwestern China, in order to assure the Chinese that locally excavated materials were not exported out of China to serve the hegemonic ambition of European imperialism. The climax of this narrative came with the discovery of the Peking Man in Zhoukoudian in the 1920s, signalling the demise of the Swedish influence and the growing prominence of the American model in paleoanthropological research in China. The Peking Man provided subsequent Chinese intellectuals a kind of 'hard evidence' for making claims of monogenism and evolutionary Asia-centrism (more specifically, Sinocentrism) that supported a politicized vision of Chinese history as deep and continuous across time.

Zhipeng Gao's essay deepens our understanding of the ways in which politics casts an uneven shadow on the fate of scientific disciplines. It uses the reception of Pavlovianism as a case study to disentangle the ways political ideology differentiated scientific transformations across physiology, medicine, and psychology in the Maoist period. The central question that Gao seeks to answer is this: why was Pavlovianism considered the political-academic orthodoxy in physiology and medical science but criticized as capitalistic and bourgeois in psychology in the late 1950s? In many ways, Gao's analysis extends ongoing scholarly debates about how to best position the work of Russian/communist scientists (especially Lysenko and Pavlov) within the larger narrative of modern science.⁶ Due to the Sino-Soviet alliance, the early Cold War era presented a unique window into reconsidering these debates in the new light of the Chinese human sciences. According to Gao, besides the deeper impact Pavlovianism had on psychology (than on

the physiological and medical sciences), the different fate of Pavlovianism in scientific disciplines must be explained by the performative negotiations of scientists working under severe ideological pressure, reaching a crescendo around the time of the 1958 anti-rightist movement.

Whereas the previous three essays concentrate on the reciprocal influence of politics and human scientific disciplines, Yubin Shen's essay adopts a topical approach by examining the historical origins of *zaolian* (early love) as a social problem in shifting political contexts of 20th-century China. In this regard, Shen's framing exemplifies a Foucauldian genealogical method deciphering when and how a problem becomes a problem. Shen periodizes the history of *zaolian* in terms of three stages: from 1900 to 1950, institutional changes in law and education created a discourse of anti-early marriage; between 1950 and the early 1980s, the discourse of anti-early marriage gradually folded into the new concept of 'early love' to form a discourse against 'early love and early marriage' (*zaolian zaohun*); and finally, since the 1980s, the Second Marriage Law of 1980 joined the one-child policy (first introduced in 1979) to reorient the conceptualization of *zaolian* under the aegis of the new phrase 'early marriage and early childbirth' (*zaohun zaoyu*). The history of *zaolian* reveals the complex interactions of the legal regime, the education system, medical science, eugenics, and family planning public policies in the transitions from republican to communist to post-reform China.

Howard Chiang's essay makes a radical departure from the other papers by advancing a theoretical interpretation of the category of 'China' in contextualizing mental health science in relation to, rather than outside of, global geopolitics. Specifically, it adopts a critical postcolonial approach to explore the postwar development of transcultural psychiatry through the genealogy of a clinical diagnosis known as 'koro', or *suoyang* in Chinese. By examining the competing understandings of koro in the 1960s, Chiang shows how psychiatrists based outside of continental China—namely, Taiwan, Hong Kong, and Singapore—appropriated ideas from traditional Chinese culture and synthesized them with western biomedical models to consolidate the clinical diagnosis of koro as a culture-bound disorder. This new global meaning of koro was made possible by a cohort of medical experts who encountered the phenomenon in Sinophone (Sinitic-language) communities, but placed their contributions within the broader contours of the universal reach of Anglophone psychiatric science. When American psychiatrists came to view koro as a paradigm for the study of culture-bound syndromes, the history of the circulation of ideas about bodily disease and psychic disturbance highlights the broader need to historicize the shifting meanings of 'Chinese' and 'culture' across the Pacific.

The rise of American hegemony in 20th-century science demands a critical rethinking of the history of scientific developments in China that accounts for the global configurations of politics.⁷ Whether our analytical frame is rooted in the contours and concerns of internationalism, imperialism, nationalism, the Cold War, communism, or (post) colonialism, the essays collected in this special issue provide ample evidence for exceeding both a strictly 'internalist' or a staunch 'externalist' analysis of scientific progress. The heterogeneous terrains of the human sciences in modern China cast a new historical light on the empirical figuring of things human and the scientific ordering of things social.

Acknowledgement

We would like to thank the journal editor, Iwan Rhys Morus, for his support and encouragement to pursue this special issue.

Funding

We thank the British Arts and Humanities Research Council for a research networking grant under the project title, 'China and the human sciences: 1600 to the present' (ref: AH/L01579X/1), which funded our presentation of this research at the 2015 Association for Asian Studies annual meeting.

Notes

1. Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (London: Routledge, 1997), pp. 344–345.
2. For the dating of the French term *sciences humaines*, see Theodore M. Porter and Dorothy Ross, 'Introduction: Writing the History of Social Sciences', in Theodore M. Porter and Dorothy Ross (eds.) *The Cambridge History of Science Volume 7: The Modern Social Sciences* (Cambridge: Cambridge University Press, 2003), pp. 1–10. In the area of statistical and probability history, for example, see Ian Hacking, *The Emergence of Probability: A Philosophical Study of Early Ideas about Probability, Induction and Statistical Inference* (Cambridge: Cambridge University Press, 1975); Theodore M. Porter, *The Rise of Statistical Thinking, 1820–1900* (Princeton: Princeton University Press, 1986); Lorraine Daston, *Classical Probability in the Enlightenment* (Princeton: Princeton University Press, 1988); Ian Hacking, *The Taming of Chance* (Cambridge: Cambridge University Press, 1990).
3. Dorothy Ross (ed.), *Modernist Impulses in the Human Sciences, 1870–1930* (Baltimore: Johns Hopkins University Press, 1994); Theodore M. Porter and Dorothy Ross (eds.), *The Cambridge History of Science Volume 7: The Modern Social Sciences* (Cambridge: Cambridge University Press, 2003). See also Roger G. Smith, *The Norton History of the Human Sciences* (New York: W. W. Norton & Company, 1997).
4. Bettina Gransow, 'The Social Sciences in China', Theodore M. Porter and Dorothy Ross (eds.) *The Cambridge History of Science Volume 7: The Modern Social Sciences* (Cambridge: Cambridge University Press, 2003), pp. 498–514. See, for example, Yung-chen Chiang, *Social Engineering and the Social Sciences in China, 1919–1949* (Cambridge: Cambridge University Press, 2006); Wendy Larson, *From Ah Q to Lei Feng: Freud and Revolutionary Spirit in 20th Century China* (Stanford: Stanford University Press, 2008); Sigrid Schmalzer, *The People's Peking Man: Popular Science and Human Identity in Twentieth-century China* (Chicago: University of Chicago Press, 2008); Thomas Mullaney, *Coming to Terms with the Nation: Ethnic Classification in Modern China* (Berkeley: University of California Press, 2010); Tong Lam, *A Passion for Facts: Social Surveys and the Construction of the Chinese Nation-State, 1900–1949* (Berkeley: University of California Press, 2011); Howard Chiang (ed.), *Psychiatry and Chinese History* (London: Pickering and Chatto, 2014).
5. Michel Foucault, *The History of Sexuality, Volume 1: An Introduction*, trans. into English by Robert Hurley (New York: Vintage, 1990); Ann Laura Stoler, *Race and the Education of Desire: Foucault's History of Sexuality and the Colonial Order of Things* (Durham: Duke University Press, 1995); Gregory Pflugfelder, *Cartographies of Desire: Male–Male Sexuality in Japanese Discourse, 1600–1900* (Berkeley: University of California Press, 1999); Siobhan B. Somerville, *Queering the Color Line: Race and the Invention of Homosexuality in American Culture* (Durham: Duke University Press, 2000); Ann Laura Stoler, *Carnal Knowledge and*

- Imperial Power: Race and the Intimate in Colonial Rule* (Berkeley: University of California Press, 2002); Howard Chiang, 'Epistemic Modernity and the Emergence of Homosexuality in China', *Gender and History*, 22(3), 2010, pp. 629–657; Leon Antonio Rocha, 'Scientia Sexualis Versus Ars Erotica: Foucault, van Gulik, Needham', *Studies in History and Philosophy of Biological and Biomedical Sciences*, 42, 2011, pp. 328–343.
6. See, for example, David Joravsky, *The Lysenko Affair* (Chicago: University of Chicago Press, 1970); Loren R. Graham, *Science, Philosophy, and Human Behavior in the Soviet Union* (New York: Columbia University Press, 1987); Valery N. Soyfer, *Lysenko and the Tragedy of Soviet Science* (New Brunswick: Rutgers University Press, 1994); Slava Gerovitch, "'Mathematical Machines" of the Cold War: Soviet Computing, American Cybernetics and Ideological Disputes in the Early 1950s', *Social Studies of Science* 31(2), 2001, pp. 253–287; Loren Graham, *Science and the Soviet Social Order* (Cambridge: Harvard University Press, 2002); Daniel P. Todes, *Pavlov's Physiology Factory: Experiment, Interpretation, Laboratory Enterprise* (Baltimore: Johns Hopkins University Press, 2002); Ethan Pollock, *Stalin and the Soviet Science Wars* (Princeton: Princeton University Press, 2006).
 7. Fa-ti Fan, 'Redrawing the Map: Science in Twentieth-Century China', *Isis* 98(3), 2007, pp. 524–538.

Disciplining China with the scientific study of the state: Lu Zhengxiang and the Chinese Social and Political Science Association, 1915–1920

History of Science

2015, Vol. 53(1) 9–20

© The Author(s) 2015

Reprints and permissions:

sagepub.co.uk/journalsPermissions.nav

DOI: 10.1177/0073275314567432

hos.sagepub.com



John H. Feng

Visiting project fellow, The Research and Educational Center for China Studies and Cross Taiwan-Strait Relations, Political Science Department, National Taiwan University, Taipei, Taiwan

Abstract

This paper discusses the Chinese Social and Political Science Association and its impact on China's inclination to Wilsonianism. The CSPSA was founded in Beijing in 1915. Two primary supporters were Lu Zhengxiang (China's Foreign Minister) and Paul S. Reinsch (American Minister to China during the Wilson administration). It chose English as its official language in order to have dialogues with American scholars. The CSPSA had strong interests in constitutionalism, international relations and international law. As it pondered how to discipline China, it demonstrated its inclination to the American scientific study of the state. Epistemologically, this led to the political converge between China and the US during the Great War.

Keywords

Lu Zhengxiang (Lou Tseng-tsiang), Paul S. Reinsch, Chinese Social and Political Science Association, American scientific study of the state, Wilsonianism

It was the Enlightenment idea of progress that stirred individuals and sovereign states to believe that peace could be gradually achieved with reason. For an individual, being civilized meant that he or she was imbued with judicial conscience and was in compliance with the state's control over his or her own body. The construction of peace varied from that of domestic governmentality. That advanced science and industrialization enabled the Western states to globally exercise their economic and military power and colonize

Corresponding author:

John H. Feng, No3. Alley 2, Lane 144, Shiyuan Road, Wenshan District, Taipei, 11642, Taiwan.

Email: john.h.feng@gmail.com

the rest of the world for their own national purposes established the hierarchy of states of modern times. Colonial nationalism denied the practicality of a governance entity that could be above all sovereign states to maintain peace. In accordance with the pervasiveness of colonial nationalism, the scientific study of the state, appearing in the West, endeavoured to help them search for international political discourses for peace.¹ Peace could be obtained if international law – a series of behavioural codes that the Western states draw from reason – was imposed on themselves and others. International law made peace a self-sustained discursive system composed of civilization and reason, integrating colonial nationalism and the hierarchy of states. Obeying international law proved a state's willingness to act with reason and judicial conscience. In other words, if a state demonstrated that it was reasonable, it would be seen as civilized.

The discursive system of peace culminated at the turn of the twentieth century. The Hague Peace Conferences of 1899 and 1907 were commenced in order to discipline sovereign states over their disputes and warfare. The Western states demonstrated their reason and hierarchical superiority in The Hague. On the other hand, since the mid-nineteenth century, China was coerced by the Western states to sign the so-called unequal treaties, surrender extraterritorial privileges and accept an inferior status in the hierarchy they defined. China's sovereignty was incomplete. The two conferences were its first time to attend an international conference as a sovereign state. China, by approving the conventions signed in the conferences, was eagerly to show that it was an absolute sovereignty like the Western states.²

Although China approved all the conventions, The Hague Peace Conferences did not verify its status as an absolute sovereign state as it wished. The conferences reinforced a Chinese official's determination to approach the scientific study of the state, continue to introduce international law to China and improve China's inferior status in the hierarchy of states. In 1907, Lu Zhengxiang (Lou Tseng-tsiang), China's Ambassador Extraordinary to The Hague Peace Conference, submitted a memorial to Empress Dowager Cixi and Emperor Guangxu, urging that China should not alone be disciplined by international law but should be also reinvigorated with constitutionalism.³ Soon after the Chinese Republic was established, Lu acquired sufficient political power to carry out what was written in this memorial. Being appointed China's Foreign Minister and supported by Paul S. Reinsch (Woodrow Wilson's Minister to China), Lu founded the Chinese Social and Political Science Association (CSPSA) in December 1915. This society was a Chinese replica of the American Political Science Association (APSA). Most of the members were foreigners and returned students who were associated with the Chinese government. Before Lu's political retirement in 1920, the CSPSA focused on China's international relations and constitutionalism, aiming to accomplish what Lu wrote in the 1907 memorial.

The CSPSA represented an alternative approach to promote the scientific study of the state in China. From the Imperial to the Republican periods, the Chinese government and intellectuals, following Zhang Zhidong's well-known guideline 'Chinese learning for the fundamental principle and Western learning for the pragmatic use' (*zhongti xiyong*), tried to accommodate the scientific study of the state with the Confucian study of governance. They reinterpreted the scientific study of the state in the Chinese lexical context, argued their own discourses in Chinese and contested to create equivalents between Chinese and

foreign languages. They introduced the scientific study of the state to the Chinese reading public. Their translation practices were not only cross-cultural but also involved different languages. In Lydia H. Liu's sense, their practices were 'translingual'.⁴ The CSPSA, on the contrary, chose English as its official language and published an English quarterly, *The Chinese Social and Political Science Review (Review)*. Its audience in China was a small group of foreigners and Chinese elites who could speak English. The society had no intention to be engaged in the Chinese lexical context. It was by no means 'translingual'.

This paper explores how and why such an association was born to approach the scientific study of the state without hybridizing the Confucian study of governance. The CSPSA not only introduced international law into the Chinese state's diplomatic institution, but it also hoped that Chinese elites could accustom themselves to the spirit of constitutionalism. In terms of its broader significance, this society was Lu's non-translingual practice to bring the scientific study of the state from the US across the Pacific and discipline China domestically and internationally.

Lu Zhengxiang and his dearest wish

Lu Zhengxiang had a 'dearest wish' to modernize China's diplomatic institution in line with the Western states, and abolish the extraterritorial privileges and unequal treaties to restore China's absolute sovereignty.⁵ His diplomatic career epitomized the changing course of China's engagement with the Western states in modern times. He did not have a degree in the scientific study of the state. He studied French at the Peking Imperial College of Languages (*Jingshi tongwen guan*), the purpose of which was to train interpreters for the Imperial government. After graduation, Lu was sent to St. Petersburg as an interpreter. In The Hague Peace Conference of 1899, he was also an interpreter in the Chinese delegation. He was then promoted to Minister to the Netherlands and appointed as Ambassador Extraordinary to The Hague Peace Conference.⁶ Lu's recruitment indicated that during the late imperial period, international law was not a requirement to do consular service for China. It prioritized language skills, and the concept of the traditional tributary system was still influential in its diplomacy. The reasons behind international law had not been appreciated. That is, China kept itself from the Western states' discursive system of peace. For the Western states, it meant that China was not civilized and deserved the lowest status. Lu said:

...The Hague became the scene of the meeting of the Second International Peace Conference.... The Chinese Government appointed me as its ambassador to this Conference. That task brought me for the first time face to face with the simultaneous attitude of all the Powers, unanimous in treating China as a country of the lowest rank. This was an experience very rich in lessons for me.⁷

Lu's experience in The Hague led him to acknowledge the discursive system behind international law. Only a civilized state that obeyed international law with reason and judicial conscience was eligible for equal treatment. In order to be perceived as civilized, China needed to be involved in this discursive system. After the two conferences, Lu presented a memorial to Empress Dowager Cixi and Emperor Guangxu, analysing China's situation in

The Hague. He believed that, in general, the two conferences presented a proof of 'the progress of civilization'. Jurists persuaded with reason; soldiers persuaded with power; and diplomats negotiated between them. Peace was promising but China could not expect it with naïve optimism. In the conferences, the attending states, especially Japan, criticized China's judicial progress for being unsatisfactory and argued that the extraterritorial privileges should not be abolished.⁸ What Lu tried to point out was that the Western states saw China as being uncivilized and the imposition of extraterritorial privileges was a necessary measure to exclude China from other civilized states. He accordingly made the recommendation to Empress Dowager Cixi and Emperor Guangxu that, in addition to international law, China needed to accelerate its pace of constitutionalism and try to associate itself with the US and Germany in order to avoid similar criticism at the Third Hague Peace Conference that was scheduled to commence in 1914.⁹ Lu understood that China's request for equal treatment was conditional. It had to be rooted in the discursive system of reason, judicial conscience and civilization that the Western states reaffirmed in The Hague. The memorial proved Lu's awareness that China had to diminish its distance from the discursive system. Unfortunately, the memorial had little actual impact, for Empress Dowager Cixi and Emperor Guangxu passed away a few months after Lu's submission and the Qing Empire was overthrown in three years.

Lu's first opportunity to put the memorial into practice came when the Republic's regime was established. As soon as Yuan Shikai, a strong man and his friend, assumed the presidency, Lu was appointed Foreign Minister and with Yuan's trust was endowed with complete authority over decision-making regarding personnel.¹⁰ Lu started to raise the importance of the scientific study of the state in China's diplomatic institution. The Ministry changed the recruitment policy; foreign language skills as well as a degree in the scientific study of the state were both required for those who wished to do consular service for China.¹¹ In such a new mechanism, Lu structured the scientific study of the state in China's diplomatic institution.

In the meantime, Lu tried to organize a society outside the Ministry for similar purposes. In Beijing in the autumn of 1912, the Society for International Law (*Guoji fa hui*) was founded to discuss international law and politics; the membership was limited to those who studied the scientific study of the state or related subjects either in China or abroad. This restriction was based on Lu's reasoning that the jurisprudence of international law was the essence of civilization. He wanted to assemble those who had a similar belief and sufficient background knowledge.¹² This society aimed to collectively promote the scientific study of the state within China's borders. Lu's effort was warmly welcomed in the US. American jurist James Brown Scott wrote:

But the enlightened statesmen of the republic recognize that it is not enough to have a foreign office comparable in organization and efficiency to the foreign offices of European civilization, for the conduct of international relations. They recognize that the principles of international law must be studied and mastered by leaders of thought, and that appropriate organs should be created for their study and dissemination.

...we are informed that a society for the study of international law has been formed in Peking... The moving spirits of this new society are Mr. Lou Tseng-Tsiang... The Peking society is organized upon a scientific basis.

The American Society of International Law and the Editorial Board of the *American Journal of International Law* extend their sincere congratulations to the enlightened statesmen, jurists and publicists... That their endeavors be crowned with complete success must be the wish of all who are interested in the study of international law and the maintenance of international peace on the foundations of law and justice.¹³

‘Civilization’, ‘international law’ and ‘scientific basis’ were the elements of the new spirit that Lu represented in the newly born Republican regime. He brought new changes to the Foreign Ministry. For Scott, the reform was more than institutional. That the scientific study of the state was required for China’s consular service meant that Lu’s attempt to prioritize this field was as important as language skills. He wanted those who had a related degree and could speak foreign languages to act with reason and judicial conscience on behalf of China in foreign states. By approaching this field, he tried to structure the Western states’ discursive system in China’s diplomatic institution and civilize China as a whole sovereign state internationally.

The Chinese Social and Political Science Association

The Society for International Law, ‘owing to the pressure of the official duties of the members’, gradually became stagnated.¹⁴ Yet Lu’s ‘dearest wish’ had not worn off. In December 1915, with Paul Reinsch’s help, he founded the CSPSA, which had a similar purpose. In the next year, the Society for International Law was merged into the new society.¹⁵ Lu resumed realizing his ‘dearest wish’; this time he made great progress.

Lu’s supporter Reinsch – a Progressive political scientist – was American Minister to China during the Wilson administration. Before assuming this post, he set up and chaired the Political Science Department at the University of Wisconsin.¹⁶ Meanwhile, he was one of the fifteen political scientists who created the APSA, which was dedicated to ‘the scientific study of the organization and functions of the State’.¹⁷ Concerning China’s situation, Reinsch was a sincere advocate of the Open Door doctrine. He worried that the Western states’ colonial presence there already endangered the stability in the Far East and world peace. He wished that Open Door cooperation could replace colonialism. He also believed that ‘the Chinese earnestly desired American assistance in the development of their nation’.¹⁸ After Wilson sent him to Beijing, Reinsch ‘often discussed the desirability of establishing an association’ devoted to ‘the scientific study of economic and political subjects’. It could not only modernize the Chinese people’s intellectual life, but it could also formulate an ‘organic relationship’ between their traditional discursive system and the Western counterpart in science.¹⁹ The Progressive spirit accordingly drove him to take action. He approached China’s Foreign Ministry and ‘suggested the idea of forming a political science association along the line of’ the APSA ‘with the special object of studying International Law and Diplomacy’.²⁰

However, Lu did not directly cooperate with Reinsch to found the CSPSA. Instead, three young officials of the Ministry, including Gu Weijun (V.K. Wellington Koo), Yan Heling (Hawking L. Yen) and Wu Chaoshu (Wu Chao-chu), worked with Reinsch. Higher-ranking officials normally communicated via lower-ranking staff; the three officials’ participation demonstrated Lu’s decisive role behind the scene. His arrangement seemed to be intentional. The three officials and Reinsch shared common educational

backgrounds. Gu and Yan both received their PhD degrees in the scientific study of the state from Columbia University before they joined the Ministry.²¹ Gu himself was an APSA member during his doctoral study at Columbia.²² Wu Chaoshu studied law at the University of London and then Lincoln's Inn; his father was the Chinese Imperial Minister to the US in the last decade of the Qing Empire.²³ The three officials were all returned students, speaking English, American-friendly and familiar with the scientific study of the state. Educationally, they and Reinsch formulated a pure Anglo-Saxon intellectual origin for the CSPSA. We may argue that Lu wanted this society to have a focus on the American perspective while it discussed and promoted the scientific study of the state on China's soil.

Such a special intellectual trait dominated from the birth of the CSPSA. In its opening meeting held at Lu's residence on 5 December 1915, Reinsch explained what this society was expected to achieve in detail.

The founding of this Association... means a closer linking up and affiliation of Chinese thought with scientific activities abroad, both in Europe and in America; it promises an opportunity for a consistent and continuous interpretation, in objective and reliable form, of Chinese political and social experience in the past and the present to the general intelligence of the world. It also stands for the standardizing of methods of observation, recording and analysis in China, among the men interested in political and social action, bringing to bear upon these methods the rigid criteria of scientific exactness.

The Association... will have the purpose to encourage the dealing with these rich materials according to methods that will produce results of permanent validity in the scientific thought of the world. The materials contained in the historical and literary tradition of China should first be sifted and analysed according to the severest critical tests of scientific accuracy and reliability...²⁴

Reinsch's rhetoric, such as 'objective and reliable form', 'scientific exactness' and 'permanent validity', indicated that the CSPSA aimed to imitate APSA positivism in China. It wanted to use its predecessor's orthodoxy to reinterpret China's political and social experiences. Such a predisposition reminds us of Hu Shi's slogan 'transvaluation of all values' (*chongxin guding yiqie jiazhi*) during the May Fourth Movement.²⁵ Both the CSPSA and Hu Shi intended to remodel China with Western science. Reinsch's articulation was a few years earlier than Hu Shi's. So far, no archival documents have been uncovered to prove the kind of influence that the CSPSA had over Hu Shi. Yet the difference was clear. Hu Shi spoke up for his vaguely defined scientific attitude and his audience was Chinese people exclusively. On the other hand, the CSPSA, being engaged with Americans and Chinese elites who shared similar educational and linguistic backgrounds, placed a heavy emphasis on the scientific study of the state and attempted to bring the discursive system that the Western states defined into China's diplomatic institution.

Disciplining China

Lu was elected to be the first CSPSA president and held this post continuously until 1920. His presidency was the longest throughout the society's history. During this period,

the *Review*, its English quarterly, paid full attention to investigating the Chinese state's central and provincial functions and organizations. From central to provincial government, from taxation to river management, the range was wide. Yet the CSPSA had two main themes. Each issue had at least two papers discussing either China's constitutionalism or international relations. We may argue that this English quarterly explored how the Chinese state could discipline itself domestically and internationally.

The last two issues of 1916 were dedicated to 'discussions on the making of a constitution now taking place in this country'.²⁶ According to Andrew J. Nathan, the Republican regime suffered from critical factional clashes and civil wars between warlords. Factional politicians and warlords all claimed that they were constitutionally loyal, and numerous versions of a constitution were drafted, but none of the versions could be sustained for long. Constitutional order in China was unable to consolidate and the Republican regime was extraordinarily unstable. As faith in constitutionalism faded away, the Chinese Nationalist Party (Kuomintang, *Guomin dan*) tried to build up a strong political authority with revolutionary ideology in order to overcome such a disorder.²⁷ Nathan's retrospective is certainly insightful. However, in the 1910s, Lu was faithful and the CSPSA endeavoured to circulate the idea of constitutionalism among Chinese elites. The *Review* said:

We, in offering our opinions on the various important phases of a constitution, have not allowed ourselves to be influenced by any political considerations but made an effort the best we can to present some conclusions arrived at from a comparative study of the political phenomena as obtaining in countries of a constitutional form of government.²⁸

Other than the papers discussing a comparative constitutional system, the *Review* also published two APSA members' commentary on the spirit of American democracy. Jeremiah W. Jenks argued, 'the Republican government is not really so much a matter of form as it is a question of spirit'. The American founding fathers' unselfishness, tolerance and morality were the Chinese political leaders' examples to imitate. 'A tremendous responsibility rests upon the leaders today because it is they who must adapt new forms to the exercise of the spirit of republicanism.'²⁹ Westel W. Willoughby articulated that 'the Chinese, in the past, have been habituated neither to the idea of a government by law... nor have they had forced upon them the imperative necessity for a strong and energetic executive government in domestic as well as in international matters.' China had to harmonize 'governmental efficiency' and 'popular control' so that it could 'hope to rank among the truly great States of the world'.³⁰

The views of Jenks and Willoughby were rooted in the American scientific study of the state. By borrowing it, they pointed out what China lacked in comparison with the Western states and how China should discipline itself for growing constitutionalism. They further portrayed the US as China's ideal role model to follow. In such dialogues with Jenks and Willoughby, the CSPSA attempted to learn the American scientific study of the state, mapped China's road to constitutionalism and imagined how to established a government that was comparable to their Western counterparts.

China's international relations were another main theme about which the CSPSA was extraordinarily concerned. Several young officials of the Foreign Ministry articulated why China deserved equal treatment and why foreigners' extraterritorial privileges

should be abolished. Their perceptions were tightly incorporated in international law. For one thing, it was understood that the most-favoured-nation clause that China unilaterally granted to civilized states 'must be obeyed' as a legal liability. Since the clause had already harmed China's self-preservation, it was legitimate to retrieve China's full sovereign rights on the basis of humanity.³¹ For another, it was argued that foreigners' extra-territorial privileges were 'concluded under the tacit condition *rebus sic stantibus*'. China's treaty obligations had clashed with the principle of self-preservation; foreign states, for the sake of humanity, goodwill and friendship, should relinquish these privileges and enable China to exercise its free will to develop itself.³²

The arguments given above were both grounded in the rationale of international law. Self-preservation was prior to treaty liability. China's claim for equal treatment was derived from an understanding of reason rooted in the Western discursive system. The contributors, the members of the CSPSA, as well as the officials of the Foreign Ministry, all spoke English and had previously studied the scientific study of the state abroad. Their discussions in the *Review* represented the stance of the Ministry. Under Lu's influence, they argued for China's judicial conscience and justified China's claim in the Western states' discursive system. The Ministry had accepted this discursive system and admitted China's inferior status in the hierarchy of states. It wanted to persuade the Western states with reason and judicial conscience; it therefore embraced the American scientific study of the state.

More importantly, the rationale of international law was also the foundation of Wilsonianism. What the CSPSA (and the Ministry) articulated was philosophically coherent with what Wilson stood up for. The political convergence started before the US and China declared war on Germany. Xu Guoqi has argued that during the First World War, the translation of Wilson's Fourteen Points was extraordinarily popular in China and Chinese people regarded Wilson as China's protector. Chinese people believed that both Wilson and China attempted to protect peace and humanity. They trusted Wilson and relied on him to bring justice to China for the reconstruction of the world order after the First World War.³³ What the CSPSA did shows us that the political converge between China and the US was epistemologically based on the CSPSA and Lu's access to the American scientific study of the state.

At the same time, in return the political convergence strengthened the shared epistemological ground. William C. Dennis, an American jurist who was close to the Wilson administration, was invited to introduce Wilson's idea of the League of Nations at the CSPSA annual meeting on 23 December 1917.³⁴ Dennis argued that Wilson's idea was to realize the conventions of The Hague Peace Conferences. It was not only desirable, but also feasible.³⁵ Lu replied, 'China's declaration of war against Germany is primarily for the purpose of upholding the Law of Nations and of enforcing the principles of Humanity, in the hope that by so doing, durable peace will be hastened'.³⁶ Dennis used the rhetoric of international law to invite Lu to prove that China was as civilized as the US. Lu's response indicated that he was thoroughly immersed in the American scientific study of the state. Accordingly, a few days after the end of the First World War, the CSPSA passed a resolution at the annual meeting held at Reinsch's residence on 18 November 1918.

Whereas the various States associated in combating the Central Empires have achieved final triumph in... a war of ideals, of principles—of democracy against autocracy, of the principle that right makes might against the principle that might makes right, of equality, justice and freedom against inequality, injustice and oppression.

Whereas Woodrow Wilson, President of the United States of America, not only contributed powerfully to the winning of the war... but also... has guided the political thought of the world into the right channel and laid sure and deep the foundations of a just and permanent peace.

... congratulations be extended to President Wilson on the successful accomplishment... particularly on his inestimable contribution to political science in translating his long-cherished, lofty political ideals, into action from which the human race will enjoy unbounded blessings.³⁷

The victory of Wilsonianism was extensively emphasized. Politically, the CSPSA's resolution was the consequence of China and America's convergence during the First World War. Epistemologically, it came from the CSPSA's intellectual inclination towards the American scientific study of the state. Like Lu's echo to Dennis, the resolution again demonstrated that the CSPSA, from Lu to the members, complied with and used the American scientific study of the state to defend China's reason and judicial conscience. More importantly, the resolution also proved that by the end of the First World War, Lu had assimilated the Foreign Ministry into this field and prepared for the Paris Peace Conference epistemologically.

Conclusions

Unfortunately, the result of the Paris Peace Conference was a frustration to Lu; China was still treated as an inferior state with partial sovereignty. A contemporary explanation is that Wilson faced a threat that the proposed League of Nations could be in vain and he chose to betray China.³⁸ On the other hand, what is explored in the previous sections can lead us to another explanation. Lu had recognized the Western states' discursive system and wished to retrieve China's full sovereignty. From the Society for International Law to the CSPSA, he endeavoured to import the American scientific study of the state so that the society members, most of whom were young elites and spoke English, could appreciate the spirit of constitutionalism and defend China's claim by citing international law. They tried to discipline China domestically and internationally. It was Lu's ambition to show China's reason and judicial conscience to the Western states. Lu accepted their conclusion that China was inferior in the hierarchy of states; he planned to win the Western states' recognition by rational persuasion. This meant that Lu was reluctant to challenge their discursive system. His inclination to the American scientific study of the state did not prepare China to contest against the Western states for discursive power. Epistemologically, China started from a self-constrained position in the Paris Peace Conference.

Lu said that the CSPSA was 'the first one of its kind' in China. He hoped that 'this Association will help to strengthen the intellectual relations between the people of this

country and those of foreign countries' and that 'it will mark the beginning of a new era in China'.³⁹ It is certainly true that in Chinese history, this society was the first one that was deeply and directly engaged with foreigners. It did not hybridize the American scientific study of the state with the Confucian study of governance. Its practice was non-translingual. Lu made the CSPSA yield to the Western states' discursive system. In other words, Lu made the society docile with their colonial presence in China. The Chinese Nationalist Party fuelled its anti-colonial discursive power with Wilsonianism and used anti-colonial nationalism to agitate mass support.⁴⁰ Yet Lu did the opposite. Such a difference predetermined the latter's political frustration and the former's rise on China's soil.⁴¹

Acknowledgements

This paper is an output of 'China and the Human Sciences: 1600 to the Present', a two-year international research project funded by the Arts & Humanities Research Council. I am grateful to the project coordinator Prof. Howard Chiang of Warwick University. His feedbacks are certainly insightful. I am also grateful to Prof. Chih-yu Shih and the colleagues at the Research and Educational Center for China Studies and Cross Taiwan-Strait Relations, Political Science Department, National Taiwan University. My draft was discussed in the Center's workshop and the comments I received are constructive.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Notes

1. According to Frank J. Goodnow, the first APSA President, the scientific study of the state was equivalent with political science. Frank J. Goodnow, 'The Work of the American Political Science Association', *Proceedings of the American Political Science Association*, 1, 1904, pp. 35–46. DOI: 10.2307/3038319, accessed 20 June 2014. This paper defines the scientific study of the state in a loose sense; 'being scientific' has had different connotations through history.
2. On China and The Hague Peace Conferences of 1899 and 1907, see Tang Qihua [Tang Chi-hua], 'Qingmo minchu zhongguo dui haiya baohe hui zhi canyu' [A Study on China's Participation of The Hague Peace Conferences, 1899–1917], *Guoli zhengzhi daxue lishi xuebao* [NCCU Journal of History], 23, 2005, pp. 45–90.
3. Lu Zhengxiang, 'Juzou baohe hui qianhou shizai qingxing deng zhepian qing daidi you' [Purpose: Presenting a Memorandum to Report the Actual Situations Before and After The Hague Peace Conferences; Please Submit for Me], 17 February 1908, 02-21-004-01-003, Archives of Academia Sinica Institute of Modern History, Taipei.
4. Lydia H. Liu, *Translingual Practice: Literature, National Culture, and Translated Modernity—China, 1900–1937* (Stanford: Stanford University Press, 1995), p. 8.
5. Lu Zhengxiang [also known as Dom. Pierre-Celestin Lou Tseng-tsiang], *Souvenirs et Pensées* [Ways of Confucius and of Christ], trans into English by Michael Derrick (London: Burns Oates, 1948), pp. 32–33.
6. Luo Guang, *Lu Zhengxiang zhuan* [Biography of Lu Zhengxiang] (Taipei: Commercial Press, 1967), pp. 55–61.
7. Lu Zhengxiang, *Ways of Confucius and of Christ*, p. 24.

8. Lu Zhengxiang, 'Juzou baohe hui qianhou shizai qingxing deng zhepian qing daidi you' [Purpose: Presenting a Memorandum to Report the Actual Situations Before and After The Hague Peace Conferences; Please Submit for Me], 17 February 1908, 02-21-004-01-003, Archives of Academia Sinica Institute of Modern History, Taipei.
9. Lu Zhengxiang, 'Juzou baohe hui qianhou shizai qingxing deng zhepian qing daidi you' [Purpose: Presenting a Memorandum to Report the Actual Situations Before and After The Hague Peace Conferences; Please Submit for Me], 17 February 1908, 02-21-004-01-003, Archives of Academia Sinica Institute of Modern History, Taipei.
10. Luo Guang, *Biography of Lu Zhengxiang*, pp. 80–81.
11. Shi Yuanhua, *Zhonghua minguo waijiao shi* [Diplomatic History of the Republic of China] (Shanghai: Renmin Chubanshe, 1994), pp. 29–34.
12. 'Lu Zhengxiang cheng jinri zhi wanren ye' [Lu Zhengxiang is indeed a perfect gentleman today], *Shanghai News* (*Shun Pao, Shen bao*), 10 October 1912, pp. 2–3.
13. James Brown Scott, 'The Chinese Society and Journal of International Law', *American Journal of International Law*, 7(1), 1913, pp. 159–161. DOI: 10.2307/2186972, accessed 20 June 2014.
14. 'Editorial Notes', *Chinese Social and Political Science Review*, 1(1), 1916, p. 9.
15. 'Editorial Notes', *Chinese Social and Political Science Review*, 2(1), 1917, p. 1.
16. Noel H. Pugach, *Paul S. Reinsch: Open Door Diplomat in Action* (New York: Millwood, 1979), pp. 22–24.
17. 'The Organization of the American Political Science Association', *Proceedings of the American Political Science Association*, 1, 1904, pp. 5–15. Goodnow, 'The Work of the American Political Science Association', p. 36.
18. Pugach, *Paul S. Reinsch*, pp. 11 and 76.
19. Paul S. Reinsch, *American Diplomat in China* (Garden City, New York and Toronto: Doubleday, Page & Company, 1922), pp. 152–3.
20. 'Editorial Notes', *Chinese Social and Political Science Review*, 1(1), p. 1.
21. The China Weekly Review, *Who's Who in China: Containing the Pictures and Biographies of China's Best Known Political, Financial, Business, and Professional Men*, 3rd ed. (Shanghai, 1925), pp. 416–7 and 930–1.
22. Gu's doctoral study was from 1909 to 1912 and the APSA held its annual meeting in New York in December 1909. 'List of Members', *Proceedings of the American Political Science Association*, 6, 1910, p. 18; 7, 1911, p. 22; 8, 1912, p. 24; 9, 1913, p. 24.
23. *Who's Who in China*, 3rd ed., pp. 861–2.
24. Reinsch, 'The Chinese [Social and] Political Science Association', *Chinese Social and Political Science Review*, 1(1), pp. 13–14 and 18–19.
25. Hu Shi, 'Xin sichao de yiyi' [The Meaning of New Intellectual Trends], *Xin qingnian* [New Youth], 7(4), 1919, pp. 5–12. On Hu Shi, 'transvaluation of all values', and the May Fourth Movement, see Jerome Grieder, *Hu Shih and the Chinese Renaissance: Liberalism in the Chinese Revolution, 1917–1937* (Cambridge, MA: Harvard University Press, 1970), pp. 108–11.
26. 'Editorial Notes', *Chinese Social and Political Science Review*, 1(4), 1916, p. 1.
27. Andrew J. Nathan, *Peking Politics, 1918–1923: Factionalism and the Failure of Constitutionalism* (Berkeley: University of California Press, 1976).
28. 'Editorial Notes', *Chinese Social and Political Science Review*, 1(4), p. 1.
29. Jeremiah Jenks, 'Fundamental Principles of Republicanism' *Chinese Social and Political Science Review*, 1(3), 1916, pp. 6 and 11–12.
30. Westel Willoughby's paper was presented in a CSPSA smoker held at Reinsch's residence on 23 October 1916. Willoughby, 'Energy and Leadership in Government', *Chinese Social and Political Science Review*, 1(4), 1916, pp. 16–17.

31. Guo Yunguan [Kuo Yun-kuan], 'The Legitimate Bounds of Most-favored-Nation Treatment in China', *Chinese Social and Political Science Review*, 1(1), pp. 40–55.
32. Diao Mingqian (M.Z.T Tyau), 'China and the Peace Conference', *Chinese Social and Political Science Review*, 2(2), 1917, pp. 52–3.
33. Xu Guoqi, *China and the Great War: China's Pursuit of a New National Identity and Internationalism* (New York: Cambridge University Press, 2005), pp. 244–52.
34. This meeting was held at the American legation. 'Editorial Notes', *Chinese Social and Political Science Review*, 2(4), 1917, pp. 1–2.
35. William Dennis, 'The Proposed League of Nations to Enforce Peace', *Chinese Social and Political Science Review*, 3(1), 1918, pp. 31–40.
36. Lu Zhengxiang, 'China's Relations with the World', *Chinese Social and Political Science Review*, 4(40), 1918, pp. 342–3.
37. 'Editorial Notes', *Chinese Social and Political Science Review*, 4(4), pp. 333–5.
38. Bruce A. Elleman, *Wilson and China: A Revised History of the Shandong Question* (Armonk, New York: M.E. Sharpe, 2002), p. 88. Margaret MacMillan, *Peacemakers: The Paris Conference of 1919 and Its Attempt to End War* (London: John Murray, 2001), pp. 331–53.
39. 'Editorial Notes', *Chinese Social and Political Science Review*, 1(1), pp. 2–3.
40. On Wilsonianism and China's anti-colonialism, see Erez Manela, *Wilsonian Moment: Self-determination and the International Origins of Anticolonial Nationalism* (Oxford: Oxford University Press, 2007).
41. On the rise of the Chinese Nationalist Party, see John Fitzgerald, *Awakening China: Politics, Culture, and Class in the Nationalist Revolution* (Stanford: Stanford University Press, 1996).

From palaeoanthropology in China to Chinese palaeoanthropology: Science, imperialism and nationalism in North China, 1920–1939

History of Science

2015, Vol. 53(1) 21–56

© The Author(s) 2015

Reprints and permissions:

sagepub.co.uk/journalsPermissions.nav

DOI: 10.1177/0073275314567435

hos.sagepub.com



Hsiao-pei Yen

Postdoctoral Fellow, Institute of Modern History, Academia Sinica, Taiwan

Abstract

Before the establishment of the Cenozoic Research Laboratory (*Xinshengdai yanjiushi*) in 1929, paleoanthropological research in China was mainly in the hands of foreigners, individual explorers as well as organized teams. This paper describes the development of paleoanthropology in China in the 1920s and 1930s and its transformation from the international phase to an indigenized one. It focuses on the international elite scientist network in metropolitan Beijing whose activities and discoveries led to such transformation. The bond between members of the network was built on shared scientific devotion, joint field experience, and social activities. However, such scientific internationalism was not immune from imperialistic and nationalistic interests and competition as most members of the network also belonged to institutions of the dominant hegemonic powers, such as the French Paleontological Mission and the American Museum of Natural History, operating by the logic of international system of imperialism. While these foreign institutions enjoyed relatively unrestricted access to the Chinese frontier and Mongolia in the early 20th century to discover and collect for the establishment of what they saw as universal scientific knowledge, in the late 1920s rising Chinese and Mongolian nationalisms began to interpret these activities as violations to their national sovereignty. The idea of establishing a “Chinese” institute to carry out paleoanthropological research in China took shape in such milieu. This paper highlights the entanglement between scientific internationalism, imperialism, nationalism in China in the early 20th century and the complicated process of knowledge formation at various national and personal levels.

Keywords

paleoanthropology, expeditions, North China, international elite network

Corresponding author:

Hsiao-pei Yen, Institute of Modern History, Academia Sinica, 130 Academia Rd, Sec. 2, Nangang, Taipei 115, Taiwan.

Email: hsiaopeiy@gmail.com

Against the international mainstream palaeoanthropological theory denoting Africa to be the origin of both the hominid and all modern humans, many scientists and the general public in China support the hypothesis of Multiregional Continuity. This states that after *Homo erectus* first migrated out of Africa about 1.8 million years ago (Out of Africa I), the so-called Peking Man (first named *Sinanthropus pekinensis*, now *Homo erectus pekinensis*), the one who settled in North China around 0.68 to 0.78 million years ago, evolved continuously, without being replaced by more modern humans from Africa (Out of Africa II), into *Homo sapiens* and then the modern Chinese. Chinese scientists like Wu Xinzhi are the major advocates of the hypothesis of Multiregional Continuity, and their best evidence comes from the existing hominid fossils found in China that show common morphological traits between *Homo erectus*, *Homo sapiens* and the contemporary Chinese.¹ Political scientist Barry Sautman uses the term ‘paleoanthropological nationalism’ to describe the ancestral cult of Peking Man in today’s China as a nationalist construction of mytho-historical longevity and continuity of the Chinese race.² Chinese palaeoanthropology, in other words, provides an example of how scientific disciplines interact with the political agenda.³

Before Peking Man was nationalized as the Chinese ancestor, he was considered to be the common ancestor of all humans. Chinese intellectuals in the 1930s and 1940s began to indigenize Peking Man as the first Chinese by appropriating the most prevailing palaeoanthropological theory of Asiacentrism and evolutionism.⁴ This paper focuses on the moment surrounding the discovery of Peking Man and before the discipline of palaeoanthropology was fully indigenized in China. It tells the story of the international elite scientist network in Beijing whose activities and discoveries directly shaped the development of an indigenized Chinese palaeoanthropology.

The bond between members of the network was strengthened by shared theoretical origins, joint field research and expeditions, and social activities. However, such scientific internationalism was not immune from imperialistic and nationalistic interests and competition, as most members of the network also belonged to institutions of the dominant hegemonic powers, such as the French Paleontological Mission and the American Museum of Natural History, operating by the logic of the international system of imperialism. While these institutions enjoyed relatively unrestricted access to the Chinese frontier and Mongolia in the early twentieth century to discover and collect for the establishment of what they saw as universal scientific knowledge, in the late 1920s rising Chinese and Mongolian nationalisms began to interpret these activities as violations of their national sovereignty. Regulations were set on foreign explorations, including whether findings could be taken out of these territories.

The idea of establishing a ‘Chinese’ institute to carry out palaeoanthropological research in China took shape in such a milieu. The discovery of Peking Man garnered unprecedented international media attention for Beijing, the ancient city of early humans. The Cenozoic Research Laboratory (*Xinshengdai yanjiushi*) was founded to take charge of the Peking Man excavation project. Strictly speaking, the Cenozoic Research Laboratory was not a Chinese institute per se. While it was a part of the National Geological Survey of China (*Dizhi diaochasuo*), the American Rockefeller Foundation provided the funding and controlled the scope and the direction of the research. The Rockefeller Foundation’s patronage represented a contemporary American attitude to

shape China's future through the direct transplanting of American ideas about scientific organizations and practices, the Peking Union Medical College (PUMC) being another example.⁵ Yet, the Cenozoic Research Laboratory, staffed by some of the core members of the Beijing scientific network, not only promoted Beijing's status as the most prominent centre for human palaeontology but also set the foundation for the indigenization of palaeoanthropology in China. The story of the discoveries and activities of the Beijing scientific network highlights the entanglement between scientific internationalism, imperialism and nationalism in China in the early twentieth century. The tensions also reveal the ways in which issues concerning human origins in general, and Chinese origins in particular, could bear highly political implications.

Cosmopolitan Beijing: The 'other' China

On 25 April 1927, a group of scientists gathered at the famous restaurant, Hotel du Nord, in Beijing to enjoy a cordial 'Cenozoic dinner' (*diner cénozoïque*). To honour the Swedish geologist-archaeologist Johan Gunnar Andersson before his departure to Sweden, a special menu was created to include the most whimsical names of courses, which served to entertain the attending geologists and palaeontologists. For example, the appetizer was *meletta sardinites*, a kind of sardine that existed in the Oligocene; the soup was *testudo insolitus*, a Pliocene tortoise; and for the dessert, the choices were stratigraphic cake (*gateau stratigraphique*) and assorted Palaeolithic fruit (*fruits paléolithiques assortis*). Of course, the menu also included a meat dish called *Chilotherium anderssoni* (a giant rhinoceros of the late Miocene in northern China, discovered by Andersson and named after him). To acknowledge Andersson's contribution to the two hominid teeth discovered in Zhoukoudian, a profile of a primitive woman's head was printed on the menu to indicate that this Cenozoic dinner was prepared 'under the spiritual guidance of the Peking Lady' (*sous la direction spirituelle de la Dame pékinoise*). After the meal, all attending scientists signed their names on the menu and mailed it to their common friend, Henry Fairfield Osborn, the president of the American Museum of Natural History to 'remind him of Peking'.⁶

The people who had forever left their signatures on the menu were a motley crew of international elite scientists residing in Beijing, including the Chinese Weng Wenhao and Ding Wenjiang, the Swede Johan Gunnar Andersson, the French Pierre Teilhard de Chardin, the Americans Walter Granger, George Barbour and Amadeus Grabau, and the Canadian Davidson Black, names well known to students of geology and palaeoanthropology in particular, and modern Chinese history in general.⁷ A few days later, the French Jesuit Teilhard de Chardin described the Cenozoic dinner in a letter to his friend in France: 'I believe that never in all of my life – family life included – have I spent hours so rich and cordial as that evening. As so many other times in Peking, the occasion was pervaded by a dimly sensed triumph at the overcoming of racial, national and religious barriers.'⁸ The friends formed a very close and intimate circle in Beijing's lively and international scientific environment in the 1920s and 1930s. Davidson Black used to call this group 'the gang'.⁹ The Beijing scientific network constitutes two kinds of scientists: while the majority of them either taught or worked in Beijing's academic or research institutions, it also included foreign explorers, who often stayed in Beijing temporarily during the preparation periods for their frontier expeditions. The formation of the Beijing

international network was not an accident: the coming together of these scientists in Beijing during the 1920s was largely a result of a shared common interest: the search for human ancestors.

All of the members of the Beijing scientific network, regardless of their nationalities, were affiliated with or had connections to the National Geological Survey of China and the non-governmental, voluntary Geological Society of China (*Dizhi xuehui*).¹⁰ The two Chinese scientific institutions fostered a transnational environment for collaboration between Chinese and foreign scientists. The National Geological Survey of China was one of the most progressive scientific institutions in Republican China. The central figure, who was both the founder and the director for many years, was Ding Wenjiang. Born into a wealthy family in Jiangsu, Ding was one of the first Chinese intellectuals to have received a solid science education in the West. He studied under the prominent British geologist J.W. Gregory at the University of Glasgow and graduated with a double degree in zoology and geology. Like many contemporary Chinese overseas students, he returned to China in 1911, eager to serve his country. He was recruited to lead the geology section (*dizhi ke*) of the Bureau of Mines (*Kuangzheng si*) under the Ministry of Agriculture and Commerce (*Nongshang bu*) of the new Republic in 1913. Realizing the importance of training professional geologists, Ding and Zhang Hongzhao, a Tokyo university graduate and the only other geological expert in the Ministry, launched the Geological Institute, funded by the Bureau of Mines. Together with Weng Wenhao, a newly returned graduate of Louvain, the three young geologists formed the core teaching body. Within three years, they had trained numerous diligent young men who were capable of carrying out field research and investigation. Many of these students filled the staff of the newly launched National Geological Survey, directed by Ding Wenjiang under the Bureau in 1916.

The official mission of the Geological Survey was to systematically establish data regarding China's geological features, to create maps and to investigate mines,¹¹ but it also managed to promote general geological studies and international collaboration. During its early years, the Survey, with limited funding, was often commissioned by the Ministry and private coal mining companies to examine mineral deposits and to record conditions of earthquakes. The Swedish geologist Johan Gunnar Andersson was hired as a mining advisor by the Ministry of Agriculture and Commerce in 1914 for the purpose of locating valuable minerals. He became friendly with Ding Wenjiang in 1915 and was later one of the leading researchers in the Survey. As will be discussed in detail below, Andersson also managed to bring in financial support from Swedish sources. The Survey became one of the hosting institutions for foreign professionals, thanks to the openness of Ding Wenjiang to international collaborations.

By the 1920s the Geological Survey had become the leading organ of geological and palaeontological research in China. It published two major scholarly journals, the *Bulletin of the Geological Survey of China* (*Dizhi huibao*) and the *Paleontologia Sinica* (*Zhongguo gushengwu zhi*), and occasional monographs of field research.¹² The Survey managed to build a museum to display its collections of minerals, rocks and fossils, and a library filled with academic publications acquired from Europe and America.¹³ The founding of the transnational Geological Society of China in Beijing in 1922, with 26 charter members, further created a bridge between the geologists of the Survey, the faculty of geology in higher educational institutions in Beijing and other independent

researchers.¹⁴ The *Bulletin of the Geological Society of China*, the official organ of this organization, was published mainly in English, with occasional French and German articles. The Society expanded rapidly; by 1926 it had more than a hundred affiliated fellows from all over the world.¹⁵

The core members of the Beijing scientific network were founding members of the Geological Society. Weng Wenhao served as the vice president; J. Gunnar Andersson, Ding Wenjiang and A.W. Grabau were the councillors; and Ding was also the editor of the *Bulletin*. Davidson Black and Walter Granger each delivered a congratulatory speech in the Society's first general meeting. George Barbour participated in several field research trips conducted by Andersson and Grabau. Pierre Teilhard de Chardin was pursuing his PhD degree in Paris at the time and would arrive in Beijing in 1923.

For foreign scientists who came to China in the early twentieth century, Beijing was an intellectual oasis in the vast barren area of a 'backward', 'stagnant' and 'uncultivated' China. Andersson had described Beijing as a different China: 'During my years in Peking I had the great good fortune to live in a circle of the leaders in science and literature trained in modern scholarship, and I thus learned to know another China, seething with new spiritual power, eager to adopt all that is valuable in occidental civilization but proudly aware of the noble worth and vitality of her own cultural inheritance.'¹⁶ The 'real' China, as Andersson saw it, extended from Beijing's rural districts to all the interior cities that had been relatively untouched by foreign influence. He described the life of people in these areas as 'the living Middle Ages'.¹⁷ The 'other China,' on the contrary, contained an 'enlightened' Chinese intellectual community formed by people like Ding Wenjiang and Weng Wenhao: those who received their intellectual training in the West but were able to find a balance between East and West. Beijing, where most such Chinese intellectuals resided during the 1910s and 1920s, became a magnet for elite foreign intellectuals who might otherwise find China's backward rural conditions and less 'cultivated' peasant population difficult to endure.¹⁸ This created another lure of Beijing in the eyes of the foreign explorers and field researchers: Beijing was literally seen as the closest civilized city surrounded by the wilderness of the frontier. After a few months of digging fossils and collecting rocks in the Ordos region in 1923, Teilhard de Chardin, who had just started his expatriate life in China, longed for the exciting intellectual atmosphere of Paris.¹⁹ To him, the Chinese frontier represented the 'raw regions of the universe' where 'intellectual life is the last thing you will find in the people of these parts'.²⁰ On his journey back to Tianjin in November of that year, where he was sent to help the Jesuit school, he stopped by in Beijing, as all other explorers did. This short stay turned out to be a blessing. Not only was the old capital very picturesque in autumn colours, it was the 'one city in China where you find most intelligence and intellectual life'.²¹ Beijing provided both material supplies for extended frontier journeys and intellectual nourishment for the mind of the solitary foreign explorers.

Knowing little or no Chinese was not a problem for foreign scientists who taught at Chinese universities. All their classes were delivered in English and most of their Chinese intellectual friends trained in the West were fluent in English or other European languages. For example, Teilhard de Chardin felt most close to the Belgium-trained Weng Wenhao, who spoke excellent French.²² Perhaps for this reason, most foreign scientists of the Beijing scientific network did not know any Chinese. Although living in China,

some for a long time, they had very little contact with the ordinary Chinese who spoke no foreign tongue. It might be considered unnecessary for geologists, palaeontologists or naturalists in general, who dealt mainly with rocks, fossils, plants and animals, to learn Chinese for practical purposes. The lack of Chinese language skills shows that the members of the Beijing scientific network were quite confined within the highly intellectualized and Westernized 'gated' community in Beijing. Like the global capitalist elite class today, these foreigners disliked the locals and their host nation; they were only attracted by the abundant opportunities the place guaranteed.

Any foreign scientist who arrived in Beijing for the first time would easily find company from not only the 'enlightened' Chinese intellectuals, but also other scientists from all over the world hired by Chinese academic institutions, or explorers preparing for their next expeditions. The mixed transnational community was friendly toward newcomers. And the economic condition of foreign professionals allowed them to enjoy a rather easy and comfortable life in Beijing. With the Boxer indemnity funds and generous Rockefeller support, Chinese institutions could offer guaranteed high pay, much more desirable than salaries received in their home countries, to recruit foreign scholars. For example, Amadeus Grabau was offered \$1600 a month for teaching palaeontology at Peking University and being affiliated with the Geological Survey as a researcher.²³ Grabau, who had been fired by Columbia University for his pro-German attitude during the First World War and his personal conflicts with colleagues in his department, regarded coming to China as the most favourable choice to start anew both his life and career. With such a generous salary, Grabau was able to live in a small but cozy house and to afford three Chinese servants to take care of his daily life.²⁴ Walter Granger and the members of his Central Asiatic Expeditions (CAE) team of the American Museum of Natural History lived in a rented mansion with one hundred and sixty-one rooms, which once was the residence of a Manchu prince. The wage for Chinese servants who knew a little English for daily communication was moderate. Many Chinese cooks were also very good at preparing Western-style cuisine. Roy Chapman Andrews, the leader of the CAE team, once commented, 'living is made so very easy in China that one becomes hopelessly spoiled'.²⁵

The small space encircled by the triangle shaped by three institutions: Peking University at the northeastern corner of the old Imperial City, Peking Union Medical College in the East City and the Geological Survey in the West City, formed the locus of intellectual life for the Beijing scientific network's foreign scientists. In late 1923, the newcomer Teilhard de Chardin spent a day with many American and Chinese anthropologists, palaeontologists and geologists and was amazed that 'it's a great deal in itself... to have the opportunity of finding them all collected at the same place and time'.²⁶ The more formal academic gatherings took place in those general and annual meetings of the Geological Society. These were often occasions where the most important and influential Chinese and foreign figures attended to deliver their research reports or to announce new projects. These meetings were polyglot. While the leading language was English, scholars were free to use whatever languages they felt most comfortable with.²⁷ It was also a time to make social connections. Teilhard de Chardin, for example, was informally introduced into the community in the sixth general meeting in June 1923, where he made a presentation of the findings that he and his colleague, Father Emile

Licent, made during their Ordos expedition.²⁸ We learn what a typical group gathering was like from a letter Teilhard de Chardin wrote to his cousin in France describing the second annual meeting of the Geological Society in January 1924:

The Geological Conference was very lively; I made a number of new contacts, learnt a great deal, and greatly enjoyed the frank intimacy that was born between Chinese, Americans, Swiss and French. A continual succession of dinner-parties consolidated these new friendships. If you'd been here yesterday, you'd have laughed to see ten rickshaws, each carrying a gentleman in a fur cap, plunging into the narrow lanes under the eyes of the dumbfounded Chinese, and all looking for the scene of the banquet. These little lanes are perhaps the most picturesque of the memories I'll retain of my time in Peking.²⁹

Social life in Beijing for foreigners of the scientific circle encompassed other circles. Cocktail and dinner parties were a normal part of daily life. Members of the legations were frequent guests at these occasions and they often had good relations with the expatriate scientists. Grabau's sister, Adele Grabau Ziemer, who came to China in 1934 to take care of her brother, complained about Grabau's busy social life of endless invitations and parties:

Nov.20 here we had the famous Dr. V.K. Ting [Ding Wenjiang] – Chinese reformer (a Chinaman) – here for lunch. Nov. 21 we went to lunch in a rickshaw to a writer's house – a fine place in the Legation Quarter. [In the afternoon] the editor of the Peking newspaper came for tea. The same evening from 6 to 8 was a cocktail party and reception at the house of the American Minister to China... [Nov.24] Another Chinese professor is here. Tomorrow we are invited out at a Chinese doctor's house – rich Chinese people. We go for noon hour, and in the evening somewhere else. All next week we are booked.³⁰

The scientific community could also be very hierarchical. Upon their arrival in Beijing in 1921, George Barbour's wife wrote her parents explaining the community: 'The newcomers must call on the oldcomers... within the first week, month, or year according to your position and theirs.'³¹ However, discomfort and fatigue from the long trip and anxiety towards the new environment could be eased by the warm welcome offered by Ding Wenjiang, the extraordinary Chinese polymath who ranked perhaps the highest in the community. Not only did Ding eagerly promote Sino-Western scientific collaboration, he also tried his best to accommodate foreign scientists and provide much needed guidance. Perhaps it was for pragmatic concern as he once said, 'Although foreigners have better achievements than us, they do not speak Chinese and do not know China's needs. Without capable Chinese to guide them, they cannot work to the best of their ability.'³² However, Ding's openness and intelligence won him intimate friendship and praises from the foreigners of the scientific circle. Andersson dedicated his first book of travel experiences in China, *The Dragon and the Foreign Devils*, to Ding Wenjiang to celebrate their friendship. For Andersson, Ding 'may not be counted as a typical Chinese: for that he is too driving in his work, too demanding towards his collaborators, much too frank in his criticism, and has too keen a sense of merciless justice. But as one of the most advanced members of today's Chinese intelligentsia, he is [a] shining representative of his people'.³³ Teilhard de Chardin called Ding the 'most remarkable neo-Chinese'³⁴ and

described him as ‘deeply Chinese, without being at all xenophobic... [H]e represents, in his ideas, the axis along which China must reorganize and advance...’³⁵

Another senior figure in the network who played the role of helping and guiding the junior members and newcomers was Amadeus Grabau. Because of his worsening arthritis problem, Grabau was not able to conduct field research after the first year of his stay in China and focused mainly on teaching palaeontology and geology at Peking University and doing research for the Geological Survey. After classes, he spent most of his time at home writing, reading and examining rocks and fossils brought to him by his colleagues. His house close to the Geological Survey became the hub for the Beijing scientific network. The members of the network often gathered in his house for dinner and chats. Sometimes classes or college meetings took place there as well. Teilhard de Chardin was said to have lunch at the Grabau’s every Sunday afternoon at 2 pm.³⁶

Grabau was not only regarded as a cordial man by his friends, he was also well-respected by his Chinese students at Peking University. In 1926, the Geological Society initiated the first A.W. Grabau Gold Medal Awards to honour his contribution.³⁷ On Grabau’s 60th birthday in 1930, which coincided with the 10th year of his service in China, the Geological Society held a reception. A whole issue of the *Bulletin of the Geological Society* was dedicated to Grabau’s anniversary. Zhang Hongzhao wrote a Chinese poem and Sven Hedin drew a picture of Grabau for this special occasion. The main Chinese staff of the Society’s council wrote a letter to express their gratitude for Grabau’s achievements, ‘We want particularly to tell you that ever since your arrival in China we have felt that you are one of us. We have long since forgotten that you are a foreigner, because we realize that your heart is here, and that your devotion to science is strong enough to transcend race and nationality’.³⁸

Most of the foreign scientists in the network came to China for the abundance of research opportunities, especially in the field of human palaeontology. Since the discovery of the Java Man – an ‘ape man’ that was the supposed missing link between human and ape – by Dutch scientist Eugène Dubois in 1891, many scientists believed that human ancestors might be found in Asia.³⁹ The French Jesuits stationed in Tianjin carried out extensive research in Inner Mongolia. The American CAE allotted Mongolia as the site for their hunt for human ancestors. Andersson and Black explored North China and collaborated with the Geological Survey. It is the episodes of their investigations and discoveries in these areas to which we now turn.

Inner Mongolia: The Jesuit Garden of Eden

The existing scholarship on Jesuit activities in China often focuses on the late Ming and the high Qing period before the Jesuits were expelled and prohibited from proselytizing Christianity in China.⁴⁰ Few have looked at the Jesuit China mission in the nineteenth and twentieth centuries after the Jesuits had re-established their infrastructure in China.⁴¹ The return of the French Jesuits to North China after the Second Opium War established the Catholic vicariate in Xianxian, a rural village in Hebei. Their activities extended to Tianjin (four hours by car from Xianxian) where the formal French concession was built in 1860. The French Jesuit engagement of natural science in North China during the first quarter of the twentieth century is exemplified by the work of Father Emile Licent.⁴²

Licent obtained his doctoral degree in science, specializing in zoology. It was in 1912 that Licent formalized the idea of building a natural science museum in Tianjin. North and Northwest China, particularly in the region of the Yellow River Basin, Inner Mongolia and Tibet remained an unknown area in the fields of natural sciences. He envisioned his natural science museum as a research institution that fulfilled multiple functions: installing and studying the collections, publishing research reports, sending materials to other scientific institutions and providing a service for public education.⁴³ His idea was soon endorsed by the superiors of the Mission in Xianxian, the Jesuit Provincial of Northern France, as well as the general superior of the Jesuits. Emile Licent travelled from France through Siberia and arrived in Tianjin in 1914.

Licent's primary duties in Tianjin were as a naturalist, explorer and collector. In the first few years he familiarized himself with the Chinese language and visited the mountains in areas northwest of Beijing along the Kalgan and Datong railroad lines, the loess region of the Yellow River, Henan, Shanxi and Shaanxi. Licent received extensive support and help from the Catholic priests on his itineraries. They would provide him with food and accommodation, as well as transportation and coolies. He collected almost everything he could find on his journeys: from rocks, insects, plants, animals and fossils to local ethnic costumes and crafts. This was due to his constant anxiety to 'collect specimens everywhere and everyday for all the branches of natural history'.⁴⁴ By 1925, Licent had travelled 50,000 kilometres and brought back thousands of specimens.

Since 1914, Licent had been storing his collections in a small building, a property of the Jesuits, in Tianjin. However, as the quantity of specimens grew greater each year, Licent received support from the Xianxian Mission and the authorities of the French and Italian Concessions to build a museum on Race Course Road, as he had originally planned. The three-floor museum, named Musée Hoang Ho Pai Ho (The Yellow River and White River Museum, or *Beijiāng bowuyuan*, as it was known to the Chinese), was finally completed in 1922.

In 1920, Licent carried out a considerable number of excavations near Qingyang in northeastern Gansu and inspected several places for the formation of the great loess base. His discoveries disproved the hypothesis that there was no human existence in China during the Old Stone Age (the Palaeolithic period, ca. 2.5 million to 100,000 years ago).⁴⁵ In the same year, Licent received samples of rhinoceros teeth and other animal bone fossils found near the Ordos desert by a Belgian Jesuit. Later he received information from two other Jesuit fathers, who had been prompted by the Mongolian Wansjock, that there was a site with bones at the Sjara Osso Gol (southeastern Ordos, *Salawusu* in Chinese) at the southern edge of the Ordos.⁴⁶ Licent had been preoccupied with finding palaeontological fossils in the Ordos ever since.

In 1922, Licent returned to southern Ordos largely to exploit the fauna of the Quaternary along the Sjara Osso Gol. He discovered skeletons of the *Rhinoceros tichorhinus* (woolly rhinoceros) and the *Hemione* (Asiatic wild ass), one human tooth fossil and a few human femurs and humerus. Licent was excited about his palaeontological discoveries but also felt that he was unable to handle the research of these findings by himself. He asked Marcellin Boule, a professor of geology, palaeontology and physical anthropology at the National Museum of Natural History in Paris, to send someone to China to

aid his research. Boule found his protégé, the Jesuit Pierre Teilhard de Chardin, a perfect candidate for the mission.

Teilhard de Chardin was born in 1881 in Auvergne, France, to a family of distinguished lineage. He was influenced by his mother's piety and decided to become a Jesuit so that he could keep his interest in natural science while devoting himself to the religious cause. When he was younger, Teilhard de Chardin was influenced by Henri Bergson's book, *Creative Evolution*.⁴⁷ Throughout the years of studying science, Teilhard de Chardin grew more interested in Darwin's theory and attempted to consolidate science with elements of religion. He developed a concept of 'the All' (*le Tout*): the totality of the entire universe, in which constant evolution occurs and the ultimate goal is the convergence of all things to form the body of Christ, which is what he called the 'Omega Point'.⁴⁸ Teilhard de Chardin's resolution of science and religion led to his rejection of a literal interpretation of the Fall of Adam and Eve, the Garden of Eden and original sin. His writings and lectures on evolution and his growing popularity in the arena of science were frowned on by the Catholic authorities in the Vatican. They wanted him to leave Europe. When, in 1922, Licent requested a collaborator for his research in China, the Jesuit superiors suggested Teilhard de Chardin, who at first was not interested in the idea of leaving his beloved Paris to travel to China. However, he was encouraged by Boule and, being a Jesuit, he had to obey the rule of his superiors. Teilhard de Chardin arrived in China in 1923, but only intended to stay for a year until the anger of the Jesuit authorities was quelled.

To continue the expedition to the Ordos, Licent acquired financial support from the National Museum of Natural History in Paris, the Academy of Sciences and the Ministry of Public Instruction (the Ministry of Education) in France.⁴⁹ The expedition was named the *Mission paléontologique Française* (French Paleontological Mission). Licent would be the director and the Musée Hoang Ho Pai Ho would provide any necessary personnel and equipment. The national identification in the title of the expedition is significant during a time when the Chinese northern and northwestern frontier became a hotspot of foreign scientific explorations. Competing with Roy Chapman Andrews of the American Museum of Natural History's CAE in Mongolia and the Swedish-funded Andersson, Licent and Teilhard began their first expedition in the Ordos, with the support of French institutions. In a letter to Boule in Paris, Teilhard de Chardin contended that his work in China represented Paris, and he would make every effort to promote the scientific institutions in Paris to the high reputation enjoyed by those in New York and Uppsala.⁵⁰ In 1923 the French Jesuits discovered an entire area of Palaeolithic dispersal, rich in Stone Age artefacts, at Shuidonggou. This was a stone-tool industry that was similar to the Middle Palaeolithic industry found in Europe.⁵¹ They also unburied the remains of 33 species of mammals and 11 species of birds, as well as scrapers and points made by the human hand at Sjava Osso Gol. Although they were not able to find human skulls during their expedition, at Licent's laboratory in Tianjin Teilhard de Chardin was able to discover a humanlike upper incisor from the pile of animal teeth that they brought back. He dated it to the Pleistocene era. The tooth was further examined by the Canadian scientist Davidson Black in Beijing, who named the unknown hominid the 'Ordos Man' (or *Hetaoren*, as it was known to the Chinese).⁵²

Compared to the American CAE, whose activities will be discussed later, the French Paleontological Mission was relatively small in scale and tight on budget. The French team comprised ten mules, three donkeys, five muleteers, two servants, a military escort and the two scientists.⁵³ One advantage that the French Jesuit explorers enjoyed was the extensive and efficient information network formed by the Catholic priests in the area. Licent had frequently received fossil samples and information about possible sites through other missionaries, and these often led to important discoveries. In a letter to Boule, Teilhard de Chardin mentioned that they had obtained some 'tips' from the Belgian missionaries that were even unknown to the Geological Survey of China.⁵⁴ Keeping their itinerary secret was Licent's advice to his partner, and the two Jesuit-explorers often tried to avoid direct conflict with the interest of other international teams. They tended to publish immediately about their invaluable findings, even before they had studied and examined them closely, as a way to publicly announce the French team as the first discoverer of particular sites.⁵⁵

Licent's museum collections were fast-growing, and he extended the space to include a side-building for public display in 1925. In 1928 the museum was open to the public for the first time. The grand opening ceremony was a big event: not only did all the foreign legations in Tianjin send their representatives, but the participants also included Chinese officials from Zhili and foreign and Chinese newspaper reporters.⁵⁶ Despite its bustling grand opening, the Musée Hoang He Pai Ho was not a popular place for the ordinary Tianjinese. It only opened three days a week for four hours a day. Tickets were sold at 1 Mexican dollar (relatively high compared to the market price of refined flour at about 0.15 Mexican dollar per kilogram in Tianjin in 1926⁵⁷). Brian Power, a Briton living in Tianjin at the time, described the museum as a 'quiet place', and even on Sundays during its opening time there were no more than a dozen visitors.⁵⁸ Nakayama Shōzen, a scholar of religion and the leader of Tenrikyō, a religious sect in Japan, attempted to visit the museum during his trip to Tianjin. He initially had difficulty finding the museum because many local Tianjinese did not seem to know of its existence. Nakayama was impressed by the collections, but what interested him more was the motivation of the Jesuits in building a museum like this. Being a religious leader himself, he did not understand if the Jesuits sent their missionaries to China for the purpose of preaching or researching, and whether their goal was to convert the Chinese or to train scientific scholars.⁵⁹

Musée Hoang He Pai Ho was a product of nationalism and personal ambition. According to Amir Aczel, 'Licent believed that the museum was a French outpost in a foreign land – its collections were not to be shared with the Chinese or with other Westerners... It was 'his' museum'.⁶⁰ Indeed, on the Museum Guide, written by Licent himself, it stated very clearly that all the collections were 'personal'.⁶¹ The collections to be publically displayed were only a very small portion of his 'personal collections', which were kept in the private section of the museum. Yet, Licent considered his work in the museum as a contribution from the periphery lending prestige to French science in the metropole.⁶² The contract he made with Boule of the Paris Museum of Natural History stated that any unique pieces discovered during the French Paleontological Mission's expedition in China would be sent to and kept by the Paris Museum and only duplicates or casts would stay in the Musée Hoang He Pai Ho.⁶³ Licent, the 'Father

Curator', desired to build one of the most important natural history museums in North China. According to the Chinese palaeontologist Jia Lanpo, Licent believed that the deserts of Inner Mongolia, prehistorically fertile, were the site of the lost Garden of Eden.⁶⁴ The fossils that were dug out from that region by Licent had definitely enriched his own Garden of Eden in Tianjin.

Teilhard de Chardin returned to Paris in 1925 with huge number of findings from the previous expeditions. He intended to stay in Paris for good, but a document he had written in 1922 about original sin had just been discovered by the Vatican. The Jesuit superiors, being furious again, demanded Teilhard de Chardin to sign six propositions and then exiled him back to China, this time with an unlimited term. He returned to China in 1926 and began to spend more time in Beijing, participating in the more lively international intellectual community and forming good relationships with the expatriate scientists as well as Chinese intellectuals of the Beijing scientific network. When he decided to accept a position in the newly established Cenozoic Research Laboratory of the Geological Survey in 1929, Licent was quite angry at him for neglecting the duties of the museum and accused him of 'going over to the Chinese', calling him a 'coolie'.⁶⁵

Licent continued his expeditions with the aid of other Jesuit fathers and continually aggregated his collections. Leaving Tianjin for France in 1939 during the second Sino-Japanese War, he brought most of the invaluable fossil specimens back to the Paris Museum, although the Musée Hoang Ho Pai Ho was still left with 35,000 plant specimens, 2000 animal specimens, thousands of mineral specimens and 7000 ethnological samples.⁶⁶ The new curator of the museum, Father Pierre Leroy, moved most of the important collections to Beijing in 1940 when the Japanese occupied the British and French concessions. The Musée was taken over by the Bureau of Culture of the Tianjin municipal government in 1952, and in 1957 it was renamed Tianjin Museum of Natural History.

Mongolia: The American hunt for the trophy

Throughout the 1920s, while the French Jesuits persevered with their investigation of Inner Mongolia on donkey backs, the American scientists traversed the Gobi in Mongolia with fleets of automobiles in search of human origins. The idea of the American CAE was conceived by Roy Chapman Andrews as early as in 1912. After investigating marine mammals in the Pacific for years, Andrews began to be interested in land exploration in Asia, inspired by Henry Fairfield Osborn's Asiatic homeland theory. The simultaneous finding of similar mammalian and reptilian fossils in Europe and in the Rocky Mountain region of North America, separated by ten thousand miles, led Osborn to declare that the 'dispersal centre' must be half-way in-between. He suggested that during the end of the age of reptiles and the beginning of the age of mammals, the ancestors of higher mammals evolved in northern Asia and later migrated eastward and westward to other continents.⁶⁷ 'Asia is the mother of the continents' thus became Osborn's famous 'prophecy'.⁶⁸ Andrews took Osborn's courses while he studied at Columbia and later worked under Osborn at the American Museum of Natural History. He was a firm believer in Osborn's Asiatic 'prophecy' and was determined to prove it. In 1915, Andrews proposed to Osborn a series of expeditions to northern Asia

extending over ten years. The First Asiatic Zoological Expedition took place in Yunnan and the Tibetan frontier in 1916 and the Second in Mongolia in 1919. The team contained only a handful of members, including Andrews and his wife, and the main purpose was to collect zoological specimens through hunting. These two hunting expeditions resulted in the 'largest and most complete collection of mammals that had ever been taken from a single region of Asia'.⁶⁹ Andrews was convinced that the Chinese frontier was the ideal testing ground for Osborn's theory, and the idea of more ambitious expeditions, both in scale and scope, began to brew in his mind.

In 1920, Andrews presented to Osborn his plan for the 'exploration of the future'. It was a formidable 'total' exploration of Mongolia to map its whole past history through geological and palaeontological studies of land structure, fossils and climate, through zoological collecting of living animals, and through ethnological research of the indigenous. The 'exploration of the future' needed a staff of experts from each branch of science to carry out varied tasks. The grandiose scope of the exploration also needed a new pace so as to 'do in one season as much as others have done in ten years'.⁷⁰ The solution was to travel with motorcars, an innovative undertaking in the history of exploration. Osborn was fascinated by Andrews' grand plan and immediately approved it. The museum would do its best to support the expedition, but Andrews would have to raise most of the funding, estimated at a quarter of a million dollars for the first five years.

To raise such a huge amount of money in New York City within a short period of time, Andrews' strategy was to make his proposed exploration a 'society expedition with a big S' by first persuading influential financiers to support it and then make donating to the cause of the expedition the most fashionable 'must' for other members of New York high society to follow. Among the generous supporters were wealthy New Yorkers such as the financiers and philanthropists John D. Rockefeller, Jr., Cleveland H. Dodge, J.P. Morgan and George F. Baker, to name just a few.⁷¹ Andrews would be the leader and the zoologist of the expedition team. Walter Granger, the curator of vertebrate palaeontology at the American Museum of Natural History, was the second in command and the chief palaeontologist.⁷² The rest of the team included geologists, herpetologists, archaeologists, anthropologists, a surgeon, technicians and a photographer taking motion pictures.⁷³ For the 'all-American expedition', a fleet of three Dodge Brothers cars and two Fulton trucks, all made in America, was to be used to transport the staff across the Gobi, supported by a caravan of around one hundred camels carrying supplies.⁷⁴ To make the team's national identity even more conspicuous, an American flag was always flying on the top of the tent during the expeditions.⁷⁵

The expeditions attracted great media attention and aroused enormous public interest in America. However, what interested people was not Andrews' original objective of testing Osborn's theory of Central Asia as the origin of mammalian evolution, but the expedition's 'potential' in discovering the 'missing link'. A headline in *The New York Times* that pitched finding the human fossil as the primary mission of the expedition – 'Scientists to Seek Ape-Man's Bones: Natural History Expedition Will Begin Five-year Quest For Missing Link in February' – was simply one among many examples.⁷⁶ The Darwinian interpretation that humans had evolved from apes was a highly controversial issue in America at the time: within just a few years the Scopes Trial would hit the headlines.⁷⁷ Not wanting to exasperate the conservative science community, Andrews had

attempted to clarify and direct public attention to the larger scope of the expedition. But the press was not interested in anything else except the 'primitive man' and, as Andrews noted, the team had to 'bow to the inevitable and talk Missing Link for all we were worth since it was a definite part of our program'.⁷⁸ Perhaps it was initially a strategic compromise to public demand, but the team increasingly came to regard the search for the missing link as the most important mission when successive expeditions in Mongolia were carried out throughout the 1920s. The shift in emphasis was mostly related to Osborn's proposition about the origin of human ancestors. During the early 1920s he had become one of the most zealous proselytizers of the idea that Central Asia was the cradle of humanity. The discovery of a human tooth and deposits of Palaeolithic artefacts made by the French Jesuits in Ordos in 1923 had strengthened his conviction in the Central Asia 'prophecy'. Now he gambled on his CAE team to bring back the grand trophy from the arid Gobi.⁷⁹

The CAE team spent a whole year making preparations in Beijing before its first departure for Mongolia in April 1922. Upon arriving in Beijing, Andrews and Granger immediately visited the Geological Survey and received a cordial reception from J.G. Andersson, Amadeus Grabau, Ding Wenjiang and Weng Wenhao.⁸⁰ To facilitate cooperation and to avoid competition, Ding, the director of the Survey at the time, negotiated with Andrews about carving up field research areas. Regions including Zhili, Shandong, Shanxi, Shaanxi, Henan, Gansu, Manchuria and some areas in Mongolia, Guizhou and Sichuan, that the Survey was already interested in investigating, had to be preserved. The American team was welcome to take other places.⁸¹ In return, Osborn agreed to send a duplicate set of the American Museum's collections to the Survey.⁸² The team was determined to have Mongolia as the chief exploration site and attempted to maintain a friendly relationship with the Survey and other scientists researching in China. The territorial division between research teams was strictly followed.

The American team spent five months in Mongolia in 1922 to survey the geology of the Gobi, and collected about two thousand fossil specimens and several thousand mammals.⁸³ The most significant discovery was the colossal fossil skull of *Baluchitherium*, the giant extinct rhinoceros, at Iren Dabasu in southeastern Mongolia. The beast from the Oligocene period was the largest known land mammal. It was an encouraging sign for the team because the members believed, as did Osborn, that the human ancestors evolved from the anthropoid-ape stock during the Oligocene and progressed in open land, just like the place where they found the *Baluchitherium*. Andrews boldly declared that 'This discovery [of man's remote ancestors] will most probably be made in Asia; it would be rash to predict that it will be made in that part of Asia where our parties are now working, but in our opinion it is more probably that we are relatively near the centre of human origin'.⁸⁴

The team returned to Mongolia in 1923 with much enthusiasm to focus on the palaeontological investigation of the region. In Flaming Cliffs, the team found enough skulls and jaws of *Protoceratops* (later named *Protoceratops andrewsi*) to make a complete developmental series.⁸⁵ But the most exciting finding was a nest of dinosaur eggs. Twenty-five eggs, mostly in perfect condition, were taken out from the sandstone. Andrews claimed, 'Never before in the history of science has it been possible to study palaeoembryology!'⁸⁶ The team also discovered a new species of dinosaur near the nest

of eggs, which was later named by Osborn as *Oviraptor* (meaning the egg thief).⁸⁷ The second season of the CAE was definitely a fruitful one: in Flaming Cliff alone the team collected sixty cases of fossils, including seventy animal skulls, fourteen skeletons and twenty-five dinosaur eggs.⁸⁸ Osborn visited the team in Mongolia right before the completion of the expedition and made a stop in Beijing in 1923. This was Osborn's first time in China; he received a cordial welcome from the Beijing scientific community and became the special guest of honour at the seventh general meeting of the Geological Society in 1923. He gave grateful thanks for the help that the American CAE team received from the Survey and the Society.⁸⁹

The discovery of the dinosaur eggs aroused unprecedented worldwide public interest, which eventually became a mixed blessing for the CAE team. To raise more funds for their next expedition, the team decided to hold an auction to sell one egg to the highest bidder. Offers came from all over the world, and eventually the egg was sold to Colonel Austin Colgate for \$5000.⁹⁰ With the high publicity brought forth by the dinosaur eggs, Andrews was able to obtain enough money for the next expedition, planned for 1925. However, the negotiations with the Mongolian government for passports was not so smooth this time. After the founding of the Mongolian People's Republic, the government had formed a Scientific Committee to deal with scientific expeditions and to prepare for the establishment of a natural museum in Urga (now Ulan Bator). The chair of the committee, who was also the Minister of Education, opposed the American expeditions. According to Andrews, the Mongols suspected that the American team made huge profits by selling the dinosaur eggs and thus were discouraged to allow foreigners to come in and rob the priceless possessions of the Mongolian people.⁹¹ Through the help of Andrews' powerful Mongolian friends, the Scientific Committee reached an agreement with Andrews in May 1925. Complete palaeontological fossil skeletons and one example of each rare fossil had to be returned to the Scientific Committee; the American Museum of Natural History would send some collections of the American flora and fauna to the Committee; Andrews would have to present to the Committee, with copies of maps of their itinerary, all of the scientific data and photographs taken during his expeditions.⁹² Although Andrews signed the agreement to proceed with the expeditions, he never attempted to follow it as he was strongly opposed to returning to the Mongols any of the fossils found by his team. The American Museum only sent back to the Mongolian Scientific Committee 'things that are all inexpensive and will not be of much trouble to prepare', which included a few casts of dinosaur eggs, some minor collections and photographs.⁹³

The 1925 expedition was probably the largest land expedition ever carried out in the history of exploration. There were forty staff members in total, with five Dodge cars, two trucks and one hundred and twenty-five camels. The team travelled five thousand miles across the Gobi and accomplished much more than in the previous seasons. In addition to more mammalian and reptilian fossils and dinosaur eggs, the expedition discovered two Palaeolithic and one Neolithic cultural deposit. An accurate topographic survey from Kalgan to the heart of the Gobi was conducted, and maps were produced.⁹⁴ Although no human fossil was found this time either, Andrews and Osborn's expectation of finding the relics of the missing link was once more stimulated by the announcement of the discovery of two hominid teeth in Beijing in 1926. 'We believe', Andrews stated, 'that what

we have proved true in the case of mammals and reptiles is likely to prove true in the case of man also. We think that man originated in this region [Mongolia] because it was the type of country which would best encourage his development.⁹⁵

The Mongolian objection to the CAE expedition was only the beginning of a series of obstacles that the team was to be confronted with; more would be initiated by the nationalistic Chinese. By the time the Chinese Nationalist government was inaugurated in Nanjing in 1927, a strong anti-foreign nationalism had reached its climax nationwide. While Beijing was still in the control of Zhang Zuolin and his Fengtian army, a group of Chinese scholars from universities in Beijing formed an organization, the Chinese Association of Learned Societies (*Zhongguo xueshu tuanti xiehui*), in the spring of 1927 to prevent Sven Hedin's expedition to Xinjiang. The primary objective of the Association was to put a bridle on foreign expeditions in China that 'infringe our sovereignty, plunder our research materials, and cause great loss to the future of Chinese academic development'.⁹⁶ It was a 'duel between West and East', as Hedin called it, and for his personal honour and reputation he was determined to fight against the 'Chinese intolerance'.⁹⁷ Ding Wenjiang and Weng Wenhao were both nationalists but they also supported international cooperation and their role in the anti-Hedin event was rather controversial. According to Hedin, Weng, who was the director of the Geological Survey at the time, had also become a target for the angry professors of the Association, not only for Weng's personal relationship with the 'Swedes' (Andersson and Hedin) but also because these professors were envious that the Survey was the most modern and Westernized scientific institution in Beijing.⁹⁸ Hedin's assumption was perhaps not groundless: even Ding Wenjiang pointed out that the opposition of anti-foreign nationalism was directed more against himself, Weng, Andersson, and the Survey than against Hedin and his expedition.⁹⁹ Thus Ding and Weng remained low-key and only occasionally offered Hedin their personal opinions on Chinese politics. After negotiations over five months, Hedin finally came to terms with the Association and signed an agreement. The Swedish team had to accept a Chinese co-director and include ten Chinese professors and graduate students in the team. In addition to paying all necessary expenses for the Chinese members, Hedin had to pay 'monthly fees' to the Association during the time of the expedition. All findings should be turned over to the Association and only some duplicates would be given to Hedin.¹⁰⁰ The Sino-Swedish Scientific Expedition to Northwestern China (*Zhong-Rui xibei kexue kaochatuan*) was the first joint expedition between foreign and Chinese scientists, and the agreement became the protocol for future negotiations.

For the Association, the result was seen as a great victory for the Chinese. As one of the members claimed, the Sino-Swedish agreement was 'a reversed unequal treaty', which marked an epoch in the history of China's confrontation with foreign countries.¹⁰¹ However, for Andrews and his team members, who were waiting in Beijing for their next venture into Mongolia, it was a great threat. To avoid alerting the Association, Andrews obtained permission directly from Zhang Zuolin and launched the expedition in the summer of 1928 in secrecy by persuading the foreign correspondents of major newspapers to hold the news of the expedition until after their departure.¹⁰² However, even though the expedition proceeded as Andrews planned, at their return in August, eighty-seven boxes of their collections were held in Kalgan by the newly established Beijing Branch of the National Commission for the Preservation of Antiquities (*Zhongyang guwu baoguan*

weiyuan hui). Unlike the un-official Association, the National Commission for the Preservation of Antiquities was founded by the Nationalist government to implement regulations and laws on foreign expeditions, international collaboration and the preservation of ancient relics.¹⁰³ Andrews claimed that the Chinese 'had no legal or moral right to detain our collections'.¹⁰⁴ The Chinese reaction against foreign expeditions was regarded by Andrews as irrational native resistance against scientific universalism. An agreement was signed after six weeks of negotiation. The Committee allowed the palaeontological fossils to be shipped to the American Museum for study, but they had to be returned to China later, while all the archaeological findings and half of the zoological and botanical specimens would stay in China. In reality, Andrews was able to ship all the collections, except one box of archaeological relics, to America, and did not return any as indicated in the agreement.¹⁰⁵

The ambivalent position of Ding Wenjiang and Weng Wenhao during the anti-Hedin event shows that friendship and collaboration transcending national boundaries could only exist within the Beijing scientific network. It was true that Ding and Weng were well-respected by their foreign peers, but they were regarded as exceptional, or the 'other Chinese', in Andersson's term. The foreign scientists of the network did not generally have a high opinion of the 'real Chinese'. During his brief return to Beijing in the summer of 1929, Sven Hedin complained to Andrews and Granger about having included Chinese in his team. To keep a good relationship with the Chinese, Hedin often praised his Chinese members in public. In his own account of the expedition, which was published later in the 1940s, Hedin contended that it was satisfying to 'give a number of young Chinese a chance of modern scientific training under European leadership'.¹⁰⁶ However, he privately revealed to his American friends that he actually regarded the Chinese participation as a complete 'farce' forced upon him,¹⁰⁷ and that he was quite disappointed at his Chinese co-director, who, although an educated gentleman, did not even have the geographical knowledge of where Gobi was.¹⁰⁸ Granger concluded that Hedin's previous accomplishments were achieved with the aid of 'competent white men – Swedish, German and others' and therefore the present joint expedition with a 'haphazard assortment of Chinese students and graduate failures' could hardly have been much assistance in Hedin's scientific work.¹⁰⁹ When Granger, on behalf of the CAE, proposed to the Committee for the Preservation of Antiquities the team's next expedition in 1929, the Committee expected the Americans to follow a similar agreement to the one made with Sven Hedin. Half of the expedition staff would have to be Chinese, paid by the Americans.¹¹⁰ Andrews was very much opposed to the idea of collaboration with the Chinese in the expeditions. The American team also refused to compromise with the Committee because they wanted to keep all their collections. Aside from testing Osborn's theory, the unspoken ultimate goal of the CAE was to collect unknown specimens to enhance the possessions of the American Museum of Natural History. In a public statement condemning the Chinese government and the Committee for interrupting the CAE, Andrews angrily commented that the Chinese attitude would stop all foreign scientific work in the country, and 'Museums cannot send expensive expeditions if they are not allowed control of their collections'.¹¹¹

Through diplomatic negotiations and the bribing of the members of the Committee, the American team was allowed to resume their work in Mongolia in 1930.¹¹² In order

not to hand over substantial specimens to the Chinese, Andrews decided to limit this expedition to palaeontological, geological and topographical research alone. The team would also include three 'Chinese' scientists: Yang Zhongjian (C.C. Young), who had received a doctorate in vertebrate palaeontology in Germany and returned to China in 1928, Teilhard de Chardin, representing the Geological Survey, and the geologist Zhang Xi from Zhongshan University.¹¹³ Instead of making them members of the team, Andrews referred to them as the 'Chinese representatives'.¹¹⁴ Within four months, the team found seventy-five species of palaeontological fossils, including a few new types, and managed to ship all the findings back to New York.¹¹⁵ According to Andrews, it formed the 'largest and one of the most important collections ever taken out of Central Asia'.¹¹⁶ Instead of cooperation, Andrews and his American team members intentionally isolated the three 'Chinese representatives' in order to prevent them from participating in their fossil collecting activities. According to Yang Zhongjian, the three of them were allowed to use the tools brought by the team and thus they were involved in their own scattered geological research and fossil digging. All vertebrate fossils they discovered had to be handed over to the Americans.¹¹⁷ However, the participation in the American expedition provided the Chinese members with ample opportunities to learn professional field techniques. As Yang commented, 'To put it bluntly, the so-called "Sino-American collaboration" (*Zhong-Mei hezuo*) is but about how they take advantage of us, and how we take advantage of them'.¹¹⁸ Thus ended the last CAE of the American Museum. In 1932, Andrews attempted to ally with the newly inaugurated government of Manchukuo in order to resume the exploration of Mongolia through Manchuria. His plan was aborted due to the political instability of the area.¹¹⁹

No human fossil was ever discovered during the CAE from 1921 to 1930. As Andrews lamented, 'we have not been successful in one objective of our search – the "dawn man"', and he blamed the Chinese opposition to foreign investigation that cut short their expeditions and prevented them from achieving their goal.¹²⁰ However, the team did manage to bring back to the American Museum a large quantity of precious palaeontological fossils.¹²¹ Both Osborn and Andrews were convinced more than ever that 'Central Asia was a palaeontological Garden of Eden'.¹²² Mongolia represented an unknown and utterly blank space in the fields of natural science to be filled up through their investigations. It was viewed as a great opportunity to advance the scientific accomplishment of the Americans and to gain prestige for their Museum, similar in significance to what Inner Mongolia did for Licent and his Musée in Tianjin. As historian Ronald Reinger has cogently commented, the Central Asiatic Expeditions were a product of the American Empire in the early twentieth century as the ambitious Osborn eagerly expanded the Museum's collections through explorations not only to Asia, but also to North and South America, Europe and Africa.¹²³ Reinger also points out that such a imperial hegemonic mentality was best reflected in the attitude of the expedition members toward the Chinese and the Mongolians: these Americans took it for granted that they should take possession of the scientific findings from Central Asia because they held far greater knowledge than the locals.¹²⁴ Andrews had publicly claimed that the American CAE was working toward the aim of advancing world science, because 'the Chinese themselves cannot do the work, for they have neither adequately trained men nor the money to conduct investigations'.¹²⁵ Not only did the

American team members express condescending attitudes toward the Chinese and Chinese scientists, the Museum also failed to treat the Chinese and Mongolian museums on equal terms. To obtain permission from the Mongolian government, the American Museum promised to send duplicates of their collections to the Urga Museum. Instead, Andrews and Osborn decided to have the American Museum gather some 'mounted discards' of birds and mammals from their school collections. 'They [the Mongols] are very keen to have anything of the sort', Andrews explained, 'it really makes little difference how badly mounted they are'.¹²⁶

China, with few funds and a few professionally trained scientists, was indeed in need of international assistance. A mutual collaboration with foreigners who, while utilizing the resources to pursue scientific knowledge in the land of opportunity, were also committed to the development and advancement of science in China was necessary. The Cenozoic Research Laboratory embodied a vision aimed at indigenizing scientific institution and research in China by training more Chinese to become capable scientists who could carry on the mission by themselves in the future.

Discovery of Peking Man and the Cenozoic Research Laboratory

The discovery of Peking Man has a long history, beginning with the Swedish geologist Johan Gunnar Andersson's fossil collecting venture in China. While travelling along the Yellow River and surveying for mines Andersson became interested in the palaeontological fossils he discovered in loess beds. His friend Axel Lagrelius, the Swedish industrialist, established the Swedish China Research Committee (Kinafond) to fund his vertebrate fossil collecting work in China.¹²⁷ In 1918, Andersson was told by J. McGregor Gibb, a chemistry professor in Beijing, about fragments of bone-bearing clay he found in a place called 'Chicken Bone Hill' near Zhoukoudian, fifty kilometres southwest of Beijing.¹²⁸ In 1921, with Otto Zdansky, the Austrian palaeontologist invited by Andersson from the University of Uppsala to aid his work on other fossil deposits, and Walter Granger, who happened to be in Beijing preparing for the first Central Asiatic Expedition, Andersson again went back to Zhoukoudian. This time, they found many vertebrate fossils and flakes of quartz in the cave. The latter led Andersson to make the assumption that a 'hominid' might have used these sharp quartz flakes to cut up the captured animals. He told Zdansky, 'I have a feeling that there lie here the remains of one of our ancestors and it is only a question of your finding him'.¹²⁹ Zdansky continued the excavation at the site and found more fossil mammals, including an upper molar that unmistakably belonged to a hominid jaw. Instead of announcing his big discovery or, at least, informing Andersson about it, Zdansky kept it to himself and packed it with the other fossil teeth he excavated. As he recalled later, 'I recognized it at once, but I said nothing. You see, hominid material is always in the limelight and I was afraid that if it came out there would be such a stir, and I would be forced to hand over material I had a promise to publish'.¹³⁰ Beginning in 1919, Andersson, who was not an expert in palaeontology, had shipped fossils he found in China to the Swedish palaeontologist Carl Wiman at the University of Uppsala for examination and identification.¹³¹ Zdansky returned to Uppsala in 1923 and worked on preparing these fossils.

Andersson's research in China, unrelated to the survey of mines, was undoubtedly connected to Swedish national interest, as it was mostly funded by the Swedish China Research Committee.¹³² It was out of a nationalistic desire to glorify Swedish national strength and scientific advancement. This is revealed in a letter, written by the Swedish archaeologist Oscar Montelius, requesting more research funding for Andersson, 'Few words are needed to convince us here in Sweden, what great importance it would have for our small people, if Swedish scientists were to be recognized for spreading light over the oldest history of the ancient cultural country of China...' ¹³³ While working officially for the Chinese Ministry of Agriculture and Commerce and serving as a senior member in the Geological Survey, Andersson felt quite confident in securing Sino-Swedish cooperation in China until the French Jesuits and the American expedition team began to show an interest in the palaeontological opportunities in China's northwestern frontier and Mongolia. In 1920, Andersson visited Licent in Tianjin and had a chance to look at his fossil collections. It worried Andersson immediately because eighty percent of Licent's specimens were the same taxa as the specimens he had collected and sent to Uppsala, which signalled a potential competition between the Swedes and the French over the same material.¹³⁴ To secure Swedish cooperation in China, Andersson urged his scientist friends in Sweden to write to Ding Wenjiang to stress the 'strong commitment that Sweden had to palaeontological research in China'.¹³⁵ The American CAE then posed an even greater danger because their more ambitious venture was well-supported with huge capital and better equipment. The news of the discovery of dinosaur eggs was a big blow for Andersson because he had planned to visit the same region in 1920 but later had to yield to the American team to avoid competition. In a letter to Wiman, Andersson expressed his frustration at the missed opportunity and stated, 'Certainly, the Americans, with their unlimited resources and fleets of automobiles, could cross the endless Mongolian plains and discover the country's wonderful secrets'.¹³⁶

Andersson was offered a professorship at the University of Stockholm and the position as the director of the newly established Museum of Far Eastern Antiquities, so he decided to return to Sweden for good in 1926.¹³⁷ However, after learning of the Swedish Crown Prince's plan of touring the world, Andersson invited the Prince to make Beijing a stop on his itinerary in October 1926. It was his last attempt to win praise for Swedish accomplishments in China. He managed to bring the Geological Society, the Peking Union Medical College and the Peking Society of Natural History to hold a joint welcome reception for the Prince. The highlight of the event would be a presentation by Andersson about the mammal material he had discovered in China in the last decade. He asked Wiman for notes on the fossils stored in Uppsala, and it was at this point that Zdansky finally revealed the existence of two hominid teeth: a molar from his excavation in 1921, and a premolar he had just uncovered from the piles of fossils brought back from China. Andersson did not record how he felt about Zdansky's keeping the first molar without informing him for five years, but he did write down his excitement upon knowing the discovery: 'So the hominid expected by me was found!' ¹³⁸ The news was going to be revealed to the public in the reception on 22 October. After the opening speech by Weng Wenhao, the president of the Geological Society, the Prince gave a short talk, followed by Liang Qichao's paper on archaeology in China, and Teilhard de Chardin's presentation of the Ordos Man. Then came the last part of the programme,

Andersson's presentation in which he announced the finding of two teeth probably belonging to the earliest ancestor of humans.¹³⁹ It created quite a stir for the scientific society in Beijing and the world, as Zdansky had predicted. The headline in the *Manchester Guardian* read, 'The Oldest Human Type whose remains have been found in the strata of the earth'.¹⁴⁰ However, not all were convinced that the two teeth would prove the existence of early human ancestors in Zhoukoudian. For example, Teilhard de Chardin asked Andersson whether the teeth could belong to some carnivore, instead of a hominid.¹⁴¹ At a dinner party later that year, Amadeus Grabau asked Andersson the same question in front of Beijing's most distinguished scientists. Andersson, feeling that 'the ground was rocking beneath my feet and that both the Peking Man and I myself would be ridiculed if I could not return the complement promptly', replied with wit, 'The latest news from the Chou K'ou Tien [Zhoukoudian] field is that our old friend is neither a man nor a carnivore, but rather something half-way between the two. It is a lady'.¹⁴² Since then the 'Peking Lady' has become a nickname used by the scientists in the Beijing scientific network, and she consequently was made the spiritual hostess of Andersson's farewell dinner in April 1927.

The scientist who was most excited about the two molars and enthusiastically supported Andersson's interpretation of them was Davidson Black. He had been a firm believer in the Central Asiatic hypothesis ever since he first read W.D. Matthew's book, which designated north Asia as the centre of mammalian dispersal, with evidence of the relation between environmental changes and evolutionary development.¹⁴³ As Black's biographer Dora Hood has pointed out, reading Matthew's 1915 book was a turning point in Black's life. Afterwards, Black's thoughts were primarily occupied with exploring China and other Asian regions to prove Matthew's theory and to find man's origin.¹⁴⁴ The offer by Peking Union Medical College in 1919 of a position as the professor of anatomy provided exactly such an opportunity. As early as 1922, Black had suggested to Roger Greene, the director of the China Medical Board of the Rockefeller Foundation, the branch directly in charge of the PUMC, that the college was in the best position to 'become the foremost Eastern pioneer in the realm of investigations calculated to throw light on man's origin'.¹⁴⁵ As an anatomist, Black had helped Andersson examine the human remains from his excavations in north and northwestern China since 1921.¹⁴⁶ The discovery of prehistoric human skeletons in Gansu from 1923 to 1924 was an encouraging sign for both Black and Andersson that more ancient human relics must be buried farther west in Xinjiang – a region that lay within the original centre of primate dispersal. They planned a joint expedition to Xinjiang exclusively for the discovery of the 'missing link'. To persuade the Rockefeller Foundation to support his proposal, Black expressed his great expectation of promising findings in China to Edwin Emree, the director of the Division of Studies at the Rockefeller Foundation:

For the love of Peet don't allow yourself to contemplate a visit to the eastern hemisphere without calling first on Peking which really honest to goodness and no joking is the scientific centre for the greater part of Asia. I know how important Australia, New Zealand, and Polynesia are – but their importance lies rather in their isolation, and the consequent specialization of their material while Central Asia holds the key to man's origin and to his subsequent migration remote and recent.¹⁴⁷

It also indicates Black's expectation that Beijing should become the definite centre for palaeoanthropological research and the headquarters for his venture into Central Asia. The joint Xinjiang expedition was eventually aborted due to insufficient funding from the Swedish China Committee. The discovery of the teeth from the Zhoukoudian site, however, ignited a rather prosperous future. Black immediately wrote a short piece introducing the great finding to the readers of *Science*. In the article, he was confident that 'the actual presence of early man in eastern Asia is therefore no longer a matter of conjecture'. With the Piltdown Man in the west and the Java Man in the southeast, 'The Chou Kou Tien discovery therefore furnishes one more link in the already strong chain of evidence supporting the hypothesis of the central Asiatic origin of the Hominidae'.¹⁴⁸ Knowing of Andersson's imminent departure from China, Black quickly persuaded the Rockefeller Foundation to grant financial support to a joint research plan on the Zhoukoudian project for two years by the Peking Union Medical College and the Geological Survey. A formal statement was made in February 1927 to secure cooperation, and Andersson handed over to Black all his data and the responsibility for the further investigation of the Zhoukoudian site.¹⁴⁹ Thus the phase of the Swedish influence in palaeoanthropological research in China was officially over, and a new era of international cooperation based on the American model begun.

The statement showed mutual benefits for both institutions and, in many ways, leans to the advantage of the scientific establishment in China. Unlike the precedent with Andersson and his Swedish institutions, the statement indicated that 'all collections of specimens shall entirely belong to the Geological Survey, but the anthropoid material will be deposited for study in the Department of Anatomy of the Peking Union Medical College with the understanding that nothing will be exported out of China'.¹⁵⁰ China lacked both funds and adequately trained staff to carry out independent work in the field of human palaeontology, Black argued, and most foreign scientific institutions were not willing to do more than 'sending out expeditions for the acquisition of material and data'. Black specified clearly that his position, together with the PUMC, and the Rockefeller Foundation, was unique because 'we have permanently located our laboratories and our research interests in China and we are in a position to undertake research for the sake of the work itself'. Above all, their research material would be prepared, studied, described and left exclusively in China.¹⁵¹

Black was more ambitious and lucky than Andersson. Now with the Rockefeller funds and the full support from the Geological Survey, he had the Cenozoic Research Laboratory at his disposal to fulfil his dream of discovering the first man in the Zhoukoudian deposits. The excavation at Zhoukoudian was resumed in April 1927. Lockhart Hall at the PUMC was used as the laboratory for storing, preparing and studying the excavated material. Although Andersson was no longer in China, he had insisted that a Swede should supervise the work. Black agreed, and Wiman's student Berger Bohlin thus became a part of the project for two years.¹⁵² Upon arriving at Zhoukoudian, Bohlin was assigned a difficult task by Black, who was perhaps too anxious to find any promising result, to remove one whole large deposit within six weeks.¹⁵³ Bohlin did extensive excavation with Li Jie, a geologist from the Geological Survey, ten technicians and a large team of labourers, and eventually discovered another molar in 1927.¹⁵⁴ Black identified it as a child hominid molar, similar to the one Zdansky had discovered in

Uppsala, from the Pleistocene period. He thus rushed to create a new genus for the Zhoukoudian hominid: *Sinanthropus pekinensis*.¹⁵⁵ In 1928 Li Jie was replaced by Yang Zhongjian, who was aided by Pei Wenzhong, Grabau's student and a graduate of geology from Peking University. That year's work resulted in a lower jaw with three teeth, along with 400 boxes of animal fossils.¹⁵⁶ According to Pei, the intensive excavation had nearly transformed the Chicken Bone Hill, one of the deposits, into a Chicken Bone Pit.¹⁵⁷

In January 1929, at the end period of the Rockefeller funds, Black proposed to the Foundation a more ambitious plan for future work on human palaeontology in China. Besides systematically excavating the Zhoukoudian deposits and the neighbouring sites, the investigation of other localities, including northwestern Shanxi, regions along the Beijing–Hankou railway northward of the Yellow River and Xinjiang, should be carried out; Black should visit the Trinil site where the Java Man was discovered to comparatively study the *Pithecanthropus* and *Sinanthropus*; and a permanent Cenozoic Research Laboratory should be established as a special department of the Geological Survey with Black and Ding Wenjiang being the honorary directors.¹⁵⁸ The Rockefeller Foundation approved the proposal and provided \$80,000 for the research.¹⁵⁹ The professional staff of the new Cenozoic Research Laboratory included a mixture of foreign and Chinese scientists: Teilhard de Chardin served as the advisor and research associate; Yang Zhongjian was the assistant director; Pei Wenzhong was in charge of the Zhoukoudian fieldwork; Bian Meinian, later joined by Jia Lanpo, would be the field assistants.¹⁶⁰ George Barbour became the visiting physiographer and frequently offered his expertise on geological problems.¹⁶¹

By November 1929, the excavation of the year had only resulted in a few more isolated teeth, and the team was going to close down the work for the winter. Pei Wenzhong was struggling to reach the bottom of a cave and did not want to give up. His perseverance paid off: in the late afternoon of 2 December he discovered a complete skullcap embedded in the cave travertine. The next morning the exhilarated Pei telegraphed Black and sent letters through a special messenger to Weng and Yang in Beijing. He then carefully wrapped the skull in layers of Chinese cotton paper and coarse cloth soaked with flour paste. The weather was so cold that it took three days for the wrappings to dry. Then Pei rushed back to Beijing on 6 December and delivered the first complete skull of the *Sinanthropus* to Black at the Cenozoic Research Laboratory.¹⁶² Black was overwhelmed with joy by the discovery. As Barbour recalled, 'it seemed as if Black's whole life had been in preparation for that moment'.¹⁶³ The Geological Survey held a special meeting on 28 December to announce the discovery.¹⁶⁴ The next day the Beijing-based foreign newspaper *Peking Leader* immediately reported the discovery, and the news aroused great public interest throughout the world.¹⁶⁵ Scientists around the world soon visited Beijing to see the skull.

Among the numerous news reports and articles, the role of the PUMC in the discovery did not get much publicity. As Roger Greene said to M.K. Eagleston, the secretary of the China Medical Board, 'This is as it should be, and tends to create the kind of good feeling necessary for the continuation of the work under the best condition. We can rest satisfied with the knowledge that the scientists of the world who are interested in this particular subject will give the college all the credit that is its due, and nothing can distract from the credit due to Dr. Black personally'.¹⁶⁶ Greene, who had been enthusiastically working to

transform the PUMC into a 'Chinese' institution for the modernization of China, had become an avid supporter of the Cenozoic project.¹⁶⁷ When Black proposed the extension of funds for the Laboratory in 1932, Greene wrote to the President of the Foundation, Max Mason, that 'I wish to add my hearty endorsement to this application. I believe that money has rarely been spent in a more effective and productive manner for research of this type'.¹⁶⁸ As a person who had been working toward the goal of implementing American medical education in China to foster the development of medical science of the Chinese, Greene was particularly frustrated by the situation created by the CAE in 1929. In a letter to Mason about Osborn and Andrew's statement condemning the Chinese government and the National Committee for the Preservation of Antiquities in Science, Greene articulated how much damage the attitude of the American Museum could potentially do to the healthy cooperation already established between foreign and Chinese scientists:

I believe that the attitude of the representative of the American Museum here has done not a little to aggravate the situation... Of course, the essential feature of our work in this field has been cooperation with the Chinese, and perhaps for that reason Mr. Andrews would say that our work was not foreign in the sense which he meant. There has been too much of a tendency in the past for Dr. Osborn to assume that the work of the American Museum was the only scientific work being done in China. Some of his friends should exercise restraint over his utterances. Personally, I should be sorry to see any more of Rockefeller's money used to support the Museum's foreign expeditions until a different attitude is adopted.¹⁶⁹

Greene was eager to differentiate himself and other foreign scientists like Grabau and Black from Andrews and his American team: the former's work was not tied to any particular national interest, and they stayed in China for the opportunities it offered to fulfil their personal visions. As Max Mason later commented, they 'were definitely a part of China', and 'their strength come from the cordiality of understanding and willingness to cooperate shown by the Chinese'.¹⁷⁰ Yang Zhongjian later similarly remarked that the foreigners of the Cenozoic Research Laboratory worked their best to help their Chinese colleagues, with the expectation that one day Chinese scientific research could be handled and developed by the Chinese themselves alone.¹⁷¹ And to thank Black for his able leadership and the 'sympathetic attitude' that made possible the excellent discovery in the Zhoukoudian project, the Geological Society awarded him with the Grabau Medal of 1929; and Black attributed the success of the project largely to the collaboration between foreign and Chinese scientists.¹⁷²

The Cenozoic Research Laboratory continued to make efforts at the Zhoukoudian sites, which resulted in more fragments of skulls and jaws with teeth that belonged to the same genus of *Sinanthropus*. Moreover, in 1933 a large deposit of Palaeolithic human remains and archaeological relics was uncovered in the Upper Cave, one of the sites excavated in Zhoukoudian.¹⁷³ Teilhard de Chardin, Barbour and Yang also made field reconnaissance of Cenozoic deposits in Shanxi, Shaanxi, the Ordos and Manchuria.¹⁷⁴ Black was burning his candle at both ends by dealing with PUMC affairs during the day and studying fossils from the Zhououdian deposits at night. He often worked in his laboratory until dawn. On the afternoon of 16 March 1934, Black talked to Yang in his laboratory about the future of the Cenozoic Research Laboratory.

Half an hour after Yang left, he died at his desk of heart failure.¹⁷⁵ It was a sudden blow to the Beijing scientific community. In May his friends from the Beijing scientific network held a memorial meeting for him in the Geological Survey. Ding Wenjiang touched upon the delicate topic of the relationship between Chinese and foreign scientists:

It is frankly admitted that sometimes we find cooperation between Chinese and foreigners in scientific work rather difficult. The reasons I think are not difficult to seek. First many foreigners are suffering from a superiority complex. Subconsciously they think somewhat like this: here is a Chinese, he knows something about science, but he is a Chinese nevertheless – he is different from a European, therefore we cannot treat him in the same way. At best his manners become patronizing. On the other hand, their Chinese colleagues are suffering from an inferior complex. They become self-conscious and supersensitive, always imaging that the foreigner is laughing at them or despising them. Ninety percent of the troubles between Chinese and foreign colleagues working together comes from these two factors. In my dealings with Davidson Black, and I think Black's colleagues will bear me out, I never found him suffering from such a complex, and his Chinese colleagues became also free from theirs. In politics Black was a conservative, but in his dealings with his Chinese colleagues, he forgot altogether about their nationalities or race, because he realized that science was above such artificial and accidental things. This I think is an example for all of us to follow.¹⁷⁶

Black's death was not only a great loss for his friends, but it also signified the decline of the Cenozoic Research Laboratory, which had so far operated upon his ambition and personal charisma. Franz Weidenreich, a Jewish German anatomist, took over Black's position in 1935. As Yang pointed out, Weidenreich was not a sociable person like Black and was not interested in anything but research. Thus Yang had to deal with all of the organizational affairs.¹⁷⁷ In 1937 the Rockefeller Foundation stopped supporting any activities of the Cenozoic Research Laboratory outside of Zhoukoudian.¹⁷⁸ The Second Sino-Japanese war made the future of the Laboratory rather bleak. Weidenreich received a position in the American Museum of Natural History and left China in 1941, and all the Peking Man skulls mysteriously went missing while being shipped to America in the same year.

The Cenozoic Research Laboratory had left a great legacy in the development of Chinese palaeoanthropology. Jia Lanpo resumed the Zhoukoudian project in 1949 after the establishment of the PRC, and the laboratory eventually was transformed, as the Institute of Vertebrate Paleontology and Paleoanthropology (IVPP), within the Chinese Academy of Sciences, in 1960.¹⁷⁹ Yang Zhongjian, Pei Wenzhong and Jia Lanpo took the leading roles in the research of the IVPP. What had survived from the previous Cenozoic Research Laboratory was not only the personnel but also the theoretical foundations concerning human and Chinese origins. After the international palaeoanthropological paradigm shifted from Asia to Africa for more than two decades, Jia Lanpo still insisted, in the late 1980s, that humans originated in Asia, most likely in Yunnan and Tibet, instead of Africa.¹⁸⁰ More importantly, studies of the Peking Man fossils done by Black and Weidenreich indicated a continuous morphological relationship between Peking Man and the modern Chinese. The implication was obvious: Peking Man was not

only an ancient hominid, but he was more likely the direct ancestor of the Chinese. Chinese intellectuals who supported monogenism and evolutionary Asiaticism therefore argued that Peking Man was the first Chinese and a common ancestor of all humans and developed a Sino-centric palaeoanthropological narrative of China's deep and continuous history.¹⁸¹

Conclusions

Palaeoanthropology took shape in China in the 1920s and 1930s through the activities of the Beijing international elite scientist network, the operation of the Chinese and international scientific institutions and the field experiences of the scientists. In a world of unequal power relations, knowledge formation was incredibly complex, functioning at various national and personal levels. The complexity lies in the fact that these power relations were not absolute and were often manipulated. For example, regardless of the scientific hegemony of Western institutions, their scientific activities in China were gradually limited by the rising Chinese nationalist assertion of sovereignty over the objects taken from Chinese territories. Yang Zhongjian's remarks mentioned above show that Chinese scientists took advantage of the situation and created opportunities for collaboration to learn the most advanced field skills and techniques from leading foreign scientists. Therefore, instead of presenting an episode of how palaeoanthropology in China had transformed from an international/imperialist phase to a national and indigenized one as exemplifying a reductionist dichotomy between Western imperialism and Chinese nationalism, I show the multifaceted interactions between scientific internationalism, universalism, imperialism and nationalism and the historical contingency shaping these discourses.

It would be equally reductionist to label the foreign scientists either as imperialists or Sinophiles, or to draw a rosy picture of their collaboration with Chinese scientists, although their activities and discoveries helped to educate a new generation of Chinese professional scientists who would later become core figures in Chinese palaeoanthropology. Foreign scientists came to China for various reasons, be it personal, imperialistic, nationalistic or purely scholastic. Like today's transnational capitalist elites, they lived in a gated community in the host country protected by economic and social advantages. The only Chinese they were acquainted with were the 'extraordinary', cosmopolitan and highly Westernized Chinese intellectuals who spoke in their tongue, accommodated their needs and shared similar visions toward the scientific establishment. China, as an ideal place for scientific research opportunities, as a haven for the politically and religiously persecuted, and as a place to meet other scientists with similar vision and ambition, transformed the lives of these foreign scientists, and at the same time created for them niches in the temple of fame in the history of palaeoanthropology.

The complicated socio-historical matrix of scientific organizations and knowledge formation, shaped by personal networks and national and international institutions, assumed significantly different roles for individual scientists. Each national institution had its unique culture and logistics. The French Jesuits carried out their expeditions in a completely different fashion from the corporate-funded, extravagantly well-equipped

American Central Asiatic Expeditions team. But even among the Americans, attitudes toward scientific enterprise in China varied. For example, the philosophy of indigenization held by the China Medical Board of the Rockefeller Foundation clashed with the more imperialist approach of the American Museum of Natural History. Yet, we should also be careful not to confuse personal attitudes of scientists with those of the institutions backing their activities. Pierre Teilhard de Chardin felt much more in accord with the scientists of the Beijing scientific network than with his colleague Emile Licent of the same French Paleontological Mission. Only through an investigation of the complex of individuals, networks, institutions and national and global contexts can we better understand how palaeoanthropological knowledge first set root in China and transformed into its contemporary variant.

Funding

The research and the writing of this paper was funded by the American National Science Foundation Doctoral Dissertation Research Improvement Grant, the ACLS/Melon Dissertation Completion Fellowship and the Postdoctoral Fellowship of the Institute of Modern History, Academia Sinica.

Notes

1. Wu Xinzhi developed this theory with the American palaeoanthropologist Milford Wolpoff and the Australian palaeoanthropologist Alan Thorne in the 1980s. See Milford Wolpoff, Wu Xinzhi, and Alan Thorne, 'Modern *Homo sapiens* Origins: A General Theory of Hominid Evolution Involving the Fossil Evidence from East Asia' in Fred Smith and Frank Spencer (eds.) *The Origins of Modern Humans: A World Survey of the Fossil Evidence* (New York: Alan R. Liss Inc., 1984), pp. 411–83. However, Franz Weidenreich was the first to suggest in 1946 that contemporary racial groups (Australian, Mongolian, African, and Eurasian) developed along parallel lines from more archaic regional human forms. See Franz Weidenreich, *Apes, Giants and Man* (Chicago: University of Chicago Press, 1946); Franz Weidenreich, 'Facts and Speculations Concerning the Origin of *Homo sapiens*', *American Anthropologist*, 49, 1947, pp. 187–203 and Franz Weidenreich, 'The Trend of Human Evolution', *Evolution* 1, 1947, pp. 221–36.
2. Barry Sautman, 'Peking Man and the Politics of Paleoanthropological Nationalism in China', *The Journal of Asian Studies* 60(1), 2001, pp. 95–124.
3. The most comprehensive discussion on the development of palaeoanthropology in Communist China and how it has been intertwined with politics is Sigrid Schmalzer's book *The People's Peking Man: Popular Science and Human Identity in Twentieth-Century China* (Chicago: University of Chicago Press, 2008).
4. Hsiao-pei Yen, 'Evolutionary Asiacentrism, Peking Man, and the Origins of Sinocentric Ethno-Nationalism', *Journal of the History of Biology*, 47(4), 2014, pp. 585–625.
5. Peter Buck. *American Science and Modern China, 1876–1936* (Cambridge: Cambridge University Press, 1980).
6. This menu was discovered by Allan Mazur, the biographer of Amadeus Grabau, in the American Museum of Natural History archives. See Allan Mazur, *A Romance in Natural History: The Lives and Works Amadeus Grabau and Mary Autin* (Syracuse: Garrett, 2004), p. 286. Another version of the same menu with signatures of the attendants is now located in the Foundation Institut de paléontologie humain Prince Albert Ier de Monaco. This was sent by Teilhard de Chardin to M. Boule. See Li-chuan Tai. 'Zhongguo dizhixue ji shiqianxue fazhan chuqi zhi guoji xingge' [The International Characteristics in the Early Development

- of Chinese Geology and Paleontology]. *Gujin lunheng* [Past & Present], 25, 2013, pp. 133–66.
7. The names represent the core members of the network. The other attending scientists, Li Siguang, Jin Shuchu and Sven Hedin, were also members of the network.
 8. Pierre Teilhard de Chardin, *Letters to Two Friends, 1926 – 1952* (New York: The New American Library, 1967), pp. 71–2.
 9. Stated in a letter from Davidson Black to George Barbour (June 12, 1933). Claude Cuenot, *Teilhard de Chardin: A Biographical Study* (London: Burns and Oates, 1958), p. 158.
 10. For the development of these two institutions and their contribution to the establishment of Chinese geology, see Grace Shen, *Unearthing the Nation: Modern Geology and Nationalism in Republican China* (Chicago and London: University of Chicago Press, 2014).
 11. Zhang Jiuchen, *Dizhixue yu minguo shehui, 1916–1950* [Geology and the Republican Society, 1916–1950] (Jinan: Shandong jiaoyu chubanshe, 2005), p. 38.
 12. National Geological Survey of China, *Zhongguo dizhi diaochasuo gaikuang: bensuo chengli shiwunian jinian kan* [The National Geological Survey of China, 1916–1931: A Summary of its Work during the First Fifteen Years of its Establishment] (Beijing: National Geological Survey of China 1931), pp. 23–4.
 13. National Geological Survey of China, *Zhongguo dizhi diaochasuo gaikuang: bensuo chengli shiwunian jinian kan*, pp. 25–9.
 14. Editorial, “The Geological Society of China History of Organization” *Bulletin of the Geological Society of China*, 1(1), 1922, p. 1.
 15. “Complete List of Members of the Geological Society of China (September, 1926)” *Bulletin of the Geological Society of China*, 5(1), 1926, pp. 89–97. For a discussion of the cosmopolitanism of the Geological Society and its publication, see Grace Shen, *Unearthing the Nation*, pp. 73–107.
 16. Johan Gunnar Andersson, *The Dragon and the Foreign Devils* (Boston: Little, Brown, and Company, 1928) p. vii.
 17. Andersson, *The Dragon and the Foreign Devils*, p. 86.
 18. During the late Qing some coastal cities, such as Fuzhou and Shanghai, became the centres of Western learning for the Qing reformers and established arsenals and translation schools to promote science and technology. Many Western missionaries were employed to carry out the mission of translation and education. See Benjamin Elman, *On Their Own Terms: Science in China, 1550–1900* (Harvard University Press, 2005), pp. 355–95. The ways in which Beijing became the international scientific centre in the 1920s was different. Most of the foreign scientists who came to China were secular, coming for the opportunities of field research rather than for the proselytization of the Chinese. Beijing was close to the frontier where most of the scientific fieldwork took place, yet it was historically the cultural and intellectual centre of North China.
 19. More details of Teilhard de Chardin’s conflict with the Catholic church will be discussed below.
 20. Pierre Teilhard de Chardin, *Letters from a Traveller* (New York and Evanston: Harper Torchbooks, 1962), p. 74.
 21. Teilhard de Chardin, *Letters from a Traveller*, p. 106.
 22. George Barbour, *In the Field with Teilhard de Chardin* (New York: Herder and Herder, 1965), p. 46.
 23. Mazur, *A Romance of Natural History*, p. 224.
 24. Mazur, *A Romance of Natural History*, p. 252.
 25. Andrews, *Ends of the Earth*, p. 232.
 26. Teilhard de Chardin, *Letters from a Traveller*, p. 106.

27. For example, Weng Wenhao often spoke French in public meetings like these. See Y.C. Sun, "Proceedings of the Society", *Bulletin of the Geological Society of China*, 2(3–4), 1923, p. 99.
28. "Proceedings of the Society", *Bulletin of the Geological Society of China*, 2(3–4), 1923, p. 1.
29. Teilhard de Chardin, *Letters from a Traveller*, pp. 107–8.
30. Adele Grabau Ziemer to family, cited in Mazur, *A Romance in Natural History*, p. 368.
31. Dorothy Barbour (Letter, 13 February 1921), cited in Mazur, *A Romance in Natural History*, p. 299.
32. Ding Wenjiang, 'Woguo kexue yanjiu shiye' *Shenbao* (18 December 1935), cited in Zhang Jiuchen, *Dizhixue yu minguo shegui*, p. 163.
33. Magnus Fiskesjö and Chen Xingcan, *China before China: Johan Gunnar Andersson, Ding Wenjiang, and the Discovery of China's Prehistory* (Stockholm: Museum of Far Eastern Antiquities, 2004), p. 16. For the friendship between Andersson and Ding, see also Magnus Fiskesjö, 'Science Across Borders: Johan Gunnar Andersson and Ding Wenjiang', in Denise Glover, Stevan Harrell, Charles McKhann and Margaret Swain (eds.) *Explorers and Scientists in China's Borderlands, 1880–1950* (University of Washington Press, 2011), pp. 240–266.
34. Teilhard de Chardin, *Letters from a Traveller*, p. 71.
35. Teilhard de Chardin, *Letters from a Traveller*, p. 64.
36. Mazur, *A Romance in Natural History*, p. 375.
37. "Proceedings of the Society", *Bulletin of the Geological Society of China*, 5(1), 1926, pp. 23–4.
38. "Letter from the Council", *Bulletin of the Geological Society of China* 10, December, 1931, p. 1.
39. For more on the Asiancentric paradigm and Chinese palaeoanthropology, see Hsiao-pei Yen, 'Evolutionary Asiacentrism, Peking Man, and the Origins of Sinocentric Ethno-Nationalism' pp. 585–625.
40. Charles E. Ronan and Bonnie B.C. Oh, *East Meets West: the Jesuits in China, 1582–1773* (Chicago: Loyola University Press, 1988); Roman Malek (ed.) *Western Learning and Christianity in China: The Contribution and Impact of Johann Adam Schall von Bell, S. J. (1592–1666)* (Sankt Augustin: China Zentrum; Institut Monumenta Serica, 1998); Benjamin Elman, *On Their Own Terms: Science in China, 1550–1900* (Harvard University Press, 2005); Liam Matthew Brockey, *Journey to the East: The Jesuit Mission to China, 1579–1724* (Cambridge, MA: Harvard University Press, 2007); Florence Hsia, *Sojourners in a Strange Land: Jesuits and Their Scientific Missions in Late Imperial China* (University of Chicago Press, 2009); R. Po-chia Hsia, *A Jesuit in the Forbidden City: Matteo Ricci, 1552–1610*. Oxford University Press, 2010); this list is by no means exhaustive.
41. For example, Richard Madsen. 'Hierarchical Modernization: Tianjin's Gong Shang College as Model for Catholic Community in North China', in Wen-hsin Yeh (ed.) *Becoming Chinese: Passages to Modernity and Beyond* (Berkeley: University of California Press, 2000), pp. 161–190.
42. Li-chuan Tai has a short piece describing Licent and his museological work in Tianjin: 'Zai "bianyuan" jianli "zhongxin": Faguo yesuishi Sang Zhihua yu Tianjin Beijiag bowuguan' [Building the 'Centre' on the 'Periphery': The French Jesuit Emile Licent and the Tianjin Musée Hoang Ho Pai Ho]. *Fujen lishi xuebao*, 24, 2009, pp. 229–256.
43. Emile Licent, *Vingt deux années d'exploration dans le Nord de la Chine, en Mandchourie, en Mongolie et au Bas-Tibet (1914–1935): Le Musée Hoang ho Pai ho de Tientsin* (Tianjin: Mission de Sienhsien, 1936), p. 4.
44. Licent, *Vingt deux années d'exploration*, p. 9.

45. Sinologist Berthold Laufer had claimed that the reason for the scarcity of stone implements discovered in China was that 'the Chinese have never passed through an epoch which for other culture-regions has been designated as a stone age'. See Berthold Laufer, *Jade: A Study of Chinese Archaeology and Religion* (Chicago: Field Museum of Natural History, 1912), p. 29.
46. J. Gunnar Andersson, *Children of the Yellow Earth: Studies in Prehistoric China* (Cambridge, MA: The MIT Press, 1973), p. 148.
47. Amir D. Aczel, *The Jesuit and the Skull: Teilhard de Chardin, Evolution, and the Search for Peking Man* (New York: Riverhead Books, 2007), p. 75.
48. Aczel, *The Jesuit and the Skull*, p. 76.
49. Emile Licent, *Le Paléolithique de la Chine* (1929), p. 3. The amount was 35,000 francs in total, which was about 2500 Mexican silver dollars.
50. Pierre Teilhard de Chardin, *Teilhard de Chardin en Chine: Correspondance inédite (1923–1940)* (Paris: Muséum National D'Histoire Naturelle, 2004), p. 166.
51. Aczel, *The Jesuit and the Skull*, p. 96.
52. Aczel, *The Jesuit and the Skull*, p. 98.
53. Barbour, *In the Field with Teilhard de Chardin*, pp. 26–7.
54. Teilhard de Chardin, *Teilhard de Chardin en Chine*, p. 65.
55. Li-chuan Tai. 'Zhoukoudian fajue shidai de yiming Faguo guwen: yi xinjin chuban de De Rijin shuxinji wei jichu cailiao de yanjiu' [A French Adviser in the Time of the Choukoutien Archaeological Excavation: A Study Based on the Recently Published Correspondence of Teilhard de Chardin]. *Zhongyang yanjiuyuan lishi yuyan yanjiusuo jikan*, 79(1), 2008, p. 11.
56. Wang Jiachuan and Wang Shan, 'Tianjin Beijiang bowuguan bukao' [Addendum on the Hoangho-Paiho Museum in Tianjin], *China Historical Materials of Science and Technology*, 25(1), 2004, p. 38.
57. The data is from the survey done by the Economic Research Institute of Nankai University in 1926. See Ministry of Commerce of the People's Republic of China (ed.) *Kangzhan qianjiage cankao ziliao* [Price Indices before the Second Sino-Japanese War], Vol. 2 (Beijing: Guojia tushuguan chubanshe, 2012), p. 467.
58. Brian Power, *Ford of Heaven: A Childhood in Tianjin, China* (Oxford: Signal Books, 2005), p. 165.
59. Fang Jianchang, 'Tianjin Beijiang bowuguan kaoshi' [On the Hoangho-Paiho Museum in Tianjin], *China Historical Materials of Science and Technology*, 24(1), 2003, p. 12.
60. Aczel, *The Jesuit and the Skull*, p. 139.
61. Licent, *A Guide to the Musuem*, p. 1.
62. Licent, *Le Paléolithique de la Chine*, p. 6.
63. Licent, *Le Paléolithique de la Chine*, p. 6.
64. Aczel, *The Jesuit and the Skull*, p. 89.
65. Mary Lukas and Ellen Lukas, *Teilhard* (New York: McGraw-Hill, 1981), p. 114.
66. Fang, 'Tianjin Beijiang bowuguan kaoshi', p. 13.
67. Henry Fairfield Osborn, 'The Geological and Faunal Relations of Europe and America During the Tertiary Period and the Theory of the Successive Invasions of an African Fauna', *Science*, New Series, 11(276), 1900, p. 567. Asa Gray had pondered upon similar phenomena concerning the dispersal of plants, see Kuang-chi Hung, 'The Place that "Offers the Greatest Interest": Northeast Asia and the Making of the Making of Asa Gray's Disjunction Thesis', *Harvard Papers in Botany*, 15(2), 2010, pp. 231–76.
68. Henry Fairfield Osborn, 'Forward: Asia the Mother of Continents', in Roy Chapman Andrews, *On the Trail of Ancient Man* (Garden City: Garden City Publishing Company, Inc, 1926), pp. vii–x.

69. Roy Chapman Andrews, *Ends of the Earth* (Garden City: Garden City Publishing Company, Inc., 1929), p. 178.
70. Andrews, *Ends of the Earth*, p. 205.
71. Andrews, *Ends of the Earth*, p. 208.
72. For Walter Granger's biography, see Vincent Morgan and Spencer Lucas, *Walter Granger, 1872–1941, Paleontologist*, Bulletin 19, (New Mexico Museum of Natural History and Science, 2002).
73. Roy Chapman Andrews, *New Conquest of Central Asia* (New York: The American Museum of Natural History, 1932), p. xi.
74. Andrews, *On the Trail of Ancient Man*, p. 10.
75. For an image of the American flag flying over the tent of the team, see Image Number: 410730 "Staff of Third Asiatic Expedition, Mongolia, 1925," Shackelford, James B., AMNH Digital Special Collections, <http://images.library.amnh.org/digital/items/show/25715> (accessed 16 February 2015).
76. 'Scientists to Seek Ape-Man's Bones', *New York Times*, 20 October 1920.
77. The Scopes Trial, or more popularly known as the 'Monkey Trial', was a famous legal case in which John Scopes, a high school science teacher, was accused by the State of Tennessee in 1925 for violating the state law by teaching evolution in class. This case demonstrates the controversy between creationism and evolutionary theory that has long existed in America.
78. Andrews, *Ends of the Earth*, p. 212.
79. Henry Fairfield Osborn, 'Why Central Asia?' *Natural History*, 16(3), 1926, p. 266.
80. Andrews, *On the Trail of Ancient Man*, p. 26.
81. Letter from Ding Wenjiang to Roy Chapman Andrews, 18 April 1921, Box 5, Folder 18, MSS. C446 Central Asiatic Expeditions, 1921–1930, Special Collections, American Museum of Natural History. As a friendly gesture, the Survey later handed over to the American team their preserved districts in Guizhou and Sichuan. Walter Granger thus conducted research in eastern Sichuan during the years 1921–1922, 1923 and 1926, and discovered rich quantities of fossils of the Pleistocene times. See Walter Granger, 'Paleontological Exploration in Eastern Sichuan', in Andrews, *New Conquest of Central Asia*, pp. 501–28.
82. Letter from Ding Wenjiang to Henry Fairfield Osborn, 25 March 1921, Box 5, Folder 18, MSS. C446 Central Asiatic Expeditions, 1921–1930, Special Collections, American Museum of Natural History.
83. Andrews, *New Conquest of Central Asia*, pp. 176–9.
84. Andrews, *On the Trail of Ancient Man*, p. 207.
85. Andrews, *On the Trail of Ancient Man*, p. 231.
86. Andrews, *On the Trail of Ancient Man*, p. 231. Yet, these eggs were not the first dinosaur eggs ever discovered. Fossil eggshells and complete eggs were first found in 1859 and 1869 in France. However, they were considered to be eggs of crocodiles and giant birds until Paul Gervais, a French palaeontologist, published a report in 1877 on these eggs and suspected them to be dinosaur eggs.
87. Later discoveries revealed that Oviraptor was a nesting dinosaur and the eggs discovered by the American team in 1923 were actually Oviraptor eggs. See Mark Norell, James Clark, Luis Chiappe and Demberelyin Dashzeveg, 'A Nesting Dinosaur' *Nature*, 378, 1995, pp. 774–6.
88. Andrews, *On the Trail of Ancient Man*, p. 240.
89. *Bulletin of the Geological Society of China*, 2(3–4) 1923, pp. 100–3.
90. Andrews, *New Conquest of Central Asia*, p. 230.
91. A letter from Andrews to Osborn, 1 October 1924, Box 4, Folder 4, MSS. C446 Central Asiatic Expeditions, 1921–1930, Special Collections, American Museum of Natural History.

92. 'Agreement between the Mongolian Scientific Committee and Roy Chapman Andrews', 29 May 1925, Folder 1214.1 (March–May, 1925), Central Archives, Special Collections, American Museum of Natural History.
93. Letter from Andrews to Osborn, 1 October 1924, Box 4, Folder 4, MSS. C446 Central Asiatic Expeditions, 1921–1930, Special Collections, American Museum of Natural History.
94. 'Summary of the results accomplished by the Third Asiatic Expedition during the season of 1925', Box 6, Folder 44, Roy Chapman Andrews Administrative Papers, 1920–1940, Special Collections, American Museum of Natural History.
95. 'Pre-Dawn Man', *The Trans-Pacific*, 16 June 1928.
96. '*Beijing xueshu tuanti fandui wairen caiqu guwu zhi xuanyan zuori yeyi fabiao*' [The Manifesto of the Association of Learned Societies Against Foreigners Collecting Ancient Relics was Announced Yesterday], *Chen bao* (March 10, 1927), cited in Wang Chen (ed.) *Gaoshang zhe de muzhiming* [The Epitaph of the Nobles] (Beijing: Zhongguo wenlian chubanshe, 2005), pp. 521–522.
97. Sven Hedin, *History of the Expedition in Asia, 1927–1935, Vol. 1* (Stockholm: Elanders borttryckeri aktiebolag, 1943), pp. 16–17.
98. Hedin, *History of the Expedition in Asia, 1927–1935, Vol. 1*, p. 18.
99. Hedin, *History of the Expedition in Asia, 1927–1935, Vol. 1*, p. 20.
100. Chen *Gaoshang zhe de muzhiming*, pp. 525–528.
101. Chen *Gaoshang zhe de muzhiming*, p. 10.
102. Andrews, *New Conquest of Central Asia*, p. 345.
103. Luo Guihuan, '*Shilun 20 shiji qianqi 'Zhongyang guwu baoguan weiyuan hui' de chengli ji yiyi*' [Regarding the Founding and Significance of the National Committee for the Preservation of Antiquities in the Early Twentieth Century], *Zhongguo keji shi zazhi* [The Chinese Journal for the History of Science and Technology], 27(2), 2006, pp. 138–9. The committee members included nineteen intellectuals, including Zhang Ji, Cai Yuanpei, Fu Sinian, Li Ji, Gu Jiegang and Li Siguang. All the main constituents, like Liu Bannong, Ma Heng and Yuan Fuli, from the Chinese Association of Learned Societies, were recruited to the National Committee. Weng Wenhao was also recruited as a member and served as a buffering negotiator between the antagonistic Chinese members and foreigners.
104. Andrews, *New Conquest of Central Asia*, p. 418.
105. Luo Guihuan, '*Shilun 20 shiji qianqi "Zhongyang guwu baoguan weiyuan hui" de chengli ji yiyi*', p. 139.
106. Sven Hedin, *History of the Expedition in Asia, 1927–1935, Vol. 1*, p. 60. Hedin's attitude in public leaves an impression upon Chinese scholars of the Sino-Swedish Expedition that Sven Hedin was a great example of a true collaborator. For example, Luo Guihuan calls him an 'honest scholar with much insight' who 'sincerely collaborated with the Chinese, unlike other Western expedition team leaders'. See Luo Guihuan, '*20 shiji qianqi liangci shibai de zhong wai hezuo kexue kaocha jiyi yuanyin*' [The Two Failed Joint Scientific Expeditions in China and Foreign Countries in the Early Twentieth Century], *Zhongguo keji shi zazhi* [The Chinese Journal for the History of Science and Technology], 26(3), 2005, p. 198.
107. Letter from Andrews to Granger, 18 November 1929, Box 1, Folder 11, MSS. C446 Central Asiatic Expeditions, 1921–1930, Special Collections, American Museum of Natural History.
108. Letter from Granger to Osborn, 25 June 1929, Box 4, Folder 7, MSS. C446 Central Asiatic Expeditions, 1921–1930, Special Collections, American Museum of Natural History. This co-director was Xu Bingchang, a professor of philosophy at Beida and a member of the National Committee.
109. A letter from Granger to Osborn, 25 June 1929, Box 4, Folder 7, MSS. C446 Central Asiatic Expeditions, 1921–1930, Special Collections, American Museum of Natural History.

110. Andrews, *New Conquest of Central Asia*, pp. 420–1.
111. Cited in Henry Fairfield Osborn, 'Interruption of Central Asiatic Exploration by the American Museum of Natural History', *Science*, 70(1813), 27 September 1929, p. 293.
112. In a letter to Granger, 15 January 1930, Andrews revealed that he had 'employed' a member of the Committee, whose name was T.T. Sun, to report the Committee's inner workings and to negotiate for the Expedition under the table. See Box 1, Folder 1, MSS. C446 Central Asiatic Expeditions, 1921–1930, Special Collections, American Museum of Natural History; and also Charles Gallenkamp, *Dragon Hunter: Roy Chapman Andrews and the Central Asiatic Expeditions* (New York: Penguin Books, 2001), pp. 263–4.
113. The agreement on including the three scientists was probably made based on the good relationship between Teilhard de Chardin and Andrews and Granger. Davidson Black was also included in an earlier expedition. However, it is interesting to note that unlike Black, who was invited by Andrews and Granger, Teilhard de Chardin was regarded as an official representative of the Geological Survey, thus a 'Chinese' participant.
114. Andrews, *New Conquest of Central Asia*, p. 422.
115. Luo Guiguan, '20 shiji qianqi liangci shibai de zhong wai hezuo kexue kaocha jiqi yuanyin', p. 196.
116. Andrews, *New Conquest of Central Asia*, p. 453.
117. Yang Zhongjian, *Yang Zhongjian huiyi lu* (Beijing: Dizhi chubanshe, 1983), p. 70.
118. Zhongjian, *Yang Zhongjian huiyi lu*.
119. See Andrews' correspondence with Chuichi Ohashi, the Vice Minister of Foreign Affairs of Manchuria, Box 7, Folder 3, Roy Chapman Andrews Administrative Papers, 1920–1940, Special Collections, American Museum of Natural History.
120. Andrews, *New Conquest of Central Asia*, p. 453.
121. According to the estimate made by the United States Geological Survey, the accomplishments made in the first three years by the CAE equalled those accomplished in fifty years of discovery (1850–1900) in the Rocky Mountain region. See Henry Fairfield Osborn, 'Discoveries in the Gobi Desert by the American Museums Expeditions', *Nature*, 118(2968), 18 September 1926, p. 419.
122. Osborn, 'Discoveries in the Gobi Desert', p. 453.
123. Ronald Reinger, *An Agenda for Antiquity: Henry Fairfield Osborn and Vertebrate Paleontology at the American Museum of Natural History, 1890–1935* (Tuscaloosa, AL: University of Alabama Press, 1991), pp. 103–4.
124. Reinger, *An Agenda for Antiquity*, p. 104.
125. Cited in Henry Fairfield Osborn, 'Interruption of Central Asiatic Exploration by the American Museum of Natural History', p. 293.
126. A letter from George Sherwood to Doctor Frank M. Chapman and Mr H.E. Anthony, 15 July 1926, Folder 1214.1 (July–August, 1926), Special Collections, American Museum of Natural History.
127. Niall Mateer and Spencer Lucas, 'Swedish Vertebrate Paleontology in China: A History of the Lagrelius Collection', *Bulletin of the Geological Institution of the University of Uppsala*, 11, 1985, p. 5.
128. Andersson, *Children of the Yellow Earth*, pp. 95–6.
129. Andersson, *Children of the Yellow Earth*, p. 101.
130. John Reader, *Missing Links: In Search of Human Origins* (Oxford University Press, 2011), p. 207.
131. Mateer and Lucas, 'Swedish Vertebrate Paleontology in China', p. 5. In 1924, the Swedish China Research Committee had come to an agreement with the Geological Survey to return human remains as well as a large quantity of botanical and mammal fossils that

- Andersson shipped to Upsala for study. Based on the records kept in the Museum of Far Eastern Antiquities, founded by Andersson in Stockholm in 1926 to store archaeological findings from China, there were seven shipments of boxes from Sweden to Beijing from 1927 to 1936. See Magnus Fiskesjö, 'The China Collection: the Cross-continental Ethics of Johan Gunnar Andersson and the Creation of the Museum of Far Eastern Antiquities', in Håkan Karlsson (ed.), *Swedish Archaeologists on Ethics* (Lindome: Bricoleur Press, 2004), p. 193. However, these returned collections are now nowhere to be found in China. Therefore, the Paleontological Museum of the University of Uppsala and the Museum of Far Eastern Antiquities hold one of the largest collections of Chinese fossils and archaeological relics outside of China. For correspondence between Andersson, Weng and the Swedish China Research Committee, see Weng Xinyu (ed.), *Weng Wenhao gurenleixue yu lishi wenhua wenji* [Weng Wenhao: Works on Paleontology, History and Culture], (Beijing: Kexue chubanshe, 2008), pp. 126–67.
132. The Swedish Crown Prince also became a co-sponsor of the Committee. See Mateer and Lucas, 'Swedish Vertebrate Paleontology in China', p. 5.
 133. Fiskesjö and Chen, *China before China*, p. 32.
 134. Mateer and Lucas, 'Swedish Vertebrate Paleontology in China', p. 10.
 135. Mateer and Lucas, 'Swedish Vertebrate Paleontology in China', p. 9.
 136. Mateer and Lucas, 'Swedish Vertebrate Paleontology in China', p. 13.
 137. Letter from Andersson to Ding Wenjiang and Weng Wenhao, 15 March 1926, cited in Weng Xinyu (ed.), *Weng Wenhao gurenleixue yu lishi wenhua wenji*, pp. 150–3.
 138. Andersson, *Children of the Yellow Earth*, p. 103.
 139. "Proceedings of General Meetings of the Geological Society of China, Held on October, November and December 1926", *Bulletin of the Geological Society of China*, 5(3–4), 1927, pp. 197–200.
 140. 'News report on Peking Man', *Manchester Guardian*, 17 November 1926, cited in Reader, *The Missing Links*, p. 211.
 141. Andersson, *Children of the Yellow Earth*, p. 105.
 142. Andersson, *Children of the Yellow Earth*, pp. 105–6.
 143. W.D. Matthew, *Climate and Evolution*, N.Y. Academy of Sciences, 1915. More of Matthew's theory is discussed in Hsiao-pei Yen. 'Evolutionary Asiaticism, Peking Man, and the Origins of Sinocentric Ethno-Nationalism'.
 144. Dora Hood, *Davidson Black: A Biography* (Toronto: University of Toronto Press, 1964), p. 35.
 145. Barbour, *In the Field with Teilhard de Chardin*, pp. 43–4.
 146. For more information on these findings, see Hsiao-pei Yen. 'Evolutionary Asiaticism, Peking Man, and the Origins of Sinocentric Ethno-Nationalism'.
 147. Letter from Black to Edwin Embree, 8 July 1925, Record Group 1.1, Series 601, Box 39, Folder 316, Rockefeller Foundation Archives.
 148. Davidson Black, 'Tertiary Man in Asia – the Chou Kou Tien Discovery', *Science*, 64(1668), 1 December 1926, p. 587.
 149. 'Memorandum on Future Human Paleontological Research by Davidson Black', 11 January 1929, Record Group 1.1, Series 601, Box 39, Folder 317, Rockefeller Foundation Archives.
 150. 'Cooperation between the National Geological Survey of China and the Peking Union Medical College for Research on the Tertiary and Quaternary Deposits in North China', Record Group 1.1, Series 601, Box 39, Folder 316, Rockefeller Foundation Archives.
 151. 'Memorandum on Future Human Paleontological Research by Davidson Black' 11 January 1929, Record Group 1.1, Series 601, Box 39, Folder 317, Rockefeller Foundation Archives.
 152. Mateer and Lucas, 'Swedish Vertebrate Paleontology in China', p. 17.

153. Reader, *Missing Links*, p. 214.
154. There were normally fifty to sixty, sometimes even a hundred, Chinese labourers working in the deposits. See Pei Wenzhong, *Zhoukoudian dongxueceng caijue ji* [Zhoukoudian Excavations], *Bulletin of the Geological Survey*, Series B, 7, 1934, p. 16.
155. The term *Sinanthropus* was suggested by Grabau. See Davidson Black, 'On A Lower Molar Tooth from the Chou Kou Tien Deposit', *Paleontologia Sinica*, Series D, 7, 1927, p. 21.
156. Reader, *Missing Links*, p. 218.
157. Pei, *Zhoukoudian dongxueceng caijue ji*, p. 37.
158. 'Memorandum on Future Human Paleontological Research by Davidson Black', 11 January 1929, Record Group 1.1, Series 601, Box 39, Folder 317, Rockefeller Foundation Archives.
159. Hood, *Davidson Black*, p. 100.
160. Letter from Black to Roger Greene (the director of the PUMC), Record Group 1.1, Series 601, Box 39, Folder 318, Rockefeller Foundation Archives.
161. Barbour, *In the Field with Teilhard de Chardin*, p. 48.
162. For descriptions of the discovery, see Pei Wenzhong, 'Account of Discovery of Adult *Sinanthropus* Skull', *Bulletin of the Geological Society of China*, 1929, pp. 203–5 and Pei Wenzhong, *Zhoukoudian dongxueceng caijue ji*, pp. 39–41.
163. Barbour, *In the Field with Teilhard de Chardin*, p. 52.
164. 'Proceedings on the Special Meeting on December 28th, 1929', *Bulletin of the Geological Society of China*, 1929, pp. 171–2.
165. The article on the *Peking Leader* was written by Barbour; for his recollection of the event, see Hood, *Davidson Black*, pp. 105–6.
166. Letter from Roger Greene to M.K. Eagleston, 30 December 1929, Record Group 1.1, Series 601, Box 39, Folder 317, Rockefeller Foundation Archives.
167. For Roger Greene's China career, see Warren I. Cohen, *The Chinese Connection: Roger S. Greene, Thomas W. Lamont, George E. Sokolsky and American-East Asian Relations* (Columbia University Press, 1978) and Mary Brown Bullock, *An American Transplant: the Rockefeller Foundation and the Peking Union Medical College* (Berkeley: University of California Press, 1980), pp. 48–77.
168. Letter from Roger Greene to Max Mason, 4 January 1932, Record Group 1.1, Series 601, Box 39, Folder 318, Rockefeller Foundation Archives.
169. Letter from Roger Greene to Max Mason, 27 December 1929, Record Group 1.1, Series 601, Box 39, Folder 317, Rockefeller Foundation Archives.
170. Max Mason's diary of 16 January 1931, Max Mason, R.G. 12.1 Diaries, Reel #1, Rockefeller Foundation Archives.
171. Yang Zhongjian, 'Xinshengdai yanjiushi ershi nian' [Twenty Years of the Cenozoic Research Laboratory], *Kexue*, 30(10), 1948, p. 328.
172. 'Proceedings of the Special Meeting of the Geological Society', *Bulletin of the Geological Society of China*, 1931, p. 102.
173. Pei Wenzhong, 'A Preliminary Report on the Late-Paleolithic Cave of Choukoutien', *Bulletin of the Geological Society of China*, 1934, pp. 327–58.
174. Davidson Black, 'Fossil Man in China', *Geological Memoirs*, Series A, 11, 1933, p. 9.
175. Yang Zhongjian, *Yang Zhongjian huiyi lu*, p. 79.
176. 'Proceedings of the Special Meeting (May 11, 1934)', *Bulletin of the Geological Society of China*, 1934, p. 322.
177. Yang Zhongjian, *Yang Zhongjian huiyi lu*, p. 82.
178. Letter from Henry Houghton (Director of the China Medical Board) to Warren Weaver (Director of Division of Natural Sciences), 13 November 1936, Record Group 1.1, Series 601, Box 39, Folder 321, Rockefeller Foundation Archives.

179. For a brief history of the Institute of Vertebrate Paleontology and Paleoanthropology, see Sigrid Schmalzer, *The People's Peking Man: Popular Science and Human Identity in Twentieth-century China* (Chicago: University of Chicago Press, 2008), 64n23, or the website of the Institute at < <http://www.ivpp.cas.cn/jggk/lsyg> > (accessed 16 February 2015).
180. Jia Lanpo, 'Gurenleixue yanjiu de yixie wenti' [A Few Questions Concerning the Study of Palaeoanthropology] in Chen Guoqiang and Lin Jiahuang (eds.), *Renleixue yanjiu zhi si* [The Study of Anthropology, Volume 4], (Shanghai: Sanlian chubanshe, 1992), p. 2; and Jia Lanpo and Huang Weiwen, *The Story of Peking Man*, trans. into English by Yin Zhiqi (Beijing: Foreign Languages Press and Hong Kong: Oxford University Press, 1990), pp. 242–3.
181. For details on Black's and Weidenreich's research and how they impacted on contemporary Chinese intellectuals' imagination and construction of their past, see Hsiao-pei Yen, 'Evolutionary Asiacentrism, Peking Man, and the Origins of Sinocentric Ethno-Nationalism'.

Pavlovianism in China: Politics and differentiation across scientific disciplines in the Maoist era

History of Science

2015, Vol. 53(1) 57–85

© The Author(s) 2015

Reprints and permissions:

sagepub.co.uk/journalsPermissions.nav

DOI: 10.1177/0073275314567436

hos.sagepub.com



Zhipeng Gao

York University, Canada

Abstract

In the early 1950s, the Chinese communist party promoted a massive Learning-from-the-Soviet-Union Campaign and made Pavlov's reflexology the political-academic orthodoxy in physiology, medical science and psychology. In the late 1950s, however, while Pavlov's theory was continuously advocated by physiologists and medical scientists, it suffered a major setback in psychology as Pavlovian psychology was criticized as being bourgeois and reactionary. How was it possible for such sheer contrast across disciplines to take place within a few years? This paper argues that the greater ideologization of Pavlovian psychology was conditioned by a number of factors: the Sino-Soviet relations, the shifting Chinese communist policies, professional practices, local social conditions, disciplinary cultures and discursive performances. This historical reconstruction rejects a homogenizing view of the relation between politics and science in the Maoist China, and demonstrates ways in which historical localities and dynamics ruptured the overarching political context.

Keywords

Chinese communist party, Maoist era, medical science, Pavlov, physiology, politics, psychology

Introduction

History of science in (former) communist countries is often characterized by political and ideological intervention. While the historiography of post-war Soviet sciences has accumulated a rich body of literature,¹ its Chinese counterpart remains relatively meagre. Where the Chinese context is concerned, the Cultural Revolution (1966–1976) stands

Corresponding author:

Zhipeng Gao 150 C, Behavioral Science Building, York University, 4700 Keele Street, Toronto, ON, M3J 1P3, Canada.

Email: gzhipe@yorku.ca

out as the most disastrous event when a single-party government thwarted most scientific researches.² This arresting calamity dwarfs a few preceding events and makes them less visible in the historiography of science: the Learning-from-the-Soviet-Union Campaign, the Hundred Flowers Campaign and the Anti-Rightist Campaign in the 1950s. However, I argue that these three preceding events are worth attention because they displayed much richer historical complexity and dynamics than the meanings we tend to attach to the Cultural Revolution.

In the early 1950s, with its 'leaning to one side' policy, the newly-established government of the People's Republic of China promoted a massive Learning-from-the-Soviet-Union Campaign. As a result, Ivan Pavlov's theory of reflexology³ became the political-academic orthodoxy in three disciplines: physiology, medical science and psychology. In the late 1950s, these disciplines were subjected to another political movement: the Anti-Rightist Campaign. However, this time Pavlov's theory had drastically disparate fates across these three disciplines. In physiology and medical science, Pavlov's theory was reasserted as being politically correct in opposition to bourgeois orientation. In psychology, however, it suffered vehement criticism and was associated with the bourgeois ideology. How was it possible for such a sheer contrast to come about? What caused Pavlovianism to differentiate across disciplines within only a few years? Under what conditions were local intellectual, professional and discursive practices capable of diversifying within the political environment and creating divergent historical trajectories? The celebrated historian of Soviet sciences, Ivan London, warns that historians should not reify the widespread belief that Soviet sciences are uniformly patterned after one of its disciplines (genetics) by free use of selected quotations from Soviet sources in the mapping of an over-all pattern in Soviet sciences. According to London, 'The only way out is to proceed to make an analysis in depth, discipline by discipline, until the whole range of the sciences has been covered'.⁴ This article responds to Ivan London's call in the Chinese context. It sets out to solve this historical puzzle by situating Pavlovian sciences within international relations, politics-science relations, intellectual/professional practices and discursive performances.

The 1950s is the first decade after the People's Republic of China was established within the Cold War context. The Chinese Communist Party (CCP) was facing extraordinary challenges in its efforts to secure and develop the new regime: it had to put together limited resources available to repair the war-damaged society, to maintain the communist alliance in front of the hostile Western countries as well as the uprisings within the communist world, to educate the masses for labour productivity and political loyalty, to channel the scarce academic and professional resources to meet urgent social needs and at the same time keep the intellectuals compliant, and so on. In the broadest scope, I situate this history within the evolving Sino-Soviet relations, which conditioned both the import and partial dissolution of Pavlovianism in(to) the Chinese human sciences. While many intellectual, practical and political parallels can be found in Pavlovian sciences in the Chinese and the Soviet contexts, there also existed important distinctions that became more apparent in the late 1950s when the Sino-Soviet split began. In its exploratory stage of governance, the CCP leadership kept revising its policies toward the intellectuals, creating not only repression and confusion, but also opportunities for the intellectuals to pronounce different views or to undermine the political pressure with

outward compliance. The changing international relations, compounded with the shifting CCP policies, made the status of Pavlovianism ambivalent in the late 1950s: some people still perceived it as a politically correct doctrine that may protect the scientific community; some were mildly in support of it; some cautiously circumvented it; and others, who were slow in catching up with political change, continued advocating it with naivety and resolution. Such an indeterminate state of affairs conditioned the differentiation of Pavlovianism's fate across disciplines.

By discussing Pavlovianism in physiology, medical science and psychology, I do not imply that its influence was exclusively found in these three disciplines. There is evidence that Pavlov's theory was applied to, or at least demanded to be applied to, psychiatry, animal husbandry and education.⁵ Nor do I suggest that Pavlov's theory was the only school that dominated these three disciplines; Michurinism-Lysenkoism, for example, was another doctrine imposed on physiology and medical science.⁶ However, it is safe to argue that Pavlov's theory, rather than other theories, had greater impact on physiology, medical sciences and psychology, rather than other disciplines. A history focusing on these three disciplines would be the one most representative of the Pavlovian sciences in China; it also offers a unique opportunity for exploring the trans-disciplinary parallels and differentiations across sciences. Nonetheless, I discuss related disciplines and doctrines when appropriate to contextualize the current investigation.

Methodologically, I corroborate historical evidence from Chinese and English sources. Due to language and geographical barriers, English sources are less based on original texts/observations, so their reliability and comprehensiveness are both limited. In addition, although Western scholars are rarely affected by the Chinese Communist ideology, they sometimes write in a way that reifies cultural/political stereotypes popular in Western discourses. As for sources written in Chinese, I situate primary historical evidence in its political context to challenge works written by contemporary historians of psychology. I break away from the latter's treatment of original texts as authentic representations of what 'actually' happened; instead, I read these texts as historical actors' *expressions* that are more performative than genuine, more expedient than truthful.

Among all the books, journal articles, official documents, newspapers, public speeches, school curricula, biographies and oral histories that I have consulted, I give particular attention to four important journals. *Acta Physiologica Sinica*, created in 1927, was sponsored by the Chinese Association for Physiological Sciences. The *Chinese Journal of Medicine* was created in 1951 under the directorship of the Ministry of Health. *Acta Psychologica Sinica* was established by the Chinese Psychological Society in 1956.⁷ *Chinese Science Bulletin*, created in 1950, was sponsored by the Chinese Academy of Sciences. While the three former journals, respectively, represent the three disciplines under discussion, the fourth is more comprehensive and situates the three disciplines within academia as a whole. All of these four journals are the leading and most impactful journals in these disciplines under discussion. Being more or less directed by the CCP,⁸ they published not only theoretical discussions, reviews, experimental findings and clinical reports, but also correspondences, news, conference summaries and addresses made by the disciplinary leaders, who often held government-official positions at the same time. By tracing all articles published in these journals in the 10-year span, I reconstruct how the academic community received the continuities, disruptions and ebb and flow of

official policies. Considering that publications in these journals may not fully represent the opinions and practices of 'lower-level' researchers and professionals, and that the journal *Acta Psychologica Sinica* did not inaugurate until 1956, I use other sources for complementary and contrastive reading.

I approach these historical sources with the assumption that many of them are likely to have gone through censorship. There is abundant evidence indicating prevailing censorship in the Soviet and Chinese sciences in this period.⁹ One of the examples relevant to the current discussion is that Pavlov's speech, 'Communist Dogmatism and the Autonomy of Science', in 1923 was suppressed for decades.¹⁰ Ivan London points out cases when historical sources have been falsified through deliberate omission and modification and warns historians to be cautious in their use of historical materials.¹¹ In the Chinese context, the media were regarded as a weapon for class struggle; it was not only publishers who had to obey the CCP's policies, but also the editors and reporters who had to go through thought reform. When undesirable voices were already public, criticism and self-criticism became the remedy for rectification.¹² Even Chairman Mao himself acknowledged that leftist politics dissuaded people from speaking out.¹³ The practice of censorship may create an illusion of harmony between politics and science; it requires historians to be attentive to the political pressure surrounding the creation of the text and the associated contradictions within the text.

My reading of primary historical evidence with the assumption of censorship led me to conclude that conventional historical accounts have misinterpreted the criticism of psychology in 1958. Most historians concur that the 1958 criticism was directed against the Western bourgeois schools; I contend that this view is based on a way of interpreting historical texts at face value, i.e. taking historical actors' claims as being truthful or at least genuine expressions. Instead, I situate these historical voices within the 1950s political contexts, exploring contradictions between texts created by different authors, written in different years and publicized under different circumstances even by the same author. With this approach, I reconstruct these texts less as claims of truth or expressions of genuine intentions than discursive performances utilized by the authors to achieve certain ends. This reconstruction suggests that the 1958 criticism was de facto targeted primarily at Pavlovian psychology instead of Western psychologies, even though it was rarely acknowledged so.¹⁴ This key argument provides the entry point into the question of why the fate of Pavlovianism differentiated across disciplines within one grand political environment.

Pavlovian sessions in China and the Soviet Union

On 21 August 1953, the Ministry of Health of the People's Republic of China directed the Chinese Academy of Sciences and the All-China Federation of Natural Science Societies to hold an advanced 'Learning Pavlov's Theory Workshop' in Beijing.¹⁵ This workshop was momentous in terms of scale, length, prestige and meticulousness. The opening speeches were given by the leaders of the above mentioned organizing institutions; it involved over 100 leading psychologists, physiologists and medical scientists representing many universities and research institutes across the country.¹⁶ With a carefully planned curriculum, it required scientists to have group discussions, attend keynote

speeches, write reports and visit conditioning laboratories. In a manner close to worship, the workshop held two ceremonies: one celebrating Pavlov's 104th birthday, the other mourning Pavlov's death 17 years previously.¹⁷ The intensive training lasted for 40 days. It was reported that the attendants achieved the consensus that it was necessary to guide physiological, medical and psychological research, teaching and practice with Pavlov's theory, which was construed as an embodiment of Marxism. A number of scientists confessed that they had misunderstood Pavlov's theory and now they were determined to make corrections.¹⁸

In many aspects, this event is reminiscent of the Pavlov Session in the Soviet Union held three years before. Between 28 June and 4 July 1950, the USSR Academy of Sciences and the USSR Academy of Medical Sciences jointly sponsored a conference to combat Western influences on Russian disciplines related to Pavlov's theory.¹⁹ Costing nearly half a million roubles, this conference was attended by 1400 physiologists, medical scientists, psychologists and others. Under Stalin's guidance, this conference granted the highest authority to Pavlov's reflexology and relentlessly criticized scientists who deviated from it. What historical processes connected these two events across the nations?

Learning from the Soviet Union in the early 1950s

In the late 1940s and the early 1950s, Joseph Stalin heavily intervened in the Soviet sciences, which became a component of the Cold War. Besides serving national security and industrialization, the Soviet sciences also became the battle ground of ideological struggle.²⁰ In order to maintain the legitimacy of the Soviet government and the people's worldview, it was necessary for scientific research to conform to communism. Scientific accomplishments, once made, can be said to demonstrate the superiority of the Soviet social system. The life and behavioural sciences in particular were further enmeshed with the Soviet aspiration that human development can be fully transformed and revolutionized when the environment is fully controlled, thus Michurinism-Lysenkoism, in a sense similar to Lamarckism, and Pavlov's reflex conditioning promised to create the Soviet man.²¹ In the Soviet science wars, Stalin and his trusted lieutenants directly intervened in six important scientific debates concerning philosophy, biology, physics, linguistics, physiology and political economy. In these debates, Western theories were rejected in favour of the ideologically correct theories developed by the 'comrade scientists': Trofim Lysenko's genetic theory and Ivan Pavlov's reflexology, for instance. The famous Pavlov Session was but one of the episodes when the Soviet sciences were subjected to state control. New textbooks were systematically designed to educate various populations.²² Another example can be found in the establishment of the Scientific Council on the Problem of the Physiological Theory of Academician I. P. Pavlov, in 1950, which served as a 'watchdog' to facilitate and guarantee the Pavlovianization of physiology and the relevant sciences.²³

Newborn in the communist world, the People's Republic of China adopted the 'leaning to one side' foreign policy in alliance with the Soviet Union and against capitalism. By then China had been severely devastated by wars over the previous decades, and it had too few scientists and technicians to rebuild its society.²⁴ In addition to a request for

direct technological aid from the Soviet Union, China initiated a massive Learning-from-the-Soviet-Union Campaign in the early 1950s that had wide impact on Chinese politics, economy, culture, military and education as well as science.²⁵ Against this background, Soviet doctrines were imposed on most Chinese natural and social sciences. Pavlov's theory, with its focus on higher neural activity and classical conditioning, had a major impact on Chinese physiology, medical science and psychology through translation, scholar visits, guest lectures, workshops, educational reform, and criticism and self-criticism regarding one's adherence to Pavlov's theory.²⁶ For instance, in 1953 the Chinese central government required all military medical universities, medical science research institutes, military medical middle schools, the highest-level military hospitals and the China Union Medical College to study Pavlov's theory. The official document not only provided a detailed curriculum, but also required supervising committees to be established and completion reports to be submitted.²⁷ By 1954, the majority of scientists in the Chinese Academy of Sciences already learnt to read the Russian language; meanwhile, scientists from more than 20 cities had systematically studied Pavlov's theory.²⁸

Before the People's Republic of China was established in 1949, many Chinese intellectuals did not have a favourable view of the Soviet Union.²⁹ Within a few years, however, the CCP's painstaking efforts to promote the Soviet model paid off: they converted many scientists and silenced the rest. Pavlov's theory had become the absolute authority in Chinese physiology, medical science and psychology. In physiology, the Ministry of Education of the People's Republic of China regulated the high school and undergraduate curricula to promote Pavlov's theory.³⁰ The journal *Bulletin of Biology* created a special column where Yibing Zhao wrote 13 articles between 1955 and 1956 systematically introducing Pavlov's theory.³¹ Accepting K.M. Bykov's declaration that 'we have to divide all physiology into two stages – the pre-Pavlovian stage and the Pavlovian one',³² many Chinese physiologists attempted to apply Pavlov's theory to varied areas such as neurology, immunology, human anatomy and pathophysiology.³³ Scholars were criticized for neglecting or deviating from Pavlov's doctrines.³⁴

Pavlov's theory also took hold in Chinese medical science. According to AnElissa Lucas, the Soviet model influenced 'the [Chinese] Communist Party's manoeuvres to gain political control over medical professionals by reorganizing their associations, journals, teaching curricula, research institutes and health institutions at all levels'.³⁵ Within this reformation, it was suggested that Pavlov's theory should be applied to diverse areas such as immunology, public health, paediatrics nursing, veterinary medicine and Chinese medicine.³⁶ As early as 1952 the *Chinese Journal of Medicine* created a 'Soviet Medical Science' column to introduce Pavlov's work. Another special column invited Guolong Liu to write 30 articles between 1954 and 1956 to introduce Pavlov's theory.³⁷ Doctors of traditional Chinese medicine attempted to identify connections between Pavlov's theory and traditional Chinese medicine in order to legitimize their profession.³⁸ Researchers were criticized for not using Pavlov's theory to explain medical phenomena.³⁹

Pavlov's theory dominated Chinese psychology as well, restructuring psychological research on a physiological foundation.⁴⁰ Following communist restrictions in 1955, the Chinese Psychological Society made Pavlov's theory the core principle for guiding psychological research and teaching.⁴¹ Liru Zhao points out that the Institute of Psychology, Chinese Academy of Sciences, primarily focused on 'studying Marxism-Leninism and

Pavlov's theory, criticizing the bourgeois idealism in the old psychology, learning from Soviet psychology, and developing research in accordance with the reality of communism construction'.⁴² Chinese psychologists used to apply a variety of Western approaches in their research, yet now they dismissed all Western schools without argument.⁴³ Instead, they used Pavlov's theory to define their research methods, objectives and topics such as higher neural activity, memory, psychological development and language.⁴⁴

It should be noted that Pavlovianism did not completely purge Western schools, especially in the case of physiology and medical science. Soviet and Chinese physiologists still acknowledged Darwin's theory, though with certain reservation, and doctors never fully gave up on Western diagnostic and treatment knowledge and practices. Nor did Pavlov's theory become the sole representative of the Soviet comrade sciences; K.N. Kornilov and Aleksei N. Leontiev's works were occasionally taught in Chinese psychology as well. Further, I do not wish to give the impression that Chinese scientists and practitioners readily submitted themselves to Pavlovianism without any resistance. Fei Peng modestly criticized that Pavlovian psychology does not take into account the social and linguistic aspects of psychological phenomena.⁴⁵ Shu Pan subtly criticized the Pavlovian ontological assumption of psychological phenomena and pointed out the limits of Pavlovian methods in psychology.⁴⁶ However, these arguments did not receive positive response. Some Chinese medical doctors used Soviet theoretical terms to market their indigenous knowledge and practice.⁴⁷ As I will argue later on, the lingering of Western schools, as well as Chinese scholars' lip service to Pavlovianism, partially conditioned the differentiation of Pavlovianism across discrepant disciplines in the late 1950s.

Interlude: De-Stalinization and the Hundred Flowers Campaign

Things changed in the mid-1950s, when the CCP became critical of the Soviet model.⁴⁸ Since the early 1950s Soviet industrial and agricultural productivity had slowed down, and the de-Stalinization movement in the mid-1950s exposed a number of legal, economic, agricultural and scientific problems existing in the Soviet model. The Hungarian uprising also alerted the CCP. Worrying that China might repeat the same mistakes made by the Soviet Union, during 1955 and 1956 Chairman Mao developed the idea of 'learning the lessons from the Soviet Union', warning that China should not blindly adopt every element in the Soviet model. Meanwhile, he reasserted that China should continue learning the Soviet social sciences and Marxism-Leninism in a way that was undogmatic and in accordance with the Chinese social reality.⁴⁹

Even within the Soviet Union, the status of Pavlov's theory began to change gradually. The death of Stalin in 1953, and especially Nikita Khrushchev's denunciation of Stalinism at the 20th Party Congress in 1956, created a relatively liberal atmosphere. Stalin's legacies in the human sciences were judged negatively by the Thirteenth All Union Congress of Physiologists, Biochemists and Pharmacologists and the Board of Academy of Science of the USSR.⁵⁰ 1955 and 1956 witnessed the rehabilitation of the physiologist, Leon Abgarovich Orbeli, who had fallen victim during the Pavlov Session. Nonetheless, Pavlovianism lingered in physiology until the 1960s.⁵¹ In psychology,

Pavlovianism was formally countered once S.L. Rubinstein published his critical article in early 1955.⁵² Social and industrial psychology enjoyed development as a combined result of official prodding and scholarly interest.⁵³ Scientific developments made in the West were once again introduced into the Soviet Union. It should be noted that this de-Stalinization political 'thaw' did not grant full autonomy to scientific research – sciences were still often kept within the party line as a weapon for class struggle rather than for their own sake. Western psychological schools were still often labelled as bourgeois.⁵⁴ Nor did the liberalization process proceed without regression. The reins sometimes became tightened again against 'revisionism';⁵⁵ the geneticist Lysenko, for instance, reclaimed his political-academic power in 1957 and 1958. In addition, the Soviet people's reactions toward de-Stalinization varied between advocacy, uncertainty, confusion and opposition.⁵⁶ Nevertheless, in general terms the de-Stalinization movement created a relatively open atmosphere for intellectuals and Pavlovianism was in gradual decline.

The Chinese political environment was changing as well. A few years after the Learning-from-the-Soviet-Union Campaign, China had secured its international status after participating in the Korean War; internally it achieved relative unity and stability; socialization of industry and agriculture was in progress; and the thought reform of the intellectuals appeared to be successful. The CCP's policy toward the intellectuals oscillated between two directions: repression when the CCP needed to control the intellectuals, and relaxation when it needed the intellectuals to be productive and cooperative.⁵⁷ As the CCP gradually gained confidence, it decided to grant intellectuals more freedom so that they could make greater contribution to the nation-building project.⁵⁸

Against this international and national political background, in 1956 Chairman Mao initiated the Hundred Flowers Campaign that encouraged intellectuals to express freely their academic, artistic and political opinions. Dingyi Lu, the Director of the Publicity Department of the CCP, delivered an address, *Let One Hundred Flowers Bloom, One Hundred Schools of Thought Contend*, to a major gathering of distinguished scientists, doctors, teachers, writers and artists:

'Letting a hundred flowers blossom, a hundred schools of thought contend' means that we stand for freedom of independent thinking, of debate, of creative work; freedom to criticize and freedom to express, maintain and reserve one's opinions and questions of art, literature or scientific research'.⁵⁹

Lu explicitly rejected the idea of labelling Pavlov and Michurin's theories as necessarily socialist and Western medicine and the Mendel-Morgan genetics as necessarily capitalistic. In his opinion, Chinese scientists should learn critically from the Soviet Union as well as the capitalistic countries. Lu's comments imply that the Learning-from-the-Soviet-Union had passed its climax and the status of Soviet sciences had become indeterminate to certain degree. Nonetheless, Lu declared that the Hundred Flowers Campaign granted freedom to the people and not the counter-revolutionists; a clear boundary must be drawn between the people and the enemies of the new regime. Patriotism and socialism should serve as the basis for uniting people; dialectical materialism must be firmly held against idealism. Arts and sciences should be used as the weapon for class struggle. They should serve the proletariats, the people, and not the

bourgeois, property owners and imperialism. Regardless of their disciplines and professions, intellectuals must be aware of their political stance and not develop art for the sake of art, science for the sake of science.

Chinese scientists responded positively to the Hundred Flowers Campaign; the *Chinese Science Bulletin* published a series of articles where leading scientists discussed how the campaign should proceed.⁶⁰ Outspoken scholars criticized the politicization of scientific research in the previous years and proposed that the publication system must grant greater freedom to encourage free discussions and debates.⁶¹ A few disciplines, including genetics, history, philosophy and economics, initiated significant debates.⁶² For instance, the famous Qingdao Conference in 1956 ended the dominance of Lysenko-Michurinism over Chinese genetics and restored the legitimacy of Thomas Hunt Morgan's theory.⁶³ This reinvigorating atmosphere had less impact on physiology, medical science and psychology, however. In her speech to the first National People's Congress in June of 1956, Dequan Li, the Minister of Health of the People's Republic of China, briefly criticized the Learning-from-the-Soviet-Union Campaign for creating some problems for China's health care system.⁶⁴ In the same year the *Chinese Journal of Medicine* published an article proposing to learn advanced medical knowledge from all countries, though with the reassertion that the Soviet medical science was still important to learn.⁶⁵ The thirteenth convention of the Chinese Association for Physiological Sciences endorsed the Hundred Flowers Campaign.⁶⁶ Concerning psychology, the Publicity Department of the CCP advised that psychologists should have more freedom in deciding their research orientation,⁶⁷ yet this announcement produced little concrete effect. While Chinese psychologists interpreted Pavlov's theory in different ways, none of them referred to the Hundred Flowers Campaign as a political resource to challenge the Pavlovian hegemony. Shu Pan subtly pointed out the limitations of the Pavlovian approach, yet received no positive response.⁶⁸ *Acta Psychologica Sinica* published no further articles against Pavlov's theory during the Hundred Flowers Campaign. In contrast, the chemist, Minglong Huang, was more outspoken concerning the limitation of Pavlovianism and the dogmatism associated with it.⁶⁹

Some scientists and intellectuals beyond the academic circle expressed much richer and more severe criticism toward the CCP's policies. Leaders of the non-Communist parties, literary circles, government functionaries, teachers, students and others, joined the debate through journals, pamphlets, newspapers and wall posters. They questioned the role of the CCP in intervening in science and education, the attitude and behaviour of some of the Party members, the ways in which the so-called counterrevolutionaries were treated, the dogmatism in learning from the Soviet Union, the lack of distinction between government and party and, most severely, the communist monopoly of power.⁷⁰ By June 1957, some intellectuals' criticisms intensified to the extent that the CCP perceived its leadership being threatened, especially when international anti-Soviet Union sentiment was on the rise. Astonished, Chairman Mao called a halt to the Hundred Flowers Campaign, declaring that some 'rightists' were taking it as an excuse to attack the CCP and to perpetuate capitalistic bourgeois ideology. The debate was no longer viewed as among the people, but between the people and the enemies. The Anti-Rightist Campaign was quickly launched to identify and purge rightists, defined as people who come from the exploiting classes, who praise the bourgeoisie against the socialist economy, politics

and culture, who oppose the government's basic policies, who deny the achievements of the socialist revolution and construction and who subvert the party's leadership.⁷¹ Depending on the degree of infringement committed, more than half a million alleged Rightists were criticized, laid off, subjected to labour reform in farm or factory or imprisoned. Although the campaign was primarily targeted at intellectuals who directly protested the communist politics, to some degree it radiated to scientists whose works potentially bore the mark of capitalistic ideology.⁷²

Anti-Rightist Campaign and the differentiated status of Pavlovianism

Academia as a whole quickly responded to the Anti-Rightist Campaign with compliance. In order to demonstrate their political loyalty, many scientists reaffirmed their adherence to the Soviet science. The 21st issue of the *Chinese Science Bulletin* in 1957 was entirely devoted to exaltations of Soviet sciences and corollary expressions of political loyalty from various disciplines such as physics, space science, chemistry, geology and psychology. Richang Cao, for instance, declared that it was imperative for Chinese psychologists to follow Pavlov's theory in order to free themselves from the impasse where the capitalistic scholarship was trapped.⁷³ Lianzhang Fu, the Deputy Minister of Health, denounced the 'rightist attack' and reaffirmed the superiority of Soviet medical science over its capitalistic rivals.⁷⁴ Two medical journals and a newspaper highlighted a same article entitled 'Firmly Learn from the Soviet Union'.⁷⁵ Physiologists were not as eager to express their political loyalty; there was no identifiable periodical publication that explicitly refuted the rightist trend in 1957. Nonetheless, in 1959, the leading physiologist, Yibing Zhao, wrote an enthusiastic article to celebrate the application of Pavlov's theory in Chinese physiology.⁷⁶ Also, in a review of the textbook *Physiology*, Aihua He used Pavlov's theory as one primary criterion for making evaluation.⁷⁷ Although Pavlovianism abated to a certain degree during the Hundred Flowers Campaign, it still appeared as a safety zone within the current tightening political movement against the capitalistic bourgeois ideas. Such perception was conditioned by the Sino-Soviet relation at that point. Chairman Mao had not made up his mind to break fully from the Stalin model. To him, Stalin's legacy should be divided into 30% mistakes and 70% accomplishments.⁷⁸ He also defended the Soviet Union when international criticisms became overly radical.

By 1958, physiology, medical science and psychology had gone through similar political events: pressed by the Learning-from-the-Soviet-Union Campaign, they all adopted Pavlov's theory as the guiding principle; the Hundred Flowers Campaign modestly weakened Pavlovianism; and the Anti-Rightist Campaign tightened the ideological control again and reasserted the authority of Pavlov's theory. However, when the Anti-Rightist Campaign appeared to be gradually abating in 1958, it had a sudden resurgence during an educational revolution. The result was a vehement criticism of psychology, according to which Pavlovianism was no longer a comrade science, an embodiment of Marxist-Leninist philosophy, an exemplifier of the superiority of communism or a manifestation of political loyalty. In this criticism it became the opposite: a capitalistic science.

The educational revolution stemmed from a historical complex including the Anti-Rightist Campaign.⁷⁹ In the mid-1950s, the CCP gradually realized that the Soviet model

was not fully applicable to the Chinese society. When economic and industrial developments required more educated labours, the limited and ill-structured educational resources had become a bottleneck in the social construction process. The alarming ending of the Hundred Flowers Campaign indicated that Chinese intellectuals still required control, and educational institutions were among the most important sites for that purpose. In 1958, Chairman Mao called for an educational revolution, according to which education must serve the proletariat under the guidance of the CCP. The number of new schools and student enrolment rapidly increased in both urban and rural areas; schools and factories were merged where students were required to study half of the time and work half of the time. A new round of thought reform took place with the aspiration to make higher education available to every citizen over 15-years-old and to cultivate large works that were intellectually and physically competent and politically reliable. Against this background, the political leader Sheng Kang, in consultation with the Publicity Department of the CCP, made psychology the entry point to revolutionizing scientific research. In July 1958, the criticism movement started from Beijing Normal University, where Sheng Kang held a position of honorary professor, and quickly spread over the entire country.⁸⁰ The criticism was targeted at the tendencies of 'biologization' and 'abstractionism' in psychology.⁸¹ Biologization refers to the research practice that reduces psychological phenomena to physiological processes; abstractionism refers to the research practice that understands human psychology within a controlled laboratory and isolated from social reality. It was suggested that these trends legitimized bourgeois consciousness, neglected the class nature of human psychology and thus could not serve the communist social construction. Psychology was viewed by leftist politicians and revolutionary academics as capitalistic and counter-revolutionary; some psychological researchers were suspended and a number of psychologists suffered maltreatment.⁸² Contrary to Laurence Binet Brown's comment,⁸³ the self-claimed natural-scientific status did not protect psychology, for it was precisely the naturalization of psychological phenomena, or the lack of social analysis, that subjected psychology to criticism.

Historians commonly consider that the 1958 criticism was aimed at Western psychologies rather than the Soviet Pavlovian psychology.⁸⁴ Such views are based on the fact that most critical articles claimed that they were targeted at the capitalistic, bourgeois psychology. However, historians should not simply accept what these historical texts *claimed to be* without analyzing what they actually *did* in that highly charged political environment. Since the Learning-from-the-Soviet-Union Campaign all Western psychological schools had been abolished: behaviourism was denounced in 1953,⁸⁵ psychoanalysis in 1955,⁸⁶ functional psychology in 1956,⁸⁷ Gestalt psychology in 1957,⁸⁸ and so on. Psychological measurement and social psychology were fully abandoned as well.⁸⁹ In his presidential address to the first congress of the Chinese Psychological Society, Shu Pan summarized that, in the 1950s, Chinese psychologists had spent most of their time in thought reform, learning Russian, studying Marxism-Leninism and Pavlov's theory, translating Soviet works and replicating experiments conducted by Soviet psychologists.⁹⁰ By 1958, Chinese psychological research was fully dominated by Pavlov's theory and there was nothing Western left to be criticized. When a few psychologists published articles in 1958 criticizing behaviourist psychology, Gestalt psychology and functional psychology, they were merely rehashing criticisms put forward a

few years before;⁹¹ in other words, they were criticizing Sigmund Freud, John B. Watson, John Dewey, Wolfgang Köhler and others instead of any Chinese psychological research currently being conducted following these Western traditions – for there were none. For instance, Heqin Chen published one article self-criticizing his application of John Dewey's pragmatism; a historical retrospect reveals that this is only one of a series of criticisms and self-criticisms regarding Dewey's theory since 1951.⁹²

Gregory Razran expresses an opposite opinion:

There is sufficient evidence to think that psychologies in China and in Poland have become, under the impact of Pavlovian propaganda and the aegis of the Communist State, only much more what we would call behavioristic (the Russians will resent the American appellation), without being fully metamorphosed into a not-to-be-questioned Pavlovian orthodoxy.⁹³

However, Razran immediately acknowledges that his information on Chinese psychology is gathered wholly from Russian sources and he calls for review of literature in Chinese. Further, Razran's opinion was never reflected in the 1958 criticism.

Most critical articles did not specify which particular Western school they were criticizing. Rather than 'tilting at windmills' – criticizing Western research which was no longer found in Chinese psychology – these texts were more aimed at existent psychological research informed by Pavlov's theory. Indeed, the intellectual trends being criticized, namely 'biologization' and 'abstractionism', capture more accurately Pavlov's approach than the heterogeneous Western schools that were not all biologizing and abstract. This muddy situation bewildered historians Robert Chin and Ai-li S. Chin, who considered the criticism as directed at the Western psychologies but 'also revealed a dissatisfaction with Soviet psychology and the new emphasis of Pavlovianism'.⁹⁴ Some outspoken critics spelled out the truth; for instance, Shujian Wu explicitly opposed Pavlovianism:

Professor Changling Sun openly discussed in class: 'nowadays the most important question in psychology is how to thoroughly apply Pavlov's theory of higher neural activity. From now on, we must transform psychology into a real Pavlovian science.' Apparently, this is to subject psychology, which has a strong class nature, into the plight of biologization.⁹⁵

If the 1958 criticism was in fact largely targeted at Pavlovian psychology, why did it not make its target explicit? This question can be answered when one takes the perspective of the critics, who identified themselves with the CCP's policy. It would be extremely embarrassing for the critics to revoke a political token that they had elevated to the highest intellectual-political status just a few years before. In order to transform psychology without exposing the inconsistent meanings attached to Pavlovianism, most critics chose to avoid mentioning the name of Pavlov or the label of Soviet psychology at all, only focusing on what psychological research was being conducted, which was predominantly Pavlovian. On some occasions, in order to justify their misnamed accusation, critics alleged that psychologists were conducting bourgeois research within the cover of Marxism and Pavlovian theory.⁹⁶ Such argument is belied by its neglect in distinguishing Pavlov's theory from bourgeois approach, and in its failure to establish why Pavlov's theory is Marxist, as well as in its advantage over Western schools in connecting psychological research with class

analysis. This politically charged scenario was guided by an intriguing discursive performance: it criticized Pavlovian psychology in the name of Pavlov.⁹⁷

The 1958 criticism of psychology was followed by a nationwide debate the next year when the Anti-Rightist Campaign and the educational revolution abated.⁹⁸ Scholars from various cities engaged in reflection on the subject matter, research methods, social relevance and natural-scientific/social-scientific status of psychology, as well as Pavlovianism in psychology.⁹⁹ A few psychologists defended Pavlovian psychology without their previously taken-for-granted sense of orthodoxy. Houcan Zhang had recourse to the Marxist-Leninist view that mind is the reflection of reality, stating that higher neural activity, which is emphasized in Pavlov's theory, is the process through which mind reflects reality. Nonetheless, she acknowledged that psychological study should not be reduced fully to physiology and that subjectivity is shaped by social life.¹⁰⁰ A number of scholars, while advocating continued application of Pavlov's theory, conceded that it did not solve all questions and that other approaches should be used as well.¹⁰¹ Richang Cao, one of the most determined Pavlovian psychologists, commented that, despite the important scientific advance made possible by Pavlov's contribution, studies of brain function and the physiological basis of psychology were still limited.¹⁰² Most other scholars avoided the name of Pavlov and the label of Soviet psychology at all, or mentioned them very briefly. The Pavlovian hegemony ended.

Now we may return to the trans-disciplinary context and ask the question: what destabilized the status of Pavlov's theory so unevenly across physiology, medical science and psychology? This question compels us to analyze disciplinary particularities that do not succumb to the grand political scheme traversing disciplines.

Historical locality and discursive performance

The year 1958 witnessed the initial break down of the Sino-Soviet alliance.¹⁰³ From April 1958, the CCP and Soviet leaders discussed building a long-wave radio station on Hainan Island, China, to enable submarine control of the Western Pacific. The CCP leaders proposed that China would cover all the expense and only accept technical assistance from the Soviet Union; as a result, China would claim ownership of the station and consider allowing the Soviet military to use it. The Soviet leaders insisted on providing the majority of the funds to ensure Soviet access to the station. The negotiation process was far from smooth. In July the Soviet leaders presented a second proposal, perhaps as a solution to the dispute over the long-wave radio station, that China and the Soviet Union should establish a joint fleet. The implication was that the Soviet military would gain access to China's coastline. This proposal further infuriated Chairman Mao, who became suspicious that the Soviet Union's intention was to sabotage China's sovereignty. These two events caused intensive confrontations between the Chinese and the Soviet leaders.

The changing Sino-Soviet relation put Pavlovianism in an indeterminate, if not awkward, position. On the one hand, Pavlov's theory had become the political-intellectual orthodoxy in the Chinese human sciences since the early 1950s. Some scholars sincerely embraced it while others viewed it as the political high ground on which scientific research could be sustained. On the other hand, as the CCP leaders started to question the Soviet model, and even developed enmity toward the Soviet Union, Pavlov's theory

gradually lost its unshakable authority; it was no longer a safe harbour where the political storm subsided. Pavlovianism had become a liminal object that might glide to any direction, depending on circumstances.

Against this precarious background, a number of theoretical, practical and disciplinary cultural factors differentiated the status of Pavlovianism across disciplines. First of all, Pavlov's theory had different degrees of impact on physiology, medical science and psychology. It achieved more, or at least promised more, in psychology than in the other two disciplines. It had the potential to address a wide range of psychological topics: learning, higher neural activity, psychopathology, psychotherapy, human development, intelligence, language, personality, person-environment interaction and so on. Further, its emphasis on the physiological foundation of mental life not only promised an integrative understanding of human beings but also lent the credibility of objective knowledge to psychologists who long craved it. It is no wonder that its most vibrant American child, behaviourism, proudly made the ambitious claim that it was fully able to engineer human development as 'a purely objective experimental branch of natural science'.¹⁰⁴ The Learning-from-the-Soviet-Union Campaign created a perfect opportunity for Pavlovianism to colonize psychology to almost full extent.

In contrast, Pavlov's theory is completely unable to envelope physiology and medical science. One document illustrates this point. In 1952, the Ministry of Education of the People's Republic of China issued a series of course curricula for middle and high school education in biology. The physiology course curriculum for first-year high school students gives great emphasis to Pavlov's theory: it requires the two-hour introduction to include 'the contents and tasks of human anatomy and physiology' and 'the biography of the great physiologist Pavlov'.¹⁰⁵ However, only two of the 11 following learning units – the digestive system and the nerve system – are directly related to Pavlov's theory. Other units, such as the respiratory system, the musculoskeletal system, the circulation system, the skin and the endocrine system, are hardly relevant to Pavlov's theory. Insofar as these topics were still included in course curricula and research agendas, it was impossible for Pavlov's theory to colonize physiology fully. Unlike psychology, Chinese physiology was still open to Western thought. For instance, Darwin's theory was included in both the first-year and second-year curricula.¹⁰⁶ The tolerance to Darwin's theory is understandable if we take into account that Darwin's theory was viewed favourably by Marx and Engels and that it was accepted by some Soviet physiologists.¹⁰⁷

Similarly, medical science is required to address many problems unrelated to the salivating dog, reflex conditioning, or higher neural activity, and Pavlov 'had very little to say about how his theory might be translated into medical practices that would be useful to human beings'.¹⁰⁸ Even during the Learning-from-the-Soviet-Union Campaign, in order to address the dreadful medical conditions with limited professional resources, the CCP still mobilized the traditional Chinese doctors, who outnumbered the handful of scientifically trained physicians by 30–50 times and whose practice did not require costly scientific equipment.¹⁰⁹ The Academy of Traditional Chinese Medicine was established in 1955. While great efforts were made to explain traditional Chinese medicine in Soviet scientific terms, they had little impact on the actual treatment of disease.¹¹⁰ Similar to the Soviet Union, China never fully rejected Western medicine in its oscillating policy. When modern physicians were required to study Marxism and the Soviet medical

knowledge, it is questionable to what extent their research and practice was actually transformed. Lian Zhu, for instance, relied on much Western medicine in her actual practice while using Soviet medical knowledge to legitimize her theoretical system of the 'new acupuncture'.¹¹¹ Further, with its strong practical orientation, Chinese medicine was complicated in local conditions, practices and policy changes. Lucas suggests that, while the Chinese medical profession imitated the Soviet model in the early 1950s, at the same time it continued the 'state medicine' model originated in the 1930s that gave more emphasis to effective distribution of healthcare services to various regions while downplaying the importance of scientific advancement.¹¹² The loose process of licensing traditional Chinese doctors indicates strong pragmatism and disregard of formal scientific training.¹¹³ The CCP's practical reliance on medical experts mirrored the Soviet Union's strenuous efforts to expand the number of doctors.¹¹⁴ At the same time, some local conditions made the Chinese medical practice different from the Soviet model. By 1958 the Soviet Union gave medical priority to radiation sickness, heart disease, cancer and infectious diseases, while paying least attention to the epidemic diseases of the past; China had exactly the opposite medical problems.¹¹⁵ These reasons explain why Chinese physiology and medical science, unlike psychology, did not fully succumb to Pavlovianism.

While the Anti-Rightist movements 'made people both within and outside the [Party] afraid to tell the truth',¹¹⁶ leaders in physiology and medical science often undermined Pavlovianism with performative advocacy. At this point one needs to analyse the publications and speeches by Dequan Li and Lianzhang Fu, the Minister and the Deputy Minister of the National Ministry of Health. While being very active in directing Chinese medical science in various political and academic aspects according to the CCP's policy,¹¹⁷ Li never made a public address in the early 1950s to promote the Learning-from-the-Soviet-Union Campaign. In 1956 she criticized the Learning-from-the-Soviet-Union Campaign for having a negative impact on Chinese health work with a brief mention that Chinese people could learn from the Soviet Union for treating malaria.¹¹⁸ In the beginning of the Anti-Rightist Campaign, Li made one address, *The Party is Capable of Directing Health Science and Technology*, that included a few sentences that briefly reasserted that Chinese medical scientists should continue learning from the Soviet Union.¹¹⁹ Given the political environment as well as the main theme of the address, it is very likely that Li was reluctantly expressing loyalty to the CCP rather than wholeheartedly advocating Pavlov's theory. In her subsequent addresses in the following years, she rarely mentioned Soviet medical science, except briefly acknowledging that the Soviet Union and other socialist countries had helped China to control disease rates. She did, in contrast, praise the policy of combining Western and traditional Chinese medical knowledge.¹²⁰

Lianzhang Fu's speeches exhibited a similar pattern, though with more references to the Soviet Union. During the Learning-from-the-Soviet-Union Campaign, Fu wrote an article to mourn the passing of Stalin.¹²¹ In 1956, Fu suggested that Chinese medical scientists should learn not only from socialist countries but also from capitalist countries, and that doctors should combine Western and Chinese medicines.¹²² These two calls can be taken as more genuine expressions, that were less subject to political pressure, as they were made during the Hundred Flowers Campaign. Upon the launch of the Anti-Rightist Campaign, Fu's position changed drastically; he firmly reasserted that Chinese medical

scientists must learn from the Soviet Union.¹²³ This was, however, Fu's final pronunciation of supporting the Soviet model; as the Anti-Rightist Campaign subdued, Fu never again called for imitating Soviet medical science.

Because of all the reasons discussed above, the massive Learning-from-the-Soviet-Union Campaign did not make physiology and medical science fully dominated by Pavlov's theory. When political control over intellectuals tightened in the late 1950s, the most convenient strategy for physiologists and medical scientists to preserve their research was to declare further adherence to Pavlovianism, the political-academic orthodoxy. Psychology was in a different situation. If the Learning-from-the-Soviet-Union Campaign did not make every Chinese psychologist Pavlovian, it at least succeeded in muting dissents and eradicating all Western approaches in psychology. During the 1958 criticism, it would be ideal for critics to attack psychological researches conducted with Western approaches; however, Western components were barely found in Chinese psychology for this purpose. Any criticism directed to the contemporary research practice could only be a criticism of Pavlovian psychology, even when the critics often avoided so acknowledging. Such irony seems to illustrate one ancient Chinese proverb: 'Things will develop in the opposite direction when they become extreme' (Wujibifan).

The above explanation rests on one precondition: the 1958 criticism as a continuation of the Anti-Rightist Campaign only took place in psychology and not in physiology or medical science. One might ask: why was the criticism only targeted at psychology in the first place? The reason is that the communist ideology had greater impact on psychology than on physiology and medical science.¹²⁴ Nicholas DeWitt argues that 'The impact of ideology upon the Soviet scientists varies. One variation is by field of knowledge, with physical sciences the least vulnerable, social sciences the most vulnerable, and the life sciences somewhere in the middle'.¹²⁵ As for psychology, it was 'among the most ideologically sensitive branches of Soviet science; it is subject to rather strict ideological supervision and more than any other sector of Soviet thought has been the scene of tempestuous methodological debate'.¹²⁶ Indeed, while Soviet physicists were able to make significant progress 'in spite of Marxism' and Soviet psychophysiology enjoyed progress unimpeded by state control, Soviet psychology fell into lamentable infertility under the constriction of the communist ideology.¹²⁷ Razran comments that 'in Soviet ideology cognitive psychology (not unlike literature, art, philosophy, and the social sciences) is much more class-construed and class-angled than are psychophysiology, physics, and engineering'.¹²⁸

These comments are applicable to the Chinese context as well.¹²⁹ In his *On the Ten Major Relationships* in 1956, Chairman Mao suggested that Chinese intellectuals should continue studying the Soviet social sciences and Marxism-Leninism, and, in contrast, actively learn advanced natural sciences and technologies from foreign countries, including the capitalistic countries.¹³⁰ In his key speech, *Let One Hundred Flowers Bloom, One Hundred Schools of Thought Contend*, Lu asserted that while natural sciences do not have a class nature, art, literature, philosophy and social sciences are class-laden. Lu further commented:

[The natural sciences, including medicine] have their own laws of development. The only way they tie up with social institutions is that under a bad social system they make rather slow progress, and under a better one they progress fairly rapidly ... It is, therefore, wrong to label a

particular theory in medicine, biology or any other branch of natural science 'feudal,' 'capitalist,' 'socialist,' 'proletarian' or 'bourgeois'.¹³¹

Lu argued that literature and art should serve the proletariat; philosophers and social scientists needed to avoid turning into idealists and bourgeois scholars. Influenced by such views, Chinese social sciences of the 1950s enjoyed less autonomy and suffered greater ideological pressure.¹³² According to Krishna Prakash Gupta, social sciences in China were put under strict political control because of their subversive potential; a number of leading scholars in sociology, history, economics, political science, anthropology, philosophy and psychology were chosen as the 'model' targets of criticism.¹³³ Sociology was declared as a pseudoscience and banned in 1952.¹³⁴ Anthropology was almost fully repudiated with only ethnology remaining.¹³⁵ History grew numerically as an academic and pedagogical tool for legitimatizing dialectical materialism, resonating with Alexander Dallin's observation 'the propagandist aspect of much of Soviet history and political science attracts to it "party hacks" and opportunists adept at following dictates, not evidence'.¹³⁶ Certainly, it is negotiable theoretically whether psychology is a natural science or social science; however, within the historical context it suffices that the critics defined psychology as a social science with strong party and class characteristics.¹³⁷ Or at least, when the critics demanded that psychology should become a social science, psychologists' self-claim of natural-scientific status was viewed as a bourgeois wolf appearing in sheep's clothing. In this regard, it is hardly surprising that the political leaders debated between education and psychology as an entry point to educational revolution, and ultimately chose the latter because psychology as the study of mind appeared to be the antithesis of materialism.¹³⁸ This does not imply that Chinese physiology and medical science were exempt from communist political control; the Learning-from-the-Soviet-Union Campaign swept over all the three disciplines being discussed. Kim Taylor, for example, argues that the development of Chinese medicine in this period owed much to the fact that it fitted the political ideal of the communist revolution.¹³⁹ My argument is that physiology and medical science were much less vulnerable and precarious in comparison with psychology. In retrospect, when the Department of Universities and Sciences attempted to rectify the errors committed in the campaign against scholars, it regarded the criticism of psychology as the most notorious example.¹⁴⁰ Modern Chinese psychologists talk about the 1958 criticism not only with bitterness, but also with puzzlement.

Conclusion

How can we make sense of the striking contradiction across disciplines; namely, that in the late 1950s Pavlovianism was held as the political-academic orthodoxy in physiology and medical science, yet criticized as capitalistic in psychology? Ivan London comments that,

Falling into the Party line is not an automatic affair and poses, moreover, difficulties even for the scientist who wants to conform: He is never quite sure whether he is following the line as intended or as *will* be intended – whether he is underadhering or overadhering.¹⁴¹

In the late 1950s, Chinese physiologists and medical scientists perceived themselves as under-adhering to Pavlov's theory, so that they reasserted their devotion to Pavlov's theory as a self-preservation strategy. Psychology, in contrast, almost arrived at the point of over-adhering to Pavlov's theory and, when it fell under criticism, so inevitably did Pavlovianism. In an oral history interview, the witness Renmei Ren comments:

In order to criticize the trend of biologization in psychological studies, Pavlov's theory cannot be circumvented. After the university remodeling, Pavlov's theory became the sole natural-scientific foundation of psychology. The criticism of psychology cannot be fully achieved if we do not repudiate Pavlov's theory.¹⁴²

The authority attached to Pavlov's theory was not intrinsic or unconditional. Instead, Pavlovianism was established as an ideological token, something that could be either ratified or dismissed under due political circumstance. It is neither intrinsically Marxist or capitalistic, and its relations to various academic disciplines are far from immanent and stable. Even when it appears to be more intimately and comprehensively related to psychology, the relationship may overturn precisely because it has become saturated. Such indeterminacy was further complicated by the deteriorating Sino-Soviet relations as well as the swift changes in the communist party's policies. Stalin's policies, for instance, are commented on as 'Widely publicized declarations notwithstanding, inconsistencies abounded ... Outcomes from one discussion did not translate into clear lessons for other disciplines'.¹⁴³ Regarding the Chinese context, the arbitrariness of the Anti-Rightist Campaign is illuminated by the fact that Chairman Mao suggested certain quotas according to which the campaign participants must be labelled rightists.¹⁴⁴ Any attempt to identify a theoretical truth must fail within the paradoxical history of Pavlovianism in Chinese human sciences; historiographic endeavours can be more productive when looking for struggles, negotiations and performances as the logic of a politically laden history. Chin and Chin comment that, in China, 'the fate of psychology must be studied as a fluctuating process of adjustment between ideological pressure and political movements on the one hand and methodology and the maturation of ideas on the other'.¹⁴⁵ It is evident that the former process dominated the 1950s Chinese psychology.

Nevertheless, Chinese scientists did not fully submit themselves to communist politics. As discussed above, medical scientists and physiologists performatively expressed their loyalty in order to preserve their research. In 1959 Chinese psychologists took advantage of the 1958 criticism to undermine the Pavlovian hegemony developed since the early 1950s.¹⁴⁶ Such agency found expression not in a stark opposition to the dominant political discourse but by skilfully taking advantage of it. Resistance through performative conformity misguides historians to construct a coherent narrative that neglects ruptures, contradictions, negotiations and self-silencing in the primary historical evidence. By treating original historical texts as speaking of their era and authors and not theoretical truth, I have reconstructed a different history of psychology and called attention to the sheer disparate fates of Pavlovianism across disciplines. In response to Ivan London's call,¹⁴⁷ I provide empirical evidence that rejects a homogenous view of Chinese human sciences in the Maoist era. Although physiology, medical science and psychology were all greatly affected by Pavlovianism since the Learning-from-the-Soviet-Union Campaign, their

divergent trajectories in the late 1950s demonstrate that, when local theoretical, practical and professional conditions/relations ruptured the grand political scheme, even the highly centralized political power was unable to dictate the course of historical development fully. The relationships between human sciences and politics in 1950s communist China kept evolving under constant negotiation within a dynamic historical complex.

Acknowledgements

This research project was partially funded by the Faculty of Graduate Studies, the York Centre for Asian Research, and the local Canadian Union of Public Employees at York University. I would like to thank Dr. Thomas Teo at York University and Dr. Howard Chiang at the University of Warwick for their helpful advices, comments, and edits. Thanks to the Cheiron (the International Society for the History of Behavioral & Social Sciences) conference for the stimulating exchange of ideas, especially those made by Dr. Robert Kugelman at the University of Dallas and Dr. Christopher D. Green at York University.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Notes

1. For instance, see Waldemar Kaempffert, 'Science – and Ideology – in Soviet Russia', *New York Times*, 15 September 1946, P. SM3; Ethan Pollock, *Stalin and the Soviet Science Wars* (Princeton and Oxford: Princeton University Press, 2006); Benjamin Zajicek, *Scientific Psychiatry in Stalin's Soviet Union: The Politics of Modern Medicine and the Struggle to Define 'Pavlovian' Psychiatry, 1939–1953* (PhD Dissertation, The University of Chicago, Chicago, IL, 2009).
2. It should be noted that there is a very recent volume that, against the widely accepted total-failure narrative, proposes that the Cultural Revolution was actually beneficial in some areas and that there were potential continuities between the May Fourth Movement and the Cultural Revolution. See Chunjuan Nancy Wei and Darryl E. Brock (eds.), *Mr. Science and Chairman Mao's Cultural Revolution: Science and Technology in Modern China* (Lanham, MD: Lexington Books, 2013). My re-evaluation of the 1958 criticism of psychology takes a similar perspective.
3. Ivan Petrovich Pavlov (1849–1936) was a Russian physiologist and a Nobel laureate. According to Pavlov, a conditioned stimulus (a previously natural stimulus, such as a bell ringing) would trigger a conditioned response after being associated with an unconditioned stimulus (a biologically potent stimulus, such as food). In his classic experiment, Pavlov observed that the dog salivated (unconditioned response) after tasting meat (unconditioned stimulus). Then he rang a bell each time before he gave the dog meat; after several times of repetition the dog began to salivate (conditioned response) when hearing the sound of the bell (conditioned stimulus). Based on this observation Pavlov proposed the classical conditioning theory that also includes a number of related mechanisms, such as extinction, external inhibition, stimulus generalization, stimulus discrimination and latent inhibition. Pavlov's theory had great impact on behaviourism developed by John B. Watson and B.F. Skinner in the United States.
4. Ivan D. London, 'A Note on Soviet Science', *Russian Review*, xvi, 1957, pp.37–41.
5. For Pavlov's influence on psychiatry, see Benjamin Zajicek, *Scientific Psychiatry in Stalin's*

- Soviet Union: The Politics of Modern Medicine and the Struggle to Define 'Pavlovian' Psychiatry, 1939–1953* (PhD Dissertation, The University of Chicago, Chicago, IL, 2009). (Note 1). For animal husbandry, see Jinyao Hu, *Applying Pavlov's Theory to Animal Husbandry* (China: Animal Husbandry and Veterinary Medicine Publishing House, 1953); I acquired this information from a book review by Jianxuan Li, 'Review of Applying Pavlov's theory to animal husbandry', *Animal Husbandry & Veterinary Medicine*, i, 1954, pp.35–38. For education, see Anonymous, 'Pavlov's Theory and Education', *People's Education*, xii, 1953, 49, 24; the original article was published in the Russian journal, *Teacher's Journal*, on 15 August 1953, the author's name cannot be translated back to Russian.
6. Josef Brožek, 'Extension of political domination beyond Soviet genetics', *Science, New Series*, cxi, 1950, pp.389–391.
 7. A number of its articles relevant to my discussion were translated into English in Laurence Binet Brown, *Psychology in Contemporary China* (New York: Pergamon Press, 1981).
 8. For instance, the primary objectives of the *Chinese Science Bulletin* included popularizing Marxism and guiding scientific research with the CCP's policy. See Editorial, 'Chinese Academy of Sciences' decision concerning the function of Chinese Science Bulletin', *Chinese Science Bulletin*, vi, 1953, pp.1–2.
 9. Irina Sirotkina and Roger Smith, 'Russian Federation', in David B. Baker (ed.) *The Oxford Handbook of the History of Psychology* (Oxford and New York: Oxford University Press, 2012); Jishun Zhang, 'Thought Reform and Press Nationalization in Shanghai: The Wenhui Newspaper in the early 1950s', *Twentieth-Century China*, xxxv, 2010, pp.52–80.
 10. After travelling in western Europe and the United States in 1923, Pavlov criticized Marxism in a lecture given to students in the Military Medical Academy in Leningrad. One excerpt of Pavlov's lecture reads: 'In spite of the fact that you are communists, "rabfaks", etc., if you acknowledge that Marxism and communism are not absolute truths, that it is only a theory in which there may be a part of a truth, but in which there is perhaps no truth, then you will look on all life with freedom of view, but not with such slavery.' It should be noted, though, that in his later years Pavlov withdrew his disapproval of the Soviet regime without revising his theory according to dialectical materialism. See Kenneth W. Rose, Erwin Levold and Lee R. Hiltzik, 'Ivan Pavlov on Communist Dogmatism and the Autonomy of Science in the Soviet Union in the early 1920s', *Minerva*, xxix, 1991, pp.463–475, on p.475.
 11. Ivan D. London, 'De-Stalinization in Soviet Physiology', *Science, New series*, cxxxviii, 1962, pp.16–17.
 12. Jishun Zhang, 'Thought Reform and Press Nationalization in Shanghai' (Note 9); Leonard L. Chu, 'Press Criticism and Self-criticism in Communist China: An Analysis of its Ideology, Structure and Operation', *Gazette*, xxxi, 1983, pp.47–61; David Shambaugh, 'China's Propaganda System: Institutions, Processes and Efficacy', *The China Journal*, lvii, 2007, pp.25–58.
 13. CCCPC Party Literature Research Office, *Biography of Mao Tse-Tung (1949–1976)*, (Beijing, 2003).
 14. I discussed this in an oral presentation, Zhipeng Gao, 'Revisiting Chinese Psychology in the 1950s: Political Intervention, Dogmatism and Resistance', given at the International Society for the History of Behavioral and Social Sciences (Texas, 2013).
 15. Editor, 'National Ministry of Health Organizing "Learning Pavlov's Theory Workshop"', *Chinese Science Bulletin*, x, 1953, pp.96–97. The All-China Federation of Natural Science Societies has been renamed as China Association for Science and Technology.
 16. Learning Pavlov's Theory Workshop Committee, 'Minutes of the "Learning Pavlov's Theory Workshop"', *Chinese Science Bulletin*, xi, 1953, pp.17–19.
 17. Editor, 'Chinese Academy of Sciences and Other Institutes Celebrating Pavlov's 104th

- Birthday', *Chinese Science Bulletin*, xi, 1953, p.5; Editor, 'Chinese Academy of Science Commemorating the Seventeenth Year after Pavlov's Death', *Guang Ming Daily*, 3 March 1953. There is no special meaning attached to the number 17 or 104 in the Chinese culture.
18. Learning Pavlov's Theory Workshop Committee, 'Minutes of the "Learning Pavlov's Theory Workshop"' (Note 16).
 19. Andrei Brushlinsky, 'The "Pavlovian" Session of the Two Academies', *European Psychologist*, ii, 1997, pp.102–105; Ethan Pollock, *The Politics of Knowledge Party Ideology and Soviet Science, 1945–1953* (PhD Dissertation, University California, Berkeley, CA, 2000); Pollock, *Stalin and the Soviet Science Wars* (Note 1); W.W. Gordon, 'The Pavlov Conference', *Soviet Studies*, iii, 1951, pp.34–59; Ivan D. London, 'Contemporary Psychology in the Soviet Union', *Science, New Series*, cxiv, 1951, pp.227–233. Holloway nicely describes how Soviet scientists legitimized their own research by 'quotation-mongering – appealing to the classics of Marxism-Leninism-Stalinism in support of one's arguments', and suppressed others by 'label-sticking – the attempt to defeat an opponent's argument by associating it with a philosophical or political deviation'. See David Holloway, 'Scientific Truth and Political Authority in the Soviet Union', *Government and Opposition*, v, 1970, pp.345–367, on 348. Although only a handful of psychologists attended the Pavlov Session, the impact of this session on Soviet psychology is crucial. See T.R. Payne, 'The "Brain-psyche" Problem in Soviet Psychology: A Survey of its Development and Perspectives', *Studies in Soviet Thought*, vii, 1967, pp.83–100.
 20. Pollock, *Stalin and the Soviet Science Wars* (Note 1); Nicholas Dewitt, 'Soviet Science Education and its Challenge', *The Mathematics Teacher*, li, 1958, pp.66–73.
 21. Robert C. Tucker, 'Stalin and the Uses of Psychology', *World Politics*, viii, 1956, pp.455–483.
 22. Gregory Razran, 'Soviet Psychology since 1950', *Science, New Series*, cxxvi, 1957, pp.1100–1107.
 23. Ivan D. London, 'The Scientific Council on Problems of the Physiological Theory of Academician I.P. Pavlov: A Study in Control', *Science, New Series*, cxvi, 1952, pp. 23–27.
 24. John M.H. Lindbeck provides a nice review of the available scientific and technical resources in China in this period. He estimates: 'Among college graduates there were very roughly 10,000 who had degrees in the natural sciences, 25,000 in engineering, 10,000 in agriculture, 7,000 in medicine and health, and 60,000 in law and the social sciences ... In all fields combined, of those who received one or more advanced degrees before 1949, perhaps 2,000 to 3,000 were on the mainland of China in 1950 ... In the natural sciences, there probably are not over 1,200 scientists with advanced degrees.' John M. H. Lindbeck, 'The Organization and Development of Science', *The China Quarterly*, vi, 1961, pp.98–132.
 25. Thomas P. Bernstein and Hua-yu Li (eds.), *China Learns from the Soviet Union, 1949–Present* (New York: Lexington Books, 2010); Editorial, 'Chinese Academy of Sciences Quickly Learning Russian Language', *Chinese Science Bulletin*, ii, 1953, p.96.
 26. For educational reform, see Ministry of Education of the People's Republic of China, 'Curriculum of Biology for High Schools', *Bulletin of Biology*, iii, 1952, pp.146–152. For an example of translation, see C.M. Павленко, 'Pathological Physiology in my Fatherland: Celebrating the Fortieth Year of the October Revolution', *Патол. физиол. и эксп. меп.* [Pathological Physiology and Experimental Therapy], i, 1957, pp.3–12; here I am following a Chinese translation made by Ruinian Wang, Chengbiao Ke and Wenhan Wei, published in *Progress in Physiological Sciences*, iii, 1958, pp.271–280. An example of a scholar visit is provided by Richang Cao, 'On Psychology: Notes on My Visit to the Soviet Union, Czechoslovakia, Poland and The German Democratic Republic', *Chinese Science Bulletin*, xi, 1951, pp.1188–1191. Another visit to Soviet physiological

- research institutions is recorded by Depei Feng and Jichun Shen, 'Impressions of Soviet Physiology', *Chinese Science Bulletin*, ix, 1953, pp.30–37. One of the guest lectures was given at the Learning Pavlov's Theory Workshop, see Learning Pavlov's Theory Workshop Committee, 'Minutes of the "Learning Pavlov's Theory Workshop"' (Note 16). I will discuss criticism and self-criticism in detail later on.
27. Health Section, Logistics Department of the Military Council, 'Call for Studying Pavlov's Theory', *People's Military Surgeon*, iii, 1953, pp.77–78.
 28. Heng Wu, 'Meeting Minutes of Chinese Academy of Sciences Learning Soviet Sciences', *Chinese Science Bulletin*, viii, 1954, pp.6–11; Zan Ding, 'The Popularization of Pavlov's Theory in China', *Popular Science*, x, 1954, pp.368–369.
 29. Min-ling Yu, 'Learning from the Soviet Union: Chinese Communist Propaganda and its Effects, Bulletin of the Institute of Modern History', *Academia Sinica*, xl, 2003, pp. 99–139.
 30. For examples of officially required curricula see: Ministry of Education of the People's Republic of China, 'Curriculum of Biology for High Schools' (Note 26); an example of the textbook can be found in Fengyan Xu, *Physiology* (Beijing: People's Medical Publishing House, 1960).
 31. This special column began with Yibing Zhao, 'The Physiological Basis of Higher Neural Activity (1)', *Bulletin of Biology*, v, 1955, pp.33–37, and ended with Yibing Zhao, 'The Physiological Basis of Higher Neural Activity: Developments of Pavlov's Theory (13)', *Bulletin of Biology*, xi, 1956, pp.44–51.
 32. This declaration was recorded in Anonymous, *Session on Physiological Questions Concerning the Conceptualizations of Professor Pavlov: The Shorthand Notes* (Moscow: Izdatelstvo AN USSR, 1950), p.14. It was followed by Chinese scientists: Yibing Zhao, 'Pavlov and Physiology', *Bulletin of Biology*, x, 1952, pp.16–19; and Jie Li and Changbo Teng, 'Preliminary Opinions on Minying Liu's Book *Pavlov's Theory of Higher Neural Activity*', *People's Military Surgeon*, vii, 1954, pp.525–529.
 33. Fuzhou Wang, 'A Few Immunology Questions from the Perspective of Neurology', *People's Military Surgeon*, x, 1953, pp. 840–844; Yibing Zhao, 'Introducing Human Anatomy', *Bulletin of Biology*, xi, 1953, pp.443–448; Yaozhong Fang, 'Introducing a Few Basics of Modern Pathophysiology', *Jiangxi Journal of Traditional Chinese Medicine*, ix, 1954, pp.4–13.
 34. Li and Teng, 'Preliminary Opinions on Minying Liu's Book' (Note 32). The authors commented that Minying Liu's book is poorly written; it fails to achieve the aim of introducing Pavlov's theory and contains many serious shortcomings and errors. Specifically, this book fails to include many important topics such as neuropathology and the historical and philosophical origins of Pavlov's theory; it explains some ideas in curtailed or erroneous ways, it introduces too much capitalistic knowledge to the extent of overriding Pavlov's theory and it suggests many subjectivistic research methods. At the end the authors demand that Liu should publically correct his/her mistakes. A response was made in Minying Liu, 'Response to Comments: My Self-criticism of the Mistakes and Flaws in my Book *Pavlov's Theory of Higher Neural Activity*', *People's Military Surgeon*, iii, 1955, pp.173–174.
 35. In a sincere tone, Liu thanked the critics, stating that their comments were mostly correct. Liu criticized him/herself as being irresponsible to scientific research and to the readers. Liu explained that sometimes he/she avoided introducing certain Pavlovian ideas because of limited literature available as well as his/her lack of in-depth understanding of Pavlov's theory. Liu acknowledged that he/she needed to learn more about Pavlov's reflexology and to recognize the counter-revolutionary nature of Western theories. Nonetheless, Liu contended that a number of issues pointed out by the critics required further discussion. Criticism and self-criticism, as illustrated in the case of above correspondences, is one of the common strategies for thought regulation in the Maoist era. See Chu, 'Press Criticism and Self-criticism in Communist China

- (Note 12). p.35. AnElissa Lucas, 'Changing Medical Models in China: Organizational Options or Obstacles', *The China Quarterly*, lxxxiii, 1980, pp.461–489, on p.482.
36. Fuzhou Wang, 'A Few Immunology Questions from the Perspective of Neurology' (Note 33); Gongshao Ye, 'Pavlov's Theory and the Development of Public Health', *Chinese Science Bulletin*, xi, 1953, pp.12–13, 8; Lanfan Ma, 'Preliminary Personal Understanding of a Few Issues in Pediatrics after Learning Pavlov's Theory', *Chinese Journal of Medicine*, vi, 1956, pp.409–411; Minying Liu, 'Nursing Must be Based on Neurology Theory', *Chinese Journal of Nursing*, ii, 1954, pp.5–7; Shenxuan Wang, 'Research on the Six Channels Principle in Zhang Zhongjing's *Shang Han Lun* from the Pavlovian Perspective', *Shanghai Journal of Traditional Chinese Medicine*, vii, 1955, pp.16–19; Chuping Zhu, 'Applying Three Basic Principles of Pavlov's Theory to Veterinary Practice', *Animal Husbandry & Veterinary Medicine*, vi, 1954, pp.225–227. Also Jinyao Hu, *Applying Pavlov's Theory to Animal Husbandry* (Note 5).
 37. This special column began with Guolong Liu, 'Pavlov's Theory of Higher Neural Activity and its Application', *Chinese Journal of Medicine*, iv, 1954, pp.23–28, and ended with Guolong Liu, 'Pavlov's Theory of Higher Neural Activity and its Application (30)', *Chinese Journal of Medicine*, xii, 1956, pp.48–54.
 38. Huankui He, 'Zhang Zhongjing's *Shang Han Lun* from the Pavlovian Perspective', *Jiangxi Medical Journal*, x, 1954, pp.21–29; Kim Taylor, *Chinese Medicine in Early Communist China, 1945–1963: A Medicine of Revolution* (New York: Routledge, 2005).
 39. Tao Xu, 'Critique of Teleology', *Chinese Journal of Medicine*, viii, 1956, pp.573–574. Xu asserted that Qinglin Dai should not have argued that microfilariae periodically appear in the bloodstream in adjustment to a mosquito's nocturnal habit so that it can reproduce and complete its life circle. Such a view, according to Xu, implies that microfilariae's behaviour is purposeful and teleological. Further, Xu criticized Qinglin Dai for distorting facts in his comments that 'most clinicians' agree upon this knowledge. It was said that by making teleological arguments and misrepresenting other clinicians' views, Qinglin Dai committed the error of idealism. Xu argued that a correct answer must be based on Pavlov's theory and proposed that the neural processes of the animal host are primarily responsible for the appearance of microfilariae. Following this critique, a letter from Qinglin Dai was attached, admitting his mistake by not referring to Pavlovian explanation. Nonetheless, Qinglin Dai was not fully convinced by Xu's explanation and commented that the question concerning microfilariae required further studies.
 40. C.C. Ching, 'Psychology in the People's Republic of China', *American Psychologist*, xxxv, 1980, pp.1084–1089; Qicheng Jing and Xiaolan Fu, 'Modern Chinese Psychology: Its Indigenous roots and international influences', *International Journal of Psychology*, xxxvi, 2001, pp.408–418; James O. Whittaker, 'Psychology in China: A Brief Survey', *American Psychologist*, xxv, 1970, pp.757–759.
 41. Secretary of Chinese Psychological Society, 'The Establishment of the Chinese Psychological Society', *Chinese Science Bulletin*, ix, 1955, pp.69–70.
 42. Liru Zhao, *The History of the Development of the Institute of Psychology, Chinese Academy of Sciences, (1950–1993)* (Beijing: Institute of Psychology, Chinese Academy of Sciences, 1996). I am following a quotation from Pangao Xue, 'Autonomy and Intervention: Psychology in China (1949–1976)', *Science & Culture Review*, iii, 2006, pp.111–121, on p. 115.
 43. See the application of Western approaches in Chinese psychology before the 1950s: Matthias Petzold, 'Chinese Psychology Under Political Pressure: A Comment on Guoan Yue', *Theory & Psychology*, iv, 1994, pp.277–279; Shuchang Yan, *A History of Modern Psychology in China* (Shanghai: Shanghai Education Press). Many critical articles in English translation can be found in Laurence Binet Brown, *Psychology in Contemporary*

- China* (Note 7). For instance, when having difficulty explaining the proximity between Pavlov's reflexology and capitalistic behaviourism, Tong accused behaviourism of having illegitimately 'stolen' Pavlov's idea. See Shuye Tong, 'Critique of Behaviorism: Notes from Learning Dialectical Materialism', *Journal of Literature, History & Philosophy*, vi, 1953, pp.27–33.
44. For instance: Lei Mei and Peitan Xu, 'Study of the Physiological Mechanism of Circular Mnemonics', *Acta Physiologica Sinica*, i, 1954, pp.143–154; Houcan Zhang, 'A Convenient Experimental Equipment for Studying the Classical Conditioning of Language Enhancement', *Journal of Beijing Normal University (Social science edition)*, i, 1958, pp.157–164. Anonymous, 'Pavlov's Theory and Child Psychological Development', *Chinese Science Bulletin*, v, 1952, pp.302–309. This article was written in Russian by an unidentifiable author, published in *Soviet Pedagogy* in April 1951 and translated into Chinese by Junxie Wu.
 45. Fei Peng, 'The Nature of Human Psychology', *Journal of Beijing Normal University (Social science edition)*, ii, 1957, pp.87–102.
 46. Shu Pan, 'Comments on Philosophical Questions on Psychology', *Acta Psychologica Sinica*, nulla, 1956, pp.27–34; Shu Pan, 'Methodological Questions in Psychology', *Journal of Dialectics of Nature*, nulla, 1956, pp.114–116.
 47. Kim Taylor, *Chinese Medicine in Early Communist China, 1945–1963* (Note 38).
 48. Thomas P. Bernstein and Hua-yu Li, *China Learns from the Soviet Union, 1949–Present* (Note 25).
 49. Mao Tse-tung, 'On the Ten Major Relationships', in Mao Tse-tung, *Selected Works of Mao Tse-tung* (Beijing: Foreign Languages Press, 1977), pp.284–307. Original speech given on 25 April 1956.
 50. Merab G. Tsagareli, 'Ivane Beritashvili: Founder of Physiology and Neuroscience in Georgia', *Journal of the History of the Neurosciences*, xvi, 2007, pp.288–306.
 51. See the repression and rehabilitation of Orbeli: Ivan D. London, 'A Note on Soviet Science' (Note 4); Ivan D. London, 'Further Documentation on de-Stalinization in Soviet Physiology and Related Disciplines', *Psychological Reports*, xii, 1963, p.86. For the continuous influence of Pavlov's theory on physiology, see David Holloway, 'Scientific Truth and Political Authority in the Soviet Union' (Note 19); Ernst Simonson and Josef Brožek, 'Trends in Some Areas of Soviet Biomedical Research', *Science, New Series*, cl, 1965, pp.1687–1689.
 52. Robert C. Tucker, 'Stalin and the Uses of Psychology' (Note 21).
 53. Levy Rahmani, 'Social Psychology in the Soviet Union', *Studies in Soviet Thought*, xiii, 1973, pp.218–250; Alexander Dallin, 'The Soviet Social Sciences after Stalin', *The Library Quarterly*, xxviii, 1958, pp.308–321.
 54. Levy Rahmani, 'Social Psychology in the Soviet Union' (Note 53).
 55. Alexander Dallin, 'The Soviet Social Sciences after Stalin' (Note 53). One concrete example of anti-revisionism can be seen in Robert R. Herr, 'Renewed Attack on Lysenko's Genetic Theories in the Soviet Union', *American Institute of Biological Sciences Bulletin*, xiii, 1963, pp.50–51.
 56. Miriam Dobson, 'The Post-Stalin Era: De-Stalinization, Daily Life, and Dissent', *Kritika: Explorations in Russian and Eurasian History*, xii, 2011, pp.905–924.
 57. John King Fairbank and Roderick MacFarquhar, *The Cambridge History of China, Vol. 14: The People's Republic, Part 1: The Emergence of Revolutionary China, 1949–1965* (Cambridge: Cambridge University Press, 1987). This mirrors Holloway's observation that the Soviet political authority 'endeavored to achieve the sometimes conflicting aims of harnessing science to its own purposes as efficiently as possible, and ensuring the political

- loyalty of the scientific community'. See David Holloway, 'Scientific Truth and Political Authority in the Soviet Union' (Note 19), p.345.
58. Vidya Prakash Dutt, 'The Rectification Campaign in China', *International Studies*, i, 1959, pp.28–50.
 59. Robert R. Bowie and John King Fairbank, *Communist China 1955–1959: Policy Documents with Analysis* (Cambridge: Harvard University Press, MA, 1962), p.153.
 60. Editorial, 'Fulfilling the One Hundred Flowers Campaign and Actively Promoting Free Academic Discussion', *Chinese Science Bulletin*, vi, 1956, pp.1–4.
 61. Zhongchi Zhao, 'Scientific Publication and the One Hundred Flowers Campaign', *Chinese Science Bulletin*, xi, 1956, pp.48–50.
 62. John King Fairbank and Roderick MacFarquhar, *The Cambridge History of China* (Note 57).
 63. Laurence Schneider, *Biology and Revolution in Twentieth-century China* (Lanham, MD: Rowman & Littlefield Publishers, Inc., 2003).
 64. Dequan Li, 'Eliminating Diseases that are Most Detrimental to People's Health Speech made by the Minister of Health Dequan Li at the third meeting of the first National People's Congress', *Jiangxi Medical Journal*, vii, 1956, pp.1–5.
 65. Anonymous, 'Learning Advanced Medical Knowledge from all Countries', *Chinese Journal of Medicine*, xi, 1956, pp.1–2.
 66. Chinese Association for Physiological Sciences, 'The Thirteenth Convention of the Chinese Association for Physiological Sciences', *Chinese Science Bulletin*, x, 1956, pp.74–75.
 67. Pangao Xue, 'Autonomy and Intervention' (Note 42).
 68. Shu Pan, 'Comments on Philosophical Questions on Psychology' (Note 46); Shu Pan, 'Methodological Questions in Psychology' (Note 46). It is interesting to note that, in contrast to these modestly critical comments, Shu Pan in the same year reasserted the orthodox status of Marxist-Pavlovian psychology in an official tone in the opening speech at the first representatives' meeting of the Chinese Psychological Society in 1956; see Shu Pan, 'Bring Collective Energy into Full Play to Develop Scientific Psychology in Service of the Great Socialist Construction in our Country', *Acta Psychologica Sinica*, i, 1956, pp.1–10.
 69. Minglong Huang, Kongxiang Lin, Chenglu Zou and Fangyun Chen, 'Writings on the One Hundred Flowers Campaign', *Chinese Science Bulletin*, x, 1956, pp.80–83.
 70. Vidya Prakash Dutt, 'The Rectification Campaign in China' (Note 58); Rene Goldman, 'The Rectification Campaign at Peking University: May–June 1957', *The China Quarterly*, xii, 1962, pp.138–153.
 71. Naranarayan Das, '"Rightist" Dissent in China during 1957–1958', *China Report*, x, 1974, pp.36–54.
 72. Vidya Prakash Dutt, 'The Rectification Campaign in China' (Note 58); Naranarayan Das, '"Rightist" Dissent in China during 1957–1958' (Note 71).
 73. Richang Cao, 'The Superiority of Soviet Psychology', *Chinese Science Bulletin*, xxi, 1957, pp.669–671.
 74. Lianzhang Fu, 'Firmly Learn the Advanced Medical Science in the Soviet Union', *Chinese Pharmaceutical Journal*, xi, 1957, pp.482–483.
 75. This article first appeared in the *Health* magazine, and was then reproduced in *Jiangxi Medical Journal*, xi, 1957, pp.1–2; and *Fujian Journal of Traditional Chinese Medicine*, vi, 1957, pp.1–2.
 76. Yibing Zhao, 'Accomplishments of Pavlov's Theory in China in the Past Ten Years', *Bulletin of Biology*, x, 1959, pp.468–475.
 77. Aihua He, 'Review of *Physiology* edited by Fengyan Xu', *Tianjin Medical Journal*, iv, 1961, pp.264–264.

78. Vladimir Petrov, 'Mao, Stalin and Kim il Sung: An Interpretive Essay', *Journal of Northeast Asian Studies*, xiii, 1994, pp.3–30.
79. See some introductions to the educational revolution: Tushou Chen, 'Sheng Kang in the Educational Revolution in the 1950s', *Yan Huang Chun Qiu*, xii, 2011, pp.44–50; Pangao Xue, 'Autonomy and Intervention'. (Note 42); Lee S. Zhu, 'Communist Cadres on the Higher Education Front, 1955–1962', *Twentieth-century China*, xxxiv, 2008, pp.73–95.
80. Some of the critical articles were edited into a two-volume collection: Research Team, Beijing Normal University, *Critique of Psychology* (Beijing: Higher Education Press, 1958). See oral history example: Pangao Xue, 'Autonomy and Intervention'. See an example when the teaching of psychology was criticized: Zheng, 'Criticizing the Bourgeois Direction in the Teaching of Psychology', *Journal of Dialectics of Nature*, iii, 1958, pp.63–64 (the author's first name was not publicized).
81. C.C. Ching, 'Psychology and the Four Modernizations in China', *International Journal of Psychology*, xix, 1984, pp.57–63; Robert Chin and Ai-li S. Chin, *Psychological Research in Communist China, 1949–1966* (Cambridge, MA: The MIT Press, 1969).
82. Guoan Yue, 'More on Chinese Theoretical Psychology: A Rejoinder to Matthias Petzold', *Theory & Psychology*, iv, 1994, pp.281–283; The Executive Committee of Chinese Psychological Society, 'Sixty Years of the Chinese Psychology: Retrospect and Prospect', *International Journal of Psychology*, xviii, 1983, pp.167–187.
83. Laurence Binet Brown, *Psychology in Contemporary China* (Note 7).
84. Robert Chin and Ai-li S. Chin, *Psychological Research in Communist China* (Note 81); Guoan Yue, op. cit. (ref. 82).
85. Shuye Tong, 'Critique of Behaviorism'.
86. Anonymous, 'Freud's Theory Serves for Counter-revolutionary Bourgeoisie', *People's Military Surgeon*, iii, 1955, pp.14–17. Translated into Chinese by Weiqing Li, this paper was written by a Russian scholar whose name cannot be translated back to Russian.
87. Zhixian Zhu, 'Criticizing Pragmatist Philosopher Dewey's Counter-revolutionary Thoughts in Psychological Study', *Journal of Beijing Normal University (Social Science Edition)*, nulla, 1956, pp.1–32.
88. Tongxian Fu, 'A Brief Critique of Gestalt Psychology', *Journal of Shandong Normal University*, i, 1957, pp.173–178; Xiliang Zhu, 'Critique of Gestalt Psychology', *Journal of Central China Normal University (Humanities and Social Sciences)*, iii, 1957, pp.32–44.
89. Houcan Zhang, 'Psychological Measurement in China', *International Journal of Psychology*, xxiii, 1988, pp.101–117; Robert Chin and Ai-li S. Chin, *Psychological Research in Communist China* (Note 81).
90. Shu Pan, 'A General Review of psychology in China', *Acta Psychologica Sinica*, ii, 1958, pp.3–9.
91. For instance, Zhu's 1957 article criticizing Gestalt psychology was published again in *Acta Psychologica Sinica* in 1958, possibly under pressure of the criticism movement. See Xiliang Zhu, 'Critique of Gestalt Psychology' (Note 88), and Xiliang Zhu, 'Critique of Gestalt psychology', *Acta Psychologica Sinica*, nulla, 1958, pp.85–98.
92. Heqin Chen, "'Experienced education" and Dewey's Pragmatism: Criticizing my Educational Thought', *Academic Monthly*, vi, 1959, pp.54–57.
93. Gregory Razran, 'Psychology in Communist Countries other than the USSR', *American Psychologist*, xiii, 1958, pp.177–178, on p.177.
94. Robert Chin and Ai-li S. Chin, *Psychological Research in Communist China* (Note 81), p.54.
95. Shujian Wu, 'Fully Eliminate the Mistake of Biologizing Psychology', in Research Team, Beijing Normal University (eds.) *Critique of Psychology* (Beijing: Higher Education Press, 1958), pp.29–35, p.30.

96. Kejiao Guo, 'What is the Philosophical Foundation of Psychology?', in Research Team, Beijing Normal University (eds.) *Critique of Psychology* (Beijing: Higher Education Press, 1958), pp.11–17; Zhenhai Qi, 'Undeniable Bourgeois Philosophy Under the Cover of Marxism', in Research Team, Beijing Normal University (eds.) *Critique of Psychology* (Beijing: Higher Education Press, 1958), pp.18–28.
97. I do not want to give the impression that the 1958 criticism should be dismissed fully. I have argued somewhere else that this event created a discursive space that allowed Chinese psychologists to undermine that Pavlovian hegemony. The 'biologization' and 'abstraction' criticisms were taken advantage of by some psychologists to reflect on the subject matter, research method, and social relevance of psychology. See Zhipeng Gao, 'Revisiting Chinese Psychology' (Note 14).
98. Tushou Chen, 'Sheng Kang in the Educational Revolution in the 1950s' (Note 79); Pangao Xue, 'Autonomy and Intervention' (Note 42), pp.111–121; Lee S. Zhu, 'Communist Cadres on the Higher Education Front' (Note 79).
99. Richang Cao, 'Debates in Psychology', *Acta Psychologica Sinica*, iii, 1959, pp.137–141; Zan Ding, 'On the Subject Matter and Scientific Status of Psychology', *Acta Psychologica Sinica*, i, 1960, pp.7–12.
100. Houcan Zhang, 'Discussing the Subject Matter of Psychology', *Acta Psychologica Sinica*, ii, 1959, pp.100–108.
101. Ruixiang Peng and Genquan Feng, 'Some Opinions on Research Methodologies in Psychology', *Journal of Dialectics of Nature*, iii, 1959, pp.9–11; Hui Qi and Meifu Yan, 'Two Thoughts Concerning the Development of Scientific Psychology', *The Journal of Humanities*, nulla, 1959, pp.60–63.
102. Richang Cao, 'A Summary of Studies of the Physiological Mechanism of Psychology and Brain Function', *Journal of Dialectics of Nature*, iv, 1959, pp.14–17, 35.
103. Lorenz M. Lüthi, *The Sino-Soviet Split: Cold War in the Communist World* (New Jersey: Princeton University Press, 2010).
104. John B. Watson, 'Psychology as the Behaviorist Views it', *Psychological Review*, xx, 1913, pp.158–177, on p.158.
105. Ministry of Education of the People's Republic of China, 'Curriculum of Biology for High Schools' (Note 26); Ministry of Education of the People's Republic of China, 'Human Anatomy and Physiology Course Curriculum for First Year High School', *Bulletin of Biology*, iii, 1952, pp.159–161, on p.159.
106. See both Ministry of Education of the People's Republic of China sources in Note 105; Ministry of Education of the People's Republic of China, 'Basics of Darwinism Course Curriculum for Second Year High School', *Bulletin of Biology*, iii, 1952, pp.161–163.
107. Ruhuang Jin, 'Materialism as the Scientific-Philosophical Basis of Soviet Medical Science', *People's Military Surgeon*, viii, 1953, pp.1–5.
108. Benjamin Zajicek, *Scientific Psychiatry in Stalin's Soviet Union*, (Note 1) p.410.
109. Ralph C. Croizier, 'Traditional Medicine in Communist China: Science, Communism and Cultural Nationalism', *The China Quarterly*, xxiii, 1965, 1–27; William Y. Chen, 'Medicine and Public Health', *Sciences in Communist China*, vi, 1961, pp.153–169.
110. Kim Taylor, *Chinese Medicine in Early Communist China* (Note. 38).
111. Kim Taylor, *Chinese Medicine in Early Communist China* (Note 38).
112. AnElissa Lucas, 'Changing Medical Models in China' (Note 35).
113. Ralph C. Croizier, 'Traditional Medicine in Communist China' (Note 109).
114. Christopher Burton, 'Soviet Medical Attestation and the Problem of Professionalisation under late Stalinism, 1945–1953', *Europe-Asia Studies*, lvii, 2005, pp.1211–1229; Ellen K. Cromley and Peter R. Craumer, 'Physician Supply in the Soviet Union 1940–1985', *Geographical Review*, lxxx, 1990, pp.132–140.

115. AnElissa Lucas, 'Changing Medical Models in China' (Note 35).
116. Gengmo Luo, 'Analysis of the Formation of China's Planned Economy and its Course of Development', *Jingji Yanjiu*, ii, 1981, pp.1–13, on p.8. I am following William A. Joseph, 'A Tragedy of Good Intentions: Post-Mao Views of the Great Leap Forward', *Modern China*, xii, 1986, pp.419–457.
117. Dequan Li, 'We Have the Power to Defeat American Empire's Bacterial Warfare', *Chinese Science Bulletin*, si, 1952, pp.253–255; Dequan Li, 'Further Development the Health Campaign to Eliminate the Four Pests in Ethnic Minority Regions', *China's Ethnic Groups*, iii, 1958, pp.7–8.
118. Dequan Li, 'Eliminating Diseases' (Note 64).
119. Dequan Li, 'The Party is Capable of Directing Health Science and Technology', *Health Magazine*, 12 July 1957.
120. Dequan Li, 'Health Work in the Past Ten Years', *Chinese Journal of Medicine*, xi, 1959, pp.4–5.
121. Lianzhang Fu, 'Mourning the Great Teacher of Revolution: Comrade Stalin', *Chinese Pharmaceutical Journal*, iii, 1953, p.84.
122. Lianzhang Fu, 'Our Honorary President Lianzhang Fu Made a Speech at the Second Extended Executive Meeting', *The Journal of the Chinese Antituberculosis Association*, iv, 1956, pp.1–2; Lianzhang Fu, 'Actively Lead and Organize Western Medical Doctors to Learn Traditional Chinese Medicine', *Journal of Traditional Chinese Medicine*, ii, 1956, pp.60–61.
123. Lianzhang Fu, 'Firmly Learn the Advanced Medical Science' (Note 74).
124. Alexander Dallin, 'The Soviet Social Sciences after Stalin' (Note 53).
125. Nicholas DeWitt, 'The Politics of Soviet Science', *American Behavioral Scientist*, vi, 1962, pp.7–11, on p.11.
126. T.R. Payne, 'A.V. Petrovskij's History of Soviet Psychology', *Studies in Soviet Thought*, viii, 1968, pp.181–187, on p. 181.
127. For physics see Gustav Wetter, 'Ideology and Science in the Soviet Union Recent Developments', *Daedalus*, Lxxxix, 1960, pp.581–603; for a review of more natural sciences see Warren B. Walsh, 'Some Judgments on Soviet Science', *Russian Review*, xix, 1960, pp.277–285. For physiology and psychology see Gregory Razran, 'Soviet Psychology and Psychophysiology', *Science, New Series*, cxxviii, 1958, pp.1187–1194. Dallin would say that sciences were forced to lower their academic and ethical standards, see Alexander Dallin, 'The Soviet Social Sciences after Stalin' (Note 53).
128. Gregory Razran, 'Soviet Psychology and Psychophysiology' (Note 127), p.1192.
129. Greg Guldin, 'Anthropology by Other Names: The Impact of Sino-Soviet Friendship on the Anthropological Sciences', *The Australian Journal of Chinese Affairs*, xxvii, 1992, pp.133–149; Wong Siu-Lun, 'Social Enquiries in the People's Republic of China', *Sociology*, ix, 1975, pp.459–476.
130. Mao Tse-tung, 'On the Ten Major Relationships' (Note 49).
131. Robert R. Bowie and John King Fairbank, *Communist China* (Note 59), p.156.
132. Bingxian Hu, 'Centralization of Power and Control of Knowledge: China's Policy Concerning Top Universities During the Educational Revolution Period', *Tsinghua Journal of Education*, xxix, 2008, pp.105–113; S.K. Li, 'Social Sciences in Communist China', *The American Behavioral Scientist*, ix, 1966, pp.3–7.
133. Krishna Prakash Gupta, "'Society as a factory": Maoist Approach to Social Sciences', *China Report*, viii, 1972, pp.36–57.
134. Kejing Dai, 'The Vicissitude of Sociology in China', *International Sociology*, viii, 1993, pp.91–99; Krishna Prakash Gupta, "'Society as a factory" ' (Note 133), pp.36–57; Lucie

- Cheng and Alvin So, 'The Reestablishment of Sociology in the PRC: Toward the Sinification of Marxian Sociology', *Annual Review of Sociology*, ix, 1983, pp.471–498; Until Stalin's death in 1953, the very term 'sociology' was avoided in the Soviet Union as the synonym for bourgeois science of society. See Dmitri N. Shalin, 'The development of Soviet sociology, 1956–1976', *Annual Review of Sociology*, iv, 1978, pp.171–191.
135. Mingxin Liu, 'A Historical Overview on Anthropology in China', *Anthropologist*, v, 2003, pp.217–223; Wong Siu-Lun, 'Social Enquiries' (Note 129); Greg Guldin, 'Anthropology by Other Names' (Note 129).
 136. Robert Chin Ai-li S. Chin, *Psychological Research* (Note 81); Alexander Dallin, 'Social Psychology in the Soviet Union' (Note 53), p.308.
 137. Research Team, Beijing Normal University, *Critique of Psychology* (Note 80).
 138. Pangao Xue, 'Political Intervention and Vicissitudes of Psychology', *Yan Huang Chun Qiu*, viii, 2007, pp.46–51.
 139. Kim Taylor, *Chinese Medicine in Early Communist China* (Note 38).
 140. Lee S. Zhu, 'Communist Cadres on the Higher Education Front' (Note 79).
 141. Ivan D. London, 'The Scientific Council' (Note 23), p.23.
 142. Renmei Ren, 'My Own Experience of the Movement of Criticizing Psychology', *Yan Huang Chun Qiu*, iv, 2010, pp.12–15, p.13.
 143. Ethan Pollock, *Stalin and the Soviet Science Wars* (Note 1), p.9.
 144. Yen-lin Chung, 'The Witch-hunting Vanguard: The Central Secretariat's Roles and Activities in the Anti-Rightist Campaign', *The China Quarterly*, ccvi, 2011, pp.391–411.
 145. Robert Chin and Ai-li S. Chin, *Psychological Research* (Note 81), p.1.
 146. Richang Cao, 'Debates in Psychology' (Note 99); Zhipeng Gao, 'Revisiting Chinese Psychology' (Note 14).
 147. Ivan D. London, 'A Note on Soviet Science' (Note 4).

Too young to date! The origins of *zaolian* (early love) as a social problem in 20th-century China

History of Science

2015, Vol. 53(1) 86–101

© The Author(s) 2015

Reprints and permissions:

sagepub.co.uk/journalsPermissions.nav

DOI: 10.1177/0073275314567437

hos.sagepub.com



Yubin Shen

Georgetown University, Washington DC, USA

Abstract

Zaolian (literally means “early love,” “zao” for “early,” “lian” for “love”) refers to courtship or dating among young people in elementary and secondary school systems. In today’s China, it is regarded as a serious social problem related to minors/adolescents. To safeguard their moral, hygiene and promising future, it is believed that zaolian should be prevented and controlled by school regulations, family pressures, and even state laws. This paper attempts to provide a historical explanation to origins of this specific juvenile delinquency in China’s long twentieth century. Firstly, it offers a critical discussion on current scholarships, which dismiss zaolian either as a Freudian sexual repression by the Chinese Communist regime since 1949 or as a product of this regime’s social control efforts in the early 1980s. Unconvinced by these explanations, it then presents a new approach to examine “moral, ideological and structural” origins of zaolian. The moral and ideological origins include traditional Confucian patriarchy and its sexual norms, a new regime of western medical sciences, and the sexual repressive regime of the Chinese Communist Party, and all of them could be traced at least in the early 20th century. Lastly, it turns to the more crucial structural origins, or the three institutional-buildings responding to globally circulating discourses since the early 20th century: modern marriage against zaohun (early marriage), family planning policy against zaoyu (early childbirth) and modern educational system. Zaolian as a social problem was fledged in the 1980s when the three institutions had been well-established in China.

Keywords

zaolian, modern medical sciences, modern China, juvenile delinquency

Corresponding author:

Yubin Shen, Department of History, Georgetown University, ICC 600, 37th and O Streets, N.W., Washington D.C. 20057, USA.

Email: ys289@georgetown.edu

Introduction

On 20 August 2009, the Standing Committee of the National People's Congress of Heilongjiang Province passed the *Regulations on the Protection of Minors of Heilongjiang Province*, with a section against minors' delinquency. According to Article 13 of that section:

It is the right and duty of parents and other guardians of minors to keep their minors away from the following deviant behaviors: *zaolian* (early love), illicit cohabitation, drug-taking, prostitution and whoring.¹

The reason to put *zaolian* into this article, as a legal spokesman explains, is "because *zaolian* is responsible for many of those serious social problems, such as illicit cohabitation, drug-taking or prostitution," it is necessary to "criticize and prevent *zaolian* in advance" for the good of minors and society.²

In today's People's Republic of China (PRC), if you ask Chinese residents, they might immediately understand the meaning of *zaolian*, and they would probably agree that it is indeed a dangerous problem for young people. You might also easily detect a strong social anxiety concerning *zaolian* from publications of youth education and parenting guides. Many of them have titles such as "*Zaolian: A Dangerous Beginning*,"³ "*My Daughter is Now Involved in Zaolian: What Should I Do?*"⁴ Or even "*Dealing with The Problem of Zaolian Among Primary and Secondary School Students Correctly: 100 Successful Cases*."⁵ What is more, in most secondary and primary schools, there are also rules and regulations against *zaolian*. Violators would get verbal and official warnings, and even might be expelled from school.⁶

In Chinese, *zao* literally means "early," and *lian* is "love," thus *zaolian* could be translated directly, following some scholars in the Anglophone world, as "early love"⁷ or "love too early."⁸ Since it conveys a certain meaning of "falling in love at an early age," some other scholars use "premature love"⁹ or "premature courtship" to refer to *zaolian*. Nevertheless, in this paper I will adopt "early love" for three major reasons: first of all, there is a striking difference in understanding early love in China and "premature courtship" in the West. For many in the western world, romantic attachments or "premature courtships" developed in adolescence are usually considered normal, as natural results of hormone increase, while early love is not regarded as natural or positive. One example of this is the Chinese revised edition to a popular teenager guidebook in Britain, *Teenage Worrier's Guide to Lurve*.¹⁰ The original purpose of this book, according to the author, is to help teenagers to have a happy life and find true love. For example, it will teach a girl how to win the heart of her boyfriend. However, the Chinese edition is titled *I Am A Teenager, and Early Love Is So Obscure*.¹¹ For the Chinese translator, this book was published to help teenagers to avoid early love rather than find it! Secondly, although the term "early love" sounds quite bizarre, it best conveys an ambiguous and informal nature that cannot be translated. For example, how early is early love? Ironically, there is no agreement in answering this basic question. Some experts on youth education insisted that 18–22 is the ideal age range to start dating, and therefore any dating earlier than 18 is early love,¹² while some others insisted even undergraduates, aged from 17 to 22, should avoid



Figure 1. Pornographic music entraps a young man.¹⁸

early love.¹³ More surprisingly, although early love is used daily with some frequency, it has not appeared in any of the most authoritative Chinese dictionaries such as *Xinhua zidian* or *Cihai*. There is not even a clear definition of the term “early love” itself or a clear explanation of what kind of behavior early love is. According to some observations, any intimate behaviors such as “note-passing, eye-batting, and paring off among students” could also be labeled as early love.¹⁴ The third reason for using “early love” has to do with its relations to other two kinds of “early” (early marriage and early childbirth), which will be elaborated in my following explanation on the origins of early love.

Why and how, we might wonder, did early love become a juvenile delinquency or, to borrow Thomas W. Laqueur’s interpretation of modern masturbation, a social “problem”¹⁵ related to minors/adolescents in China? How can we understand its potential implications for 20th-century Chinese history? This essay provides some tentative responses to these questions.

Current Scholarship

We can begin by introducing current scholarship in the English-speaking world on early love. Although early love is not a brand new topic, it has gained neither enough attention nor satisfactory explanation.

After the Cultural Revolution (1966–1976), foreign scholars were permitted to enter China for fieldwork. Some historians noticed a hotly debated social issue called “early love” in China, and attempted to discuss it in their studies. Emily Honig and Gail Hershatter, for example, pointed out that at the high school level in the 1980s, there was a “burgeoning phenomenon” or “outbreak” of “premature love.”¹⁶ They did not provide any explanation for this phenomenon, but mentioned that Chinese official propaganda blamed “spiritual pollution” from the West for spreading this social pathology. According to this view, early love was an abnormal behavior among a few middle school students, when they had been induced and harmed by the “spiritual pollution,” such as “pornographic music” on the topics of sex and love, from western capitalist culture (especially

Hong Kong and Taiwan) (see Figure 1). "To cure this perverse behavior, the final solution is to eradicate spiritual pollution."¹⁷

Another historian, Børge Bakken, has made significant contributions in introducing and understanding the early love problem. In one of his earlier studies, he recognized an increasing lowering trend of early love ages in the 1980s: early love used to be a problem only among "university students or upper-secondary school pupils" a few years ago, but it had suddenly become a central problem in "lower secondary-schools." He explained this change with two possible reasons: firstly, youth attitudes towards sex became more open due to the inclusion of sex education in class; and secondly, there was a biological basis that young students reached "physical maturity earlier."¹⁹ In another recent study, Børge Bakken noted that there was a noticeable tendency to diagnose *zaolian* as a medical disorder during the 1980s and 1990s.²⁰ According to his 2014 essay, "medicalized moral panics" on early love are still increasing in recent decades with a particular directed attack against the "wayward girl."²¹ He interpreted the emergence of the early love problem as a symbol of the Chinese Communist Party's (CCP) old methods and principles of social control that could not keep up with a changing Chinese society in the 1980s, or a decade filled with the so-called "dangers of modernity." Nevertheless, Bakken's studies still remain largely silent about why and how early love became a social problem in the first place.

Harriet Evans, in her valuable book on the history of sexuality in the early PRC era, also indicated that early love was very common in middle schools, according to surveys conducted in 1989.²² She treated early love as "the gendered problematization of adolescence," and examined it as part of the construction and circulation of scientific knowledge about sexuality developed since 1949. Firstly, she insisted that the voluminous and open discussions on sexuality published under official auspices in the 1950s had great influence on the notions of "right" and "wrong" behaviors in adolescence. According to official CCP rhetoric in both the 1950s and the 1980s, the school years should be devoted solely to studies and personal development. "Thinking about love" was the "main obstacle to concentrating on studies."²³ Secondly, she argued that the main targets and victims of early love were girls. They were regarded as "unable to distinguish between right and wrong," vulnerable to potential somatic and psychological harms, and therefore had to be controlled and protected carefully.²⁴ Thirdly, she reminded us that there were noticeable concerns with youth hygiene and eugenics against early love: the authorities claimed that adolescence was a problematic and dangerous period. Young people were susceptible to harmful behaviors, especially those sexual behaviors like early love, which would destroy their bodies and hygiene.²⁵ Lastly, early love might also result in pre-marital sexual behaviors. The potential pregnancy and early childbirth problems would not only do harm to young girls' health, but also violate laws on marriage and eugenics by producing unhealthy children.²⁶

Harriet Evans's foregoing analysis reminds us of Foucault's "four great strategic unities"²⁷ in a regime of sexuality in late 18th and 19th-century Europe: the "masturbating youth," the "hysterical women," the "perverse adult" and the "Malthusian couple." Was early love derived from the regime of repressive sexuality by the Chinese Communist Party in the PRC? Anthropologist Zhang Everett Yuehong intended to answer this question based on his personal experience with the "no dating rule," a

practical expression against early love, in a technical school in Maoist China (1949–1976). He argued that it is necessary to add a historical perspective in applying the repressive hypothesis to interpret the origins of the “no dating rule” in Chinese schools during Mao’s period. According to Zhang, this rule was a historically specific phenomenon constructed by the socialist state through “moral, ideological and structural forces.” The main purpose was to appropriate and control youth bodies as state property in schools in the late 1970s and the 1980s.²⁸ For him, the “moral force” means repressing sexual desire as abnormal/anti-revolutionary, and the “ideological force” is that “one should subject one’s emotions to one’s passion and enthusiasm for the revolutionary cause” following the CCP’s propaganda, and the “structural force” is the socialist workplace system (*danwei*),²⁹ which incorporated and controlled individuals systematically.

In many respects, I agree with some of these scholars’ explanations and observations. The influence of western culture, the change of ages in biological maturity, pathologization/medicalization, gendered problematization of adolescence (especially girls), laws on marriage and eugenics, and especially the tri-dimensional “moral, ideological and structural” forces, are indeed helpful for us to understand early love. However, their explanations suffer from two major shortcomings: firstly, they seem to assume that early love was a problem limited to school systems. But this school-centered view was only part of the whole story. If we pay more attention to other related publications during the 1980s and early 1990s, we would find that the targets against early love were not only students, but included other groups of young people, such as young workers,³⁰ farmers,³¹ as well as soldiers.³² As I will discuss later, with the spread of the education system, students are gradually constructed as being the only target of the early love problem. What is more, while Zhang limited his discussion to Maoist China, other scholars hold that early love is a “peculiar post-Mao term for dating during adolescence.”³³ However, my following research will also demonstrate that early love was not a construct of the early PRC era alone. At least a prototype of *zaolian* (early love) could be found as early as the 1920s.³⁴ Therefore, I will argue that it is a trap to apply a simplistic “repressive hypothesis” to explain the emergence of early love as a result solely of the regime of sexuality overseen by the CCP after 1949, and we need to study early love from a *historical perspective*.

“Moral and Ideological” and “Structural/Institutional” Forces in Shaping Early Love

Although Zhang failed to provide a historical explanation, his approach is very helpful to integrating current studies and historical evidence for early love. In this section, inspired by his work, I argue that three types of “moral and ideological” forces and one set of complex “structural/institutional force” have shaped early love as a social problem, and all of them could be traced back to at least the early 20th century.

The first type of “moral and ideological force” is traditional Confucian patriarchy and its sexual norms. Prior to the 20th century, Neo-Confucianism was the dominant moral and ethical ideology in China.³⁵ According to the Neo-Confucian doctrine, contacts between males and females were to be strictly conducted, as “Man and woman should

not give and take directly” (*nan nü shou shou bu qin*). Anything related to sexuality was supposed to be hidden from public view. On the other hand, the marriages of sons and daughters were arranged by their parents, and there were severe taboos against social contact of any sort between unmarried young people of the opposite sex, with special moral concerns about daughters’ virginity and chastity. Although traditional Confucian sexual moralities were attacked and partly replaced by new cultural counterparts in the 20th century, they still played a crucial role in Chinese life. Even if recent studies have shown that such normative values were not always strictly adhered to in actual social practice,³⁶ generally speaking, sex has long been a taboo topic. For example, in an article titled as “E de gushi” (“The Story of Geese,” which was no doubt derived from the famous story in Giovanni Boccaccio’s *The Decameron*) in *Renmin Ribao* in 1956, the author pointed out that in some middle schools, the normal contacts between female and male students were forbidden, because the school administrations still insisted that “if male and female students hang out together, they will definitely do something bad” (*nan nü tong xue gao zai yi qi nanmian bu chu huai shiqing*).³⁷ As with arranged marriage practices, according to statistics gathered in the 1980s, among the total marriages in China, 15% were still arranged by parents, and 55% were at least partly arranged.³⁸ To some extent, the anxieties and parents’ moral panic about early love might be seen at least partially as a continuation of traditional arranged marriage practices and centuries-old taboos on open displays of sexuality.

Another type of “moral and ideological force” is a new regime of eugenics and sexology which regulates youth and female sexual desire, and controls family, marriage and reproduction. Once again, this regime was not a post-1949 construct, but could be traced to the early 20th century, especially during the wake of the New Culture Movement (1915–1923).

In my previous discussion, I have discussed how methods of regulating youth and female sexual desire are of serious concern to the problem of early love. These two categories of “youth” and “women,” and public control of their sexual behavior, according to Frank Dikötter in his pioneering work on modern Chinese sexual culture, resulted from Chinese enlightened intellectuals’ appropriation of western sexology and eugenics, as part of the struggle for Chinese national survival in the early 20th century.³⁹ These enlightened intellectuals turned “youth” (or adolescence) into a powerful symbol of regeneration and vitality. In the iconoclastic mood of the times, many believed that only revitalized youth could save China by eliminating the poisonous “germs” of tradition. However, on the other hand, they argued that adolescence was a dangerous period for fragile teenagers due to their undeveloped bodies and minds, and thereby would potentially pose a social problem. Not only might they possibly conduct some criminal activities,⁴⁰ but they were also susceptible to evil sexual habits. For example, masturbation, regarded as a deviant practice, could bring about serious harm to their health and to the nation’s strength.⁴¹

Similarly, for those enlightened intellectuals, women were regarded, on the one hand, as victims of traditional Confucian patriarchy (thus they should be liberated), and, on the other hand, as weak and fragile with regard to sexuality. Due to their biological and psychological differences from men, women could not control their sexual desire. Since women as mothers had a duty to produce fit offspring for the nation’s regeneration, their

uncontrolled sexuality had to be disciplined by society.⁴² As a result, youth and female sexual desire, although seen as a biological drive, was socially constructed to be a domain for state intervention and public control, thereby early love should be regulated.

Hiroko Sakamoto also recognized that eugenics was a public concern among intellectuals in early 20th-century China, but her emphasis is on the regulations of family, marriage and reproduction from that sexual and eugenic regime.⁴³ During the New Culture Movement, Chinese intellectuals developed an ideology of “sacred love,” a free notion of marriage, and a new model of the small family based on “romantic love,”⁴⁴ contrary to the traditional Confucian patriarchic family and arranged marriage. Hiroko Sakamoto argued that with the introduction of eugenics, women were discursively constructed as “mothers of the nation” with a sacred duty to reproduce a healthy Chinese race. Therefore, this new family model, free marriage and “sacred love” were linked to the modern nation-state and eugenic reproduction. As a result, “sacred love” was in fact transformed into “sacred love and marriage (and family)” in accord with eugenics.⁴⁵ With this in mind, we can partly understand how early love is regarded as a problem, since the purpose of love or courtship was not merely romance or sexual pleasure, but also the consummation of a eugenically healthy marriage.⁴⁶

The third type of “moral and ideological force” is the sexually repressive regime of the CCP, as other scholars have discussed in detail. But here I need to point out again that the CCP did not begin to control youth courtships and sexuality until after 1949. For example, as early as 1941, the official youth journal of the CCP, *China Youth*, published a long article: “How do we direct the courtships of middle school students.” The author proposed nine solutions, including relying on the cooperation of society, teachers and educational administration and family, to eradicate dangerous courtships/dates among middle school students.⁴⁷

The last and the most important type of force is the set of complex “structural/ institutional forces.” Reading the publications on the early love problem from the 1950s to the 1990s, I find that early love was gradually associated with the concerned “school systems” and two other systemic “early” problems, early marriage (*zaohun*) and early childbirth (*zaoyu*), against marriage laws and family planning policy. Therefore, I propose that there is a set of institutional forces of marriage, education, and family planning in the origins of early love. As I will elaborate in the next section, it is in practice the set of complex institutional forces that play a determining role in the framing of early love as a widespread social problem.

Three Stages: From Early Marriage and Early Childbirth to Early Love

Based on the foregoing discussions and my empirical studies, my own explanation of how early love has been developed as a social problem is as follows: although many other important factors and “moral and ideological forces” mattered significantly, the origin of early love is most closely related to the collective response to globally circulating discourses since the early 20th century of three institutions: modern marriage against *zaohun* (early marriage), family planning policy against *zaoyu* (early childbirth) and modern educational system, and *zaolian* (early love) was fledged in the 1980s when the

three institutions had been well established in China. This process occurred in three identifiable stages: the early 20th century to the 1950s, the 1950s to the 1980s, and the 1980s to the present.

In the first stage, there was not yet a concept of early love, but the emergence of anti-early-marriage discourses and corresponding institutional forces provided foundations for the subsequent development of early love.

This discourse against early marriage, in my view, started on 30 December 1902, when the most influential intellectualist in modern China, Liang Qichao, published an important article "*On Abolishing the Practice of Early Marriage*" (*Jin zaohun yi*), responding to a globally circulating eugenics discourse. Spearheaded by American and European missionaries, that discourse arranged "civilizations" hierarchically based on the age of marriage.⁴⁸ He pointed out that "among those backward Chinese marriage customs which should be reformed, early marriage is the most serious one," and constructed a civilizational hierarchy of races according to marriage ages: India, China, Japan and Europe (Russia, Britain, Prussia and Norway). Liang Qichao, like other contemporary Chinese elites described by John Fitzgerald and Ruth Rogaksi in her influential study of "hygienic modernity," portrayed early marriage practice as a kind of "Chinese deficiency" to awaken the Chinese people.⁴⁹

He then suggested that early marriage would result in "five great harms" to the Chinese people. Firstly, early marriage would harm "personal hygiene" (*hai yu yang sheng*). As Liang explained, due to their undeveloped bodies and minds, young couples "would indulge themselves with sexual desires" and would "deplete their life essences (*jing xue*)."⁵⁰ As a result, they would be sick and would even die at an early age. Secondly, early marriage would harm "the continuation of the race" (*hai yu chuan zhong*). Liang believed that the weak physical bodies of young parents would produce weaker children, leading to racial degeneration. Thirdly, early marriage would harm the "cultivation of children" (*hai yu yang meng*). Liang pointed out that because young parents lack life experience themselves, they are not able to cultivate their children. Fourthly, early marriage would harm "personal academic pursuit" (*hai yu xiu xue*). Liang warned that the golden ages for study are from 15 to 20 years of age. Those who have got married at earlier ages would not achieve academically due to their family obligations and excessive sexual activity with their spouses. Finally, Liang insisted that early marriage would harm the "national economy" (*hai yu guo ji*). Since those young couples are without any economic independence, they could not even support themselves, let alone raise their children. Therefore, they and their children would increase China's financial burdens. In the conclusion of his essay, Liang proposed to eliminate the practice of early marriage in China, and he provided a best standard for the marriage age: 30 years old for men and 25 years old for women.⁵⁰ During the same period, there were also many other scholars and educators supporting this discourse against early marriage. Nerveless, Liang's arguments on the "five harms" done by early marriage were of the utmost importance, and to some extent set a discursive model for subsequent discussions.

It is not difficult for us to recognize the great influence of racial eugenics in Liang's and others' discussions against early marriage. For example, in 1912 a scholar named Lu Yi was also against early marriage because he subscribed to the theory of eugenics: "It is only parents with strong bodies that will give birth to healthy babies. The human body is

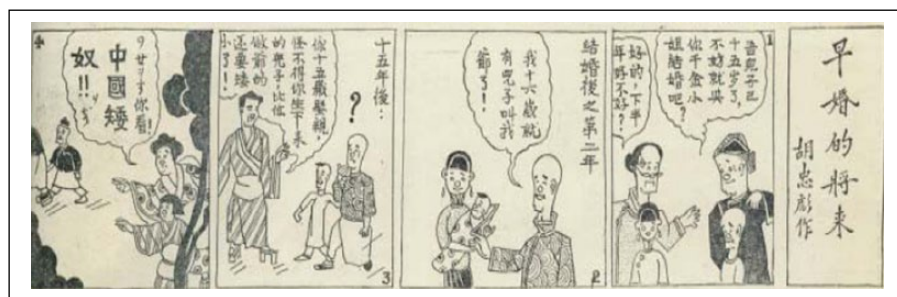


Figure 2. The future due to early marriage.⁵³

weak in adolescence, thus early marriage and re-production would produce weak offspring and create a sick nation.”⁵¹ As Chung Yuehtsen Juliette had pointed out, eugenics was a discourse in China which was especially concerned with competition against Japan;⁵² a cartoonist, Hu Zhongbiao, expressed a panic on the degeneration of the Chinese race, comparing them with the Japanese in the following cartoon titled “The Future due to Early Marriage” (*zaohun de jianglai*). It reads from right to left:

1. Chinese Man with his boy: “My son is 15 years old. How about marrying your daughter to him?” Chinese Woman with her girl: “OK! How about marrying them the late half of this year?”
2. One year after their marriage. Chinese Husband says to his young Wife happily: “I am only 16 years old, and I already have a son call me father!”
3. Fifteen years later. Japanese Man mocks Chinese Man: “You got married at 15 years old. It makes sense to me that your son is even shorter than you!”
4. Japanese Woman and Girl towards Chinese Father and Son: “Look! The Chinese shorter slaves!”

In the following decade, some authors began to link dating/courtship to the discourse of anti-early marriage based on some of Liang’s arguments. In 1920, a young student named Zhu Muhui expressed his own opinion on marriage in a newspaper article in Shanghai. He connected marriage with economic independence and academic pursuit, and provided the earliest discursive prototype of early love that I have found. Zhu insisted that the proper age for marriage was 25 years old, because by that age a young man might have graduated from school or would have found a job. He then argued that:

Those who are not yet twenty-five years old should not get involved in any relationship. If they do not date girls, there will be, of course, no marriage; otherwise they would do harm to themselves, to their wives, and to society!⁵⁴

As I have emphasized in the foregoing pages, the crucial forces in forming the concept of early love were not the moral or ideological ones, but significant institutional transformations. During the first stage, this discourse of anti-early marriage had resulted in changes in marriage and the educational systems, although these changes were only

incremental at the time. One alteration was the enactment of a civil law in 1930 which set up the legal age for marriage for the first time: in the early Republican period, the practical age for marriage followed that of the Qing dynasty: 16 years old for men and 14 years old for women. Now according to this new law, the legal age for marriage was raised to 18 for men and 16 for women.⁵⁵ In the field of education, there were also certain new institutional developments. For example, in 1916 Qinghua University stated that no student in college could marry, and if they did, they would be dismissed.⁵⁶ In the early 1920s, the Ministry of Education in Beijing proclaimed that the marriage of high school students should be forbidden, or they would be expelled.⁵⁷ In 1929, the Educational Administration of Anhui Province also implemented a rule: “due to their undeveloped physical bodies, lack of knowledge for choosing spouses, and marriage induced harms to study, high school students should not be permitted to get married. Those who have been married will be not eligible for enrollment.”⁵⁸ In short, the first stage before 1949 saw the beginning of two kinds of institutional changes in laws about marriage, particularly in the educational realm, culminating in the emergence of the discourse and practice of anti-early-marriage.

The second stage in the development of early love control stretched from 1949 to the early 1980s. After 1949, the CCP began to establish a socialist regime in mainland China. During the 1950s, with the enactment of the Marriage Law, the discourse against early marriage gradually merged with the new term “early love,” and thus resulted in a new set of discourse and practice against “early love and early marriage” (*zaolian zaohun*). However, the main concern was still the early marriage, and the targets were not only students but in effect included all young men and women in PRC until the early 1980s.

The first text on early love with the contemporary meaning⁵⁹ was published in *Chinese Youth* in 1957, entitled as “My View on Young Students’ Early Love and Early Marriage.” The author, Zhang Shili, a middle school principal, insisted that it was harmful for young students, especially girls, to get married at an early age.⁶⁰ Many physicians and doctors also claimed that “early love and early marriage” (*zaolian zaohun*) was harmful, and encouraged late marriage. For example, in 1957 Fu Lianzhang, the president of the Chinese Medical Association, responded to some teachers who had reported that there were many young students getting involved in “early love and early marriage”: it was not only harmful to young students’ health and academic study, but was also not good for their families or the nation.⁶¹ The combined term of “early love and early marriage” (*zaolian zaohun*) was generally used until as late as the early 1990s. In a guidebook of female hygiene published in 1990, there was a discussion on “What are the harms of early love and early marriage?”⁶² However, all their major concerns were about early marriage rather than early love.

More importantly, the legal and educational institutional forces described in the first section continued to regulate under the same banner against early marriage. However, As Frank Dikötter has noted, “it was only under socialist rule after 1949 that public policies were inaugurated to deal with the sexual practices.”⁶³ PRC marriage laws and school regulations had a much wider influence than had their Republican-era counterparts.

The first institutional continuation that transcended the 1949 divide was contained in the *Marriage Law of 1950*, also the first official national law of the PRC. It increased the legal age of marriage to 20 years old for men and 18 years old for women.⁶⁴ The new

PRC regime took this very seriously. On September 16, 1951, an inspection team was sent by the central government to oversee the implementation of this national marriage law at local levels.⁶⁵ Students remained a focus of this reinvigorated institutional force. For example, in 1953 the leading journal of education in China, *Renmin Jiaoyu*, published an article claiming that it was necessary for teachers to teach their students more about the marriage law and to teach them new dating values. It insisted that young students should avoid early love and early marriage, for the latter was in violation of this new law.⁶⁶ However, since the early marriage practice was especially prevalent in rural China, the primary targets of early love and early marriage (*zaolian zaohun*) were still the very large majority of youth who lived in the countryside, who had not been enrolled into school systems.

The second institutional force that continued was the nation-wide rules forbidding college students from getting married. In 1978, the Ministry of Education enacted a temporary rule stating that “We encourage college students to get married in late ages. Thus, college students who are not yet 25 years should not get married. Any violator will be dismissed from college.”⁶⁷ In the next year, an additional rule was enacted:

To help students focus their attention on studying, and to make college administration work more convenient, all college students are not allowed to get married. Anyone who dares to get married without the proper permits will be dismissed from college.⁶⁸

On March 28 1981, the Ministry of Education enacted an official rule: “Normally, college students should be those who are not married. Anyone who wants to get married should leave college.”⁶⁹ In short, in the second stage, two nation-wide systemizations of institutional forces, new laws on modern marriage, and related rules in the education realm, contributed further to the emergence of early love and early marriage (*zaolian zaohun*), with a major focus on early marriage.

The third stage, which began in the early 1980s, was crucial for the branding of early love as a social problem of young students due to new institutional developments. The first of these was still in the realm of marriage: the PRC enacted a new marriage law in 1980, which set the following legal ages for marriage: 22 years old for men and 20 years old for women. Secondly, the PRC began to set up the one child rule as one of its most important national policies after 1978.⁷⁰ As a result of the two new institutional forces, another term of “early marriage and early childbirth” gradually emerged. “As the first frontline of the One-Child-Policy in China, the management of marriage played a noticeable role,” and an official rule was circulated in 1992. It also insisted that “early marriage and early childbirth are illegal and harmful for young people,” and “late marriage and late childbirth are patriotic behaviors.”⁷¹ Also during this stage, the three types of “early,” “early love, early marriage and early childbirth,” were finally linked together. Although this is still a rough sketch and requires further deeper research, here I propose the thesis that it was with the enactment of the one child policy that early love was finally widely accepted as a social problem. We might remember that, as Zhu Muhui put it in 1920: no date, no marriage. In effect, following the same logic, it is the anti-early love discourse and practice that served as the first frontline of the one child policy: no date, no childbirth; or no early love, no uncontrolled childbirth against that national

policy. With strict enforcement of the one child policy in the following decades, the practice of early marriage and early childbirth in China gradually diminished; early love became the major concern. The third development is the introduction of compulsory education in 1986. All children and young people of school ages, many of whom used to remain at home away from school, have now begun to be incorporated into the school system. By the end of 2001, the enrollment rate of school-age children had reached 97.41% for primary schools and 82.02% for junior middle schools. It is therefore reasonable to assume that the targets of early love, previously directed towards the majority of uneducated rural youth, gradually shifted mainly towards students. Finally, in today's China, early love as a social problem has become largely contained within the school systems, as we have observed.

To sum up, this essay analyzed the ways in which *zaolian* has been constructed as a social problem in China by three institution-building responses to globally circulating human scientific discourses such as eugenics, race, family and civilization. It will also help us understand the following arguments in Chinese history: firstly, this process lasted throughout the 20th century. This demonstrates that 1949 was not always the determining watershed in modern China, at least in the emergence of anti-*zaolian* sentiment or policies. Second, the shifting meanings of *zaolian* remind us that it is too simplistic to mechanically apply western social-cultural theories to explain complicated historically situated issues in Chinese history. Even regimes of sexuality such as *zaolian*, which at first glance appear to be a peculiar construct of the early PRC years, need to be subjected to historical analysis and contextualization specific to time and space.

Acknowledgements

I would like to especially thank my supervisor, Professor Carol Benedict, for her extraordinary guidance and editing support during the preparation of this paper. I also want to thank Howard Chiang for his comments.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Notes

1. *Regulations on the Protection of Minors of Heilongjiang Province, Section 9, Article 13*, <<http://www.hljfz.gov.cn/data/xwxx/news/20090907093502100.html>> (2 October 2009).
2. Guo Yi, “‘zao lian’ ru fa yin xuan ran dabao, ti xian li fa yin dao gong neng she hui mo wu du,” *Fazhi Ribao (The Legal Daily)*, 28 August 2009, p. 4.
3. Zhang Gongcheng, *Zaolian: Wei xian de kai duan (Early Love: A Dangerous Beginning)* (Beijing: Qunzhong Chubanshe, 1994).
4. “Nü er zaolian le zen me ban?” (“My Daughter Is Now Involved in Early Love: What Should I Do?”), *Yantai Ribao (Yantai Daily)*, 12 July 2013, p. B04.
5. Wu Xinyuan, *Zheng que chu li zhong xiao xue sheng zao lian 100 li (Deal with the Problem of Early Love among Primary and Secondary School Students Correctly: 100 Successful Cases)* (Beijing: Beijing Shifan Daxue Chubanshe, 1993).

6. For a recent report on this kind of school regulation, see Geng Yingpin, "zaolian jiu de kai chu?" ("Anyone Who's Involved with Early Love Should Be Expelled?"), *Wenzhou Ribao* (*Wenzhou Daily*), 19 January 2009.
7. Harriet Evans, *Women and Sexuality in China: Female Sexuality and Gender since 1949* (New York: Continuum, 1997), p. 58.
8. Børge Bakken, "Modernizing Morality? Paradoxes of Socialization in China During the 1980s," *East Asian History*, 2, 1991, p. 126.
9. Emily Honig and Gail Hershtatter, *Personal Voices: Chinese Women in the 1980's* (Stanford, Calif: Stanford University Press, 1988), p. 56; Harriet Evans, *Women and Sexuality in China: Female Sexuality and Gender since 1949* (New York: Continuum, 1997), p. 37. Harriet Evans uses the two kinds of translations interchangeably.
10. Ros Asquith, *Teenage Worrier's Guide to Lurve* (London: Corgi Childrens, 1996).
11. Ros Asquith, translated by Wang Liya, revised by Gaojun, *Wo shi qing shao nian, zao lian hao meng long* (*I Am a Teenager, and Early Love Is So Obscure*) (Shenyang: Chunfen Wenyi Chubanshe, 1999).
12. Yao Peikuan and Yang Xiong, *Dangdai qingchunqi jiaoyu yanjiu* (*Research on Contemporary Adolescent Education*) (Zhengzhou: Henan Renmin Chubanshe, 1994), p. 277.
13. Shenyang shisuo gaodeng yuanxiao gongchan zhuyi sixiang pinde ke jiangyi bianxie zu (ed.), *Gaodeng xuexiao gongchan zhuyi sixiang pinde ke jiangyi: gongchan zhuyi rensheng guan feng* (*Communist Moral Education for College Students*) (Shenyang: 1982), p. 150.
14. Honig and Hershtatter, *Personal Voices*, p. 56.
15. Thomas W. Laqueur, "Chapter Five: Why Masturbation Became A Problem," in *Solitary Sex: A Cultural History of Masturbation* (New York: Zone Books, 2003), pp. 247–358.
16. Honig and Hershtatter, *Personal Voices*, p. 56.
17. Zou Yinren, "Qing chu jingshen wuran de bingtai zaolian" ("Early Love Is a Sickness from Spiritual Pollution"), *Gansu Jiaoyu*, 1, 1984, p. 44.
18. *Workers' Daily*, 6 December 1983, p. 3. Quoted in Honig and Hershtatter, *Personal Voices*, p. 60.
19. Børge Bakken, "Modernizing Morality? Paradoxes of Socialization in China during the 1980s," *East Asian History*, 2, 1991, p. 127.
20. Børge Bakken, *The Exemplary Society: Human Improvement, Social Control and the Dangers of Modernity in China* (Oxford University Press, 2000), pp. 354–76.
21. Børge Bakken, "The 'Bad' and the 'Sick': Medicalizing Deviance in China," in Robert Peckham (ed.) *Disease and Crime: A History of Social Pathologies and the New Politics of Health* (New York and London: Routledge, 2014), pp. 101–5.
22. Harriet Evans, *Women and Sexuality in China: Female Sexuality and Gender since 1949* (New York: Continuum, 1997), p. 76.
23. Evans, *Women and Sexuality in China*, pp. 55–81.
24. Evans, *Women and Sexuality in China*, pp. 36 and 77.
25. Evans, *Women and Sexuality in China*, p. 76.
26. Also see Xie Huizhen, *Nüxing weisheng zhishi wenda* (*Q & A on Female Hygiene*) (Nanning: Guangxi Minzu Chubanshe, 1990).
27. Michel Foucault, *The History of Sexuality: An Introduction*, trans. Into English by Robert Hurley (New York: Vintage, 1978), p. 103.
28. Everett Yuehong Zhang, "Rethinking Sexual Repression in Maoist China: Ideology, Structure and the Ownership of the Body," *Body and Society*, 11(3), 2005, p. 9.
29. For more about *danwei*, see Xiaobo Lü and Elizabeth J. Perry (eds.), *Danwei: The Changing Chinese Workplace in Historical and Comparative Perspective* (Armonk, N.Y.: M. E. Sharpe, 1997).

30. Liu Xiaoming, "Guanyu qingnian zhigong zaolian de wenti" ("On the Problem of Early Love among Young Workers"), *Shehuixue tongxun*, 3, 1983, p. 57.
31. Qiao Ruibo, "Nongcun zaolian zaohun zaoyu yuanyin fenxi ji duice yanjiu" ("Analysis on Early Love, Early Marriage and Early Childbirth in Rural Areas"), *Renkou zhanxian*, 3, 1991, pp. 21–3.
32. Dong Shiqing, "Qingnian zhanshi zaohun zaolian ji xu yingqi zhongshi" ("We Should Pay Attention to the Problems of Early Marriage and Early Love among Young Soldiers"), *Qingnian tansuo* 1, 1989, pp. 15–16. There was also special attention paid to early love among female soldiers. See Wang Yanping and Qiu Maoquan, "Zaolian: nü bing guanli zhong de jishou wenti" ("Early Love: A Tough Problem in Managing Female Soldiers"), in Li Fangmei (ed.) *Jun hun falü zhinan* (*Guides to Marriages of Military Service Persons*) (Xi'an: Shanxi Renmin Chubanshe, 1992), pp. 253–7.
33. James Farrer, "Sexual Citizenship and the Politics of Sexual Storytelling among Chinese Youth," in Elaine Jeffreys (ed.) *Sex and Sexuality in China* (London and New York: Routledge, 2006), p. 106.
34. Howard Chiang made a similar argument about homosexual identity in the Republican period. See Howard Chiang, "Epistemic Modernity and the Emergence of Homosexuality in China," *Gender and History* 22(3), 2010, p. 631.
35. For more about Neo-Confucianism and its important role in the past and present of China see Peter Bol, *Confucianism in History* (Cambridge, Mass.: Harvard University Asian Center, 2008).
36. Paul Rakita Goldin, *The Culture of Sex in Ancient China* (Honolulu: University of Hawaii Press, 2002).
37. Hujiao, "E de gushi" ("The Story of Geese"), *Renmin Ribao* (*The People's Daily*), 29 July 1956.
38. Yan Fumei, "Woguo bashi niandai zaohun zaoyu huisheng de xinli chengyin" ("The Psychological Factors for the Increase of Early Marriage and Early Childbirth during the 1980s"), *Hubei daxue xuebao*, 4, 1994, p. 85.
39. Frank Dikötter, *Sex, Culture, and Modernity in China: Medical Science and the Construction of Sexual Identities in the Early Republican Period* (London: Hurst and Co, 1995), pp. 14–101, 146–79.
40. On youth crimes, see Frank Dikötter, *Crime, Punishment and the Prison in Modern China* (New York: Columbia University Press, 2002), 172–8.
41. On masturbation as a social problem for Republican national strength, see Hugh Shapiro, "The Puzzle of Spermatorrhea in Republican China," *Positions: East Asia Cultures Critique*, 6, 1998, pp. 551–96.
42. The issues of reproduction are of special concern in modern China, since eugenics, as a race science of reproduction officially sanctioned after 1949, gained credence in the 20th century. See Frank Dikötter, *Imperfect Conceptions: Medical Knowledge, Birth Defects, and Eugenics in China* (New York: Columbia University Press, 1998).
43. Hiroko Sakamoto, "The Cult of 'Love and Eugenics' in May Fourth Movement Discourse," *Positions: East Asia Cultures Critique*, 12, 2004, pp. 329–76.
44. For more about the small family model, see Susan Glosser, *Chinese Visions of Family and State, 1915–1953* (Berkeley and Los Angeles: University of California Press, 2003).
45. Hiroko Sakamoto, *Chūgoku minzoku shugi no shinwa : jinshushintai jendā* (Tōkyō: Iwanami Shoten, 2004), p. 121.
46. Everett Yuehong Zhang, "Rethinking Sexual Repression in Maoist China: Ideology, Structure and the Ownership of the Body," *Body and Society*, 11(3), 2005, p. 9. Zhang takes it for granted that in Chinese culture, the only purpose of courtship or dating is marriage, but it is also a newly invented tradition dating from the early 20th century.

47. Wu Meicun, "Zenyang zhidao zhong xuesheng de lian ai wenti" ("How Do We Direct the Courtships among Middle School Students"), *Zhongguo qinnian (Chinese Youth)*, 4, 1941, pp. 63–74.
48. A similar case was the anti-early marriage discourse in early 20th-century Korea. See Theodore Jun Yoo, *The Politics of Gender in Colonial Korea: Education, Labor, and Health, 1910–1945* (Berkeley: University of California Press, 2008), pp. 172–6.
49. John Fitzgerald, *Awakening China: Politics, Culture, and Class in the Nationalist Revolution* (Stanford: Stanford University Press, 1996); Ruth Rogakshi, *Hygienic Modernity: Meanings of Health and Disease in Treaty-Port China* (Berkeley and Los Angeles: University of California Press, 2004).
50. Liang Qichao, "On Abolishing the Practice of Early Marriage," in *Qiang Qichao Quanjī (The Complete Works of Liang Qichao)* (Beijing: Beijing Press, 1999), pp. 621–5.
51. Lu Yi, "Hunyin gailiang lun" ("Reform the Marriage Practice"), in Zhang Dan and Wang Renzhi (eds.) *Xingai geming qian shinian jian shilun xuanji (Popular Opinions between 1901–1911 China) Vol. 3* (Beijing: Sanlian Press, 1977), p. 839.
52. See Chung Yuehtsen Juliette, *Struggle for National Survival: Eugenics in Sino-Japanese Contexts, 1896–1945* (New York: Routledge, 2002).
53. Hu Zhongbiao, "Zaohun de jianglai" ("The Future Due to Early Marriage"), *Wenhua*, 4, 1929, p. 42.
54. Zhu Muhui, "Liang ge qingnian dui yu hunyin wenti de kanfa" ("Two Young Men's Views on the Marriage Problem"), *Shanghai Mingguo Ribao*, 9 May 1920.
55. Lü Wenhao, "Zhongguo jindai hunlin huayu de fenxi: cong qingmo zhi 1930 niandai" ("Analysis on Discourses of Ages for Marriage in Modern China: From Late Qing to the 1930s"), in *Zhongguo Shehui Kexueyuan Jindaishi Yanjiusuo Qingnian Xueshu Luntan* (Beijing: Shehui Kexue Wenxian Chubanshe, 2005), 237–60. I thank Lü Wenhao for his help in sending me this paper.
56. Wu Jingchao, "Qinghua de lishi" ("The History of Qinghua University"), *Qinghua Shenghuo*, 28 April 1932.
57. Lü Wenhao, "Zhongguo jindai hunlin huayu de fenxi: cong qingmo zhi 1930 niandai."
58. Anhui sheng jiaoyu ting (ed.), *Anhui shengli zhongdeng xuexiao xiaozhang huiyi lu (Notes of the High School Principals Conference in Anhui Province)*, 1929, p. 66.
59. The earliest vernacular use of the term *zaolian* in Chinese appeared in 1944 as the title of a Chinese version of the Soviet novel *Dikaya sobaka Dingo, ili Povest o pervoj lyubvi (The Wild Dog Dingo or A Tale of a First Love)* by Ruvim Frayerman. Although the Chinese translator Hu Shanyuan did not provide the original title of that novel (Russian or English), he mentioned on the front page that it was translated from an English journal *International Literature*. Thus we can conclude that *zaolian* here referred to the English term "the first love." However, the use of *zaolian* in this translated novel is quite different from the meaning of *zaolian* in usage nowadays. See Ruvim Frayerman, translated by Hu Shanyuan, *Zaolian* (Tianguang shudian, 1944).
60. Zhang Shili, "wo dui qingnian xuesheng guozao lian ai jiehu de yijian" ("My View on Young Students' Early Love and Early Marriage"), *Zhongguo qingnian (Chinese Youth)*, 4, 1957, pp. 10–11.
61. Fu Lianzhang, "Fu Lianzhang huizhang tan wanhun wenti" ("President Fu Lianzhang on the Issue of Late Marriage"), *Zhonghua huli zazhi*, 3, 1957, p. 2.
62. Xie Huizhen, *Nüxing weisheng zhishi wenda*, pp. 87–8.
63. Frank Dikötter, *Sex, Culture, and Modernity in China: Medical Science and the Construction of Sexual Identities in the Early Republican Period* (London: Hurst and Co, 1995), p. 181.
64. "Section 2, Article 4, The Marriage Law of the PRC (1950)," in *Zhongguo Funü Xiehui (ed.) Zhongguo fu nü yundong zhongyao wenxian (Key Documents of Women Movements in China)* (Beijing: Renmin Chubanshe, 1979), p. 199.

65. Shiliang, "Hunyin fa zhixing qingkuang zhongyang jianchaizu jiancha baogao" ("The Report by the Central Inspection Team on the Marriage"), *Renmin Ribao*, 4 July 1952.
66. "Yong yansu fuze de taidu, xiang xuehseng jinxing hunyin fa he lian ai guan de jiaoyu" ("Teach the Marriage Law and Dating Values to Students with Serious Attitudes") *Renmin Jiaoyu*, 3, 1953.
67. Section 4, Article 3 of "Gaodeng xuexiao xuesheng xueji guanli de zanxing guiding" ("Working Rules on Enrollments of College Students"), in Guojia jiaoyu weiyuanhui gaoxiao xuesheng si (eds.), *Gaodeng Jiaoyu Xueji Xueli Guanli Guiding Xuanbian* (Beijing: Beijing Shifan Chubanshe, 1994), p. 489.
68. Ibid, p. 492.
69. Guojia jiaoyu weiyuanhui gaoxiao xuesheng si (eds.) *Gaodeng Jiaoyu Xueji Xueli Guanli Guiding Xuanbian*, "Jiaoyu bu guanyu gaodeng xuexiao zai xiao xuesheng jie hun de guiding" (The Rule on College Students' Marriage," Guojia jiaoyu weiyuan hui gaojiao xuesheng si (ed.) *Gaodeng Jiaoyu Xueji Xueli Guanli Guiding Xuanbian*, p. 73.
70. For a detailed discussion on the one child rule, see Susan Grennhalgh, *Just One Child: Science and Policy in Deng's China* (Berkley, University of California Press, 2008). Her main argument is this one child rule was determined by a small group of rocket scientists after 1978.
71. Guowu yuan bangong tin, "Guowuyuan bangongting zhuanfa mingzhengbu deng bumeng guanyu jiaqiang hunyin guanli zhizhi zaohun zaoyu yijian de tongzhi," <<http://www.people.com.cn/item/flfgk/gwyfg/1992/112103199241.html>> (accessed 26 April 2010).

Translating culture and psychiatry across the Pacific: How koro became culture-bound

History of Science

2015, Vol. 53(1) 102–119

© The Author(s) 2015

Reprints and permissions:

sagepub.co.uk/journalsPermissions.nav

DOI: 10.1177/0073275314567439

hos.sagepub.com



Howard Chiang

University of Warwick, UK

Abstract

This article examines the development of koro's epistemic status as a paradigm for understanding culture-specific disorders in modern psychiatry. Koro entered the *DSM-IV* as a culture-bound syndrome in 1994, and it refers to a person's overpowering belief that his (or her) genitalia is retracting and even disappearing. I focus in particular on mental health professionals' competing views of koro in the 1960s—as an object of psychoanalysis, a Chinese disease, and a condition predisposed by culture. At that critical juncture, transcultural psychiatrists based outside of continental China—namely, Taiwan, Hong Kong, and Singapore—appropriated ideas from traditional Chinese culture to consolidate the clinical diagnosis of koro as culture-bound. This new global meaning of koro was made possible by a cohort of medical experts who encountered the phenomenon and its sufferers in Sinophone (Chinese-speaking) communities, but placed their contributions within the broader contours of the global reach of Anglophone psychiatric science.

Keywords

Koro, transcultural psychiatry, Sinophone, culture-bound syndrome, Asia

Introduction

The history of science has lately witnessed a major turn towards global analysis, with an emphasis on circulation and exchange.¹ Certainly, one of the most distinctive features of science is its geographical unrootedness. That is not to say that scientific practice and inquiry are not always intrinsically dependent on their local context, but rather that they

Corresponding author:

Howard Chiang, Department of History, University of Warwick, Coventry, CV4 7AL, UK.

E-mail: h.h.chiang@warwick.ac.uk

are not *merely* local or regional in nature. Despite the growing momentum behind the global studies of science, technology and medicine, not all historians of science share the same optimism. In 2009, Warwick Anderson observed that ‘in science and technology studies (STS), as elsewhere, euphoric accountings of globalisation rapidly are displacing anhedonic postcolonial genealogies, often to the detriment of critical thought’.² More recently, he added that ‘on the way to the global we seem to have dropped the colonial’ and that ‘the global makes us comfortable with the multiplicity and ambiguity of its performative differences’.³ Sarah Hodges has similarly cautioned against the recent ‘global menace’ in the history of medicine, whereby historians often tend to reproduce, rather than perform critical analytical work that accounts for, the uneven stumbles of globalization itself.⁴ To quote Fa-ti Fan, a balanced global approach to the history of science must attend to ‘the historical reasons and circumstances that fostered or hindered the movement of knowledge or material objects’.⁵

Building on these insights, this article uses ‘Asia as method’ and situates the history of East Asian medicine within a robust postcolonial framework.⁶ I borrow the concept of the Sinophone from the literary scholar Shu-mei Shih to refer to Sinitic-language communities and cultures outside of China or on the margins of China and Chineseness.⁷ Sinophone communities and cultures thus bear a historically contested and politically embedded relationship to China, similar to the relationships between the Anglophone world and Britain, the Francophone world and France, the Hispanophone world and Spain, the Lusophone world and Portugal, and so forth. By refocusing our attention away from ‘the West’ to the provincializing of China, Sinophone postcolonial studies broaches a *minor*, rhizomic form of transnationalism that is especially valuable for understanding the intercultural negotiation, standardization and comprehension of medical experience between the global and the regional, and on the epistemic and quotidian scales.⁸

In shedding light on the horizontal connections across Chinese-speaking postcolonial locations such as Taiwan, Hong Kong and Singapore, the Sinophone concept enables a historical perspective on transpacific medicine to emerge from outside the hegemonic parameters of the nation-state.⁹ Specifically, this article explores the postwar development of transcultural psychiatry by focusing on the genealogy of a clinical diagnosis known as ‘koro’, or *suo yang* (縮陽) in Chinese. Koro was listed as a culture-bound syndrome in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*, and it referred to a person’s overpowering belief that his (or her) genitalia is retracting and even disappearing.¹⁰ This article examines mental health experts’ competing views of koro in the 1960s. At that critical juncture, psychiatrists based outside of continental China – namely, Taiwan, Hong Kong and Singapore – appropriated ideas from traditional Chinese culture to consolidate the clinical diagnosis of koro as a *culture-bound* disorder. I will show that this new global meaning of koro was made possible by a cohort of medical experts who encountered the phenomenon and its sufferers in Sinophone communities, but placed their contributions within the broader contours of the universal reach of Anglophone psychiatric science.

In Cold War Asia, Sinophone psychiatrists strategically positioned themselves as experts on culture-specific mental illnesses with which their European and American counterparts were less familiar. Using local patient cases from the geocultural borders of the Sinosphere as the immediate grounds of comparison, they claimed for themselves an

unprecedented niche in Western biomedicine that defied the co-formations of Eurocentric and Sinocentric culturalism. The trajectory whereby koro became an object of psychoanalysis, a Chinese disease and a culture-specific disorder foregrounds the double marginality of Asian transcultural psychiatrists (and their patients), whose significance has been historically situated on the peripheries of both Western psychiatry and the meanings of China and Chineseness.

Koro as a psychoanalytic object

American psychiatrists were first exposed to Chinese cases of koro in 1963. In May that year, the Japanese Society of Psychiatry and Neurology and the American Psychiatric Association held a joint meeting in Tokyo. The Taiwan-based psychiatrist, Rin Hsien (林憲), delivered a paper on two koro patients.¹¹ Both patients had migrated to Taiwan from mainland China in the late 1940s, and both sought medical treatment at the Department of Neurology and Psychiatry at the National Taiwan University Hospital in the 1950s. Up to this point, cases of koro patients of Chinese descent had been reported only in Southeast Asia. Rin's patients were unique in that they represented the first sample of natives of mainland China diagnosed with this condition by the mental health profession.¹² Given the notable absence of koro cases in Taiwan during the Japanese colonial period (1895–1945), when Rin first encountered his Chinese koro patients in Taipei, he was determined to draw on his psychoanalytic training to treat their concomitant psychiatric illnesses, such as borderline personality disorder and schizophrenia.¹³

The first patient, 33-year-old T.H. Yang, visited the psychiatric clinic in August 1957. Originally from Hankow in Central China, Yang was the eldest of five sons brought up in a small town on the Yangtze River. His father passed away, due to an unknown illness, when Yang was only seven, shortly after his youngest brother was born. His mother subsequently remarried, but his stepfather frequently beat him. She then took Yang to live with her brother, who also mistreated him. Yang started to support himself at the age of 11, first working as a baker, then as a cook. However, he had difficulty in saving money after developing the habits of gambling and frequenting brothels. At one point he was concerned about his excessive masturbation, and he turned to Chinese herbal medicine (and even his urine) to 'cure' this problem. He enlisted in the army at the age of 22 and migrated to Taiwan with the Nationalist government in 1949. After arriving in Taiwan, he soon quit the army and found a job in a bakery. He redeveloped his habit of gambling and going to brothels. For an extended period he engaged in sexual intercourse on a daily basis.

Yang's first attack of breathlessness and palpitation came in July 1957. He also suffered from dizziness, weakness in limbs and muscular twitching. Although physical examination was unanimously negative, he recovered in two weeks after receiving doses of vitamin B injection. But he visited brothels again, and more attacks came on a more frequent and prolonged basis. He saw many herb doctors at the same time that he was given regular vitamin injections. One of them told him that he was suffering from *shenkui* [腎虧], a diagnosis of sexual defect in Chinese medicine that implied the loss of vitality (possibly leading to death) due to excessive sexual intercourses. He finally decided to quit his job to save his strength.

In August 1957, Yang was referred to the psychiatric department by a medical doctor. According to Rin Hsien, 'irresistible sexual desire seized [Yang] whenever he felt slightly better; yet he experienced strange "empty" feelings in his abdomen when he had sexual intercourse'. With these strange feelings of an 'empty' abdomen, Yang 'often found his penis shrinking into his abdomen, at which time he would become very anxious and hold on to his penis in terror'. At night, Yang would frequently find his penis shortened to less than one centimetre long. Consequently, he 'would pull it out' so as to be 'able to relax and go to sleep'. Sometimes Yang thought that his anus was withdrawing into his body, too.¹⁴

The second patient, T.H. Wang, was a 39-year-old married man from Jiangsu. He was admitted into the psychiatric division of the National Taiwan University Hospital in May 1959 with the diagnosis of paranoid state. Wang was the only son in a traditional family, raised in a small town situated in the lower reaches of the Yangtze River (the urban centre of Chinese culture throughout the late imperial period). While he remembered his father to be very kind and gentle, his recollection of his grandmother, who took over raising him from the age of six, was more strict and authoritative. His father died when he was 11. Given the resulting economic burden placed on his family, Wang had to leave home at the age of 16 to work in a bookstore in Shanghai. During the Sino-Japanese War (1937–1945), he obtained a good position in a government office, married a lady who was five years older than him, and raised a daughter. They moved first to Nanjing after the war, then to Taiwan in 1949. The next year, he secured a job as chief accountant in a college office.

Between summer 1958 and spring 1959, a series of events happened to him that made him feel increasingly insecure and paranoid about the people whom he knew. He was first blamed by the dean of his college for his careless supervision of a co-worker. In September, he was accused of illegal construction after trying to expand his house to make room for his daughter. His salary disappeared from his house in November, at which point he began to develop insomnia and overt paranoid ideas. He started to trust no one and avoided contacts with others. It got to a point where he even believed that someone was hiding in the ceiling to spray poison on him.

By May 1959, the severity of Wang's symptoms led to hospitalization. According to Rin Hsien, Wang was referred to the psychiatric department because 'he believed that his scrotal skin was so loose that *jing* (精, semen) was leaking out and making the surrounding skin gelatinous'. To relieve his anxiety (in part about his penis withdrawing into his abdomen), the doctors delivered a course of insulin shock treatment. Afterwards, he was gradually relieved from his various somatic symptoms. He increasingly felt that his skin, especially his scrotum, was tighter. Eventually, achieving therapeutic catharsis, he was able to confront the extraordinary measure of emotional stress he had been under in recent years.¹⁵

In commenting on these two cases, Rin Hsien used a model that combined Western psychodynamic theories with concepts rooted in traditional Chinese culture. Psychoanalysts had long considered the indirect association of orality with dependency as the psychological basis for the prevalence of opium-smoking and gambling in Southern China.¹⁶ Because Chinese culture emphasized orality, Rin observed, the symptoms of his two koro patients demonstrated a form of sexual defect on account of their oral

deprivation. In the yin-yang principle of Chinese medicine, yin denotes cold, wetness and the feminine, whereas yang is correlated with heat, dryness and the masculine. A balance of yin and yang was crucial for an individual's health. Koro's Chinese name, *suo-yang*, literally means the 'retracting of yang'. Viewed in this light, the various medications consumed orally by the first patient, Yang, were likely herbs that curbed yin excess and replenished deficient yang. Since the meaning of *suo yang* resembled the ideas of *shen kui* (腎虧, vital defect), *xin kui* (心虧, heart defect) and *shen kui* (神虧, spiritual defect), Rin grouped all of these conditions under the general category of the 'deficiency of vitality'.¹⁷

These Chinese concepts of illness helped Rin to understand koro through a psycho-analytic lens. In 1956, the Stanford anthropologist, John H. Weakland, published an article in *Psychiatry* that aimed to enumerate the connection between orality and Chinese male genital sexuality.¹⁸ Drawing on examples from Robert van Gulik's *Erotic Color Prints of the Ming Period* (1951),¹⁹ Weakland argued that 'one very basic and powerful Chinese conception of sexual intercourse is an oral relationship of feeding and eating, like that of mother and infant, but reciprocal. Both male and female genitals may play either the giving, feeding, milk-secreting role of the breast or the eating, drinking, absorbing role of the mouth.'²⁰ To explain the experience of his two koro patients, Rin borrowed Weakland's insight and relayed that 'powerful castration threats in the genital phase may be experienced by the Chinese as oral deprivation'.²¹ Rin speculated the psychodynamics of the two cases in the following way:

Owing to castration fear, the first case visited prostitutes after he had lost in gambling. The second case drank heavily in response to his wife's domination and rejection; later he developed a fear of sexual defect. Lack of oral supplies and threat to dependency needs leads to a fear of castration and eventually to a fear of loss of vitality. At that time the patients felt forsaken, decompensation and distortion took place, and delusions regarding genitals and their function were manifested. Hypochondriacal trends and narcissistic behavior were clearly shown by the patients during their state of panic. The patients' statements that their 'penis shrinks' and that their 'testicles drop off' are in keeping with Chinese concepts of illness and morbid fears.²²

Rin placed an emphasis on the two patients' troubled childhood, noting especially the absence of a strong father figure in both of their lives. This led to 'confusion and anxiety in achieving masculinity' and 'excessive masturbation, indulgence in prostitution, gambling, drinking, and seeking maternal partners in marriage in their adult lives'.²³

Yang and Wang's migration served to show that Chinese cases of koro would be difficult to interpret without the fundamental concepts of ill-health that originated from Chinese culture. Both came to feel greater personal and family insecurity as a result of the various employment and financial difficulties triggered by migration. What they brought to Taiwan with them, therefore, was not just their physical bodies, but a whole set of belief systems that stressed the significance of yin-yang balance and its underlying sexual and cultural connotations. The movement of Chinese-speaking peoples directed the centrifugal flow of ideas and worldviews from mainland Han Chinese culture, and this pattern of migration critically anchored the formation of Sinophone communities in post war Taiwan.²⁴

More importantly, Rin Hsien drew on ideas from traditional Chinese culture and medicine not as an end in and of itself to understand koro, but as a means to unpack the psychodynamics of its Chinese sufferers. He did not deem the Chinese concepts themselves as sufficient. Rather, they were necessary for him to foreground psychoanalytic paradigms, especially Freudian ideas about the different stages of psychosexual development (oral, genital, etc.) and castration anxiety, and to subsume traditional notions of vital deficiency under the explanatory power of Western psychogenic theories. Unlike the transmission of psychiatric knowledge and practice to formal colonial contexts in Asia and Africa, native intellectual and medical elites played an agential role in introducing psychoanalytic concepts to Chinese and Sinophone communities.²⁵ Mirroring the epistemic tension between the Chinese background of the patient and the Western psychodynamic approaches of the physician, koro emerged as a clinical entity on the overlapping geocultural margins of Chineseness and Anglophone psychiatric medicine.

Koro as a Chinese disease

In Southeast Asia, Singapore stood at the forefront of koro research. Gwee Ah Leng (魏雅聆), a neurologist and founding editor of the *Singapore Medical Journal*, was the leading authority on the subject in the 1960s.²⁶ In the same year that Rin Hsien spoke at the Tokyo meeting, Gwee reported three cases of Chinese koro patients living in Singapore whom he had followed up for more than seven years.²⁷ The first patient ('C.C.H.') was an 8-year-old Chinese schoolboy whose penis was considered by his parents to have retracted after an insect bite. He then visited the hospital on multiple occasions starting on 28 July 1956, and his penis was often found to be clamped by various things (chopsticks, a loop of string, etc.). The second case ('H.H.F.') was a 34-year-old Chinese man who, on 24 March 1956, believed that his penis was getting shorter when he went to the loo during a cinema show. He held onto his penis with his right hand, felt cold in the limbs and was weak all over. About half an hour later the attacks abated and he was able to see a medical specialist to resolve the situation. The third case ('N.C.') was a 38-year-old Chinese man married with seven children. His attack came during intercourse with his wife, but he recovered after holding onto his penis for 20 minutes. In the two years prior to the attack he claimed to have been feeling very weak and every time he defecated he thought that his penis would retract (though it never did), which aroused great fear and distress.²⁸

Interestingly, all three patients were Chinese, were aware of 'Shook Yong' (Singaporean Anglicization of *suo yang*) prior to their koro attacks and were eventually cured by vigorous assurance and talks about sexual anatomy from the doctor. The 8-year-old schoolboy was in many ways led to believe in koro by his parents; the 34-year-old man claimed to have heard from his friends of both 'Shook Yong' and fatalities during intercourse; and the married man conceded that his knowledge of 'Shook Yong' as a dangerous and fatal disease went way back to his school days.²⁹ Moreover, whereas Rin Hsien paid a great measure of attention to his patients' childhood and teenage experiences, the cases presented in Gwee's report were succinct capsules of events pertaining to the koro episodes under discussion. The psychosexual development of the patient's experience remained irrelevant in Gwee's interpretation of these events.

Rather than using basic concepts from traditional Chinese culture to fortify a psycho-analytic understanding of koro, Gwee situated the triggering of koro experience within Chinese culture itself. Gwee not only questioned koro etiological explanations on pure psychological grounds, but he also turned to long standing Chinese customs and beliefs as a fertile source of cultural stimulus:

it is interesting to note that castration is practiced in China to create eunuchs for the Court, and also that in ordinary conversation, children are frequently threatened with castration for misdemeanor in micturition habits. Further, promiscuity is frowned upon by Chinese culture in spite of the public sanction of multiple wives, and literature abounds in exhortations to avoid illicit sexual relationships with all sorts of supposed ills that may arise as a result of such practices. Also, Chinese medicine, which has a wide appeal, attaches great importance to the spermatic fluid, stating that 10 grains of rice form a drop of blood, and 10 drops of blood form a drop of spermatic fluid, and that a Man's health can be seriously jeopardized if there is an excessive loss of spermatic fluid. [...] The formation of spermatic fluid is supposed to be attributable to the kidneys, and round about the kidneys is situated a mysterious point referred to as the Gate of Life (命門). Hence it can be seen that as far as Chinese culture goes, the ground is adequate to give rise to the concept that sexual excess, apart from being a social and religious taboo, can literally through the loss of the spermatic fluid result in the loss of life.³⁰

In light of the rich tradition of viewing sex as the essence of life in Chinese culture, Gwee explained men's false anxiety over penile shrinking by way of two key factors: 'the free play of imagination of a physician on top of a culture which links fatality with genital retraction and sexual activity with risk to life'.³¹ In other words, koro 'delusion' was not only instigated by the popular appeal of Chinese medicine, but it was also a problem propagated by Western biomedical physicians who 'made up' its clinical existence.³² For Gwee, koro as a construct operated on two different registers: a form of common knowledge for which medical professionals held pivotal responsibility in its popular dissemination, and a form of experience informed and conditioned by the patient's (Chinese) cultural background.

Pushing for the argument that koro was nothing but a culturally imprinted phenomenon, Gwee was the first psychiatrist to unearth in detail the discussions of koro in classical Chinese medical sources.³³ In an article that he published in the *Singapore Medical Journal*, 'Koro—Its Origin and Nature as a Disease Entity' (1968), Gwee brought to light five Chinese medical texts in which the retraction of penis was documented.³⁴ The first, oldest, example came from the *Linshu* part of the classic *Inner Cannon of the Yellow Emperor* (first century BCE):

In the case of the liver, grief moves the innermost self and causes harm to the animus. When the animus is injured, the result is madness [狂], amnesia, and lack of sperm. Without sperm, a person will not be well, and the manifestation is one of *retraction of genitals* [陰縮] with spasm of muscles, the bones of the chest are depressed, and the hair colour poor. Death usually occurs in Autumn.³⁵

The second example came from *The Etiology and Symptomatology of Diseases* (*Zhubing yuanhou lun* 諸病源候論, 610) compiled by Chou Yuanfang (巢元方), a physician to the emperor of the Sui Dynasty (550–630):

This disease arises in the case of man or woman just recovered from fever, and indulging in intercourse before being completely well. The illness resulting is called the transposition of symptoms of Yin and Yan[g] ... The symptoms are feeling of heat rising up the chest, head too heavy to be lifted up, vision blurred, and all limbs are in spasm, the lower abdomen is painful, there is carpo-pedal spasm, and, *all will die instantly* [...] If the patient indulges in intercourse, the result will be swelling of genitalia with *retraction into the abdomen* [令人陰腫縮入腹].³⁶

In these classical sources, as well as most of the Chinese medical texts that appeared before the nineteenth century, the Chinese word for both male and female sex organs is Yin (陰).

Perhaps the most important source from the Qing dynasty (1644–1911) that commented on genital retraction is the *Golden Mirror of the Orthodox of Medical Lineage* (*Yizong jinjian* 醫宗金鑑, 1742), a project commissioned by the Qianlong Emperor. As Marta Hanson has shown, the *Golden Mirror* ‘was one of multiple publishing projects in the first decade of the Qianlong reign [1735–1796] that represent the initial stage of the emperor’s obsession with defining orthodoxy (*zheng* 正) in all realms of Chinese knowledge as a tool of Manchu control over both Chinese culture and the Chinese’.³⁷ Following the aim of defining orthodoxy, the *Golden Mirror* used male figures to depict the standard human body in the vast majority of its images, while visual illustrations of the female body only appeared sporadically in non-normative, special circumstances.³⁸ The *Golden Mirror* passage that mentioned genital retraction was concerned with the symptoms of fever: ‘In fever, yin and yan[g] transposition is seen as feeling of heaviness, shortness of breath, discomfort in lower abdomen, may be *retraction of genitals with spasm* [陰中拘攣], heat rising up the chest, head too heavy to be lifted, visions blur, knees and calves are spastic, the powder of burnt, panties is of value’.³⁹

The two remaining Chinese medical texts were published in the nineteenth century. The first was the *New Compilation of Tested Prescriptions* (*Yanfang xinbian* 驗方新編, 1846) by Bao Xiang’ao (鮑相璈). In *New Compilation*, the section on the ‘Retraction of Penis’ (陽物縮入) in Chapter 6 directs the reader to the section under the heading of ‘Yin-Type of Fever’ (陰症傷寒) in Chapter 14. Interestingly, this passage may be the earliest documentation of female koro in Chinese medicine:

After an intercourse between the male and female, may be arising of exposure to wind and cold, or the ingestion of raw or cold food, the result is pain in the abdomen, *the scrotum in the male or the nipples in the female are retracted* [男子腎囊內縮，婦女乳頭內縮]. May be the limbs will be flexed and of a dark purplish hue, and when severe, there is trismus, and cessation of breathing. This is called Yin-type of fever.⁴⁰

Finally, Gwee included an image of the acupuncture tract with which koro was associated in Chinese medicine (Figure 1), the middle female meridian of the feet (*zujue yin-ganjing* 足厥陰肝經), ‘which ran a course on the inner side of the lower limb to the genitalia and then to the ipsilateral side of the abdomen up to the chest’.⁴¹ Gwee came across this connection in the *Collection of Acupuncture and Moxibustion* (*Zhenjiu jicheng* 針灸集成, 1874) by Liao Runhong (廖潤鴻). The section ‘The Middle Female Meridian of the Feet’ states that its value lies in ‘difficulty in movement, painful hernia, impotence and blackouts, muscle spasms, loss of spermatid fluid, retraction of the penis

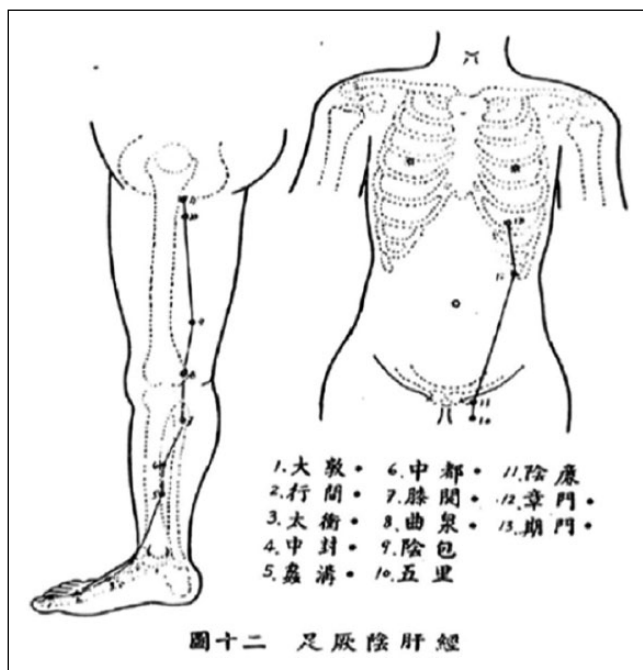


Figure 1. The middle female meridian of the feet. Source: Ah Leng Gwee, 'Koro; Its Origin and Nature as a Disease Entity', *Singapore Medical Journal* 9, no. 1 (1968): 3.

into the abdomen [陰縮入腹] ... Nocturnal emissions, retraction of genitalia [夢洩遺精陰縮].⁴² As Yi-Li Wu has shown, the flourishing publishing industry of the late Qing period helped to disseminate medical knowledge of various levels. Books such as the *New Compilation of Tested Prescriptions* and the *Collection of Acupuncture and Moxibustion* were likely to be popular medical handbooks, revised and edited by literati amateurs, that contained methods and remedies that aroused suspicion among scholar-physicians but were welcomed by lower-level literati families.⁴³

In the autumn of 1967, a koro epidemic swept across Singapore (Figure 2). On the day of 3 November alone, as many as 97 male koro patients showed up at the emergency unit of the Singapore General Hospital.⁴⁴ Some appeared with their genitals clamped with restraint devices (Figure 3). In attempts to demystify this unprecedented event in Southeast Asia, Singaporean doctors clung to the idea that koro was merely a delusion suggested to the patient by his cultural background. The Chinese Physician Association of Singapore convened a seminar during the epidemic and arrived at the conclusion that 'the epidemic of Shook Yang was due to fear, rumour-mongering, climatic conditions, and imbalance between heart and kidneys, and was in no way similar to the classical entity of Shook Yin (縮陰)'.⁴⁵

Gwee subsequently formed the Koro Study Team that conducted a comprehensive study of the epidemic between August and July 1968 (the late start was intended to avoid a second scare). Chaired by Gwee himself, the Koro Study Team involved Lee Yong

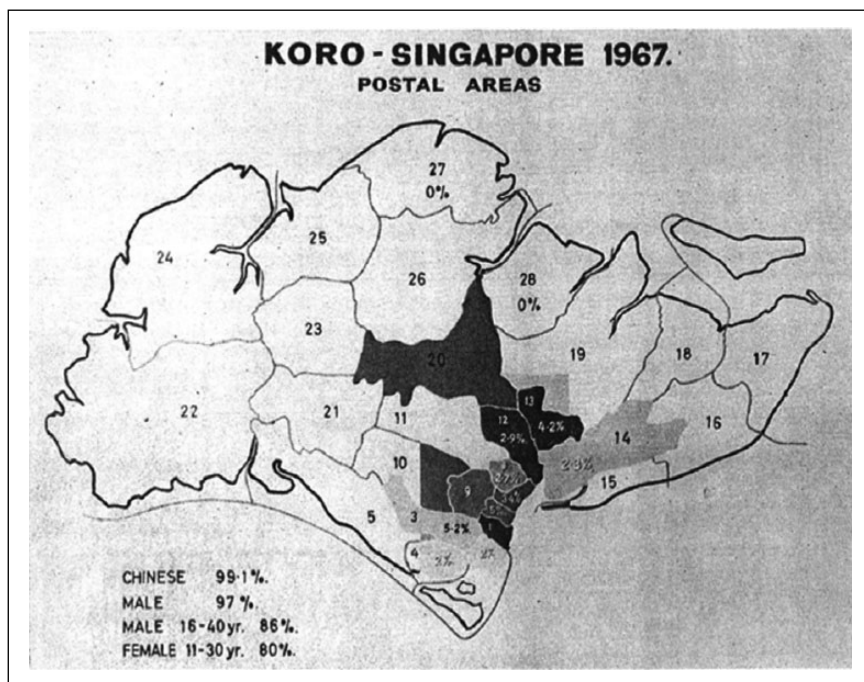


Figure 2. Breakdown of the incidence rates of the 1967 koro epidemic by postal areas.
Source: The Koro Study Team, 'The Koro "Epidemic" in Singapore', *Singapore Medical Journal* 10, no. 4 (1969): 238.

Kiat, Tham Ngiap Boo, Chee Kim Hoe and William Chew from the Medical Unit III of the Outram Road General Hospital; P.W. Ngui, Wong Yip Chong, Lau Chi Who and Chee Kuan Tsee from the Woodbridge Hospital for mental diseases; and J.M. Colbourne from the Department of Social Medicine and Public Health at the University of Singapore.⁴⁶ The researchers sent a request letter to all doctors in Singapore, government emergency units and outpatient departments for details on all koro cases seen. The idea was that these details would provide the basis for follow-up studies. However, the group was disappointed by the low return rate from general practice. Furthermore, the few returned cases often contained insufficient information on date and address, and a significant portion of them refused to be followed up. In total, 469 cases were recorded, 80% of which came from the Emergency Unit of Outram Road General Hospital, but only 235 (52%) responded to the follow-up calls.⁴⁷

Above all, the Koro Study Team used the data they collected to reaffirm Gwee's earlier view that koro was a condition produced by predisposition to Chinese culture. From the returns, they obtained the racial breakdown of 95% Chinese males and 2.2% of Malays and Indians combined. This distribution, the team argued, 'proved conclusively that in spite of the fact that the disease has a Malay name, *it is essentially a Chinese disease* and would seem to support the suggestion that the original pathogenetic concept was of Chinese origin'.⁴⁸ Since koro was a concept loaded with complex traditional and

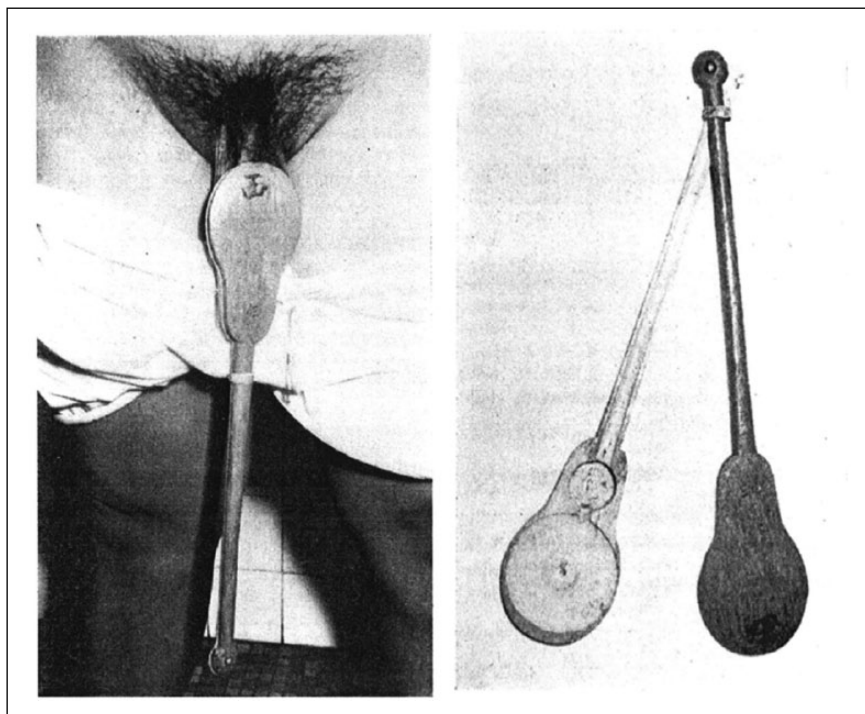


Figure 3. A restraint device used by a koro patient in Singapore. Source: The Koro Study Team, 'The Koro "Epidemic" in Singapore', *Singapore Medical Journal* 10, no. 4 (1969): 239–240.

cultural meanings, the researchers also associated prior knowledge of koro with higher educational attainment. Their results showed that of the 236 response cases, only 12 (5%) were uneducated, while 135 (57%) were Chinese educated and 84 (35%) were English educated. Hence, as 'expected', the rate of koro 'amongst educated persons [was] higher than the corresponding one amongst the uneducated'.⁴⁹ Moreover, the team came across six cases below the age of 6, which seemed to challenge the correlation they initially established between koro occurrence and the level of education. But the researchers explained that 'all these young children were literally "shanghaied" into the ranks of Koro patients by anxious parents who were only too ready to diagnose Koro'. Similar to the 8-year-old Chinese schoolboy whom Gwee discussed in his 1963 report, these young-age koro cases actually 'support the previous hypothesis that indoctrination had a great deal to do with the occurrence of the disease'.⁵⁰ Because 'every case has some idea of Koro either hearing about it previously or told about it at the "epidemic" before he was affected', the Koro Study Team conclusively called koro an *indoctrination* culture-bound syndrome.⁵¹

Koro becomes culture-bound

But the Koro Study Team was not the first to distinguish koro as specifically bound to Chinese culture. From the early to mid-1960s, the vocabulary of *culture-bound syndrome*

was introduced in a series of articles published by a psychiatrist based in Hong Kong, Pow-Meng Yap. Yap was a senior specialist in psychiatry of the Hong Kong Government and the Head of the Psychiatric Division in the Department of Medicine at Hong Kong University.⁵² It was within the broader context of his comparative studies on possession and exotic psychoses that Yap assigned koro the nosological label of 'culture-bound depersonalization syndrome'.⁵³ Over the course of 15 years, Yap gathered 19 cases of patients affected by koro in Hong Kong. Based on clinical observations, Yap considered patients of this particular disorder to be sufferers of 'a localized depersonalization of their penis'.⁵⁴ Yap explained that because the penis is 'toneless' and 'beyond voluntary control', its physical contours are largely 'dependent upon episodic emotional arousal'.⁵⁵ Whereas Gwee, in Singapore, argued that koro patients are delusional since 'in truth no anomaly has occurred', Yap maintained that they actually 'ha[ve] not lost touch with reality as far as the conviction of penile retraction goes, because this is based on partial depersonalization'.⁵⁶ According to Yap, the fear of penile shrinkage is 'reinforced by the existence of a folk belief in the *reality* of a possibly dangerous koro illness'.⁵⁷ He therefore chose the adjective 'culture-bound' to underscore koro's close connection to the Chinese cultural background of its subjects.

Although both Gwee and Yap attributed the cause of koro to an awareness of the Chinese cultural repertoire, they disagreed on its physical and psychogenic mechanisms. For Yap, the varying size of the penis falls within the normal realm of the organ's physiology, and this was *no less real* than the existence of the belief (and fear) of fatal genital retraction. On the contrary, a proponent of interpreting koro as a delusional state, Gwee maintained that 'this belief has no anatomical or physiological basis'. 'In other words,' Gwee explained, 'it is actually not so much a true depersonalization of an organ, which does not disappear in Koro, but even in the mind of the affected is very much present but in the wrong place, in other words a *translocation*'.⁵⁸ Whether it is a culture-bound depersonalization or translocation syndrome, by the late 1960s, koro had become a *distinctively mental* illness, no longer resembling a pure somatoform disorder as depicted in Chinese medical texts. The Western biomedicalization of koro recasts Chinese culture itself as a source of this pathology and an important arbiter for its contemporary psychologization and understanding.⁵⁹

Starting in the 1970s, psychiatrists began to discover cases of koro more frequently outside Chinese East Asia. Reports of koro came from all over the world – Great Britain, France, Canada, the United States, India, Georgia, Yemen and Nigeria.⁶⁰ These findings pushed Western and non-Western psychiatrists alike to acknowledge the increasing need to engage with anthropological perspectives in order to fully understand the development of certain mental health problems in culturally saturated contexts.⁶¹ Most recently, the genital-theft panic in Western African nations in the 1990s posed a significant challenge to the move to a universal set of genital retraction disorders, a tendency encouraged by the 'tightening up' of the *DSM*.⁶² The desire for more standardized diagnostic criteria, more systematic clinical practices and fewer case histories compelled some mental health experts to elevate culture-bound syndromes to a more general family of psychiatric illness.⁶³ This reorganization culminated in 1990 when two faculties at Boston University, Ruth Bernstein and Albert Gaw, proposed a new classification scheme for the forthcoming *DSM-IV*.⁶⁴ According to Bernstein and Gaw, koro could 'provide a paradigm for

examining other culture-specific disorders'.⁶⁵ In 1994, Chinese koro officially entered the *DSM-IV* as the 'true' koro model for understanding other culture-bound syndromes in modern psychiatry.

Conclusion

In the existing scholarship on koro, the medical sociologist Robert Bartholomew distinguishes himself as an adamant critic of the clinical reality of koro, arguing that epidemic koro in particular is 'a non-Western example of a collective social delusion'.⁶⁶ More recently, historian Ivan Crozier has provided a Foucauldian perspective that depicts koro as 'transient' across time and 'not a stable reality; it is rather a series of specific practices that can only be understood against their local, historical context'.⁶⁷ However, Crozier's account tends to stress the roots of modern transcultural psychiatry in colonial psychiatry.⁶⁸ His narrative misses the crucial role and agency of non-Western doctors in shaping the emergent discourse of 'culture-bound syndrome' that significantly reoriented the relationship between culture and psychiatry in the 1960s and beyond.

This article has tried to balance this omission by examining the effort of those mental health practitioners who grappled with koro in Sinophone communities and yet were based mainly on the periphery of Anglophone psychiatry. From the start, psychiatrists in Chinese-speaking East Asia did not consider Western psychiatric theories sufficient for explaining koro.⁶⁹ All of them reached for ideas in traditional Chinese medicine and culture, which they considered to provide a more adequate basis for understanding why the phenomenon occurred. The Koro Study Team even went so far as to label koro a *Chinese* disease. The renaming of koro as a culture-bound syndrome was so widely accepted after the 1960s that even Rin Hsien, who did not refer to the concept initially, would later devote a whole chapter to it in his textbook on transcultural psychiatry.⁷⁰ In the process whereby koro was imported back into the American psychiatric mainstream with a culture-bound diagnostic status, mainland Han Chinese culture had been significantly appropriated and reworked in Sinophone locations outside of the People's Republic of China – in Taiwan, Hong Kong and Singapore. Yet, despite their technical disagreements, Asian psychiatrists presented cases of Chinese koro in English and repositioned long-standing Chinese cultural norms by bringing them into the core of global biomedical discourse. Therefore, this study suggests that in order to historicize culture-bound disorders and indeed the discipline of transcultural psychiatry itself, one must begin with not a stable ontology of the 'otherness' of non-Western culture, but the translational permeability, fluidity and porousness of culture as a moving target.⁷¹

Acknowledgements

Jia-shin Chen, Celina Hung, Jonathan Saha, Alvin K. Wong, and Lily Wong provided very insightful feedback on an earlier version of this essay, which benefited from several airings in 2013: the Association for Asian Studies annual meeting; the 'Critical Entanglements: Histories and Cultures of Global Health' workshop at the University of Warwick; the Fourth International Conference on Sexualities in China at the Institute of Sexuality and Gender of Renmin University (China); the Western Medicine in China, 1800–1950 conference at the Peking University Center for the History of Medicine; the 12th Junior Scholars Conference on Sinology at the Graduate Institute of Taiwan

Literature and Transnational Cultural Studies of National Chung Hsing University; and the 8th International Congress on Traditional Asian Medicine. I thank participants at these events for their perceptive and pointed questions.

Funding

This research was generously supported by a Wellcome Trust Small Grant under the project title, 'Experiencing Koro: On the Margins of Chinese Culture and Western Psychiatry' (Ref: 100532/Z/12/Z).

Notes

1. See, for example, Lissa Roberts, 'Situating Science in Global History: Local Exchanges and Networks of Circulation', *Itinerario*, 33, 2009, pp. 9–30; Sujit Sivasundaram, 'Sciences and the Global: On Methods, Questions and Theory', *Isis*, 101, 2010, pp. 146–158; Fa-ti Fan, 'The Global Turn in the History of Science', *East Asian Science, Technology and Society: An International Journal*, 6(2), 2012, pp. 249–258.
2. Warwick Anderson, 'From Subjugated Knowledge to Conjugated Subjects: Science and Globalisation, or Postcolonial Studies of Science', *Postcolonial Studies*, 12(4), 2009, pp. 389–400.
3. Warwick Anderson, 'Making Global Health History: The Postcolonial Worldliness of Biomedicine', *Social History of Medicine*, 27(2), 2014, pp. 372–384, on pp. 380, 383.
4. Sarah Hodges, 'The Global Menace', *Social History of Medicine*, 25(3), 2012, pp. 719–728.
5. Fan, 'The Global Turn in the History of Science', p. 253.
6. Warwick Anderson, 'Where is the Postcolonial History of Medicine?', *Bulletin of the History of Medicine*, 72(3), 1998, pp. 522–530; Kuan-Hsing Chen, *Asia as Method: Toward Deimperialization* (Durham: Duke University Press, 2010); Warwick Anderson, 'Asia as Method in Science and Technology Studies', *East Asian Science, Technology and Society: An International Journal*, 6, 2012, pp. 445–451.
7. For a programmatic overview of Sinophone studies, see Shu-mei Shih, *Visuality and Identity: Sinophone Articulations across the Pacific* (Berkeley, CA: University of California Press, 2007); Shu-mei Shih, 'The Concept of the Sinophone', *Publications of the Modern Language Association of America*, 126(3), 2011, pp. 709–718; and the essays collected in Shu-mei Shih, Chien-hsin Tsai and Brian Bernards (eds.), *Sinophone Studies: A Critical Reader* (New York: Columbia University Press, 2013). For an earlier set of essays that deal with similar issues to 'decenter' China, see Susan D. Blum and Lionel M. Jensen (eds.), *China Off Center: Mapping the Margins of the Middle Kingdom* (Honolulu: University of Hawaii Press, 2002). See also Sherman Cochran and Paul G. Pickowicz (eds.), *China on the Margins* (Honolulu: University of Hawaii Press, 2010); Howard Chiang and Ari Larissa Heinrich (eds.), *Queer Sinophone Cultures* (New York: Routledge, 2013).
8. On minor transnationalism, see Françoise Lionnet and Shu-mei Shih (eds.), *Minor Transnationalism* (Durham: Duke University Press, 2005).
9. On 'transpacific' as a useful frame for historical analysis, see Chih-ming Wang, *Transpacific Articulations: Student Migration and the Remaking of Asian America* (Honolulu: University of Hawaii Press, 2013); Janet Hoskins and Viet Thanh Nguyen (eds.), *Transpacific Studies: Framing an Emerging Field* (Honolulu: University of Hawaii Press, 2014).
10. American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed., text rev. (Washington, DC: American Psychiatric Association, 2000).
11. Hsien Rin, 'Koro: A Consideration of Chinese Concepts of Illness and Case Illustrations', *Transcultural Psychiatric Research*, 15, 1963, pp. 23–30; Hsien Rin, 'A Study of the Aetiology

- of Koro in Respect to the Chinese Concept of Illness', *International Journal of Social Psychiatry*, 11, 1965, pp. 7–13.
12. Rin, 'A Study', p. 13.
 13. Personal interview with Rin Hsien on 9 December 2013.
 14. Rin, 'A Study', pp. 7–9.
 15. Rin, 'A Study', pp. 9–11.
 16. Warner Muensterberger, 'Orality and Dependence: Characteristics of Southern Chinese', *Psychoanalysis and the Social Sciences*, 3, 1951, pp. 37–69. Cf. Tsung Yi Lin, 'A Study of Mental Disorder in Chinese and Other Cultures', *Psychiatry*, 16(4), 1953, pp. 313–336.
 17. Rin, 'A Study', p. 12. Rin also compared koro to frigophobia (畏寒症), a parallel culture-bound vital deficiency syndrome found in Chinese patients who suffered from a 'morbid fear of cold'. See Hsien Rin, 'Two Forms of Vital Deficiency Syndrome among Chinese Male Mental Patients', *Transcultural Psychiatric Research*, 3(1), 1966, pp. 19–21.
 18. John H. Weakland, 'Orality in Chinese Conceptions of Male Genital Sexuality', *Psychiatry*, 19(3), 1956, pp. 237–247.
 19. Robert Hans van Gulik, *Erotic Color Prints of the Ming Period: With an Essay on Chinese Sex Life from the Han to the Ch'ing Dynasty, 206 BC–AD1644* (Leiden: Brill, 2004 [1951]). This book was originally published privately by van Gulik himself in a 50-copies print run. In 2003 and 2004, Brill republished this book and his more well-known book, *Sexual Life in Ancient China* (Leiden: Brill, 1961). For an assessment of van Gulik's 'return' as signalled by these re-publications, see Charlotte Furth, 'Rethinking van Gulik', *Nan nü: Men, Women, and Gender in China*, 7(1), 2005, pp. 71–78, and Paul R. Goldin, 'Introduction', in Robert Hans van Gulik, *Sexual Life in Ancient China: A Preliminary Survey of Chinese Sex and Society from c. 1500bc till AD1644* (Leiden: Brill, 2003 [1961]), pp.xiii–xxx.
 20. Weakland, 'Orality,' p. 244 (emphasis original).
 21. Rin, 'A Study', p. 12.
 22. Rin, 'A Study', pp. 12–13.
 23. Rin, 'A Study', p. 12.
 24. The Han group is the ethnic majority in the People's Republic of China. The popular rendition of 'Chinese' typically implies this particular ethnonational group and elides the other 55 'official' ethnic minorities. See, for example, Thomas Mullaney, James Leibold and Eric Vanden Bussche (eds.), *Critical Han Studies: The History, Representation, and Identity of China's Majority* (Berkeley, CA: University of California Press, 2012). Although there was already a large population of Han Chinese in Taiwan before 1945, their presence never imposed a form of colonial hegemony in the way Chiang Kai-shek's Nationalist regime did. On the role of Taiwan in the shaping of Qing colonial imaginary, see Emma Jinhua Tang, *Taiwan's Imagined Geography: Chinese Colonial Travel Writing and Pictures, 1683–1895* (Cambridge: Harvard University Asia Center, 2004). I thank Jia-hsin Chen for suggesting that what contributed to the koro symptomatology of Rin's patients was not Han Chinese culture per se, but the migration experience that differentiated them from the earlier Chinese settlers. In my view, the colonial hegemony of the Nationalist regime likely played a significant role in differentiating the migration experience of Rin's patients from that of the earlier Han settlers.
 25. On colonial psychiatry see, for example, Megan Vaughan, *Curing Their Ills: Colonial Power and African Illness* (Cambridge: Polity, 1991); Waltraud Ernst, *Mad Tales from the Raj: European Insane in British India, 1800–58* (New York: Routledge, 1991); Jock McGulloch, *Colonial Psychiatry and the 'African Mind'* (Cambridge: Cambridge University Press, 1995); Jonathan Sadowsky, *Imperial Bedlam: Institutions of Madness in Colonial Southwest Nigeria* (Berkeley: University of California Press, 1999); Christiane Hartnack, *Psychoanalysis in Colonial India* (Oxford: Oxford University Press, 2001); Dinesh Bhugra and Rowland

- Littlewood (eds.), *Colonialism and Psychiatry* (Oxford: Oxford University Press, 2001); Sloan Mahone, 'The Psychology of Rebellion: Colonial Medical Responses to Dissent in British East Africa', *Journal of African History*, 47, 2006, pp. 241–258; Hans Pols, 'The Development of Psychiatry in Indonesia: From Colonial to Modern Times', *International Review of Psychiatry*, 18(4), 2006, pp. 363–70; Richard Keller, *Colonial Madness: Psychiatry in French North Africa* (Chicago: University of Chicago Press, 2007); Sloan Mahone and Megan Vaughan (eds.), *Psychiatry and Empire* (Basingstoke: Palgrave Macmillan, 2007); Waltraud Ernst and Thomas Muller (eds.), *Transnational Psychiatries: Social and Cultural Histories of Psychiatry in Comparative Perspectives, c. 1800–2000* (Newcastle: Cambridge Scholars Publishing, 2010); Warwick Anderson, Deborah Jensen and Richard C. Keller (eds.), *Unconscious Dominions: Psychoanalysis, Colonial Trauma, and Global Sovereignties* (Durham: Duke University Press, 2011); Jonathan Saha, 'Madness and the Making of Colonial Order in Burma', *Modern Asian Studies*, 47(2), 2013, pp. 406–435; Matthew Heaton, *Black Skins, White Coats: Nigerian Psychiatrists, Decolonization, and the Globalization of Psychiatry* (Athens, Ohio: Ohio University Press, 2013); and Waltraud Ernst, *Colonialism and Transnational Psychiatry: The Development of an Indian Mental Hospital in British India, c. 1925–1940* (London: Anthem Press, 2013). On psychoanalysis in China see Jingyuan Zhang, *Psychoanalysis in China: Literary Transformations, 1919–1949* (Ithaca: Cornell University Press, 1992); Haiyan Lee, *Revolution of the Heart: A Genealogy of Love in China, 1900–1950* (Stanford: Stanford University Press, 2007); Wendy Larson, *From Ah Q to Lei Feng: Freud and Revolutionary Spirit in Twentieth-Century China* (Stanford: Stanford University Press, 2009); Howard Chiang, 'Epistemic Modernity and the Emergence of Homosexuality in China', *Gender and History*, 22(3), 2010, pp. 629–657; Tao Jiang and Philip J. Ivanhoe (eds.), *The Reception and Rendition of Freud in China: China's Freudian Slip* (New York: Routledge, 2012); and Howard Chiang (ed.), *Psychiatry and Chinese History* (London: Pickering & Chatto, 2014).
26. For more biographical information on Gwee see Robert C.K. Loh, 'Dr. Gwee Ah Leng', *Singapore Medical Journal*, 47(5), 2006, pp. 447–449, and Robert C.K. Loh, 'Gwee Ah Leng (1920–2006)', *Annals Academy of Medicine*, 35(6), 2006, pp. 443–444.
 27. Ah Leng Gwee, 'Koro—A Cultural Disease', *Singapore Medical Journal*, 4(3), 1963, pp. 119–122.
 28. Gwee, 'Koro—A Cultural Disease', pp. 119–120.
 29. Gwee, 'Koro—A Cultural Disease', pp. 119–120.
 30. Gwee, 'Koro—A Cultural Disease', p. 121.
 31. Gwee, 'Koro—A Cultural Disease', p. 121.
 32. Ivan Crozier, 'Making Up Koro: Multiplicity, Culture, Psychiatry, and Penis-Shrinking Anxieties', *Journal of the History of Medicine and Allied Sciences*, 67(1), 2011, pp. 36–70. Crozier's analysis builds on the philosophical work of Ian Hacking, 'Making up People', in Thomas C. Heller (ed.), *Reconstructing Individualism: Autonomy, Individuality and the Self in Western Thought* (Stanford: Stanford University Press, 1986), pp. 222–236.
 33. More recently the following examples have been supplemented by Ben Yeong Ng and Ee Heok Kua, 'Koro in Ancient Chinese History', *History of Psychiatry*, 7, 1996, pp. 563–570.
 34. Ah Leng Gwee, 'Koro—Its Origin and Nature as a Disease Entity', *Singapore Medical Journal*, 9(1), 1968, pp. 3–6.
 35. 'Lin-Chi on Basic Animus', trans. by Gwee in 'Koro—Its Origin and Nature', p. 6 (emphasis added).
 36. 'Chapter 10—Fever, transposition of Yin and Yan symptoms', trans. by Gwee in 'Koro—Its Origin and Nature', p. 6 (emphasis original).
 37. Marta Hanson, 'The *Golden Mirror* of the Imperial Court of the Qianlong Emperor, 1739–1742', *Early Science and Medicine*, 8(2), 2003, pp. 111–147, on p. 112.

38. Yi-Li Wu, 'The Gendered Medical Iconography of the *Golden Mirror* (*Yuzuan yizong jinjian* 御纂醫宗金鑑, 1742)', *Asian Medicine*, 4, 2008, pp. 452–491.
39. 'Annotated Book of Fevers: Relapse of Fevers as a Result of Work, Food, and Yin and Yan Transposition', trans. by Gwee in 'Koro—Its Origin and Nature', p. 6 (emphasis added).
40. 'Yin-type of Fever', trans. by Gwee in 'Koro—Its Origin and Nature', p. 5 (emphasis added).
41. Gwee, 'Koro—Its Origin and Nature', p. 3.
42. 'The Middle Female Meridian of the Feet', trans. by Gwee in 'Koro—Its Origin and Nature', p. 6.
43. Yi-Li Wu, *Reproducing Women: Medicine, Metaphor, and Childbirth in Late Imperial China* (Berkeley, CA: University of California Press, 2010), pp. 54–83.
44. The Koro Study Team [Gwee et al.], 'The Koro "Epidemic" in Singapore', *Singapore Medical Journal*, 10(4), 1969, pp. 234–242, on p. 234. On the 1967 koro epidemic in Singapore, see P.W. Ngui, 'The Koro Epidemic in Singapore', *Australian and New Zealand Journal of Psychiatry* (special issue on studies of anxiety) II, 3(3a), 1969, pp. 263–266; and Scott D. Mendelson, *The Great Singapore Penis Panic and the Future of American Mass Hysteria* (USA: Author, 2010).
45. Gwee, 'Koro—Its Origins and Nature', p. 4.
46. The Koro Study Team, 'The Koro "Epidemic" in Singapore', p. 234.
47. The Koro Study Team, 'The Koro "Epidemic" in Singapore', pp. 235–236.
48. The Koro Study Team, 'The Koro "Epidemic" in Singapore', p. 236 (emphasis added).
49. The Koro Study Team, 'The Koro "Epidemic" in Singapore', p. 237.
50. The Koro Study Team, 'The Koro "Epidemic" in Singapore', p. 237.
51. The Koro Study Team, 'The Koro "Epidemic" in Singapore', p. 240.
52. On the life and works of Pow-Meng Yap see the special issue on 'Introducing the Life and Works of Professor P.M. Yap', *Hong Kong Journal of Mental Health*, 28(1–2), 1999; and Helen Chiu, 'Professor Pow-Meng Yap: A Giant in Psychiatry from Hong Kong', *Asia-Pacific Psychiatry*, 4(1), 2012, pp. 84–86.
53. Pow-Meng Yap, 'Mental Diseases Peculiar to Certain Cultures: A Survey of Comparative Psychiatry', *Journal of Mental Science*, 97, 1951, pp. 313–327; Yap, 'The Possession Syndrome: A Comparison of Hong Kong and French Finding', *Journal of Mental Science*, 106, 1960, pp. 114–137; Yap, 'Words and Things in Comparative Psychiatry with Special Reference to the Exotic Psychoses', *Acta Psychiatrica Scandinavica*, 38, 1962, pp. 163–169; Yap, 'Koro—A Cultural-Bound Depersonalization Syndrome', *British Journal of Psychiatry*, 111, 1965, pp. 43–50. Yap later broadened and extended the culture-bound concept in 'Classification of the Culture-Bound Reactive Syndromes', *Far East Medical Journal*, 7, 1969, pp. 219–225, and 'The Culture-Bound Reactive Syndromes', in W. Caudill and Tsung-Yi Lin (eds.), *Mental Health Research in Asia and the Pacific* (Honolulu: University Press of Hawaii, 1969), pp. 33–53.
54. Pow-Meng Yap, 'Koro or Suk-Yeong—An Atypical Culture-Bound Psychogenic Disorder Found in Southern Chinese', *Transcultural Psychiatric Research*, 1, 1964, pp. 36–37, on p. 37.
55. Yap, 'Koro—A Cultural-Bound Depersonalization Syndrome', p. 48.
56. Gwee, 'Koro—Its Origin and Nature', p. 4; Yap, 'Koro—A Cultural-Bound Depersonalization Syndrome', p. 48.
57. Yap, 'Koro—A Cultural-Bound Depersonalization Syndrome', p. 48 (emphasis added).
58. Gwee, 'Koro—Its Origin and Nature', p. 4 (emphasis added).
59. On the analytic frame of 'biomedicalization', see Adele E. Clarke, Laura Mamo, Jennifer Ruth Fosket, Jennifer R. Fishman, and Janet K. Shim (eds.), *Biomedicalization: Technoscience, Health, and Illness in the U.S.* (Durham: Duke University Press, 2010).

60. Pow-Meng Yap, 'Koro in Briton', *British Journal of Psychiatry*, 111, 1965, pp. 774–775; J. Guy Edwards, 'The Koro Pattern of Depersonalization in an American Schizophrenic Patient', *American Journal of Psychiatry*, 126, 1970, pp. 1171–1173; Y.D. Lapierre, 'Koro in a French Canadian', *Canadian Psychiatric Association Journal*, 17, 1972, pp. 333–334; Ken Barrett, 'Koro in a Londoner', *Lancet*, 312, 1978, p. 1319; Anne Cremona, 'Another Case of Koro in a Briton', *British Journal of Psychiatry*, 138, 1981, pp. 180–181; German Berrios and Stephen Morley, 'Koro-Like Symptoms in a non-Chinese Subject', *British Journal of Psychiatry*, 145, 1984, pp. 331–334.
61. See, for example, Ari Kiev, *Transcultural Psychiatry* (New York: Basic Books, 1972).
62. On the African genital-theft panic see Vivian Afi Dzokoto and Glenn Adams, 'Understanding Genital-Shrinking Epidemics in West Africa: Koro, Juju, or Mass Psychogenic Illness?', *Culture, Medicine, and Psychiatry*, 29(1), 2005, pp. 63–78. On the 'tightening up' of the DSM, see Herb Kutchins and Stuart A. Kirk, *Making Us Crazy: DSM: The Psychiatric Bible and the Creation of Mental Disorders* (New York: Free Press, 1997).
63. Ronald C. Simons and Charles C. Huges, *The Culture-Bound Syndromes: Folk Illnesses of Psychiatric and Anthropological Interest* (Dordrecht: D. Reidel Publishing Company, 1985).
64. See Ruth L. Bernstein and Albert C. Gaw, 'Koro: Proposed Classification for DSM-IV', *American Journal of Psychiatry*, 147(2), 1990, pp. 1670–1674, on p. 1673. For other psychiatrists' reaction to Bernstein and Gaw's proposal, see 'Mechanism and Classification of Koro', *American Journal of Psychiatry*, 148(7), 1991, pp. 959–960.
65. Bernstein and Gaw, 'Koro', 1673.
66. Robert E. Bartholomew, *Exotic Deviance: Medicalizing Cultural Idioms—From Strangeness to Illness* (Boulder: University Press of Colorado, 2000), p. 91.
67. Crozier, 'Making Up Koro', p. 41.
68. On the transition from colonial to transcultural psychiatry see also Alice Bullard, 'Imperial Networks and Postcolonial Independence: The Transition from Colonial to Transcultural Psychiatry', in Sloan Mahone and Megan Vaughan (eds.), *Psychiatry and Empire* (New York: Palgrave Macmillan, 2007), pp. 197–219.
69. In fact, many Asian mental health practitioners today still consider Western psychiatric theories insufficient for appreciating 'the Asian mind' and the 'Asian' patterns of personality, feeling and thinking, and psychopathology'. Wen-Shing Tseng, Suk Choo Chang and Masahisa Nishizono, 'Preface', in Wen-Shing Tseng, Suk Choo Chang and Masahisa Nishizono (eds.), *Asian Culture and Psychotherapy: Implications for East and West* (Honolulu: University of Hawaii Press, 2005), pp. vii–ix, on p. vii.
70. Rin Hsien (林憲), *Wenhua jingshen yixue de zengwu: Cong Taiwan dao Riben* (文化精神醫學的贈物: 從台灣到日本) (Taipei: Xinling gongfang, 2007 [2004]), pp. 42–74.
71. On 'moving target', see Ian Hacking, 'Kinds of People: Moving Targets', *Proceedings of the British Academy*, 151, 2007, pp. 285–318.

