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Writing, Authority and Practice in Tokugawa Medicine, 1650-1850

Trambaiolo, Daniel Marco

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Writing, Authority and Practice

in Tokugawa Medicine, 1650–1850

Daniel Trambaiolo

A DISSERTATION
PRESENTED TO THE FACULTY
OF PRINCETON UNIVERSITY
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Benjamin Elman

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Abstract

This dissertation examines the history of medical knowledge in Tokugawa Japan through a study of the relationships between medical texts, social institutions and clinical practices. It situates the history of Japanese medicine during this period within its regional and global contexts, analysing Japanese doctors' engagement with ideas and practices drawn from medical cultures in China, Korea, and Europe and showing how these ideas and practices became integrated into the medical cultures of Japan itself.

Part One focuses on the written representations of medical knowledge. From the seventeenth century onwards, the medical literature available within Japan came to include more widely accessible texts published in Japanese (*kana*) as well as texts in classical Chinese (*kanbun*), but classical Chinese writings remained authoritative. The close philological study of classical Chinese texts became a central problem for practitioners of "Ancient Formulas" (*kohō* 古方) medicine, and philological forms of evidential argument provided a model for new ways of using the empirical evidence of medical practice.

Part Two focuses on the different types of personal interaction involved in the creation and dissemination of medical knowledge. Records of encounters between Japanese and Korean doctors in the context of diplomatic embassies during the eighteenth century illustrate the benefits and the shortcomings of cross-cultural interaction, while the history of the Ikeda lineage of smallpox doctors shows how the personal transmission of medical knowledge within Japan was linked to the desire of medical lineages to maintain the secrecy of the knowledge they possessed.

Part Three focuses on the question of how novel medical practices were integrated into Japanese medical culture. New practices such as therapeutic vomiting, bloodletting, mercurial drugs for syphilis, and the cowpox vaccine were based on Japanese doctors' reading of Chinese as well as European sources; regardless of the geographical and cultural origins of new medical techniques, adoption of such techniques often required similar processes of adaptation to the prevailing practical and cultural conditions within Japan.

Table of Contents

Abstract iii

Acknowledgements v

Introduction 1

Part One. Language, Philology and Medical Knowledge

Chapter 1. The Languages of Medical Knowledge 23

Chapter 2. Ancient Texts and New Medical Ideas 54

Part Two. Transmission, Secrecy and Medical Authority

Chapter 3. Medical Dialogues between Korea and Japan 104

Chapter 4. Secrecy, Openness and Lineage Authority 144

Part Three. New Diseases, New Drugs, New Techniques

Chapter 5. New Remedies for Difficult Diseases 180

Chapter 6. Smallpox Vaccination and the Politics of Medical Knowledge 215

Conclusion 254

Bibliography 260

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* * *

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University in May 2012, the Workshop "Mercury in Medicine: Fluid Economies of Knowledge and Trade" held at the University of Zürich in February 2013, the Annual Meeting of the Association for Asian Studies in San Diego, March 2013, and the Annual Meeting of the History of Science Society in Boston, November 2013. Primary sources related to this chapter were read and discussed at a text reading seminar held at the Needham Research Institute in October 2010.

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Introduction

Among the many novel characteristics of Japanese medicine during the Tokugawa period, perhaps the most striking was novelty itself. Earlier Japanese doctors had thought of their role as practicing and transmitting already existing arts of therapy, but during the eighteenth and nineteenth centuries Japanese doctors increasingly became concerned with discovering new methods of treatment beyond those already available to them. Historians have devoted extensive efforts to describing many of these innovations of eighteenth and nineteenth-century Japanese medicine and their sources of inspiration in Chinese books, European contacts, Japanese folk medicine, and practical experimentation; however, we still lack an adequate account of how innovation itself came to be an integral part of Tokugawa medical culture.

A simplistic but widely accepted narrative of the history of Tokugawa medicine in relation to broader developments in Tokugawa history might be recounted as follows.[1] During the sixteenth century, contacts between Japan and

[1] The outlines of this narrative were established more than a century ago by Fujikawa Yū 富士川游, *Nihon igakushi* 日本医学史 (Tokyo: Shōkabō, 1904), which remains a standard point of reference for historical scholarship today. More recent surveys of Tokugawa medical history include Sakai Shizu 酒井シヅ, *Nihon no iryōshi* 日本の医療史 (Tokyo: Tokyo shoseki, 1982); Kosoto Hiroshi 小曽戸洋, *Kanpō no rekishi* 漢方の歴史 (Tokyo: Taishūkan Shoten, 1999); Aoki Toshiyuki 青木歳幸, *Edo jidai no igaku: meiitachi no 300 nen* 江戸時代の医学：名医たちの三〇〇年 (Tokyo: Yoshikawa Kōbunkan, 2012).

the continent allowed Japanese doctors to learn about and adopt styles of medical learning and practice that were then prevalent in Ming China and Chosŏn Korea, and these styles became widely adopted among elite Japanese practitioners during the seventeenth century.[2] However, starting from the early eighteenth century, Japanese doctors began to reject traditional Chinese beliefs and to emphasize the value of practical experience and observation over conformity to traditional systems of medical doctrine.[3] During the second half of the eighteenth century, the rate of medical innovation accelerated as a growing number of Japanese doctors and scholars began to read European medical treatises written in Dutch and to translate them into Japanese.[4] This acquisition of European medical knowledge helped promote the development of a broader interest in European culture, and thus made a crucial contribution to the process of Japanese cultural modernization.

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[2] Fujikawa, *Nihon igakushi*, 280–95; Kosoto, *Kanpō no rekishi*, 129–53; Aoki, *Edo jidai no igaku*, 5–19; Yakazu Dōmei 矢数道明, *Kinsei kanpō igakushi: Manase Dōsan to sono gakutō* 近世漢方医学史：曲直瀬道三とその学統 (Tokyo: Meicho Shuppan, 1982).

[3] Aoki, *Edo jidai no igaku*, 55–102; Kasaya Kazuhiko 笠谷和比古, "Joron: Jūhasseiki Nihon no 'chi'-teki kakumei" 序論：十八世紀日本の「知」的革命, in *Jūhasseiki Nihon no bunka jōkyō to kokusai kankyō* 一八世紀日本の文化状況と国際環境, ed. Kasaya Kazuhiko (Kyoto: Shibunkaku Shuppan, 2011), 7–20.

[4] The acquisition of European medical knowledge from the late eighteenth century onwards is the one topic in Tokugawa medical history that has received extensive (and increasingly sophisticated) treatment in English-language scholarship: see John Z. Bowers, *Western Medical Pioneers in Feudal Japan* (Baltimore: Johns Hopkins Press, 1970); John Z. Bowers, *When the Twain Meet: The Rise of Western Medicine in Japan* (Baltimore: Johns Hopkins University Press, 1980); Grant K. Goodman, *Japan and the Dutch, 1600–1853* (Richmond, England: Curzon Press, 2000); Ellen Gardner Nakamura, *Practical Pursuits: Takano Chōei, Takahashi Keisaku, and Western Medicine in Nineteenth-Century Japan* (Cambridge: Harvard University Asia Center, 2005); Ann Bowman Jannetta, *The Vaccinators: Smallpox, Medical Knowledge, and the Opening of Japan* (Stanford: Stanford University Press, 2007); Maki Fukuoka, *The Premise of Fidelity: Science, Visuality and Representing the Real in Tokugawa Japan* (Stanford: Stanford University Press, 2012).

While this narrative incorporates a number of the salient features of Tokugawa medical history, there is much of importance that it omits. By stressing the emergence of European contacts and by treating Chinese-style medicine merely as the "traditional" background against which innovations occurred, it underestimates the extent to which medicine in other parts of East Asia during this period was itself evolving and continuing to serve as a source of innovations within Japan.[5] At the same time, by representing Tokugawa medical history as a series of developmental stages, it ignores the fact that Tokugawa medicine was always characterised by the coexistence of multiple distinct approaches rather than by widely accepted standards, and thus gives a misleading impression of how widely and rapidly the innovations of each period were adopted. The discovery of new medical techniques was only the first stage of their integration into Japanese medical culture, which usually required extended periods of accumulation of personal and collective experience, modification to suit local conditions, intellectual efforts to reconcile their efficacy with accepted medical doctrines, and dissemination of knowledge through the printing of books, the circulation of manuscripts, and communication through networks of personal interaction.

This dissertation aims to develop a more accurate understanding of the history of medical knowledge in Tokugawa Japan, analysing the roles of written

[5] Some historians had more recently placed greater emphasis on the importance of contacts with the continent: see for example Kosoto Hiroshi, *Chūgoku igaku koten to Nihon: shoshi to denshō* 中国医学古典と日本：書誌と伝承 (Tokyo: Hanawa Shobō, 1996); Mayanagi Makoto 真柳誠, "Edo-ki torai no chūgoku isho to sono wakoku" 江戸期渡来の中国医書とその和刻, in *Rekishi no naka no yamai to igaku* 歴史の中の病と医学, ed. Yamada Keiji 山田慶児 and Shigehisa Kuriyama 重久栗山 (Kyoto: Shibunkaku Shuppan, 1997), 301–40.

texts, personal authority, and practical experiences in shaping the development of innovative medical ideas and practices. Rather than analysing Japanese medicine within a purely national context, I understand this history to be a part of the broader medical history of the East Asian region, and therefore treat European medicine as just one among several foreign sources of medical ideas and practices available to Japanese doctors. Rather than focusing exclusively on those ideas and practices that seem to have represented progress towards modern forms of medicine, I devote equal attention to the persistence of older traditions and to various forms of resistance to these innovations, since by studying apparently retrograde elements within Tokugawa medical culture we can learn at least as much about that culture as a whole as we can by focusing on progressive developments.

The three broad themes of writing, authority and practice necessarily form elements of any historical analysis of any type of knowledge in any historical period; it was the ways in which these elements interacted with each other that made Tokugawa medical knowledge a distinctive sociocultural system. By examining the mutual influences of writing, authority and practice at different stages, I seek to understand the shifting criteria for medical knowledge in Tokugawa history, taking into account both the explicit discourses about such criteria and the more subtle ways such criteria were embedded into routine practices. At the same time, I seek to understand why practitioners of various techniques and advocates of various doctrines came to be seem as authoritative at different periods and by different groups within Tokugawa society.

In their recent book on the history of concepts and practices of scientific objectivity, Lorraine Daston and Peter Galison have suggested an approach to the study of knowledge that historicizes the classic philosophical problems of epistemology by characterizing different ways of knowing in terms of the "epistemic virtues" to which they aspire and the ideal types of knowing self with which those virtues are associated.[6] In contrast to more rigid theoretical models such as Thomas Kuhn's "paradigms" or Michel Foucault's "epistemes," which emphasized the radical mutual incompatibility of different ways of knowing and postulated that new ways of knowing could triumph only through the obliteration of their predecessors, their more nuanced model acknowledges that contrasting ways of knowing can persist in unresolved tension for years or centuries without any of them being recognized as absolutely superior to or reducible to any of the others.[7] This description of an ecology of multiple ways of knowing, each of which is viewed by a historical community as incompatible with the others yet still as being worthy of simultaneous respect, is well suited to the analysis of medical knowledge in early modern Japan, where fierce doctrinal polemics often coexisted with pragmatic eclecticism.

A word of caution is necessary here concerning the use of concepts such as "knowledge" and "epistemology" in the analysis of East Asian medical history. These terms are widely used by modern historians of East Asian medicine, but pre-

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[6] Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007).
[7] Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962); Michel Foucault, *Les mots et les choses: une archéologie des sciences humaines* (Paris: Gallimard, 1966), translated as *The Order of Things: An Archaeology of the Human Sciences* (London: Routledge, 2002).

modern East Asian medical writers themselves rarely took the trouble to articulate explicit theories about the nature of medical "knowledge." This situation stands in contrast to that of the European medical tradition, in which debates about the foundations and status of medical knowledge had been an integral aspect of medical discourse since the time of the Hippocratic writings.[8] Our own concept of medical "knowledge" differs in subtle ways from the more usual ways that Tokugawa doctors thought about their medicine as a form of "learning" (*gaku* 学), as a set of "techniques" (*jutsu* 術), or as a "Way" (*michi* 道). The development of a discourse about "knowledge" and "knowing" (*chi/shiru* 知) in relation to "testing" (*shi* 試), "experience" (*ken* 験), and "evidence" (*shō* 證, *chō* 徵) was one of the most striking innovations of the Ancient Formulas (*kohō* 古方) doctors of the eighteenth century, and the significance of this innovation can become obscured if we are too indiscriminate in discussing the medical "knowledge" of other doctors who did not participate in this discourse. Nevertheless, the presence of explicit discourse about knowledge is not a necessary condition for the presence of knowledge itself, and knowledge is too useful as an analytic category to restrict its use entirely to cases where it is found in the primary sources.

Tokugawa medicine was a practical art, and in order to understand the history of medical knowledge we cannot treat it as a purely intellectual phenomenon but must seek to understand how it was applied in concrete social and

[8] This difference between the European and the East Asian medical traditions has proven challenging for attempts at cross-cultural epistemological comparison: see Don Bates, "Scholarly Ways of Knowing: An Introduction," in *Knowledge and the Scholarly Medical Traditions*, ed. Don Bates (Cambridge: Cambridge University Press, 1995), 1–22.

historical contexts. Studies of these contexts have in recent years become one of the most active areas of research into the history of Tokugawa medicine: historians such as Tsukamoto Manabu, Hiruta Genshirō, Yokota Fuyuhiko, Sugano Noriko, Ujiie Mikito, Shinmura Taku, Suzuki Noriko, Umihara Ryō, Hartmut Rotermund, Gregory Smits, Bettina Gramlich-Oka, and William Johnston have examined topics such as the increasing access to medical books and practitioners, especially in rural areas, as well as the variety of popular responses to illness, especially epidemics.[9] Others, such as Sōda Hajime, Yoshioka Shin, Iwashita Tetsunori, Watanabe

[9] Tsukamoto Manabu 塚本学, "Jūhasseiki kōhan no Matsumura-ryō Ueno-gumi to iryō: Kumi wo koeru chiiki shakai" 十八世紀後半の松村領上野組と医療：組を超える地域社会, in *Matsumotodaira to sono shūhen chiiki ni okeru shakaiteki ketsugō no shokeitai to sono hendō* 松本大良とその周辺地域における社会的結合の諸形態とその変動 (Matsumoto: Shinshū daigaku jinbun gakubu, 1982), 1–26; Tsukamoto Manabu, *Tokai to inaka: Nihon bunka gaishi* 都会と田舎: 日本文化外史 (Tokyo: Heibonsha, 1991); Hiruta Genshirō 昼田源四郎, *Hayariyamai to kitsunetsuki: kinsei shomin no iryō jijō* 疫病と狐憑き：近世庶民の医療事情 (Tokyo: Misuzu Shobō, 1985); Hartmut Rotermund, *Hôsôgami, ou, la petite vérole aisément: matériaux pour l'étude des épidémies dans le Japon des XVIIIe, XIXe siècles* (Paris: Maisonneuve & Larose, 1991); Yokota Fuyuhiko 横田冬彦, "Kinsei sonraku shakai ni okeru 'chi' no mondai" 近世村落社会における「知」の問題 *Hisutoria* 159 (1998), 1–28; Sugano Noriko 菅野則子, *Edo no muraisha: Honda Kakuan Sadatoshi fushi no nikki ni miru*. 江戸の村医者：本田覚庵・定年父子の日記にみる (Tokyo: Shin Nihon Shuppansha, 2003); Fukuda Mahito 福田眞人 and Suzuki Noriko 鈴木則子, ed. *Nihon baidokushi no kenkyū : iryō shakai kokka* 日本梅毒史の研究 : 医療、社会、国家 (Kyoto: Shibunkaku Shuppan, 2005); Umihara Ryō 海原亮, *Kinsei iryō no shakaishi: chishiki, gijutsu, jōhō* 近世医療の社会史：知識・技術・情報 (Tokyo: Yoshikawa Kōbunkan, 2007); Shinmura Taku 新村拓, *Nihon iryōshi* 日本医療史 (Tokyo: Yoshikawa Kōbunkan, 2006); Ujiie Mikito 氏家幹人, *Edo no yamai* 江戸の病 (Tokyo: Kōdansha, 2009); Gregory Smits, "Warding off Calamity in Japan: A Comparison of the 1855 Catfish Prints and the 1862 Measles Prints," *East Asian Science, Technology and Medicine*, 30 (2009), 9–31; Bettina Gramlich-Oka, "The Body Economic: Japan's Cholera Epidemic of 1858 in Popular Discourse," *East Asian Science, Technology and Medicine*, 30 (2009), 32–73; William D. Johnston, "Sexually Transmitted Diseases and Demographic Change in Early Modern Japan," *East Asian Science, Technology and Medicine*, 30 (2009), 74–92; Suzuki Noriko 鈴木則子, *Edo no hayariyamai: hashika sōdō ha naze okotta ka* 江戸の流行り病：麻疹騒動はなぜ起こったか (Tokyo: Yoshikawa Kōbunkan, 2012).

Sachiko, and Habu Kazuko, have examined the cultural and economic history of the drugs that were used for medical therapies.[10]

This extensive body of research into the social, cultural and economic history of Tokugawa medicine leads towards the question of whether the new insights it has generated might undermine the standard narrative of the development of medical knowledge itself. However, attempts to develop such an account have begun to appear only quite recently, and remain uncommon. Notable examples include Tsukamoto Manabu's study of medical knowledge and practice in the context of early modern political power, Ellen Gardner Nakamura's study of *ranpō* doctors in the early nineteenth-century Kantō region, combining analysis of these practitioners' attempts to understand and generate new medical knowledge with analysis of the social networks within which they operated, and Susan Burns' study of the early nineteenth-century doctor Nanayama Jundō, drawing attention to his geographical and social peripherality within Japan and the ways this social position shaped his innovative ways of thinking and writing about his clinical experiences.[11]

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[10] Sōda Hajime 宗田一, *Toraiyaku no bunkashi: oranda-sen ga hakonda yōyaku* 渡来薬の文化誌：オランダ船が運んだ洋薬 (Tokyo: Yasaka Shobō, 1993); Yoshioka Shin 吉岡信, *Edo no kigusuriya* 江戸の生薬屋 (Tokyo: Seiabō, 1994); Yamawaki Teijirō 山脇悌二郎, *Kinsei Nihon no iyaku bunka* 近世日本の医薬文化 (Heibonsha, 1995); Iwashita Tetsunori 岩下哲典, *Kenryokusha to Edo no kusuri: ninjin, budōshu, gosoku no gyoyaku* 権力者と江戸のくすり: 人参、葡萄酒、御側の御薬 (Tokyo: Hokuju Shuppan, 1998); Watanabe Sachiko 渡辺祥子, *Kinsei Ōsaka yakushu no torihiki kōzō to shakai shūdan* 近世大坂薬種の取引構造と社会集団 (Osaka: Seibundō Shuppan, 2006); Habu Kazuko 羽生和子, *Edo jidai kanpōyaku no rekishi* 江戸時代漢方薬の歴史 (Osaka: Seibundō, 2010).

[11] Tsukamoto Manabu 塚本学, *Ikiru koto no kinseishi: jinmei kankyō no rekishi kara* 生きることの近世史：人命環境の歴史から (Heibonsha, 2001); Ellen Gardner Nakamura, *Practical*

The emergence of multiple new styles of medical knowledge in Tokugawa Japan, defined not only by their distinctive doctrines and practices but also by their distinctive attitudes towards the relationship between textual traditions, personal authority, and practical experiences, was just as much a consequence as it was a cause of the changing ways in which medicine was practised in society. By analogy with the arguments of Sheila Jasanoff and other historians and sociologists who have described the development of modern scientific and technological systems in terms of the "co-production" of science and social order, there are substantial insights to be gained by viewing Tokugawa medical knowledge as a product of the social relations of medical practice rather than as an autonomous intellectual process whose relationship to Tokugawa society was merely a matter of top-down dissemination and implementation.[12]

Medical Knowledge in the Context of Tokugawa Society

During the seventeenth century, the types of social identities associated with medical practice began to undergo a gradual but fundamental shift. Many forms of learning were becoming dissociated from the aristocratic and religious groups that had dominated these fields in earlier periods, and it became possible for scholars, authors, playwrights, doctors, and naturalists to carve out for themselves new types

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Pursuits: Takano Chōei, Takahashi Keisaku, and Western Medicine in Nineteenth-Century Japan (Cambridge: Harvard University Asia Center, 2005); Susan L. Burns, "Nanayama Jundō at Work: A Village Doctor and Medical Knowledge in Nineteenth-Century Japan," *East Asian Science, Technology and Medicine*, 29 (2008), 61–82.

[12] Sheila Jasanoff, "The Idiom of Co-Production," in *States of Knowledge: The Co-Production of Science and Social Order*, ed. Sheila Jasanoff (London: Routledge, 2004), 1–12.

of social niche.[13] One aspect of these new patterns of cultural activity was the growing trend towards viewing medicine as a respectable occupation for individuals of samurai status. The earliest Tokugawa regulations for samurai in 1615 (*buke shohatto* 武家諸法度) had grouped medicine together with the divinatory arts (*i in ryōdō* 医陰両道), but the 1662 revision of these regulations grouped it instead with Confucian scholarship (*ju i ryōdō* 儒医両道), implying a greater respect for medical learning and practice.[14] Around the same time, the Military Mirrors (*bukan* 武鑑) began for the first time to specify that certain individual samurai were "doctors."[15] Not long afterwards, the Kyoto doctor Gotō Konzan 後藤艮山 (1659–1733) broke with the traditional custom of taking the tonsure as an indication of his medical occupation, thereby distancing himself from the earlier association between medical and monastic practice.[16] Both in the major cities and in the countryside, the total number of doctors was increasing, and a significant fraction of the new doctors

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[13] Bitō Masahide, *The Edo Period: Early Modern and Modern in Japanese History*, trans. Gaynor Sekimori (Tokyo: Tōhō Gakkai, 2006), 28–33, 154–155; C. Andrew Gerstle, "Takemoto Gidayū and the Individualistic Spirit of Osaka Theater," in *Osaka: The Merchants' Capital of Early Modern Japan*, ed. James McClain and Wakita Osamu (Ithaca, NY: Cornell University Press, 1999), 104–24; Federico Marcon, "The Names of Nature: The Development of Natural History in Japan, 1600–1900" (PhD dissertation: Columbia University, 2007).

[14] This change was made on the suggestion of Matsudaira Tadatsugu 松平忠嗣 (1605–1665) and Hoshina Masayuki 保科正之 (1611–1673), and carried through despite the objections of Abe Tadaaki 阿部忠秋 (1602–1675). Tokugawa Mitsukuni 徳川光圀 (1628–1701) also objected to the change, on the grounds that Confucian scholarship was not an occupation and thus should not be considered in the same category as medicine. Subsequent revisions to the *buke shohatto* did not consistently group medicine together with Confucian scholarship. See Hattori Toshirō 服部敏郎, *Edo jidai igakushi no kenkyū* 江戸時代医学史の研究 (Tokyo: Yoshikawa Kōbunkan, 1978), 24–5.

[15] Fujinami Kōichi 藤波剛一, "Edo bakufu ikan seido" 江戸幕府医官制度, *Nihon ishigaku zasshi* 1300 (1942), 61–71.

[16] Hattori, *Edo jidai igakushi no kenkyū,* 26.

came from non-medical family backgrounds.[17] These developments contributed to a growing competition for status among medical practitioners, as both new and established doctors sought to gain access to medical learning and to project authority by displays of scholarly erudition.

Tokugawa doctors' status was closely connected to the vertical transmission of medical knowledge through the social institutions of lineage households and discipleship. Within the stable society envisaged by the Tokugawa rulers, intergenerational reproduction of individual lineage households fulfilling specific social functions provided the primary means of ensuring overall social continuity from generation to generation. A number of historians and sociologists have identified the increasing prominence and changing character of lineage households as one of the distinctive features of Japan's transition from medieval to early modern forms of social and political organization, and lineage households played a vital role in the maintenance of many forms of technical knowledge and skill across generations in Tokugawa Japan.[18] The close relationship between the transmission of medical learning and the maintenance of medical lineages was thus a special case

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[17] Yokota Fuyuhiko 横田冬彦, "Kinsei sonraku shakai ni okeru 'chi' no mondai" 近世村落社会における＜知＞の問題, *Hisutoria* 159 (1998), 6.

[18] Murakami Yasusuke 村上泰亮, Kumon Shunpei 公文俊平, and Satō Seizaburō 佐藤誠三郎, *Bunmei to shite no ie shakai* 文明としてのイエ社会 (Tokyo: Chūō Kōronsha, 1979); Eiko Ikegami, *The Taming of the Samurai: Honorific Individualism and the Making of Modern Japan* (Cambridge, Mass.: Harvard University Press, 1995), 126–7, 161–2; Kasaya Kazuhiko 笠谷和比古, *Samurai no shisō: Nihon-gata soshiki, tsuyosa no kōzō* 士の思想：日本型組織・強さの構造 (Nihon Keizai Shinbunsha, 1993), 157–159; Bitō Masahide, *The Edo Period: Early Modern and Modern in Japanese History*, trans. Gaynor Sekimori (Tokyo: Tōhō Gakkai, 2006), 28–33, 154–155.

of the more general phenomenon of lineage households coming to serve as social units fulfilling particular social functions.

One obvious consequence of this close relationship between lineage household and social function was the frequency with which doctors, like the practitioners of other arts, sought to ensure the continuity of their lineages by adopting heirs from outside the family or from among their own agnatic kin. It is not clear how common this practice was during the early Tokugawa period, but at least as early as the period of the Kyōhō reforms (1716–1745), the bakufu had begun to take an active interest in its smooth functioning: a decree of 1720 insisted that doctors who adopted heirs should ensure that the adoptees were sufficiently competent at medicine, and similar decrees were issued periodically until the final years of bakufu rule.[19] In a recent study on the status of domain doctors (*han-i* 藩医), Umihara Ryō has noted that nearly half of the doctors on a list of 170 individuals belonging to 31 medical families in Hikone domain during the early nineteenth century had been adopted into those lineages.[20] The purposes of such adoptions were not always straightforward: in many cases, the adoptee was already a member of a medical family before being adopted, and the adoption was required not in order to become a doctor but rather in order to obtain the specific prestige and status benefits associated with the lineage household into which he was adopted.

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[19] Kikuchi Shunsuke 菊池俊助, ed. *Tokugawa kinrei kō goshū* 徳川禁令考後集, vol. 2 (Tokyo: Yoshikawa Kōbunkan, 1931), 377.

[20] Umihara Ryō 海原亮, "Han-i" 藩医, in *Bushi no shūen ni ikiru* 武士の周縁に生きる (Yoshikawa Kōbunkan, 2007), 77–110 at 83–5.

In addition to passing on their medical learning to their own heirs, a prominent doctor could also accept disciples (*monnin* 門人), to whom he would transmit not only medical knowledge but also the prestige and authority of affiliation with a well-known medical lineage. The status of doctors as disciples was formally recorded in registries (*monninroku* 門人録), and these registries were often maintained over multiple generations of a main lineage. Particularly well-known doctors in Kyoto, Edo or Nagasaki could attract hundreds of disciples from all over Japan, and doctors who spent a few years studying in one of these centers of medical learning and then returned to their home provinces represented one of the ways in which styles of medical thought and practice became geographically diffused within Japan.[21] In contrast to the linear transmission of medical learning and authority through the lineage household, discipleship was not necessarily based on exclusive relationships, and many doctors studied under multiple masters either with or without those masters' approval. As Ellen Gardner Nakamura and Maki Fukuoka have recently emphasized, most Tokugawa doctors were happy to combine ideas and methods from a variety of sources and regarded such eclecticism as normal rather than exceptional.[22]

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[21] Similar patterns of education, diffusion and authorization were seen in other areas of learning, such as Confucian scholarship, *rangaku*, and aesthetic arts such as the tea ceremony, painting and poetic composition. On scholarly private academies (*shijuku* 私塾), see Richard Rubinger, *Private Academies of Tokugawa Japan* (Princeton: Princeton University Press, 1982); on the transmission of aesthetic taste and authority through the *iemoto* 家元 system, see Eiko Ikegami, *Bonds of Civility: Aesthetic Networks and the Political Origins of Japanese Culture* (Cambridge: Cambridge University Press, 2005).

[22] Ellen Gardner Nakamura, *Practical Pursuits: Takano Chōei, Takahashi Keisaku, and Western Medicine in Nineteenth-Century Japan* (Cambridge: Harvard University Asia Center, 2005), 9–

Beginning in the mid-eighteenth century, a number of domains began to establish institutions of medical learning.[23] By the end of the Tokugawa period, around eighty domains had established institutions for medical education, whether in the form of independent academies of medical learning or in the form of medical education programs managed by domain academies.[24] One of the earliest and most prominent of these domain medical academies was the Saishunkan 再春館, established by the daimyo of Kumamoto domain in 1756.[25] Particularly from the 1780s onward, the growing number of domains that had established their own domain medical academies set a precedent that other domains sought to emulate.

In 1791, the bakufu bestowed official status on the Seijukan 躋寿館, which had originally been founded as a private medical academy by Taki Mototaka 多紀元孝 in 1765. This bakufu initiative, undertaken in broader context of attempts to revitalize governance during the period of the Kansei Reforms, also stimulated daimyo interest in promoting medical education within their own domains.[26] Although most of these academies were established in the first instance as

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13, 52–4, 131–2; Maki Fukuoka, *The Premise of Fidelity: Science, Visuality and Representing the Real in Tokugawa Japan* (Stanford: Stanford University Press, 2012), 28–34.

[23] Nakaizumi Tesshun 中泉哲俊, "Kinsei shohan no igaku kyōiku" 近世諸藩の医学教育, *Hirosaki daigaku jinbun shakai* 2 (1951), 59–74.

[24] On the spread of domain schools in the eighteenth century, see Ronald Philip Dore, *Education in Tokugawa Japan* (London: Routledge & Kegan Paul, 1965), 70–72.

[25] On the history of the Saishunkan, see Yamazaki Masatada 山崎正董, *Higo iikushi* 肥後医育史 (Kumamoto: Chinzei ikai jihōsha, 1929).

[26] Machi Senjurō 町泉寿郎, "Igakukan no gakumon keisei (1): Igakukan seiritsu zengo" 医学館の学問形成（一）医学館成立前後, *Nihon ishigaku zasshi*, 45.3 (1999), 339–72; Machi Senjurō, "Igakukan no gakumon keisei (2): Kansei no kaikakuki no kan'itachi no dōkō" 医学館の学問形成（二）寛政の改革期の官医たちの動向, *Nihon ishigaku zasshi*, 45.4 (1999), 515–42.

educational institutions for doctors who were employed directly by the domain, in many cases they were also involved in providing training to doctors who operated privately as town or village doctors, and they were thus in a position to influence medical practices more broadly.

The academies also became involved not only in the education but also in the regulation of medical practitioners.[27] In 1801, Akita domain issued a decree prohibiting the practice of medicine by non-professional healers (*shokugai no mono* 職外の者) and stipulating that local healing practitioners who had a history of success in treating patients should be investigated and certified by the domain medical academy. The Saishunkan of Kumamoto domain acquired even more extensive monitoring functions, including the inspection of the records that doctors were ordered to keep concerning their treatment of patients and statistics concerning patient recovery rates. From the Tenpō period (1830–1841) onwards, an increasing number of domains gave their medical academies the authority to regulate medical practitioners, although the ways in which this regulation was implemented in practice remain in need of further clarification.

In contrast to the above strategies for the transmission of medical learning through direct personal contact, the publication of medical books represented a much more open method for the dissemination of such learning. During the peace and economic expansion that followed the establishment of Tokugawa rule, patterns for the dissemination of medical knowledge were transformed by the

[27] Nakaizumi Tesshun, "Kinsei shohan no igaku kyōiku," 67–68.

spread of literacy and by the development of an indigenous commercial publishing industry. Residents of cities, towns and villages increasingly turned to published medical books as sources of information, and the doctrines and therapies described in these books came to exert a growing influence over healing practices. In the process, they transformed the nature of medical authority by greatly accelerating the diffusion of medical knowledge both spatially and through the different strata of Tokugawa society.

The growth of medical publishing was fostered by a natural symbiosis between publishers and medical authors, at first in Kyoto, the dominant centre both of medical learning and of the Japanese printing industry during the seventeenth century, and in a more widely diffused fashion from the eighteenth century onwards, both through collaborations between publishers and booksellers in Kyoto, Edo and Osaka, and through the participation of an increasing number of medical authors working not only in these urban centres but also in more remote provinces. [28] Although teaching lineages continued to be important for the transmission of both knowledge and authority, and the associated practices of manuscript copying remained important in Japanese medical culture until the end of the Tokugawa period, texts that circulated in printed form played a crucial role in the novel social phenomenon of knowledge transmission independent of direct

[28] Cf. the more general discussion of early modern Japanese publishing in Peter Kornicki, *The Book in Japan: A Cultural History from the Beginnings to the Nineteenth Century* (Leiden: Brill, 1998), 192–207 and Mary Elizabeth Berry, *Japan in Print: Information and Nation in the Early Modern Period* (Berkeley: University of California Press, 2006).

interpersonal relationships.[29] Nevertheless, medical knowledge obtained solely from books was widely regarded with suspicion, and true medical expertise was assumed to be dependent on an extended period of formal discipleship. Despite the emergence of a diverse range of new approaches to medicine during the eighteenth and nineteenth centuries, the evaluation of these different approaches remained closely tied to traditional conceptions of expertise and social institutions of medical authority.

Chapter Outline

The organization of this dissertation is both thematic and chronological. Part One examines the role of written texts in the social and epistemological transitions reshaping the nature of medical knowledge from the seventeenth to the eighteenth century and the emergence during this period of new ways of thinking about medical knowledge that combined philological study of ancient texts with an emphasis on practical experience. Part Two examines the role of personal interactions in the propagation of medical ideas, showing how the social contexts in which medical learning was acquired and transmitted shaped the ways that these ideas were interpreted and put into practice. Part Three examines the practical efforts of Japanese doctors during the eighteenth and nineteenth centuries to discover, develop and evaluate new medical techniques and substances.

[29] On Tokugawa manuscript culture, see Peter Kornicki, "Manuscript, not Print: Scribal Culture in the Edo Period," *The Journal of Japanese Studies* 32.1 (2006), 23–52.

Language forms the foundation of any system of knowledge, and Chapter 1 shows how the changing linguistic forms of published medical treatises shed light on the social and cultural development of medicine as a discipline. Since the Tokugawa bakufu confined legitimate foreign trade to a limited number of channels and imposed severe restrictions on the movement of people into and out of Japan, cultural influences from the continent were transmitted primarily through the importation of books, and since Japanese medicine had always depended heavily on ideas, practices and materials derived from China, the ability to read texts written in classical Chinese was a non-trivial challenge facing doctors who wished to adhere to elite standards of practice. However, there was at the same time a growing interest in indigenous forms of knowledge that were unique to the Japanese archipelago. This chapter shows how the relationships between regional and local medical knowledge were reflected in language, analyzing the linguistic strategies by which medical writers made Chinese classical medical learning accessible to a Japanese audience and the ways that medical learning from indigenous oral and written sources gradually became incorporated into the mainstream of the Japanese medical tradition.

Chapter 2 discusses the "Ancient Formulas" (*kohō* 古方) doctors of the eighteenth century, who are widely recognized to have made important contributions to the development of medical empiricism in Japan and to the subsequent growth of interest in European medicine among Tokugawa doctors. Advocates of Ancient Formulas viewed the orthodox medicine of their immediate

predecessors as the degenerate medicine of a "Later Age" (*gosei* 後世) and based their therapies on the formulas recorded in the *Shanghanlun* 傷寒論 (*Discourse on Cold Damage*) of the second-century Chinese doctor Zhang Zhongjing 張仲景.[30] The beginnings of this phenomenon can be traced back to the late seventeenth-century doctors Nagoya Gen'i 名古屋玄医 (1628–1696) and Gotō Konzan 後藤艮山 (1659–1733), but it was not until the middle decades of the eighteenth century that Ancient Formulas medicine developed into a self-conscious movement, when Kyoto doctors such as Kagawa Shūan 香川修庵 (1683–1755), Yamawaki Tōyō 山脇東洋 (1705–1762), and Yoshimasu Tōdō 吉益東洞 (1702–1773) began to develop a new and distinctive approach to the foundations of medical knowledge by combining philological study of early Chinese texts with an emphasis on empiricism and practical observation. This chapter explores the relationship between the philological and the empirical investigations of the Ancient Formulas doctors Yamawaki Tōyō and Yoshimasu Tōdō, arguing that these apparently contrasting modes of enquiry were in fact complementary aspects of a way of knowing that valued explicit arguments and concrete evidence over intuitive reasoning from first principles.

[30] The term *kohō* literally meant "ancient formulas," referring specifically to the therapeutic formulas recorded in the treatises of Zhang Zhongjing and other early Chinese doctors; however, the historical significance of *kohō* medicine was much broader than that of the formulas themselves. I thus translate *kohō* as "Ancient Formulas medicine" when the term is used in a broader sense, and as "ancient formulas" when the more concrete meaning is intended.

Chapter 3 shows how the visits of Korean doctors in the entourage of diplomatic embassies presented an unusual set of opportunities for Japanese doctors to discuss medical topics with doctors from outside Japan. Japanese doctors hoped to learn from the visiting Koreans about topics ranging from their interpretations of the Chinese medical classics to their methods of processing valuable drugs such as ginseng, since personal contact between individuals could potentially enable forms of knowledge transmission for which books alone were insufficient. However, the divergence between Japanese and Korean medical cultures over the course of the eighteenth century meant that this potential was seldom realized, as both sides experienced increasing frustration in their attempts to engage in dialogue.

Chapter 4 analyzes the roles of lineage authority and secret and public forms of knowledge in the unique style of medicine practiced by the Ikeda lineage of smallpox doctors. The Ikeda doctors emerged in the late eighteenth century from obscure origins to become the most prominent lineage of specialist practitioners of smallpox medicine during the first half of the nineteenth century, and their history allows us to examine how Tokugawa doctors delineated the boundaries between secret and public forms of medical knowledge and how those boundaries could change depending on their changing social circumstances.

Chapter 5 examines the ways that Tokugawa doctors approached the problem of understanding therapies that had not previously been part of their therapeutic repertoire, focusing on the development of vomiting, bloodletting and mercurial drug therapies during the late eighteenth and early nineteenth centuries. These aggressive types of therapy were consistent with the style of medicine

developed by the Ancient Formulas doctors, but they drew their inspiration from foreign sources and faced significant obstacles to adoption. Making these therapies work required sustained efforts to develop the knowledge necessary for practicing them effectively within Japan, and the development and transmission of this knowledge provide far from straightforward.

Chapter 6 analyses the introduction of the cowpox vaccine, a new medical technique whose rapid success has often been seen as marking the conclusive triumph of Western medicine and laying the foundation for the transformation of Japanese medicine in the second half of the nineteenth century. This chapter argues that the question of whether to adopt the use of the cowpox vaccine was much more problematic than has usually been supposed, and shows that despite its apparently novel characteristics, the processes by which typical Tokugawa doctors evaluated the vaccine's potential risks and benefits continued to display many of the same intellectual and social dynamics that had characterized Tokugawa medicine during the previous two centuries.

Part One

Language, Philology and Medical Knowledge

Chapter 1

The Languages of Medical Knowledge

The linguistic details of medical speech and writing might appear to be of no more than peripheral importance to the history of early modern Japanese medicine when compared with subjects such as the emergence of new medical epistemologies, the shifting patterns of therapeutic practice, or the changing social relationships between doctors and patients. Early modern Japanese doctors, like their contemporaries in early modern Europe, generally assumed that the correct use of language was an essential foundation for medical learning, but they also argued that doctors should avoid fixation on language for its own sake and should concentrate instead on the realities to which their language referred. Some of the eighteenth-century Ancient Formulas doctors made this claim in forceful terms: Yamawaki Tōyō 山脇東洋 (1705–1762), for example, criticized earlier writers who "clung to names and lost the facts," while Kagawa Shūan 香川修庵 (1683–1755) regarded excessive concern with language as an unfortunate Chinese habit that he hoped his

countrymen would be able to avoid.[1] Nevertheless, the styles of written language that were used to convey medical ideas not only carried traces of those ideas' origins, but also determined the range of readers to whom those ideas would be accessible. The history of medical language thus represents an essential aspect of the social and intellectual histories of medical knowledge and practice.

The practice of learned medicine in Tokugawa Japan, like that throughout early modern East Asia, was dominated by vocabulary, ideas and practices drawn from the Chinese medical tradition. Texts written in Classical Chinese formed the basis for a cosmopolitan medical culture extending across a diverse range of ecological, social and linguistic territories beyond China itself, and medical learning in Vietnam, Korea and Japan thus developed through a continual process of interaction between this cosmopolitan medical culture and the variety of local ways of speaking and writing about bodies, illnesses and therapies in each of these countries. In contrast to the multipolar relationships among centers of cultural and political influence in South Asia and Europe, the flows of cultural influence in East Asia were largely unipolar, radiating outwards from the core regions of Chinese

[1] Yamawaki Tōyō 山脇東洋, *Zōshi* 蔵志 (1759), 1:2b; Kagawa Shūan 香川修庵, *Ippondō yakusen* 一本堂薬選 (1734), 1:72a. For the idea that Chinese medical writers were especially prone to favor elegant language over substantial facts, cf. also Nakagawa Shūtei 中川修亭, *Ihō shinko ben* 医方新古辨 (undated manuscript in KyFC, early nineteenth century), 17b. For comparable claims by early modern European medical writers about the need for doctors to avoid concerning themselves with language for its own sake, see Charles Schmitt, "Aristotle Among the Physicians," in *The Medical Renaissance of the Sixteenth Century*, ed. Andrew Wear, Roger K. French, and Iain M. Lonie (Cambridge: Cambridge University Press, 1985), 14; Ian Maclean, *Logic, Signs, and Nature in the Renaissance: The Case of Learned Medicine* (Cambridge: Cambridge University Press, 2002), 104–108; Peter Burke, *Languages and Communities in Early Modern Europe* (Cambridge: Cambridge University Press, 2004), 77.

culture towards the peripheral cultures of Vietnam, Korea and Japan, each of which exerted very little influence in the reverse direction.[2]

The nature of Chinese writing and the various systems for reading it in different parts of East Asia made possible a flexible relationship between written and spoken languages, especially when written texts were transported over long distances. In Japan, the close relationship between the language of *kana* medical texts and the *kanbun kundoku* 漢文訓読 style of vocalizing *kanbun* texts meant that *kanbun* and *kana* versions of a medical text could potentially be very similar in vocalization, despite the difference in their written formats. An analysis of the languages of medical knowledge in Tokugawa Japan thus cannot simply be based on a dichotomy between texts written in "Chinese" (or *kanbun*) and those written in "Japanese" (or *wabun*), but needs to take into account the mutual influences of different modes of medical writing.

This chapter examines the development of medical language in Tokugawa Japan in terms of two complementary flows of knowledge within Tokugawa society.[3] The first of these flows proceeded from the elite scholars and doctors of the metropolitan centers towards the lower social strata and peripheral regions, and was associated with what we might call a vernacularization of classical or

[2] For broader considerations, see Peter Kornicki, "The Latin of East Asia?" (2008 Sandars Lecture in Bibliography, www.lib.cam.ac.uk/sandars/kornicki1.pdf); Benjamin A. Elman, "One Classic and Two Classical Traditions: The Recovery and Transmission of a Lost Edition of the Analects," *Monumenta Nipponica* 64.1 (2009), 53–82; Peter Kornicki, "A Note on Sino-Japanese: A Question of Terminology," *Sino-Japanese Studies* 17 (2010), Article 4.

[3] This argument builds on a suggestion put forward by Tsukamoto Manabu 塚本学 in his *Tokai to inaka: Nihon bunka gaishi* 都会と田舎：日本文化外史 (Heibonsha, 1991); see also Tsukamoto Manabu, "Edo jidaijin no seimei iji no tame no jōhō" 江戸時代人の生命維持のための情報, *Rekishigaku kenkyū* 651 (1993), 30.

"cosmopolitan" medicine, involving the proliferation of *kana* texts offering knowledge of classical Sino-Japanese medical doctrines and techniques; the second flow proceeded from the lower social strata towards the elites and from the rural peripheries to the urban centers, and was associated with what we might call a textualization of oral or "vernacular" medical knowledge, involving the collection and publication of local medical knowledge that had previously been passed down only in oral form. Although this analysis accounts for only a part of the range of the linguistic phenomena in Tokugawa medical speech and writing, it enables us to see how the multiple forms of written medical language shaped both intellectual and social dimensions of Tokugawa medical history.

From *Kanbun* to *Kana*: The Vernacularization of Classical Medicine

In early modern Japan as elsewhere in early modern East Asia, a number of written genres existed for the recording and transmission of medical learning: treatises on the basic principles of medicine, formularies listing remedies but providing only minimal discussion of principles, comprehensive treatises that surveyed both fundamental principles and practical advice, simple healing manuals for household use, miscellaneous notes on medical topics, dictionaries of medical terminology, commentaries on Chinese medical classics, polemical attacks on other doctors' writings, and treatises on topics such as *materia medica* (*honzō* 本草), acupuncture and moxibustion, and diagnostic techniques of pulse-taking and abdominal palpation.

Both *kanbun* and *kana* could be used in any of these genres, but certain unstated assumptions guided the choice among the possible styles of writing. As David Lurie has pointed out, *kanbun* was a "privileged mode" for recording technical knowledge in many fields of learning from the seventh until the twentieth century, and medicine was no exception.[4] *Kanbun* remained the standard form of medical writing throughout the Tokugawa period, not least because *kanbun* literacy enabled access to both the ancient and the more recent Chinese texts that continued to inform Japanese doctors' ways of thinking about medicine. Reprints of Chinese and Korean medical treatises represented an important part of the available medical literature alongside the various genres of books produced by Japanese writers, and these reprints included recent works from Chosŏn Korea and Ming and Qing China as well as new editions of older medical classics.

Because *kanbun* was regarded as standard for medical writing, the authors of *kanbun* medical treatises felt no need to draw attention to or explain their choice of writing style; by contrast, *kana* medical books often carried titles that mentioned their use of Japanese script (*kana* 仮名, *waji* 倭字) or language (*wago* 倭語), and their authors offered justifications for their choice of this form of writing by claiming that the use of *kana* would make the contents of their books accessible to a wider audience. *Kana* medical writing almost exclusively adopted a linguistic register

[4] David B. Lurie, *Realms of Literacy: Early Japan and the History of Writing* (Cambridge, Mass.: Harvard University Press, 2011), 323. In order to avoid reproducing the Sinocentric assumptions embedded in the term "*kanbun*," Lurie employs the term "*kundoku*-mediated logography" rather than "*kanbun*"; however, since "*kundoku*-mediated" medical writing in Tokugawa Japan adhered closely to standard classical Chinese syntax, it will be more convenient here to use the traditional term.

closely related to what Haruo Shirane has described as the "demotic vernacular" style, whose diction was based on *kanbun kundoku* and whose vocabulary drew extensively on technical terms of Chinese origin.[5] Only a small number of medical texts departed from this convention regarding the appropriate style of *kana* medical writing: simple *waka* verse summaries of *materia medica*; dialogues that mixed archaic and colloquial language, examination answers that employed Japanese epistolary style (*sōrōbun* 候文), and the attempts of several nineteenth-century doctors to appropriate older forms of the Japanese language for medical writing, such as the *Manyōshū*-style verses of Morikawa Sōen's 森川宗円 *Kusushi no kotodama* 医言霊 (*The Spirits of the Words of the Doctor*, 1822) and the classical *waka*-style language of Satō Katasada's 佐藤方定 *Kushi mitama* 奇魂 (*The Miraculous Spirit*, 1831).[6] But these styles of writing were used only in exceptional cases, and the vast majority of *kana* medical literature was written in a neutral technical style.

Most Tokugawa doctors agreed that the foundations of medical learning rested on a knowledge of *kanbun*, but for many readers of the Tokugawa period

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[5] Haruo Shirane, "Mediating the Literary Classics: Commentary, Vernacular, and Translation in Medieval and Early Modern Japan," paper presented at the Research Cluster Meeting "Rethinking Asian Languages, Vernaculars and Literacies," Princeton Institute for International and Regional Studies, November 2011.

[6] On the subject of *waka* verses on medical topics, see Tsukamoto Manabu, *Tokai to inaka*, 206–208; Ueno Masuzō 上野益三 and Yoshii Motoko 吉井始子, "Kaidai" 解題, in *Shokumotsu honzō taisei* 食物本草大成 (Kyoto: Rinsen Shoten, 2007), vol. 2. For an unusual example of a medical dialogue mixing archaic and colloquial language, see Alessandro Bianchi and Machi Senjurō 町泉寿郎, "Nagasawa Dōju *Yabui mondō* no kaidai to honkoku" 長沢道寿『藪医問答』の解題と翻刻, *Nihon ishigaku zasshi* 56.1 (2010), 136–106. On the use of *sōrōbun* in medical examinations, see Machi Senjūrō 町泉寿郎 and Tode Ichirō 戸出一郎, "Kansei kōin kōshi shorui sanshu" 寛政甲寅考試書類三種, *Nihon ishigaku zasshi* 50.2 (2004), 291–302; 50.3 (2004), 428–44; 50.4 (2004), 617–27.

kanbun presented a formidable barrier to comprehension. Even introductory Chinese medical primers could be difficult enough that eighteenth-century townspeople and doctors formed reading groups for mutual study assistance.[7] In the nineteenth century, when Chinese books reprinted in Japan continued to serve as sources of information about new medical ideas and techniques, the vaccination advocate Koyama Shisei 小山肆成 (1807–1862) took the unusual step of translating a Chinese treatise on vaccination into a *kana* version on the grounds that "there are people for whom reading *kanbun* is like trying to scratch an itch through a boot."[8] Ability to write *kanbun* accurately was a still rarer mark of distinction, and even a prominent eighteenth-century doctor such as Yoshimasu Tōdō could make mistakes writing *kanbun* that would later need to be corrected by his more rigorously trained grandson.[9]

Well before the advent of large-scale commercial printing, some Japanese medical writers had already adopted *kana* writing styles in order to disseminate their medical learning to a broad audience. The fourteenth-century doctor and Buddhist monk Kajiwara Shōzen 梶原性全 (c.1265–c.1337) used *kanbun* to write his major medical treatise *Man'anpō* 万安方 (*Myriad Relief Prescriptions*, 1315), since he assumed

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[7] Yokota Fuyuhiko 横田冬彦, "Kinsei sonraku shakai ni okeru 'chi' no mondai" 近世村落社会における＜知＞の問題, *Hisutoria* 159 (1998), 2.

[8] Koyama Shisei 小山肆成, *Hon'yaku intō shinpō zensho* 翻訳引痘新法全書 (1847), 28a. On the continuing importance and difficulty of *kanbun* for village doctors in the nineteenth century, see also Shibata Hajime 柴田一 "Kinsei kōki ni okeru zaison'i no shūgaku katei: Chihara Eishun no baai" 近世後期における在村医の修学過程：千原英舜の場合, *Jitsugakushi kenkyū* 2 (1985), 187.

[9] Tateno Masami 館野正美, *Yoshimasu Tōdō "Kosho igen" no kenkyū: sono shoshi to igaku shisō* 吉益東洞『古書医言』の研究: その書誌と医学思想 (Tokyo: Kyūko Shoin, 2004), 65–9.

that the few trusted disciples who were allowed access to the treatise would be sufficiently well educated that *kanbun* text would not present any problems.[10] Nevertheless, Shōzen had also compiled another treatise, *Ton'ishō* 頓医抄 (*Book of the Simple Doctor*, 1304), which employed *kana* writing in order to "make [medical knowledge] widely known to people and to help everybody in the realm."[11] Later in the fourteenth century, another monk-doctor, Yūrin 有林, cited similar motivations for his decision to make medical learning available through his "annotated explanation in Japanese script" (*waji chūkai* 和字注解) of the contents of important Song dynasty medical treatises.[12]

Several centuries later, Tokugawa medical authors would continue to make similar sorts of claims about their choices of written language style, suggesting a degree of continuity in the correlation between different writing styles and the different audiences for medical writing. However, it is important to keep in mind the radically altered social context of the Tokugawa period, and in particular the way that new printing technologies and book distribution networks meant that an increasing variety of medical writings had become much more widely available. Kajiwara Shōzen had been able to consult around 270 Chinese medical treatises in

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[10] Mieko Macé, "Transmission secrète et vérité de l'enseignement dans le milieu médical de l'époque d'Edo," in *Revue d'Études Japonaises du CEEJA – Benkyōkai* (Colmar & Aurillac, Centre Européen d'Études Japonaises d'Alsace, Publications Orientalistes de France, 2005), 183–4.

[11] Kajiwara Shōzen 梶原性全 *Ton'ishō* 頓医抄 (1304; repr. Tokyo: Kagaku Shoin, 1986), 177. For a translation of this passage, see Andrew Goble, *Confluences of Medicine in Medieval Japan* (Honolulu: University of Hawai'i Press, 2011), xviii.

[12] Yūrin 有林, *Fukudenpō* 福田方 (1363), repr. in *Nihon koten zenshū* 日本古典全集, vol. 39 (Tokyo: Gendai Shichōsha, 1979), 35.

the compilation of his *Man'anpō* by exploiting his status as a retainer of the high-ranking samurai Nagai Munehide to gain access to the finest library collections in Kamakura; but by the end of the first century of Tokugawa rule, the reprinting in Japan of at least this number of Chinese medical texts—to say nothing of the growing body of literature by Japanese medical authors themselves—meant that a comparable range of medical literature would have been easily accessible to any individual of moderate financial means, regardless of status and patronage.[13]

When the first medical books were printed in Japan using moveable type around the turn of the seventeenth century, the texts printed were predominantly written in *kanbun*. These included editions of the Song, Jin, Yuan and Ming dynasty treatises describing the new approach to medical thought which came to dominate scholarly medical practice in the seventeenth century. The early printed treatises by the Japanese masters of this new medical style, Manase Dōsan 曲直瀬道三 (1507–1594) and Manase Gensaku 曲直瀬玄朔 (1549–1631), were mostly written in *kanbun*, but they also included *kana* treatises such as *Saiminki* 済民記 (*Record for the Salvation of the People*, 1573; printed 1617), *Keitokuhō* 恵徳方 (*Charitable Virtue Formulas*, 1597), and *Enju satsuyō* 延寿撮要 (*Essential Anthology for the Extension of Longevity*, 1599). During the second half of the seventeenth century, the shift from moveable type to woodblock printing facilitated more complex linguistic presentations of text through

[13] On the libraries available to Kajiwara Shōzen, see Goble, *Confluences of Medicine*, 24. The comparison with the number of Chinese medical treatises reprinted in Japan during the first century of the Tokugawa period is based on the bibliographic data in Kosoto Hiroshi 小曽戸洋, *Nihon kanpō tenseki jiten* 日本漢方典籍辞典 (Tokyo: Taishūkan Shoten, 1999), 417–37.

the incorporation of reading marks (*kaeriten*, *okurigana*) and phonetic glosses (*furigana*) in *kanbun* texts.[14] Yet although these reading marks became an almost universal feature of printed *kanbun*, they never fully eliminated the cognitive challenge of interpreting texts that were written according to a syntax radically different from that of Japanese.

Of much greater significance for the development and diffusion of medical knowledge was the increased publication of books that made classical doctrines and therapies available to a wide audience. The motivations for writing and publishing medical books in *kana* rather than *kanbun* varied slightly depending on the nature of the book: the colophon to Manase Dōsan's *Saiminki*, a simplified summary of the contents of several important Ming treatises, suggested that it could be useful to "beginning students"; while the colophon to *Enju satsuyō*, a popular manual on regimen (*yōjō* 養生), specified that the use of *kana* would make the contents accessible to those in "remote provinces and minor towns."[15] These assumptions about the audiences for vernacular medical treatises probably underestimated both the extent of *kanbun* literacy in the countryside and the desire of educated urban readers for easily comprehensible writings on medicine, but they persisted as a conventional trope in prefaces and colophons to *kana* medical books. In the late seventeenth century, the Hikone doctor Ashikawa Keishū 蘆川桂洲 explained that

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[14] Peter Kornicki, *The Book in Japan: A Cultural History from the Beginnings to the Nineteenth Century* (Leiden: Brill, 1998), 128–58.

[15] Manase Dōsan 曲直瀬道三, Colophon (1573) to *Saiminki* 済民記 (1617); Manase Gensaku 曲直瀬玄朔, Colophon to *Enju satsuyō* 延寿撮要 (1599), repr. in *Nihon kyōiku bunko: eisei oyobi yūgi hen* 日本教育文庫：衛生及び遊戯篇 (Tokyo: Dōbunkan, 1911), 44.

he had written his *Shūchin iben* 袖珍医便 (*Pocket Reference Book of Medicine*, 1690) in the vernacular language (*zokugo* 俗語) in the hope that this might make it more readily comprehensible both to "quacks in country backwaters" (*katainaka no yabui* 片郷の野巫医) and to "lay-people intent on medical practice" (*iryō ni kokorozashi aru zokka* 医療に志ある俗家). This treatise thus included not only general advice on health, medicines and other healing techniques, but also information specifically relevant to practicing doctors such as directions for packaging and labeling the compound formulas that doctors would give to their patients.[16] A century later, the Ōsaka doctor Suzuki Sadahiro explained that he had produced a *kana* version of Zhang Zhongjing's *Shanghanlun* (J. *Shōkanron*, *Discourse on Cold Damage Disorders* 傷寒論) in order to disseminate knowledge of Zhang Zhongjing's formulas to people in remote and humble regions who lacked doctors.[17] Throughout the Tokugawa period, the use of *kana* thus marked a treatise as suitable for beginning students or non-professional practitioners rather than established doctors, and for rural rather than urban audiences.

Many of the new *kana* treatises made only minimal references to their sources in the Chinese medical tradition, but in other cases these sources were more prominently displayed. A notable example of the latter approach was the bakufu-sponsored *Fukyū ruihō* 普救類方 (*Classified Formulas for Widespread Relief*, 1729), compiled by Niwa Seihaku 丹羽正伯 (1691–1756) and Hayashi Ryōteki 林良適

[16] Ashikawa Keishū 蘆川桂洲 *Shūchin iben* 袖珍医便 (1690; repr. 1725), *hanrei*, 1a; 1:5b–8a.
[17] Suzuki Sadahiro 鈴木定寛, *Shōkan yakutsū* 傷寒訳通 (1788), Preface (1784), 2b.

(1695–1731) and presented to the eighth shogun Tokugawa Yoshimune 徳川吉宗 (r. 1716–1745).[18] This formulary incorporated more than three thousand formulas drawn from several sources, the most important among which was Li Shizhen's 李時珍 (1518–1593) *Bencao gangmu* 本草綱目 (*Systematic Materia Medica*, 1596). The explicit citation of Chinese sources in *Fukyū ruihō* had no direct relevance to practical matters of healing, but these citations nevertheless constituted a crucial aspect of the book by serving as an authorizing textual presence, making the book's contents acceptable to readers for whom the authority of Chinese sources remained indisputable.[19]

While the accessibility of these *kana* medical treatises made them popular among less educated readers, doctors who wished to present themselves as serious scholars of medical learning could not rely on *kana* treatises alone. The polymathic scholar Kaibara Ekiken 貝原益軒 (1630–1714) used *kana* in his *Yōjōkun* 養生訓 (*Instructions on Nurturing Life*, 1713), "softening the words of the ancients" in order to ensure that his advice would reach as broad an audience as possible.[20] However, in the same treatise Ekiken also insisted on the value of studying *kanbun*, arguing that exclusive reliance on *kana* treatises would yield only a shallow understanding of

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[18] Fukui Tamotsu 福井保, *Edo bakufu hensanmono, kaisetsu hen* 江戸幕府編纂物、解説編 (Tokyo: Yūshōdō Shuppan, 1983), 199–201.

[19] Yokota, "Kinsei sonraku shakai ni okeru 'chi' no mondai," 17. For more general comments on the role of Chinese as an authorizing presence in vernacular Japanese texts, see Peter Kornicki, "Little Chinese, Less Manchu" (2008 Sandars Lecture in Bibliography, www.lib.cam.ac.uk/sandars/kornicki3.pdf), 8.

[20] Kaibara Ekiken 貝原益軒, *Yōjōkun* 養生訓 (1713), *kōki* 後記. This passage is not included in the text of the *Yōjōkun* in *Ekiken zenshū*, but is present in a number of Tokugawa woodblock editions.

medical principles, and lead to dangerous mistakes in diagnosis and therapy.[21] Both practical concerns and status competition among practitioners thus generated a demand for books that would reduce the problem of understanding *kanbun* medical treatises by providing guidance for readers with limited educational backgrounds.

The simplest form of such guidance was lexicographic, and during the seventeenth and eighteenth centuries there appeared a number of medical dictionaries designed for what Ann Blair has referred to in the early modern European context as "consultation reading."[22] These dictionaries served as auxiliary texts that could help their readers to comprehend the sometimes obscure terms and concepts encountered in medical writings, and thus would have lessened the need for personal instruction as a means to acquire medical learning. A number of lexicographic treatises on medicine and related topics had been produced in Japan prior to the Tokugawa period, but the spread of literacy and the rise of commercial publishing meant that the new treatises produced from the seventeenth century onwards had a much wider social impact.[23] The early publication of a single-volume lexicon of anonymous authorship, *Byōron zokkai shū* 病論俗解集 (*Compendium of Vernacular Explanations of Discourse on Disease*, 1639), was followed by the most important medical lexicon of the seventeenth century, Ashikawa Keishū's

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[21] Kaibara Ekiken, *Yōjōkun* 養生訓 (1713), repr. in *Ekiken zenshū* 益軒全集, vol. 3 (Tokyo: Ekiken Zenshū Kankōbu, 1911), 558–9.
[22] Ann M. Blair, *Too Much to Know: Managing Scholarly Information before the Modern Age* (New Haven: Yale University Press, 2010), 8.
[23] Before the Tokugawa period, the most important lexical treatises relevant to medicine were primarily in the field of *materia medica*, including *Honzō wamyō* 和名本草 (c.918) and *Honzō iroha shō* 本草色葉抄 (1284).

eight-volume *Byōmei ikai* 病名彙解 (*Collected Explanations of Disease Names*, 1686). Ashikawa wrote that he had originally intended this book to serve both as a lexical aid and as a guide to therapy, but that the inclusion of formulas alongside the disease names would have made the book too unwieldy and he had eventually decided to focus on its lexical functions alone.[24] He provided detailed explanations for many of the 1822 disease terms in the lexicon, especially for more important or more complex disease concepts. A typical entry such as that on *raifū* 癩風 ("leprosy") covered a full double-page, listing its colloquial name *sanbyō* サンビヤウ, discussing alternative Chinese characters for writing the disease name, and listing symptoms, aetiological factors, and variant forms of the disease.[25] This lexicon had found its way into rural book collections by the early eighteenth century, and its continuing value as a reference work in indicated the fact that a new edition was reprinted as late as 1793, more than a century after its initial publication.[26]

Readers seeking further assistance could turn to the *kana* commentaries on Chinese classics produced by Okamoto Ippō 岡本一抱 (1654–1716), a Kyoto doctor whose medical pedigree stretched back to Manase Dōsan. Ippō's publication of *kana* guidebooks was a natural extension of his teaching activities, allowing him to disseminate his interpretations of Chinese medical treatises to an audience beyond

[24] Ashikawa Keishū 蘆川桂洲 *Byōmei ikai* 病名彙解 (1686), *hanrei*.
[25] Ashikawa, *Byōmei ikai*, 4:3a–4a.
[26] Yokota, "Kinsei sonraku shakai ni okeru 'chi' no mondai," 10, 12.

his personal disciples.[27] His use of the vernacular was consistent with his view that introductory medical books did not need to provide comprehensive knowledge, but instead should serve as a "gateway" to medical learning.[28] The prefaces to Ippō's books stressed their value for beginning students and for practising doctors whose limited ability to read *kanbun* meant they had been unable to establish a deep understanding of their art.[29] Although these commentaries tended to advertise their usefulness to beginning students rather than to rural audiences, their circulation had extended at least as far as the rural hinterland of Osaka by the early years of the eighteenth century.[30]

Okamoto Ippō's production of these *kana* treatises and commentaries was not uncontroversial. According to one account, Ippō's own older brother, the playwright Chikamatsu Monzaemon 近松門左衛門 (1653–1724), persuaded him to cease producing them on the grounds that they would encourage students to dispense with serious study of the classical Chinese texts themselves.[31] This story may be apocryphal, since Ippō's vernacular commentaries continued to be

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[27] Okamoto Ippō, *Byōin shinan* 病因指南 (1695), Preface, 1a. For biographical information on Okamoto Ippō, see Yakazu Dōmei 矢数道明, "Okamoto Ippō" 岡本一抱, in *Kinsei kanpō igakusho shūsei* 近世漢方医学書集成, vol. 7 (Tokyo: Meicho Shuppan, 1979), 7–17.

[28] Okamoto Ippō, *Hōi bengi* 方意辨義 (1703), Preface, 1a.

[29] Okamoto Ippō, *Byōin shinan*, *hanrei*; *Kakuchi yoron genkai* 格致余論諺解 (1696), *hanrei*; *Kōeki honzō taisei* 広益本草大成 (1698), Preface, 5b; *Igaku sanzō benkai* 医学三臓辨解(1700), *hanrei*, 2a; *Igaku kōdan hottan ben* 医学講談発端辨 (1700), Preface, 1a–b. By contrast, one doctor who wrote a preface for Ippō claimed that the book was not just for beginners, but would also be valuable for experienced doctors. See Okamoto Ippō, *Ihō taiseiron wagoshō* 医方大成論和語鈔 (1702), Preface by Tamura Genshin 田村玄真.

[30] Yokota, "Kinsei sonraku shakai ni okeru 'chi' no mondai," 10, 12. For an explicit reference to rural readership, see Okamoto Ippō, *Kōtei daikei somon genkai* 黄帝内経素問諺解 (1744), Preface by Kadoma Yoshihiro 門間嘉寛, 7a.

[31] Fujikawa Yū 富士川游, *Nihon igakushi* 日本医学史 (Tokyo: Nisshin Shoin, 1941), 292.

published until the final years of his life and posthumously by his disciples; nevertheless, it expressed a very real sentiment that persisted among later elite medical writers. The bakufu medical official Mochizuki San'ei 望月三英 (1697–1769) blamed books like those of Okamoto Ippō for doctors' declining standards of scholarly learning.[32]

Given that there were already numerous books in existence offering medical knowledge to readers who could not read *kanbun* fluently, it might seem surprising that Okamoto Ippō's vernacular commentaries would have seemed so objectionable. One possible explanation for this apparent paradox might be that Ippō's treatises offered readers a different sort of knowledge from that contained in formularies like *Fukyū ruihō* or even dictionaries like *Byōmei ikai*. The majority of vernacular treatises aimed to provide simple, practical knowledge to people who lacked easy access to classically trained doctors, and thus did not threaten the distinction between the less educated practitioners who had a pragmatic knowledge of healing techniques and the scholarly physicians whose authority rested on intimate familiarity with the *kanbun* classics. Okamoto Ippō's printed, commercially available commentaries offered access to more prestigious forms of medical knowledge, and therefore had the potential to undermine the authority that these forms of knowledge had once conferred.

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[32] Mochizuki San'ei 望月三英, *Rokumon zuihitsu* 鹿門随筆, repr. in *Kyōrin sōsho* 杏林叢書, vol. 4 (Tokyo: Tohōdō Shoten, 1925), 157. For an earlier discussion of the virtues and dangers of publishing *kana* medical books, cf. Ujita Un'an 宇治田雲南, *Igaku bengai* 医学辨害 (1681), 1:43b–44b.

Tensions surrounding the appropriate means of access to medical learning persisted throughout the eighteenth century, even as the styles of medicine favoured by the medical elite were undergoing important changes. The second half of the eighteenth century saw an expansion of institutionalized medical education at the elite level, as both the bakufu and a number of domains established academies for medical training to complement the academies of Confucian learning that they established during the same period.[33] The widening availability of the earlier reference works and commentaries discussed above was itself an additional factor forcing eighteenth-century doctors to attain ever higher levels of erudition in order to present themselves as scholarly physicians. The "Ancient Formulas" (*kohō* 古方) doctors presented a new challenge to the styles of medicine that had been popular in the seventeenth century by arguing that the art of medicine should be learned from the oldest surviving Chinese formularies, in particular those attributed to the third-century doctor Zhang Zhongjing. There was thus a ready market in the second half of the eighteenth century for *kana* commentaries that promised to help their readers overcome the difficulties of Zhang Zhongjing's writings, such as Furuno Ryōsaku's 古野了作 *Shōkanron kokujikai* 傷寒論国字解 (*Explanation of the Shanghanlun in Japanese Characters*, 1771) and *Kinki yōryaku kokujikai* 金匱要略国字解 (*Explanation of the Jingui Yaolue in Japanese Characters*, 1771) and Suzuki Sadahiro's 鈴

[33] Nakaizumi Tesshun 中泉哲俊 "Kinsei shohan no igaku kyōiku" 近世諸藩の医学教育, *Hirosaki daigaku jinbun shakai* 2 (1951), 59–74; Machi Senjurō 町泉寿郎, "Igakukan no gakumon keisei. 1. Igakukan seiritsu zengo" 医学館の学問形成（一）医学館成立前後, *Nihon ishigaku zasshi* 45.3 (1999), 339–372.

木定寛 (1754–1788) *Shōkanron yakutsū* 傷寒訳通 (*Translated Compendium on the Shanghanlun*, 1788). These works were written and printed in styles similar to the medical commentaries and paraphrases of Okamoto Ippō, but they also reflected the shifting emphases of elite medical learning.

To cater to the more textually ambitious medical students of the late eighteenth century, the scholar Minagawa Kien 皆川淇園 (1734–1807) and several of his disciples collaborated to compile *Ian ruigo* 医案類語 (*Classified Phrases for Medical Case Records*, 1774), a style guide to medical writing that gathered vocabulary and short excerpts from important Chinese medical treatises to serve as models for students who wished to learn how to compose medical case records in *kanbun* without risk of revealing themselves as "simpletons" (*bokujin* 樸人).[34] Yet although Minagawa Kien sought to appeal to these relatively sophisticated readers, his treatise's numerous interlinear paraphrases of the *kanbun* text incorporated extensive samples of *kana* writing, including even quite colloquial forms of language. As an example, we can consider how Minagawa glossed a passage taken from a case narrative of the Yuan-dynasty doctor Zhu Zhenheng 朱震亨 (1281–1358), "a person was unable to eat all at once, and liked to eat at frequent intervals." This was not an especially difficult passage of *kanbun*, since the phrases "eat all at once" (*tonshoku* 頓食) and "eat at frequent intervals" (*hinshoku* 頻食), although uncommon, were readily comprehensible from their component characters. However, they were

[34] Minagawa Kien 皆川淇園, *Ian ruigo* 医案類語 (1774), *Ian ruigo*, Preface by Tachibana Tō 橘陶, 2b.

sufficiently distant from everyday language to present potential obstacles to intuitive understanding, and Kien supplied interlinear *katakana* glosses in a more colloquial style of Japanese (*ichido ni kuu*; *chokochoko kuu*), encouraging students to draw connections between the classical *kanbun* of medical writing and the ordinary Japanese of everyday conversation.[35]

This style of direct translation into colloquial Japanese was not entirely innovative as a pedagogical alternative or supplement to the use of *kanbun kundoku*: more than half a century previously, the Confucian scholar Ogyū Sorai 荻生徂徠 (1666–1728) had already stressed the cognitive value of translating from *kanbun* into more natural styles of Japanese, and Minagawa's textbook on medical writing was only part of a broader series of eighteenth and nineteenth-century attempts to develop effective pedagogical methods for Japanese students of *kanbun*.[36] The distinctiveness of *Ian ruigo* lay in its specific targeting of such sophisticated *kanbun* knowledge towards students of medicine, enabling these students to develop *kanbun* writing skills that were directly relevant to their own occupation and thus reducing the need to follow the usual laborious route through broad study of the Chinese classics. It represented a shortcut to *kanbun* competence designed specifically for medical students and doctors who wished to present themselves as scholars as well as physicians.

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[35] Minagawa Kien, *Ian ruigo*, 6:2a–b.

[36] Emmanuel Pastreich, "Grappling with Chinese Writing as a Material Language: Ogyū Sorai's *Yakubunsentei*," *Harvard Journal of Asiatic Studies* 61.1 (2001), 119–70; Benjamin A. Elman, "Sinophiles and Sinophobes in Tokugawa Japan: Politics, Classicism, and Medicine During the Eighteenth Century," *East Asian Science, Technology and Society* 2 (2008), 103–4.

Local Medicine and Local Language

While some doctors and scholars were devising new ways to enable Japanese students to access the learning of the Chinese medical classics, others were seeking to record, analyse and investigate Japan's indigenous traditions of medical knowledge. This undertaking was a much more heterogeneous one than the vernacularization of classical medical knowledge described above, as it involved the assimilation into the written tradition of Japanese medical literature of ideas and techniques drawn from a disparate range of textual and oral sources. These investigations ranged from the recording of oral traditions of simple folk remedies to erudite philological research into historical texts, but they were all rooted in the knowledge and study of the Japanese language and the desire to exploit that knowledge as an extension of and complement to the traditions of *kanbun* medical learning, and reflected the changing ways in which writing in the Japanese lanugage could serve to disseminate medical knowledge or function as an element in the construction of medical authority.

Just as some members of the samurai elite sought to project an image of beneficence towards their governed populations by disseminating classical medical learning in accessible vernacular forms, others sought to achieve the same goal by sponsoring the collection and dissemination of knowledge that was derived from simpler traditions of folk medicine.[37] This appears to have been the motivation for the composition of *Kyūmin myōyaku* 救民妙薬 (*Miraculous Medicines for Relieving the*

[37] Tsukamoto Manabu 塚本学, *Ikiru koto no kinseishi: jinmei kankyō no rekishi kara* 生きることの近世史：人命環境の歴史から (Tokyo: Heibonsha, 2001), 147–9.

People, 1693), a formulary compiled by Hozumi Hoan 穂積甫安 on the orders of the Mito domain lord Tokugawa Mitsukuni 徳川光圀 (1628–1701). This compilation listed around four hundred simple remedies for one hundred and thirty common illnesses, ranging from pestilence and food poisoning to venereal diseases and parasitic worms. Many of these remedies were household cures of a type rarely mentioned in the *kanbun* treatises that were popular among scholarly doctors: a salve for a prolapsed rectum made from the ashes of burnt straw sandals, or a decoction for the treatment of urinary blockages (*rinbyō* 淋病) made from the plastering fibers of an old wall.[38] Surviving manuscript copies of these types of popular medical manuals also provide evidence for the ways that the villagers who copied them sometimes extended their range of therapeutic techniques still further, by transcribing magical incantations for the cure of various minor ailments into the same volumes.[39] Not only in their language but also in the origins of the therapies they listed and in the ways they were received and put to use at the local level, these types of vernacular treatises belonged to a medical culture quite remote from the cosmopolitan traditions of medical treatises written in *kanbun*.

At the other end of the spectrum, a number of scholars during the late eighteenth and early nineteenth centuries came to regard the philological study of early Japanese texts as an important complement to the investigation of

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[38] Hozumi Hoan 穂積甫安, *Kyūmin myōyaku* 救民妙薬 (1693), repr. in *Nihon kyōiku bunko: eisei oyobi yūgi hen* 日本教育文庫・衛生及び遊戯篇 (Tokyo: Dōbunkan, 1911), 75, 78.
[39] Hatakama Kazuhiro 幡鎌一弘, "Shingakusha" 神学者, in *Chishiki to gakumon wo ninau hitobito* 知識と学問をになう人びと, ed. Yokota Fuyuhiko (Tokyo: Yoshikawa Kōbunkan, 2007), 101.

contemporary Japanese language and customs as a strategy to define the authentic forms of national culture.[40] Within the field of medicine, the investigation of popular healing traditions thus became juxtaposed with the philological study of transmitted texts, and with the attempt to discover manuscripts of Japanese medical treatises that were widely believed to have been lost.[41] Although this type of nativist medical scholarship attracted only a small number of medical practitioners, their ideas deserve attention here as an alternative form of scholarly medical erudition based not on *kanbun* learning, but rather on texts written in the Japanese language.

The early nineteenth-century doctor Nasu Tsunenori's discussion of Japanese disease terms provides a particularly intriguing example of the way that philological methods applied to Japanese texts could lead doctors to draw conclusions about the distinctiveness of certain Japanese diseases. Nasu Tsunenori 奈須恒徳 (1774–1841) was the son of a bakufu medical official and studied medicine at the bakufu-sponsored Igakukan 医学館 (Medical Academy) under Taki Motonori 多紀元徳 (1732–1801) and Taki Motoyasu 多紀元簡 (1755–1810).[42] After he left the Igakukan following a dispute with Taki Motoyasu, he devoted much of his energy to the study of Japanese medical history, adapting typical Igakukan methods of

[40] Harry D. Harootunian, *Things Seen and Unseen: Discourse and Ideology in Tokugawa Nativism* (Chicago: University of Chicago Press, 1988); Peter Nosco, *Remembering Paradise: Nativism and Nostalgia in Eighteenth-Century Japan* (Cambridge, Mass.: Council on East Asian Studies, 1990); Susan L. Burns, *Before the Nation: Kokugaku and the Imagining of Community in Early Modern Japan* (Durham, N.C.: Duke University Press, 2003).
[41] Daniel Trambaiolo, "Native and Foreign in Tokugawa Medicine," *The Journal of Japanese Studies* 39.2 (2013), 299–324.
[42] On the biography of Nasu Tsunenori, see Ōtsuka Yasuo 大塚恭男, "Nasu Tsunenori" 奈須恒徳, in *Kinsei kanpō igakusho shūsei* 近世漢方医学書集成, vol. 40 (Tokyo: Meicho shuppan, 1981), 20–26.

philological scholarship and applying them to Japanese texts. During his period at the Igakukan, Tsunenori had already shown an interest in native Japanese disease terms, and had transcribed a list of those in the tenth-century lexicon *Wamyō ruijushō* 和名類聚抄 (*Classified Japanese Names*, c. 934) into his notes on various aspects of Japanese medical history.[43] In his later studies of Japanese texts, Nasu also came across examples of diseases that appeared to be unique to Japan. Regarding a disease referred to in Japanese texts as "summer-moon night chill" (*natsuzuki nebie*), Tsunenori stated simply that "in China, this disease does not exist; this is why there are no medical books that describe the methods for its treatment," but also added a note that "if we insist, then it should be considered equivalent to the Chinese syndrome of 'summer-heat disease acquired while resting.'" Tsunenori offered more detailed thoughts in relation to a second Japanese disease called "wind malady" (*kaze no kokochi*), descriptions of which appeared in old story collections such as the eleventh-century *Eiga Monogatari* 栄華物語 (*A Tale of Flowering Fortunes*). Although "wind" was a commonly cited aetiological factor in Chinese medical texts, Tsunenori insisted that the description of the disease and its treatment in the *Eiga Monogatari* indicated that it represented an indigenous Japanese illness distinct from the familiar Sino-Japanese disease category.[44] Tsunenori provided no explanation for why these illnesses might occur in Japan and not in China, nor did he discuss how they might be identified in practice; instead, he simply recorded them as

[43] Nasu Tsunenori 奈須恒徳, *Hyōhanroku* 豹斑録 (1801), 15a–22a.

[44] Nasu Tsunenori 奈須恒徳, *Honchō idan* 本朝医談 (1822), 24a–25a. On the classical Chinese concept of wind, see Shigehisa Kuriyama, *The Expressiveness of the Body and the Divergence of Greek and Chinese Medicine* (New York: Zone Books, 1999), 233–70.

examples of Japanese illnesses that could not be explained within the frameworks provided by Chinese medical doctrine. His analysis of Japanese texts written in *kana* rather than *kanbun* was central to his attempts to understand the nature of these illnesses, since both were referred to by native Japanese rather than Sino-Japanese terms.

Local language also played a prominent role in the formation of Tokugawa literature on *materia medica* (*honzō* 本草). As Federico Marcon has argued, Tokugawa *honzō* originated as field of study ancillary to medical learning but developed into a broader subject encompassing the classification and naming of species, the description of their characteristics, and methods of harvesting, cultivation and processing.[45] Yet despite this expansion of scope, *honzō* retained important connections with medicine, both because doctors still needed to familiarize themselves with the characteristics of the various products that they used as drugs and because *honzō* scholars adopted a rhetorical strategy of promoting the practical medical benefits of their activities. The belief that the cultivation of natural historical studies would lead to practical medical and economic benefits attracted support for *honzō* scholars from bakufu and domain governments, while the popularity of *honzō* across a wide range of Tokugawa society facilitated the exchange of knowledge among different social groups.

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[45] Marcon, "The Names of Nature," 1–2. See also Maki Fukuoka, *The Premise of Fidelity: Science, Visuality and Representing the Real in Tokugawa Japan* (Stanford: Stanford University Press, 2012), Sugimoto Tsutomu 杉本つとむ, *Nihon honzōgaku no sekai: shizen, iyaku, minzoku goi no tankyū* 日本本草学の世界：自然、医薬、民俗語彙の探究 (Tokyo: Yasaka Shobō, 2011); and the essays in Yamada Keiji 山田慶児, ed., *Higashi Ajia no honzō to hakubutsugaku no sekai* 東アジアの本草と博物学の世界 (Kyoto: Shibunkaku Shuppan, 1995).

Japanese treatises on *honzō* compiled between the late seventeenth and the early nineteenth century absorbed a diverse range of vocabulary from Chinese, Korean, Dutch and Japanese sources. As in many parts of the world, the distinctiveness of local species meant that scholars relied extensively on local knowledge that was independent of cosmopolitan traditions of learning, and orally transmitted knowledge and *kana* writing thus played crucial roles in the formation of this genre of literature.[46] Li Shizhen's *Bencao gangmu* continued to serve Tokugawa doctors as a standard point of reference, but the division between elite texts written in *kanbun* and popular texts written in *kana* was much less pronounced in *honzō* treatises than in other medical genres, and Japanese *honzō* scholars from the early eighteenth century onwards wrote in *kana* not only to make their contents available to a wide audience but also to capture the variety of vocabulary that was needed to describe species that could not be accommodated within the range of existing Chinese terminology.[47]

One particularly important use of *kana* writing in *honzō* literature was for recording regional variations in the terms for different plant and animal species,

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[46] On the significance of local languages in the formation of *materia medica*, see W. F. Vande Walle, "Introduction," in *Dodonaeus in Japan: Translation and the Scientific Mind in the Tokugawa Period*, ed. W.F. Vande Walle and Kazuhiko Kasaya (Leuven: Leuven University Press, 2001), 13–19; Ian Maclean, *Logic, Signs, and Nature in the Renaissance: The Case of Learned Medicine* (Cambridge: Cambridge University Press, 2002), 39–41; Londa L. Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge, Mass.: Harvard University Press, 2004), 194–225; Guy N. A. Attewell, *Refiguring Unani Tibb: Plural Healing in Late Colonial India* (Hyderabad: Orient Longman, 2007), 17–20; Pratik Chakrabarti, *Materials and Medicine: Trade, Conquest and Therapeutics in the Eighteenth Century* (Manchester: Manchester University Press, 2010), 123–127.

[47] Maki Fukuoka, "Between Knowing and Seeing: Shifting Standards of Accuracy and the Concept of *Shashin* in Japan, 1832–1872" (PhD dissertation: University of Chicago, 2006), 30–47; Marcon, "The Names of Nature," 46–62, 131–142.

and Sugimoto Tsutomu has recently drawn attention to the close relationship between *honzō* and the study of regional dialects from the early eighteenth century onwards.[48] Individual scholars often tended to possess geographically uneven knowledge of Japanese regional vocabulary, biased towards the areas in which they had been most active: for example, Kaibara Ekiken recorded a preponderance of terms from Kyushu and western Honshu, while Hiraga Gennai 平賀源内 (1728–1780) recorded large numbers of terms from Edo and from his home province of Sanuki.[49] Yet the progressive accumulation of these studies tended to compensate for their individual biases. When Ono Ranzan 小野蘭山 (1729–1810) completed his monumental *Honzō kōmoku keimō* 本草綱目啓蒙 (*Clarifications on the "Bencao gangmu*," 1803) at the turn of the nineteenth century, he was able to provide lists of the full variety of Japanese dialect names for individual species by drawing both on historical texts and on the findings of the many scholars who had conducted field investigations over the course of the eighteenth century. As Sugimoto has pointed out, eighteenth-century scholars such as Koshigaya Gozan 越谷吾山 (1717–1787) who compiled dictionaries of Japanese dialect words had relied extensively on earlier *honzō* writings, and in some respects Ono Ranzan's treatise surpassed even these dictionaries in its regional and linguistic coverage.[50] The field of *honzō*, with its origins in the investigation and classification of the medical properties of substances,

[48] Sugimoto, *Nihon honzōgaku no sekai*, 347–76.
[49] Sugimoto, *Nihon honzōgaku no sekai*, 46, 373.
[50] Sugimoto, *Nihon honzōgaku no sekai*, 227.

thus gave birth to some of the Tokugawa period's most detailed and extensive surveys of Japanese vernacular language.

The linguistic range of *honzō* was not limited to words of Chinese and Japanese origins alone, since many medically important drugs were imported from countries other than China and a number of Tokugawa *honzō* scholars sought to become familiar with relevant areas of vocabulary in languages such as Korean and Dutch. Korean scholars had begun to record local names for plants and animals in their own treatises of *materia medica* as early as the thirteenth century, at first through the use of *idu* 吏讀 transcriptions using Chinese characters for their phonetic values and later through the use of *hangul*.[51] Eighteenth-century Tokugawa doctors would have encountered Korean drug names written in *hangul* in reprinted Japanese editions of the Korean doctor Hŏ Chun's *Tongŭi pogam* 東醫寶鑑 (*Precious Mirror of Eastern Medicine*, 1613), although few of them were able to read the Korean script; even before this treatise became widely available in Japan, *honzō* scholars such as Hitomi Hitsudai and Kaibara Ekiken had taken care to record their knowledge of Korean names for various plant and animal species.[52] Later in the eighteenth century, *honzō* scholars paid increasing attention to the European terms for species and substances, including not only those that were imported to Japan by Dutch merchants, but also those that were recorded in the European treatises whose contents were painstakingly translated into Japanese by early pioneers of Dutch

[51] Soyoung Suh, "Herbs of Our Own Kingdom: Layers of the 'Local' in the Materia Medica of Early Chosŏn Korea," *Asian Medicine: Tradition and Modernity* 4 (2008), 395–422.
[52] Sugimoto, *Nihon honzōgaku no sekai*, 47–50.

language studies.[53] The field of *honzō* thus came to incorporate Korean and Dutch vocabulary alongside the predominant vocabularies drawn from Chinese and Japanese and to lay foundations for the new phase in the history of Japanese medical language represented by the beginning of *rangaku* in the second half of the eighteenth century.

When Japanese doctors from the late eighteenth century onwards began to translate medical treatises from Dutch, the choice between *kanbun* and *kana* writing carried different implications from those it had possessed for earlier Japanese doctors working within the East Asian medical tradition. Although eighteenth and nineteenth-century *rangaku* doctors were familiar with Chinese medical concepts, they no longer assumed that the foundations of medical learning were to be found in Chinese texts, and were thus partly liberated from the need to demonstrate facility with *kanbun* in order to prove their competence as learned doctors.

Sugita Genpaku and Maeno Ryōtaku set a significant precedent through their use of *kanbun* in the first major Japanese translation of a European anatomical treatise, *Kaitai shinsho* 解体新書 (1774), and *rangaku* scholars made extensive use of existing and newly created Sino-Japanese compounds as the basis of their technical vocabulary for translating the technical terms of European medicine.[54] Some later

[53] On the beginnings of *honzō* studies of European *materia medica* treatises, see Kazuhiko Kasaya, "The Tokugawa Bakufu's Policies for the National Production of Medicines and Dodonaeus' *Cruijdeboeck*," in *Dodonaeus in Japan: Translation and the Scientific Mind in the Tokugawa Period*, ed. W.F. Vande Walle and Kazuhiko Kasaya (Leuven: Leuven University Press, 2001), 167–184.

[54] On the use of Sino-Japanese neologisms for translating the technical vocabulary of European medical texts, see Mieko Macé, "Le chinois classique comme moyen d'acces à la

rangaku scholars continued to express hopes that rendering Dutch medical treatises into *kanbun* would allow the benefits of their translation activities to reach beyond Japan, but there is little evidence to suggest that these *rangaku* translations ever achieved the transnational reception that their authors desired.[55] *Kanbun* gradually declined in importance as a language for *rangaku* translations, both because the use of *kana* writing styles made these translations accessible to a wider potential audience of Japanese readers and because the use of *kana* enabled the more convenient incorporation of vocabulary of non-Chinese origin. However, this does not mean that earlier patterns of linguistic usage ceased to be relevant for the broader field of medicine as a whole, for as we shall see in the following chapters, *kanbun* writings on medicine continued to form a vital part of medical knowledge until the end of the Tokugawa period.

Conclusion

In a recent article on languages of technical discourse in South Asia, Sheldon Pollock has drawn a contrast between the rise of vernacular languages in South Asian literary culture and the continuing dominance of Sanskrit as a language of "systematic discourse" on technical subjects, suggesting that the universalist aspirations of "scientific" writing generally tend to favour the adoption of cosmopolitan rather than vernacular languages and that the cultural nationalization

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modernité: Le reception des concepts médicaux dans le Japon des XVIIIe et XIXe siècles," *Daruma* 4 (1998), 79–103.

[55] Ōtsuki Gentaku 大槻玄沢, *Ran'yaku teikō* 蘭訳梯航 (1816), repr. in *Kyōrin sōsho* 杏林叢書, vol. 1, ed. Fujikawa Yū (Tokyo: Tohōdō Shoten, 1922), 251.

of scientific language in early modern Europe thus appears to have been little more than a "curious experiment" now coming to an end with the growing global dominance of English.[56] Yet the analysis of Tokugawa medical language presented in this chapter suggests that the development of local and and cosmopolitan forms of technical discourse should be regarded as complementary processes rather than as competing alternatives. Tokugawa medical writings in *kanbun* tended to aim at a more universal level of discourse than those written in *kana*, but the social significance of medical learning resided not so much in the articulation of universal discourse for its own sake as in the way that these discourses related to interactions between doctors and patients, in which spoken language and vernacular texts played important mediating roles.[57]

The multiplicity of forms in Tokugawa medical writing can be seen to have developed in response to tensions between the competing goals of transmitting medical learning to wider groups of readers, incorporating new forms of knowledge into the medical literature, and maintaining the vitality of the *kanbun* medical tradition. In the next chapter, we will see how the efforts of the Ancient Formulas doctors of the mid-eighteenth century to reconstruct an idealized version of the medicine of Chinese antiquity reflected their attempt to resolve these tensions in the

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[56] Sheldon Pollock, "The Languages of Science in Early Modern India," in *Forms of Knowledge in Early Modern Asia: Explorations in the Intellectual History of India and Tibet, 1500–1800*, ed. Sheldon Pollock (Durham, North Carolina: Duke University Press, 2011), 38.

[57] For pertinent observations on the gap between the classical language of medical literature and the vernacular of the clinical encounter, see Barbara Duden, *The Woman Beneath the Skin: A Doctor's Patients in Eighteenth-Century Germany*, trans. Thomas Dunlap (Cambridge, Mass.: Harvard University Press, 1987), 63–64.

relationship between the written forms of medical knowledge and the ways medicine was practiced in society.

Chapter 2

Ancient Texts and New Medical Ideas

Historians have often described the Ancient Formulas doctors' turn towards empiricism as an important stage in the development of modern medicine in Japan, but have seldom remarked on the paradoxical fact that this seemingly modern empiricism was combined with a veneration for ideas and practices derived from ancient Chinese texts.[1] The Ancient Formulas doctors' practice of textual philology has traditionally been seen as merely incidental to their innovative medical ideas, and it is only more recently that historians such as Yamada Keiji, Machi Senjurō, Tateno Masami, and Terasawa Katsutoshi have highlighted the need to pay attention to these philological activities in order to distinguish clearly between the Ancient Formulas doctors' original motivations, methods and aims and their

[1] Kure Shūzō 呉秀三, "Yoshimasu Tōdō sensei" 吉益東洞先生, in *Tōdō zenshū* 東洞全集, ed. Kure Shūzō 呉秀三 and Fujikawa Yū 富士川游 (Tokyo: Tohōdō Shoten, 1918), 5; Fujikawa Yū 富士川游, *Nihon igakushi* 日本医学史 (Tokyo: Nisshin Shoin, 1941), 296–9, 342–66, 429–33; Masayoshi Sugimoto and David L. Swain, *Science and Culture in Traditional Japan* (Cambridge, Mass: The MIT Press, 1978), 280–284; Kosoto Hiroshi 小曽戸洋, *Kanpō no rekishi: Chūgoku, Nihon no dentō igaku* 漢方の歴史：中国、日本の伝統医学 (Tokyo: Taishūkan Shoten, 1999), 153–8; Aoki Toshiyuki 青木歳幸, *Edo jidai no igaku: meiitachi no 300 nen* 江戸時代の医学：名医たちの三〇〇年 (Tokyo: Yoshikawa Kōbunkan, 2012), 69–93.

eventual historical impact.[2] The work of these historians has offered substantial insights into the ideas and practices of the most important figures in eighteenth-century Ancient Formulas medicine, collectively suggesting the need for new syntheses to clarify the similarities and differences among the Ancient Formulas doctors and the overall coherence of Ancient Formulas medicine as a historical phenomenon.

This chapter shows how Yamawaki Tōyō and Yoshimasu Tōdō, two of the most prominent Ancient Formulas doctors of the middle decades of the eighteenth century, sought to develop a new style of social identity for elite medical practitioners that was closely linked to a new style of medical epistemology. The ideas and practices of these two doctors can be regarded as a discrete stage in the development of Ancient Formulas medicine, characterized by efforts to integrate the practical medical concerns of earlier Ancient Formulas doctors with social and epistemic concerns derived from the writings of the Confucian scholar Ogyū Sorai

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[2] Yamada Keiji 山田慶児, "Igaku ni oite kogaku wa nan de atta ka: Yamawaki Tōyō no kaibōgaku to shokugyō oyobi gakumon to shite no i no jiritsu" 医学において古学はなんであったか：山脇東洋の解剖学と職業および学問としての医の自立, in *Rekishi no naka no yamai to igaku* 歴史の中の病と医学, ed. Yamada Keiji 山田慶児 and Kuriyama Shigehisa 栗山茂久 (Kyoto: Shibunkaku Shuppan, 1997), 457–87; Machi Senjurō 町泉寿郎, "Kagawa Shūan no 'ju-i ippon' no ju ni tsuite: *Daigakusō* wo chūshin to shite" 香川修庵の「儒医一本」の儒について：『大学叢』を中心として, *Nihon ishigaku zasshi* 44.1 (1998), 49–72; Machi Senjurō 町泉寿郎, "Yamawaki Tōyō to Sorai gakuha: *Waitai miyao fang* honkoku wo megutte" 山脇東洋と徂徠学派：『外台秘要方』翻刻をめぐって, *Nihon Chūgokugaku kaihō* 50 (1998), 233–47; Tateno Masami 館野正美, *Yoshimasu Tōdō "Kosho igen" no kenkyū: sono shoshi to igaku shisō* 吉益東洞『古書医言』の研究：その書誌と医学思想 (Tokyo: Kyūko Shoin, 2004); Yamada Keiji 山田慶児, "Hankagaku to shite no kohōha igaku" 反科学としての古方派医学, *Shisō* 985.5 (2006), 26–65; Terasawa Katsutoshi 寺澤捷年, *Yoshimasu Tōdō no kenkyū: Nihon kanpō sōzō no shisō* 吉益東洞の研究：日本漢方創造の思想 (Tokyo: Iwanami Shoten, 2012).

荻生徂徠 (1666–1728). The outcome of these doctors' efforts was a new way of thinking about medical knowledge that valued explicit arguments and concrete evidence over intuitive reasoning from abstract principles, thereby laying an important foundation for the later intellectual development of Tokugawa medicine.

Yamawaki Tōyō 山脇東洋 (1705–1762) was born in Kyoto, the son of Shimizu Ryūan 清水立安, a doctor originally from Tanba.[3] While his father was studying with the senior Kyoto physician Yamawaki Harunaga 山脇玄修 (1654–1727), Harunaga noticed Tōyō's youthful talent and adopted him as his heir. The Yamawaki lineage traced its heritage of medical learning back to Manase Dōsan 曲直瀬道三 (1507–1594), the most influential of the Japanese doctors who had adopted and promoted the style of scholarly medicine developed in China during the Ming that would be disparaged by the Ancient Formulas doctors as the medicine of the "Later Age" (*gosei* 後世).[4] However, Tōyō soon began to take an interest in Ancient Formulas (*kohō* 古方), studying for a short period with the

[3] On the biography of Yamawaki Tōyō, see Ōtsuka Yasuo 大塚恭男, "Yamawaki Tōyō" 山脇東洋, in *Kinsei kanpō igakusho shūsei* 近世漢方医学書集成, vol. 13 (Tokyo: Meicho Shuppan, 1979), 18–34; Okamoto Takashi 岡本喬, *Kaibō kotohajime: Yamawaki Tōyō no hito to shisō* 解剖事始め：山脇東洋の人と思想 (Tokyo: Dōseisha, 1988).

[4] On the history of this style of medicine in Japan, see Yakazu Dōmei 矢数道明, *Kinsei kanpō igakushi: Manase Dōsan to sono gakutō* 近世漢方医学史：曲直瀬道三とその学統 (Tokyo: Meicho Shuppan, 1982); Kosoto, *Kanpō no rekishi*, 130–44; Aoki, *Edo jidai no igaku*, 5–19. Historians often refer to this style of medicine as "Li-Zhu" 李朱 medicine, based on the substantial influence of the writings of Li Gao 李杲 (1180–1251) and Zhu Zhenheng 朱震亨 (1281–1358) over the way this style of medicine was practiced in Japan. However, Tokugawa doctors were much more eclectic than this term implies, selecting and rejecting ideas and therapies not only from Li Gao and Zhu Zhenheng but from a wide range of Chinese sources.

Ancient Formulas doctor Gotō Konzan 後藤艮山 (1659–1733) after Yamawaki Harunaga's death in 1727. Beginning when he was around forty years old, Tōyō also began to study Sorai's writings, making contact with a number of Sorai's followers and becoming increasingly enthusiastic about the possibility of applying Sorai's style of philological scholarship to his understanding of medicine. His first notable public success was his 1746 edition of Wang Tao's *Waitai miyao fang* 外台秘要方, a Tang therapeutic treatise whose text he collated with the aid of a rare Song edition in the collection of the bakufu; he was so proud of this work that he sought to have a copy sent to China as evidence of Japanese achievements in the field of scholarly medical learning.[5]

Tōyō is today best remembered for his *Zōshi* 蔵志 (*Record of the Organs*, 1759), an illustrated anatomical treatise that challenged orthodox ideas about the structure of the human body on the basis of Tōyō's direct observations of an executed criminal's corpse. Because Tōyō's anatomical investigations were one of the sources of inspiration for the later inquiries into European medical and anatomical knowledge by Sugita Genpaku 杉田玄白 (1733–1817) and other scholars of *rangaku*, they have often been regarded as a paradigmatic example of the spirit of empirical investigation in Ancient Formulas medicine. However, we shall see below that Tōyō's philological studies of early Chinese texts also played a crucial role in in motivating his anatomical inquiries and in shaping his impressions of what he saw,

[5] Yamawaki Tōyō, *Yōjuin isoku* 養寿院医則 (1751), 23a. For discussion, see Machi, "Yamawaki Tōyō to Sorai gakuha," 238–9.

and a more nuanced account of the epistemic basis of Tōyō's *Zōshi* is therefore necessary.

Yoshimasu Tōdō was born into a samurai lineage that had enjoyed considerable prominence during the fifteenth and early sixteenth centuries but whose fortunes had declined precipitously by 1590, when Hideyoshi's troops inflicted a decisive defeat on Tōdō's great-grandfather Hatakeyama Masayoshi 畠山政慶. Masayoshi took refuge with the surgical and obstetric practitioner Yoshimasu Hanshōsai 吉益半笑斎, adopting his surname and studying his medical techniques. Tōdō himself learned these techniques from a disciple of his grandfather.[6] Although Tōdō's own writings on medicine did not include extensive discussions of surgery or obstetrics, Terasawa Katsutoshi has plausibly suggested that this early knowledge of forms of treatment that had traditionally been marginal to the elite Chinese medical tradition may have encouraged Tōdō to think about therapy in unconventional ways.[7] In 1738, Tōdō moved to Kyoto, but he was initially unsuccessful in his attempts to attract patients in the imperial capital and was forced to earn a living by making and selling dolls. His fortunes began to improve only several years after his arrival, when a chance meeting with Yamawaki Tōyō introduced him to a network of prominent Confucian scholars who helped him develop a deeper understanding of a wide range of early Chinese texts.[8]

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[6] Yoshimasu Tōdō 吉益東洞, *Tōdō sensei ikō* 東洞先生遺稿 (1800), repr. in *Tōdō zenshū* 東洞全集, ed. Kure Shūzō 呉秀三 and Fujikawa Yū 富士川游 (Tokyo: Tohōdō Shoten, 1918), 551–2.
[7] Terasawa, *Yoshimasu Tōdō no kenkyū*, 22.
[8] Terasawa, *Yoshimasu Tōdō no kenkyū*, 42.

Textual philology offered one of the most sophisticated models of evidential reasoning available in mid-eighteenth century Japan, and it is thus hardly surprising that Japanese doctors sought to adapt its methods for use in their own field. Following an intellectual path similar to that of Chinese advocates of evidential investigations (*kaozheng* 考証), the Japanese Confucian scholars Itō Jinsai 伊藤仁斎 (1627–1705) in his studies of "ancient meanings" (*kogi* 古義) and Ogyū Sorai in his studies of "ancient phraseology" (*kobunji* 古文辞) had sought to recover the original meanings of the classics by rejecting the traditions of philosophical interpretation that had shaped readings of these works since the Song dynasty.[9] These philological studies of Jinsai and Sorai were not an isolated phenomenon, but rather were part of a broad transformation of the character of knowledge during the early eighteenth century that was beginning to reshape fields of learning as diverse as classical scholarship, astronomy, medicine, and natural history and to give rise to new ways of thinking about fundamental epistemic categories such as evidence, conclusions, and interpretation.[10] Although Tōdō and Tōyō came from very different backgrounds and experienced very different career trajectories, their efforts to come to terms with these new styles of reasoning, and especially with the ideas of Ogyū Sorai, led them to develop similar approaches to understanding the nature of medical knowledge.

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[9] Yoshikawa Kōjirō, *Jinsai, Sorai, Norinaga: Three Classical Philologists of Mid-Tokugawa Japan*, trans. Kikuchi Yūji (Tokyo: Tōhō Gakkai, 1983).

[10] Kasaya Kazuhiko 笠谷和比古, "Joron: Jūhasseiki Nihon no 'chi'-teki kakumei" 序論：十八世紀日本の「知」的革命, in *Jūhasseiki Nihon no bunka jōkyō to kokusai kankyō* 一八世紀日本の文化状況と国際環境, ed. Kasaya Kazuhiko (Kyoto: Shibunkaku Shuppan, 2011), 3–29.

Tōdō and Tōyō adapted many of their ideas about the nature of evidence from Sorai's style of textual philology and made textual studies an integral part of their efforts to establish new foundations for medicine. After they became acquainted, for a brief period they met to study the *Shanghanlun* together with a third Kyoto doctor, Matsubara Ikkansai 松原一閑斎 (1689–1765).[11] However, this group soon broke up due to conflicts between Tōdō and Ikkansai. When Tōyō proposed to Tōdō that they continue their studies, Tōdō suggested instead that it might be preferable to gather with Confucian scholars to study the *Zuozhuan* 左傳.[12] Although we know little about the scholars who joined Tōdō and Tōyō or the content of their discussions, it is clear that their growing familiarity with new styles of Confucian scholarship and their participation in patterns of collective textual study that had been advocated by Jinsai and Sorai exerted lasting effects on the development of their medical ideas.[13] Tōdō and Tōyō searched widely in the corpus of surviving ancient Chinese literature for passages that could lend insights into the medicine of antiquity, believing that the study of "ancient words" (*kogen* 古言) could supplement the study of "ancient techniques" (*kojutsu* 古術), since "by the words one knows the age, and by the techniques one knows the people" (以言知世,

[11] Matsuoka Takanori 松岡尚則 et al., "Yoshimasu Tōdō to Matsubara Ikkansai no ijutsu, iron ni tsuite" 吉益東洞と松原一閑斎の医術、医論について, *Kanpō no rinshō* 58.12 (2011), 2387–2404.
[12] Yoshimasu Tōdō, *Tōdō sensei ikō*, 554.
[13] On Jinsai and Sorai's promotion of collective study of the classics, see Maeda Tsutomu 前田勉, *Edo no dokushokai* 江戸の読書会 (Tokyo: Heibonsha, 2012), 68–106.

以術知人).[14] Far from seeking to displace the authority of texts through observation and experience, Tōdō and Tōyō undertook their empirical investigations because they believed practical trials and observations would support the conclusions of their philological scholarship.

In this chapter, I first examine how this peculiar epistemological stance arose in part through these doctors' attempts to establish themselves in a proper relationship to the society in which they lived, and in part through their efforts to translate Sorai's philological and philosophical methods into a basis for medical knowledge; I then show how this epistemological stance helped motivate and shape these doctors' most distinctive contributions to the development of Tokugawa medicine, Yamawaki Tōyō's investigations into human anatomy and Yoshimasu Tōdō's ideas about the nature of therapy.

Textual Scholarship and Medical Knowledge in Tokugawa Society

By the beginning of the eighteenth century, the spread of literacy, the growth of the publishing industry, and the proliferation of schools and academies had helped transform the ability to understand classical Chinese texts from a rare skill possessed by a few specialists to an educational foundation desirable for a wide range of social groups. At the same time, these changes helped a growing number of individuals to gain access to medical learning through the medium of written texts, and the social characteristics of classical scholarship and medical learning thus

[14] Yamawaki Tōyō, *Yōjuin isoku*, 9a. See also *Yōjuin isoku*, 7a; *Zōshi*, 1:26b–27a, 2:17b–18a.

evolved in parallel.[15] Classical scholarship and medicine were also closely connected at an intellectual level. Prominent seventeenth-century scholarly doctors such as Hori Kyōan 堀杏庵 (1585–1642), Emura Sensai 江村専斎 (1565–1664) and Mori Unchiku 森雲竹 (1631–1712) established a pattern of combining the practice of medicine with the study of the Confucian classics. Ujita Un'an 宇治田雲庵 (1618–1686), a doctor in the service of Wakayama domain, argued that medical cultivation of the body and Confucian cultivation of the self were complementary aspects of the same Way.[16] Broad study of the Chinese classics offered a path to better understanding of the ancient texts from which medical learning derived, while the practice of medicine represented a way for aspiring scholars to earn a living while they pursued financially unprofitable studies of Chinese texts. For many doctors who considered themselves members of the medical elite, medical and scholarly activities thus came to form a single continuous field of cultural practice.[17]

Reacting against the increasingly widespread combination of medicine and Confucian scholarship, Itō Jinsai criticized the very concept of "Confucian doctors"

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[15] Rai Kiichi 頼祺一, "Kinseijin ni totte no gakumon to jissen" 近世人によっての学問と実践, in *Nihon no kinsei: Jugaku, kokugaku, yōgaku* 日本の近世：儒学，国学，洋学, ed. Rai Kiichi (Tokyo: Chūō Kōronsha, 1993), 7–34; Yokota Fuyuhiko, "Kinsei sonraku shakai ni okeru 'chi' no mondai" 近世村落社会における＜知＞の問題, *Hisutoria* 159 (1998), 1–28; Peter Kornicki, *The Book in Japan: A Cultural History from the Beginnings to the Nineteenth Century* (Leiden: Brill, 1998), 258–76; Richard Rubinger, *Popular Literacy in Early Modern Japan* (Honolulu: University of Hawai'i Press, 2007), 9–43.

[16] Ujita Un'an 宇治田雲南, *Igaku bengai* 医学辨害 (1681), quoted in Lan Hongyue 藍弘岳, "Ogyū Sorai no shisō keisei ni okeru igaku to heigaku: *Sorai sensei igen* to *Sonshi kokujikai* wo chūshin ni" 荻生徂徠の思想形成における医学と兵学：『徂徠先生医言』と『孫子国字解』を中心に, *Nihon shisōshigaku* 39 (2007), 78.

[17] For a biographical and intellectual survey of scholar-doctors who combined Confucian learning and medicine during the Tokugawa period, see Anzai Yasuchika 安西安周, *Nihon jui kenkyū* 日本儒医研究 (Tokyo: Ryūginsha, 1943).

(*jui* 儒医), declaring that medicine was an affair for "petty people" (*shōjin* 小人) and that so-called "Confucian doctors" were merely doctors who sought to attract patients and profits through false claims of erudition. Early eighteenth-century scholars such as Ogyū Sorai and Dazai Shundai 太宰春台 (1680–1747) and doctors such as Naitō Kitetsu 内藤希哲 (1701–1735) adopted views similar to those of Jinsai concerning the fundamentally distinct characteristics of medicine and Confucian learning.[18]

Nevertheless, polemics against "Confucian doctors" were fully compatible with the assumption that doctors needed to cultivate many of the same linguistic and philological skills as Confucian scholars. Dazai Shundai lamented the fact that because the most philologically gifted students tended to become Confucian scholars rather than doctors, many of those who did become doctors never mastered the study of ancient phraseology (*kobunji* 古文辞) to the extent necessary for serious study of the medical classics.[19] Even some of Jinsai's own disciples insisted on the desirability of combining Confucian study and medical practice: Namikawa Tenmin 並河天民 (1679–1718), for example, actively encouraged

[18] Hattori Toshirō 服部敏郎, *Edo jidai igakushi no kenkyū* 江戸時代医学史の研究 (Tokyo: Yoshikawa Kōbunkan, 1978), 28–9. For a survey of Jinsai's relationships with doctors, see ibid., 44–54. Yoshikawa Kōjirō suggested that Jinsai's views on this issue may have had their basis in his biography, since Jinsai had refused to follow his relatives' advice to take up the practice of medicine as his own occupation (Yoshikawa, *Jinsai, Sorai, Norinaga*, 73). Jinsai's warnings that Confucian scholars should not become involved in medicine continued to be taken seriously as late as the mid-nineteenth century: for an example, see Mieko Macé, "La Médecine de Hoashi Banri (1778–1852): Recherche d'une médecine universelle par un naturaliste encyclopédiste de la première moitié du XIXe siècle," in *La vase de Béryl: Études sur le Japon et la Chine en hommage à Bernard Frank*, ed. J. Pigeot and Hartmut O. Rotermund (Arles: Éditions Philippe Picquier, 1997), 408.

[19] Hattori, *Edo jidai igakushi no kenkyū*, 63.

Japanese Confucian scholars to practice medicine in order to have means of financial support.[20] Whether for intellectual or for purely pragmatic reasons, many individuals chose to cultivate simultaneous double identities as doctors and Confucian scholars.

From the early eighteenth century onwards, advocates of Ancient Formulas took an active interest in these debates concerning the social status of medical learning and medical practitioners. Gotō Konzan noted that Zhang Zhongjing himself had been a government official in the service of the Han dynasty and thus was not a "doctor" in the sense of having had medicine as his occupation. Konzan suggested that medicine should not be thought of as an occupation (*gyō* 業) but simply as the art of treating the sick, arguing that doctors who thought of medicine as an occupation tended to become excessively focused on cultivating fame and profit.[21] Yamawaki Tōyō wrote that both in China and in Japan, medicine had been pursued as an easy path to profit by people lacking in literary or military talent and with insufficient land or money to make a living through farming or trading, and both he and Yoshimasu Tōdō consistently referred to medicine as a "humble occupation" (*sengyō* 賤業, *senshoku* 賤職).[22] Tōyō's disciple Nagatomi Dokushōan 永富独嘯庵 (1732–1766) was best known as a doctor, but his nephew took pains to

[20] Hattori, *Edo jidai igakushi no kenkyū*, 27–34.
[21] Gotō Konzan 後藤艮山, *Shisetsu hikki* 師説筆記, repr. in *Nihon shisō taikei* 日本思想大系, vol. 63, ed. Ōtsuka Keisetsu 大塚敬節 (Tokyo: Iwanami Shoten, 1971), 390–2.
[22] Yamawaki Tōyō, *Yōjuin isoku*, 24b. Cf. *Yōjuin isoku*, 5a–b, 18a, 32a, 33b; *Zōshi*, 1:23b; Yamawaki Tōyō, *Tōyō rakugo* 東洋洛語, repr. in *Kinsei kanpō igakusho shūsei* 近世漢方医学書集成, vol. 13 (Tokyo: Meicho Shuppan, 1979), 409; Yoshimasu Tōdō, *Tōdō sensei ikō*, 503, 509. For discussion, see Yamada Keiji, "Igaku ni oite kogaku ha nan de atta ka," 479–82.

point out that the practice of medicine did not constitute his "essential character" (*honshoku* 本色), and when Dokushōan's disciple Kamei Nanmei 亀井南冥 (1743–1814) met with representatives of a visiting Korean embassy he was at least as eager to praise his teacher's scholarly and literary writings as his medical ideas.[23] Kagawa Shūan, a disciple of Itō Jinsai, disregarded Jinsai's criticisms of Confucian doctors and declared that "Confucianism and medicine have a single root" (*ju i ippon* 儒医一本); later advocates of Ancient Formulas pointed out that this idea could provide valuable moral support to sons of hereditary medical families, who often felt ashamed to engage in an occupation whose practitioners were notorious for their lack of scholarship, but who did not wish to abandon their families' traditions.[24] These remarks suggest that many advocates of Ancient Formulas felt embarrassed about the low prestige of their profession; their efforts to develop new styles of medical scholarship modelled on contemporary currents of Confucian learning may have been prompted by a desire to compensate for this sense of inferiority.

Yoshimasu Tōdō's ambivalent statements about his own status as a doctor offer particularly revealing glimpses into the nature of the social, cultural and psychological tensions surrounding the status of medical practitioners. According to the biography of Tōdō written by his son Yoshimasu Nangai 吉益南涯 (1750–1813), Tōdō's decision to be known by the name "Yoshimasu" was prompted by his

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[23] Nagatomi Dokushōan 永富独嘯庵, *Man'yū zakki* 漫遊雑記 (1764, repr. 1807), Preface by Fuji Takaaki 藤隆昌 (1807), 1a; Kamei Nanmei 亀井南冥, 泱泱余響 (1764).

[24] Kagawa Shūan 香川修庵, *Iji setsuyaku* 医事説約 (1744), Preface by Suga Akira 菅斐, 1a. On Kagawa's idea that Confucianism and Medicine had a single root, see also Machi, "Kagawa Shūan no 'ju-i ippon' no ju ni tsuite."

feeling that the practice of medicine was unworthy of the name of his ancestral Hatakeyama lineage.[25] Tōdō admitted to one correspondent that he thought of medicine as no more than "a technical skill and a humble profession," and wrote that "even the name 'doctor' is shameful."[26]

Nevertheless, Tōdō also took pride in his occupation, believing that medicine should be practiced as a primary duty (*honshoku* 本職) rather than regarded as a field of learning that scholars could acquire and practice casually.[27] Tōdō's sense of pride in his occupation can also be seen in his description of a dream experienced during the period soon after his arrival in Kyoto, while he was still making and selling dolls for a living. Tōdō dreamed of an argument between a clay doll and a wooden doll in which each doll proclaimed its own superiority on the basis of the material from which it was made. The two dolls continued to argue inconclusively until they were interrupted by a paper doll, who pointed out that both sides of the debate were founded on a mistaken assumption about the relationship between innate nature and social function:

> The uprightness of wood and the simple honesty of earth are their heaven-bestowed natures (*tensei* 天性). Clay is clay and wood is wood, and they cannot be substituted for one another. It is the same with people. Human nature (*jinsei* 人性) is many-sided, and each person possesses some merits while lacking others. Since this is the case, people

[25] Yoshimasu Tōdō, *Tōdō sensei ikō*, 553.
[26] Yoshimasu Tōdō, *Tōdō sensei ikō*, 503; Yoshimasu Tōdō, *Tōdō ō isō* 東洞翁遺草, repr. in *Tōdō zenshū*, 575.
[27] Yoshimasu Tōdō, *Kosho igen* 古書医言, repr. in *Tōdō zenshū*, 55.

should satisfy their heaven-bestowed natures and fulfill their heaven-bestowed duty (*tenshoku* 天職). […] We are born through the command of heaven (*tenmei* 天命), and we should strive to make use of what we have received from heaven; to strive without ceasing is to accept our heaven-bestowed duty.[28]

In creating new styles of scholarly medical identity, the Ancient Formulas doctors adopted a range of behaviours that set them apart from their predecessors. The most visible of these behaviours was Gotō Konzan's break with the tradition of taking the tonsure as an outward marker of medical status.[29] Yamawaki Tōyō thought it was unhelpful for practitioners of technical arts to regard themselves as "Confucians"; nevertheless, when he completed his newly collated edition of *Waitai miyao fang* in 1746 and his own treatise *Yōjuin isoku* 養寿院医則 in 1751, he presented each of these books at the shrine of Sugawara no Michizane 菅原道真 (845–903), the Heian courtier posthumously enshrined as patron deity of scholarly

[28] Yoshimasu Tōdō, *Tōdō sensei ikō*, 513. Tōdō's description of this dream is found in a letter he wrote to the Confucian scholar Udono Shinei 鵜殿士寧 (1710–1774), a disciple of Hattori Nankaku whom Tōdō admired as an authority on statecraft (*keizai* 経済); although the letter is not dated, the implicit message that Tōdō's difficulties were well behind him at the time of writing suggests that it was written no earlier than c.1750, and perhaps much later.

[29] Hattori, *Edo jidai igakushi no kenkyū*, 26. Konzan's rejection of the tonsure as a marker of medical status had been anticipated by Mukai Genshō 向井元升 (1609–1677), but this had attracted little attention at the time, and later doctors who did not take the tonsure were following Konzan's example: for discussion of this point, see Ōtsuka Yasuo 大塚恭男, "Gotō Konzan" 後藤艮山, in *Kinsei kanpō igakusho shūsei* 近世漢方医学書集成, vol. 13, ed. Ōtsuka Keisetsu 大塚敬節 (Tokyo: Meicho Shuppan, 1979), 5–17.

learning.[30] By choosing to dedicate these texts to a deity associated with scholarship, Tōyō was indicating his aspiration to be taken seriously not only as a doctor but also as a scholar. Likewise, Yoshimasu Tōdō devoted extensive efforts to compiling an anthology of passages on medical topics excerpted from a broad range of early Chinese literature.[31] Tōdō and Tōyō saw their pursuit of scholarly learning as an integral aspect of their social function as medical practitioners, and they therefore sought to familiarize themselves with the ideas and methods of contemporary scholars of Chinese learning and to develop analogous ideas and methods in their own field.

Ogyū Sorai and Ancient Formulas Medicine

Ogyū Sorai was one of the most influential intellectual figures of eighteenth-century Japan, renowned for his literary, philological and philosophical writings.[32]

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[30] Yamawaki Tōyō, *Yōjuin isoku* 養寿院医則 (1751), 37a; *Zōshi*, 2:6a–8b, 9a–10b. Tōyō's objection to doctors calling themselves Confucians may have been provoked by a sense of rivalry with Kagawa Shūan, a more senior disciple of Gotō Konzan. For Tōyō's criticisms of Shūan, see also Yamawaki Tōyō, *Tōyō rakugo*, 418–20.

[31] Yoshimasu Tōdō, *Kosho igen*; Tateno, *Yoshimasu Tōdō "Kosho igen" no kenkyū*. Cf. Yamawaki Tōyō's argument that although surviving versions of Zhang Zhongjing's treatise gave an incomplete picture of the medicine of antiquity, other genres of early Chinese literature could also provide valuable evidence: Yamawaki Tōyō, *Yōjuin isoku*, 7a.

[32] The literature on Ogyū Sorai is too extensive to summarize here; my account here draws on Maruyama Masao, *Studies in the Intellectual History of Tokugawa Japan*, trans. Mikiso Hane (Tokyo: University of Tokyo Press and Princeton University Press, 1974); Yoshikawa, *Jinsai, Sorai, Norinaga*; Tetsuo Najita, *Tokugawa Political Writings* (Cambridge: Cambridge University Press, 1998); John A. Tucker, *Ogyū Sorai's Philosophical Masterworks: The Bendō and Benmei* (Honolulu: University of Hawai'i Press, 2006); Peter Flueckiger, *Imagining Harmony: Poetry, Empathy, and Community in Mid-Tokugawa Confucianism and Nativism* (Stanford: Stanford University Press, 2011); Bitō Masahide 尾藤正英, *Ogyū Sorai* Seidan 荻生徂徠「政談」(Tokyo: Kōdansha, 2013).
For discussion of Sorai's writings on medicine, see Hattori, *Edo jidai igakushi no kenkyū*, 54–62; Lan, "Ogyū Sorai no shisō keisei ni okeru igaku to heigaku."

Sorai approved of Itō Jinsai's earlier critique of the hermeneutic traditions that had dominated interpretation of the Confucian classics since the Song dynasty, but he also believed that it was necessary to go beyond Jinsai's arguments, insisting that the meanings of early Chinese texts should be discerned through the evidential study of ancient language and phraseology rather than by reference to intuitively comprehended moral principles, proposing that the Way of the Ancient Kings (*sennō no michi* 先王之道) had been about "things" (*mono/butsu* 物) rather than Principle (*ri* 理), and arguing that the Ancient Kings' achievements derived not from their superior moral natures but from the practical "techniques" (*waza/jutsu* 術) that they had employed and bequeathed to later generations.[33] His moral and political philosophy emphasized the importance of concrete forms of social organization, insisting that it was a mistake to think of the Way as having any existence independent of its embodiment in rites, music, punishments and governance.[34]

Sorai was the son of a physician and was thus familiar with medical learning, but his writings on medical topics were not published until several decades after his death. These writings thus exercised little influence over the development of Ancient Formulas medicine. Nevertheless, they are worth considering here in order to clarify the contrast between how Sorai himself thought about medicine and how Tōdō and Tōyō later appropriated Sorai's methods and ideas for their own

[33] Ogyū Sorai 荻生徂徠, *Bendō* 弁道 (1717), repr. in *Nihon shisō taikei* 日本思想大系, vol. 36, ed. Yoshikawa Kōjirō 吉川幸次郎 (Tokyo: Iwanami Shoten, 1973), 26, 28–30, 205, 206.

[34] Ogyū Sorai, *Bendō*, 13, 201; *Seidan* 政談 (1727), repr. in *Nihon shisō taikei*, vol. 36, 304–6.

purposes. Sorai's most substantial statements on medical doctrine took the form of a set of notes critiquing the seventeenth-century doctor Ujita Un'an's 宇治田雲庵 voluminous treatise *Igaku bengai* 医学辨害 (*Discriminating the Dangers of Medical Learning*, 1681); these notes were probably compiled during Sorai's youth, but they were first published in book form forty years after his death as *Sorai sensei igen* 徂徠先生医言 (*Master Sorai's Words on Medicine*, 1767). Their content suggests that Sorai possessed a sophisticated and critical understanding of the mainstream medical traditions of the late seventeenth century, but although he criticized specific ideas within this tradition he by no means sought to reject it as a whole.[35] A separate set of notes on the early Chinese medical classics *Suwen* 素問 (*Basic Questions*) and *Nanjing* 難經 (*Canon of Difficult Questions*) offer a slightly different perspective on the relationship between Sorai's broader scholarly attitudes and his studies of medical texts.[36] These notes were primarily philological in character: Sorai noted his admiration for certain passages that he felt offered valuable statements of medical doctrine, but in general he applied the same sort of historicizing approach to these medical classics that he later employed in his analyses of other early Chinese writings. Sorai took it for granted that the *Suwen* was a composite text, the majority of which had been written during the Qin and Han dynasties but which also incorporated earlier and

[35] Ogyū Sorai, *Sorai sensei igen* 徂徠先生医言 (1767), repr. in *Rinshō kanpō shohō kaisetsu* 臨床漢方処方解説, vol. 4 (Tokyo: Oriento Shuppansha, 1995). For a detailed analysis of this text in relation to the development of Sorai's ideas, see Lan, "Ogyū Sorai no shisō keisei ni okeru igaku to heigaku."

[36] Two slightly different versions of these notes were printed based on different manuscript copies: see *Sorai sensei sonan hyō* 徂徠先生素難評 (1765) and *Sorai sensei somon hyō* 徂徠先生素問評 (1766), repr. in *Kōtei daikei yōgo shūchū* 黄帝内経要語集註, vol. 6, ed. Ishida Hidemi 石田秀実 and Shinohara Kōichi 篠原孝市 (Osaka: Oriento Shuppansha, 1990).

later material. He drew conclusions regarding the date of individual passages from the presence of specific vocabulary or allusions to official ranks that only made sense in the context of specific historical periods. Some of these inferences were quite subtle, such as his argument that the language of a passage stating that "the pulses of spring resemble a bowstring" (春脈如弦) indicated that this passage had been written at a stage in the development of medical doctrine before the emergence of standardized terminology for the description of pulse phenomena.[37]

Sorai briefly discussed several problems relating to the more practical side of medicine in his late political treatise *Seidan* 政談 (*Discourse on Government*, c.1727), arguing that the high costs of urban living were encouraging doctors to choose their therapeutic strategies in order to maximize profit rather than to bring about the most effective cures for their patients. This was supposedly manifested in their avoidance of strong medicines, since ignorant patients preferred to visit doctors who prescribed weaker medicines with no immediate adverse effects, despite the fact that use of these medicines required multiple doses that ultimately did greater harm.[38] Sorai further complained that although such courses of treatment could bring doctors a steady stream of income, they also kept these doctors too busy to educate their children and pass on their art to the next generation; he therefore suggested that the bakufu should sponsor a medical school and send its graduates out to the countryside, where they would not face the temptations to venality

[37] Ogyū Sorai, *Sorai sensei sonan hyō*, 10a–b; *Sorai sensei somon hyō*, 3b, 6a, 7a.
[38] Ogyū Sorai, *Seidan*, 300, 390.

presented by life in the cities.[39] It is striking that Sorai appears to have favoured the same sorts of aggressive therapies for which the Ancient Formulas doctors would later become notorious; however, there is no clear evidence of mutual interaction between Sorai's medical ideas and the emergence of Ancient Formulas medicine, and the two seem to have developed largely independently.

Ogyū Sorai's philosophical writings had a sensational impact on Japanese intellectual culture during the middle years of the eighteenth century. His ideas were rapidly disseminated through the medium of printed books, and their reception thus extended to all readers who were willing to approach the challenges presented by Sorai's innovative ideas and his often intricate *kanbun* prose.[40] Nawa Rodō 那波魯堂 (1727–1789), a critic of Sorai and a defender of Zhu Xi's ideas, later recalled that popular enthusiasm for Sorai's ideas "was most extreme for a period of twelve or thirteen years from Genbun through to Enkyō and Kan'en [1736–1750], when people studied and rejoiced in his doctrines as if they had truly gone mad."[41] Many doctors joined in this enthusiasm. Yamawaki Tōyō described his initial contact with Sorai's writings as a thrilling encounter, writing: "I was almost forty years old when I first obtained Sorai's books, but in reading them I became exhilarated to the point of forgetting myself. It was like gazing on the great ocean. The more I read, the more I believed, and though the day turned to night I

[39] Ogyū Sorai, *Seidan*, 444.
[40] Nakamura Shunsaku 中村春作, "Sorai wa dō 'yomareta' ka" 徂徠はどう「読まれ」たか, *Edo no shisō* 5 (1996), 43.
[41] Nakamura, "Sorai wa dō 'yomareta' ka," 32.

experienced no fatigue."[42] When Tōyō travelled to Edo in 1746 to present his new edition of Wang Tao's *Waitai miyao fang* to the bakufu, he regarded the opportunity to meet Sorai's disciples Dazai Shundai and Hattori Nankaku as a highlight of the journey.[43]

Yamawaki Tōyō and Yoshimasu Tōdō soon came to see parallels between their aim of restoring the medicine of antiquity and Sorai's aim of restoring the original meanings of the Confucian classics, and Sorai's ideas thus came to play a crucial role in shaping the character of Ancient Formulas medicine for Japanese doctors during the middle decades of the eighteenth century. These ideas were not the initial stimulus for the emergence of Ancient Formulas medicine itself—Nagoya Gen'i and Gotō Konzan, inspired in part by the writings of Chinese doctors such as Fang Youzhi 方有執 (1523–1593), Yu Jiayan 喻嘉言 (1585–1684) and Cheng Yingmao 程應旄, had already been advocating revival of Zhang Zhongjing's formulas several decades before Sorai's ideas became widely known—but Tōdō and Tōyō's recognition of the analogies between Sorai's aims and their own provided them with a powerful set of concepts and methods for developing a distinctive style of medical thought and practice.

The parallels between Sorai's ideas and those of Tōdō and Tōyō began with the concept of antiquity itself, which they used to refer not so much to a specific historical period as to an idealized notion of origins. In his writings on literary aesthetics, Sorai had followed the example of the Ming literati Li Panlong 李攀龍

[42] Yamawaki Tōyō, *Zōshi*, 2:20b.
[43] Yamawaki Tōyō, *Yōjuin isoku*, 22a–b; *Zōshi*, 2:17a–21a.

(1514–1570) and Wang Shizhen 王世貞 (1526–1590) in adopting an ideal of antiquity broad enough to recognize both the prose of the Qin and Han and the poetry of the High Tang as suitable models for imitation; similarly, the Ancient Formulas doctors' notion of antiquity was broad enough to take its models from a diverse range of sources.[44] Yamawaki Tōyō wrote that doctors should "cultivate the professional duties of the Zhou and implement the techniques of the Han" (脩周之職，行漢之術), but he also studied and made use of formulas recorded in Tang-dynasty treatises.[45] Yoshimasu Tōdō was more sceptical about the writings of Chinese doctors later than the period of Zhang Zhongjing, but he also argued that traditional remedies passed down among the common people should not necessarily be dismissed as inferior to those in books.[46] Tōdō justified his use of his own newly devised formulas by claiming that what was important in evaluating formulas was the fact of their efficacy rather than the question of their historical origins.[47] To the extent that these concepts of "antiquity" genuinely referred to the distant past, they served not so much to designate a clearly defined period of historical time as to draw attention to supposedly undesirable developments in thought and practice that had taken place in China since the Song. Just as Sorai's

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[44] Flueckiger, *Imagining Harmony*, 91–3.

[45] Yamawaki Tōyō, *Yōjuin isoku*, 2a.

[46] Yoshimasu Tōdō, *Idan* 医断 (1759), repr. in *Tōdō zenshū*, 452.

[47] Yoshimasu Tōdō, *Iji wakumon* 医事或問 (1769) 1918, repr. in *Tōdō zenshū*, 26–7. Although Tōdō recorded his use of his own formulas in his case histories, he did not specify their ingredients in any of his published works. However, it is clear from the surviving manuscript *Tōdō sensei kajuku hō* 東洞先生家塾方 (Preface 1780; repr. in *Tōdō zenshū*), listing twenty-four of these formulas with additional comments by Tōdō's disciple Murai Kinzan 村井琴山 (1733–1815), that many of them were quite different from the formulas of the *Shanghanlun*.

call for a return to the original meanings of the Confucian classics was formulated as a challenge to the orthodoxies of the Song-dynasty Neo-Confucianism of Zhu Xi, Tōdō and Tōyō's call for a return to the medicine of antiquity was formulated as a challenge to the tradition of medical reasoning developed by elite Chinese doctors between the Song and the Ming, the supposedly degenerate medicine of a "Later Age."

One of Sorai's central objections to orthodox Neo-Confucian philosophy was that it had departed from the correct uses of language by concerning itself with abstract "Principle" rather than concrete "things," producing an empty discourse that strayed too far from the proper relationship between language and reality. Tōdō and Tōyō adapted this rhetoric to develop a parallel argument against the conceptual basis of "Later Age" medicine. Sorai rejected the possibility of moral discourse grounded in Principle because he feared that such discourse would impose no limits on the arbitrariness of individual judgment and thus would provide no clear criteria for establishing its conclusions.[48] In criticizing the philosophical centrality of Principle in the writings of Song Neo-Confucians, Sorai had written that "Principle has no form (*katachi/kei* 形), and thus has no standards (*jun* 準)… Different people see things differently… It is like when two peasants are disputing a property boundary—if there is no official to hear the dispute, what can serve as a standard?"[49] Yoshimasu Tōdō borrowed directly from these arguments to support his critique of the excessively abstract character of orthodox medical

[48] Flueckiger, *Imagining Harmony*, 67–72.
[49] Ogyū Sorai, *Bendō*, 28, 206; cf. *Benmei*, 150, 244.

discourse: "Principle has no fixed standards (*jun* 準), while diseases have fixed symptoms (*shō* 証). How can we use Principle without fixed standards to confront diseases with fixed symptoms?"[50] Yamawaki Tōyō's allusions to Sorai were no less clear: "Principle can be turned upside-down, but how can things (*mono* 物) be mistaken? If we treat Principle as primary and things as secondary, then even the most intelligent people cannot avoid error."[51]

Tōdō and Tōyō's attacks on the concept of Principle are all the more significant in view of the fact that that this concept had never enjoyed the central position in medical discourse that it had enjoyed in the discourse of Neo-Confucian philosophy. Rather than seeing these attacks as criticisms of doctrines actually espoused by Tōdō and Tōyō's contemporaries, we should understand them as part of Tōdō and Tōyō's attempt to develop a system of medical epistemology modeled on Sorai's arguments. It was through this epistemology, and especially through its cluster of concepts relating to the nature of evidence, that Tōdō and Tōyō sought to

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[50] Yoshimasu Tōdō, *Idan*, 448; cf. Ogyū Sorai, *Bendō*, 28, 206; *Benmei*, 150, 244. For other examples of Tōdō's criticisms of "Principle," see Yoshimasu Tōdō, *Ruijuhō* 類聚方 (1764), repr. in *Tōdō zenshū*, 246–7; *Tōdō sensei ikō*, 503–4, 512; *Kosho igen*, 44, 45, 47.

[51] Yamawaki Tōyō, *Zoshi*, 1:6a. For discussion, see Yōrō Takeshi 養老孟司, "Edo no kaibōzu" 江戸の解剖図, in *Edo no naka no kindai: Akita ranga to* Kaitai shinsho 江戸のなかの近代：秋田蘭画と『解体新書』, ed. Takashina Shūji 高階秀爾 (Tokyo: Chikuma Shobō, 1996), 203. Yōrō suggests that a supposed distinction between nature and artifice in Sorai's political thought provided the basis for Tōyō's vision of the anatomical body as part of nature and thus as a possible object of knowledge. This provocative claim encounters three major difficulties: (1) it assumes the validity of Maruyama Masao's influential but controversial interpretation of Ogyū Sorai's "modernity"; (2) it imposes an anachronistic category of "nature" onto the ideas of eighteenth-century writers; (3) by positioning Tōyō's anatomical studies on a line of development running from Sorai to Sugita Genpaku rather than seeing them in the context of Tōyō's practical and polemical aims as an advocate of Ancient Formulas medicine, it neglects the role of philology in shaping Tōyō's observations and thus presents an exaggerated picture of his methodological empiricism.

organize their empirical and observational findings and to reconcile these findings with the results of their philological investigations.

The Ancient Formulas doctors appropriated not only epistemological aspects of Sorai's philosophy but also Sorai's emphasis on the importance of establishing correct social and political institutions. For Tōdō and Tōyō, practicing Ancient Formulas medicine was not simply a matter of using the right sorts of therapies, but also of standing in the appropriate relationship to the societies in which they lived: in order to restore the lost medical practices of antiquity, it was necessary first to understand the nature of medicine as a social function.

Tōdō and Tōyō based their notions of the ideal social context for the practice of medicine on the *Zhouli* 周禮, which had described the formal system of medical offices supposedly implemented by the Zhou government.[52] Perhaps surprisingly for a doctor who never held an official medical appointment, it was Tōdō who devoted the most attention to analyzing the *Zhouli* system and drawing out its implications for the practice of medicine in his own time. Based on his reading of the *Zhouli*, Tōdō came to believe that the art of medicine had long suffered from confusion among several distinct categories of medical practice. He argued that in antiquity there had been four branches of medicine, corresponding to four different classes of practitioner—physicians (*shitsu-i* 疾医), dieticians (*shoku-i* 食医), surgeons (*yō-i* 瘍医) and veterinarians (*jū-i* 獣医)—while later periods had

[52] On the *Zhouli* as a source of ideas for statecraft thought in Tokugawa Japan, see Kate Wildman Nakai, "Tokugawa Approaches to the *Rituals of Zhou:* The Late Mito School and 'Feudalism'," in *Statecraft and Classical Learning: the Rituals of Zhou in East Asian History*, ed. Benjamin A. Elman and Martin Kern (Leiden: Brill, 2010), 279–308.

also seen the development of yin-yang doctors (*in'yō-i* 陰陽医) and Daoist doctors (*senka-i* 仙家医). Tōdō deduced from the case histories recorded in the biography of the Western Han doctor Chunyu Yi 淳于意 that the ideas of yin-yang doctors had by this period already begun to displace those of true physicians.[53] He claimed that most subsequent doctors in China and Japan alike had followed Chunyu Yi in this degenerate tradition of yin-yang medicine, basing their diagnoses and therapies on ideas about the five *zō* and six *fu* organs (*gozō roppu*; C. *wuzang liufu* 五臟六腑), yin-yang dualism, the five phases, and other still more elaborate cosmological ideas; other Chinese doctors, such as Ge Hong 葛洪, Tao Hongjing 陶弘景, and Sun Simiao 孫思邈, had adopted Daoist techniques for the cultivation of *qi* and the production of elixirs, combining these techniques with the methods of yin-yang doctors to develop a distinctive tradition of Daoist medicine. However, no doctor had transmitted the ancient Way of physicians (*ko shitsu-i no michi* 古疾医の道) since the time of Zhang Zhongjing, and even the treatises of Tang dynasty authors included no more than a few genuinely ancient formulas.[54]

Tōdō and Tōyō developed their image of the ideal doctor as simultaneously a philologist and a practitioner by ascribing this dual identity to Zhang Zhongjing himself, about whom the scarce surviving biographical information placed few constraints on their imaginations. The original preface to the *Shanghanlun* stated that Zhongjing had "diligently sought out the ancient precepts, widely gathering

[53] Yoshimasu Tōdō, *Kosho igen*, 44–7.
[54] Yoshimasu Tōdō, *Idan*, 451; *Iji wakumon*, 2–3. For Yamawaki Tōyō's expression of a similar narrative of decline, see Yamawaki Tōyō, *Zoshi*, 1:5b.

numerous formulas" (勤求古訓，博採眾方), and Tōdō and Tōyō deduced from this statement that Zhongjing's formulas had already been "ancient" when he had recorded them and that Zhongjing had preserved and transmitted these formulas in precisely the same way that Tōdō and Tōyō sought to preserve and transmit them during their own time. Tōyō declared that "Zhongjing followed the ancient precepts, preserving the methods and transmitting the art; ever since the death of Zhongjing, only Wang Tao in his *Waitai miyao* 'transmitted and did not create'."[55] Tōdō agreed with this evaluation of Zhongjing's achievement, stating that Zhongjing was "a transmitter of formulas, not a creator of formulas."[56] By adapting Sorai's methods and combining textual and empirical investigations in their efforts to recover the ancient art of medicine, Tōdō and Tōyō were also hoping to follow the example of Zhang Zhongjing.

Texts and Observation in Yamawaki Tōyō's *Zōshi*.

During his early medical studies with Yamawaki Harunaga, Yamawaki Tōyō studied the descriptions of the body's organs in the orthodox medical classics *Suwen*, *Lingshu* and *Nanjing*. It was Gotō Konzan who first suggested to Tōyō that dissection of human corpses might be the best way to learn the truth about the organs, but since this was prohibited by Tokugawa regulations the best Tōyō could do was to conduct dissections on the corpses of otters (*kawauso* 獺), whose organs were thought

[55] Yamawaki Tōyō, *Yōjuin isoku*, 10b–11a.
[56] Yoshimasu Tōdō, *Idan*, 451; *Tōdō sensei ikō*, 504, 512.

to be similar to those of humans. It was not until 1754 that Tōyō was given the opportunity to observe the dissection of an executed criminal's corpse, watching as the officially appointed "butcher" (*tosha* 屠者) cut open the body to reveal its contents.[57] Tōyō published his conclusions from these observations five years later in his *Zōshi*, a book that helped stimulate the rapidly growing enthusiasm for anatomical knowledge among Japanese doctors during the following decades.

Given the importance of anatomy for the subsequent history of Japanese interest in European medicine, it is not surprising that historians who have discussed Tōyō's *Zōshi* have generally emphasized those aspects of the treatise that anticipated the later work of Sugita Genpaku and other advocates of *rangaku*: the epistemological significance of visual observation, the role of European books, or the use of illustrations.[58] Yet as Yamada Keiji has pointed out, this tendency to view Tōyō's investigations retrospectively through their relationship to later Tokugawa

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[57] Yamawaki Tōyō, *Zoshi*, 1:1a–3a. For a partial translation of this passage, see Fukuoka, *The Premise of Fidelity*, 35–6. Fukuoka offers a valuable analysis of Tōyō's anatomical studies in relation to the history of visual observation in Tokugawa Japan, but her discussion mistakenly conflates "old way" medicine (*kohō* 古方, i.e. Ancient Formulas medicine) with the orthodox mainstream medicine of Tōyō's time.

[58] Fujikawa, *Nihon igakushi*, 404–9; Hattori, *Edo jidai igakushi no kenkyū*, 10; William D. Johnston, "Jūhasseiki Nihon no igaku ni okeru kagaku kakumei: ranpō no hatten no tame no shisōteki na zentei" 十八世紀日本の医学における科学革命：蘭方の発展のための思想的な前提, *Nihon ishigaku zasshi* 27.1 (1981), 37–46; Okamoto, *Kaibō kotohajime*; Shigehisa Kuriyama, "Between Mind and Eye: Japanese Anatomy in the Eighteenth Century," in *Paths to Asian Medical Knowledge*, ed. Charles Lesley and Allan Young (Berkeley: University of California Press, 1992), 24–5; Yōrō, "Edo no kaibōzu"; Sakai Shizu 酒井シヅ, "Jūshichi, jūhasseiki no nihonjin no shintaikan" 一七、一八世紀の日本人の身体観, in *Rekishi no naka no yamai to igaku* 歴史の中の病と医学, ed. Yamada Keiji 山田慶児 and Kuriyama Shigehisa 栗山茂久 (Kyoto: Shibunkaku Shuppan, 1997) , 431–55; Fukuoka, *The Premise of Fidelity*, 34–42; Aoki, *Edo jidai no igaku*, 71–5.

anatomy risks distorting our understanding of Tōyō's own intentions.[59] To understand the original significance of Tōyō's dissections, we need to consider more carefully how they were shaped by his practical aims, methodological strategies and polemical purposes as an advocate of Ancient Formulas. Tōyō's anatomical inquiries were motivated not simply by curiosity or by a desire to overturn received wisdom, but by a practical concern to establish the universal human body—the target of Zhang Zhongjing's formulas—as a particular type of epistemic object, susceptible to investigation using the evidence provided by philology and direct observation. Seen from this perspective, Tōyō's anatomical treatise appears less as a precursor to Sugita Genpaku's *Kaitai shinsho* 解体新書 (*New Book of Anatomy*, 1774) than as an extension of Tōyō's own project of medical evidential scholarship, incorporating visual observations alongside the types of philological research that he had made use of several years previously when producing his edition of Wang Tao's *Waitai miyao fang*.

Tōyō's view of the body as a stable object that could be known through evidential study was deliberately opposed to the prevailing concept of the body in the Chinese styles of medicine developed between the Song and the Ming dynasties and popularized in Japan by the followers of Manase Dōsan, which had emphasized the variability of the body through time and space.[60] This supposed

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[59] Yamada, "Igaku ni oite kogaku ha nan de atta ka."

[60] On the variability of the human body in the Chinese medical "geographic imagination," see Marta Hanson, *Speaking of Epidemics in Chinese Medicine: Disease and the Geographic Imagination in Late Imperial China* (London: RoutledgeCurzon, 2011); on the history of Tokugawa ideas about Sino-Japanese medical difference, see Daniel Trambaiolo, "Native and Foreign in Tokugawa Medicine," *The Journal of Japanese Studies* 39.2 (2013), 299–324.

variability provided the justification for the sophisticated system of medical doctrine and cultivated intuition that elite doctors claimed was necessary to devise therapeutic strategies best suited to the unique circumstances of individual patients, which inevitably posed a problem for the Ancient Formulas doctors' claim that the foundations of medical therapy were to be found not in higher-level principles but in the straightforward formulas recorded in Zhang Zhongjing's treatises. Several years before he carried out his dissections, Tōyō had already begun to develop arguments against this view of the body, arguing that Zhongjing's formulas remained a reliable guide to therapy precisely because the human body was the same in all times and places:

> Who knows the causes of change and alteration? Is it not natural that restoring antiquity should be difficult? Nevertheless, the seven apertures have the same form, and the nine organs are all present. Light clothes in summer and heavy clothes in winter; becoming drunk with wine, becoming sated with meat. How can the human body change? Our nourishment and clothing do not alter, so why would our illnesses be different? The uses of drugs and stone needles can also be known from this. This is why our art is easy to know.[61]

Tōyō's excitement upon seeing Western anatomical treatises likewise derived not so much from their representational accuracy as from the fact that they

[61] Yamawaki Tōyō, *Yōjuin isoku*, 3b. Tōyō made a similar point in a letter sent to Hattori Nankaku in the eighth month of 1752: "The nine organs and the seven emotions are the same in antiquity and in the present. Wearing heavy cloth in winter and light cloth in summer—what difference is there between [the ages of] Yao and Jie? The illnesses from which they suffered can also be known" (*Zōshi*, 2:17a).

demonstrated the universal nature of the human body: "The organs of [the sage ruler] Yao, the organs of [the tyrant ruler] Jie, and the organs of foreigners are all similar… through a thousand ages they do not change, and across different regions they do not differ."[62] The stability of the human body across different regions of space provided indirect support for Tōyō's more important assumption that the characteristics of the human body were stable through time, since this stability was a necessary condition for the possibility of developing a style of medicine based on ancient formulas.

One of the major contrasts between the *Zōshi* and later Japanese anatomical treatises was the extent to which Tōyō was concerned not only to describe what he saw but also to draw his readers' attention to what he did not see. Tōyō complained that doctors who followed the *Suwen* and *Nanjing* were at risk of "clinging to names and losing the facts," contrasting Zhang Zhongjing's precise use of language with the vague and inaccurate terms for disease found in later medical treatises and arguing that the problem had arisen due to the progressive proliferation of empty language that failed to correspond to genuine aspects of reality.[63] As medical language had become more elaborate, it had gradually displaced the simpler but more accurate understanding of the body that had served as the basis of medicine in antiquity and that Tōyō hoped to restore through the careful use of evidence derived from philological study and direct observation. Rather than seeking to establish visual observation as the ultimate criterion for anatomical understanding,

[62] Yamawaki Tōyō, *Zoshi*, 1:6a; cf. Fukuoka, *The Premise of Fidelity*, 38.
[63] Yamawaki Tōyō, *Zōshi*, 1:2b, 1:22b.

Tōyō made use of his observations as part of a broader polemical strategy to support the medical ideas and practices he attributed to Zhang Zhongjing and to undermine the medical orthodoxy based on the *Suwen*, *Lingshu* and *Nanjing*.

Tōyō's argument that the small and large intestines should not be regarded as two distinct organs but rather as a single continuous organ running from the stomach to the anus provides one of the clearest illustrations of how Tōyō's aims and methods in the *Zōshi* differed from those of later Tokugawa anatomists. Tōyō did not merely claim that he was unable to distinguish between small and large intestines; rather, he regarded the absence of distinct small and large intestines as a positive fact on the same level as his finding that there were no channels for the flow of *qi* (*keiraku* 経絡) in the arms and legs.[64] Tōyō's argument for this conclusion depended on his textual studies just as much as on his anatomical observations. Not only in the *Shanghanlun* itself but also in a range of non-medical texts such as the *Shangshu* 尚書, *Zhouli* 周禮, *Liezi* 列子, and Wei Zhao's 衛昭 commentary on the *Guoyu* 國語, the intestines were mentioned only as a single organ; just as importantly, counting the intestines as a single organ meant that the total number of organs would correspond neatly to the "nine organs" mentioned in the *Zhouli*. Tōyō concluded that the distinction between the large and small intestines was merely one of the many empty concepts that had entered later medical discourse through the influence of yin-yang and Daoist ideas.[65] Later Tokugawa anatomists

[64] Yamawaki Tōyō, *Zōshi*, 1:4b–5a.
[65] Yamawaki Tōyō, *Zōshi*, 1:2a–b; 1:5b. As Yamada Keiji has pointed out, this group of texts represented a highly selective reading of the available textual sources and

had fewer difficulties in observing the distinction between the small and large intestines, in part because they were able to build on the cumulative experience of earlier dissections and could also make more effective use of European anatomical treatises, but also because they lacked the strong commitment to the integration of philological and observational evidence that was characteristic of Ancient Formulas medicine during the middle decades of the eighteenth century and which exerted a decisive influence over Tōyō's anatomical investigations.[66]

Many of Tōyō's contemporaries were reluctant to accept Tōyō's assumptions about the status of the human body as an object of knowledge. The *Zōshi* encountered scepticism not only among traditionally-minded doctors who felt Tōyō had failed to understand the nature of the organs in classical medical theory, but also from other Ancient Formulas doctors, who felt that medical knowledge ought to concern itself only with the relationship between diseases and therapies and that Tōyō's anatomical investigations offered no more than a distraction.

Sano Yasusada 佐野安貞, a doctor from Sanuki, attacked Tōyō from an orthodox perspective in his *Hizōshi* 非蔵志 (*Refutation of the Record of the Organs*, 1760), claiming that whatever philological objections might be raised against the received

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commentaries: for a detailed analysis, see Yamada, "Igaku ni oite kogaku wa nan de atta ka," 477–9. For a comparison of Tōyō's description of the intestines with those found in other anatomical treatises popular in mid-eighteenth century Japan, see Yōrō, "Edo no kaibōzu," 205–18.

[66] On the history of anatomical studies between Tōyō's *Zōshi* (1759) and Sugita Genpaku's *Kaitai shinsho* (1774), see Mieko Macé, "Dissection, Blood-Letting and Medicine as per Yamawaki Tōmon and Ogino Gengai," in *East Asian Science: Tradition and Beyond. Papers from the Seventh International Conference on the History of Science in East Asia, Kyoto, 2–7 August 1993*, ed. Hashimoto Keizō, Catherine Jami and Lowell Skar (Osaka: Kansai University Press, 1995), 351–357; Yōrō, "Edo no kaibōzu"; Aoki, *Edo jidai no igaku*, 76–79.

text of the *Suwen*, its medical doctrines derived from an authentic transmission of the doctrines of the Yellow Emperor himself.[67] Sano did not deny the value of knowing the forms and positions of the organs, but he claimed that Tōyō's attempts to understand them through dissection had ignored the crucial distinction between organs that were simply physical forms (*keizō* 形蔵) and organs that were vital functioning entities (*shinzō* 神蔵); in order to understand the latter, the evidence of visual observation was inferior to the sorts of learning that could be obtained from the *Neijing*.[68] The scholar Hayashi Kōan 林厚庵 wrote in his preface to *Hizōshi* that "[Sorai's followers] proclaim that ritual, music, punishments and government are the Way. They do not know that nature, the Way, and cultivation derive from Heaven. It is therefore only natural that they should also regard a deceased shell and decaying intestines as the Way."[69] In making these criticisms, Sano and Hayashi recognized that just as Sorai had insisted that moral and political discourse should refer to the concrete "forms" (*katachi*/*kei* 形) of social and political institutions, Tōyō's anatomical investigations were premised on the idea that medical discourse should refer to the concrete forms of the human body.[70]

Yoshimasu Tōdō was more sceptical than Tōyō about the value of inquiring into the physical structure of the organs: although he admitted that the *Zhouli* had

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[67] Sano Yasusada 佐野安貞, *Hizōshi* 非蔵志 (1760), 1a–b.
[68] Sano Yasusada, *Hizōshi*, 2a, 3b–4a; cf. Fukuoka, *The Premise of Fidelity*, 38.
[69] Sano Yasusada, *Hizōshi*, Preface by Hayashi Kōan, 1a.
[70] Ogyū Sorai himself had accepted the conventional understanding of the organs as functional entities rather than physical forms, approving of Ujita Un'an's argument that "the *zō* and *fu* organs cannot be seen through dissection." Cf. Ujita Un'an, *Igaku bengai*, 4:2b–7b and Ogyū Sorai, *Sorai sensei igen*, 27a.

stated that familiarity with the organs formed part of a doctor's responsibilities, he argued that references to the organs in the *Shanghanlun* were not part of Zhongjing's original text but had been added by later writers.[71] Two years after the publication of the *Zōshi*, Tōdō's disciple Tanaka Hidenobu 田中栄信 (1732–1792) wrote a brief criticism of Tōyō's treatise from the perspective of this narrow conception of the scope of medical knowledge as strictly concerned with therapy.[72] Hidenobu admired Tōyō's goal of restoring the medical profession of the Zhou and the medical techniques of the Han, but he argued that by focusing on internal bodily structures that had no relevance to the needling, moxa and drug therapies that doctors used in practice, from a true physician's point of view Tōyō's descriptions of the organs ultimately resulted in precisely the same sort of empty discourse divorced from practice that Tōyō himself had sought to avoid.

Yoshimasu Tōdō and Pharmacological Empiricism

Among the most innovative of Yoshimasu Tōdō's medical ideas was his argument that physicians should determine the appropriate therapies for their patients strictly according to observable symptoms (*shō* 証), without taking into account these symptoms' causes (*in* 因).[73] This doctrine represented a striking departure from the mainstream tradition of East Asian medical learning since the Song dynasty, in which consideration of the causes of a disease was considered

[71] Yoshimasu Tōdō, *Idan*, 446.
[72] Tanaka Hidenobu 田中栄信, *Ben seki idan* 辨斥医断 (1783, repr. 1846), 40a–b.
[73] Yoshimasu Tōdō, *Idan*, 452–3.

essential to determining the appropriate choice of therapy. There had been other Japanese doctors before Tōdō who had avoided discussing the causes of disease using the abstract language of yin-yang and the five phases, but Tōdō's outright rejection of causes as a therapeutically relevant category revealed an unusually rigorous epistemological stance, extending even to cases in which the origins of a patient's problems were apparently much more straightforward, such as injury from a fall.[74] Tōdō claimed support from the *Shanghanlun* for his insistence that therapy should follow directly from symptoms without regard to aetiology, since his studies of this text had led him to the conclusion that Zhang Zhongjing had used similar therapies for similar symptoms even when these symptoms arose from different causes, but had used different therapies for different symptoms even when these symptoms arose from similar causes. This pattern of doctrine and justification bore close structural similarities to the methodology of the *Zōshi*: like Tōyō, Tōdō sought to restore the medicine of antiquity by excluding from consideration all bodily phenomena other than those accessible to direct observation. In this section, we consider the implications of this epistemological stance for Tōdō's approach to the practical problems of therapy, focusing on his studies of pharmacology and his notorious preference for aggressive treatments such as sweating, vomiting, and purging.

Tōdō's approach to pharmacology employed a combination of textual research and direct observation similar to that we have seen above in the case of Tōyō's anatomical studies. Earlier Chinese and Japanese treatises on the properties

[74] Yoshimasu Tōdō, *Tōdō sensei ikō*, 511.

of drugs had generally adhered to the conventions of the genre of *materia medica* (C. *bencao*, J. *honzō* 本草), at the apex of which stood Li Shizhen's *Bencao gangmu* 本草綱目 (*Systematic Materia Medica*, 1596).[75] As discussed in the previous chapter, this genre had traditionally incorporated learning of a highly heterogeneous nature, combining pharmacological knowledge about the therapeutic properties of drugs with encyclopaedic description of the many varieties of plant, animal and mineral products, but a number of Japanese scholars in the late seventeenth and early eighteenth centuries were working to develop a distinctive Japanese variant of this tradition, gradually distancing *honzō* from its original association with medicine and establishing it as a broader field of natural historical knowledge.

These developments in Tokugawa *honzō* opened up new possibilities for thinking about pharmacology itself as a field of knowledge distinct from broader investigations into the natural world. Ancient Formulas doctors were among the most prominent among those attempting to develop a new style of pharmacology. Kagawa Shūan had begun to explore these possibilities in his *Ippondō yakusen* 一本堂薬選 (*Selected Pharmaceuticals*, 1731–38), and somewhat later, Yoshimasu Tōdō began to develop the distinctive account of pharmacology presented in his *Yakuchō* 薬徴 (*Pharmacological Demonstrations*, 1785), a treatise in which he sought to provide a set of foundations for pharmacological knowledge independent of the *materia medica* tradition.

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[75] Carla S. Nappi, *The Monkey and the Inkpot: Natural History and Its Transformations in Early Modern China* (Cambridge, Mass.: Harvard University Press, 2009).

Tōdō spent three decades revising this treatise, and throughout his lifetime he refused to have it published. It was only after his son and heir Yoshimasu Nangai arranged for its publication in 1785 that it became established as one of Tōdō's most influential works.[76] Tōdō's pharmacological investigations were based on the premise that although the *materia medica* tradition included valuable knowledge that should not be discarded, it was compromised not only by its indiscriminate mixture of correct and incorrect doctrines but also by its failure to distinguish between the types of knowledge appropriate to physicians (*shitsu-i* 疾医) and those appropriate to dieticians (*shoku-i* 食医).[77] He argued that the distinction in the *materia medica* between drugs "with poison" (*yūdoku* 有毒) and drugs "without poison" (*mudoku* 無毒) followed from this basic confusion and exemplified the problem with the *materia medica* for the aspiring physician. Tōdō regarded "poison" as an essential characteristic of all drugs that was fundamental to their ability to expel disease.[78] He thus claimed that the distinction between drugs with and without poison was a consequence of the fact that the *materia medica* had not been written from a perspective appropriate to physicians but had been assembled from a variety of dietetic, yin-yang, and Daoist sources.[79] Compiling a pharmacological treatise to meet the needs of true physicians thus demanded an independent set of foundations

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[76] Ōtsuka Keisetsu 大塚敬節, "Yoshimasu Tōdō" 吉益東洞, in *Kinsei kanpō igakusho shūsei* 近世漢方医学書集成, vol. 10 (Tokyo: Meicho shuppan, 1985), 26–7. Regarding Yoshimasu Tōdō's reluctance to publish this book, see the colophon by Yoshimasu Nangai 吉益南涯 to Yoshimasu Tōdō, *Yakuchō* 薬徴 (1785), repr. in *Tōdō zenshū*, 242.

[77] Yoshimasu Tōdō, *Yakuchō*, 139–40, 154, 449.

[78] Yoshimasu Tōdō, *Yakuchō*, 146; cf. Kagawa Shūan, *Ippondō Yakusen* 一本堂薬選 (1734), *hanrei*, 3b.

[79] Yoshimasu Tōdō, *Yakuchō*, 241.

for pharmacology based on a combination of philological study of the *Shanghanlun* with direct practical experience.

The treatises of Zhang Zhongjing had not discussed the efficacy of drugs as isolated substances, but only as components of formulas. To reconstruct Zhongjing's implicit understanding of the medicinal properties of individual drugs, Tōdō therefore used a method that he referred to as "examination of the evidence" (*kōchō* 考徵). For each drug, he identified all the formulas in Zhongjing's treatise that included that drug, and by comparing the lists of symptoms corresponding to each of these formulas he deduced the specific healing properties of individual drugs from the set of symptoms listed under all the formulas in which that drug occurred and absent from the formulas in which the drug did not occur.[80] In some cases, Tōdō made reference to textual parallels in the writings of Tang Dynasty doctors such as Sun Simiao and Wang Tao, using these parallels to emend passages of Zhang Zhongjing's treatise for which he suspected the received text had become corrupted in transmission.[81] Despite such complications, Tōdō was confident that this method would provide more precise knowledge of the nature of drugs, and that this would in turn lead to better understanding of the formulas themselves.[82]

To support his conclusions concerning the effects of individual drugs, Tōdō cited cases from his own practical experience that contradicted the received ideas of the *materia medica* tradition. He used this evidence to show that gypsum (*sekkō* 石膏)

[80] Yoshimasu Tōdō, *Yakuchō*, 153.
[81] Yoshimasu Tōdō, *Yakuchō*, 144, 202.
[82] Yoshimasu Tōdō, *Yakuchō*, 451.

should not be regarded as a harsh drug but could be effectively prescribed over an extended period, that *Bupleurum* root (*saiko* 柴胡) was useful for treating periodic fevers (*gyakushitsu* 瘧疾) only in cases when these were accompanied by painful swelling around the chest and sides, that *Pinellia* tuber (*hange* 半夏) could be safely administered during pregnancy, that ginseng should be used for clearing dense accumulations below the heart (*shinge hikō* 心下痞硬) rather than as a general-purpose supplementation drug (*hoyaku* 補薬), and that "warming" drugs were not necessarily the most effective treatment for patients suffering from coldness in their extremities.[83] Tōdō's references to clinical experience as evidence for drug efficacy were much less systematic than his careful deductions from the text of the *Shanghanlun*, and he seems to have regarded his textual research and his clinical experiences as mutually validating rather than as potentially conflicting sources of evidence. Tōdō's *Yakuchō*, like Tōyō's *Zōshi*, represented an attempt to demonstrate that the conclusions to be drawn from textual sources were identical to those that would be drawn from direct observation and practical experience.

Just as Tōdō insisted that diagnosis should be carried out purely on the basis of manifest disease phenomena, he also insisted that therapy too should cause manifest changes in the patient's condition. In contrast to contemporaries who preferred a slow and gentle approach to nourishing the body in order to sustain a recovery, Tōdō insisted that both the effects of the drugs and the subsequent recovery from illness should take place rapidly. Rather than allowing for a

[83] Yoshimasu Tōdō, *Yakuchō*, 145–6, 177, 189, 202, 217.

protracted period of recovery from illness during which the patient's prescription could be modified repeatedly by the doctor, he thus used aggressive therapies in the hope of effecting an immediate cure.[84]

Tōdō referred to the effects of these aggressive therapies using the archaic term *menken* 瞑眩, derived from a passage in the *Shangshu*: "If the medicine is not *menken*, the disease will not be cured" (若藥弗瞑眩、厥疾弗瘳).[85] The usage of this term in its original context was metaphorical and its precise medical connotations unclear, but it apparently alluded to harsh effects such as dizziness or fainting. Chinese medical writers had occasionally alluded to this passage, but they had never made *menken* a central term for understanding the action of medicines in general. Zhang Zhongjing's surviving writings had never made use of the term *menken*, but Tōdō claimed to find the concept implicit in certain passages of the *Shanghanlun* and asserted that it was the key to understanding Zhang Zhongjing's approach to therapy.

The most obvious precedent in the East Asian medical tradition for such a strong emphasis on aggressive therapies was provided by the Jin doctor Zhang Congzheng 張從正 (1156–1228), who had argued that in order to treat disease it

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[84] Yoshimasu Tōdō, *Iji wakumon*, 4–5. In practice, Tōdō's therapies did not always conform to this ideal: several of his published case histories show that even when using aggressive formulas, his patients could sometimes require continuing treatment. For examples, see Yoshimasu Tōdō, *Kenshuroku*, 479, 483–4, 487.

[85] Yoshimasu Tōdō, *Yakuchō*, 179–80. The earliest identified use of the term *menken* in Tokugawa medical discourse appears in a letter written by Yamawaki Tōyō in 1752 and published seven years later in an appendix to his *Zōshi*. Tōyō's use of the term at this early date may have been influenced by discussions with Tōdō, but Tōyō himself regarded the concept as too simplistic to serve as an adequate guide to the complexities of medical therapy: see Yamawaki Tōyō, *Zōshi*, 1:5b, 1: 26a, 2:9a.

was necessary to expel the associated pathogenic *qi* (*xieqi* 邪氣) through use of the three methods of vomiting, sweating and purging (C. *han tu xia*; J. *kan to ge* 汗吐下).[86] Few subsequent Chinese doctors had accepted this extreme view, and even those who had admired Zhang Congzheng generally qualified their admiration by suggesting that these aggressive therapeutic strategies needed to be complemented by alternative strategies depending on the circumstances. When Zhang Congzheng's *Rumen shiqin* 儒門事親 (*A Scholar Serves his Kin*, 1228) was reprinted in a Japanese edition in 1711, some Japanese doctors welcomed it as a useful corrective to the contemporary tendency to rely excessively on the warm supplementation therapies of the Ming doctor Xue Ji 薛己 (1487–1559), but they did not at first take seriously Zhang Congzheng's argument that vomiting, sweating and purging could together constitute a comprehensive range of therapies.[87] Several decades later, when Yamawaki Tōyō and Yoshimasu Tōdō began to advocate the wider use of aggressive therapeutic strategies, they were apparently reluctant to acknowledge Zhang Congzheng as a precursor, perhaps because they felt that mentioning him would compromise their claims to be restoring the medicine of antiquity. Such fears would have been justified, for critics of Tōdō's aggressive therapies were quick to

[86] Fabien Simonis, "Mad Acts, Mad Speech and Mad People in Late Imperial Chinese Law and Medicine" (PhD Dissertation: Princeton University, 2010), 83–5.
[87] In addition to the preface of the 1711 edition of *Rumen shiqin*, see also the remarks in Naitō Kitetsu 内藤希哲, *Ikei kaiwaku ron* 医経解惑論 (Preface 1731; first printed edition, 1776; repr. 1804), 5:36a–38b. On the Japanese edition of Zhang Congzheng's *Rumen shiqin*, see Wang Tiece 王鐵策 and Su Chunmei 蘇春梅, "*Rumen shiqin* zai Riben de liuchuan xinzheng"《儒門事親》在日本的流傳新證, *Zhongyi wenxian zazhi* 28.1 (2010), 8–10.

charge that although Tōdō claimed to be following the therapies of Zhang Zhongjing, his treatments were in fact closer to those of Zhang Congzheng.[88]

Tōdō's therapies could sometimes be harsh enough to bring his patients to the brink of death, and he readily admitted that the *menken* of his drugs could be so extreme as to give the appearance that his patients had died from consuming them.[89] However, Tōdō argued that even if his patients passed away after receiving his treatment he could have no regrets, since their fate was determined not by his remedies but by the command of heaven (*tenmei* 天命).[90] Tōdō found support for this doctrine in the *Shiji* 史記 biography of the legendary doctor Bian Que 扁鵲, who had supposedly remarked after his successful treatment of the apparently deceased Crown Prince of Guo 虢: "I am not able to bring the dead to life; this man was meant to live, and I merely caused him to arise."[91] It is possible that public familiarity with this doctrine may itself have led to a high death rate among Tōdō's patients, since knowing that Tōdō refused to acknowledge responsibility for his patients' deaths may have discouraged patients from seeking treatment from Tōdō unless they felt they had no other options, and Tōdō's critics were quick to point out the logical flaws and moral dangers of these arguments.[92]

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[88] Yamawaki Tōmon 山脇東門, *Tōmon zuihitsu* 東門随筆, repr. in *Kyōrin sōsho* 杏林叢書, vol. 3, ed. Fujikawa Yū 富士川游 (Tohōdō Shoten, 1924), 5; Horie Dōgen 堀江道元, *Ben idan* 弁医断 (1766), Preface, 2a.
[89] Yoshimasu Tōdō, *Iji wakumon*, 9–12, 19–20.
[90] Yoshimasu Tōdō, *Idan*, 444–5.
[91] Yoshimasu Tōdō, *Iji wakumon*, 3.
[92] Aoki, *Edo jidai no igaku*, 85–7.

However, it is worth noting that even Tōdō's opponents regarded the study of ancient Chinese texts as an essential source of evidence to be used in arriving at the correct doctrine. Hata Kōzan 畑黄山 (1720–1804), for example, pointed out that historical evidence such as the *Zhouli*'s stipulation that doctors' salaries should be determined according to their patients' rates of survival contradicted Tōdō's claim that the doctors of antiquity did not concern themselves with life and death.[93] Despite their different ideas about medicine and about the social roles of doctors, even doctors who opposed Tōdō had come to share his assumption that some important medical questions could only be settled by making reference to ancient texts beyond those of the medical canon itself.

Murai Kinzan's Philological Criticisms of the *Huangdi neijing*

Later disciples of the Ancient Formulas doctors continued the task of examining early medical texts using increasingly sophisticated philological methodologies. Among those who did so was Yoshimasu Tōdō's disciple Murai Kinzan 村井琴山 (1733–1815), the son of a doctor from Kumamoto domain. Kinzan prepared to follow in his father's footsteps as a doctor, but around the age of eighteen he began to have doubts about the way that medicine was practiced by the doctors of his own time.[94] He obtained a copy of Yoshimasu Tōdō's *Idan* 医断 (*Judgments on Medicine*, 1759), but for several years remained uncertain about how to regard its contents; this uncertainty about fundamental issues led him to abandon

[93] Hata Kōzan 畑黄山, *Seki idan* 斥医断 (1762), 7a.
[94] Murai Kinzan 村井琴山, *Idō nisennen ganmoku hen* 医道二千年眼目編 (1807), Preface, 1a.

the offer of a post as assistant lecturer at the Kumamoto domain medical academy, the Saishunkan. Meanwhile, he wrote to Yamawaki Tōyō in Kyoto, asking him about the "Way of the true doctor" (*shin i no michi* 真医の道). Kinzan's correspondence with Tōyō persuaded him to travel to Kyoto in order to further his studies, where he obtained through a friend an introduction to Yoshimasu Tōdō.

Kinzan studied with Yoshimasu Tōdō for several months in 1764 and obtained Tōdō's blessing to return to Kyushu to promote the dissemination of his doctrines. Tōdō encouraged Kinzan to build on these doctrines by supplementing their deficiencies, a task to which Kinzan set himself with great enthusiasm. When Kinzan paid a return visit to Kyoto in 1769, Tōdō's disciples were preparing the text of his *Iji wakumon* 医事或問 (*Answers to Questions on Medicine*, 1769) for publication in a woodblock edition printed that same year, and they invited Kinzan to participate in the editing process. In subsequent years, when Kinzan returned to Kumamoto to take up official employment as a domain doctor, Kinzan compiled numerous works of his own. He had several of these works published in Kyoto, despite the communication problems that could arise as a result of his distance from the publishing houses of the imperial capital.[95]

The central argument of Kinzan's *Idō nisen nen ganmoku hen* 医道二千年眼目編 (*Epitome of Two Thousand Years of the Way of Medicine*, 1807) was that Yoshimasu Tōdō had rediscovered the true Way of medicine after some two thousand years of decline, which had begun even before the Han dynasty. To a great extent the book

[95] Murai Kinzan, *Idō nisennen ganmoku hen*, *hanrei*.

was a recapitulation of Yoshimasu Tōdō's views, but Kinzan introduced several novel arguments of his own, including some of a specifically philological character. Kinzan believed that just as medicine had suffered from insufficient attention to philological problems, historians and scholars had fallen into error because of their failure to grasp the principles of medicine.[96] Like Tōdō, Kinzan believed that history, philology and medical knowledge were essential complements to one another.

Kinzan also brought his philological skills to bear on the dating and authenticity of the *Suwen* and the *Lingshu*, the two texts that made up the *Huangdi neijing*. Substantial portions of these texts took the form of dialogues on medicine between the legendary Yellow Emperor and his minister Qi Bo 岐伯. Chinese scholars had begun as early as the eleventh century to doubt the text's authenticity as a record of dialogues at the Yellow Emperor's court, and by the eighteenth century the scholarly consensus in Japan was that it had been composed during the Warring States, Qin or Han periods.[97] Few scholars or doctors were prepared to defend an earlier date for the text on technical grounds, even if they admired it as a source of medical doctrine. Gotō Konzan had encouraged his followers to adopt the "correct" doctrines of the *Huangdi neijing*, but had failed to provide clear guidance on how to distinguish the correct doctrines from the incorrect ones.[98]

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[96] Murai Kinzan, *Idō nisennen ganmoku hen*, 2:11b, 15a.
[97] Nathan Sivin, "*Huang ti nei ching*," in *Early Chinese Texts: A Bibliographical Guide*, ed. Michael Loewe (Berkeley: The Society for the Study of Early China, 1993), 199.
[98] Gotō Konzan 後藤艮山, *Shisetsu hikki* 師説筆記, repr. in *Nihon shisō taikei* 日本思想大系, vol. 63, ed. Ōtsuka Keisetsu 大塚敬節 (Tokyo: Iwanami Shoten, 1971), 392.

Kagawa Shūan rejected the *Huangdi neijing* in its entirety, and while Yamawaki Tōyō thought that its text might contain "two or three" ideas worth adopting, he considered it unworthy to serve as the basis of medical practice.[99] Yoshimasu Tōdō argued that although the dialogue sections were mostly Han dynasty interpolations, the canon nevertheless preserved fragments of genuine ancient doctrines that remained relevant for practice in his own time.[100]

Murai Kinzan felt that a more rigorous philological methodology was essential in order to make progress in these longstanding debates:

> I have recently read through these two books with great care. When one excludes the dialogue sections, the sections that narrate and explain matters all have rhymes. Comparing these rhymes to those of the *Shijing* 詩 and *Shangshu* 書,[101] the *Yijing* 易經 and the *Laozi* 老子, they are not ancient [rhymes]. Comparing them to the *Sushu* 素書, *Sunzi* 孫子 and *Wuzi* 吳子, or the *Lüshi chunqiu* 呂氏春秋 or the *Huainanzi* 淮南子, they are not recent [rhymes]. Comparing them to the rhymes that Wang Shuhe introduced into the *Shanghanlun*, they are close to ancient [rhymes]. The rhymes seem to be later than the Spring and Autumn and Warring States periods, but earlier than the Western Han. This is

[99] Yamawaki Tōyō, *Yōjuin isoku*, 10a.
[100] Murai Kinzan, *Idō nisen nen ganmoku hen*, 4:36b–37b.
[101] The printed text reads *sho sho* 諸書 ("the many books"), probably a transcription error for *shi sho* 詩書 ("the *Shijing* and *Shangshu*").

> something that no reader of these two books in Japan or China, in ancient or recent times, has mentioned or noticed.[102]

Kinzan further argued that phonological analysis of the *Huangdi neijing* could not only lead to an improved text of the medical classic but also shed light on the errors of earlier scholars. He quoted a rhymed passage from the *Suwen*: "the essence of healing is not missing the complexion and the pulses; using these without confusion is the great rule of healing" (治之要極，無失色脈，用之不惑，治之大則), and pointed out that switching the order of the two characters *sè* 色 ("colour/countenance/appearance") and *mài* 脈 ("tracts/pulses") would restore the integrity of the rhyme scheme. Kinzan argued that the Song dynasty scholar Wu Yu's 吳棫 failure to notice the need for this textual emendation had led him to assign incorrect rhyme categories for the character *mài* 脈, and that a number of subsequent Chinese philologists had followed this mistake.[103]

Murai Kinzan's arguments regarding the dating of the *Huangdi neijing* were based on a selective analysis of a few passages and would hardly meet the most exacting standards of philological criticism. There was a gap between Murai Kinzan's rhetorical deployment of scholarly argumentation and the rigor with which he pursued scholarly ends: his analysis of the rhyme schemes in the *Suwen* followed standard methods of philological analysis, but his conclusions merely tended to confirm what many had already suspected about the date of the text.

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[102] Murai Kinzan, *Idō nisen nen ganmoku hen*, 4:27b–28a.
[103] Murai Kinzan, *Idō nisen nen ganmoku hen*, 4:28a–29b.

Nevertheless, Kinzan's attempt to apply these methods to the analysis of a medical text reflects not only the Ancient Formulas doctors' sensitivity to the linguistic problems involved in reconstructing a picture of the medical styles of Chinese antiquity, but also the seriousness with which they pursued this goal.

Conclusion

Although the conclusions of Tōdō and Tōyō's medical investigations did not depend in any substantive way on Sorai's political or philosophical doctrines, their epistemic affinities ran deeper than the mere appropriation of Sorai's rhetoric. These affinities were based on the analogous ways in which Sorai and Tōdō and Tōyō construed the relationship between contemporary knowledge, the objects of that knowledge, and historical traditions of learned discourse. This structural parallel between Sorai's social thought and Tōdō and Tōyō's medical ideas suggests that we should not see the latter as an expression of a straightforward empiricism in which the authority of texts was to be replaced by that of experience, but as one in which experience was to be used strategically in the affirmation, rejection and reinterpretation of textual evidence that had itself become open to re-evaluation through the methods of philological scholarship.

With the declining influence of Sorai's ideas in the second half of the eighteenth century, fewer doctors felt the same sense of a necessary connection between philological and empirical investigation that Tōdō and Tōyō had felt during the century's middle decades, and within a few years of their deaths the notion that the conclusions of philology would correspond precisely to those of

practical investigations began to seem increasingly implausible. Yamawaki Tōyō's son and heir Yamawaki Tōmon wrote disparagingly of Yoshimasu Tōdō as a doctor who had "followed after the epigones of Sorai and acquired a smattering of knowledge about ancient phraseology," apparently forgetting that the same might also have been said about his own father.[104] Doctors who had initially been enthusiastic about Ancient Formulas began to doubt that Zhang Zhongjing's formulas would offer a sufficiently broad range of therapies to cure the diseases that Japanese doctors encountered in practice. As we shall see in Part Two, even among those doctors who were most strongly influenced by the ideas of Ancient Formulas medicine, changing patterns of international and local circulation of medical ideas and practices led to changes in the prevailing views of the nature of medical knowledge and of the appropriate ways of relating classical texts to contemporary experiences.

[104] Yamawaki Tōmon, *Tōmon zuihitsu*, 1.

Part Two

Transmission, Secrecy and Medical Authority

Chapter 3

Medical Dialogues between Korea and Japan

We have so far been considering the development of Tokugawa medical knowledge primarily as it was recorded in written materials. However, although these written materials were an important medium for the dissemination of medical ideas and practices through space and time, reading books was widely acknowledged throughout the Tokugawa period to be an inferior substitute for the acquisition of medical knowledge through personal interactions with acknowledged masters of the art. In Part Two, we turn to examine how the ways medical knowledge was created and transmitted through networks of social interaction shaped the ways practitioners interpreted medical writings and put their medical learning into practice.

The twelve diplomatic embassies sent from Korea to Japan between 1607 and 1811 fulfilled a variety of functions in sustaining good relations between the two countries. During the early seventeenth century, Japanese and Korean rulers were seeking to rebuild peaceful relations following Toyotomi Hideyoshi's disastrous invasions of the peninsula between 1592 and 1598. The Korean court sought to obtain the repatriation of Koreans who had been brought back to Japan

as prisoners and to obtain information about a neighbouring country that had proven its potential for causing trouble, while the newly established Tokugawa shogunate sought to exploit the pomp and ceremony of diplomatic relations to bolster its own domestic legitimacy.[1] Over the course of the seventeenth century, the threat of military confrontation faded into the background and the embassies began to take on the character of a conventional diplomatic ritual; as a consequence, they were increasingly treated as valuable opportunities for cultural interaction and exchange.[2]

The journeys of Korean doctors who travelled to Edo in the entourage of Korean diplomatic embassies thus represented an unusual opportunity to discuss medical topics with doctors from outside Japan who were intimately familiar with traditional forms of East Asian medicine. Japanese doctors hoped to learn from the visiting Koreans about topics ranging from the interpretation of the Chinese medical classics to their knowledge about valuable drugs such as ginseng. However, the distinctive features of Japanese medical culture that emerged over the course of the eighteenth century, including Ancient Formulas and new approaches to the study of *materia medica* (*honzō* 本草), had no close counterparts in the medical culture

[1] Ronald P. Toby, *State and Diplomacy in Early Modern Japan: Asia in the Development of the Tokugawa Bakufu* (Princeton: Princeton University Press, 1984).
[2] On the cultural dimensions of the Korean embassies, see Ronald P. Toby, "Carnival of the Aliens: Korean Embassies in Edo-Period Art and Popular Culture," *Monumenta Nipponica* 41.2 (1986), 415–56; Burglind Jungmann, *Painters as Envoys: Korean Inspiration in Eighteenth-Century Japanese Nanga* (Princeton: Princeton University Press, 2004); Woobong Ha, "Sirhak in Late Choson Korea and Ancient Learning in Early Modern Japan from the Perspective of the History of Interaction," *Korean Studies* 30 (2006), 91–109.

of eighteenth-century Korea, and as a consequence both sides would experience considerable frustration in their attempts to engage in dialogue.[3]

Those traveling with the embassies typically included between four and five hundred Koreans, several hundred samurai from the Japanese domain of Tsushima, and several thousand individuals involved in transportation and provisioning.[4] At each stage along the six-month return journey of over two thousand miles, local scholars, artists, and doctors participated in entertainments involving eating, drinking, music, painting, poetic composition, and conversation on a wide variety of topics. From 1682 onwards, each of the Korean embassies included a Medical Expert (K. *yangŭi*, J. *ryōi* 良醫) to allow Japanese doctors to learn more about their art from elite Korean practitioners.[5] Earlier Korean embassies had included Medical Officers (K. *ŭiwŏn*, J. *iin* 醫員) to attend to the needs of Koreans who fell

[3] The foundations for the study of the medical brush talks were established by Miki Sakae in his comprehensive survey of Korean medical history and Yoshida Tadashi in his more focused study of the brushtalks themselves: see Miki Sakae 三木栄, *Chōsen igakushi oyobi shippeishi* 朝鮮医学史及疾病史 (Osaka: Miki Sakae, 1962), 311–18; Yoshida Tadashi 吉田忠, "Chōsen tsūshinshi to no iji mondō" 朝鮮通信使との医事問答, *Nihon bunka kenkyūjo kenkyū hōkoku* 24 (1988), 27–69. More recently, Korean historians have begun to take a renewed interest in the topic, comparing the medical brush talks with dialogues on Confucian scholarship (Kim Ho 金澔, "Chosŏn hugi t'ongshinsa wa Han-Il ŭihak kyoryu - p'ildamrok ŭl chungshim ŭro 朝鮮後期 通信使와 韓日 醫學 交流: 筆談錄을 중심으로," *Chosŏn t'ongsinsa yŏn'gu* 6 (2008), 35–71; Kim Ho, "1763-nyŏn gyemi t'ongsinsa wa Ilbon kohakp'a yuŭi Kamei Nanmei ŭi mannam - Chosŏnin ŭi nun e pich'in Edo-sidae sasanggye" 1763 년 癸未 通信使와 日本 古學派 儒醫 龜井南冥의 만남: 조선인의 눈에 비친 江戶時代 思想界, *Chosŏnsidaesa hakbo* 47 (2008), 83–119) and examining their significance as a publishing phenomenon (Hŏ Kyŏngjin, "Chosŏn ŭiwŏn ŭi Ilbon sahaeng kwa ŭihak p'ildamjip ŭi ch'ulp'an yangsang" 조선 의원의 일본 사행과 의학필담집의 출판 양상, *Korean Journal of Medical History*, 19.1 (2010), 137–56).

[4] Nakao Hiroshi 中尾宏, *Chōsen tsūshinshi: Edo Nihon no seishin gaikō* 朝鮮通信使：江戸日本の誠信外交 (Tokyo: Iwanami shoten, 2007), 114–22.

[5] Yoshida Tadashi, *Chōsen tsūshinshi to no iji mondō*, 29–32.

sick during the journey, but it was only after 1682 that medical dialogues became an important aspect of the embassies' cultural significance. The records of dialogues between Korean and Japanese doctors during the eighteenth century offer us an unusually direct view of the range of possible cultural and epistemic implications of early modern East Asian doctors' motion across national boundaries.

As Tashiro Kazui has pointed out, the initial request for the embassies to include Medical Experts probably came from Tsushima, a small island domain in the Korea Strait that because of its location had long acted as an intermediary between Korea and Japan for both trade and diplomacy.[6] The economy of the island was closely tied to its trade with the Korean peninsula, and the domain therefore maintained a permanent presence on the peninsula in the form of the Japan House (*waegwan* 倭館), a walled compound in the port of Pusan housing approximately five hundred Tsushima merchants and officials who engaged in a lucrative trade of Japanese silver for Korean ginseng and facilitated diplomatic communications.[7]

During the seventeenth century, doctors from Tsushima had often sought to receive instruction in medicine from Korean teachers, either by travelling to the Japan House or by studying with Korean doctors invited to Tsushima for this purpose. However, this latter possibility came to an end in 1678 after Tsushima

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[6] Tashiro Kazui 田代和生, *Edo jidai Chōsen yakuzai chōsa no kenkyū* 江戸時代朝鮮薬材調査の研究 (Tokyo: Keiō Gijuku Daigaku Shuppankai, 1999), 39–41.

[7] James B. Lewis, *Frontier Contact between Chosŏn Korea and Tokugawa Japan* (London: RoutledgeCurzon, 2003; Robert I. Hellyer, *Defining Engagement: Japan and Global Contexts, 1640–1868* (Cambridge, Mass.: Harvard University Press, 2009), 39–42.

attempted unsuccessfully to obtain permission for these Korean doctors to travel all the way to Edo.[8] When Tsushima subsequently petitioned for the inclusion of a Medical Expert in the diplomatic embassies, it was presumably hoping to partially mitigate the effects of the new restrictions and to ensure that a few Korean doctors would be able to transmit their learning to Japanese doctors in Tsushima and as far away as Edo. The bakufu itself took a close interest in the visits of the Korean Medical Experts and ensured that its own medical officials would have privileged access to them while they were residing in Edo. However, there were also numerous opportunities along the route for the Koreans to meet with Japanese doctors who did not occupy official medical positions.

The conversations between Korean and Japanese doctors were carried out through the medium of "brush talks" (*hitsudan* 筆談), a form of written communication peculiar to East Asia. Korean and Japanese interpreters accompanying the embassies were able to speak both languages, but few Korean or Japanese scholars were able to converse with each other through speech, and in the settings of ritual banquets and entertainments they communicated with each other almost exclusively through written classical Chinese, which they had typically studied from an early age and were able to read and write with some fluency. Because there was widespread curiosity about the embassies and because the written form of the brush talks lent itself easily to reproduction, the recorded

[8] Tashiro, *Edo jidai Chōsen yakuzai chōsa no kenkyū*, 36–46.

dialogue of the brush talks formed the basis for a genre of printed books produced by publishers in Kyoto, Osaka and Edo during the eighteenth century.

Hŏ Kyungjin has recently examined the surviving examples of published brush talks on medical topics and concluded that doctors and booksellers sought to publish their brush talk conversations as soon as possible after they had taken place in order to take advantage of this curiosity while it lasted.[9] One of the earliest surviving published medical brush talks, Kitao Shunpo's 北尾春圃 *Sōkan idan* 桑韓医談 (*Medical Conversations Between Japan and Korea*, 1711), may have helped to inspire the later development of the genre, but later published brush talks varied considerably in format. Some adhered closely to the original form of the brush talk conversations, incorporating poetic exchanges and small talk alongside questions and answers of medical interest; others were edited from the original sequence of the conversation into a more logical sequence of ideas and topics; others incorporated more extended questions and answers that were not "brush talks" at all, but were written out and answered separately from the meetings that took place in person. In all cases, however, the appeal of these books lay not only in the fact that they transmitted the substance of medical learning obtained through discussions with the Koreans, but also in the fact that their dialogue format conveyed to readers a qualitative impression of the experience of interaction with

[9] Hŏ Kyŏngjin, "Chosŏn ŭiwŏn ŭi Ilbon sahaeng kwa ŭihak p'ildamjip ŭi ch'ulp'an yangsang"조선 의원의 일본 사행과 의학필담집의 출판 양상, *Korean Journal of Medical History* 19 (2010), 137–156.

the Korean visitors themselves. These books thus reproduced in writing something of the immediacy of direct personal transmission of medical learning.

The broader significance of the Korean embassies remains a controversial subject. Ronald Toby has analyzed the response of Tokugawa society to the visiting Korean's exotic appearance and behavior and concluded that "through reenactment and representation, the alien embassy became permanent and omnipresent… It was an instrumentality for the construction of 'Korea'… and by extension it was a means for creating 'Japan'."[10] Burglind Jungmann has argued that the embassies played a significant role in facilitating exchanges of visual culture and painting styles between the two countries, while Fuma Susumu and Woobong Ha have shown that the embassies helped Korean scholars become aware of new styles of philological scholarship in Japan that contrasted strongly with the Korean orthodoxies of the period.[11] However, not all historians have taken a positive view of the embassies' role in promoting cultural exchange. Nam-lin Hur has argued that prejudices on both sides tended to hinder the development of genuine mutual comprehension, noting that "what [the visiting Koreans] observed, or tried to observe, in Tokugawa Japan was what they had taken for granted even before encountering the Japanese," and that the Japanese attitude that "Koreans had come thousands of miles in order to pay respect to the 'glorious authority' of the divine country" encouraged them to exploit available opportunities to demonstrate

[10] Toby, "Carnival of the Aliens," 423.

[11] Jungmann, *Painters as Envoys*; Fuma Susumu 夫馬進, "1764-nen chōsen tsūshinshi to Nihon no Soraigaku" 1764 年朝鮮通信使と日本の徂徠学, *Shirin* 89 (2006), 645–677. Woobong Ha, "Sirhak in Late Choson Korea and Ancient Learning in Early Modern Japan."

their own cultural superiority; he has thus proposed that we should see the frequent failures of these encounters to result in mutual respect or comprehension as rooted in a cultural dynamic of ethnic opposition and "heterophobia."[12]

In relation to the medical brush talks, it is perhaps most fruitful to regard these different perspectives as complementary rather than contradictory. Discussions of medicine were less ideologically charged than those concerning social and political issues or the interpretation of the Confucian classics, but they nevertheless reveal the inherent possibilities for both friendly dialogue and conflict that were latent in these transnational encounters. The nature of the conflicts that arose in the course of the medical discussions suggests that we should not be too quick to interpret Korean and Japanese scholars' willingness to write dismissively of their counterparts as primarily "ethnic" in character: as I shall argue below, their antagonisms arose less from ethnic prejudice than from the fact that the developments in Japanese medical culture that we have seen in the previous two chapters meant that elite Japanese doctors increasingly thought about medical knowledge in ways that were quite different from those of their Korean counterparts. When these two divergent cultures of medical knowledge came into contact through the embassies, participants on both sides could feel that their own culture was superior, not because of their ethnic status as "Korean" or "Japanese" but because of their different ideas about the essential features of medical learning. One of the unforeseen consequences of the medical brush talks was that the

[12] Nam-lin Hur, "Chosŏn Korean Officials in the Land of Tokugawa Japan: Ethnic Perceptions in the 1719 Korean Embassy," *Korea Observer* 38 (2007), 452, 461, 466.

participants came to develop a clearer understanding of their own assumptions concerning the nature of medical learning and the appropriate forms of medical practice.

Chinese Medicine, Korean Medicine and Japanese Medicine

During the seventeenth century, the elite doctors of Korea and Japan had shared a common set of assumptions based on the scholarly styles of East Asian medicine developed by Chinese doctors during the fourteenth and fifteenth centuries. Korean doctors, who had enjoyed ready access to Chinese medical books, had been able to familiarize themselves with these new medical ideas within a short period after their emergence in China; in Japan, however, these new ideas often arrived only after a long delay and it was not until the seventeenth century that this new style of scholarly medicine became widely adopted. Japanese doctors' discussions on medicine with the visiting Koreans were thus shaped by a conventional assumption that Japan had more to learn from Korea than Korea had to learn from Japan, an assumption that was not unique to medicine but was common to many areas of scholarly learning and which faded only gradually over the course of the eighteenth century as Japanese scholars and doctors began to develop a greater sense of pride in their own country's achievements.

When the Korean doctors arrived in Japan with the diplomatic embassies, Japanese doctors hoped to learn from them not only about their understanding and use of ideas and practices of cosmopolitan medicine derived from China, but also about forms of medical learning distinctive to Korea itself. Korean doctors had

been writing about "local medicines" (*hyangyak* 鄕藥) since at least as early as the thirteenth century, collecting and preserving their findings in compilations such as *Hyangyak kugŭppang* 鄕藥救急方 (*Prescriptions of Local Medicines for Emergency Use*, c.1236) and *Hyangyak chipsŏngbang* 鄕藥集成方 (*Standard Prescriptions of Local Medicines*, 1433). As Soyoung Suh has argued, this tradition of studying local medicines had enabled Korean doctors to develop a sense of local identity despite their continuing adherence to the fundamental doctrines of cosmopolitan medicine derived from China.[13] During the eighteenth century, knowledge of this Korean tradition also served as one source of inspiration for Japanese doctors who began to take an interest in the medical practices and medicinal products of their own country.

The Korean treatise that exerted the greatest influence on Tokugawa medicine, Hŏ Chun's *Tongŭi pogam* 東醫寶鑑 (*Precious Mirror of Eastern Medicine*, 1613), presented an epitome of late Ming medical learning but also incorporated descriptions of local Korean species, their medicinal uses, and their native names written out in the Korean phonetic script (*hangul*). When the Tokugawa bakufu sponsored the reprinting of the *Tongŭi pogam* in 1724, its primary aim was to provide a single convenient book on medicine for "doctors who lacked book collections," but the descriptions of Korean species also aroused considerable curiosity among Japanese herbalists.[14] This curiosity had begun to develop even before the

[13] Soyoung Suh, "Herbs of Our Own Kingdom: Layers of the 'Local' in the Materia Medica of Early Chosŏn Korea," *Asian Medicine: Tradition and Modernity* 4 (2008), 395–422.
[14] On the reprinting of *Tongŭi pogam*, see Yokota Fuyuhiko 横田冬彦, "Kinsei sonraku shakai ni okeru 'chi' no mondai" 近世村落社会における「知」の問題 *Hisutoria* 159

reprinting took place: within a few days of receiving a Korean edition of the *Tongŭi pogam* from Tsushima officials in 1718, the bakufu scholar Hayashi Hōkō had asked Tsushima to make use of its Korean contacts to find out more about the Korean species listed and about their differences from similar Japanese species.[15] After its reprinting in Japan, the *Tongŭi pogam* became the standard text through which Japanese doctors learned about "Korean" medicine, and a substantial proportion of their questions to visiting Korean doctors during the eighteenth century sought to develop a better understanding of its contents.

Throughout this period, Japanese doctors were also familiarizing themselves with the ideas contained in new Chinese medical books imported directly to Japan through Nagasaki and then published by commercial booksellers in Kyoto, Osaka and Edo.[16] These books included treatises by doctors who had lived through the calamitous epidemics of the late Ming dynasty and developed novel doctrinal conclusions and therapeutic strategies, such as Wu Youxing's *Wenyi lun* 溫疫論 (*Discourse on Warm Epidemics*, 1642) and Guo Zhisui's *Sha zhang yuheng* 痧脹玉衡 (*Jade Standard for Sand-Rashes and Swellings*, 1675); treatises that aimed to reconstruct the original content of ancient medical classics, such as Yu Chang's *Shanghan shanglun pian* 傷寒尚論篇 (*In Praise of the Shanghanlun*, 1648); and the *Yizong jinjian* 醫宗金鑒

(1998), 15 and Umihara Ryō 海原亮, *Kinsei iryō no shakaishi: chishiki, gijutsu, jōhō* 近世医療の社会史：知識・技術・情報 (Tokyo: Yoshikawa Kōbunkan, 2007), 28.

[15] Tashiro, *Chōsen yakuzai chōsa no kenkyū*, 63–71.

[16] Mayanagi Makoto 真柳誠, "Edo-ki torai no chūgoku isho to sono wakoku" 江戸期渡来の中国医書とその和刻, in *Rekishi no naka no yamai to igaku* 歴史の中の病と医学, ed. Yamada Keiji 山田慶児 and Shigehisa Kuriyama 栗山茂久 (Kyoto: Shibunkaku Shuppan, 1997), 301– 340.

(*Imperially Commissioned Golden Mirror of the Orthodox Lineage of Medicine*, 1749), which incorporated descriptions of previously unfamiliar techniques such as smallpox inoculation. The Korean doctors who visited Japan were rarely familiar with these books, and in response to questioning from Japanese doctors could only state apologetically that "the customs of our country mean that we are not familiar with the Chinese books of recent ages."[17]

Finally, one of the most important ways in which the Japanese medicine of the eighteenth century diverged from that of Korea was through the emergence of Ancient Formulas medicine. Although the most influential of the Ancient Formulas doctors were active primarily in Kyoto, by the second half of the eighteenth century these doctors' disciples had helped spread their ideas to all parts of Japan. The clinical practices and epistemological attitudes of Ancient Formulas medicine represented a radical departure from the earlier traditions of medicine that most Korean doctors still upheld, and as we shall see could sometimes become a source of disagreement and even conflict between the visiting doctors and their hosts.

Brush Talks in the Transmission of Medical Learning

For the Korean doctors accompanying the embassies, the medical dialogues were framed by the experience of several months of continuous travelling through Japan during which they gradually became familiar with the peculiar interests of Japanese doctors as they were asked to answer similar questions by different doctors along the route. The Japanese doctors had a very different perspective on these

[17] Niwa Seihaku 丹羽正伯, *Ryōtō hitsugo* 両東筆語 (manuscript in NKBK, 1748), 1:4a.

encounters, not only because they remained among their own familiar surroundings but also because their interactions with the Koreans typically came to an end after only a few days. Although the longer period of the embassies' stay in Edo made it possible to develop closer relationships with the Korean visitors and doctors in other parts of Japan might hope to meet with the Koreans during both the outward and the return journeys, Japanese doctors' experiences of these interactions were framed not so much by the context of the individual embassies' journeys to Edo and back as by the discontinuous accumulation of knowledge about Korean medicine over the course of multiple embassies.

For many Japanese doctors, the importance of the published records of earlier brush talk conversations as a source of information about Korean medicine was second only to that of Hŏ Chun's *Tongŭi pogam*, and several Japanese doctors in later embassies asked questions concerning the responses that had been given by earlier Korean Medical Experts. An example of this pattern of interaction can be seen arising from the response of Ki Tu-mun 奇斗文, the Medical Expert of the 1711 embassy, to a question from the Japanese doctor Kitao Shunpo concerning the illnesses *rōsai* 癆瘵 and *denshi* 傳屍, widely feared contagious diseases that could cause afflicted individuals to die either suddenly without warning or through gradual wasting away.[18] In response, Ki Tu-mun claimed that these diseases had existed in Korea in the past but were no longer found there in the present; he

[18] These disease categories were later assimilated to the Western disease category of tuberculosis: see William Johnston, *The Modern Epidemic: A History of Tuberculosis in Japan* (Cambridge, Mass.: Harvard University Press, 1995).

suggested that if it were necessary to treat these diseases, appropriate therapies could be derived from those of the Ming-dynasty Chinese doctor Yu Tuan 虞摶 (1438–1517).[19]

During each of the two subsequent Korean embassies, Japanese doctors asked the visiting Medical Experts for clarification of what Tu-mun had meant by these claims, and whether they believed he had been correct. In 1748, the Japanese doctor Kawamura Harutsune 河村春恒 sought to follow up on Ki Tu-mun's remarks by asking the Medical Expert Cho Hwal-am 趙活庵 whether there had been any changes in Korea during the intervening period, and Hwal-am gave a response quite different from Tu-mun's: he pointed out that because these diseases tended to occur in rural Korean villages and because doctors themselves were reluctant to approach afflicted patients, they generally knew little about these diseases' occurrence and treatment.[20] Yamaguchi Ansai 山口安斎 raised a different question when he met with the Medical Expert Yi Chwa-guk 李佐國 in 1764, asking how it was possible that Koreans could escape from a disease that Japanese doctors since ancient times had been unable to treat effectively. Was it because Koreans were endowed with stronger constitutions, or was it because of movements of *qi* or climatic factors? Chwa-guk replied that contrary to Ki Tu-mun's assertions, the disease was indeed present in all countries and had nothing to do with

[19] Kitao Shunpo 北尾春圃, *Sōkan idan* 桑韓医談 (1713), 1:6b–c.
[20] Kawamura Harutsune 河村春恒, *Sōkan i mondō* 桑韓医問答 (1748), 2:1a–2a.

movements of *qi* or climatic factors, and offered his suggestions for treatment.[21] Although consecutive embassies were typically separated by gaps of many years, the written form of the brush talks and their publication within Japan allowed each generation to pick up the conversations where their predecessors had left off.

The potential value of Korean doctors' journeys to Japan as a channel for the transmission of knowledge can be seen most clearly in discussions concerning the identification and characteristics of drug products and other plant and animal species. Japanese doctors practicing Chinese medicine often had to rely on herbal medicines imported from the continent, since not all of the ingredients of the formulas listed in Chinese treatises could be obtained from indigenous Japanese sources. Throughout the Tokugawa period, medicines imported from China and Korea represented a significant proportion of the total value of the drug trade within Japan.[22]

Japanese doctors possessed both a supply of these imported drugs and detailed written descriptions of medicinal species in Chinese treatises such as Li Shizhen's *Bencao gangmu*, but these descriptions could not convey the subtle variations in colour, tactile qualities, odour and flavor that were necessary to distinguish between drug varieties whose appearance was superficially similar but whose therapeutic value might be very different. It was only through the sorts of

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[21] Yamaguchi Ansai 山口安斎, *Wakan iwa* 和韓医話 (1765), 2:1b–2b.

[22] For example, Yamawaki Teijirō has noted that the total value of foreign medicines brought to Osaka in 1714 was nearly four times the value of Japanese medicines brought into the city in the same year: see Yamawaki Teijirō 山脇悌二郎, *Kinsei Nihon no iyaku bunka: Miira, ahen, kôhî* 近世日本の医薬文化：ミイラ、阿片、コウヒイ (Tokyo: Heibonsha, 1995), 235.

personal interactions that the Korean embassies' motion through Japan made possible that this type of knowledge could be effectively communicated, since the embassies gave Korean and Japanese doctors a rare opportunity to meet with each other not only to discuss the drugs that they used in their practice but also to view, touch, and taste them.

Kitao Shunpo presented a series of discussions on drugs at the very beginning of the published version of his brush talks with Ki Tu-mun in 1711, focusing primarily on the drug *shajin* 沙参 (Lilyleaf ladybell, *Adenophora*).[23] Shunpo first presented Tu-mun with a *shajin* root obtained in Japan from Chinese traders and asked to hear Tu-mun's opinion on the sample, since the Chinese naturalist Li Shizhen had written that *shajin* roots could be easily confused with those of ginseng or other species. In cases such as this, the problem of identification was especially severe because the commercially traded drug product consisted of the root alone, while other parts of the plant such as the stem, leaves, and flowers had been removed before shipment. Tu-mun declared that the root was indeed a sample of Chinese *shajin* after examining its visual appearance and chewing on it to assess its flavor.

In other cases, the Korean doctors could also present drug samples that they had brought with them from Korea to discuss with their Japanese hosts. A typical example of this type of interaction took place during the embassy of 1764, when the Medical Expert Yi Chwa-guk allowed the Japanese doctor Yamaguchi Ansai to

[23] Kitao Shunpo, *Sōkan idan*, 2a.

taste a sample of the highest grade of Korean ginseng that he had brought with him from Korea as part of his own personal drug collection.[24] By carrying this ginseng on his person as he travelled through Japan, Chwa-guk offered an implicit guarantee of its quality that would not have been associated with the commercially traded ginseng reaching Edo through the hands of intermediary traders, who were not carrying the drugs for their own personal use and whose claims about the quality of their products would naturally be subject to suspicion. The price for ginseng could vary substantially according to its supposed quality, and merchants might be tempted to modify the appearance of ginseng that they sold by soaking or trimming the roots; the further a commercial drug sample had travelled from its point of origin, the greater the suspicion that such an alteration might have taken place. The drugs carried by the Korean Medical Experts thus had a privileged epistemic status deriving from the unusual circumstances of their presence in Japan, which was all the more important because very few Japanese naturalists had the opportunity to travel beyond Japan to the countries where these drugs originated.

Ginseng

The Korean and Japanese doctors' discussions about ginseng offer a particularly revealing example of the ways that contrasting assumptions and attitudes towards different forms of textual and practical evidence could raise barriers to communication, even when such communication was seen as highly desirable. Ginseng was by far the most important of the several dozen varieties of

[24] Yamaguchi Ansai, *Sōkan i mondō*, 2:10a.

drugs imported to Tokugawa Japan from Korea.[25] During the final decades of the seventeenth century, Japanese consumption of imported ginseng had reached the point that the resulting outflow of silver became a major concern for the bakufu, and high ranking officials proposed that the bakufu should take active steps towards developing domestic sources of the drug either by searching for Japanese ginseng growing in the wild or by cultivating ginseng using seeds or seedlings imported from the continent.[26] Such a policy of promoting domestic ginseng production was not entirely unprecedented, but it did face formidable obstacles. Historical records from tenth century Japan indicated that "ginseng" had once been submitted as tribute to the Heian court from certain Japanese provinces, but it was far from certain that the species referred to in these records were not some other plant species that had been mistaken for ginseng. There had also been instances of the importation of ginseng seeds or seedlings to Japan during the first half of the seventeenth century, but for unknown reasons these early attempts at importation and cultivation failed to generate a self-sustaining domestic supply.[27]

The new effort to cultivate Korean ginseng did not begin in earnest until after the eighth shogun Tokugawa Yoshimune came to power in 1716. Tsushima domain officials managed to obtain Korean seeds and seedlings and sent these to

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[25] The standard work on the history of ginseng in East Asia remains Imamura Tomo's 今村鞆 magisterial seven-volume *Ninjinshi* 人参史 (Kyoto: Shibunkaku Shuppan, 1940).
[26] Ōishi Manabu 大石学, *Kyōhō kaikaku no chiiki seisaku* 享保改革の地域政策 (Tokyo: Yoshikawa Kōbunkan, 1996), 460–506; Kasaya Kazuhiko, "The Tokugawa Bakufu's Policies for the National Production of Medicines and Dodonaeus' Cruijdeboeck," in W.F. Vande Walle and Kazuhiko Kasaya, ed. *Dodonaeus in Japan: Translation and the Scientific Mind in the Tokugawa Period* (Leuven: Leuven University Press, 2001), 167–84, 175–80.
[27] Tashiro, *Chōsen yakuzai chōsa no kenkyū*, 28–29.

Edo on several occasions between 1721 and 1728, while the bakufu also sought to obtain seedlings of Manchurian ginseng from Chinese merchants in Nagasaki.[28] Several decades of sustained effort eventually resulted in success, and in 1746 the bakufu issued a decree allowing the sale of Japanese cultivated ginseng descended from the Korean seedlings obtained through Tsushima. Throughout this period, herbalists, medicine merchants, and bakufu officials had sought to learn all they could about ginseng, sending queries through Tsushima domain officials, questioning visiting Chinese doctors and merchants in Nagasaki, and posing questions to the Medical Experts and other Korean doctors who visited Japan in the retinue of the diplomatic embassies. Since ginseng on the continent was generally harvested wild rather than cultivated, these questions yielded few direct insights into cultivation methods, but Japanese doctors remained eager to learn more about the topic from visiting Koreans.

During their protracted investigations into the characteristics of local ginseng-like plants and the methods needed to cultivate imported ginseng varieties, Japanese doctors had become acutely aware that different growth conditions and processing methods could alter the appearance, flavor, and perhaps also the medicinal qualities of ginseng. "Flavor" had traditionally been regarded as a subtle intrinsic quality of drug substances that was not necessarily identical to the apparent flavor perceived by the tongue, but many doctors were inclined to suspect that a

[28] Imamura Tomo, *Ninjinshi*, vol. 4, 230–45.

difference in perceived flavor was also indicative of a difference in efficacy.[29] However, there were also obvious precedents that might have prompted eighteenth-century Japanese doctors to think about processing ginseng in order to alter its flavor. During the seventeenth century, a Chinese refugee from the Qing conquest had identified a Japanese species closely related to Korean ginseng (*Panax japonicus*, known as *chikusetsu ninjin* 竹節人参 ["bamboo-segment ginseng"] or *hige ninjin* 髭人参 ["whisker ginseng"]), and during the same period that some Japanese herbalists were seeking to cultivate Korean ginseng from imported seeds and seedlings, others were developing methods for processing native Japanese ginseng in an attempt to render its flavor and efficacy equivalent to that of the Korean product. Some medicine merchants were so confident in their processing methods that they falsely sold their processed Japanese ginseng as imported Korean ginseng or as Japanese cultivated Korean ginseng.[30] Conversely, Tamura Ransui 田村藍水 (1718–1776), who had been one of the key figures in the efforts to cultivate ginseng in Japan, thought that he could see faint imprints of binding, cloth texture and bamboo latticework on imported Korean ginseng roots, suggesting that these roots had been processed according to methods similar to those used for Japanese ginseng.[31] The Ancient Formulas physician Kagawa Shūan also argued for the value of ginseng processing methods, since he believed that the bitter flavor of

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[29] On "flavor" (C. *wei*, J. *mi* 味) as a quality of drug substances, see Carla S. Nappi, *The Monkey and the Inkpot: Natural History and Its Transformations in Early Modern China* (Cambridge, Mass.: Harvard University Press, 2009), 62–3.
[30] Imamura, *Ninjinshi*, vol. 2, 499–503.
[31] Tamura Ransui 田村藍水, *Ninjin wakumon* 人参或問 (undated manuscript in NKBK), 5a–b.

native Japanese ginseng varieties was only an incidental characteristic that did not affect their therapeutic usefulness but arose as a consequence of different methods of processing and cultivation; he therefore proposed that Japanese ginseng could be used effectively as a ginseng substitute if it were brewed together with liquorice root to balance the harshness of the flavor.[32] By the middle years of the eighteenth century, the differences between Korean ginseng, Chinese ginseng, and Japanese cultivated Korean ginseng, together with the pharmacological implications of different growth conditions and processing methods, had thus become subjects of widespread confusion and disagreement among Japanese doctors.

These differences among ginseng varieties were therefore obvious subjects about which to question visiting Koreans, who were generally more than willing to assume the role of experts on this topic. Shin Yu-han 申維翰 recorded that his Japanese hosts asked him about ginseng processing methods when he was visiting the country as Composer of Documents (*chesulgwan* 製述官) for the embassy of 1719.[33] When the embassy of 1748 was passing through Osaka on its way towards Edo, the Japanese doctor Naomi Genshū 直海元周 offered Cho Hwal-am a sample of Japanese ginseng to evaluate, but Hwal-am declared that although its overall appearance resembled ginseng, its bitter flavor and its pattern of striations meant that it was clearly something else.[34] Hwal-am faced similar questions from the doctors whom he met in Edo: Niwa Seihaku asked him about different varieties of

[32] Kagawa Shūan 香川修庵, *Ippondō yakusen* 一本堂薬選 (1734), 46b–f.
[33] Imamura, *Ninjinshi*, vol. 5, 124.
[34] Naomi Genshū 直海元周, *Hankei kantan* 班荊間譚 (1748), 1:8a–b.

ginseng and related plants, including those that grew in Japan and those brought to Japan by Chinese merchants, while Kawamura Harutsune tried unsuccessfully to persuade Hwal-am that his father had developed a method for processing bitter Japanese ginseng that did not make use of liquorice or other herbal drugs but nevertheless imparted a sweet flavor and physiological effects that were similar to those of imported Korean ginseng.[35]

Hwal-am seems eventually to have grown tired of having to repeat his criticisms of Japanese ginseng, for when the Osaka doctor Momota Kinpō asked him to evaluate a root of Japanese ginseng, he simply smiled and did not reply.[36] When the embassy was stopping in Osaka on its return journey from Edo, Hwal-am explained to Naomi Genshū why he thought that even Japanese cultivated Korean ginseng would be unlikely to have the same medicinal properties as true Korean ginseng: "Ginseng is not a thing that can be transplanted. In our country we have tried transplanting ginseng into gardens, but it soon decays."[37] Like the many doctors who continued to argue that ginseng imported from Korea was superior to that grown within Japan, Hwal-am believed that the potency of a drug was inseparably associated with the place and environment of its growth and that transplanting it to a new location meant that it could no longer be considered the same drug. Because of such beliefs, the bakufu's drug import substitution policies achieved only partial success in their attempt to reshape patterns of trade in medical

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[35] Niwa Seihaku, *Ryōtō hitsugo*, 1:3b–4a, 2:5b–8b, 3:3a; Kawamura Harutsune, *Sōkan i mondō*, 1:17b.
[36] Watarai Suenari 度会末済, ***Sōkan shōkōroku*** 桑韓鏘鏗録 (1748), 3:9a.
[37] Naomi Genshū, *Hankei kantan*, 2:8b.

goods; the types of motion involved in such trade were shaped by local environment and terrain in ways that were not easily altered.

Yet although Korean Medical Experts consistently sought to persuade their Japanese interlocutors that that genuine ginseng grew only in Korea and that it required no processing prior to its medicinal use, several Japanese doctors also recorded that the Koreans had eventually proven willing to pass on knowledge of "secret" processing methods. Kawamura Harutsune managed to persuade Cho Hwal-am to reveal his secret methods by claiming that his grandfather's disciple had received them from Ki Tu-mun in 1711 but that the written account of this method had subsequently been lost; he thus implied that it would not constitute a betrayal of secrecy for Hwal-am to transmit these methods to him once again. Although Harutsune did not publish a description of the "wonderful" secret method that Hwal-am transmitted to him, he noted that he had submitted this information to the bakufu in addition to keeping a copy at home.[38] The knowledge of these processing methods seems to have remained a closely guarded secret for some time afterwards, for Tamura Seiko 田村西湖 tried to employ a similar strategy to elicit knowledge of secret processing methods from Yi Chwa-guk during the embassy of 1764; this time, Seiko referred back to Cho Hwal-am's transmission of such methods to Kawamura Harutsune as a precedent. Chwa-guk at first denied that there were any such methods and insisted that the many Japanese doctors who had been asking him about them were simply mistaken, but in the face of persistent

[38] Kawamura Harutsune, *Sōkan i mondō*, 18a–b.

questioning he eventually relented and revealed his "secrets" to Seiko.[39] When Chwa-guk met with the precocious young scholar Yamada Tonan 山田図南 (1749–1787) just three days later, he once again sought at first to deny the existence of processing methods, but subsequently relented and revealed his "secret" methods to Tonan as well.[40]

All of these Japanese doctors wrote in the published versions of their brush talks that the transmission of secret methods had taken place, but they did not publish any information about the methods themselves, and it is thus difficult to know how to interpret these half-hearted attempts to maintain secrecy. Imamura Tomo has noted that there is indeed little evidence for the existence of processing methods in Korea during this period, and suggested that when Chwa-guk supposedly revealed his "secret method" to Tonan, he simply invented one in order to bring an end to Tonan's insistent questioning.[41] If there were indeed genuine secrets that might have allowed Japanese ginseng producers to compete with Korean ginseng producers on an equal basis, it is difficult to believe that the Korean Medical Experts would have been willing to allow their transmission; however, if the methods that the Korean doctors "revealed" were only minor variations on methods that were already well known, it is surprising that the Japanese doctors who received them would have sought to maintain such "secrets" by omitting the information from the published versions of their brush talks. It is

[39] Tamura Seiko 田村西湖, *Wakan idan* 倭韓医談 (1764), 1:10a–18b.
[40] Yamada Tonan 山田図南, *Sōkan hitsugo* 桑韓筆語 (1764), 4b–5a.
[41] Imamura, *Ninjinshi*, vol. 5, 124–5.

possible that the reason these Japanese doctors refused to make these secrets public was precisely that the secrets involved no genuinely new information: these doctors might have hoped to gain in reputation by claiming possession of secrets transmitted to them by foreign visitors, and once the Koreans had departed there was no risk that the emptiness of these secrets would be exposed. However, any such explanation must remain speculative in the absence of additional evidence.

In 1764, several Japanese doctors also asked the visiting Korean Medical Expert Yi Chwa-guk for his opinion concerning "Cantonese ginseng," an unusual ginseng-like root that Chinese merchants had been bringing to Japan since 1747. Although most Japanese doctors did not realize this at the time, this drug was in fact American ginseng (*Panax quinquefolius*), which had been harvested in the forests of North America and brought to China by French and British merchants as a trade good since 1727 and whose shipping to Nagasaki by Chinese merchants probably began not long afterwards.[42] The appearance and characteristics of American ginseng were close enough to those of traditional East Asian ginseng varieties that it seemed plausible that these drugs could perhaps be used interchangeably. However, the American ginseng was also falsely sold as Korean or Chinese ginseng and the pharmacological and legal status of Cantonese ginseng were thus highly controversial. Just a few months before the arrival of the Korean diplomatic embassy of 1764, the bakufu had issued a decree forbidding the sale of

[42] Michael Block, "New England Merchants, the China Trade, and the Origins of California" (PhD Dissertation: University of Southern California, 2011).

Cantonese ginseng, and this prohibition remained in place until 1788.[43] Yi Chwa-guk in any case flatly rejected the idea that this drug could be seen as equivalent to true ginseng, and suggested instead that it might be a variety of *shajin*.[44] Since most Japanese doctors at this stage already believed that Cantonese ginseng was distinct from Korean ginseng, Chwa-guk's expression of this opinion only served to confirm their existing suspicions.

Communication, Confrontation and Cultural Conflict

Although the embassies offered chances for personal interaction between Korean and Japanese doctors, the nature of the Koreans' journey through Japan could detract from the quality of cultural exchanges. Not only were the periods during which individual Japanese doctors could meet with the Korean doctors extremely brief, but the Korean doctors themselves were often suffering from physical exhaustion and the psychological strains of travel. Cho Hwal-am complained that his exposure to wind and dew during the sea journey from Korea had left him with a severe headache, damaged his spleen and stomach so that he had trouble eating and drinking, and left him unable to recover from his illness even after taking medicine for several days. The Japanese doctor Kan Dōhaku 菅道伯 expressed concern that Hwal-am's repeated meetings for brush talks were

[43] Imamura, *Ninjinshi*, vol. 2, 496–9; Hellyer, *Defining Engagement*, 74–75.
[44] Tamura Seiko, *Wakan idan*, 1:18a; Yamada Tonan, *Sōkan hitsugo*, 4b–5a.

delaying his recovery further, but Hwal-am pointed out that he was not in a position to refuse them.[45]

Yi Chwa-guk also fell ill during his journey through Japan, and this experience may have exacerbated his annoyance at the poor quality of Japanese medicines: towards the end of one evening's discussions with the Japanese doctor Tamura Seiko, Chwa-guk produced from his medicine box a sample of charred magnolia bark (*kōboku* 厚朴) obtained from Japanese drug merchants, and placing it alongside a sample that he had brought with him from Korea demanded that Seiko examine the two samples and state which one had been prepared correctly. Seiko expressed his own regrets for the fact that Japanese medicine merchants often over-processed the medicines that they sold and explained that competent Japanese doctors would never use such badly charred magnolia bark, but Chwa-guk nevertheless launched into a diatribe accusing Japanese doctors of paying attention only to writing and neglecting real practice.[46] Although Chwa-guk quickly apologized for this outburst, he made similar disparaging remarks in his brush talk with Yamada Tonan the following evening, claiming that Japanese doctors sought only to cultivate "talent" at the expense of "virtue."[47] However much these accusations may have been provoked by personal frustrations, they also expressed a sense of the deeper conflicts between the Korean visitors and their Japanese hosts that lay beneath the outwardly polite conventions of the brush talk meetings.

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[45] Kan Dōhaku 菅道伯, *Tairei hitsugo* 対麗筆語 (1748), 11b.
[46] Tamura Seiko, *Wakan idan*, 2:7a–10a.
[47] Yamada Tonan, *Sōkan hitsugo*, 5b–6a.

Despite their many shared interests and assumptions as practitioners of medicine within the broader East Asian tradition, these Korean and Japanese doctors nevertheless encountered each other not simply as individuals, but also as representatives of distinct medical cultures with different ideas about what it meant to be a doctor and what counted as medical knowledge.

Differences in social and political organization between Korea and Japan meant that elite Korean and Japanese doctors occupied quite different positions in their own respective societies, and thus had different assumptions about what doctors should know or how doctors should act. In Korea, where the political class was constituted by a *yangban* elite that reproduced itself socially and ideologically through civil service examinations based on the orthodox interpretations of the Confucian classics, doctors and other technical experts belonged to the intermediate *chungin* class. Although the top ranks of doctors were also required to pass examinations on a range of medical classics, their status was never as high as that of *yangban* scholars who mastered the study of Confucian learning.[48] High-ranking *yangban* scholars might also seek to become acquainted with medical learning, but this was a personal goal rather than one that formed part of their social and official functions. Tokugawa Japan never adopted a system of civil service examinations as a primary mechanism of controlling access to political power, and although the bakufu and domain lords encouraged the development of Confucian scholarship, the Confucian scholars whom they supported never

[48] Hŏ Chaehye 許在惠, "Ship-pal segi ŭi kyŏngjejŏk hwaldong yangsang" 十八世紀醫官의經濟的活動樣相, *Hanguksa yŏn'gu* 71 (1990), 85–107.

managed to establish themselves in a position of ideological dominance analogous to that of their counterparts in China and Korea and were often treated by default as just another class of technical expert.[49] Many of the Japanese scholars who defined themselves as "Confucians" (*ju* 儒) earned an income through the practice of medicine; at the same time, there was a widespread assumption that the education of elite doctors should extend beyond medical treatises to include a broad range of Chinese and Japanese classical learning, and the overlap between the social categories of doctors and Confucian scholars was thus much greater in Japan than in Korea.

As Kim Ho has pointed out, Korean visitors to Japan often remarked on these differences between the "scholarly paradigms" of the two countries.[50] When Shin Yu-han visited Japan in the retinue of the 1719 embassy, he noticed that the Japanese seemed to esteem doctors more highly than Buddhist monks or Confucians, and that Confucians who were unable to obtain positions as domain administrators often ended up employed in military or medical roles. As a consequence, many of the talented Japanese individuals with whom Yu-han interacted during his journey were doctors. Kim In-gyŏm 金仁謙, who visited Japan with the embassy of 1764, observed that whereas an examination system like that of China or Korea could allow talented individuals to take up political careers,

[49] Unoda Shōya 宇野田尚哉, "Jusha" 儒者, in *Chishiki to gakumon wo ninau hitobito* 知識と学問をになう人びと, ed. Yokota Fuyuhiko (Yoshikawa Kōbunkan, 2007), 17–43.
[50] Kim, "1763-nyŏn gyemi t'ongsinsa," 86.

the hereditary character of official employment in Japan meant that many such individuals ended up practicing medicine instead.

The comparatively greater extent to which Japanese doctors cultivated their literary abilities could become a source of embarrassment for visiting Korean doctors. In 1748, Cho Hwal-am apologized that he was not a literatus (K. *munsa*, J. *bunshi* 文士) and was unskilled with the brush, but he was nevertheless willing to engage in exchanges of Chinese poetry and even asked Noro Genjō to write out a Japanese poem (*waka* 和歌) in phonetic *hiragana* script.[51] In 1764, Yi Chwa-guk was more determined to avoid these sorts of literary exchanges and repeatedly declined invitations to engage in poetic exchanges: he insisted that since he was accompanying the embassy as a Medical Expert, poetic composition was beyond the scope of his skills and responsibilities.[52] On the other hand, Korean visitors did not shy away from expressing criticisms of the Japanese social and political order. In 1748, Cho Hwal-am asked Kan Dōhaku whether he was unaware of the harm caused by "feudalism" (K. *ponggŏn*, J. *hōken* 封建), alluding to the fact that in contrast to the more centralized political structures of China and Korea, much of Tokugawa Japan was governed by samurai houses with hereditary authority over territorial domains. Dōhaku deflected the question by claiming that it was an inappropriate topic for discussion between doctors, but he also advised Hwal-am to read Dazai

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[51] Noro Genjō 野呂元丈, *Chōsen hitsudan* 朝鮮筆談 (Manuscript in NKBK, dated 1748), 1:25b, 2:9b.

[52] Kamei Nanmei 亀井南冥, *Ōō yokyō* 泱々余響 (Manuscript in KyFC, dated 1764), 5b; Yamada Tonan, *Sōkan hitsugo,* 1b.

Shundai's essays on the topic of feudalism in order to understand why the Korean system was not necessarily superior.[53]

Discussions about drug materials and other plants and animals uncovered more fundamental differences between Japanese and Korean assumptions about the necessary qualifications for medical practice. These discussions concerned one of the fields of learning in relation to which the Japanese doctors held the greatest hopes for their encounters with visiting Koreans, but it was also the area in which they experienced their greatest disappointments. Following a series of meetings with members of the Korean embassy of 1719 that failed yield any substantial new insights into the species described in the *Tongŭi pogam*, one Tsushima domain official complained that Koreans were so concerned with passing their examinations that few of them took an interest in the sorts of practical questions that the Japanese had hoped to discuss with them.[54] In 1748, one of the first things that bakufu medical official Niwa Seihaku did upon meeting Cho Hwal-am was to present his Korean visitor with a list of names of Korean species that he had been unable to identify; Hwal-am promised to look over the list and to provide as much information as possible, but also added that "in our country, doctors and medicine gatherers are distinct. Doctors do not gather these things for themselves, so there is much that we do not know about these things." Seihaku pressed him further on the issue, insisting that doctors should at least have sufficient knowledge of *materia medica* to distinguish

[53] Kan Dōhaku, *Tairei hitsugo*, 6b.
[54] Tashiro, *Chōsen yakuzai chōsa no kenkyū*, 87.

between false and genuine samples of a drug, but in the end he obtained little of the information that he desired.[55]

In 1764, Yi Chwa-guk admitted in a brush talk conversation with Tamura Seiko that "our country's doctors do not gather drugs, but only read books and discuss principles."[56] Five days later, Yamada Tonan taunted a Korean official reputed to be knowledgeable about medicine with the accusation that his inability to identify plant species represented a departure from the medical customs of antiquity.[57] This official had declined to answer Tonan's question about the Korean name of the plant known in Japanese as *omoto* (*Rohdea japonica*), claiming that these sorts of questions were appropriate for people who gathered herbal medicines but did not lie within the scope of medicine itself. After a vigorous exchange of accusations and counter-accusations, the brush talk ended when the Korean official set aside his brush and began talking in Korean with Yi Chwa-guk (who had been standing to one side while this exchange took place), after which the two Koreans left the room without further comment.

The increasingly confident attitude that eighteenth-century Japanese doctors displayed in their interactions with the visiting Koreans stemmed in part from their pride in the distinctive achievements of the Ancient Formulas doctors.[58]

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[55] Niwa Seihaku, *Ryōtō hitsugo*, 1:2b–3b.
[56] Tamura Seiko, *Wakan idan*, 1:18a; cf. also 2:6a–b.
[57] Yamada Tonan, *Sōkan hitsugo*, 7a–8b.
[58] The development of quasi-nationalistic pride in the achievements of Ancient Medicine paralleled the slightly earlier development of pride in the scholarly and literary achievements of Itō Jinsai, Ogyū Sorai, Dazai Shundai and Hattori Nankaku, but with slightly different chronology. Ogyū Sorai's popularity within Japan was at its peak around the time of the 1748 embassy, when his style of scholarship featured prominently both in

In brush-talk discussions during the seventeenth and early eighteenth centuries, Japanese doctors had sought clarifications from the Koreans about their difficulties in understanding and applying the doctrines of the Song, Jin, Yuan and Ming dynasty treatises that doctors of both countries at that time regarded as fundamental to medical learning.[59] The earliest suggestion of the idea of Ancient Formulas arose in Kitao Shunpo's discussions with Ki Tu-mun in 1711, but Shunpo raised the question of doctors who "admire the Han and Tang and are not interested in the Song and Yuan" only in passing, and he did not identify these doctors as representing a distinctively Japanese phenomenon.[60] In 1748, the Osaka doctor Momota Kinpō asked Cho Hwal-am to comment on Korean doctors' use of sweating, vomiting and purging remedies, the typical therapeutic strategies of Japanese Ancient Formulas medicine; but after Hwal-am's reply that Korean doctors often used sweating and rarely used vomiting or purging, their discussion simply passed on to other topics.[61] When the embassy of that year reached Edo, Niwa Seihaku asked Hwal-am for his opinion on the relative merits of "scholarly medicine" (*gaku i* 學醫) and "formula medicine" (*hō i* 方醫), which was one way of formulating the difference between Ancient Formulas medicine and more

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the brush talk conversations themselves and in the prefaces to the published versions. By contrast, Ancient Medicine was in 1748 still at an early stage of its emergence as an important phenomenon, and did not begin to feature prominently in the brush talks 1764. For further discussion of this parallel, see Kim, "Chosŏn hugi t'ongshinsa."

[59] Yoshida Tadashi, "Chōsen tsūshinshi to no iji mondō," 32–40.

[60] Kitao Shunpo, *Sōkan idan*, 33a.

[61] Watarai Suenari, *Sōkan shōkōroku*, 1:4b.

traditional forms of scholarly medical practice, but Hwal-am declined to offer a definite response.[62]

It was not until the embassy of 1764, when many of the doctors who met with the visiting Koreans were advocates of Ancient Medicine, that this novel style of medical practice became a prominent topic in the brush talk discussions. The Koreans in this embassy first learned about Japanese doctors' new enthusiasms even before reaching the main islands of Japan when they stopped on the small island of Ainoshima and met with Kamei Nanmei 亀井南冥 (1743–1814), a young scholar and doctor who had returned the previous year from a brief period of study in Kyoto.[63] Despite his youth, Nanmei had already attained some distinction in his studies of classical scholarship and medicine, taken respectively under the scholar-monk Daichō 大潮 (1676–1768) and the Ancient Medicine doctor Nagatomi Dokushōan. Throughout the Koreans' stay on Ainoshima, Kamei Nanmei exchanged poems with the Korean visitors and discussed various scholarly matters. In response to questioning by one member of the Korean party, Kamei Nanmei enumerated the remarkable medical books that Japanese doctors had produced in recent years: Yamawaki Tōyō's *Zōshi* 蔵志 (*Record of the Organs*, 1759) and *Yōjuin isoku* 養寿院医則 (*Principles of Medicine*, 1751), Kagawa Shūan's *Ippondō yakusen* 一本堂薬選 (*Selected Pharmaceuticals*, 1731–1738) and *Ippondō kōyo igen* 一本堂行余医言

[62] Niwa Seihaku, *Ryōtō hitsugo*, 3:4b.
[63] Yoshida Yōichi 吉田洋一, "Kamei Nanmei no igaku shisō" 亀井南冥の医学思想, *Yōgaku* 8 (1999), 1–21; Fuma, "1764-nen chōsen tsūshinshi"; Kim, "1763-nyŏn gyemi t'ongsinsa."

(*Remarks on Medicine*, 1788), and Nagatomi Dokushōan's *Tohō kō* 吐方考 (*Investigations into Vomiting Formulas*, 1763) and *Man'yū zakki* 漫遊雑記 (*Miscellaneous Notes on Roaming at Leisure*, 1764). These were very recent works, some still unpublished and circulating only in manuscript at the time of the embassy, and when the Koreans encountered this unfamiliar style of medical thought they were often quick to reject it. When the embassy was passing through Osaka the following month, the Medical Officer Nam Ch'u-wŏl commented after leafing through a copy of Yamawaki Tōyō's *Zōshi*: "The scholars of your country are fond of spouting forth strange ideas, but I did not know that you also have strange intestines. In our country, we consistently follow the old rules of the Yellow Emperor and Qibo, and we do not seek new doctrines. To know these things by cutting is the behavior of a fool, but to know these things without cutting is the ability of a sage — do not be confused about this!"[64]

It was also while the Koreans were staying on Ainoshima that Yi Chwa-guk first encountered the aggressive empiricism and scepticism that were characteristic of the Ancient Medicine doctors' epistemology and rhetoric. Kamei Nanmei explained to Chwa-guk that during the previous thirty years a group of Japanese doctors had revived the methods of Ancient Medicine, taking Zhang Zhongjing's *Shanghanlun* as a model and relying exclusively on the three therapeutic methods of sweating, vomiting and purging; Chwa-guk agreed that emulation of Zhang Zhongjing was a worthy aim, but objected to the idea that the medical art could be

[64] Kitayama Kitsuan 北山橘庵, *Keidan ōmei* 鶏壇嚶鳴 (1764), quoted in Yoshida, "Chōsen tsūshinshi to no iji mondō," 58.

restricted to these three methods alone. Nanmei stood firm in his assertion that these three methods were the only legitimate therapies, but admitted that Japanese doctors had great trouble treating certain illnesses, such as *tenkan* 癲癇 (seizures), *rōsai* 勞瘵 (phthisis), and *kakuitsu* 嘔噎 (dysphagia), and he asked whether Chwa-guk could tell him of any formulas that in his experience had proven effective.

The thrust of Nanmei's question lay in his use of the term "experience" (*keiken* 経験) but Chwa-guk missed its significance and gave an answer based primarily on textual sources: he distinguished between depletion seizures, repletion seizures, and seizures associated with different internal organs and viscera, and contrasted the easily treated *yang* seizures, which occurred once or twice daily, with the much less easily treatable *yin* seizures, which occurred just two or three times each month. When Nanmei politely asked if Chwa-guk could clarify his use of these terms, Chwa-guk merely repeated the standard doctrine that *yin* and *yang* syndromes could be distinguished by pulse diagnosis—rapid and full pulses corresponded to *yang* syndromes, while slow and depleted pulses corresponded to *yin* syndromes—and Nanmei was unimpressed: "In that case, you are saying that when seizures occur once or twice a day, the pulses should be rapid and replete, but when the seizures occur once or twice a month, the pulses should be slow and depleted. But if you examine this against the facts, it isn't necessarily true." Chwa-guk had no

response to this line of reasoning, and after an awkward pause he diverted the conversation towards a discussion of pharmacological topics.[65]

A similar failure to engage in productive interactions can be seen in Chwa-guk's conversations with the Japanese doctor Yamaguchi Ansai on the topic of epidemic diseases. Yamaguchi Ansai's understanding of these diseases was shaped by the writings of seventeenth-century Chinese doctors, including Wu Youxing's *Wenyi lun* 溫疫論 (*Discourse on Warm Epidemics*, 1642) and Guo Zhisui's *Shazhang yuheng* 痧脹玉衡 (*Jade Standard for Sand-Rashes and Swellings*, 1675); these Chinese writers had rejected earlier ways of explaining epidemics in terms of malign conjunctions of calendric and celestial factors, and had proposed instead that epidemics were caused by miasmas (C. *liqi* 厲氣) that entered the body through the nose and mouth.[66] Ansai asked Chwa-guk about these diseases, their physiology, and their treatment, and alluded repeatedly to his own assumption that these diseases arose from miasmatic causes, but Chwa-guk apparently failed to notice Ansai's use of miasmatic terminology and offered answers based on the assumption that they arose from calendric conjunctions.[67]

Korean doctors were certainly aware of miasmatic explanations for epidemic disease. In 1748, Cho Hwal-am had alluded to miasmatic ideas in his responses to questions from Kawamura Harutsune, although he did not necessarily

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[65] Kamei Nanmei, *Ōō yokyō*, 5a–7a. For further remarks by Kamei Nanmei on sweating, purging and vomiting, see Kamei Nanmei, *Kokonsai iroha uta* 古今斎伊呂波歌 (1839), 6b–7b.

[66] Marta Hanson, *Speaking of Epidemics in Chinese Medicine: Disease and the Geographic Imagination in Late Imperial China* (London: RoutledgeCurzon, 2011).

[67] Yamaguchi Ansai, *Wakan iwa*, 1:4a.

adhere to them consistently.[68] The fact that Ansai and Chwa-guk failed to engage in any substantial discussions on this topic suggests that the circumstances of their meeting were not conducive to recognizing or acknowledging their differences of opinion, and the episode highlights the limitations of these brush talks as a medium for intellectual exchange. The restricted duration of the interactions between Japanese and Korean doctors and the framing of their interactions through the conventions of diplomatic ritual all tended to discourage them from addressing their differences in ways that might have facilitated productive resolutions.

Conclusion

Historians have sometimes assumed that brush talks between Korean and Japanese doctors were an important mechanism for the exchange of medical knowledge, but there is little evidence that these meetings had any lasting impact on medicine in either country.[69] Despite the potential that these encounters between Korean and Japanese doctors seemed to hold for the exchange of ideas and for the transmission of new learning, the conflicting expectations of the Japanese and Korean participants and the restricted duration of their interactions meant that these meetings often failed to live up to their promise. The Korean Medical Experts were unable to answer many questions on the topics of greatest interest to their Japanese hosts, and despite outward displays of respect for their Korean guests

[68] Kawamura Harutsune, *Sōkan i mondō*, 2:1b–2a, 32a–b.
[69] For an example of claims that the Korean embassies were important for the transmission of medical knowledge to Japan, see Nakao Hiroshi, *Chōsen tsūshinshi*, 173–5.

many of the Japanese doctors placed little value on the types of medical learning that the Korean Medical Experts had cultivated at home.

It might thus seem plausible to regard these meetings as little more than an element of the pageantry that accompanied the motion of the Korean embassies across Japan: just as the early Tokugawa bakufu exploited diplomatic relationships to consolidate its own domestic legitimacy, eighteenth-century Japanese doctors sought to transform their meetings with Koreans into a strategy to gain respect among their own peers, and this goal did not always lead to productive intellectual exchange. Nevertheless, the Korean embassies provided an unusual set of opportunities for Japanese doctors to understand their own country's medical culture through interactions with their Korean contemporaries. They articulated this understanding gradually, through a series of brief personal encounters that were separated by intervals of many years and whose experience was transmitted from one generation to the next through manuscript and printed records of brush talk conversations.

Japanese doctors' desire to acquire useful medical learning from the visiting Koreans was often thwarted by unanticipated barriers to communication, ranging from the Koreans' unfamiliarity with the types of knowledge that the Japanese doctors sought to acquire to their unwillingness to disclose knowledge that they regarded as secret and the difficulty for Japanese and Korean doctors, despite their shared familiarity with the broader East Asian tradition of medicine, of coming to terms with the different ways that tradition had developed in their respective countries. Direct personal interactions did not necessarily ensure the effective

transmission of medical knowledge if those interactions was not accompanied by the appropriate cultural, social and institutional conditions for such transmission. Such conditions could much more naturally be found in the case of doctors living and practicing within Japan than in the case of visitors who were present in the country only for a limited period. In the next chapter, we will see how social conditions within Japan could promote the successful acceptance and transmission of a distinctive body of ideas and practices associated with a single lineage, the successful dissemination of which depended on the development of lineage authority through means that were unavailable to the Korean visitors.

Chapter 4

Secrecy, Openness and Lineage Authority

The Ikeda smallpox doctors emerged from obscure origins in the Western Honshū domain of Iwakuni to become recognized as the foremost specialists on smallpox medicine in Japan during the first half of the nineteenth century. First in Osaka and Kyoto and later in Edo, they exploited and adapted the learning that they had inherited from earlier members of their lineage, attracting patients and disciples from all regions of the country. For much of the eighteenth century, the Ikeda doctors had claimed that their authority derived from their possession of certain secret techniques, but in the early nineteenth century they underwent a gradual transition from secret to public modes of transmission. This transition was marked both by their transmission of their lineage's learning to individual disciples and by their increasing willingness to embrace woodblock printing as a means for the textual dissemination of their lineage's learning. Yet despite this shift towards greater openness in the transmission of their learning, the Ikeda doctors never made

fully public the details of the learning that they associated most closely with their lineage's earlier history.

The secret and public teachings of the Ikeda lineage were distinct not only in their modes of transmission but also in their clinical emphases. Despite the tendency towards greater openness in the dissemination of medical knowledge, it was partly this distinction in clinical emphasis between the Ikeda doctors' secret and public techniques that allowed them to maintain their status as a lineage until the disruptions of the final years of the Tokugawa period. To understand how the Ikeda doctors maintained this pattern of distinction even while the basis of their authority shifted from their possession of secret teachings to their mastery of public knowledge, we first need to examine how they built this authority while moving through a diverse series of social environments in the late eighteenth and early nineteenth century.

The Formation of the Ikeda Lineage

As we have seen in the previous chapter, Tokugawa doctors placed great value on the direct transmission of medical knowledge through personal contact with physicians from the continent. Despite the eighteenth-century decline in admiration for the supposedly superior medical learning of Chinese and Korean physicians among sections of the Japanese medical elite, the initially peripheral Ikeda doctors emphasized their ancestor's personal contact with a seventeenth-century Chinese visitor to Japan as one of the major sources of the authority of their learning. The Ikeda doctors claimed that their distinctive techniques for diagnosis

and treatment of smallpox had been transmitted to their ancestor Ikeda Masanao 池田正直 by Dai Mangong 戴曼公 (1596–1672), a Chinese scholar who had fled the Manchu conquest of the Ming, migrated to Japan and become a monk in the Ōbaku sect of Zen Buddhism. The Ikeda doctors counted relics associated with Dai Mangong among their most cherished possessions: a Chinese-style portrait, a copy of Li Shizhen's *Bencao gangmu* containing Dai Mangong's annotations, and a number of old medical books printed in China during the Wanli period (1573–1619).[1] The Ikeda doctors and their students also continued to stress their links with the Ōbaku sect, sponsoring the erection of a monument to Dai Mangong near the main Ōbaku temple of Manpuku-ji to the south of Kyoto.

However, there is reason to be sceptical about the historicity of these supposed origins. Seventeenth-century primary sources documenting Dai Mangong's medical activities offer no hint that he was known for a particular ability in the treatment of smallpox.[2] The earliest references to Dai Mangong's smallpox therapies date to the late eighteenth century, and all of these sources derive from the Ikeda lineage itself. It is possible that Dai Mangong's techniques of smallpox medicine were indeed a very well-kept secret, but it is more likely that the Ikeda doctors chose to attribute their techniques to Dai Mangong to gain the prestige associated with transmission of their learning through direct personal contact with a

[1] "Dai Mankō den" 戴曼公伝, in *Ikeda monjo* 池田文書, 36b–37a; *Kansei kōshin kakiage* 寛政庚申書上, 34b; Ikeda Kinkyō, *Tōka ben'yō* 痘科辨要 (1811), Preface, 1a–b.

[2] On the inconsistencies in the evidence regarding Dai Mangong and the early history of the Ikeda lineage, see Ishimura Kiei 石村喜英, *Fukami Gentai no kenkyū* 深見玄岱の研究 (Tokyo: Yūzankaku, 1973), 446–7.

Chinese practitioner. The true origins of the techniques and treatises on smallpox medicine that the lineage would later attribute to Dai Mangong remain unclear, and despite the symbolic importance for the lineage of their claimed connection with Dai Mangong, the beginnings of the lineage's reliably documented history start at that time of Ikeda Masanao's great-grandson Ikeda Kinkyō 池田錦橋 (1735–1816).

Ikeda Kinkyō's life was punctuated by a series of movements that brought him progressively from his original home in Iwakuni to the bakufu-sponsored Igakukan in Edo.[3] Kinkyō lost his father at the age of seven, and an uncle took responsibility for his study of the lineage's techniques of smallpox medicine; at the same time, he also took lessons in general medicine, surgery and "secret Dutch formulas" (*oran no hihō* 阿蘭之秘方) from Kuwabara Genchū 桑原玄忠, a doctor in the service of the Kikkawa lords of Iwakuni domain.[4] This additional medical training would have been particularly useful for Kinkyō while he was living in Iwakuni, where the local practice of quarantining smallpox patients meant that cases of smallpox were rare and he would have needed to make a living by treating

[3] The principal source for Ikeda Kinkyō's early life is the biography compiled by his successor Ikeda Mukei 池田霧渓, *Ikeda-kun gyōjō* 池田君行状, repr. in *Jijitsu bunpen* 事實文編, ed. Gokyū Tomotarō 五弓友太郎, vol. 45 (Tokyo: Hayakawa Junzaburō, 1911), 1–6. I have also made use of the biographical and genealogical sources preserved in the Ikeda family and collected by Mori Ōgai 森鴎外 while researching his historical narrative *Izawa Ranken* 伊沢蘭軒, repr. in *Ōgai zenshū* 鴎外全集, vol. 17 (Tokyo: Iwanami shoten, 1973). Mori Ōgai's materials relating to the Ikeda family can be found in three volumes preserved in the Ōgai archives at Tokyo University: *Ikeda-shi jiseki* 池田氏事跡, *Ikeda monjo* 池田文書 and *Ikeda Keisui monjo* 池田京水文書.

[4] Ikeda Mukei, *Ikeda-kun gyōjō*, 1a. The nature of these "Dutch methods" is unclear, and I have found no obvious trace of European medical ideas in any of Ikeda Kinkyō's published writings.

other illnesses. In 1762 he decided to move to the nearby island of Itsukushima, where occasional smallpox epidemics meant that in addition to practising the arts of surgery learned from Kuwabara Genchū, he could also practice his own lineage's techniques of smallpox medicine.[5] After a little more than a decade in Itsukushima, Kinkyō moved to take up residence in Osaka, where the high population density would have made smallpox epidemics even more frequent; but after fifteen years of living in this bustling commercial metropolis he grew tired of the noise and dust, and in 1792 he moved once again to Kyoto. Within a few years his reputation had reached Edo, and in the twelfth month of 1796 he received a summons from the bakufu to serve as the first smallpox specialist at the recently restructured Igakukan 医学館.

The Igakukan had originally been established in 1761 as a private institution under the direction of Taki Mototaka 多紀元孝 (1695–1766), a high-ranking doctor who traced his lineage back to the illustrious Tanba doctors of the Heian period.[6] The bakufu took over the Academy as an institute for training its own medical officials in 1791, with members of the Taki lineage continuing to serve as directors. The organisation of the Igakukan and the appointment of official doctors by the bakufu were based on the assumption that specialisation could allow doctors to treat their patients more effectively. After the Academy's transition to official status, a number of specialists from around Japan were summoned to give lectures

[5] Ikeda Kinkyō, *Tōka ben'yō*, Preface, 1b; Ikeda Mukei, *Ikeda-kun gyōjō*, 1b.
[6] Machi Senjurō 町泉寿郎, "Igakukan no gakumon keisei. 1. Igakukan seiritsu zengo" 医学館の学問形成（一）医学館成立前後, *Nihon ishigaku zasshi* 45.3 (1999), 339–372.

at the Academy: Yamazaki Sōun 山崎宗運 was summoned to the Academy as a specialist in acupuncture in 1792, Katsuragawa Hoshū 桂川甫周 (1751–1809) as a specialist in Dutch-style surgery in 1793, Ogino Gengai 荻野元凱 (1737–1806) as a specialist in the treatment of "warm epidemics" (*on'eki* 温疫) in 1798, and Ono Ranzan 小野蘭山 (1729–1810) as a specialist in *honzō* in 1799.[7] Not long before the bakufu summoned Ikeda Kinkyō to Edo, the bakufu had also endorsed the value of specialisation by demanding that its medical officials practise only in the specialities of their own lineage, on the grounds that repeatedly switching among different fields of practice would compromise doctors' mastery of their own fields.[8]

Before Ikeda Kinkyō began lecturing at the Igakukan in 1797, techniques for the diagnosis and treatment of smallpox had not formed a prominent part of the curriculum. Smallpox medicine had emerged as a distinct field of practice in China as early as the Ming dynasty, and the most influential treatises on smallpox medicine in Tokugawa Japan were those by Ming doctors such as Wei Zhi 魏直, Sun Yikui 孫一奎 (1522–1619), Xue Ji 薛己 (1487–1559), Nie Shangheng 聶尚恆, Weng Zhongren 翁仲仁 and Wan Quan 萬全 (1495–1580).[9] These doctors'

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[7] Machi Senjurō 町泉寿郎, "Igakukan no kiseki: kōshō igaku no kyoten keisei wo megutte" 医学館の軌跡：考証医学の拠点形成をめぐって, *Kyōu* 7 (2004), 40.

[8] Mori Junzaburō 森潤三郎, *Taki-shi no jiseki* 多紀氏の事蹟 (Tokyo: Nihon Ishigakkai, 1933; repr. Tokyo: Ōzorasha, 1998), 201; Fujikawa Yū 富士川游, "Isha no fūzoku" 医者の風俗, repr. in *Fujikawa Yū chosakushū* 富士川游著作集, ed. Fujikawa Hideo 富士川英郎, vol. 3 (Kyoto: Shibunkaku Shuppan, 1982), 17.

[9] For further details on the history of Chinese smallpox medicine, see Chia-Feng Chang, "Aspects of Smallpox in Chinese History" (Ph. D. thesis, School of Oriental and African

writings had been imported to Japan and reprinted during the seventeenth and eighteenth centuries, and formed the basis for the discussions in specialised treatises on smallpox by Japanese doctors such as Katsuki Gyūzan 香月牛山 (1656–1740), Hori Genkō 堀元厚 (1686–1754) and Tachibana Nankei 橘南谿 (1753–1805).[10] Yet in 1794, knowledge of specialised smallpox treatises was regarded as sufficiently unusual that one examiner at the Igakukan expressed surprise and admiration upon discovering one young student's ability to refer accurately to Nie Shangheng's treatise on this topic.[11] Tokugawa doctors were aware of the standard Chinese treatises on smallpox medicine but did not generally consider them to form a fundamental component of medical education; still less did they consider smallpox medicine as a viable field of specialisation. The decision to appoint Kinkyō as a specialist in smallpox medicine was presumably prompted by a combination of the perceived importance of smallpox as a disease, the general tendency to favour medical specialisation, and by the positive reports that were reaching Edo of Kinkyō's activities in Kyoto.[12] Kinkyō's arrival at the Igakukan was thus simultaneously a recognition of the importance of smallpox medicine as a field of

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Studies, 1996); Xiong Bingzhen 熊秉真, *An yang: jinshi Zhongguo ertong de jibing yu jiankang* 安恙：近世中國兒童的疾病與健康 (Taipei: Lianjing chuban shiye gongsi, 1999), 223–300.

[10] Fujikawa Yū 富士川遊, *Nihon shippeishi* 日本疾病史 (Tokyo: Heibonsha, 1969), 112.

[11] Machi Senjūrō 町泉寿郎 and Tode Ichirō 戸出一郎, "Kansei kōin kōshi shorui sanshu" 寛政甲寅考試書類三種, *Nihon ishigaku zasshi* 50.3 (2004), 437.

[12] Katakura Kakuryō, a prominent Edo physician who was a personal disciple of the Taki doctors, recorded that he had drafted his own treatise on smallpox medicine but discarded the manuscript after reading a copy of a 'secret' Ikeda treatise brought back from Kyoto by one of his own students; he thereafter instructed his own disciples to familiarise themselves with the teachings of the Ikeda lineage: see Katakura Kakuryō 片倉鶴陵, *Seinō satan* 青嚢瑣探 (1801), 1:32b.

learning and practice, of Kinkyō's personal skills as a practitioner and as a teacher, and of the value of his learning. Because Kinkyō's learning was associated not only with Kinkyō as an individual but also with his lineage as a whole, his successors Ikeda Keisui and Ikeda Mukei would also continue to enjoy the benefits of association with the Igakukan after Ikeda Kinkyō's death in 1816.

Ikeda Keisui 池田京水 (1786–1836) was the son of Kinkyō's brother Ikeda Genshun 池田玄俊, who had moved from Iwakuni to Kyoto at around the same time that Kinkyō moved to Osaka.[13] Keisui's mother had died while giving birth to him, and since Kinkyō had a wife and daughter but no sons of his own, he adopted his nephew as his heir. When Kinkyō answered the bakufu summons to the Igakukan at the beginning of 1797, Keisui followed his adopted father to Edo after a ten-month delay, but he abandoned his claim to the lineage succession shortly afterwards, at the age of fifteen. In 1803, Keisui's status as Kinkyō's heir was officially revoked on the grounds that his poor health made him ill-suited for the rigors of medical practice. However, the claim that Keisui suffered from poor health seems to be contradicted by the vigour with which Keisui began to practice medicine soon afterwards, and by his success at attracting his own disciples during a period spent in the nearby province of Kai.[14] One friend of Keisui later wrote that Keisui had been brilliant as a student but that his "unbridled character" had made him unacceptable as an heir.[15] However, according to a manuscript account passed

[13] Mori, *Izawa Ranken*, 478–87.
[14] Ikeda Mukei, *Ikeda-kun gyōjō*, 5b; *Kansei kōshin kakiage*, 35a. cf. Mori, *Izawa Ranken*, 490–1.
[15] Ikeda Keisui, *Tōkaken kaitsū* 痘科鍵会通 (1825), Preface by Yoshida Tei 吉田禎, 1a.

down in private by Keisui's descendents, Keisui had been the victim of plotting between Kinkyō's third wife Sawa and his disciple Sasagi Bunchū 佐々木文仲.[16] This private account is difficult to confirm or refute, but it is consistent with the fact that Keisui's replacement as Kinkyō's heir had at one point been a disciple of Sasagi Bunchū; after his adoption by Ikeda Kinkyō, this disciple took on the name Ikeda Mukei.

Ikeda Mukei 池田霧渓 (1784–1857) had been born into the Muraoka family of Kōzuke province, but came to Edo at an early age to begin training under Ikeda Kinkyō.[17] Lingering doubts about the appropriateness of Mukei's designation as heir may have influenced Mukei's composition of Kinkyō's biography, which placed heavy emphasis on Kinkyō's alleged deathbed declaration that among his hundreds of disciples, only Mukei was worthy to be his successor.[18] It is unclear to what extent Keisui and Mukei eventually resolved the tensions in their relationship: some animosity between the two may have persisted throughout their lives, but in the end both won recognition for their efforts to carry on and extend Kinkyō's legacy, and both played similar roles in continuing to disseminate knowledge about Ikeda smallpox medicine during the first half of the nineteenth century.

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[16] The contents of this manuscript were first made public by Mori Ōgai more than six decades after Keisui's death: see *Izawa Ranken*, 486–90. In this manuscript, Keisui also alluded to another work in which he had recorded a more detailed account of what had happened, but this work has not survived.

[17] *Sensogaki* 先祖書, 24a.

[18] Ikeda Mukei, *Ikeda-kun gyōjō*, 5b–6a.

Patients, Patrons and Disciples in the Construction of Lineage Authority

The development of the Ikeda lineage's reputation was simultaneous with their integration into a variety of rural and urban social networks that included patients and their families, eminent patrons, and an expanding circle of disciples. During Ikeda Kinkyō's early years, smallpox epidemics provided important opportunities to build a reputation and to win allies, but after the Ikeda doctors established themselves in the Igakukan, their social position became less dependent on such fortuitous occurrences as they won enduring patronage arrangements from prominent members of the political hierarchy. At the same time, the lineage's growing network of disciples transmitted its teachings and extended its reputation throughout all regions of Japan.

Smallpox epidemics allowed Ikeda Kinkyō to attract large numbers of patients within a brief span of time, and helped him to establish his reputation each time he relocated to a new environment. This pattern repeated itself several times during Kinkyō's career following his moves to Itsukushima, Osaka, Kyoto, and finally Edo. Kinkyō claimed that he did not discriminate among patients on the basis of social status, and his recorded cases ranged from a blind Kyoto masseur to the offspring of Edo's political and scholarly elite.[19] Although the number of surviving case records is too small to draw firm conclusions, it appears that Kinkyō's final move to Edo allowed him to attract increasing numbers of patients from the upper reaches of the social hierarchy: he was summoned to treat the

[19] Ikeda Kinkyō, *Tōka ben'yō*, Appendix, "Ishō chiken jūichi jō" 異証治験十一条.

daughter of one prominent daimyo just five days after his arrival in Edo, even before he had given his first lecture in the Igakukan.[20]

During these epidemics, patients' families called on Kinkyō in the hope that he would be able to effect a cure, but even in the many cases when he was unable to save the lives of patients, he was nevertheless able to extend his reputation as an authority on smallpox medicine through his miraculous prognostic abilities. When Kinkyō arrived in Kyoto in 1792, the aspects of his art that patients and other doctors found most remarkable lay not so much in his ability to bring about miraculous cures as in his skill at predicting outcomes:

> Each time he inspected a patient, he would declare the case favorable, dangerous or adverse; he would declare after how many days there would be a change, and what the symptoms would be; he would declare on what day the patient would die, and in what state. His words would always match up perfectly with the result. It was as if he had cut away the skin and membranes and could see into the internal organs (*zōfu* 臓腑).[21]

When Kinkyō first arrived in Edo, he hesitated to prescribe medicine at all on the grounds that he was unfamiliar with the local environment (lit. "winds and soil," *fūdo* 風土), but devoted himself instead to merely observing patients from rich and poor families, pronouncing on their prospects for survival and prescribing

[20] *Kansei kōshin kakiage*, 33a.
[21] Ikeda Mukei, *Ikeda-kun gyōjō*, 1b–2a.

medicines only when it seemed that the patient had a reasonable chance of recovery.[22]

One particularly prominent group of manuscripts associated with the secret learning of Dai Mangong described the "hundred signs of death" that indicated a patient was unlikely to survive.[23] Although such knowledge could not save lives, it undoubtedly had great value to Ikeda doctors and their disciples as they sought to establish trust and authority among potential families of patients. By refusing to treat children who bore the signs of fatal smallpox, or by agreeing to recommend medicine without promising a cure, they could avoid the embarrassment of failures that might lead patients to suspect their competence.

When Kinkyō moved from Iwakuni and Itsukushima to Osaka, Kyoto and Edo, his encounter with new social environments resulted in the transformation of the Ikeda lineage from one that transmitted its secret learning in linear fashion to one that disseminated its learning more widely through teaching and publication. The character of the initial encounter can be glimpsed in Ikeda Mukei's description of Kinkyō's reception upon arriving in Osaka: "The established hereditary doctors did not understand his marvellous art; when they first heard of it, they were suspicious and thought it was the magic or sorcery of Persians or Lamas.…

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[22] *Kansei kōshin kakiage*, 33a–b.

[23] These manuscripts bore titles that were variations on the themes such as *One Hundred Forms of Death in Smallpox* (*Tōshin hyaku shi keijō den* 痘疹百死形状伝) or *Dai Mangong's Hundred Symptoms of Death in Smallpox* (*Dai Mankō tōsō hyaku shi shō den* 戴曼公痘瘡百死証伝). Although these manuscripts were not all identical, they contained broadly similar contents; some of these manuscripts also included texts on therapeutics that were also attributed to Dai Mangong but consisted primarily of formulas copied from the Chinese literature on smallpox medicine.

However, when they saw the way he prescribed drugs, responding skilfully to the stages of the disease, and in all respects basing his decisions on regular principles (*kisoku* 規則), they thoroughly acknowledged the superiority of his techniques (*jutsu* 術)."[24] In their ancestral homeland, the Ikeda doctors had established their authority by claiming to possess secret learning that they were unwilling to divulge, but in Osaka and Kyoto such claims became less persuasive than Kinkyō's ability to discuss the "principles" of his art. By forcing Kinkyō into dialogue about his learning and his techniques, these encounters cleared the path for Kinkyō's decision to accept new disciples from outside the lineage.

Ikeda Kinkyō accepted Saitō Kōan 斎藤幸庵 and Komatsu Kyūgo 小松久吾 as his first two disciples in 1788. After his move from Osaka to Kyoto, he accepted an increasing number of disciples, and brought back a substantial cohort from a tour of the nearby province of Harima in 1792.[25] However, the tension between Kinkyō's willingness to accept disciples and his insistence on treating Dai Mangong's teachings as "secret" created an ambiguous situation that invited the creative efforts of unscrupulous imitators. Ikeda Mukei wrote that during Kinkyō's time in Kyoto:

> There was a bookseller who stole copies of the diagrams and explanations of the lips, tongue and face from Kinkyō's household collection. They copied these and adorned them with illustrations, falsely imitating their forms and colours and selling them out of greed for profit.

[24] *Kansei kōshin kakiage*, 31b–32a; Ikeda Mukei, *Ikeda-kun gyōjō*, 2a.
[25] Mori, *Izawa Ranken*, 483.

> Doctors from the grasses and swamps obtained these faked diagrams and explanations and treated them as treasures, saying: "I can treat smallpox because I have glimpsed the inner recesses of Master Dai's teachings. I have entered into the hall of Ikeda." Some recklessly proclaimed themselves "disciples of Ikeda," and in extreme cases they even went as far as calling themselves "Ikeda such-and-such."[26]

As the Ikeda lineage's reputation spread and its circle of disciples expanded, it became increasingly important to distinguish between genuine Ikeda disciples and impostors who falsely claimed to possess the secrets of Ikeda learning. To solve this problem, Kinkyō appended to his treatise *Tōka ben'yō* 痘科辨要 (*Discriminating the Essentials of Smallpox Medicine*, 1811) a list of names of nearly three hundred disciples who had received the transmission of Dai Mangong's teachings.[27] When Ikeda Keisui produced a corrected version of this treatise in 1821, he added the names of the disciples to whom he had transmitted Dai Mangong's techniques in the period following his disinheritance.[28] These lists ostensibly functioned to benefit the disciples of the Ikeda doctors by confirming their legitimacy, but at the same time they also benefited the Ikeda doctors themselves by advertising the lineage's association with an extensive network of disciples that extended to all regions of Japan (Table 4.1).

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[26] Ikeda Mukei, *Ikeda-kun gyōjō*, 2b–3a; cf. Ikeda Kinkyō, *Tōka ben'yō*, *hanrei*, 4a–b.
[27] Ikeda Kinkyō, *Tōka ben'yō*, *hanrei*, 4b–5a.
[28] cf. *Kansei kōshin kakiage*, 35a.

Province	Number of Disciples (1811)	Additional Disciples (1821)
Satsuma	1	
Buzen	1	
Bungo	4	
Chikugo	4	4
Chikuzen	1	
Hizen	8	
Iyo	3	
Awa (阿波)	2	
Sanuki	3	
Tosa	1	
Suō	8	1
Nagato	4	
Aki	1	1
Iwami	2	1
Izumo	2	
Bitchū	4	2
Bizen	3	1
Harima	60	
Kyoto	8	1
Nara	0	1
Naniwa	5	
Tanba	4	
Settsu	14	
Izumi	1	2
Kawachi	2	
Kii	9	
Yamato	2	
Yamashiro	2	1
Omi	1	
Iga	4	
Ise	1	1
Owari	1	
Mino	2	
Echizen	1	
Kaga	1	
Etchū	1	
Mikawa	2	
Tōtōmi	1	
Kai	14	13
Edo	1	5
Shinano	4	
Musashi	5	1
Kazusa	1	
Shimōsa	6	1
Hitachi	3	1
Dewa	2	
Mutsu	9	4
Total	**219**	**41**

Table 4.1. Geographical distribution of Ikeda disciples listed in two editions of Ikeda Kinkyō 池田錦橋, *Tōka ben'yō* 痘科辨要.

Despite the new social environments in which Kinkyō found himself, he apparently found it difficult to abandon the notion that his learning could legitimately be practiced only by members of his own lineage. He accepted his first two pupils more than a decade after his move to Osaka, and agreed to teach them the secrets of Dai Mangong only after they had formally acknowledged him as master, sworn an oath of secrecy, and presented him with gifts of books.[29] His insistence on these rituals of discipleship indicated his reluctance to reconsider his lineage learning as a body of knowledge that could be transmitted to outsiders, but at the same time it provided a mechanism for legitimizing his break with the lineage's traditions by invoking the respectable cultural forms of discipleship.

It is possible to see traces of the same anxiety about the legitimacy of disseminating lineage secrets in a story recounted in the posthumous biography of Kinkyō written by Ikeda Mukei: according to this story, which was presumably recounted to Mukei by Kinkyō himself, Kinkyō's decision to transmit his learning to disciples beyond the lineage was prompted by the advice of an anonymous Ōbaku monk, who pointed out that by transmitting his learning to pupils from all over Japan, Kinkyō could bring far greater benefits to those suffering from smallpox than by maintaining its secrecy.[30] These moral platitudes were in themselves unremarkable, but when placed in the mouth of an Ōbaku monk they evoked associations with Dai Mangong and reinforced the idea that the move towards open

[29] Ikeda Mukei, *Ikeda-kun gyōjō*, 2a–3b.
[30] *Ikeda kun gyōjō*, 2a–3b.

dissemination could be seen as coming from within the lineage's own traditions rather than as a break with these traditions imposed by a new social environment.

Some of the Ikeda doctors' disciples continued to emphasise the secrecy of the lineage's teachings even during the period when the Ikeda doctors themselves were coming to define themselves increasingly through their publicly disseminated learning. After Kinkyō had moved to the Igakukan in Edo, his disciple Sa'i Bun'an remained in Kyoto and drew up a set of regulations for disciples of the Ikeda lineage that remained in use until the middle decades of the nineteenth century.[31] This code required disciples to take an oath binding them to a strict code of behaviour, urging them to treat patients without discrimination between rich and poor, and insisting that they could not refuse treatment even to their own personal enemies. Yet still more emphatically, the regulations insisted on the importance of maintaining the secrecy of transmission for the Ikeda learning. Disciples were not to pass on what they had learned, even to their own children or grandchildren. They were allowed to access the "secret" Ikeda books only by copying them inside the private academy, and were not permitted to carry them out of the academy's grounds. After they had ceased to practice, or if they died without an acknowledged successor in the art of Ikeda smallpox medicine, they were required to return any books of Ikeda secrets that remained in their possession.

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[31] Hasegawa Kazuo 長谷川一夫, "*Ikeda Kinkyō nyūmonsei kaikin yakusho* to Kyōto no tōka i Sa'i Bun'an ni tsuite" 「池田錦橋入門制戒禁」と京都の痘科医佐井聞庵について, paper presented at the General Meeting of the Japanese Medical History Association, October 2000.

This persistence of earlier patterns of manuscript copying and secret transmission suggests that the Ikeda doctors' moves towards openness should not be understood as a straightforward transition from secret to open forms for the transmission of their learning, but rather as a diversification both of the range of medical practices that their learning encompassed and of the range of social strategies by which they exerted control over that learning. As the anthropologist Beryl Bellman has argued, secrecy is never simply a barrier to the transmission of information, but rather serves to provide a set of assumptions and practices that affect the dynamics of concealment and revelation in ways that are intimately linked to the social and ritual contexts in which exchanges of information take place.[32] In the case of the Ikeda doctors, the association of their secret learning with the traditions of their own lineage meant that the revelation of this learning to outsiders was accompanied by social and psychological costs; their insistence on rituals of formal discipleship and their promulgation of stories that authorised the revelation of the lineage's secrets can thus be seen as strategies to minimize these costs, adopted by the Ikeda doctors as they sought to establish themselves in new social environments whose demands were distinct from those in which their lineage's traditions had been formed.

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[32] Beryl L. Bellman, *The Language of Secrecy: Symbols and Metaphors in Poro Ritual* (New Brunswick: Rutgers University Press, 1984). On patterns of secret transmission in more recent Chinese medicine, see Elisabeth Hsu, *The Transmission of Chinese Medicine* (Cambridge: Cambridge University Press, 1999), 21–57.

Manuscript Records of Practices and Doctrines

Like most doctors in the Tokugawa period, the Ikeda smallpox doctors accepted the Chinese doctrine that smallpox resulted from the eruption of an innate poison that was present in the body at the time of birth.[33] This eruption could be stimulated by a variety of external factors, such as an imbalanced diet, "fright" (*kyō* 驚), or epidemic *qi* (*ekiki* 疫氣). Once the eruption had begun, the usual course of the disease would result in complete expulsion of all the remaining poison from the body, which explained why smallpox generally occurred only once in any individual's lifetime. Despite the broad agreement regarding the aetiology of the smallpox, the techniques used for treating it varied widely, ranging from the "cooling" therapies associated with Qian Yi and Zhu Zhenheng to the "warming" therapies associated with Chen Wenzhong and Nie Shangheng.

The Ikeda doctors used a range of therapies similar to those found in the standard Chinese treatises, but they distinguished themselves through their use of an unusual set of diagnostic methods involving inspection of the patient's tongue and lips. These methods of tongue and lip diagnosis formed the core of the secret teachings that the lineage associated with Dai Mangong: a manuscript describing these methods was among the books that Ikeda Kinkyō allowed Saitō Kōan to copy when he accepted him as his first disciple in Osaka in 1788, and when at the end of his life Kinkyō wished to confirm Ikeda Mukei as his legitimate successor, he did so

[33] For a discussion of different variants of the innate poison doctrine in Chinese medical writings, see Chang, "Aspects of Smallpox in Chinese History," 48–74.

by explaining to him the secrets of lip and tongue diagnosis, pointing to his own lips and tongue to clarify his doctrines as he lay on his deathbed.[34]

The secrets of the lips and tongue were recorded in a number of illustrated manuscripts that varied considerably in their physical formats and styles of presenting information. Some were small volumes that had the tongue and lip images painted directly on the pages; others had the tongue and lip images painted on separate pieces of paper or card that were then pasted into the book; other volumes had a still more elaborate construction as concertina-folded volumes (*orihon* 折本) made from two layers of thick card, with windows cut out from one layer to frame pasted-in illustrations of tongues and lips. Some contained no explanation of the symptoms beyond such simple descriptions as "red and moist," "dry and cracked," or "slight grey colour in the centre"; others offered more detailed explanations of the diagnostic significance of tongue and lip symptoms, either as an appendix or alongside directly beside the illustrations themselves. In the case of the former style of presentation, the separation of the images from the explanations may have been intended to help maintain secrecy, or perhaps to help cultivate an air of mystery surrounding the illustrations. Disciples of the Ikeda lineage might allow other doctors or members of the general public to see such books in order to impress them with their striking visual qualities, but anybody who wished to exploit them for practical purposes would have required further explanations that could not be obtained from these manuscripts alone.

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[34] Saitō Kōan 斎藤幸庵, *Shinzetsu hizu* 唇舌秘図 (1788), IRCJS; Ikeda Mukei, *Ikeda-kun gyōjō*, 5b–6a.

As a visual mode of diagnosis, inspection of the tongue and lips would have been particularly attractive for doctors specialising in treatment of a childhood disease such as smallpox. The classical "four methods of diagnosis" in East Asian Medicine were gazing, listening/smelling, questioning and touching; in general, the most highly regarded of these techniques was the art of "touching" to feel the subtle movements of *qi* at the pulse-points of the wrist.[35] Tokugawa doctors added the method of abdominal palpation in order to detect the location of pathogenic factors accumulated in the body, and this method became especially popular in the eighteenth century among advocates of Ancient Formulas medicine.[36]

However, these standard methods were difficult to use effectively in the diagnosis of children. Paediatric medicine was known in the East Asian tradition as "mute medicine" (*aka* 唖科) because of children's inability to provide useful information in response to questioning, and even children who were old enough to speak tended to give ambiguous or inconsistent accounts of their own illnesses. Moreover, both pulse-taking and abdominal palpation were difficult to use for the diagnosis of smallpox: one early disciple of the Ikeda lineage wrote that the pulses were unreliable, since pulses in smallpox patients tended to be rapid and floating

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[35] For accounts of diagnosis in East Asian medicine, see Judith Farquhar, *Knowing Practice: The Clinical Encounter of Chinese Medicine* (Boulder: Westview Press, 1994), 62–68; Shigehisa Kuriyama, *The Expressiveness of the Body and the Divergence of Greek and Chinese Medicine* (New York: Zone Books, 1999).

[36] On the history of abdominal palpation diagnosis, see Shigehisa Kuriyama, "The Historical Origins of *Katakori*," *Japan Review* 9 (1997), 137–42; Liao Yuqun 廖育群, "Shoki fukushinsho no seikaku" 初期腹診書の性格, in *Rekishi no naka no yamai to igaku* 歴史の中の病と医学, ed. Yamada Keiji 山田慶児 and Kuriyama Shigehisa 栗山茂久 (Kyoto: Shibunkaku Shuppan, 1997), 343–69; Kosoto Hiroshi 小曽戸洋 et al., *Nihon fukushin no genryū: Ichū gen ō no sekai* 日本腹診の源流：意仲玄奥の世界 (Tokyo: Rikuzensha, 2003).

regardless of whether the patient was suffering from depletion or repletion, and abdominal palpation was also to be avoided because it ran the risk of inducing diarrhoea and doing more harm than good; thus only the signs of the tongue and lips provided a reliable means to distinguish the variants of the disease associated with cold, heat, depletion and repletion.[37] Inspection of the tongue's surface for clues to diagnosis had been practised in China since at least as early as the fourteenth century, and familiarity with tongue diagnosis principles had become increasingly widespread in both China and Japan from the mid-seventeenth century onwards; however, the system of tongue and lip diagnosis that the Ikeda doctors used for smallpox appears to have been unique to their own lineage.[38]

It is difficult to know how the Ikeda doctors and their disciples made use of tongue and lip symptoms in practice, since although a number of the lineage's published case records mentioned the appearance of the tongue and lips, they rarely presented these symptoms as the grounds for choosing among possible therapies. One exception can be found in the following case history, included in a manuscript account recorded by Saitō Kōan:

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[37] *Ikeda-ke chitō jutsu hiden* 池田家治痘術秘伝 (manuscript, c.1792–97, KyFC), *sōron* 総論. Similar remarks on the limited usefulness of pulse-taking for discriminating among different varieties of smallpox can also be found in Ikeda Kinkyō 池田錦橋, *Tōka sūyō hiketsu* 痘科枢要秘訣 (undated manuscript, KyFC); cf. also Ikeda Kinkyō, *Tōshin imashimegusa* 痘疹戒草 (1806), 1:14b–15a; Ikeda Kinkyō, *Tōka ben'yō*, *hanrei*, 2a–b.

[38] Nancy Holroyde-Downing, "Mysteries of the Tongue," *Asian Medicine: Tradition and Modernity*, 1.2 (2005), 432–461; Liang Rong 梁嶸, "Riben Jianghu shidai hanfang shezhen zhuanzhu de yanjiu" 日本江戸時代漢方舌診撰著之研究 *Zhonghua yishi zazhi* 35.3 (2005), 138–144; Liang Rong, "Chū-nichi dentō igaku no zesshin: sōiten no haikei," 中日伝統医学の舌診：相違点の背景, *Kanpō no rinshō* 55.2 (2008), 245–252.

> A man about forty years old had smallpox with dark purple pustules. Doctors tried to treat him by detoxification (*gedoku* 解毒), but without success. The Ikeda disciple Mori Kazuma 森数馬 carried out a diagnosis and said: "Nothing but ginseng and aconite will work." The family doctors disagreed, and they asked Kazuma to explain his strategy so that they could discuss it. He said again: "Nothing but ginseng and aconite." The family began to believe what he was saying and asked Kazuma for the medicine. Kazuma administered Greater Origin-Protecting Decoction with Added Aconite 大保元湯加附子, and immediately the colour of the pustules became red, showing signs of life. When the patient reached the "pus irrigation" (*kannō* 潅膿) stage, he was given Ginseng, Angelica and Deer Velvet Decoction, and recovered completely. Kazuma employed ginseng and aconite as a strategy, using as his guide the fact that the tongue was pale, white, wet and moist. Ah—how great are the uses of the lips and tongue![39]

Unfortunately, the above narrative does not explain the reasoning that allowed Kazuma to connect these particular tongue and lip signs with the therapy that he recommended. The earliest manuscripts describing tongue and lip signs offered little in the way of doctrinal explanation for the use and interpretation of the symptoms, and it appears that the Ikeda system of lip and tongue diagnosis was not associated with any consistent doctrinal basis until some time after Kinkyō's move

[39] Saitō Kōan 齊藤純, *Ikeda-sensei chitō kuketsu* 池田先生治痘口訣 (undated manuscript, KyFC).

to the Igakukan. It is possible that Ikeda Kinkyō may have provided his chosen disciples with oral expositions of this knowledge, but the diversity of descriptions found in later accounts suggests that during Kinkyō's time in Osaka and Kyoto, the doctrinal basis for tongue and lip diagnosis remained undeveloped, and that Kinkyō left it to his successors to establish a clear doctrinal justification for the lineage's secret techniques.

Ikeda Mukei suggested that although Dai Mangong's secrets had been used by the lineage primarily for diagnosing smallpox, a doctrinal basis for understanding tongue and lip symptoms would allow them to be used alongside the classical diagnostic methods not only for smallpox but also for a range of other illnesses.[40] He proposed that pulses could be used to detect the presence of heat, the tongue could be inspected to determine whether the patient was suffering from depletion or repletion, and the abdomen could be palpated in order to pinpoint the physical location of the poison that was causing the illness: any of these techniques on its own could be misleading, but in combination they could lead to an accurate assessment of the patient's condition.

Ikeda Keisui developed an alternative theory about the basis of tongue and lip diagnosis by invoking the classical Chinese doctrine that the tongue was connected to the heart, the receptacle of the body's vital spirits (*shin* 神) and the ruler of the five solid organs (*gozō* 五蔵), while the lips were connected to the spleen and to the stomach, the body's main storehouse and the ruler of the six hollow organs (*roppu* 六

[40] Ikeda Mukei 池田霧渓, *Kansō idan* 閑窻医談 (1813).

腑).[41] For Ikeda Keisui, the signs of the tongues and the lips could also guide the selection of ingredients according to the complex rules governing the design of compound formulas: the signs of the tongue could be used as a guide to the selection of the "Ruler" drugs in the compound, while the signs of the lips could be used as a guide to the selection of "Minister" drugs.[42] Although these more systematic doctrines of lip and tongue diagnosis never circulated as widely as the secret learning of the lip and tongue symptoms themselves, Mukei and Keisui's attempts to develop such doctrines shows how they were seeking to establish themselves as legitimate inheritors of lineage authority by extending and elaborating on the doctrines they had inherited from Ikeda Kinkyō.

Printed Books in the Transmission of Ikeda Medicine

The Ikeda lineage's use of woodblock printing for the more open dissemination of its learning began with the publication of Ikeda Kinkyō's popular manual *Tōshin imashimegusa* 痘疹戒草 (*Advice on Smallpox*, 1806). This book was written not for medical specialists but rather for general readers concerned about smallpox in their own families, and it was thus composed in a simple Japanese style intended to be accessible to "grannies and missuses" (*uba kaka* 媼嫝).[43] Its physical appearance, with its use of cursive *hiragana* script and its incorporation of a number of illustrations that added to the aesthetic appeal of the book but conveyed no

[41] Ikeda Keisui 池田京水, *Hiden tōka shinzetsu zenden* 秘伝痘科唇舌前伝 (1841), 1:4a.
[42] Ikeda Keisui 池田京水, *Hiden tōka shinzetsu okuden* 秘伝痘科唇舌奥伝 (1841), 3:7a.
[43] Ikeda Kinkyō, *Tōshin imashimegusa*, Preface, 3a.

practical information, was also typical of books aimed at popular audiences. The book was compiled over an extended period when Kinkyō was resident in Kyoto and Edo; as he began to take on a new identity as a public expert on smallpox medicine, the publication of such a book posed no threat to his control over the transmission of his lineage's learning but allowed him to present an image of himself as a doctor striving to distribute knowledge that would bring wide benefit to those suffering from illness. The publication of this popular manual thus served as a natural bridge for the transition of the Ikeda lineage from one that emphasised its possession of secret techniques to one engaged in the open dissemination of knowledge.

Later disciples of the lineage continued to publish popular pamphlets on the care of smallpox patients, although these were composed on a much smaller scale than Kinkyō's *Tōshin imashimegusa*. Ikeda Keisui's pupil Shibue Chūsai 渋江抽斎 (1805–1858) compiled *Gotō yōhō* 護痘要法 (*Essential Methods for Protecting Against Smallpox*, 1831), a pamphlet that presented an abridged version of the contents of Kinkyō's *Tōshin imashimegusa*. With Keisui's approval, he had this pamphlet published using funds donated by fifteen individuals.[44] Similarly, Ikeda Mukei compiled a pamphlet on foods to be consumed or avoided by smallpox patients, entitled *Hōsō shokumotsu kō* 疱瘡食物考 (*Investigations on Foods for Smallpox*, 1841). In

[44] Shibue Chūsai 渋江抽斎 and Ikeda Keisui 池田京水, *Gotō yōhō* 護痘要法 (1831). Although bibliographies and library catalogues typically list Ikeda Keisui as the main author of this work, both Ikeda Keisui's preface and Shibue Chūsai's colophon imply that primary responsibility for the compilation was due to Shibue Chūsai, with Ikeda Keisui merely serving as advisor.

contrast to the detailed discussions contained in Kinkyō's *Tōshin imashimegusa*, these later pamphlets were short enough that readers would not have needed to read through them in advance, but would have been able to consult them quickly in an emergency.

The Ikeda lineage's first printed treatise aimed at an audience of medical practitioners was *Tōka ben'yō* 痘科辨要 (1811). Kinkyō was nearly seventy when he began to compile this work, which he thought of as a way of repaying his debt of gratitude to the bakufu.[45] The published version of the text was produced through the collaborative efforts of the Ikeda doctors and their disciples; Ikeda Keisui participated in the project during its early stages, but his disinheritance and his departure from Edo meant that the final draft was compiled by other disciples, including Ikeda Mukei. The labour of editing individual sections was divided up among a core group of Ikeda disciples. Responsibility for the most important sections was allocated to Kinkyō's earliest disciples, Saitō Kōan and Komatsu Kyūgo. Despite the encouragement he received from his disciples, Kinkyō hesitated to have the work printed, claiming that his reluctance was due to embarrassment over his poor classical Chinese style. However, an equally likely explanation is that Kinkyō, despite more than a decade of lecturing in the Igakukan, continued to regard his medical knowledge as a possession of his own lineage.[46] Even when he eventually consented to have the book published, he remained unwilling to allow

[45] Ikeda Kinkyō, *Tōka benyō*, Preface, 2b.
[46] Ikeda Kinkyō, *Tōka benyō*, Preface, 3a.

the secrets of the lips and tongue to be transmitted to the "wrong people," and he therefore omitted these secrets from the book.[47]

In other respects, the treatise reflected both sides of the learning that Ikeda Kinkyō had been teaching to his disciples in Kyoto and in Edo, combining the teachings of Dai Mangong with a comprehensive approach to the classic Chinese treatises on smallpox medicine. Although it omitted the secrets of the lips and tongue, it described an alternative form of visual diagnosis based on the location of pustules on the patient's face.[48] It gave a full exposition of the characteristic doctrine of the Ikeda lineage's public teachings, the classificatory scheme of the "four periods and eight syndromes" (*shisetsu hasshō* 四節八証).[49] The four periods represented a correspondence between the twelve days of a typical smallpox case and the twelve months of the year, providing a rationale for different types of therapy appropriate to each stage of the illness, while the doctrine of the eight syndromes simplified the problem of diagnosis and treatment by classifying the many variants of smallpox according to eight fundamental categories of underlying disorder: poison obstruction, blood heat, *qi* depletion, blood depletion, exterior repletion, exterior depletion, interior depletion and interior repletion. In addition, the book presented extensive lists of prognostic signs, including signs for the identification of untreatable cases, discussions of the special problems of smallpox in adults, in women, and in pregnant women, and a small number of case records describing "unusual cases."

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[47] Ikeda Kinkyō, *Tōka benyō*, *hanrei*, 1b–2a; ibid., 2:3a.
[48] Ikeda Kinkyō, *Tōka benyō*, 1:4a–10a.
[49] Ikeda Kinkyō, *Tōka ben'yō*, 2:1a–3a.

The next generation of Ikeda doctors made increasing use of printing for the dissemination of their teachings. This increase in publishing activity may have been related to the efforts of both Ikeda Keisui and Ikeda Mukei to present themselves as Ikeda Kinkyō's legitimate successor, but the paradoxical consequence of these successors' efforts to carry on Kinkyō's legacy was a prolific output of printed texts that represented a significant departure from Kinkyō's own preferred methods for the transmission of his learning, including comprehensive treatises on the model of *Tōka ben'yō*, detailed critical commentaries on classic Chinese treatises, and compact collections of formulas designed for rapid consultation.

Ikeda Keisui and Ikeda Mukei each took Kinkyō's *Tōka ben'yō* as the basis for their own revised and expanded treatises. Keisui felt that the disciples who had prepared the final text of the first edition had distorted Kinkyō's doctrines by making too many additions and modifications, and purchased the woodblocks of the first edition from Ikeda Mukei in order to produce a revised edition of his own in 1821.[50] The disciple Shindō Genshi 進藤玄之 published a further revised edition, *Tōka ben'yō hokō* 痘科辨要補校 (1823), and Ikeda Mukei himself published *Zoku tōka ben'yō* 続痘科辨要 (*Supplement to Discriminating the Essentials of Smallpox Medicine*, 1827). All of these revisions and republications served both to assert the compilers' status as authoritative practitioners of the Ikeda tradition of smallpox medicine and to reaffirm the central place of Ikeda Kinkyō's treatise in the canon of the Ikeda lineage's public learning.

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[50] Ikeda Kinkyō, *Tōka ben'yō*, Preface by Ikeda Keisui, 1a; *Kansei kōshin kaikiage*, 35b–36a; cf. Mori, *Izawa Ranken*, 490–1.

A similar impulse to lay claim to Ikeda Kinkyō's legacy can be seen in Keisui and Mukei's production of new annotated editions and commentaries on Chinese texts, most prominently Zhu Xun's *Douke jian* 痘科鍵 (*Key to Smallpox Medicine*). Kinkyō had used this early seventeenth-century Chinese treatise as a textbook for teaching his own students in Kyoto, where it had briefly become so popular that booksellers raised their prices in response to a shortage of available copies.[51] After his move to the Igakukan, Kinkyō continued to lecture on Zhu Xun's treatise rather than on any of the better-known Chinese treatises on smallpox medicine, and after Kinkyō's death it continued to form the basis of Mukei and Keisui's Igakukan lectures on smallpox medicine until the late Tokugawa period.[52] In contrast to Nie Shangheng's emphasis on warming and supplementation therapies, Zhu Xun provided a comprehensive description of methods for "cooling the blood and releasing poison," and earlier doctors had argued that this made Zhu Xun's treatise an essential guide in more severe cases.[53] This emphasis on cooling methods could itself be seen as one-sided, and Kinkyō warned his students against uncritical adoption of Zhu Xun's doctrines and methods; nevertheless, Zhu Xun's book remained a central element of the lineage's public teachings even after Kinkyō's death. Ikeda Keisui's enthusiasm for the book prompted other doctors to joke that his pet cockerel's cry resembled the title of the book (in its Japanese pronunciation,

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[51] Ikeda Mukei, *Ikeda-kun gyōjō*, 2b.
[52] *Kansei kōshin kakiage*, 33a; Machi, "Igakukan no kiseki," 85.
[53] Zhu Xun, *Douke jian* (Japanese edition, 1730), Preface by Takeda Shukuan 武田叔安, 1a–b. Takeda Shukuan 武田叔安 (1700–1774) was a Kyoto doctor who had arranged for the reprinting of Zhu Xun's book.

"*tōkaken*"), and both Ikeda Keisui and Ikeda Mukei produced new editions and commentaries on Zhu Xun's book as part of their efforts to present themselves as Kinkyō's legitimate successors.[54]

In publishing these types of books, Mukei and Keisui were developing a printed counterpart to the forms of oral pedagogy that Ikeda Kinkyō had employed in Kyoto and in Edo, but they were also engaged in modes of textual production that were highly valued in the scholarly medical culture of the Igakukan, with its emphasis on the philological study of the Chinese medical canon. Mukei was ambivalent about the soundness of Zhu Xun's ideas: he regarded as fundamentally mistaken Zhu Xun's central theoretical assumption that the "foetal poison" of smallpox had its residence in the spleen and stomach; moreover, he felt that Zhu was far too inclined towards fruitless speculation about unknowable causes.[55] However, by producing a new edition of a Chinese treatise that had been critical to Ikeda Kinkyō's career, Mukei created a work of scholarship through which he asserted his own position both as a faithful successor to Kinkyō and as a medical scholar in his own right.

Ikeda Mukei adapted Ikeda Kinkyō's unpublished commentary on Zhu Xun's treatise and attached it to a critically edited version of the original text,

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[54] Kitamura Tadahiro 喜多村直寛, *Samidare sōshi* 五月雨草紙, repr. in Kurimoto Jo'un 栗本鋤雲, *Hōan ikō* 匏菴遺稿, vol. 1 (Tokyo: Shōka Shobō, 1900), 326–27.

[55] Ikeda Mukei, *Tōkaken sansei hochū* 痘科鍵刪正補注 (1830), *fugen* 附言, 2a–3a. A similar approach to the exposition of medical doctrine through critical commentaries on classic texts was also common in the scholarly medical traditions of Renaissance Europe: see for example the comments of the sixteenth-century Italian scholar Giambatista da Monte cited in Nancy G. Siraisi, *Avicenna in Renaissance Italy: The Canon and Medical Teaching in Italian Universities after 1500* (Princeton: Princeton University Press, 1987), 201.

publishing this as *Tōkaken sansei hochū* 痘科鍵刪正補注 (*Key to Smallpox Medicine: Corrected Edition with Expanded Commentary*, 1830). To produce this edition, Mukei carefully collated the available printed and manuscript editions of Zhu Xun's treatise, identified and highlighted redundant or mistaken passages, and commented on Zhu Xun's views by citation of relevant parallels from elsewhere in the Chinese medical literature. Ikeda Keisui published at least two books that drew explicitly on *Douke jian*. The first, *Tōkaken kaitsū* 痘科鍵会通 (*Understanding the Key to Smallpox Medicine*, 1824) was a short discursive treatise outlining its essential doctrines, while the second, *Tōkaken shikō* 痘科鍵私衡 (*Personal Evaluation of the Key to Smallpox Medicine*, 1828), was a much more exhaustive and detailed analytic commentary. A third treatise, *Ō-Shu bunkai* 翁朱分解 (*Commentary on Weng [Zhongren] and Zhu [Xun]*, c.1828), was never published but survives in several manuscript copies; in contrast to the two books that dealt exclusively with Zhu Xun's doctrines, this book attempted to counterbalance the shortcomings of Zhu's account by interweaving it with excerpts from another Ming-dynasty book, Weng Zhongren's 翁仲仁 *Jinjing lu* 金鏡錄 (*Record of the Golden Mirror*).

Ikeda Mukei's publication of concise books of formulas represented a more significant departure from Ikeda Kinkyō's conception of medical knowledge. Ikeda Kinkyō had been dismissive of doctors who wanted to have books of formulas with them to consult whenever they needed to prescribe medicine: he insisted that anyone who wished to treat smallpox should memorise all the relevant formulas, since only then would he be able to use these formulas creatively by combining and

altering them to meet the limitless variety of cases that might be encountered in practice.[56] Nevertheless, the demand for books of formulas was considerable, and Ikeda Mukei compiled *Chitō yōhō* 治痘要方 (*Essential Prescriptions for the Treatment of Smallpox*, 1835) to serve as "a treasure for holding in one's pocket or carrying in one's medicine basket," containing some 250 formulas excerpted from 52 different Chinese treatises.[57] Although Ikeda Kinkyō had disparaged books of formulas, his views were not shared by later members of the nineteenth century medical establishment, and Mukei's formulary carried a preface by Taki Motokata 多紀元堅 (1795–1857), the head of the of the Igakukan at the time. The enthusiastic reception of this formulary led to the printing of a supplementary volume in 1850, a second edition in 1853 and a complementary volume of formulas for measles in 1860. Nevertheless, this was one of the last of the lineage's published treatises. After the importation to Japan of the cowpox vaccine in 1849, and especially after the introduction of compulsory vaccination by the Meiji government, the regular epidemics that had generated demand for the services of smallpox specialists became less frequent and eventually disappeared altogether.

Conclusion

We have seen in Part One of this dissertation how rising levels of popular literacy and the growth of the Japanese publishing industry transformed the ways that medical knowledge was distributed in society and how these social changes

[56] Ikeda Kinkyō, *Tōka ben'yō*, *hanrei*, 5a–b.
[57] Ikeda Mukei 池田霧溪, *Chitō yōhō* 治痘要方 (1834, repr. 1853), colophon, 1b.

affected the ways that elite practitioners understood the nature of medical knowledge itself. The history of the Ikeda lineage provides an important reminder that such widely circulating forms of knowledge represented only one aspect of the broader history of medical knowledge in Tokugawa Japan. Much medical knowledge remained restricted in its circulation because it was regarded as unsuitable for wider dissemination and treated as the exclusive property of a lineage and its immediate disciples. However, the secret or public nature of a lineage's knowledge was in part a response to the social conditions in which it developed. A change in these social conditions could easily bring about changes not only in the ways that the knowledge was communicated but also in the ways that it was interpreted and put into practice.

The Ikeda lineage went through a series of major transformations between the late eighteenth and early nineteenth centuries, in the details of its clinical style, the modes of transmission of its learning, and its institutional contexts. Yet as Volker Scheid has pointed out in his study of the medical traditions associated with the Chinese town of Menghe during the nineteenth and twentieth centuries, these types of changes need not be inconsistent with continuity of lineage identity. Like the "Menghe medical current" studied by Scheid, the smallpox medicine of the Ikeda lineage can be regarded as a "stable entity of sorts" if we see this stability defined not in terms of a fixed set of constitutive elements but through the

diachronic connections among a shifting range of medical doctrines, clinical practices, and forms of social organisation.[58]

The Ikeda doctors were aware that their lineage had changed over time, but they nevertheless defined their social position and shaped their clinical practices so as to maintain a sense of continuity with their own lineage's real and imagined past. This ability to reinvent their own lineage's learning in response to changing social circumstances was typical of the flexible relationship between traditions of knowledge and practice in Tokugawa medicine during the eighteenth century. In the final two chapters of this dissertation, we shall see how Japanese doctors in the eighteenth and nineteenth centuries applied a similarly flexible approach to the evaluation of novel types of medical practice.

[58] Volker Scheid, *Currents of Tradition in Chinese Medicine, 1626–2006* (Seattle: Eastland Press, 2007), 390–1.

Part Three

New Diseases, New Drugs, New Techniques

Chapter 5

New Remedies for Difficult Diseases

During the late eighteenth and early nineteenth centuries, Japanese doctors increasingly sought to explore new types of treatment as potential supplements to the existing therapeutic repertoire. The introduction of European medical methods during this period is widely thought to have brought about a rupture with the previous era of Chinese-influenced medicine, but upon closer examination it becomes apparent that there were also important continuities with earlier periods of Tokugawa medical history. Most Japanese doctors continued to view Chinese writings as authoritative sources of medical learning, and they evaluated newly introduced techniques in relation to systems of ideas and practices that were derived ultimately from China. To understand the development of medical knowledge and practices during this period, it is thus essential to look beyond the narrow group of *ranpō* practitioners and to ask how older forms of medical knowledge could continue to serve as sources of innovation in their own right.

This chapter explores the ways that a number of Japanese doctors during this period became interested in exploring more extreme forms of aggressive therapy: vomiting, bloodletting and the use of mercurial drugs. These aggressive

styles of therapy were typically employed for the treatment of severe diseases that had proven difficult to treat by other means. The severity of these diseases was in itself an important stimulus to experimentation, since patients who had been unable to obtain relief through conventional means would have been all the more willing to submit to these often unpleasant and potentially dangerous types of treatment. Just as importantly, doctors experimenting with new approaches to therapy often saw these difficult diseases as distinct entities about which it was possibile to generalize based on the experiences of treating individual patients. Investigations into therapeutic methods thus proceeded in parallel with changing views of disease ontology.

The doctors who experimented with these new types of treatment were often influenced by the ideas of Ancient Formulas medicine, but the therapies themselves were quite diverse in their historical origins. Vomiting, like sweating and purging, was one of the "three methods" of Zhang Zhongjing, but it had been somewhat neglected by Tokugawa doctors until a number of them came to feel the need to develop more refined ways of applying vomiting thereapies in practice. Bloodletting was inspired by knowledge of European medicine, but Japanese doctors soon discovered parallels with their own tradition and sought to explain its mechanism of action in terms of their own doctrines. Mercurial drugs had long formed part of the Chinese medical repertoire, but new drugs against the newly introduced disease of syphilis emerged as a result of the synthesis of ideas from a

variety of Chinese and European sources.[1] This chapter shows how doctors in a variety of social circumstances sought to explore the use of these therapies, reconciling new forms of medical knowledge with existing ideas and with their own clinical experiences.

Okumura Ryōchiku, Nagatomi Dokushōan and Vomiting Therapies

Okumura Ryōchiku 奥村良竹 (1687–1761), the first pioneer of vomiting therapies in Japan, was born in Echizen and studied with the domain doctor Yamazaki Ryōhaku 山崎良伯.[2] Ryōchiku was able to meet a number of prominent Kyoto scholars and doctors while travelling to Kyoto in 1726, including the Confucian scholar Itō Tōgai, the scholarly doctor Namikawa Tenmin, the Ancient Formulas doctor Gotō Konzan, and the *honzō* scholar Matsuoka Joan.[3] His interest in vomiting therapies most likely derived primarily from his interactions with Gotō Konzan and from his reading of Zhang Congzheng's recently reprinted *Rumen shiqin* 儒門事親 (1228; repr. 1711), which together encouraged him to believe that Zhang Zhongjing's three methods constituted the essential range of medical therapies; however, he noticed that even many of his contemporaries who had shown enthusiasm for sweating and purging therapies remained reluctant to make use of

[1] On the use of bloodletting and mercurial therapies by *ranpō* doctors during this period, see Frederik Cryns, "Ranpō-i ga juyō shita jūhasseiki no seiyō iryō: chiryō no konkyo to riron tenkai" 蘭方医が受容した一八世紀の西洋医療：治療の根拠と理論展開, in *Jūhasseiki Nihon no bunka jōkyō to kokusai kankyō* 一八世紀日本の文化状況と国際環境, ed. Kasaya Kazuhiko 笠谷和比古 (Kyoto: Shibunkaku Shuppan, 2011), 103–19.
[2] Dohi Keizō 土肥慶蔵, *Gakken yūgi* 鶚軒遊戯 (Tōkyo: Kaizōsha, 1927), 50.
[3] Dohi Keizō, *Gakken yūgi*, 64.

vomiting, which was generally regarded as the most dangerous of Zhang Zhongjing's three methods, and he determined to remedy this deficiency.[4]

A number of drugs in the East Asian herbal repertoire were known to have emetic properties, including *Dichroa febrifuga* (*jōzan* 常山), melon pedicle (*katai* 瓜蒂), radish seeds (*raifukushi* 萊菔子), aconite (*busu* 附子), and black hellebore (*Veratrum nigrum*; *riro* 藜蘆). Li Shizhen had distinguished among the appropriate uses of these different drugs depended on the different types of mucus that needed to be expelled through vomiting: "*Dichroa* induces vomiting of the mucus of periodic fevers (*nuetan* 瘧痰), melon pedicle induces vomiting of the mucus of heat (*retan* 熱痰), aconite induces vomiting of the mucus of moisture (*shitan* 濕痰), radish seeds induce vomiting of the mucus of *qi* (*qitan* 氣痰), and black hellebore induces vomiting of the mucus of wind (*fengtan* 風痰).[5] Milder methods of inducing vomiting were also sometimes used, such as making the patient drink salty or sweet water, but these milder methods were not always reliable in their effects.[6] Ryōchiku and his

[4] For complaints about the general neglect of vomiting therapies by most Tokugawa doctors, see Nagatomi Dokushōan 永富独嘯庵, *Tohō kō* 吐方考 (1763), 1a; Ogino Gengai 荻野元凱, *Tohō hen* 吐法編 (1764), Preface by Ōnakatomi Suetada 大中臣季忠, 1b–2a; Kako Kakushū 加古角洲, *Tohō satsuyō* 吐方撮要 (1808), 2a–b; Kitamura Kanae 喜多村鼎, *Tohō ron* 吐法論 (1817), repr. in *Iseidō sōsho* 医聖堂叢書, ed. Kure Shūzō 呉秀三 (Kyoto: Shibunkaku Shuppan, 1970), 39.

[5] Li Shizhen 李時珍, *Bencao gangmu* 本草綱目 (Beijing: Renmin weisheng chubanshe, 1975), 1156.

[6] During the Korean embassy of 1748, the Japanese doctor Kawamura Harutsune had asked Cho Hwal-am in 1748 why it might be the case that although the "ancient method" (*kohō* 古方) involved inducing vomiting with salty water, Japanese patients seemed to vomit only if sweet water were used instead: see Kawamura Harutsune 河村春恒, *Sōkan i mondō* 桑韓医問答 (1748), 1:17b–18a.

successors therefore directed their attention primarily towards the use of herbal emetic remedies, the most important of which were based on melon pedicle.

Ryōchiku's home province of Echizen produced several varieties of melon not found in other parts of Japan, and Ryōchiku tested out their effects on himself and on his wife before trying them out on his patients.[7] Through these trials, he found that a small region of fields in the vicinity of his own hometown produced melon plants that were unusually effective as emetics, and these formed the basis of Ryōchiku's practice of vomiting therapies.[8] However, Ryōchiku made no effort to promulgate his knowledge of these therapies in print, and it was only through the writings of his disciples that they became widely known.

One of the most prominent of Okumura Ryōchiku's disciples was Nagatomi Dokushōan 永富独嘯庵 (1732–1766), a doctor originally from Ube in Nagato province.[9] As a youth, Dokushōan moved to Hagi to continue his studies under the Confucian scholar Yamagata Shūnan, who admired Dokushōan's scholarly talent and regarded him as "more of a Confucian than a doctor." He briefly visited Edo to meet other scholarly disciples of Ogyū Sorai before travelling to Kyoto in 1751

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[7] Dohi Keizō, *Gakken yūgi*, 80.

[8] Yamawaki Tōmon 山脇東門, *Tōmon zuihitsu* 東門随筆, repr. in *Kyōrin sōsho* 杏林叢書, vol. 3, ed. Fujikawa Yū 富士川游 (Tokyo: Tohōdō Shoten, 1924), 5; Ogino Gengai, *Tohō hen* 吐法編 (1764), 8a. Yoshimasu Tōdō also commented that the melons of Echizen were the best for medicinal purposes: see Yoshimasu Tōdō, *Yakuchō* 薬徴, repr. in *Tōdō zenshū*, 223.

[9] On Nagatomi Dokushōan, see Tanaka Sukeichi 田中助一, *Bō-Chō igakushi* 防長医学史 (Kankō Kōenkai, 1951–3), vol. 2, 138–172; Ogawa Kuniharu 小川国治 "Hōreki chōfu han ni okeru jitsugaku no jissen to sono zasetsu" 宝暦期長府藩における実学の実践とその挫折, *Shigaku kenkyū* 108 (1970), 37–50; Nagayo Takeo 長与健夫, "Nagatomi Dokushōan kara Koishi Genshun he: Edo jidai chūki no i no sentetsu" 永富独嘯庵から小石元俊へ：江戸時代中期の医の先哲, *Nihon ishigaku zasshi* 47.4 (2001), 819–26.

to become a disciple of Yamawaki Tōyō.[10] In 1754, he travelled to Echizen on Tōyō's suggestion, where together with Tōyō's heir Yamawaki Tōmon he studied Okumura Ryōchiku's use of vomiting therapies, corresponding with Tōyō to keep him informed of what he was learning. Tōyō himself regarded these vomiting methods as a discovery whose significance was comparable to that of his own anatomical observations conducted in the same year.[11] In 1762, he travelled to Nagasaki to learn about European medicine by studying under the Dutch interpreter Yoshio Kōgyū 吉雄耕牛 (1724–1800), but returned to Kyoto just a few months later to mourn the death of Yamawaki Tōyō.[12] He subsequently settled in Osaka, where he practiced medicine until his death at the age of 35.

The major sources of inspiration for Dokushōan's vomiting therapies were Zhang Congzheng's *Rumen shiqin* and his personal study with Okumura Ryōchiku, but he was also fascinated to discover similarities between the methods of vomiting he had learned about from these sources and those that he encountered in more unusual circumstances during his travels. He expressed skepticism about the suitability of using European methods to treat disease in Japan, but he noted that Europeans also made use of sweating, vomiting and purging methods that appeared

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[10] Nagatomi Dokushōan's name appears in the Yamawaki disciple register for 1751/10/6, but since he was also listed as the intermediary for two disciples who were entered into the registry in the fifth month of that year, his relationship with Tōyō must have begun somewhat earlier than his formal discipleship. For the relevant registry entries, see Kyōto-fu ishikai igakushi hensanshitsu 京都府医師会医学史編纂室, *Kyōto no igakushi, shiryō hen* 京都の医学史：資料篇 (Kyoto: Shibunkaku Shuppan, 1980), 262.

[11] For Yamawaki Tōyō's enthusiasm concerning these vomiting therapies, see his letters to Nagatomi Dokushōan and to the Confucian scholar Yanada Zeigan 梁田蛻巖 (1672–1757), dated 1754 and reprinted in *Zōshi* 蔵志 (1759), 2:26a–28b.

[12] Nagatomi Dokushōan, *Man'yū zakki*, 15b–16a; *Tohō kō*, Preface by Yamawaki Tōmon, 1a.

remarkably similar to those of ancient China, suggesting that methods that had long been lost in China had somehow been preserved in Europe.[13]

Dokushōan was equally fascinated to discover unfamiliar but effective vomiting methods in the Japanese countryside. On one occasion while he was staying in a village in Nagato province, he found a booklet containing a recipe for the emetic use of the fibrous flesh (*jō* 穰) of bitter melon (*nigauri* 苦瓜) in cases of food poisoning. Some time time after he had tested this remedy and found it effective, he discovered that the classic Tang-dynasty formulary *Beiji qianjin yaofang* 備急千金要方 (*Prescriptions for Emergencies Worth a Thousand Pieces of Gold*, c. 652) also contained a formula for pills made from the fibrous flesh of bitter melon, and he concluded that ancient Chinese medical techniques had been transmitted to Japan and preserved in peripheral regions.[14]

These sorts of historical speculations helped Dokushōan present an image of himself as a broadly cultivated scholarly doctor, but his criterion for medical knowledge was not the original source of that knowledge but rather its effectiveness in practice. Dokushōan compared himself to a painter whose ability was not based on the study of earlier paintings but on direct observation of things themselves, and he criticized scholarly writers who wrote about medicine on the basis of book learning rather than practical experience; he regarded the simplicity of Gotō

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[13] Nagatomi Dokushōan, *Man'yū zakki* 漫遊雑記 (1762, repr. 1809), 15b–16a; cf. *Tohō kō*, 2b.

[14] Nagatomi Dokushōan, *Man'yū zakki*, 14a. Japanese editions of Sun Simiao's *Beiji qianjin yaofang* were printed in 1659, 1660, 1786, 1799, 1814, 1832 and 1849; although there are no suriving dated editions from the first half of the eighteenth century, many medical writers of this period appear to have been familiar with its contents.

Konzan's medical writings as a reason for his superiority over Kagawa Shūan, for whom "talent and learning were always an obstacle."[15] Although he did not mention Yoshimasu Tōdō by name, he criticized some of Tōdō's most characteristic doctrines, such as his rejection of disease causes as a therapeutically relevant category and his rejection of terms like "heating" and "cooling" in the description of drug properties.[16] Unlike Yoshimasu Tōdō, for whom the the restoration of the medicine of antiquity as a minimalist system of medical knowledge represented an important goal in its own right, Dokushōan's rhetoric and methods were primarily concerned with the goal of practical efficacy, and he did not believe that abandoning aetiological accounts of disease or qualitative descriptions of the nature of drugs would help to achieve that goal.

Like other contemporaries influenced by Ancient Formulas medicine, Dokushōan was well aware of the epistemic problems associated with evaluating claims concerning the efficacy of medical treatments in practice. He estimated that among one hundred patients, in general sixty would recover without treatment, and that among the remaining forty, ten would die, ten would live, and ten would suffer from lingering symptoms regardless of the treatment given; there were only ten whose fate would depend on the precise nature of the treatment given.[17] Nevertheless, there were a number of diseases for which Dokushōan was convinced that existing cures were inadequate and that better cures should be possible, *tenkan* 癲癎 (seizures), *rōsai* 勞瘵 (phthisis), *kakuitsu* 嘔噎 (dysphagia), *kyōkenbyō* 狂犬病

[15] Nagatomi Dokushōan, *Man'yū zakki*, 1a–b, 8a, 16b, 19a.
[16] Nagatomi Dokushōan, *Man'yū zakki*, 2a, 14b.
[17] Nagatomi Dokushōan, *Tohō kō*, 8b.

(rabies), *baidoku* 黴毒 (syphilis), and *raibyō* 癩病 (leprosy).[18] Although these were serious afflictions that were notoriously difficult to treat, Dokushōan noted that their symptoms were easily confused with those of diseases that were much more easily cured, and he was therefore sceptical about contemporaries' claims that they had found effective remedies.[19]

To overcome such epistemic problems as these, Dokushōan made use of methods that Yamawaki Tōmon characterized as "investigating reality, using antiquity as evidence and testing in the present" (覈實徵古試今).[20] He carried out systematic trials to determine the usefulness of specific therapies for particular diseases, and rejected those that his trials did not show to be useful, no matter how authoritative their source. On the basis of such trials, he rejected some of the claims for the efficacy of vomiting therapies made by Zhang Congzheng and even some of those made by his own teacher Okumura Ryōchiku: for example, he rejected Okumura Ryōchiku's claim that vomiting therapies could be used to treat *tenkan* after he found that only one or two patients were cured among several tens of patients he had treated in this way.[21]

This type of systematic trial to determine the efficacy of a particular type of treatment represented an unusual departure from traditional ways of thinking and writing about clinical experience in the East Asian medical tradition. The most

[18] Nagatomi Dokushōan, *Tohō kō*, 9b–10a; *Man'yū zakki*, 17b–18b. As discussed above in Chapter 3, several of these diseases were the subject of questions posed by Nagatomi Dokushōan's disciple Kamei Nanmei to the Koreans who visited Japan during the embassy of 1764.
[19] Nagatomi Dokushōan, *Man'yū zakki*, 9a.
[20] Nagatomi Dokushōan, *Tohō kō*, Preface by Yamawaki Tōmon, 1b.
[21] Nagatomi Dokushōan, *Man'yū zakki*, 6a; cf. *Tohō kō*, 3a.

common genre of writing through which medical knowledge was construed in relation to practical experience was the case narrative (C. *yi'an*, J. *ian* 医案), a genre that favored positive affirmation of the doctrines espoused by an individual doctor and of the skill with which the doctor applied those doctrines in practice.[22] Dokushōan's trial was very different in character: it was based not on the detailed analysis of an individual case, but on the accumulated experience of administering the same type of therapeutic intervention to a number of individuals classified as suffering from the same disease; the outcome of the trial was not the positive affirmation of any doctrine or therapy but only the rejection of one possible method of treatment that had been proposed by Dokushōan's own teacher. Dokushōan's aim in recording the trial was to establish that existing methods of therapy remained inadequate to the tasks for which they were being used and to define the problems of medical knowledge that still remained to be solved. It was on the basis of this acknowledged inadequacy that further exploration of novel therapies like vomiting, bloodletting and mercurial drugs became possible.

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[22] On case narratives as a genre of medical writing, see Christopher Cullen, "*Yi'an* 醫案 (Case Statements): The Origins of a Genre of Chinese Medical Literature," in *Innovation in Chinese Medicine,* ed. Elisabeth Hsu (Cambridge: Cambridge University Press, 2001), 297–323; Joanna Grant, *A Chinese Physician: Wang Ji and the "Stone Mountain Medical Case Histories"* (London: RoutledgeCurzon, 2003); Charlotte Furth, "Producing Medical Knowledge through Cases: History, Evidence and Action," in *Thinking with Cases: Specialist Knowledge in Chinese Cultural History*, ed. Charlotte Furth, Judith Zeitlin and Ping-chen Hsiung (Honolulu: University of Hawai'i Press, 2007), 125-151; Ping-chen Hsiung, "Facts in the Tale: Case Records and Pediatric Medicine in Late Imperial China," in *Thinking with Cases*, 152–68; Judith T. Zeitlin, "The Literary Fashioning of Medical Authority: A Study of Sun Yikui's Case Histories," in *Thinking with Cases*, 169–202.

Ogino Gengai and Bloodletting Therapies

The first major Japanese treatise on therapeutic bloodletting was written by Ogino Gengai 荻野元凱 (1737–1806), a doctor who, like Nagatomi Dokushōan, had studied vomiting therapies with Okumura Ryōchiku in Echizen.[23] Gengai's studies with Okumura Ryōchiku left him with a strong interest in the use of vomiting therapies, and his treatise on the subject, *Tohō hen* 吐法編 (*Treatise on Vomiting Methods*, 1764), was published not long after Nagatomi Dokushōan's *Tohō kō*. Like Dokushōan, Gengai emphasized that his claims were supported by practical experience (*rekiken* 歷験), but much of the content of his treatise was drawn directly from Zhang Congzheng and other Chinese authors.[24] Like other Ancient Formulas doctors, Gengai showed a concern to establish the correct relationship between names and things, cited broadly from early Chinese sources, and made use of the concept of *menken*.[25] Nevertheless, the visiting Korean doctor Yi Chwa-guk seems to have had little hesitation in writing a colophon that described the treatise as belonging to the tradition of the Chinese doctors Liu Wansu 劉完素 (c.1120–1200)

[23] On the biography of Ogino Gengai, see Mieko Macé, "Dissection, Blood-Letting and Medicine as per Yamawaki Tōmon and Ogino Gengai," in *East Asian Science: Tradition and Beyond. Papers from the Seventh International Conference on the History of Science in East Asia, Kyoto, 2–7 August 1993*, ed. Hashimoto Keizō, Catherine Jami and Lowell Skar (Osaka: Kansai University Press, 1995), 353–7.

[24] Ogino Gengai, *Tohō hen*, 7a. Mieko Macé has suggested that this interest in practical evidence can be seen as "a foretaste of his interest in a Western medical approach," but this type of evidential language had been characteristic of Ancient Formulas medicine throughout the eighteenth century. See Macé, "Dissection, Blood-letting and Medicine," 354. Citations to Zhang Congzheng, Zhang Zhongjing, Ge Hong 葛洪 (284–364), Sun Simiao 孫思邈 (541–682), Zhang Gao 張杲 (1149–1227), Yan Yonghe 嚴用和 (fl. 1267) are given explicitly in the section of *Tohō hen* discussing the uses of different formulas: see *Tohō hen*, 13b–27b.

[25] Ogino Gengai, *Tohō hen*, 2a–3a, 10a.

and Zhang Congzheng rather than as part of the distinctively Japanese Ancient Formulas style of medicine.[26]

During the 1760s, when Gengai was living in Kyoto, he also began to take an interest in Dutch medicine, making contact with Yoshio Kōgyū and asking him about Western bloodletting therapies and observing him putting them into practice.[27] After trying out the technique for himself, he published the results of these investigations in his *Treatise on Piercing the Vessels* (*Shiraku hen* 刺絡編, 1771). This treatise included a brief account of the European anatomical description of the blood vessels, but Gengai's understanding of European ideas on the topic appears to have been rather vague: he claimed, for example, that the vascular system included vessels for the movement of *qi* as well as vessels for the movement of blood.[28] Just as Nagatomi Dokushōan regarded European methods of sweating, vomiting and purging as elements of an ancient Chinese medical culture that had been transmitted to Europe at some point in the distant past, Gengai believed that bloodletting was a technique that had been transmitted to Europe from China.[29] It was therefore natural that he sought to understand the technique by relating it to concepts derived from the East Asian tradition, drawing on ancient Chinese accounts of acupuncture, more recent Chinese bloodletting practices, and the

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[26] Ogino Gengai, *Tohō hen*, Colophon by Yi Chwa-guk 李佐國. This colophon is dated 1764/4, which means Chwa-guk wrote it while stopping in Kyoto on his return route from Edo back to Korea, by which time he had already seen a copy of Nagatomi Dokushōan's *Tohō kō* and other books by Ancient Medicine doctors (see Chapter 3).
[27] Ogino Gengai, *Shiraku hen*, Preface, 4b; ibid., 2b.
[28] Ogino Gengai, *Shiraku hen*, 4b.
[29] Ogino Gengai, *Shiraku hen*, 3a.

concern to relieve stagnated circulation that was common to many eighteenth-century Japanese doctors.

Gengai's initial interest in bloodletting therapies had arisen through his reading of an ancient Chinese medical classic, the *Lingshu* 靈樞 (*Spiritual Pivot*).[30] The *Lingshu* contained explicit discussions on the topic of when and how to bleed patients, but Japanese doctors of Gengai's time rarely paid close attention to these passages; it was only when Gengai later became familiar with European bloodletting techniques that he recognized them as representing a latent possibility within the East Asian tradition that had so far been unexploited. Further Chinese parallels to European bloodletting techniques also appeared in a treatise by the seventeenth-century Chinese doctor Guo Zhisui 郭志邃, *Sha zhang yuheng* 痧脹玉衡 (*Jade Standard on Sand-Rashes and Swellings*, 1675).[31] According to this treatise, "sand-rashes" (*sha* 痧) could sometimes take the form of blood stagnation, becoming visible on the surface of the body as dark purple veins (C. *jin*, J. *kin* or *suji* 筋).[32] In these cases, Guo Zhisui recommended "releasing the *sha*" (C. *fangsha*, J. *hōsa* 放痧) by piercing the skin with a needle. This treatise also incorporated some practical

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[30] Ogino Gengai, *Shiraku hen*, 1a.

[31] Guo Zhisui 郭志邃, *Sha zhang yuheng* 痧脹玉衡 (1675), repr. in *Zhongguo yiji dacheng* 中國醫籍大成, vol. 15 (Shanghai: Shanghai kexue jishu chubanshe, 1990). Japanese editions of this book were printed in 1723, 1724, 1741 and 1852. For Ogino Gengai's references to Guo Zhisui and to the concept of *sha*, see *Shiraku hen,* 8b, 24a.

[32] Guo Zhisui did not explicitly discuss the meaning of the term *sha* 痧. Marta Hanson has suggested translating this term as "granular sand-like rash": see Marta Hanson, *Speaking of Epidemics in Chinese Medicine: Disease and the Geographic Imagination in Late Imperial China* (London: RoutledgeCurzon, 2011), 111. In a different context, Yi-Li Wu has suggested "acute outbreak": see Yi-Li Wu, *Reproducing Women: Medicine, Metaphor, and Childbirth in Late Imperial China* (Berkeley: University of California Press, 2010), 219.

suggestions for this procedure, such as the use of silver rather than iron needles, but it had been only peripherally concerned with the practice of blood-letting in its own right.[33] "Releasing" was only one of three main types of therapy for *sha*, which could also be treated by skin-scraping or drug therapies. The fact that Gengai and a number of other Ancient Formulas doctors in the second half of the eighteenth century, including Yamawaki Tōyō's heir Yamawaki Tōmon and Yoshimasu Tōdō's follower Nakagami Kinkei 中神琴渓 (1743–1833), saw Guo Zhisui's "releasing *sha*" as analogous to European bloodletting shows how strongly they desired to find Chinese analogues for Dutch medical ideas, even if finding these analogues involved searching through Chinese books with scant regard for context.[34]

Fears of stagnation or blocked circulation had become prominent in Japanese thinking about disease around the turn of the eighteenth century, and the Ancient Formulas doctor Gotō Konzan had been a prominent advocate of the view that health and disease should be understood in terms of the circulation and stagnation of *qi*.[35] Gengai himself had adopted this understanding of disease in his *Tohō hen*, and in conceptual terms it was only a minor step for Gengai to transfer them to the circulation of blood.[36] However, this fear of stagnation offers only a partial explanation for why Gengai adopted bloodletting therapies, since the types

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[33] Ogino Gengai, *Shiraku hen*, 8b.
[34] Macé, "Dissection, Blood-Letting and Medicine"; Hattori Toshirō 服部敏郎, *Edo jidai igakushi no kenkyū* 江戸時代医学史の研究 (Tokyo: Yoshikawa Kōbunkan, 1978), 13.
[35] Shigehisa Kuriyama, "Interpreting the History of Bloodletting," *Journal of the History of Medicine* 50 (1995), 11–46.
[36] Ogino Gengai, *Tohō hen*, 12a; Ogino Gengai, *Shiraku hen*, 3a–b.

of medical practices associated with earlier fears of stagnation were very different from those Gengai adopted in his enthusiasm for bloodletting. None of the thirteen case narratives that Gengai appended to his treatise included any significant reference to the concept of "stagnation"; instead, these narratives described the patients' conditions in very straightforward physical terms, such as recurring rashes, encroaching blindness, paralysis, or simply persistent pain.[37] The main feature these complaints had in common was that they had proven resistant to treatment by other methods. Although the successful treatment of longstanding disease was a conventional trope of medical case narratives, the prevalence of such cases among Gengai's examples suggests that Gengai's patients were not rushing to him to have their veins pierced merely because they were concerned about stagnated circulation. In contrast to the use of bloodletting in the European medicine of this period, where the depletion of excess was seen as generally beneficial for the maintenance of health, Gengai's cases implicitly represent bloodletting as a therapy of last resort, to which patients turned after all else had failed.[38]

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[37] Ogino Gengai, *Shiraku hen*, 19a–24b.

[38] On this aspect of bloodletting in Western medicine, see Shigehisa Kuriyama, "Interpreting the History of Bloodletting," *Journal of the History of Medicine* 50 (1995), 11–46; Shigehisa Kuriyama, "The Forgotten Fear of Excrement," *Journal of Medieval and Early Modern Studies* 38.3 (2008), 413–42; John Harley Warner, *The Therapeutic Perspective: Medical Practice, Knowledge, and Identity in America, 1820–1885* (Princeton: Princeton University Press, 1997), 94; Andrew Wear, *Knowledge and Practice in English Medicine, 1550–1680* (Cambridge: Cambridge University Press, 2000), 408–9.

Syphilis and Mercurial Drugs

Like vomiting and bloodletting therapies, the popularity of mercurial drugs for the treatment of syphilis derived their popularity in part from the desire of patients to obtain treatment for illnesses that were uncurable by less drastic methods. Mercurial remedies were much more widely employed than either vomiting or bloodletting, and their usage extended well beyond those doctors who showed a particular interest in Ancient Medicine. The unusual history of mercurial drugs was associated with the unusual history of syphilis, which Chinese and Japanese doctors alike understood to be a new disease that had arrived in their part of the world only quite recently; few of these doctors felt confident in assimilating this new disesase to existing disease categories such as the cold damage categories of Zhang Zhongjing. There were also unusual problems of knowledge surrounding the nature of the mercurial drugs themselves, about which numerous accounts from Chinese, European and Japanese sources were circulating either openly or in secret.

In contrast to the rich and varied records concerning the arrival and spread of the "french disease" in Europe after its first appearance, only sparse and ambiguous documentation survives concerning the early spread of the disease in China and Japan.[39] Yu Bian 俞弁 (1488–1547) was one of the first Chinese medical writers to

[39] On the early history of syphilis in Europe, see Jon Arrizabalaga, John Henderson and Roger K. French, *The Great Pox: The French Disease in Renaissance Europe* (New Haven: Yale University Press, 1997), 20–37. The question of whether or not the *Treponema* spirochetes associated with syphilis were present in the Old World prior to the Columbian voyages remains controversial, but a recent review of the arcchyeological evidence based on skeletal remains has concluded that none of the reported claims for pre-Columbian Old World treponemal infection is based on both unambiguous diagnosis and secure dating: see Kristin N. Harper et al., "The Origin and Antiquity of Syphilis Revisited: An Appraisal of

record the appearance of a new disease, introducing the new terms for the disease like "Guangdong sores" (*guang chuang* 廣瘡) and "bayberry sores" (*yangmei chuang* 楊梅瘡) that would become familiar in later periods, and mentioning the therapeutic efficacy of corrosive sublimate and smilax rhizome (C. *tufuling*, J. *dobukuryō* 土茯苓, *sankirai* 山皈来).[40] Around the same time, Han Mao 韓懋 composed one of the first specialised treatises on these diseases, a short work entitled *Yangmei chuang lun zhifang* 楊梅瘡論治方 (*Discussion of Bayberry Sores with Formulas for Treatment*).[41]

Yu Bian wrote that the spread of this disease dated back to the Hongzhi 弘治 reign period (1488–1505), and Japanese records of a new disease known as "Chinese pox" (*tōmo*, *tōgasa* 唐瘡) appeared not long afterwards in 1512. Although Portuguese ships did not arrive in Canton until 1515, it is conceivable that the disease was brought to China as early as 1512 by Chinese maritime merchants returning home from ports that the Portuguese had also visited.[42] However, Yu Bian himself did not appear to think of the Hongzhi epidemic in terms of a new disease that had arrived from outside China, but rather as the recurrence of a pattern with historical precedents such as the early Eastern Han campaigns into the poisonous southern regions. It was only later in the sixteenth century that Chinese

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Old World Pre-Columbian Evidence for Treponemal Infection," *Yearbook of Physical Anthropology*, 54 (2011), 99–133.

[40] Yu Bian 俞弁, *Xu yishuo* 續醫說 (1522).

[41] Chen Heliang 陳和亮, *Zhongguo guji xingyixue daguan* 中國古今性醫學大觀 (Beijing: Zhongguo Zhongyiyao Chubanshe, 1994), 206. Although this work has not survived, Han Mao alluded to its existence in his own general treatise on medicine, *Han shi yi tong* 韓氏醫通 (1522).

[42] Dohi Keizō 土肥慶蔵, *Sekai baidoku shi* 世界黴毒史 (Asakaya Shoten, 1921), 64–66.

doctors moved towards a consensus that the symptoms they described as *yangmei chuang* represented a genuine new disease. Li Shizhen wrote that "Bayberry sores were not recorded in the ancient formularies, and there were no patients of this disease" (楊梅瘡，古方不載，亦無病者).[43] The early seventeenth-century doctor Chen Sicheng 陳司成 adopted a slightly different view, associating the emergence of syphilis in the far south of China and its spread to other parts of the country with a millennial change in the cosmological cyclic characters influencing the occurrence of epidemics.[44]

Although they differed in their details, all these accounts of syphilis as a new disease posed a challenge to the view that doctors should rely exclusively on the therapeutic methods of antiquity, since a new disease might naturally be thought to call for new types of therapy. As Hata Kōzan 畑黄山 (1720–1804), an outspoken critic of Ancient Formulas medicine, wrote in 1800, "there are diseases that existed in antiquity but do not exist in recent times, and there are diseases that did not exist in antiquity but exist in recent times. Syphilitic sores and buboes are an example of this. The world's praise of antiquity and condemnation of the recent is bankrupt when it comes to these illnesses."[45] Yet somewhat paradoxically, it was the Ancient Formulas doctors, always enthusiastic to make use of aggressive styles of treatment,

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[43] Li Shizhen, *Bencao gangmu*, 1296.

[44] Chen Sicheng 陳司成, *Meichuang milu* 黴瘡秘錄 (1636), ed. Gao Danfeng 高丹楓 and Chen Hui 陳輝 (Beijing: Xueyuan chubanshe, 1994).

[45] Asai Nankō, *Baisō yakugen* (1802), Preface by Hata Kōzan 畑黄山 (1800), 1b. For Hata Kōzan's earlier criticisms of Yoshimasu Tōdō, see his *Seki idan* 斥医断 (1762).

who were among the most active investigators of new pharmaceutical remedies for syphilis.

Experimentation with mercurial therapies was made possible by the desperation of syphilis patients who were willing to try any remedy that might hold the possibility of ending their affliction. First-hand accounts of syphilis from the perspective of Japanese sufferers are rare, and it is thus worth quoting at length from an account written by the nineteenth-century doctor Funakoshi Kinkai 船越錦海, in which he described both his sufferings from syphilis and the agony caused by the drugs he took in an attempt to cure it, illustrating how far desperation could serve to encourage experimentation and innovation:

> My parents also contracted this disease, and did not live out their natural span. My father departed this world at the age of twenty-nine, and my mother at the age of forty-four. During my youth, I too suffered from this disease for several years, and used all sorts of medicines without the slightest success. I therefore related the details of my illness to a doctor, and begged him: "Rather than suffering like this for a long time, I would consider a quick death as a blessing, and even the harshest of drugs hold no terrors for me. Please, give me a harsh treatment of the sort that only one in ten survive." The doctor replied: "In that case, from among the *keifun* 軽粉 (corrosive sublimate) medicines you should use Seven Treasures Pills (*shichihōgan* 七宝丸)," and he told me to consume one week's worth of pills.

By the fourth day, the inside of my mouth was swollen and painful. Thinking that it would be difficult to consume the remaining three days' worth of pills with my mouth in pain, I therefore took all the remaining pills on the morning of the fifth day. Beginning that night, my mouth began to fester severely, and each day I would spit out two *shō* 升 of saliva. It continued like this for more than thirty days. My mouth gradually recovered, but the disease poison did not diminish. The doctor said: "This is because the strength of the drugs was insufficient. You should take more Seven Treasures Pills." I therefore attacked the disease from the eleventh month until the sixth month of the following year, but without the slightest success.

By this time my body was debilitated and exhausted, just skin and bones. From this time I ceased to consume drugs and ate meat for about sixty days. My strength recovered and my flesh grew back, but the sores grew increasingly severe. After this I tried using smelling medicines (*kagi-gusuri* 嗅薬) and after about six or seven days I began to spit out saliva. After more than fifty days, I had half recovered from the poison of the sores but did not recover fully, so I stopped this as well. After I ceased treatment, the disease poison gradually increased, and by the third month of the following year my suffering and pain was double what it had been originally.

> This was when I invented Extend Longevity Pills (*enjugan* 延寿丸), preparing them myself and consuming them. The interior of my mouth was not as painful as before, I did not spit out saliva, and gradually I began to return to normal. After thirty days I was recovering, and after a hundred days I had completely recovered and the illness did not recur.[46]

The Japanese Reception of Chen Sicheng's *Meichuang milu*

Chen Sicheng 陳司成, the author of a treatise that was to become the exercise considerable influence over syphilis medicine in Tokugawa Japan, was born into a Haining family that had been practising medicine since the time of his eighth-generation ancestor.[47] During his youth, Chen Sicheng had travelled with a friend to Hulin in the hills west of Hangzhou to take the civil service examinations, where his friend also took advantage of the opportunity to visit the local brothels. Chen declined to take part in these activities, and his hesitation to do so proved justified: soon after the pair had returned to their hometown, his friend was struck by an illness that he was too embarrassed to discuss with anyone else. Chen cured his friend's disease using formulas gleaned from medical books, and later in life, when he was forced by poverty to abandon his examination studies and devote himself exclusively to the study and practice of medicine, his travels as a doctor provided him with ample opportunities to refine his understanding of syphilis. His

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[46] Funakoshi Kinkai 船越錦海, *Baisō chadan* 黴瘡茶談 (1843), quoted in Dohi Keizō, *Sekai baidoku shi*, 129.
[47] Chen Sicheng, *Meichuang milu*, 5.

Meichuang milu 黴瘡秘錄 (*Secret Record on Syphilis*, 1636) thus represented the culmination of twenty years of reflection and observation.[48]

Chen Sicheng's treatise met with a generally enthusiastic reception among Tokugawa doctors of the eighteenth and nineteenth centuries, although they frequently criticised its obscure language, its tendencies towards speculative accounts of disease processes, and its recommendations for the use of expensive and exotic drugs. Japanese editions of the book were printed in 1725 and 1774, and the high-ranking imperial court doctor Asai Nankō 浅井南皐 (1760–1826) and his disciple Murakami Tōjun 村上等順, although critical of the treatise, contributed to its popularity by producing an extensively annotated edition in 1808. The continuing impact of Chen Sicheng's book in Tokugawa Japan seems to have been greater than in Qing China, where it was neglected and not reprinted until the production of a new edition in 1885 using woodblocks of Nankō and Tōjun's 1808 edition that had been re-imported from Japan.[49]

Several years before publishing his annotated edition of *Meichuang milu*, Asai Nankō had published *Baisō yakugen* 黴瘡約言 (*Concise Remarks on Syphilis*, 1802), which rapidly became established as a Japanese work of comparable stature to the

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[48] Chen Sicheng, *Meichuang milu*, Preface, 1.

[49] Xue Qinglu 薛清录, ed. *Zhongguo zhongyi guji zongmu* 中國中醫古籍總目 (Shanghai: Shanghai Cishu Chubanshe, 2007), 704–705. A facsimile reprint of the 1885 edition is included together with a transcription, commentary and modern Chinese translation in Gao Danfeng 高丹楓 and Chen Hui 陳輝, *Meichuang milu* 黴瘡秘錄 (Beijing: Xueyuan chubanshe, 1994).

Meichuang milu itself.[50] The explicit aim of this treatise was to serve as a corrective against the influence of Chen Sicheng's *Meichuang milu*. Nankō believed that there were four main ways to contract the disease: inheritance from one's parents, unhealthy diet, environmental damp, and contact with prostitutes—according to Nankō, around seven out of ten prostitutes suffered from the disease.[51] Yet although Nankō acknowledged the possibility of contracting the disease through sexual activity, he laid the greatest stress on environmental factors, particularly warm damp (*onshitsu* 温湿). The importance of warm damp explained why its occurrence was most prevalent in southern rather than in northern regions, in coastal rather than in mountainous areas, among city dwellers rather than village folk, and among the poor rather than the rich.[52] Nankō rejected Chen Sicheng's elaborate sub-classification of the disease according to the various organ systems affected; however, he did state that the disease tended to reside in the kidneys and liver and affect three of the unpaired acupuncture tracts, the *ninmyaku*, *tokumyaku* and *shōmyaku* (任脈, 督脈, 衝脈).[53] His approach to syphilis therapy avoided rare and exotic drugs, relying predominantly on common drugs with gentle physiological effects, since he believed a cultivated doctor should be able to use ordinary means to achieve extraordinary results and criticized contemporary doctors who assumed that syphilis required radically different drugs from those that they used for other

[50] For example, one doctor whose own preferences tended towards Western medicine cited these two treatises as the two main points of reference for syphilis therapy on which his contemporaries relied: see Kimura Toyohira 木村豊平, *Baika yōryō* 黴家要領 (1828), 3b.
[51] Asai Nankō, *Baisō yakugen*, 1:2a, 1:3a.
[52] Asai Nankō, *Baisō yakugen*, 1:5b.
[53] Asai Nankō, *Baisō yakugen*, 1:2b–3b.

types of illness.[54] Nevertheless, he resorted on occasion to the use of mercury compounds, particularly for treating patients in the later stages of the disease.

Drug Production Knowledge for Mercurial Therapies

Japanese doctors had already begun to make use of sublimated mercury chlorides as antisyphilitic remedies in the sixteenth century, within a few decades of the arrival of the disease itself.[55] Beginning in the eighteenth century, the popularity of Chen Sicheng's treatise led to a demand for its most characteristic drug, a sublimated mercury chloride compound called *seiseinyū* (C. *shengshengru* 生生乳). By the early nineteenth century, *seiseinyū* was available in medicine stores, even if the quality of the product being sold was questionable.[56] However, it remained unclear exactly what *seiseinyū* was, what made it different from the more familiar sublimated mercury chloride *keifun* (C. *qingfen* 輕粉), and how doctors could produce or obtain it in sufficient quantities to treat their patients. Examining the processes by which Japanese doctors arrived at answers to these questions allows us to explore the unfolding of the relationships between therapeutic practice, the drug trade, and pharmaceutical knowledge in eighteenth and nineteenth-century Japan.

The production of mercury chlorides through sublimation had begun in Japan at least as early as the eighth century, using techniques developed in China

[54] Asai Nankō, *Baisō yakugen*, 1:4b–5a.
[55] Dohi Keizō, *Sekai baidokushi*, 83.
[56] Ishibashi Masaaki 石橋正炳, *Baidoku yōhō* 黴毒要方 (1810), 1a.

several centuries earlier.[57] One of the main centers for the production of mercury chlorides was Ise, in the vicinity of some of Japan's most important sources of cinnabar for mercury production.[58] Tokugawa doctors were aware that sublimated mercury chloride had traditionally been manufactured there for use as a whitening cosmetic known as *Ise oshiroi* 伊勢白粉, recorded as a tribute item in the historical chronicle *Shoku Nihongi* (続日本紀, 797).[59] By the seventeenth century, however, the cinnabar mines near Ise had largely been exhausted, and Japanese production of sublimated mercury chlorides had come to depend on supplies of mercury imported to Japan by Chinese and Dutch merchants, making it easier for producers in the region of Kyoto and Osaka to compete with those in Ise.

The authors of pharmacological treatises offered a variety of opinions as to which sources of *keifun* were preferable for medical uses. The late seventeenth-century author Endō Genri 遠藤元理 listed *keifun* among the "Japanese medicines for which it is necessary to distinguish between high and low quality," writing that the best *keifun* came from Kyoto, while that from Ise was of slightly inferior

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[57] On the early development of techniques for the sublimation of mercury chlorides in China, see Joseph Needham, *Science and Civilisation in China, Volume 5: Chemistry and Chemical Technology, Part 3: Spagyrical Discovery and Invention: Historical Survey, from Cinnabar Elixirs to Synthetic Insulin* (Cambridge: Cambridge University Press, 1976), 123–9.

[58] On the early history of cinnabar mining and mercury production in Japan, see Matsuda Hisao 松田壽男, "Kodai no shu" 古代の朱, in *Matsuda Hisao chosakushū* 松田壽男著作集, vol. 6 (Tokyo: Rokkō shuppan, 1987) and Matsuda Hisao, *Nyū no kenkyū: rekishi chirigaku kara mita Nihon no suigin* 丹生の研究 : 歴史地理学から見た日本の水銀 (Tokyo: Waseda Daigaku Shuppanbu, 1970).

[59] Kaibara Ekiken, *Yamato honzō* 大和本草 (1709), repr. in *Ekiken zenshū* 益軒全集 (Tokyo: Ekiken zenshū kankōbu, 1911), vol. 6, 84.

quality.[60] However, later writers such as Hiraga Gennai 平賀源内 and Ono Ranzan 小野蘭山 insisted that the best *keifun* still came from Ise.[61] Japanese doctors also made use of corrosive sublimate imported by Dutch merchants: at the end of the seventeenth century, Engelbert Kaempfer considered sublimate of mercury among the "less important" goods brought to Japan by the Dutch, but noted that "certain Japanese persistently press newly arrived foreigners for sublimate mercury and pay a high price for it."[62]

Seiseinyū was a more mysterious drug than *keifun*, since although Chen Sicheng had included instructions for its manufacture in *Meichuang milu*, those instructions were ambiguous and difficult to follow. As late as 1810, the doctor Ishibashi Masaaki 石橋正炳 wrote that there was little publicly available information about how to produce the drug.[63] Those who knew how to produce drugs like *seiseinyū* tended to keep their knowledge secret in order to maintain their monopoly, and when they passed on that knowledge they tended to do so by personal transmission rather than through the publication of instruction manuals. Medicine stores sold these drugs, but most patients lacked clear knowledge of how to assess the quality of

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[60] Endō Genri 遠藤元理, *Honzō bengi* 本草辨疑 (1681), 1:3a.

[61] Hiraga Gennai 平賀源内, *Butsurui hinshitsu* 物類品隲 (1763), 2:1b; Ono Ranzan 小野蘭山, *Honzō kōmoku keimō* 本草綱目啓蒙 (1803), 5:3a–b.

[62] Beatrice M. Bodart-Bailey, *Kaempfer's Japan: Tokugawa Culture Observed* (Honolulu: University of Hawai'i Press, 1999), 63, 209.

[63] Ishibashi Masaaki, *Baidoku yōhō*, *daiji*, 1a. This claim may indicate that the earlier printed treatises of Kurosawa Shōeki (1780) and Ōta Shin'an (1784) achieved only a limited diffusion. Ishibashi did not refer explicitly to any of the published Japanese treatises that described the production of *seiseinyū*, noting only that the production method was "described in several books" (*Baidoku yōhō, hanrei*, 1a) and he alluded only indirectly to Chen Sicheng's treatise through the name of such formulas as "Chen's pills for transforming poison" (*Baidoku yōhō*, 3a).

the drugs that they were purchasing and ran the risk of using drugs that had been improperly prepared. The high prices at which medicine stores were able to sell *seiseinyū* did not reflect the cost of the ingredients, but rather the limited diffusion of knowledge about how to carry out the transformation that transformed them into a useable drug.[64]

One case of the secret transmission of such knowledge was recorded by the Saga doctor Haruhi Gen'an 春日元庵.[65] A "secret" recipe for a mercurial antisyphilitic drug had been passed down in his lineage from the time of his ancestor Haruhi Genryō 春日元亮, who had obtained the recipe from a Dutch surgeon in Nagasaki in 1711. This Dutch doctor had imparted knowledge of a marvellously effective drug that could be used to treat even patients whose weak constitutions meant that standard purgative therapies could not be used; the Dutch visitor supposedly kept this recipe secret and refused to transmit it indiscriminately, and Genryō and his successors likewise restricted the transmission to a single member of each generation in their own lineage. However, Haruhi Gen'an later had the chance to compare his lineage's recipe with the recipe included in the printed versions of Chen Sicheng's treatise, and he discovered to his surprise that the two recipes were strikingly similar; he concluded that Chen Sicheng's *seiseinyū*

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[64] Ishibashi Masaaki, *Baidoku yōhō*, *daiji*, 1b.

[65] Sōda Hajime 宗田一, "Kubai yō suiginzai no seizō wo meguru ninshiki to tenkai — hakutansa, soppiru wo chūshin to shite" 駆梅用水銀剤の製造をめぐる認識と展開—白丹砂　ソッピルを中心として, *Jitsugakushi kenkyū* 2 (1985), 16–20. This article presents a partial transcription of Haruhi Gen'an, *Oranda shinden yōbaisō chiryō sho* 阿蘭陀新伝楊梅瘡治療書 (*Book on the Treatment of Syphilis, Newly Transmitted from the Dutch*, late eighteenth or early nineteenth century). The Dutch doctor, whose name is transcribed in the Japanese text as "Seirukettan," has not been identified.

was none other than the drug that the Dutch surgeon had taught Genryō to make, that the *Meichuang milu* had been falsely attributed to Chen Sicheng, and that the Chinese had received their information originally from the Dutch.[66]

The contrast between Gen'an's representation of Chinese medical techniques as "Dutch" and the equally implausible representation by doctors like Nagatomi Dokushōan and Ogino Gengai of European medical techniques as "Chinese" is striking, but it may have arisen not so much from prejudices concerning the intrinsic values of Chinese and European medical traditions as from the different ways these doctors wished to represent the character of their own learning. Nagatomi Dokushōan and Ogino Gengai were like Yamawaki Tōyō and Yoshimasu Tōdō in their desire to represent their own knowledge as having its basis in classical texts as well as their own personal experience; Haruhi Gen'an, by contrast, was more like Ikeda Kinkyō, seeking to represent his knowledge as the secret possession of his own lineage; by analogy, the story of the Dutch doctor who supposedly transmitted the recipes to Haruhi Genryō served the same function for the Haruhi lineage that stories about Dai Mangong served for the Ikeda lineage.

Haruhi Gen'an's recipe for *seiseinyū* offered unusually detailed specifications regarding the selection and preparation of appropriate ingredients for the manufacture of *seiseinyū*.[67] This drug was produced through the sublimation of a mixture of niter 芒硝, alum 礬石, green vitriol 綠礬, mica 雲母, green salt 青鹽, cooking salt 食鹽, mercury 水銀, and arsenolite 礬石, and according to Genryō the

[66] Sōda Hajime, "Kubai yō suiginzai no seizō," 17.
[67] Sōda Hajime, "Kubai yō suiginzai no seizō," 18–20.

quality of these ingredients varied greatly depending on their geographical regions of origin: the best mica was imported from Europe, while the Korean product was an acceptable but slightly inferior substitute; niter was sold in medicine shops as "white niter" (*shiro enshō* 白えんしやう), and the best product came from Ise, but other shops sold "horse tooth niter" (*baga shō* 馬牙消), for which the best product with a sweet and sharp flavour came from Etchū or Sanuki, while the product from seaside regions was to be considered inferior; doctors needed to exercise great care to obtain genuine green vitriol (*ryokuban* 緑礬) from China, since the Japanese product was toxic and unscrupulous medicine shops often tried to pass off blue vitriol (*tanban* 胆礬) as a substitute.

This advice on the selection of ingredients illustrates both the possibilities and the dangers that the market in medical commodities presented to doctors wishing to produce their own *seiseinyū* in the late eighteenth and early nineteenth centuries. It was possible to purchase materials originating not only from the various provinces of Japan but also from Korea, China and Europe. However, the ability to select appropriately from these materials required the doctor to make fine distinctions among different versions of the same product, while remaining constantly vigilant against the possibility that the merchant was deceiving him, whether deliberately or otherwise, about the nature of the products he sold.

Mercurial Remedies in Practice

Chen Sicheng had written that the action of *seiseinyū* was milder than that of *keifun*, but Japanese medical writers expressed a variety of opinions on this issue. Ishibashi Masaaki, an early nineteenth-century doctor heavily influenced by Ancient Formulas ideas, believed that the action of *seiseinyū* was slower and milder than that of *keifun*, but also that the two drugs each had their distinct uses.[68] By contrast, Hirano Genryō 平野元亮 (1790–1867), the author of the popular medical manual *Byōka suchi* 病家須知 (*Indispensable Knowledge for the Ill*, 1832), noted the presence of the highly toxic mineral arsenolite among the ingredients of *seiseinyū* and declared that *seiseinyū* should never be consumed internally; he recommended that it should instead be used only as a topical medicine applied directly to the sores of syphilis, or alternatively consumed in the form of inhaled vapours (*kagigusuri*).[69] Asai Nankō was sceptical of Chen Sicheng's claim that the inclusion of mica and arsenolite in the production of *seiseinyū* would disperse the mercury's poison and result in a product milder than *keifun* or *funsō* 粉霜 (calomel); he suggested that Chen might have deliberately exaggerated the differences among different mercury drugs and compounds in order to make greater profits from his patients.[70]

Hirano Genryō described the mercurial remedies that patients used during the later stages of syphilis as "down the hatch medicines" (*nagekomi-gusuri*), a colloquial term that referred to a method of wrapping and consuming toxic

[68] Ishibashi Masaaki, *Baidoku yōhō*, 1b; ibid., Appendix, 1a–b.
[69] Hirano Genryō 平野元亮, *Byōka suchi* 病家須知 (1835; repr. Tokyo: Nōsangyoson Bunka Kyōkai, 2006), vol. 2, 17–34.
[70] Asai Nankō 浅井南皐, *Baisō hiroku hyōki* 黴瘡秘録標記 (1808), 2:19a–20a.

mercury compounds in such a way that they would not come into contact with the mouth cavity, in the hope that this would help to prevent the gum decay and loss of teeth often associated with the use of mercury remedies. The practice of consuming medicines that contained toxic mercury compounds within a shell of protective material had originated in China, but had undergone distinctive developments within Japan. Chen Sicheng's Poison-Transforming Pills (*huaduwan* 化毒丸) had their core ingredients, including *seiseinyū*, coated in a layer of cinnabar.[71] Ishibashi Masaaki likewise warned that patients should not chew on pills that contained *keifun* or *seiseinyū*, and recommended that when these medicines were given to children younger than six or seven, they should be wrapped in a thick coating of gold or silver foil and swallowed together with warm water in order to ensure they passed quickly through the throat.[72]

In his discussion of therapies for syphilis, Hirano Genryō declared that mercury therapies should attempt to bring the disease-poison and the drug-poison into a balanced state of conflict (*tsuriai* 對抗); therapy could thus fail either by being too mild or too harsh.[73] He insisted that it was important to achieve the physiological response of *menken*, indicated by the stimulation of salivation, but criticized the common assumption that salivation was in itself sufficient to release

[71] Chen Sicheng, *Meichuang milu*, 45–8.
[72] Ishibashi Masaaki, *Baidoku yōhō*, 2a.
[73] Hirano Genryō, *Byōka suchi*, vol. 2, 26. As in many instances throughout the text, Hirano's Chinese characters and his Japanese phonetic glosses (*furigana*) have slightly different interpretations: The Chinese characters imply the notion of conflict, while the phonetic gloss implies the notion of balance. There is a tension between the two meanings that cannot readily be conveyed in English; in such cases, I have attempted to combine the two senses in a single translation.

the poison of syphilis from the body.[74] Failure to achieve *menken* could lead to the development of untreatable *mukumi* 腫脹 (dropsy) or *rōsai* 癆瘵 (phthisis). However, he advised caution in the use of *keifun*, since the symptoms of poisoning by this drug were similar enough to those of syphilis itself that patients often mistook the side effects of the drug for the progression of the disease and thus increased their dosage when they should have been decreasing it.[75] Conversely, he also warned that patients often made the mistake of using remedies that were too mild in the early stages of illness, but that when these failed and the disease worsened they often overcompensated for their earlier caution by turning to excessively violent mercurial treatments.[76] According to Genryō, many people afflicted with syphilis in the early stages of the disease misidentified their symptoms as relating to a blood stagnation disorder, and therefore relied on topical lotions and oils to "suck out pus" (*umisui-kōyaku* 呼膿膏薬) or on surgical procedures such as scraping out infected material by means of a probe inserted into the male urinary tract.

The ideas of Ancient Formulas medicine exercised an important influence over the ways that several early nineteenth century doctors thought about syphilis treatment. Kako Kakushū 加古角洲, a disciple of Yoshimasu Tōdō who appended an account of syphilis therapies to his own treatise on vomiting formulas, based his doctrines closely on those of Tōdō and argued that syphilis should be included within the scope of Tōdō's doctrine that "all diseases arise from a single poison."

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[74] Hirano Genryō, *Byōka suchi*, vol. 2, 26, 31.
[75] Hirano Genryō, *Byōka suchi*, vol. 2, 19.
[76] Hirano Genryō, *Byōka suchi*, vol. 2, 18–23.

He therefore rejected the common belief that the disease was associated with its own distinctive type of poison and criticized his contemporaries' reliance on specific anti-syphilitic drugs such as smilax rhizome and formulas such as Five Treasures Elixir (*gohōtan* 五宝丹).[77] Although Kakushū departed somewhat from Tōdō's diagnostic procedures in making more extensive use of pulse diagnosis, he adopted an aggressive approach to therapy that favoured sweating, vomiting and purging as well as mercury, *keifun* and arsenical drugs.

Consistent with their belief that the nature of syphilis was not radically different from that of other diseases, doctors like Ishibashi Masaaki and Kako Kakushū also argued that drugs like *keifun* and *seiseinyū* should not be restricted in their use to syphilis patients alone. Kako Kakushū saw the efficacy of mercurial drugs in terms of their general ability to "melt and transform deeply buried stiff and stagnant poisons."[78] Ishibashi Masaaki adopted Yoshimasu Tōdō's way of thinking about drugs as targeting clusters of manifest symptoms rather than hypothetical underlying pathologies, and argued that *seiseinyū* could be used as an effective treatment for patients suffering from bodily pain, malignant swellings or malignant sores, especially in cases of longstanding disease that had proved resistant to other forms of treatment – in such cases, he claimed, it was beside the point to ask whether these patients were suffering from "syphilis," and treatment should be based on manifest symptoms alone.[79]

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[77] Kako Kakushū, *Tohō satsuyō* 吐方撮要 (1808), *fugen* 附言, 1b–3a.
[78] Kako Kakushū, *Tohō satsuyō*, *furoku*, 16a; cf. 6a–7a.
[79] Ishibashi Masaaki, *Baidoku yōhō*, 19a–20a; *furoku*, 2a.

However, even these doctors' enthusiasm for mercury drugs was tempered by an awareness that it was sometimes necessary to moderate these drugs' severity. This could be done by combining mercury treatments with additional drugs to reduce the side-effects. Kako Kakushū recorded a secret family recipe for moderating the violence of *seiseinyū* or *soppiru* ソッピル (a sublimated mercury chloride compound prepared according to European methods; the name of this drug was derived from the Dutch word *sublimaat*).[80] Ishibashi Masaaki argued that although the violent effect (*menken*) of the mercury drugs was inseparable from their therapeutic value, it also carried the danger of further decay to the flesh. He therefore advised patients to use croton or rhubarb-based purgatives in alternation with mercury drugs in order to reduce their side effects; since it was difficult to predict how these drugs would act in combination, each patient had to be observed individually in order to give the appropriate treatment.[81] Other writers suggested that the healing properties of certain hot springs were particularly useful for dispelling the poison of mercurial therapies from the body: these were not generally the same springs that would be best for treating syphilis itself, and patients seeking this type of cure would have needed to travel extensively between different hot springs and cities where they might obtain drug therapies.[82] Developing a practical

[80] Kako Kakushū, *Tohō satsuyō*, *furoku*, 9b–10b.
[81] Ishibashi Masaaki, *Baidoku yōhō*, 1b–2a, 8b, 24b.
[82] Suzuki Noriko 鈴木則子, "Edo jidai no tōji to baidoku: Arima onsen to Kinosaki onsen no hensen wo megutte" 江戸時代の湯治と梅毒：有馬温泉と城崎温泉の変遷をめぐって, in *Nihon baidokushi no kenkyū: iryō, shakai, kokka.* 日本梅毒史の研究：医療、社会、国家, ed. Fukuda Mahito 福田眞人 and Suzuki Noriko 鈴木則子 (Kyoto: Shibunkaku Shuppan, 2005), 90.

understanding of how to apply violent remedies as antisyphilitic mercurial drugs thus sometimes necessitated finding cures for the effects of the drugs themselves.

Conclusion

When Japanese doctors began to experiment with new therapies and to seek to learn about them from the full range of available sources, they often noticed analogies between Chinese and European practices, and these analogies themselves became an important subject of inquiry. Whether these analogies were real or only perceived, Japanese doctors often drew attention to them, actively seeking ways to represent new techniques as either "Chinese" or "European" depending on their own prejudices and on the nature of their individual or lineage situation. The actual historical Chinese or European origins of a new technique were therefore often only a minor factor in determining whether or not the technique would gain acceptance; much more important were the experiences of doctors and their patients within Japan, the ways they interpreted those experiences in terms of the doctrinal frameworks available to them, and the ways that knowledge about these experiences and interpretations became diffused through society. As we will see in the next chapter, this could be true even in the case of smallpox vaccination, which unquestionably originated in Europe and was introduced to Japan primarily through the efforts of *rangaku* scholars and *ranpō* doctors.

Chapter 6

Vaccination and the Politics of Medical Knowledge

In contrast to the aggressive therapeutic methods described in the previous chapter, none of which have survivied as techniques well regarded by conventional medicine today, the discovery and worldwide spread of cowpox vaccination against smallpox has become regarded as one of the pivotal developments in the history of modern medicine. Since the effectiveness of the vaccine as a means of preventing smallpox is now widely accepted, it is easy to forget that at the time of its initial introduction to Japan in 1849, vaccination might have been seen as just as technically and epistemically problematic as now-abandoned techniques such as bloodletting or treatment with mercurial drugs. Early Japanese advocates of vaccination, like advocates of other medical interventions, regarded the technique as destined to succeed from the beginning, and in retrospect it is easy to agree with this view. However, when we examine a wider range of sources beyond those written by the *ranpō* doctors who were the principal advocates for the vaccine at the time of its introduction, it becomes apparent that acceptance of the new technique

depended on the same processes of negotiation, persuasion, diffusion through social networks, and gradual accumulation of practical experience within Japan that we have seen in the previous chapters.

Although Japan was one of the last countries to receive the cowpox vaccine, the practice of vaccination spread with remarkable rapidity, and twenty-five years later, when the Meiji government's newly established Bureau of Public Health (*Eisei kyoku* 衛生局) began to implement a program of compulsory vaccination in 1874, the network of practitioners and the widespread acceptance of vaccination that had developed during the intervening period enabled this program to serve as a basis for a successful regime of government-sponsored public health.[1] Since the public health practices of Meiji Japan later served as models for systems of public health implemented elsewhere in East Asia, the long-term consequences of the vaccine's arrival in Nagasaki extended well beyond Japan itself to include China, Korea and Taiwan.[2]

In her recent studies of vaccination in the late Tokugawa and early Meiji periods, Ann Jannetta has proposed two factors that were particularly important for promoting acceptance of the vaccine. First, the delayed arrival of the vaccine meant

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[1] Important studies of vaccination in nineteenth-century Japan include Soekawa Masao 添川正夫, *Nihon tōbyō shi josetsu* 日本痘苗史序説 (Tokyo: Kindai Shuppan, 1987); Brett Walker, "The Early Modern Japanese State and Ainu Vaccinations: Redefining the Body Politic, 1799–1868," *Past & Present* 163.1 (1999), 121–60; Fukase Yasuaki 深瀬泰旦, *Tennentō konzetsushi: kindai igaku bokkōki no hitobito* 天然痘根絶史：近代医学勃興期の人々 (Kyoto: Shibunkaku Shuppan, 2002); Ann Jannetta, *The Vaccinators: Smallpox, Medical Knowledge, and the Opening of Japan* (Stanford: Stanford University Press, 2007); Ann Jannetta, "Jennerian Vaccination and the Creation of a National Public Health Agenda in Japan, 1850–1900," *Bulletin of the History of Medicine* 83 (2009), 125–40.

[2] Ruth Rogaski, *Hygienic Modernity: Meanings of Health and Disease in Treaty-Port China* (Berkeley: University of California Press, 2004).

that the accumulated experience of vaccination in other countries enabled advocates to present a convincing case for its adoption even before the vaccine had become available in Japan; second, the fact that vaccination was introduced not by foreign doctors but by Japanese *ranpō* practitioners meant that the vaccine appeared less threatening than in other parts of the world where it was introduced by European colonizers.[3] According to this account, *ranpō* doctors' eagerness to implement a technique they had learned about by reading European medical treatises and conversing with visiting European doctors effectively guaranteed a positive reception for the vaccine once it had become available.

Jannetta's analysis, like the Japanese historical scholarship on which it is based, emphasizes the positive factors that supported acceptance of vaccination, and thus devotes little attention to the writings of those within Japan who were sceptical about the technique or who opposed its adoption. However, it would be a mistake to conclude from the later success of the vaccine that scepticism and opposition were insignificant. We have no firm statistics regarding popular attitudes towards vaccination during the nineteenth century, but a number of contemporary

[3] Jannetta, "Jennerian Vaccination," 130, 139. The resistance to vaccination in colonial contexts has been studied most extensively by historians of colonial South Asia: David Arnold, *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-Century India* (Berkeley: University of California Press, 1993), 116–58; Sanjoy Bhattacharya, Mark Harrison and Michael Worboys, *Fractured States: Smallpox, Public Health and Vaccination Policy in British India, 1800–1947* (New Delhi: Orient Longman, 2005). On vaccination in colonial Southeast Asia, see Annick Guénel, "Lutte contre la variole en Indochine: variolisation contre vaccination?" *History and Philosophy of the Life Sciences* 17.1 (1995), 55–79; Atsuko Naono, *State of Vaccination: The Fight against Smallpox in Colonial Burma* (Hyderabad: Orient Blackswan, 2009). For an overview of recent historiography on nineteenth-century vaccination around the world, see the articles collected in the Spring 2009 issue of *Bulletin of the History of Medicine*, in particular the introduction by Sanjoy Bhattacharya and Niels Brimnes, "Simultaneously Global and Local: Reassessing Smallpox Vaccination and Its Spread, 1789–1900," *Bulletin of the History of Medicine*, 83.1 (2009), 1–16.

references clearly indicate that scepticism was widespread at the time of the vaccine's arrival and persisted for at least the first decade of its use: one vaccination advocate wrote in 1853 that because vaccination had been practised in Japan only for a short period, many people still viewed it with suspicion; an opponent of the vaccine wrote in 1857 that only one out of ten doctors was willing to practice vaccination; as late as 1861, a vaccination advocate lamented that seven out of ten still retained doubts about the technique.[4] These scattered remarks cannot be taken literally as quantitative measures of public opinion, but they present a consistent picture of widespread scepticism that conflicts with the notion that circumstances in Japan at the time of the vaccine's arrival were exceptionally favourable to its adoption. Neither the existence of a network of *ranpō* doctors nor the successes of vaccination elsewhere in the world were sufficient to persuade a majority of people to accept the technique. Convincing Japanese doctors and patients that vaccination was a reliable method of preventing smallpox required years of local familiarity with the practise, acquired during a period in which Japanese medical culture was undergoing a broader realignment towards the adoption of Western medical models.

Recent historians of vaccination in other global contexts have drawn attention to the tension between simplistic accounts of the cowpox vaccine's diffusion and the accumulating evidence that vaccination was far from uniform in

[4] *Hi hitō ben* 非非痘辨 (1853); Ikeda Zen'an 池田全安, *Gyūtō hi seitō ron* 牛痘非正痘論 (1857), 1a; Tōyama Ken 遠山謙, *Intō bengi* 引痘辯疑 (1861), Preface, 1a.

its local manifestations.[5] Local cultures did not merely "receive" the vaccine, but transformed it by adapting its material practices to their own needs and assigning it new cultural meanings in accordance with their respective outlooks. An implicit methodological assumption of this recent scholarship has been that we can only understand the reception of any new medical technology by examining the full range of relevant contemporary discourse, paying attention to the voices of those who opposed the technique as well as those who argued in its favor.

The history of vaccination in Japan has hitherto been written primarily on the basis of sources written by *ranpō* practitioners, who were the most active early adopters of the new technology; historians have devoted much less attention to the perspectives of practitioners who thought about medicine in terms derived from East Asian medical traditions. Although these practitioners were less likely than their *ranpō* counterparts to show immediate enthusiasm for the new technique, they were far more numerous, and as the early vaccinators themselves were well aware, the acceptance of the vaccine in Japan ultimately required persuading not only those who were already convinced of the value of Western medicine at the time of the vaccine's arrival, but also the large number of doctors and members of the general public who continued to think about health and disease in terms derived from Chinese sources.

At the time of the vaccine's arrival in 1849, not only the majority of Japanese doctors but also the official policy of the Tokugawa bakufu tended to strongly favour *kanpō* rather than *ranpō* medicine. Just three months before the

[5] See the review in Bhattacharya and Brimnes, "Simultaneously Global and Local."

arrival of the vaccine, the bakufu issued an injunction against the use of *ranpō* techniques other than surgery and eye medicine, and it did not officially reverse this policy until 1858.[6] Some domains followed a policy more favourable to the adoption of Western medicine, but surveys conducted in the early Meiji period show that even in areas formerly belonging to these domains, practitioners of Western medicine constituted only around half of all practising doctors.[7] In Japan as a whole at the beginning of the Meiji period, doctors claiming to practice Western medicine constituted less than one fifth of the total.[8] In order to understand Japanese perceptions of the cowpox vaccine at the time of its introduction, it is thus essential to look beyond the writings of the committed *ranpō* doctors who have been the focus of most existing research, and to examine how *kanpō* doctors, as well as those who adopted an eclectic combination of *kanpō* and *ranpō* ideas and therapies, understood the nature of smallpox and learned about vaccination through reading Chinese as well as European sources.

This chapter therefore seeks to situate the early stages of the adoption of the cowpox vaccine within the broader context of concepts of medical knowledge and authority developed in the earlier chapters of this dissertation, showing how similar social and intellectual processes continued into the final years of the Tokugawa period despite the increasing influence of European medical ideas. To illustrate

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[6] *Tokugawa kinrei kō goshū* 徳川禁令考後集 (Tokyo: Yoshikawa Kōbunkan, 1931), vol. 2, 379–80; ibid., vol. 5, 592.
[7] Christian Oberländer, *Zwischen Tradition und Moderne: Die Bewegung für den Fortbestand der Kanpō-Medizin in Japan* (Stuttgart: Franz Steiner Verlag, 1995), 44–50.
[8] Ellen Gardner Nakamura, *Practical Pursuits: Takano Chōei, Takahashi Keisaku, and Western Medicine in Nineteenth-Century Japan* (Cambridge: Harvard University Asia Center, 2005), 99.

these continuities, this chapter focuses on two aspects of the early history of vaccination in Japan that have been largely neglected by existing scholarship. First, it examines the ways that *kanpō* doctors thought about smallpox and used Chinese sources to learn about the vaccine before the first successful vaccinations in Nagasaki. Second, it considers the reasons why some Japanese doctors initially opposed the adoption of the vaccine, both by examining the rationales presented in surviving anti-vaccination pamphlets and by analysing evidence in the writings of vaccination advocates that early Japanese vaccination practices were not as reliable as historians have tended to assume. It concludes by sketching an account of the subsequent path towards acceptance of the vaccine that acknowledges the continuing importance of *kanpō* and takes into account the widespread scepticism the vaccine encountered during its first decade of use.

Learning from China and Practicing in Japan

Translations of European treatises provided some of the earliest information about vaccination in Japan and helped motivate many of the doctors who were most active in distributing the vaccine and promoting its use after 1849.[9] Nevertheless, although *ranpō* had become steadily more popular throughout the first half of the nineteenth century, the fundamental concepts of *kanpō* continued to provide the most widely accepted framework for thinking about medicine. Moreover, many Japanese doctors were inclined to place greater trust in Chinese than in European sources of information. Far from emphasizing the foreign origins

[9] Jannetta, *The Vaccinators*, 122–7.

of the vaccine to support a broader argument for the value of Western medicine, many of the early Japanese vaccination advocates sought to deflect attention away from the vaccine's foreign origins because they were concerned these origins might hinder its acceptance.[10] Understandings of vaccination were thus mediated by the writings of contemporary Chinese as well as European doctors, and Japanese doctors adopted a variety of strategies to mitigate concerns about the Western origins of the practice.

The most important Chinese source of information about vaccination was the Cantonese doctor Qiu Xi's treatise *Yin dou lue* 引痘略 (*Concise Account of Vaccination*, 1817), copies of which had reached Japan within a few years of its initial publication in China.[11] The first Japanese reprint of the Chinese text appeared in Edo in 1846, and a Japanese-language adaptation was printed in 1849. The existence of Qiu Xi's treatise made it easier to win support for the vaccine among Japanese *kanpō* doctors who remained skeptical about the value of Western medicine in general, since it reassured them that vaccination had proven successful in China and that they thus did not need to place their faith in the writings of

[10] The vaccination advocate Kuwata Ryūsai felt it necessary to explain to his readers that "although those who call themselves Dutch medicine doctors (*ran'i* 蘭医) make many errors, we should not look at this and believe that the vaccine is another [error] of this sort." Kuwata Ryūsai 桑田立齋, *Gyūtō hatsumō* 牛痘発蒙 (1849), 7a–8a.

[11] Qiu Xi 邱熹, *Yin dou lüe* 引痘略 (1817), repr. in *Xuxiu siku quanshu* 續修四庫全書, vol. 1012 (Shanghai: Shanghai Guji Chubanshe, 2002). On the history of Qiu Xi's treatise in China, see Zhang Jiafeng 張嘉鳳 [Chia-feng Chang], "Shijiu shiji chu niudou de zaidihua—yi *Yingjiliguo xinchu zhongdou qishu*, *Xiyang zhongdou lun* yu *Yindou lüe* wei taolun zhongxin" 十九世紀初牛痘的在地化—以《英吉利國新出種痘奇書》、《西洋種痘論》與《引痘略》為討論中心, *Bulletin of the Institute of History and Philology, Academia Sinica*, 78.4 (2007), 755–812.

European doctors whose trustworthiness was uncertain; at the same time, it presented a novel account of vaccination that was consistent with *kanpō* medical ideas.

Historians have sometimes denied that medical ideas of any sort had any great importance for the Japanese acceptance of the vaccine. Harm Beukers, for example, has claimed that new *ranpō* techniques like vaccination were "not accepted because they were theoretically better founded, they were accepted for their proven effectiveness."[12] Yet although some early vaccination advocates were indeed content to adopt such a resolutely empiricist attitude, many others felt it was necessary to support their claims by demonstrating that they were consistent with widely accepted medical doctrines.[13] One of the benefits of Qiu Xi's treatise was that it provided the necessary link between the unfamiliar practice of vaccination and familiar medical ideas: it explained the significance of the vaccine's bovine origins in terms of traditional Chinese five-phases doctrine and indicated specific acupuncture points into which the vaccine should be inserted in order to have its effect.[14] It was only later, when vaccination had already come to be widely practised in Japan, that its value could become a question of "proven effectiveness." In the period immediately before and after the arrival of the vaccine, when local experience of this effectiveness was still lacking, many doctors' willingness to make

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[12] Harm Beukers, "The Fight Against Smallpox in Japan: The Value of Western Medicine Proved," in *Red-Hair Medicine: Dutch-Japanese Medical Relations*, ed. Harm Beukers et al. (Amsterdam: Rodopi, 1991), 59–77; Nakamura, *Practical Pursuits*, 151.

[13] For an example of a vaccination advocate who asserted the effectiveness of vaccination while refusing to explain the "principles" (*ri*) by which it might operate, see Nishimura Haruo 西村春雄, *Gyūtō kaihei* 牛痘解蔽 (1852), 10b–11a.

[14] Qiu Xi, *Yin dou lüe*, 1b–3a.

use of the technique depended on the fact that it could be rationally justified in terms of standard Chinese doctrines about the nature of smallpox.

The promulgation of Qiu Xi's ideas in Japan owed much to the activities of Koyama Shisei 小山肆成 (1807–1862), a doctor from rural Kumano who maintained close relationships with *kanpō* and *ranpō* doctors in the nearby cities of Kyoto, Osaka and Sakai. In 1847, Koyama arranged for the reprinting of Qiu Xi's Chinese text with *kunten* diacritic marks to improve its comprehensibility for Japanese readers; two years later, he sought to make Qiu Xi's message still more widely accessible by publishing his own Japanese-language version entitled *Hon'yaku intō shinpō zensho* 翻訳引痘新法全書 (*Translated Compendium on the New Method of Vaccination*, 1849). The text of the latter book was not a direct translation, but rather an adaptation that eliminated some of the more technical passages of the original. Qiu Xi had entered into extensive discussions of the effects of the innate poison depending on the organs in which it lodged and had given a correspondingly elaborate justification regarding the selection of acupuncture points into which the vaccine should be introduced, but Koyama abridged these sections and omitted the finer points of Qiu Xi's doctrines.[15] Koyama was sceptical about certain aspects of Chinese theories on smallpox, and he may have assumed that any readers interested in such details were probably capable of reading the Chinese version of the text; he may also have been concerned that their complexity might discourage less sophisticated readers from adopting the practice. Nevertheless, by associating

[15] Koyama Shisei 小山肆成, *Intō shinpō zensho furoku* 引痘新法全書附録 (1849), 1b–2a; cf. Qiu Xi, *Yin dou lüe*, 1b–3a.

vaccination with Qing doctors and *kanpō* rather than European doctors and *ranpō*, Koyama sought to encourage acceptance of vaccination among the many Japanese doctors who remained suspicious of Western medicine.

The attitudes of many nineteenth-century Japanese doctors towards information about the new foreign medical technique were analogous to those of bakufu officials towards different sources of information about overseas events such as the First Opium War in China (1839–1842). As Katō Yūzō has argued, bakufu officials had access to information through both Dutch and Chinese channels, but neither of these channels could provide them with entirely reliable information, and the fact that officials could read the original text of the Chinese sources without need for translation and perceive the analogies between China's situation and their own meant that Chinese sources of information were more immediately and intuitively comprehensible.[16] Bob Tadashi Wakabayashi has developed this argument further, suggesting that the broader Japanese public learned about events such as the opium wars through Japanese adaptations of Chinese accounts presenting plausible versions of events, even if these accounts were not entirely accurate.[17] Reports concerning the cowpox vaccine also reached Japan through both Dutch and Chinese sources, but because a majority of doctors were more familiar with Chinese than European medical ideas they often found information from Chinese sources more persuasive. Knowing about China's problems with

[16] Katō Yūzō 加藤祐三, *Kurofune zengo no sekai* 黒船前後の世界 (Tokyo: Iwanami Shoten, 1985), 273.
[17] Bob Tadashi Wakabayashi, "Opium, Expulsion, Sovereignty: China's Lessons for Bakumatsu Japan," *Monumenta Nipponica* 47.1 (1992), 1–25.

opium only heightened suspicions about the vaccine, which like opium was a foreign substance ostensibly imported for medicinal purposes.[18] Despite reports that vaccination was being practised successfully by Qiu Xi and other Chinese doctors, concerns about the vaccine's foreign origins contributed to lingering fears of unknown dangers.

Throughout the middle decades of the nineteenth century, a central paradox of Japanese nationalism was that in order to preserve Japanese civilisation from foreign powers it was necessary to adopt foreign technologies that themselves threatened the continuity of the Japanese civilisation that nationalists sought to preserve.[19] As we shall see below, these concerns were sometimes reflected in the writings of Japanese doctors who opposed the adoption of the vaccine; however, they were also important considerations for many vaccination advocates. Before turning to the arguments of opponents of the vaccine, it will be worthwhile to consider two examples of the strategies by which early vaccination advocates themselves sought to mitigate such concerns: Koyama Shisei's development of an

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[18] Mori Tatsuyuki 森立之, *Gyūtō hitō ben* 牛痘非痘弁 (1852), Colophon by Kitamura Naohiro 喜多村直寛. Kitamura was reacting to well-known verses by the Chinese scholar Ruan Yuan 阮元 (1764–1849) that had been printed as a preface to Qiu Xi's *Yin dou lue* and which drew a contrast between the benefits brought by the vaccine and the harm brought by opium. On Ruan Yuan's poem, see Angela Ki Che Leung, "The Business of Vaccination in Nineteenth-Century Canton," *Late Imperial China*, 29.1 (2008), 21–22.

[19] On the development of Japanese nativism during the eighteenth and nineteenth centuries, see Peter Nosco, *Remembering Paradise: Nativism and Nostalgia in Eighteenth-Century Japan* (Cambridge, Mass.: Harvard University Press, 1990); Harry D. Harootunian, *Things Seen and Unseen: Discourse and Ideology in Tokugawa Nativism* (Chicago: University of Chicago Press, 1988); Susan L. Burns. *Before the Nation: Kokugaku and the Imagining of Community in Early Modern Japan* (Durham, N.C.: Duke University Press, 2003); Mark McNally, *Proving the Way: Conflict and Practice in the History of Japanese Nativism* (Cambridge, Mass.: Harvard University Asia Center, 2005); Mark Teeuwen, "Kokugaku vs. Nativism," *Monumenta Nipponica* 61.2 (2006), 227–242.

indigenous "vaccine" by inoculating smallpox into cows, and Kasahara Hakuō's cultural framing of vaccination through the language and rituals of Japanese nativism.

Koyama and Kasahara adopted very different approaches to solving the problems posed by the vaccine's foreign origins, but they also revealed certain similarities of outlook. Both assumed that Chinese texts and *kanpō* ideas continued to provide a viable system for thinking about medicine, and both emphasized their symbolic veneration of the Two Deities (*nishin* 二神), Ōnamuchi and Sukunahikona, the native Japanese deities (*kami* 神) of medicine.[20] Koyama and Kasahara's insistence on the need to reconcile the practice of vaccination with nationalistic concerns suggests how easily medical knowledge could become entangled in the turbulent cultural politics of the late Tokugawa period.

Koyama's attempts to create his own vaccine by inoculating smallpox into cows began before the arrival of the vaccine in Nagasaki.[21] Several other doctors in the Kansai region had attempted to convert human smallpox to cowpox using similar methods, but they all concluded by admitting failure; Koyama was the only Japanese doctor who claimed to have successfully developed a vaccine of his own.[22]

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[20] On the symbolic implications of Ōnamuchi and Sukunahikona in early nineteenth-century medicine, see Daniel Trambaiolo, "Native and Foreign in Tokugawa Medicine," *The Journal of Japanese Studies* 39.2 (2013), 305, 318–19.

[21] Koyama Shisei, *Intō shinpō zensho furoku*, Preface.

[22] Asai Nobuaki 浅井允晶, "Mohnike byō juyō no zentei—Ōsaka, Sakai ni okeru Kobayashi Anseki no dōkō wo megutte" モーニッケ苗受容の前提—大坂・堺における小林安石の動向をめぐって, in *Ronshū Nihon no yōgaku* 論集日本の洋学, ed. Arisaka Takamichi 有坂隆道 and Asai Nobuaki (Osaka: Seibundō, 1993), vol. 1, 211–50; cf. *Intō shinpō zensho* (1846), Preface, 3b–4b. Koyama's creation of "vaccine" by inoculating

Koyama went through several rounds of trials before obtaining results that convinced him he had produced true vaccine. He first offered prayers to Ōnamuchi and Sukunahikona, then attempted to inoculate cows by means of nasal insufflation using smallpox scabs; however, these cows merely became feverish, and they failed to develop pustules on their udders like those described by Qiu Xi. Koyama then turned for inspiration to Li Shizhen's *Bencao gangmu*, which recorded a formula for preventing smallpox with bovine lice as the main ingredient. He speculated that if Chinese doctors had been able to prevent smallpox using bovine lice, then perhaps bovine blood might be even more effective; to test this idea, he drew blood from a spontaneously occurring wart on a cow's udder, mixed this blood with lymph taken from the pustules of a child suffering from smallpox, and inoculated other children with this mixture. The combination of bovine blood and cowpox lymph seemed to result in a milder disease than regular inoculated smallpox, but it still caused pustules dispersed over the body rather than the localized pustules described in Qiu Xi's treatise. Finally, Koyama inoculated smallpox directly into the udders of several cows, inducing the formation of pustules from which he then inoculated children and adult recipients. Since these patients developed a localized infection with no more than a very mild fever, Koyama concluded that he had finally produced "true cowpox." When the Jennerian cowpox vaccine finally arrived in Japan, Koyama claimed not only that the imported vaccine was no different from the one he had produced on his own but also that his native vaccine should be

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smallpox into cows paralleled efforts of doctors in nineteenth-century India and China who lacked access to supplies of the Jennerian vaccine. See Bhattacharya, Harrison and Worboys, *Fractured States*, 34–9; Leung, "The Business of Vaccination," 17–18.

regarded as preferable, since it could allow Japanese people to enjoy the benefits of vaccination without exposing themselves to the humiliation and danger of allowing foreigners such a great role in preserving their health. Nevertheless, few others were willing to use his vaccine, and his satisfaction at having produced true cowpox of his own soon turned to disappointment.

A very different approach to the problem of reconciling vaccination with nationalist values can be found in the writings of the Fukui doctor Kasahara Hakuō 笠原白翁 (1809–1880), who regarded vaccination as part of a broader project to augment Japan's national dignity and strength through the improvement of medicine. Kasahara's other proposals for strengthening Japan through medicine included the foundation of a medical school in Fukui for training doctors in Western techniques of military surgery, since he believed that Japanese soldiers would fight more bravely knowing that even if they were injured in battle they could still be treated and return home. Like Koyama Shisei, Kasahara thought his countrymen should pay attention to "recent books from the Qing" in order to learn about Western medical techniques such as vaccination.[23] Kasahara did not object to the use of imported vaccine, but he was sensitive to the symbolic implications of introducing a foreign disease into Japanese bodies, and he sought to frame the practice in ways consistent with the religiously inflected nationalism of Japanese

[23] Ban Isoshirō 伴五十嗣郎, "Ranpō-i to kokugaku—Fukui han'i Kasahara Hakuō no baai" 蘭法医と国学—福井藩医笠原白翁の場合, *Shintō-shi kenkyū* 24 (1976), 33–50; Ban Isoshirō, "Kasahara Hakuō no yōjōsho (ikō - shiyakukan) sōritsu ni kan suru shiryō" 笠原白翁の養成所（医黌・施薬館）創立に関する史料, *Jitsugakushi kenkyū* 3 (1986), 275–6. For a summary of Kasahara Hakuō's contribution to the spread of vaccination, see also Jannetta, *The Vaccinators*, 119–20, 139–43.

nativism (*kokugaku* 国学). Kasahara insisted that doctors performing vaccinations should first undergo ritual cleansing and pay homage to the *kami*; his vaccination clinic in Fukui included an altar to Ōnamuchi and Sukunahikona adorned with calligraphy by the nativist scholar Tanaka Ōhide 田中大秀 (1777–1847), and the planned title page for his unpublished treatise on vaccination bore a couplet exhorting doctors to pay daily homage to the Two Deities and to study diligently the medical books of all lands.[24] Early in 1850, Kasahara wrote to the prominent Osaka *ranpō* doctor Ogata Kōan 緒方洪庵 (1810–1863) to criticize a vaccination pamphlet that had included excessive praise for the English monarch and had failed to show proper respect for Japan through the honorific convention of raising the country's name to the top of each line of text.[25] Kasahara's attitudes were based on his assumption that the promotion of useful medical knowledge alone was insufficient to strengthen the country and his belief that doctors also needed to express their commitment to the nation in the ritual, linguistic and textual forms through which they applied and transmitted their knowledge.

During a period of great sensitivity to questions surrounding the native and foreign origins of cultural practices, the European origins of the vaccine were widely perceived as problematic, not only by those who opposed the use of the vaccine but even by those who advocated it. The efforts of doctors like Koyama Shisei and Kasahara Hakuō to neutralize the potentially threatening implications of the

[24] Kasahara drafted the text of this book during the period 1849–1850, but in the end it was never published. See Ban, "Ranpō-i to kokugaku," 45.
[25] Ban, "Ranpō-i to kokugaku," 42–3.

vaccine's foreign origins illustrate the extent to which the political and medical assumptions of early vaccination advocates overlapped with those of opponents. Advocates and opponents belonged to a common medical culture, and in order to understand either of these groups it is essential to see their similarities as well as their differences.

The Problems of Practice

Historians of vaccination in other nineteenth-century contexts have drawn attention to the problems associated with vaccination before the existence of consistent and reliable methods for storage, transport, and use, and have criticized the "influential, yet presentist, presumption in the historiography that vaccinations were always able to offer immunity against smallpox."[26] Similarly, a close examination of the reports left by foreign and Japanese observers during the 1850s suggests that there are good reasons to doubt the common assumption that early Japanese vaccinations were uniformly safe and effective.

The early Japanese vaccinators themselves voiced numerous criticisms of the ways their contemporaries practised the technique. Writing in 1852, Nishimura Haruo criticized vaccinators who used lymph or scabs, which were less costly but also less reliable than arm-to-arm transmission; he even claimed that some "vaccinators" performed false vaccinations using needles tipped with nothing but croton seeds, producing a local inflammation that recipients mistook for a genuine

[26] Bhattacharya, Harrison and Worboys, *Fractured States*, 235.

vaccination.[27] A further problem arose from a lack of the expertise needed to correctly distinguish between "true pox" (*shintō* 真痘) and "false pox" (*gitō* 偽痘) as possible outcomes of a vaccination. One doctor noted that many of his contemporaries were unable to distinguish between true and false pox and often believed that their patients had been successfully vaccinated when in fact they were still vulnerable to smallpox.[28] Another early vaccinator, Kuwata Ryūsai, recorded thirty-seven cases of false pox among the 1028 individuals he vaccinated during a thirteen-month period soon after the arrival of the vaccine, and he showed a particular concern for the need to re-vaccinate such individuals.[29] If Kuwata's statistics indicate the approximate rate of false pox obtained by one of Japan's most prominent vaccinators, it is likely that other vaccinators would have encountered similar rates of false pox, and many of these cases may have gone unidentified. A small but significant number of patients would not have been protected against subsequent infection, and this failure rate would have been sufficient to fuel rumors concerning the vaccine's lack of efficacy.

Problems with the vaccine persisted or even worsened during the first few years after its arrival. The Dutch naval medical officer J. L. C. Pompe van Meerdervoort, who spent five years in Nagasaki and established a Western-style hospital and medical school during his time there between 1857 and 1863, wrote in his memoirs that vaccine stocks in Nagasaki had been allowed to decline in quality

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[27] Nishimura Haruo, *Gyūtō kaihei*, 3b–5a.
[28] Anonymous handwritten marginal note in Itō Keisuke 伊藤圭介, *Igirisu-koku shutō kisho* 英咭唎国種痘奇書 (1841), IRCJS (SC/151/It).
[29] Kuwata Ryūsai, *Gyūtō hatsumō*, 18a–b.

since the departure of Otto Mohnike in 1851, and that many people had subsequently lost faith in the vaccine's efficacy.[30] In 1858, Pompe imported fresh vaccine from China and distributed it to local physicians so that they could report back to him on their rates of success, but the results were disappointing: around one third of their vaccinations ended in failure. The fact that Pompe was forced to re-import vaccine from China suggests that it had proven impossible to maintain effective stocks of the vaccine in the Nagasaki region. Local vaccinators had apparently continued to practice despite the diminished efficacy of their vaccine stocks, and it would hardly be surprising if these circumstances detracted from public confidence in the technique.

Some of the doctors who persisted with ineffective vaccinations may have been motivated to do so because they had come to rely on the technique as a source of income. The economic dimensions of early vaccination practices in Japan have been little studied, but scattered remarks in the writings of both advocates and skeptics suggest that some vaccinators' desire for profit may have delayed widespread acceptance. Many of the best-known vaccinators recognized this risk: Ogata Kōan, for example, insisted that doctors at his Osaka vaccination clinic refuse to take fees, and they even extended payment to poor families who were willing to allow their children to act as donors of lymph.[31] Doctors who attempted

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[30] J. L. C. Pompe van Meerdervoort, *Vijf jaren in Japan, 1857–1863* (Leiden: Van de Heuvel & Van Santen, 1867–68), vol. 2, 222–3; cf. Jannetta, *The Vaccinators*, 172–3.

[31] Ogata Kōan 緒方洪庵, *Jotōkan kiroku* 除痘館記録 (manuscript in Noma Collection, IRCJS). Similar systems of payment to parents who were willing to let their children act as vaccinifers were used by nineteenth-century vaccinators in other places around the world, such as Canton, Indochina, and India. See Leung, "The Business of Vaccination"; Guénel,

to profit from vaccination, either by charging for the vaccination itself or by selling medicines to be consumed afterwards, may have contributed to suspicions concerning the practice.[32] Koyama Shisei complained that people with no family tradition of medical learning were taking up vaccination as a path to quick profit, obtaining their vaccine through cruel and dishonest means, "extracting the juice from pustules before they are ripe, tearing off the scabs before they have fallen, making off with them in the darkness and leaving the children ill."[33] Similarly, Kuwata Ryūsai warned his readers about vaccinators who had taken up the technique purely to earn money.[34] Since even advocates of vaccination directed such trenchant criticisms against their fellow vaccinators, it is hardly surprising that many in Japan persisted in their reluctance to adopt the technique during the early years after its arrival.

Finally, several early vaccination advocates acknowledged that vaccination carried a risk of inadvertent transmission of other diseases. Kuwata Ryūsai noted that many people delayed vaccination until after the beginning of a smallpox epidemic, despite the fact that vaccinating during periods of epidemic smallpox risked spreading the disease itself.[35] Qiu Xi and other Chinese doctors had warned

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"Lutte contre la variole," 65; Lauren Minsky, "Pursuing Protection from Disease: The Making of Smallpox Prophylactic Practice in Colonial Punjab," *Bulletin of the History of Medicine* 83.1 (2009), 80.

[32] Tōyama Ken, *Intō bengi*, Appendix, 4b–5a.

[33] Koyama Shisei, *Intō shinpō zensho furoku*, 25a–27a.

[34] Kuwata Ryūsai, *Gyūtō hatsumō*, 16a–b.

[35] Kuwata Ryūsai, *Gyūtō hatsumō*, 16b.

about the possibility of transmitting syphilis and leprosy along with the vaccine.[36] Although many Japanese vaccinators would have taken care to select healthy donors, others may have been uninformed about the possible risks. Surviving documents do not allow us to estimate the frequency of such cases, but there is no good reason why historians should be willing to accept the more optimistic claims of vaccination advocates while disregarding these advocates' own descriptions of the technique's inherent risks. Although the vaccination sceptics discussed below tended to raise theoretical objections to vaccination more often than they cited specific cases of its failure, their objections should be seen in the context of the acknowledged practical problems of applying the unfamiliar technique effectively and safely.

Vaccination and Numerical Reasoning

Before turning to examine in more detail the arguments of the vaccination skeptics, it will be worthwhile to consider briefly the early vaccinators' compilation of statistical information regarding the outcomes of their vaccinations. This is an aspect of the early vaccinator's activities that has largely been overlooked: although historians such as Anne Jannetta have drawn attention to the importance of vaccinators' record-keeping habits in facilitating the diffusion of the vaccine, we still lack a basic understanding of the ways in which doctors converted their records into

[36] Leung, "The Business of Vaccination," 18–20. On the risks of disease transmission through vaccination in other nineteenth-century contexts, see Bhattacharya, Harrison and Worboys, *Fractured States*, 58–9; Thomas G. Benedek, "Vaccination-Induced Syphilis and the Hübner Malpractice Litigation," *Perspectives in Biology and Medicine* 55 (2012), 92–113.

numerical form, aggregating the manifold variety of outcomes into discrete categories to evaluate the effectiveness of their own practices.[37]

There are traces of evidence to suggest that the vaccinators' use of numerical reasoning may have been inspired by European models that were available to them, even it those models were not themselves directly connected to vaccination or to smallpox. Kasahara Hakuō, in order to support his claims regarding the effectiveness of Western military surgery, cited numerical statistics on the recovery of injured soldiers treated by British surgeons in the Napoleonic wars.[38] Although nineteenth-century political and economic arguments were often expressed in numerical terms, the explicit use of numbers was rare in Japanese medical discourse before the late nineteenth century.[39] Even after the Meiji restoration, older ways of writing about medical knowledge such as case histories and deductive and analogical reasoning continued to be important. Nevertheless, since the development of medical statistics in eighteenth-century Europe has often been seen in connection with the development of new modes of governing and thinking about governed populations, it is intriguing that they should have appeared in a policy proposal of a prominent vaccinator who was interested in strengthening his domain and the Japanese nation.[40]

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[37] Jannetta, *The Vaccinators*, 148–9.
[38] Ban Isoshirō, "Kasahara Hakuō no yōjōsho," 275–6.
[39] For the uses of numerical arguments in Meiji medical discourse, see Alexander Bay, "Beriberi, Military Medicine, and Medical Authority in Prewar Japan," *Japan Review* 20 (2008), 111–156.
[40] On the political uses of medical statistics in eighteenth-century Europe, see Andrea A. Rusnock, *Vital Accounts: Quantifying Health and Population in Eighteenth-Century England and France* (Cambridge: Cambridge University Press, 2002).

The pamphlets on vaccination by Kuwata Ryūsai 桑田立齋 (1811–1868) are also noteworthy for their innovative presentation of numerical information. Kuwata's *Gyūtō hatsumō* 牛痘発蒙 (1850) included two sets of numerical information presented in two distinct forms. The first of these was a table placed at the head of the book that compared the effects of natural smallpox infection, nasal insufflation, inoculation with lymph, Western-style variolation, and vaccination. Kuwata arranged these in ascending order from "great affliction" to "highest benefit," with vaccination presented as the most beneficial method. The table incorporated Kuwata Ryūsai's personal experience and that of his father Kuwata Genshin as well as reports from a number of other doctors, although the means by which Ryūsai obtained the information about other doctors' practices is unclear. Ryūsai stated that since he began practising Western-style variolation in 1838, that over the course of twelve years seventy to eighty doctors had been practising the technique on a total of several thousand children, and that it was "well known" that not one of these children had died as a result. The technique was completely safe, and was inferior to vaccination only in that in rare cases it caused pustules over the whole body rather than just the place of inoculation. Kuwata regarded nasal insufflation as particularly dangerous, since he believed that if the disease entered the patient through the nose, it was liable to cause damage to the eyes and throat.

Kuwata's table of comparisons represented only a minor innovation in the means of conveying information about the risks of different medical techniques: it expressed this information in numerical form, but the numbers included in the table

have an impressionistic quality that would not have demanded the keeping of precise records. Kuwata Ryūsai's main innovation in this table was to clarify the comparison by presenting it in the form of a table rather than simple prose. However, the same pamphlet also included information about Kuwata's experience with vaccination that was clearly based on systematic monitoring of the results of vaccination.[41] Kuwata incorporated these data into his pamphlet in a "second appendix" that was probably composed some time after the main body of the text.

The data in this "second appendix" described the results of 1028 vaccinations that Kuwata had performed during a period of slightly more than one year, from the lunar eleventh month of 1849 and the lunar twelfth month of 1850. Kuwata recorded that 974 of these vaccinations resulted in "true cowpox," while 37 resulted in "false pox." Although he attempted to re-vaccinate those children whose vaccination had resulted in "false pox," he was unable to obtain a reaction in any of these cases. Nevertheless, he was concerned that these children would still be vulnerable, and promised to return to re- vaccinate within a few years of the initial attempt. In six cases, there was no reaction to the vaccine, and there were four cases in which even a second attempt to vaccinate failed to produce any reaction. Three children developed only one pustule despite having had the vaccine administered at several distinct points on the arm. Kuwata was concerned that this might result in incomplete protection, but upon attempting to repeat the vaccination he was unable to stimulate any reaction. In four cases, Kuwata recorded that the patient became ill with natural smallpox at the same time that the

[41] Kuwata Ryūsai, *Gyūtō hatsumō*, 18a–b.

cowpox was developing. Kuwata suggested that these cases resulted from the children's contracting natural smallpox within one or two days of the vaccination, before the vaccine was able to have its effect. Nevertheless, he claimed that these cases tended to be less severe than normal, and he suggested that this was because the vaccine had robbed the natural smallpox of its strength.

It is tempting to see in these detailed records an important step towards modern, empirical ways of thinking about medicine. As we have seen in the previous chapter, eighteenth-century doctors like Nagatomi Dokushōan had begun to make use of systematic trials in which they applied the same technique to a number of patients classified as suffering from the same disease. Doctors like Kasahara Hakuō and Kuwata Ryūsai were aware of the ways that European doctors were making use of similar types of trials, and Kuwata Ryūsai's publication of his statistical records showed that he was aware of their power to inform and persuade. Nevertheless, these forms of thinking remained marginal to medical discourse throughout the first decade in which vaccination was practiced in Japan, and personal experience and rationalistic arguments based on classical texts and general principles continued to dominate the writings of vaccination advocates and skeptics alike.

Opposing the Vaccine

A small number of surviving pamphlets written by *kanpō* doctors who opposed the adoption of the vaccine offer valuable insights into these doctors' medical and political attitudes, and it is somewhat surprising that these sources have been largely

neglected by historians. The authors of these pamphlets were not obscure or peripheral figures, but rather prominent members of the *kanpō* medical elite, including smallpox specialists of the Ikeda lineage and other active contributors to the intellectual life of the Igakukan. These pamphlets were admittedly not among their authors' most influential publications; the fact that many of these pamphlets were written in unpunctuated classical Chinese rather than Japanese suggests that their authors wrote for a limited readership of highly educated doctors rather than for a broad public. Several of the anti-vaccination pamphlets were printed using moveable type, a technology typically used for producing small editions for limited distribution.[42] The extent of their circulation is difficult to judge, but there is little evidence to suggest that they were widely read.[43] Only one of the pamphlets provoked a surviving written response from a vaccination advocate, and since this response was never printed, its anonymous author presumably regarded it as a personal document rather than as a contribution to public debate.[44] It is unclear whether the concerns raised in the anti-vaccination pamphlets were typical of the

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[42] By contrast, the pamphlets published by vaccination advocates were typically printed from carved woodblocks. The use of moveable type generally did not permit the inclusion of phonetic glosses or *kunten* reading marks that would have made these texts more accessible to readers with intermediate levels of literacy in classical Chinese. For further information on moveable type printing in Tokugawa Japan, see Peter Kornicki, *The Book in Japan: A Cultural History from the Beginnings to the Nineteenth Century* (Honolulu: University of Hawaii Press, 2001), 158–63.

[43] The copy of Mori Tatsuyuki's *Gyūtō hitō ben* in KyFC contains a handwritten note by Tatsuyuki's son Mori Noriyuki referring to the receipt of ninety-five copies of the pamphlet from Kitamura Naohiro, but it is not clear whether this represented the total or only a fraction of those that were printed.

[44] *Hi hitō ben*. The author of this pamphlet did not know who Mori Tatsuyuki or Kitamura Naohiro were, and it is unclear how he obtained a copy of Mori and Kitamura's pamphlet; he seems to have been favorable toward *kanpō* rather than *ranpō* medicine, but he dismissed as ridiculous Mori's argument that vaccination was originally a Chinese technique.

reasons why *kanpō* doctors opposed vaccination, or even whether we should see them as tendentious polemics rather than legitimate arguments. Yet despite these difficulties of interpretation, these documents retain considerable value as some of the few surviving sources of direct evidence concerning the reasoning of Japanese doctors who opposed the adoption of vaccination.

Ikeda Kinkyō's popular manual *Tōshin imashimegusa* 痘疹戒草 (1806) offers some clues to the intellectual background of the Ikeda doctors' opposition to the vaccine. As discussed in Chapter 4, this manual was aimed at a non-expert audience, and it was mostly concerned with basic advice on matters such as foods and activities to be avoided while suffering from the disease. Kinkyō had warned his readers against the "miracle cures" for smallpox that had become fashionable during the late eighteenth century, including the many commercially available pills sold for preventing smallpox as well as expensive imported products such as the narwhal tusks, saffron and theriac sold by Dutch merchants.[45]

Tōshin imashimegusa also presented Kinkyō's reasons for opposing the practice of Chinese-style smallpox inoculation by nasal insufflation. This technique had first been introduced to Japan during the middle years of the eighteenth century, when the Chinese doctor Li Renshan 李仁山 performed a series of inoculations in Nagasaki; later in the eighteenth century, Chinese-style inoculation was practiced and promoted by the Kyūshū doctor Ogata Shunsaku 緒方春朔 (1748–1810).

[45] Ikeda Kinkyō 池田錦橋, *Tōshin imashimegusa* 痘疹戒草 (1806), 1:7b–8b, 17a–b.

However, it was never as widely adopted as in China.[46] Ikeda Kinkyō himself experimented with inoculation but soon abandoned it because the risks seemed too great and the benefits too uncertain. Some of his inoculated patients had failed to gain protection against later eruptions of smallpox, while others had become seriously ill and required all of his medical skill to bring them back to health; one of these patients had died despite his best efforts. Li Renshan had written that eight or nine out of ten inoculated patients would experience only a mild case of smallpox, but since Kinkyō believed he could obtain similar rates of recovery by treating patients who had contracted smallpox naturally he saw no reason to adopt the practice.[47] Half a century later, the Ikeda doctors' attitudes towards the vaccine were shaped in part by their familiarity with a long tradition of exotic remedies purporting to prevent or cure smallpox and by their knowledge of Kinkyō's unfortunate experiences with inoculation.

Nevertheless, the Ikeda doctors' opposition to the cowpox vaccine was not a foregone conclusion. Ikeda Mukei adopted an eclectic attitude to medicine similar to that of many Igakukan doctors during the first half of the nineteenth century, criticizing the sterile dogmatism of eighteenth-century confrontations over Ancient Formulas and Later Age medicine, warning against excessive reliance on old books as a source of medical learning, and encouraging doctors to keep an open mind

[46] Ōba Osamu 大庭脩, "Ri Ninsan Shutōsho ni tsuite" 李仁山種痘書について, in *Sekkō to Nihon* 浙江と日本, ed. Fujiyoshi Masumi 藤善真澄 (Suita-shi: Kansai Daigaku Shuppanbu, 1997); Shao Pei 邵沛, "Nitchū Ryōkoku ni okeru jintō sesshu hō no hikaku kenkyū" 日中両国における人痘接種法の比較研究, *Nihon ishigaku zasshi* 50(2), 2004, 187−222; Tomita Hidehisa 富田英壽, *Shutō no so: Ogata Shunsaku* 種痘の祖：緒方春朔 (Fukuoka: Nishi Nihon Shinbunsha, 2005); Jannetta, *The Vaccinators*, 20–24.

[47] Ikeda Kinkyō, *Tōshin imashimegusa*, 1:16a–b.

about medical techniques from unusual sources such as the orally transmitted learning of "grandmas and grandpas."[48] Mukei first learned about the existence of the vaccine from Ikeda Kinkyō's disciple Miyamoto Shūan 宮本周庵, and he had read the treatises on vaccination by Qiu Xi as early as 1840, several years before these treatises became available in Japanese editions.[49] Even practitioners of Dutch Medicine regarded the Ikeda doctors as trustworthy authorities: before the arrival of the vaccine at Nagasaki, the *ranpō* doctor Mitsukuri Genpo 箕作阮甫 (1799–1863), who would later be one of the leading figures in the foundation of a major vaccination clinic in Edo, considered asking Ikeda Mukei whether it might be feasible to generate a cowpox vaccine by inoculating cows with human smallpox.[50] The fact that even a *ranpō* doctor such as Mitsukuri Genpo sought to obtain Mukei's insights into the new technique suggests that the anti-vaccination pamphlets written by *kanpō* doctors deserve close study as sources of information about how elite doctors evaluated the vaccine's potential risks and benefits.

The arguments of the anti-vaccination pamphlets were typically based on a reluctance to believe that the claims made by vaccination advocates were consistent with the innate poison doctrine concerning smallpox aetiology. Many of the pamphlets questioned the vaccine's alleged power to stimulate complete release of the innate poison. The *kanpō* doctor Nakamura Genkei 中村元敬 pointed out that if the severity of smallpox depended entirely on the innate poison present in the body

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[48] Ikeda Mukei, *Kansō idan* 閑窻医談 (1813 manuscript in KyFC).
[49] Ikeda Mukei, *Shutō bengi* 種痘辨義 (1858 manuscript in KyFC), 15b–16a.
[50] Asai, "Mohnike byō juyō no zentei," 230.

at birth, it was foolish to expect that artificially stimulating its eruption could result in a less severe disease.[51] Ikeda Naoatsu 池田直温 (1819–1875), the heir of Ikeda Mukei, conveyed a similar idea in still more vivid language, arguing that vaccinators' attempts to extract the innate poison through a few superficial pustules were as senseless as trying to extract ink from a cuttlefish by pricking its tentacles.[52]

Several pamphlets challenged the claim that the vaccine was safe. Ikeda Naoatsu suggested that parents who vaccinated their children were unwittingly creating a risk of more serious problems later in life.[53] Nakamura Genkei justified a similar concern by drawing an analogy with syphilis: as we have seen, Tokugawa doctors were aware that the apparent disappearance of syphilitic symptoms did not necessarily indicate the conclusion of the disease, and attributed the subsequent reappearance of symptoms to a lingering poison that could "ferment" within the body before it erupted to the surface.[54] Too little time had passed since the arrival of the cowpox vaccine in Japan for direct practical experience to confirm that the newly introduced vaccine could not have similar consequences, and rumours of problems among vaccine recipients in China and Japan seemed to confirm that these concerns were justified: Ikeda Mukei and Ikeda Naoatsu cited reports about health problems among vaccine recipients in China, while Nakamura Genkei

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[51] Nakamura Genkei 中村元敬, *Shutōben* 種痘辨 (1852), 1a.
[52] Ikeda Naoatsu 池田直温, *Gyūtō benpi* 牛痘辨非 (1861), 2b. Cf. the similar arguments in Mori Tatsuyuki, *Gyūtō hitō ben*, 2a–3a; Nakamura Genkei, *Shutōben*, 1b.
[53] Ikeda Naoatsu, *Gyūtō benpi*, 5b–6a.
[54] Nakamura Genkei, *Shutōben*, 1b–2a.

recorded the story of a Japanese noble whose child had died after receiving the vaccine.[55]

The bovine origins of cowpox prompted a further set of concerns. Ikeda Zen'an, the son of Ikeda Keisui, reasoned that since smallpox was normally a human disease, cowpox must have originated from an unusual epidemic severe enough to cause disease even in cattle, and the vaccine thus ought to be considered even more dangerous than regular smallpox.[56] Ikeda Mukei, however, argued that since the pustules of human smallpox followed a predictable pattern of development and were never deep blue in colour, the blue pustules Jenner had observed in cows were probably unrelated to smallpox and were more probably just some sort of boil on the udders; he dismissed as ridiculous Koyama Shisei's claim to have produced "vaccine" by inoculating human smallpox into cows.[57]

Mori Tatsuyuki's *Gyūtō hitō ben* 牛痘非痘辨 (*Argument that Cowpox is not Pox*, 1852) presented more elaborate arguments concerning the nature of vaccination that deserve attention for what they reveal about the prejudices and assumptions of elite *kanpō* doctors around the time of the vaccine's arrival. Tatsuyuki's ancestors had served various domain lords in the provinces, and Tatsuyuki himself played an important role in the flourishing of medical philology at the Igakukan through his work on new critical editions of Chinese and Japanese medical classics.[58] When he

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[55] Nakamura Genkei, *Shutōben*, 2a; Ikeda Mukei, *Shutō bengi*, 21a; Ikeda Naoatsu, *Gyūtō benpi*, 3b.
[56] Ikeda Zen'an, *Gyūtō hi seitō ron*, Preface, 2a; cf. 6b–7a.
[57] Ikeda Mukei, *Shutō bengi*, 17b–18b.
[58] On Mori Tatsuyuki, see Kawase Kazuma 川瀬一馬, *Nihon shoshigaku no kenkyū* 日本書誌学之研究 (Tokyo: Dai Nippon Yūbenkai Kōdansha, 1943), 775–833 and Ueno Masuzō 上

read Qiu Xi's description of vaccination, his immediate impulse was thus to make sense of the new technique in terms of the classical traditions with which his textual research had made him intimately familiar.

Mori had been invited in 1848 to participate in the production of a new edition of Sun Simiao's *Beiji qianjin yaofang* 備急千金要方 (*Prescriptions for Emergencies Worth a Thousand Pieces of Gold*, c. 652).[59] In the process of preparing his new edition of this classic Chinese formulary, Mori had learned about an unusual Chinese technique for treating children's eye warts by cutting into the skin around the patient's eyes and introducing another patient's pus into the wounds, and when he compared Sun Simiao's description of this technique with Qiu Xi's description of vaccination he came to believe that the two were "exactly the same." He concluded that vaccination produced no more than a local reaction under the skin that could not possibly result in complete release of the innate smallpox poison.[60] This argument rested on a very superficial similarity between vaccination and the older technique for treating eye warts, and an anonymous author who wrote a critique of Mori's pamphlet quite reasonably complained that the analogy was absurd.[61] Nevertheless, it is noteworthy that Mori believed his identification of a "precedent"

野益三, *Hakubutsugakusha retsuden* 博物学者列伝 (Tokyo: Yasaka Shobō, 1991), 138–44. On medical philology in nineteenth-century Japan, see Kosoto Hiroshi 小曽戸洋, *Kanpō no rekishi* 漢方の歴史 (Tokyo: Taishūkan Shoten, 1999), 162–8; Benjamin Elman, "Sinophiles and Sinophobes in Tokugawa Japan: Politics, Classicism, and Medicine During the Eighteenth Century," *EASTS* 2 (2008), 109–112.

[59] Kawase, *Nihon shoshigaku no kenkyū*, 792–4.

[60] Mori Tatsuyuki, *Gyūtō hitō ben*, 2a.

[61] *Hi hitō ben*.

for vaccination in a thousand-year-old Chinese treatise provided a good reason to be sceptical about the technique.

The textual compilation projects carried out during this period at the Igakukan and elsewhere were clearly more than mere philological exercises. They were intended as sources of continuing guidance for medical practice. In Mori's case, however, close familiarity with ancient texts led him to misunderstand the nature of vaccination. He criticized the technique not because he saw it as an unprecedented departure from tradition, but rather because he failed to recognize its genuine novelty.[62]

From Opposition to Acceptance

Despite the continuing practical problems outlined above, most Japanese recipients of the vaccine probably received adequate protection from smallpox, and by the second half of the 1860s many doctors who had initially been sceptical about the vaccine were beginning to change their minds. Kitamura Naohiro 喜多村直寛 (1804–1876), an Igakukan doctor who had contributed a preface for Mori Tatsuyuki's *Gyūtō hitō ben*, wrote in 1867 that he had revised his opinions about Western medicine after reading the medical treatises that had recently been

[62] The unusual character of Mori's argument can be seen by its contrast with the attempts of British officials in nineteenth-century India to promote vaccination by forging "ancient" descriptions of the procedure in classical languages such as Tamil and Sanskrit: see Dominik Wujastyk, "'A Pious Fraud': The Indian Claims for Pre-Jennerian Smallpox Vaccination," in *Studies on Indian Medical History*, ed. G. Jan Meulenbeld and Dominik Wujastyk (Groningen: Egbert Forsten, 1987), 121–54.

published in China by the protestant missionary Benjamin Hobson.[63] Kitamura admired Hobson's books for the fluency of their classical Chinese prose and their refined discussion of ideas and principles, judging them far superior to the imprecise and crude translations that had been produced by Japanese *ranpō* doctors. Reading these books finally persuaded Kitamura that Chinese and Western medicine should not be regarded as opposites but rather should be seen as based on a common set of principles. During the same period, Kitamura's own observations had also convinced him of the effectiveness of the vaccine and led him to believe that the technique would one day eliminate smallpox altogether.[64]

Another early sceptic who eventually changed his mind about vaccination was Asada Sōhaku, a younger Igakukan doctor who later played a leading role in the Meiji-period movement for the preservation of *kanpō* medicine.[65] Like Mori Tatsuyuki and Kitamura Naohiro, Asada Sōhaku had initially been suspicious of the foreign technique, but he gradually came to accept it on a combination of empirical and rationalistic grounds. Writing around the time of the Meiji restoration, Asada proposed that although the principle of vaccination could be understood through an analogy with the grafting of branches onto fruit trees, it was

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[63] Kitamura Naohiro 喜多村直寛, *Heishoku idan* 柄燭医談 (1867), KyFC, Preface. Hobson's treatises had been reprinted in Japan a few years after their original publication in China during the 1850s. Their elegant Chinese prose owed much to the efforts of his Chinese collaborators: see Chan Man Sing, "Sinicizing Western Science: The Case of *Quanti xinlun* 全體新論," *T'oung Pao* 98 (2012), 528–56. On Kitamura Naohiro, see Ishida Hidemi 石田秀実, "Tōhoku daigaku fuzoku toshokan Kanō bunko zō 'Kitamura Naohiro jihitsubon *Kōtei daikei*' wo megutte" 東北大学付属図書館狩野文庫蔵「喜多村直寛自筆本『黄帝内経素問講義』」をめぐって, *Bunka* 45 (1981), 70–79.

[64] Kitamura Naohiro, *Heishoku idan*, 9b–10a.

[65] On Asada's role in the Meiji *kanpō* movement, see Oberländer, *Zwischen Tradition und Moderne*.

nonetheless an extraordinary process that could not be evaluated by "ordinary standards." He predicted that public opinion would eventually settle in favour of vaccination only after tens of thousands of successful vaccinations had demonstrated the technique's value.[66]

The growing number of successfully vaccinated individuals would certainly have made it increasingly difficult to believe that the vaccine was useless as a preventive measure, especially as Japanese vaccinators were becoming more experienced with the technique and learning to avoid its potential problems. However, a comparison with the history of vaccination in other parts of the world suggests that opposition to the vaccine could persist for many decades. Any comparative analysis of the Japanese trajectory towards acceptance of the vaccine must take into account the specific factors that caused Japanese opposition to diminish more rapidly than in other parts of the world. I have argued in this chapter that in contrast to the *ranpō* doctors who have been the subject of most existing historical studies, many Japanese doctors were wary of the vaccine at the time of its first arrival and came to accept its value only gradually. If this argument is correct, then we must consider the success of later Japanese vaccination programs not in terms of conditions in Japan at the time of the vaccine's arrival, but rather in terms of changes in Japanese medical culture during the 1850s and 1860s.

One such change was the rapid abandonment of older forms of inoculation after the introduction of the Jennerian vaccine, in contrast to the continuing use of

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[66] Asada Sōhaku 浅田宗伯, *Kikkō nenpu shō* 橘黄年譜 (1869), repr. in *Kyōrin sōsho* 杏林叢書, vol. 3, ed. Fujikawa Yū 富士川游 (Tokyo: Tohōdō Shoten, 1924), 126–7.

traditional inoculation methods in many parts of China, India, and Southeast Asia. Historians who have studied the relationships between vaccination and traditional inoculation in various parts of the world have shown that the preference for one or the other method depended on subtle conjunctions of local factors: in some areas, the prevalence of inoculation hindered the adoption of the Jennerian vaccine, but in other areas local inoculators rapidly adapted their practices to the use of the new material.[67] In Japan, where inoculation had never been sufficiently widespread to become seen as a routine practice, many of the early vaccinators were drawn from the ranks of former inoculators. None of the authors of the Japanese anti-vaccination pamphlets regarded inoculation with human smallpox as a preferable alternative, and the relatively rapid decline in opposition to the vaccine in Japan can thus be explained in part by the limited use of alternative methods of prevention.

A more important factor in the decline of opposition to the vaccine was the broader shift towards the adoption of Western technologies during the middle years of the nineteenth century. Shifts in bakufu policy both reacted and contributed to the broader acceptance of Western medicine. Although the majority of doctors in Japan were not under direct bakufu control, awareness of these policy changes encouraged the trend towards recognition of Western medicine in general and vaccination in particular. At the time of the vaccine's initial arrival in Nagasaki, the

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[67] Peter Baldwin, *Contagion and the State in Europe, 1830–1930* (Cambridge: Cambridge University Press, 1999), 250–8; Guénel, "Lutte contre la variole en Indochine"; Leung, "The Business of Vaccination," 7–8; Arnold, *Colonizing the Body*, 125–133; Bhattacharya, Harrison and Worboys, *Fractured States*, 52–7; Minsky, "Pursuing Protection from Disease."

bakufu had remained uninterested in or even hostile towards Western medicine. However, its attitude changed rapidly during the following years. The most dramatic changes in official bakufu policy towards Western medicine took place in 1858, when the bakufu approved permission for a group of *ranpō* doctors to open a vaccination clinic in Edo and dropped its earlier injunction against the use of Dutch medicine, encouraging its own doctors to study Western medicine alongside Chinese medicine and to exploit the most effective medical techniques regardless of their origins.[68] These policy changes occurred during the same period that the bakufu was engaged in ongoing treaty negotiations with Western powers, conducted with the implicit threat of violence looming in the background.[69] Acknowledgement of the weakness of Japan's military position lent support to the view that imitation of Western technologies was strategically essential.

The unusually aggressive rhetoric of the last of the anti-vaccination pamphlets, Ikeda Naoatsu's *Gyūtō benpi* 牛痘便秘 (*Disputing the Errors of Cowpox*, 1861), may have been provoked in part by these changes in the political environment. Writing at the height of the agitations to "revere the emperor and expel the barbarians" (*sonnō jōi* 尊王攘夷), Naoatsu drew explicit connections between the bovine origins of the vaccine and the animalistic nature of Europeans, developing this xenophobic idea into an argument that vaccination was inappropriate for the Japanese. Naoatsu claimed that since the Western barbarians

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[68] *Tokugawa kinrei kō goshū*, vol. 2, 379–80; Jannetta, *The Vaccinators*, 160–72.
[69] On the treaty negotiations of 1858, see Michael R. Auslin, *Negotiating with Imperialism: The Unequal Treaties and the Culture of Japanese Diplomacy* (Cambridge, Mass.: Harvard University Press, 2004), 34–50.

differed little from birds and beasts and had skin similar to that of dogs and horses, the cowpox poison would erupt harmlessly through their skins; however, the different Japanese "winds and soil" (*fūdo* 風土) meant that it would never be appropriate to use the vaccine on Japanese people. He concluded that doctors who sought transient profit by practising the barbarians' evil techniques would attract punishment from the *kami*.[70] The language of Naoatsu's argument echoed the wording of the rescinded bakufu injunction against the use of Western medicine, which had also emphasized the importance of Japan's distinctive winds and soil. Although there is no reason to doubt the sincerity of Naoatsu's commitment to a nativist ideology, the vehemence of his rhetoric suggests he was aware he was fighting a losing battle.

The spread of vaccination within Japan was one crucial aspect of the broader shift towards the acceptance of Western medicine. However, to understand the role of the vaccine within this shift it is essential to acknowledge that vaccination was a contested practice during approximately the first ten years after its arrival. Chinese sources of information played a role in convincing some *kanpō* doctors of the value of the technique, but many remained sceptical until the claims made by vaccination advocates had been confirmed by local experience. To a degree that is difficult to determine from surviving sources, opposition to the vaccine may also have been

[70] Ikeda Naoatsu, *Gyūtō benpi*, 2a–3a. The details of Naoatsu's argument were original, but the broad notion that foreigners were intermediate in status between humans and animals had a long history. Naoatsu's argument may have been inspired by the writings of the influential nativist ideologue Hirata Atsutane, who had compared the bodily form and habits of the Dutch to those of dogs. See Donald Keene, *The Japanese Discovery of Europe, 1720–1830* (Revised edition, Stanford: Stanford University Press, 1969), 170.

prolonged by real problems in the material practices of vaccination during the early years after its introduction. It was only after almost a decade of local experience and a broader transition towards acceptance of Western medicine that the initial opposition began to be forgotten, and vaccine began to assume its status as a symbol of Western medicine's promising future in Japan.

Conclusion

In the early summer of 1752, Yoshimasu Tōdō was passing through Edo on his return from the northeastern domain of Nanbu to his residence in Kyoto. While staying in the shogunal capital, he received a summons from Hotta Masanobu 堀田正陳, who had received official instructions to test Tōdō's understanding of medicine by having him engage in dialogue with the medical official Mochizuki San'ei 望月三英 (1697–1769). Tōdō refused to be evaluated in this way, but he suggested an alternative means of testing:

> I have heard Mochizuki's doctrines, and they are different from my doctrines. If Mochizuki hears my doctrines he will certainly take them to be false; likewise, I certainly do not take Mochizuki's doctrines to be true. Who can judge such an argument about truth and falsity? This is why I say it would be futile. […] If you want to test me, select a hundred sick people, entrust half to Mochizuki and half to me, and inquire about the results of our treatments.[1]

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[1] Yoshimasu Nangai 吉益南涯, *Tōdō sensei gyōjō* 東洞先生行状, repr. in *Tōdō zenshū*, 555–6. For comments on this passage, see Terasawa Katsutoshi 寺澤捷年, *Yoshimasu Tōdō no kenkyū: Nihon kanpō sōzō no shisō* 吉益東洞の研究：日本漢方創造の思想 (Tokyo: Iwanami Shoten, 2012), 203–4. (In the end, Hotta Masanobu accepted that a practical trial would be an appropriate basis on which to evaluate Tōdō's medical abilities, but shortly afterwards Tōdō was called away from Edo and the proposed trial never took place.)

This confrontation between a bakufu official and an unorthodox medical practitioner was also a confrontation between two different ways of thinking about the nature of medical knowledge and medical authority. Hotta Masanobu's initial request assumed that medical knowledge rested on established foundations and that an elite medical official should be able to evaluate another doctor's understanding of medicine by hearing his answers to an appropriate series of questions. By contrast, Yoshimasu Tōdō's reply assumed that radical differences between ways of thinking about medicine meant that even the judgements of a top-ranking medical official such as Mochizuki San'ei could not be considered definitive, and that only a practical trial could lead to a satisfactory resolution.

We are today accustomed to the idea that randomized clinical trials are the gold standard for evaluating the efficacy of medical interventions, and from this perspective Tōdō's proposal for a trial might seem a natural criterion for evaluating his competence as a doctor and the usefulness of his style of medical practice.[2] However, as we have seen throughout this dissertation, systematic trials were uncommon in Tokugawa Japan and were only one among many possible standards for the judgement of medical knowledge. Yoshimasu Tōdō himself usually applied a rather different set of criteria when evaluating medical knowledge for his own purposes, and his suggestion of a practical trial in this instance was a response to an extraordinary challenge that had implicitly called into question his whole system of medical learning. Under more normal circumstances, answering questions about

[2] On the development of clinical research trials, see Harry M. Marks, *The Progress of Experiment: Science and Therapeutic Reform in the United States, 1900–1990* (Cambridge: Cambridge University Press, 1997).

which types of therapeutic practice were most effective in treating disease depended not on decisive trials, but rather on ongoing processes of interaction and dialogue among different groups of doctors and patients.

In contrast to modern establishment medicine, where medical knowledge is generally assumed to consist of a body of facts that are thought to be independent of their representations in particular texts or their embodiment in the skills of particular practitioners, medical knowledge in Tokugawa Japan was much more closely linked to its classical written forms and to the authority of individual practitioners and lineages. The social mechanisms for establishing expertise and generating consensus that we now take for granted were not developed to the same extent as in modern societies, and one consequence of this situation was the wide diversity of styles of medical practice that we have seen in this dissertation. Individual doctors might have wished to impose their own standards of medical knowledge and practice on the whole of Japanese society, but the best they could achieve was to transmit these standards to their own heirs and disciples and to write pamphlets and treatises that might succeed in persuading others.

Modern institutional structures of professionalized medicine developed during the nineteenth and twentieth centuries through processes closely associated with the rise of modern ideologies of scientific expertise, according to which scientific experts serve the social function of formulating abstract knowledge from

their experiences and representing this knowledge to society in the form of facts.[3] The accumulating complexity of medical science encouraged the institutional division of medical expertise into narrower specialist categories, and the knowledge on which modern medical practice depends became increasingly unevenly distributed among its practitioners.[4] The division of labor that is fundamental to modern forms of expertise occurs not only between medical practitioners and the rest of society but also within the medical profession itself.

Medical authority in Tokugawa Japan operated according to a somewhat different social logic. In the absence of professional institutional bodies with the acknowledged authority to discriminate between experts and non-experts and to supply definitive judgements on matters of fact, evaluating the claims of different individuals to possess effective medical knowledge depended on complex and contingent considerations of trust, reputation, and authority. For this reason, the criteria by which Tokugawa doctors expected to be evaluated, such as membership in particular medical lineages or broad mastery of classical Chinese philology, were often different from those that we today consider essential aspects of the medical profession. Fulfilment of these criteria helped establish doctors as trustworthy individuals who were likely to be skilful practitioners of the arts of medicine found

[3] Eric Ash, "Expertise and the Early Modern State," *Osiris* 25 (2010), 7–8; Thomas Broman, "The Semblance of Transparency: Expertise as a Social Good and an Ideology in Enlightened Societies," *Osiris* 27 (2012), 191.

[4] On medical specialization in the nineteenth and twentieth centuries, see George Weisz, *Divide and Conquer: A Comparative History of Medical Specialization* (New York: Oxford University Press, 2006).

in classical texts or passed down as lineage learning, and thus also lent weight to any claims they might make on the basis of their own practical experiences.

We cannot assume that patients necessarily adopted the same standards for the development of medical expertise as practitioners: studies of patients and doctors elsewhere in the early modern world suggest that potential recipients of treatment were often sceptical about doctors' claims to expertise, judging these doctors instead on their success in curing disease and making their own judgements about the nature of their illnesses and the forms of treatment that would suit their needs.[5] Yet we should also be wary of supposing that a doctor's ability to attract patients could easily be separated from his ability to persuade fellow practitioners of his own authority. Especially for doctors who operated on the fringes of the medical establishment, who were frequently the most strongly inclined to develop and adopt innovative styles of medical practice, convincing more established doctors to look favourably on their skills and learning was often an important first step in attracting patients and winning acceptance for their own ideas.

Even into the final years of the Tokugawa period, winning acceptance for new medical ideas almost always required some degree of engagement with the writings of the Chinese medical tradition. Doctors whose ideas derived primarily from this tradition have often been represented, especially by historians working

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[5] Barbara Duden, *The Woman Beneath the Skin: A Doctor's Patients in Eighteenth-Century Germany*, trans. Thomas Dunlap (Cambridge, Mass.: Harvard University Press, 1987); Dorothy Porter and Roy Porter, *Patient's Progress: Doctors and Doctoring in Eighteenth-Century England* (Cambridge: Polity Press, 1989); Christopher Cullen, "Patients and Healers in Late Imperial China: Evidence from the *Jinpingmei*," 31 (1993), 99–150; Gianna Pomata, *Contracting a Cure: Patients, Healers, and the Law in Early Modern Bologna* (Baltimore: Johns Hopkins University Press, 1998).

outside East Asia, as engaged in the mere perpetuation of older forms of medical learning that would rapidly disappear once the superiority of European medical knowledge became apparent. Yet as I have shown, neither the image of intellectual stasis nor the picture of rapid decline following the confrontation with European medicine can be considered accurate. Tokugawa doctors' continuing engagement with the writings of their contemporaries elsewhere in East Asia and with the classics of the East Asian medical tradition were essential elements in their exploration of new avenues of intellectual inquiry and practical therapy, constituting a robust social and intellectual system that the encounter with European medicine enriched rather than rendered obsolete.

Bibliography

Abbreviations

IRCJS: International Research Center for Japanese Studies, Kyoto.

JUYC: Yamasaki Collection, Juntendō University, Tokyo.

KeUL: Keiō University Library, Tokyo.

KyFC: Fujikawa Collection, Kyoto University, Kyoto.

KUSO: Kyōu Shooku, Takeda Science Foundation, Osaka.

NDL: National Diet Library, Tokyo.

NKBK: Naikaku Bunko, National Archives of Japan, Tokyo

TUL: Tokyo University Library, Tokyo.

TUMO: Ōgai bunko, Tokyo University Library, Tokyo. Accessed online at http://rarebook.dl.itc.u-tokyo.ac.jp/ogai/

WUL: Waseda University Library, Tokyo.

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