INTRODUCTION

Translating Chinese Medical Ways in the Early Modern Period

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For many centuries Chinese medicine has been a presence in the lives of people well beyond its homelands. The period that first saw sustained commerce across the Atlantic and Pacific Oceans also witnessed a widening interest in forms of medicine emanating from China. The wealth and prestige of the Celestial Empire affected distant places, and as information and rumor about the customs to be found there circulated, people living elsewhere sometimes responded by adapting—in their own ways—ideas, practices, and medicinals identified with its heritage. Put another way, some elements of the medical ways of China made a difference elsewhere and even circled back, affecting how outsiders presented potent drinks like New World chocolate to the emperor himself. Of course, in the process of translating ideas, practices, and substances among different cultures transformations of meanings were frequent. The authors of the essays in this work explore how those multivalent processes of call and response occurred and notice some of the larger effects produced, suggesting that attempts to slide over or through cultural boundaries, even when common understanding is not fully in evidence, prompted change.

Today, when people hear the phrase "Chinese medicine" they often think of a common and coherent type of it, now often referred to as Traditional Chinese Medicine, or TCM. It is usually said to be a view that provides holistic explanations and treatments, often on the basis of an ancient lineage of textual wisdom and beneficial experience.[1] A common term associated with it that has no equivalent in European languages is *qi*, a moving source of life in the universe channeled along meridians in the human body; if the flow is blocked, damage can result, so restoring its mobility with drugs, acupuncture, and other therapies is often the aim. But TCM itself is not a timeless system of eternal truths. Its recent formulation was one of the many responses to the growing dominance of the modern biomedical sciences. The sciences have been encouraged and deployed by governments in many places—including China—as a part of

1 Mei Zhan, *Other-Worldly: Making Chinese Medicine Through Transnational Frames* (Durham: Duke University Press Books, 2009).

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the ambition to strengthen the nation, a trend that established biomedicine as the norm against which other methods are judged. In response, many kinds of traditions were invented or codified as a way of rallying people in defense of what was disappearing.[2] Medical ideas and practices distinct from the medical sciences frequently drew on past legacies to argue for a place at the table, and not only in China. In India, for instance, the government came to support medical traditions like Ayurveda, Siddha, Unani, and Homeopathy.[3] More recent framings of what became TCM were further shaped in part by the modernizing aims of Chairman Mao Tsedung in the 1940s, who wished to establish "co-operation of Chinese and Western Medical doctors."[4] By the late twentieth century, around the world, all kinds of practitioners not holding biomedical qualifications generally came to be called "traditional,"[5] with Traditional Chinese Medicine widely recognized as one of "alternative" or "complementary" methods vis-à-vis the biomedical mainstream.[6]

In earlier centuries, however, neither biomedicine nor TCM had yet emerged. Chinese texts and methods of practice that have since been folded into TCM were certainly present. But the medical ways of China were as diverse as those anywhere else. Rather than one mainstream there were many. The multitudinous environments and complex ethnicities of the home region gave rise to a wide variety of medical ways, which were in turn mutable, changing with

2 Eric Hobsbawm and Terrence Ranger, eds., *The Invention of Tradition* (Cambridge: Cambridge University Press, 2012; first published 1983).

3 Kavita Sivaramakrishnan, *Old Potions, New Bottles: Recasting Indigenious Medicine in Colonial Punjab (1850–1945)* (New Delhi: Orient Longman, 2006); Guy N. A. Attewell, *Refiguring Unani Tibb: Plural Healing in Late Colonial India* (Hyderabad, India: Orient Longman, 2007); Martin Dinges, ed., *Medical Pluralism and Homeopathy in India and Germany (1810–2010): A Comparison of Practices* (Stuttgart: Franz Steiner, 2014); Shinjini Das, *Vernacular Medicine in Colonial India: Family, Market and Homoeopathy* (Cambridge: Cambridge University Press, 2019).

4 Elizabeth Hsu, "Medical Rationale in the People's Republic," in *Innovation in Chinese Medicine*, ed. Hsu (Cambridge: Cambridge University Press, 2001), p. 338; in the same volume also see Volker Scheid, "Shaping Chinese Medicine: Two Case Studies from Contemporary China," pp. 370–404; TJ Hinrichs and Linda L. Barnes, eds., *Chinese Medicine and Healing: An Illustrated History* (Cambridge, MA: Belknap Press of Harvard University Press, 2013), pp. 239–283; and Kim Taylor, *Chinese Medicine in Early Communist China, 1945–63: A Medicine of Revolution* (London: RoutledgeCurzon, 2005).

5 For instance, in the 1978 Declaration of Alma-Ata of the World Health Organization, available at <http://apps.who.int/iris/bitstream/10665/39228/1/9241800011.pdf> (accessed December 24, 2017).

6 Zhan, *Other-Worldly*; Scheid, "Shaping Chinese Medicine," pp. 370–404. Also see Roberta Bivins, *Alternative Medicine? A History* (Oxford: Oxford University Press, 2007).

time.[7] The most common kinds of beliefs and practices were handed down within families or clans or acquired from acquaintances; others were associated with itinerant medical practitioners. Some people consulted oracles or pointed to the maleficent powers of ghosts, demons, shape-shifting worms, and other supernatural creatures; some made their livelihoods by attending to the natural powers of medicinal simples and their pharmaceutical mixtures. Literate practitioners consulted clients in population centers or moved about, giving advice on the basis of medical works but also on the influences of place and situation (*feng shui*), or according to numerological, astrological, and calendrical patterns. Men and women of elite status practiced the arts of self-cultivation, adding bodily exercise and sexual health to their regimens. Participants in religious groups, such as Taoist and Buddhist clerics, drew on their own intellectual lineages to offer explanations and assistance to their members and beyond; so, too, the Confucian and neo-Confucian literati who entered imperial service had their own textual canons (which this volume will refer to as "classical" Chinese medicine). Urban merchants and their friends accumulated and distributed medicines, instruments, and books, and studied them closely; by the early modern period, when China began to absorb large amounts of the silver being newly mined in Peru and Japan, a fresh layer of material culture was spreading through Chinese society, encouraging new forms of erudition about nature, artistry, and medicine.[8] There was, in short, no single set of ideas or practices that we can define as Chinese medicine, only many medical ways.

Patients and practitioners elsewhere also came in many varieties. A practical but eclectic naturalism could be found in the great cities and seaports of

7 Among recent studies of medicine in modern China, see Hinrichs and Barnes, eds., *Chinese Medicine and Healing*; Eugenia Lean, *Manufacturing China's Vernacular Industrialism: Nativist Tinkerer and Toothpowder Magnate, Chen Diexian (1879–1940)* (forthcoming); Sean Hsiang-Lin Lei, *Neither Donkey nor Horse: Medicine in the Struggle Over China's Modernity* (Chicago: The University of Chicago Press, 2014); Bridie Andrews, *The Making of Modern Chinese Medicine, 1850–1960* (Vancouver: University of British Columbia Press, 2014); Marta Hanson, *Speaking of Epidemics in Chinese Medicine: Disease and the Geographic Imagination in Late Imperial China* (New York: Routledge, 2011); Yüan-ling Chao, *Medicine and Society in Late Imperial China: A Study of Physicians in Suzhou, 1600–1850* (New York: Peter Lang, 2009); Benjamin A. Elman, *On Their Own Terms: Science in China, 1550–1900* (Cambridge, MA: Harvard University Press, 2005).

8 Timothy Brook, *The Confusions of Pleasure: Commerce and Culture in Ming China* (Berkeley: University of California Press, 1998); Craig Clunas, *Superfluous Things: Material Culture and Social Status in Early Modern China* (Honolulu: University of Hawai'i Press, 2004); Dagmar Schäfer, *The Crafting of the 10,000 Things: Knowledge and Technology in Seventeenth-Century China* (Chicago: University of Chicago Press, 2011).

almost every region.[9] Experience was its hallmark. Its practitioners were often as eager as their patients to try out treatments from anyone who testified to healing knowledge, no matter where they or their methods originated: often enough, exoticism carried additional value. Even when authorities were suspicious of the use of improper conjuring, arrangements could be made for drawing on experience, as in the Cartagena de Indias of the later 1640s. There, one of the most renowned practitioners of the city was a powerful ritual healer named Paula de Eguiluz, descended from West African parents and herself living enslaved for most of her life. She was imprisoned and (twice) tried by the Inquisition, condemned to perpetual imprisonment; but with the full knowledge of the authorities, for several months, she was almost daily transported in style to the palace of the elderly bishop in order to help him through his last illness.[10] In Europe, too, women and men of many kinds avidly traded a wide range of medical recipes and advice, and as the chapters below by Wei Yu Wayne Tan and Daniel Trambaiolo show plainly, the medical milieu of Japan was just as diverse.[11] Put another way, what is often termed the rise of modern science was everywhere in its early stages and far from authoritative, especially when it came to supporting health or treating disease. In such a world, the medicines of China would not be judged so much by their intellectual coherence as by the beneficial experiences they offered.

Consequently, as we will therefore see further in the contributions below, when people saw, heard, or read about medicines, ideas, and practices identified with other places, many responded with interest, often imaginatively incorporating new elements according to their own interests. Some of their recorded responses would today be considered a part of the history of TCM, others as a part of the history of the medical sciences or national intellectual histories, still others as dead ends and byways, "folkways," or even superstitions.

9 For example, Harun Küçük, *Science without Leisure: Practical Naturalism in Istanbul, 1660–1732* (Pittsburg: University of Pittsburg Press, 2019); Pamela Smith, ed., *Entangled Itineraries: Materials, Practices, and Knowledges Across Eurasia* (Pittsburgh: University of Pittsburgh Press, 2019); James Delbourgo, *Collecting the World: Hans Sloane and the Origins of the British Museum* (Cambridge, MA: The Belknap Press of Harvard University Press, 2017); Harold J. Cook, *Matters of Exchange: Commerce, Medicine and Science in the Dutch Golden Age* (New Haven: Yale University Press, 2007); Kapil Raj, *Relocating Modern Science: Circulation and the Construction of Scientific Knowledge in South Asia and Europe, 17th-19th Centuries* (Delhi: Permanent Black, 2006).

10 Pablo F. Gómez, *The Experiential Caribbean: Creating Knowledge and Healing in the Early Modern Atlantic* (Chapel Hill: University of North Carolina Press, 2017), pp. 166–171.

11 For example, Elaine Yuen Tien Leong, *Recipes and Everyday Knowledge: Medicine, Science, and the Household in Early Modern England* (Chicago; London: The University of Chicago Press, 2018).

Varieties of Chinese medicine have nevertheless elicited unexpected turns among people encountering it afresh. For example, one little known encounter took place when a Chinese physician visited Amsterdam in 1710 and impressed some of the city's most eminent patricians with his learning and skill.[12] By the time he arrived, Chou Mei-yeh had for almost thirty years been treating high officials in the Dutch government of the East Indies, practicing in its capital of Batavia (now Jakarta) and earning various offices and privileges that marked him out as a person of high status, higher even than most of the Dutch themselves. When his friend, Joan van Hoorn, the Governor-General, took ship for The Netherlands due to ailing health, Chou looked after him on the voyage.[13] On shipboard, he also instructed Joanna Maria van Hoorn, his friend's wife, how to understand "the pulse."[14] Once arrived in Amsterdam, he and Van Hoorn paid a call on Nicolaes Witsen, an influential political figure with extensive financial and intellectual interests around the globe.[15] Witsen had many questions for Chou, but before his guest departed he learned how his diagnostic method was deployed: Chou palpated Witsen's wrist for some time in silence without asking any questions, then pronounced his opinion about Witsen's health, explaining everything without needing to consult any books. He also drew Witsen a diagram of a hand and wrist with indications of where the pulses were felt according to Chinese methods. Witsen was deeply impressed, and grew eager to use the doctor's remedies, soon expressing disappointment that Chou had returned to Batavia before he could speak with him again.[16]

Surprising as Chou's visit might seem, the fact that he called on Witsen is understandable. Witsen had been gathering information about China and the

12 On the general interest in China in northern Europe see, for example, Daniel L. Purdy and Bettina Brandt, eds., *China in the German Enlightenment* (Toronto: University of Toronto Press, 2016); Thijs Weststeijn, "Cultural Reflections on Porcelain in the 17th Century Netherlands," in *Chinese and Japanese Porcelain for the Dutch Golden Age*, edited by Jan van Campen and Titus Eliens (Zwolle: Waanders, 2014), pp. 213–230.

13 Léonard Blussé, "Doctor at Sea: Chou Mei-Yeh's Voyage to the West," in *As the Twig is Bent: Essays in Honor of Frits Vos*, edited by Erika Poorter (Amsterdam: J. C. Gieben, 1990), pp. 7–30.

14 On the difference between taking the pulse and palpating the *mo*, see the magisterial Shigehisa Kuriyama, *The Expressiveness of the Body and the Divergence of Greek and Chinese Medicine* (New York: Zone Books, 1999).

15 Marion Peters, *De Wijze Koopman: Het Wereldwijde Onderzoek van Nicolaes Witsen (1641–1717), Burgemeester en VOC-Bewindhebber van Amsterdam* (Amsterdam: Bert Bakker, 2010).

16 Letters of Witsen to Gisbert Cuper, 5 Dec. 1710 and (the fullest account of the medical encounter) 12 Oct. 1712: Koninklijk Bibliotheek, MS 72 C 32, fols. 43, 47v; also printed in Johan Fredrik Gebhard, *Het Leven van Mr. Nicolaas Cornelisz. Witsen (1641–1717)* (Utrecht: J. W. Leeflang, 1881), II: 332–335, 345.

rest of the world throughout his lifetime. As one of the merchant-politicians who held the balance of power in the Dutch Republic Witsen managed his own personal information networks and participated in many of the even larger ones. He ranked among the most distinguished officials of the city, having served as burgomaster of Amsterdam many times and acting as host to the visits of Peter the Great and playing other diplomatic roles; he also sat on the governing board of the first long-lived business corporation, the Dutch East India Company (VOC). When he was a boy his father had arranged for an artist to accompany a Dutch embassy to China in order to bring back images and reports of the empire, and he himself did the same for the embassy on behalf of Tsar Peter that travelled from Moscow to Beijing in an attempt to arrange trade between the Muscovites and Chinese, bringing Witsen further information about the region then called "Tartary."[17] Moreover, when members of the Jesuit China mission visited Europe they often stopped at Amsterdam, and Witsen made sure to receive them. For instance, the person who arranged the first major publication of the works of Confucius for a European audience, Philip Couplet, and his associate, Michael Shen Fu-tsung, called on Witsen and presented him with Chinese atlases.[18] Witsen also supported the work of Andreas Cleyer, the head of the medical service in Batavia, who together with Couplet organized the first publications of Chinese medical texts in Latin.[19] (The *Specimen Medicinæ Sinicæ* of 1682 is considered throughout the following chapters, particularly in the opening one by Marta Hanson and Gianna Pomata.) Witsen would also have known about acupuncture from the first major European work about it, published in 1683 by Willem ten Rhijne, a Dutch physician in the employ of the VOC who spent two years in Japan (the chapter below by Wei Yu Wayne Tan presents new information about the medical lineages with whom Ten Rhijne was in conversation there). Witsen understandably had many questions for Chou.

But despite his knowledgeable interest in China Witsen's letter about Chou's visit focused on diagnosis and "remedies" (*remedien*). He did not mention *qi* or acupuncture or other things that might attract the attention of our own contemporaries, only Chou's ability to convey to him a deep personal diagnosis

17 Jan Nieuhof, *An Embassy From the East India Company of the United Provinces to the Grand Tartar Cham Emperor of China,* translated by John Ogilby (reprint of 1669 translation, Menston and Harrogate: Scholar Press and Palmyra Press, 1972; first Dutch edition 1665); E. Ijsbrants Ides, *Three Years Travels From Moscow Over-Land to China: Thro' Great Ustige, Siriania, Permia, Sibiria, Daour, Great Tartary, Etc. To Peking* (London: for W. Freeman, et al., 1706; first Dutch edition 1704).

18 Peters, *De Wijze Koopman*, pp. 226–228.

19 Ibid., pp. 220–226.

from palpating his wrist. That should come as no surprise, for European physicians of Witsen's generation considered the ability of Chinese practitioners to probe the inner state of the living body through feeling the vessels at the wrist to be a most wondrous thing. An English physician, Sir John Floyer, heard about Chinese pulse diagnosis—perhaps from Michael Shen Fu-tsung's visit to England—and undertook great efforts to obtain a copy of Cleyer's *Specimen,* which in turn helped to inspire him to develop his own methods of pulse diagnosis.[20] Another diagnostic method recently revived in China, a description of how to examine the tongue for indications about a person's state, was also included in the *Specimen*, and may have affected the rise of tongue diagnosis in Europe, too.[21]

In other words, in Witsen's day, Europeans seem to have been less interested in how classical Chinese medical texts understood the underlying causes of health and disease, and more interested in how the methods of diagnosis shed light on the living relationships among the interior parts of the body. Some people were even suspicious about the meaning of words like *qi*. Most accounts of Chinese medical texts originated from Jesuit missionaries, who were themselves often wary of the term. The Jesuits generally considered their interlocutors in the imperial civil service—the Confucian literati—as inheritors of an impressive fund of knowledge that stretched back to the beginning of humankind, but they also believed the literati to be this-worldly and materialistic, missing the tincture of Christianity that would consolidate their greatness.[22] They recognized *qi* as a very common literary term, but considered it to be best understood as a material substance similar to one of the Aristotelian elements,

20 John Floyer, *The Physicians' Pulse-Watch*, 2 vols. (London: Sam. Smith et al., 1707–1710), pp. 255–424; Elizabeth Hsu, "Towards a Science of Touch, Part I: Chinese Pulse Diagnostics in Early Modern Europe," and "Part II: Representations of the Tactile Experience of the Seven Chinese Pulses Indicating Danger of Death in Early Modern Europe," *Anthropology and medicine* 7 (2000): 251–268, 319–333; Mark Jenner, "Tasting Lichfield, Touching China: Sir John Floyer's Senses," *The Historical Journal* 53 (2010): 647–670; Cook, "Creative Misunderstandings: Chinese Medicine in Seventeenth-Century Europe," in *Cultures in Motion*, edited by Daniel T. Rodgers, Bhavani Raman, and Helmut Reimitz (Princeton: Princeton University Press, 2014), pp. 215–240.

21 Nancy Holroyde-Downing, "Tongues on Fire: On the Origins and Transmission of a System of Tongue Diagnosis," Ph.D. dissertation, UCL, 2017.

22 For examples of the large literature on the topic, see David E. Mungello, *The Great Encounter of China and the West, 1500–1800* (Lanham, NY: Rowman and Littlefield, 1999); Thijs Weststeijn, "The Chinese Isis, or the Sino-Egyptian Hypothesis," in *Temple—Monument—Lieu De Mémoire. The Iseum Campense From the Roman Empire to the Modern Age*, edited by M.-A. Versluys, et al. (Rome: Quasar, 2019), pp. 301–313.

air.[23] As Hanson and Pomata indicate, some of the readers of Jesuit translations from Chinese went even further, reinterpreting ancient accounts of the circulation of *qi* to be early insights into the circulation of the blood, otherwise attributed to William Harvey's publication of 1628.[24] The opinions of the Jesuits about matters like *qi* may also have affected which texts they chose for translation.

From such efforts at translation explanatory metaphors about bodily processes emerged, even affecting great projects like the *Encyclopédie*, a symbol of the European Enlightenment. As Motoichi Terada demonstrates, an early eighteenth-century translation of the *Maijue* text, undertaken by Julien-Placide Hervieu and published in the great encyclopedia about China edited by Jean-Baptiste Du Halde (both of them members of the Society of Jesus), employed the metaphor of the body as being like a lute, with the strings resonating sympathetically when any of them is plucked. Images like these encouraged vitalistic medical authors from Montpellier, invited to write for the *Encyclopédie*, to draw on Chinese texts as an intellectual resource in their fight against the more common "mechanical" views of physiology.

One might say, then, that early modern European physicians did not identify Chinese medicine with key concepts such as *qi*, instead focusing on the wonderful diagnostic methods that drew on ancient lineages about the life of the body. In contrast, as Tan and Trambaiolo indicate, Japanese physicians worked with *qi* (or *ki*) as an everyday concept. In East Asia, scholars had employed Chinese texts as repositories of learning for many centuries. Medical works written in Chinese characters became well-known in Korea, Vietnam, and other parts of the continent from an early date, and were also found in island Japan from before the tenth century.[25] Tan and Trambaiolo show how the

23 Qiong Zhang, "Demystifying Qi: The Politics of Cultural Translation and Interpretation in the Early Jesuit Mission to China," in *Tokens of Exchange: The Problem of Translation in Global Circulations*, edited by Lydia H. Liu (Durham: Duke University Press, 1999), pp. 74–106; Idem, "Translation as Cultural Reform: Jesuit Scholastic Psychology in the Transformations of the Confucian Discourse on Human Nature," in *The Jesuits: Cultures, Sciences, and the Arts 1540–1773*, edited by John W. O'Malley, Gauvin Alexander Bailey, Steven J. Harris, and T. Frank Kennedy (Toronto: University of Toronto Press, 1999), pp. 364–379.

24 See the discussion of Hanson and Pomata below; for example, drawing on the *Specimen* Floyer comments that "All Arts are grounded on a long Experience, and the Chinese have had above 4000 Years Knowledge in this Art, as appears by their old Book Nuy Kim [the *Huang Di*]; and they believe a Circulation from an old Tradition, tho' they know not the true Causes": Floyer, *Pulse Watch*, p. 428.

25 Laurence Monnais-Rousselot, Claudia Michele Thompson, and Ayo Wahlberg, eds., *Southern Medicine for Southern People: Vietnamese Medicine in the Making* (Newcastle upon Tyne, UK: Cambridge Scholars Pub., 2012); Soyoung Suh, "A Chosŏn Korea Medical Synthesis: Hŏ Chun's *Precious Mirror of Eastern Medicine*," in *Chinese Medicine and*

continued changes in Chinese medicine affected interpretations of treatment and illness in Japan well into the seventeenth and eighteenth centuries, but in ways that suited Japanese criteria. For instance, Japanese medical scholars closely followed the shifting arguments in China about disease causation from Cold Damage and Warm Damage, but did so in light of the needs and outlooks present among their own patients, who came to be concerned about an epidemic of sand rashes. Japanese methods of acupuncture were also distinct from the Chinese, especially in the methods of needling in the abdomen. It would, coincidentally, be from Japan rather than China, that information about acupuncture would arrive in Europe.

We should therefore consider the appearance of "Chinese medicine" elsewhere in the world not to be the diffusion of some kind of coherent "system" but to be a variety of adoptive responses to what people considered to be worthwhile in what they learned about the medical worlds of China. But if aspects of Chinese medicine were on the move, we need to find out more about how that occurred.

Let us begin with the movement of texts, for when Witsen entertained Chou he pulled printed works from his shelves and asked about them. Texts written in Chinese characters had long been in motion, not only eastward into Korea and Japan but westward into Central Asia as well. A century ago a large cache of manuscripts dating from before 1000 CE were found at the silk-road oasis of Dunhuang,[26] and the great contemporary medical author Ibn Sina (Latinized as Avicenna), who came from Central Asia, may have included some elements of Chinese medicine in the remarkable compilation he composed around the same time, the *Canon*.[27] Hanson and Pomata also draw our attention to the attempt to translate Chinese diagnostic texts into Arabic made under the sponsorship of Rashīd al-Dīn. Even at the further side of Eurasia medieval Europeans had long heard echoes of the medical ways of China, and once they

Healing, edited by Hinrichs and Barnes, pp. 137–139. In addition to the references found in Tan and Trambiolo below, also see M. A. Mujeeb Khan, "Transposing Knowledge: Beyond Translation in the Medieval Islamic and Japanese Medical Literary Traditions," in *Knowledge in Translation: Global Patterns of Scientific Exchange, 1000–1800 CE*, edited by Patrick Manning and Abigail Owen (Pittsburgh: University of Pittsburgh Press, 2019), pp. 191–205.

26 Vivienne Lo and Christopher Cullen, eds., *Medieval Chinese Medicine: The Dunhuang Medical Manuscripts* (London: RoutledgeCurzon, 2005); Catherine Despeux, ed., *Médecine, religion et société dans la Chine Médiévale: Étude de manuscrits Chinois de Dunhuang et de Turfan* (Paris: Collège de France, 2010).

27 This was apparently first suggested by Isaac Vossius, which was disputed by Floyer, *Pulse Watch*, p. 432; on Vossius, see Thijs Weststeijn, *Isaac Vossius (1618–1689) Between Science and Scholarship* (Leiden: Brill, 2012).

arrived in East Asia and began to learn Chinese they, too, began to collect examples of original medical sources and to produce translations of them in Latin and French.[28] Written texts were clearly mobile.

Also moving about were medical recipes and botanical descriptions. Under the Han, *bencao* texts had appeared, a genre usually translated as *materia medica* or "pharmacy," but including additional kinds of information about the natural world as well.[29] During the Song dynasties, an imperial pharmacy service was established, which early in the twelfth century produced an official guide for pharmacology and which stimulated efforts to correlate the effects of medicines according to the principles of Yin-Yang and the five phases. *Bencao* texts were certainly known in places like Japan and Vietnam and, when Europeans arrived in East Asia, they began to collect and translate them, too.[30] Hanson and Pomata have recently drawn attention to the similarities in the structure of the recipes and prescriptions that enabled the process: translating the words for the ingredients that went into the recipes posed significant challenges, but Jesuits succeeded in doing so not only because they developed linguistic competence in Chinese but because they were able to identify familiar patterns in the pharmaceutical formulas.[31] Beatriz Puente-Ballesteros, in her chapter below, considers similar patterns among European and Chinese sources that mention chocolate. Various other learned travelers also contributed to the collection of information about medical ingredients in the form of images and descriptions, an important branch of the mushrooming botanical literature. Witsen himself received hundreds of drawings and accounts of Japanese and other "East Indies" plants from Cleyer.[32]

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28 Linda L. Barnes, *Needles, Herbs, Gods, and Ghosts: China, Healing and the West to 1848* (Cambridge, MA: Harvard University Press, 2005); Antonella Romano, *Impressions de Chine: L'Europe et L'Englobement du Monde* (*XVIe–XVIIe Siècles*) (Paris: Fayard, 2016).

29 Paul U. Unschuld, *Medicine in China: A History of Pharmaceutics* (Berkeley and Los Angeles: University of California Press, 1986); on the difficulties of characterizing this literature according to European categories, see Carla Nappi, *The Monkey and the Inkpot: Natural History and Its Transformations in Early Modern China* (Cambridge, MA: Harvard University Press, 2009); and idem, "Surface Tension: Objectifying Ginseng in Chinese Early Modernity," in *Early Modern Things: Objects and Their Histories, 1500–1800*, edited by Paula Findlen (London: Routledge, 2012), pp. 31–52.

30 For example, Michele Thompson, "Tuệ Tĩnh—Vietnamese Monk-Physician at the Ming Court," in *Chinese Medicine and Healing*, by Hinrichs and Barnes, pp. 134–135.

31 Marta Hanson and Gianna Pomata, "Medical Formulas and Experiential Knowledge in the Seventeenth-Century Epistemic Exchange Between China and Europe," *Isis* 108 (2017): 1–25.

32 Peters, *De Wijze Koopman*, pp. 220–226; Cook, "Conveying Chinese Medicine to Seventeenth-Century Europe," in *Science Between Europe and Asia: Historical Studies on the*

Pharmaceutical and botanical descriptions were not the only medical mobiles, however, for medical substances themselves were widely traded. For instance, Arabic literature praised the medical uses of musk, obtained from Tibet.[33] Medicinal rhubarb from western China made its way further west and north to Muscovy and onward, as did asafetida.[34] By the fourteenth century, long distance commerce operated by Chinese merchants extended throughout Asian seas as far as the east coast of Africa, bringing with it a trade in medicines.[35] Consequently, when a Portuguese physician-merchant arrived in Goa in 1534, his attention was drawn to something he called "Da Raiz da China"—or as the English language knows it, China Root—derived from the language of the local bazars, where it was called *kub-čīnī*, in turn based on the Persian lingua franca, čūbi čīnī ("root of China").[36] From Goa, Portuguese vessels carried the root to Europe, where it became a well-regarded remedy, imported as a staple of Europe's Asia trade well into the eighteenth century.[37] Robert Boyle must have had early examples of East Asian medicines like China root in mind

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Transmission, Adoption and Adaptation of Knowledge, edited by Feza Günergun and Dhruv Raina (Heidelberg: Springer, 2011), pp. 209–232.

33 Anna Akasoy and Ronit Yoeli-Tlalim, "Along the Musk Routes: Exchanges Between Tibet and the Islamic World," *Asian Medicine* 3 (2007): 217–240.

34 Clifford M. Foust, *Rhubarb: The Wondrous Drug* (Princeton: Princeton University Press, 1992); Matthew P. Romaniello, "True Rhubarb? Trading Eurasian Botanical and Medical Knowledge in the Eighteenth Century," *Journal of Global History* 11 (2016): 3–23; Angela Ki Che Leung and Ming Chen, "The Itinerary of Hing/*awei*/asafetida Across Eurasia, 400–1800," in *Entangled Itineraries*, ed. Pamela Smith, pp. 141–164, 303.

35 Roderich Ptak, *China, the Portuguese, and the Nanyang: Oceans and Routes, Regions and Trade* (*C.1000–1600*) (Aldershot, Hampshire: Ashgate/Variorum, 2004); David Bulbeck, Anthony Reid, Lay Cheng Tan, and Yiqi Wu, eds., *Southeast Asian Exports Since the 14th Century: Cloves, Pepper, Coffee, and Sugar* (Leiden: Koninklijk Instituut voor Taal-, Landen Volkenkunde Press, 1998); M. N. Pearson, ed., *Spices in the Indian Ocean World* (Aldershot: Variorum, 1996).

36 Berthold Laufer, *Sino-Iranica: Chinese Contributions to the History of Civilization in Ancient Iran, With Special Reference to the History of Cultivated Plants and Products*, Field Museum of Natural History, Anthropological Series vol. 15, no. 3 (Peking, 1940), pp. 556–557.

37 Garcia da Orta, *Colloquies on the Simples and Drugs of India*, translated by Clements Markham (London: Henry Sotheran and Co., 1913), colloquy 47; Andreas Vesalius, *The China Root Epistle: A New Translation and Critical Edition* (Cambridge: Cambridge University Press, 2015); Peter Borschberg, "The Euro-Asian Trade and Medical Usage of *Radix Chinae* in the Early Modern Period (ca. 1535–1800)," *Review of Culture* 20 (2006): 102–116; Cook, "Trading in Medical Simples and Developing the New Science: De Orta and His Contemporaries," in *Medicine, Trade and Empire: Garcia De Orta's Colloquies on the Simples and Drugs of India* (*1563*) *in Context*, edited by Palmira Fontes Da Costa (Farnham, Surrey: Ashgate, 2015), 129–146; Anna E. Winterbottom, "Of the China Root: A Case Study of the Early Modern Circulation of Materia Medica," *Social History of Medicine* 28 (2015): 22–44.

when he wrote, "Nor should we only expect some improvements to the Therapeutical part of Physick, from the writings of so ingenious a People as the Chineses" [sic] but from other people as well.[38] At the same time, Europeans did their best to introduce their own medicinals to China: Puente-Ballesteros, for instance, shows how the Jesuits undertook great efforts to interest the Emperor of China himself in a new drink originating in the Spanish New World, chocolate. But as Margaret Garber also demonstrates below, the physician-botanists of Germany wondered whether the beneficial results of an Eastern method of therapeutic burning, moxibustion, were due to the burning process or some quality of the moxa itself, prompting considerable debate.[39] Having the imported substance in hand, and local plants available that some considered to be equivalent to moxa, made it easier to adopt the practice although it did not settle the controversies.

In addition to noting the movement of texts and substances, however, Chou's visit to Witsen reminds us that at the root of any movements of things were the travels of persons, who sometimes handed along their skills via imitation.[40] As early as 1635, for instance, Spanish barbers in Mexico City were complaining loudly to the city council about the "excesses" of their Chinese competitors, who may have been practicing with "the nine needles," a form of acupuncture. Presumably those practices had arrived because of a web of transportation networks conveying people, including the Manila Galleons, which sailed annually between The Philippines and Acapulco, thereby connecting directly New Spain to the China trade.[41] Half a century later, Europeans could read about acupuncture in a Latin and Dutch work published by the Royal Society, authored by a Dutch physician who had interacted with medical lineages in Japan and then forwarded his manuscript to a school friend in

38 Robert Boyle, *Usefulnesse of Experimental Naturall Philosophy* (Oxford: Henry Hall, 1663), Part II, pp. 220–221.

39 Also see Wolfgang Michel, "Frühe Westliche Beobachtungen zur Moxibustion und Akupunktur," *Sudhoffs Archiv* 77 (1993): 193–222; Shigehisa Kuriyama, "Interpreting the History of Bloodletting," *Journal of the History of Medicine* 50 (1995): 11–46; Roberta Bivins, *Acupuncture, Expertise, and Cross-Cultural Medicine* (Houndsmill, Basingstoke: Palgrave, 2000).

40 The literature on intermediaries is very large, but for a touchstone, see Simon Schaffer, Lissa Roberts, Kapil Raj, and James Delbourgo, eds., *The Brokered World: Go-Betweens and Global Intelligence, 1770–1820* (Sagamore Beach: Science History Publications, 2009).

41 Barnes, *Needles, Herbs, Gods, and Ghosts,* p. 59, where she cites Homer H. Dubs and Robert S. Smith, "Chinese in Mexico City in 1635," *Far Eastern Quarterly* 1 (1942): 387–389. Also see Dennis Carr, *Made in the Americas: The New World Discovers Asia* (Boston: MFA Publications, 2015); Tatiana Seijas, *Asian Slaves in Colonial Mexico: From Chinos to Indians* (New York: Cambridge University Press, 2014).

London.[42] Even the correspondence networks visible in the sources point to people who had met one another and then moved on, keeping in touch at a distance.

The movements of people who sent and carried texts, medicines, and practices were therefore prompting interactive responses from those around them, a process for which the old term *translatio* is appropriate. The Latin term originally meant transferring or transporting something from one place or state to another, handing over, or even, in horticulture, grafting one living stem onto another. In later centuries, it was common to speak of a priest being translated to a bishopric, or the bones of a saint being translated from one resting place to another. Today, we almost always use the word to mean moving a meaning from one language to another, but because the words on the two sides of the process are seldom identical in meaning and connotation the well-known Italian aphorism *traduttore-traditore* (the treason of translation) becomes a caution about the metamorphoses brought on by movement.

Most interpretations of the ways in which ideas travel from place to place have understandably focused on the difficulties of moving meaning from one language to another. Translators have challenging tasks, although with hard work they often succeed more or less well. A classic if stale historical account has ancient Greek philosophy moving into the Roman world and then on to the Middle East, shifting into Arabic, and back into Latin again during the revival of learning in the European High Middle Ages.[43] For the modern period, many scholars have similarly argued that in the exact sciences, at least, ideas "diffuse" throughout the world.[44] But some decades ago philosophers like Willard Van Orman Quine pointed to the indeterminacy of translation, especially for conceptual propositions;[45] that line of interpretation underpinned the

42 Willem ten Rhijne, *Dissertatio de Arthritide* (London: R. Chiswell, 1683); Wolfgang Michel, "Willem Ten Rhijne und die Japanische Medizin (I)," and part II, *Studien zur deutschen und französischen Literatur* 39 (1989): 75–125, and 40 (1990): 57–103; Cook, *Trials of an Ordinary Doctor: Joannes Groenevelt in Seventeenth-Century London* (Baltimore: The Johns Hopkins University Press, 1994), pp. 125–128; Cook, *Matters of Exchange: Commerce, Medicine and Science in the Dutch Golden Age* (New Haven: Yale University Press, 2007), pp. 348–377.

43 There are many examples, as in David C. Lindberg, "The Transmission of Greek and Arabic Learning to the West," in *Science and the Middle Ages*, edited by Lindberg (Chicago: University of Chicago Press, 1978), pp. 52–90.

44 See, for example, the argument of Lewis Pyenson, "Cultural Imperialism and Exact Sciences Revisited," *Isis* 84 (1993): 103–108.

45 Willard Van Orman Quine, *Word and Object* (Cambridge, MA: MIT Press, 1960); Idem, "Meaning and Translation," in *On Translation*, edited by Reuben Brower (Oxford: Oxford University Press, 1966), pp. 148–172. But also see the rebuttals in Robert Kirk, ed., *Translation Determined* (Oxford: Oxford University Press, 1986).

arguments of Thomas Kuhn about the incommensurability of different moments of "normal science" interrupted by revolutionary paradigm shifts that created gulfs of incomprehension between different mental worlds.[46] For a purist, therefore, linguistic difference emphasizes the *traditore* of translation, where each side of a translation is contained in its own sets of connotations that allow no common measure: meanings are "lost in translation."

Interpretative problems associated with the incommensurability of translation, or at least the indeterminacies of it, are recognized throughout a wide spectrum of analytical discourses, especially those pointing to variety among human cultures. Homi Bhabha, for instance, wrote about the postcolonial "hybrid location of cultural value"—where the voice of the translator often substitutes for that of the author, or even appropriates it—as being like the "translational" settings of colonial encounters.[47] The voice of the translator is, however, most often recognized when attempts to bridge differences do not go smoothly. For instance, a brilliant study by Vincente Rafael explored early Spanish rule in the Philippines in light of efforts to translate Christian doctrine for local Tagalog society. He found that "the vernacular's resistance to translation spurred further translations." In the whirlpool of translation of translations, differences of language and culture set some limits on power, tending "to cast intentions adrift, now laying, now subverting the ideological grounds of colonial hegemony. The necessity of employing the native vernaculars in spreading the Word of God constrained the universalizing assumptions and totalizing impulses of a colonial-Christian order."[48] In other words, the translator's voice is noticed chiefly when differences becomes clear and assumptions about mutual commonalities are in danger of collapse. A number of recent, carefully judged studies have therefore set out to explore the differences

46 See, for example, Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1970); Mario Biagioli, "The Anthropology of Incommensurability," *Studies in History and Philosophy of Science Part A* 21 (1990): 183–209; Howard Sankey, *The Incommensurability Thesis* (Aldershot: Ashgate, 1994).

47 Homi K. Bhabha, *The Location of Culture* (London: Routledge, 1994), p. 173; on translation in colonial power, see for example Bernard S. Cohen, *Colonialism and Its Forms of Knowledge: The British in India* (Princeton University Press: Princeton, 1996).

48 Vicente L. Rafael, *Contracting Colonialism: Translation and Christian Conversion in Tagalog Society Under Early Spanish Rule* (Ithaca: Cornell University Press, 1988), pp. 110, 21. On p. 210, Rafael also cites the anthropological approach of James T. Siegel, *Solo in the New Order: Language and Hierarchy in an Indonesian City* (Princeton, NJ: Princeton University Press, 1986), who "claims that translation arises from the need to relate one's interest to that of others and so to encode it appropriately. Translation in this case involves not simply the ability to speak in a language other than one's own but the capacity to reshape one's thoughts and actions in accordance with accepted forms."

between Chinese medicine and its Western counterparts as an example of distinct medical paths marked by deep cultural differences.[49]

Yet critical and open-ended translation—sensitive to difference but alert to possibilities—has also built bridges of understanding.[50] As one accomplished translator put it, "What translators do is find matches, not equivalences, … in the hope and expectation that their sum will produce a new work that can serve overall as a substitute for the source."[51] David Bellos's understanding is similar to a revealing move in the history of ideas and sciences in recent decades, which has attended to how people go about their work rather than to how they explain it. In keeping with that approach, after reviewing several of the chief arguments about translation and science Ian Hacking concluded: "Where we as people have branched off from others as people, we find new interests, and a looseness of fit between their and our commonplaces. Translation of truths is irrelevant. Communication of ways to think is what matters."[52] In support, Roger Hart, exploring the work of converts of the Jesuits in turning Euclid's geometry into acceptable Chinese, drew attention to the use of neologisms and transliteration, concluding that "translation was thus not an obstacle to dialogue but a crucial resource" in fostering discussions leading to knowledge.[53] Arguments such as these about translation as a prompt for communication rather than a barrier to it have caused the subject to flourish in the recent literature in history and history of science.[54]

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49 For instance, Kuriyama, *Expressiveness of the Body;* Bivins, *Acupuncture, Expertise, and Cross-Cultural Medicine*; G. E. R. Lloyd and Nathan Sivin, *The Way and the Word: Science and Medicine in Early China and Greece* (New Haven; London: Yale University Press, 2002); Paul U. Unschuld, *What is Medicine? Western and Eastern Approaches to Healing*, translated by Karen Reimers (Berkeley: University of California Press, 2009).

50 A marvelous recent example is Zhibin Zhang and Paul U. Unschuld, *Dictionary of the Ben Cao Gang Mu: Chinese Historical Illness Terminology* (Berkeley: University of California Press, 2015).

51 David Bellos, *Is That a Fish in Your Ear?: Translation and the Meaning of Everything* (New York: Faber and Faber, 2011), p. 308.

52 Ian Hacking, *Historical Ontology* (Cambridge, MA: Harvard University Press, 2002), pp. 171–172. Also see Lydia H. Liu, ed., *Tokens of Exchange: The Problem of Translation in Global Circulations* (Durham: Duke University Press, 1999); M. Henninger-Voss, "Working Machines and Noble Mechanics: Guidobaldo Del Monte and the Translation of Knowledge," *Isis* 91 (2000): 233–259; Scott L. Montgomery, *Science in Translation: Movements of Knowledge Through Cultures and Time* (Chicago: University of Chicago Press, 2000); Marwa S. Elshakry, "Knowledge in Motion: The Cultural Politics of Modern Science Translations in Arabic," *Isis* 99 (2008): 701–730.

53 Roger Hart, "Translating the Untranslatable: From Copula to Incommensurable Worlds," in *Tokens of Exchange*, edited by Liu, p. 65.

54 The literature on translation is growing rapidly, but for recent historical guidance, see Jaime Marroquín Arredondo and Ralph Bauer, eds., *Translating Nature: Cross-Cultural*

A related kind of translation, one similar to appropriation, can be heard as well. Michel Callon, for instance, examined the process by which three marine biologists attempted to develop a conservation strategy for the scallops in St. Brieuc Bay: the researchers defined the nature of the problems and came to speak on behalf of various human groups and even on behalf of the scallops. In Callon's view, they were "translating" by displacing other voices while expressing "in one's own language what others say and want, why they act in the way they do and how they associate with each other: it is to establish oneself as a spokesman."[55] Translation as a process of speaking on behalf of a concern became an important general move within the interpretative field of science studies known as Actor Network Theory, originally pitched as a "sociology of translation."[56]

The point, surely, is not that the kinds of transformations signaled by translation make it impossible to hear the "original" meaning but that they also point to processes of alteration. Perhaps some kinds of descriptive statements can pass through languages with hardly any change: Quine himself thought that despite the linguistic difficulties of translating concepts, "observation sentences peel nicely; their meanings … emerge absolute and free of all residual

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Histories of Early Modern Science (Pittsburgh: University of Pennsylvania Press, 2019); Manning and Owen, eds., *Knowledge in Translation: Global Patterns of Scientific Exchange, 1000–1800 CE*; Sven Dupré, ed., "Focus: Translating Science over Time," *Isis* 109 (2018): 302–345; Joan-Pau Rubiés, "Ethnography and Cultural Translation in the Early Modern Missions," *Studies in Church History* 53 (2017): 272–310; Carla Nappi and Marwa S. Elshakry, "Translating Science," in *A Companion to the History of Science*, edited by Bernard Lightman (Wiley-Blackwell, 2016), pp. 372–386; Michael Wintroub, "Translations: Words, Things, Going Native, and Staying True," *American Historical Review* 120 (2015): 1185–1217; Tania Demetriou and Rowan Cerys Tomlinson, eds., *The Culture of Translation in Early Modern England and France, 1500–1660* (Houndmills; New York: Palgrave Macmillan, 2015); Bernard Lightman, Gordon McOuat, and Larry Stewart, eds., *The Circulation of Knowledge Between Britain, India and China: The Early Modern World to the Twentieth Century* (Leiden: Brill, 2013); Cook and Sven Dupré, eds., *Translating Knowledge in the Early Modern Low Countries* (Zurich: LIT Verlag, 2012); Pascal Duris and Joëlle Ducos, eds., *Traduire la science: Hier et aujourd'hui* (Pessac: Maison des Sciences de l'Homme d'Aquitaine, 2008); Peter Burke and R. Po-chia Hsia, eds., *Cultural Translation in Early Modern Europe* (Cambridge: European Science Foundation; Cambridge University Press, 2007).

55 Michel Callon, "Some Elements of a Sociology of Translation: Domestication of the Scallops and Fishermen of St Brieuc Bay," in *Power, Action and Belief: A New Sociology of Knowledge?*, edited by John Law (London: Routledge, 1986), pp. 224, 223.

56 Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-theory* (New York: Oxford University Press, 2005), p. 106; for another example, Latour's *We Have Never Been Modern*, translated by Catherine Porter (Cambridge, MA: Harvard University Press, 1993), is replete with the term "translation."

verbal taint."[57] Yet Garber's chapter on moxa shows that even in description of observed things there were uncertainties arising from movement. Hacking's comment about communicating ways to think and Hart's interest in how translation fosters dialogue therefore indicates something important in the ways that people were prompted to consider things afresh when they learned of Chinese medicine, whether in Japan or elsewhere.

For example, Sir John Floyer's two-volume work on *The Physicians' Pulse-Watch* (1707–1710) was not trying to assimilate his practice to that of the ancient Chinese but attempting, rather, to use what he understood of their methods as an aid in furthering his own investigations of the pulse. He was embarking on a journey of discovery, not simply aiming to confirm what he already thought. He read Latin versions of Chinese texts on *de pulsibus* as passing on descriptions of unfamiliar activities, seeing in them a shadow of the incommensurable practice of palpating the *mo*. Yet he also hoped that the clues they offered would help him glimpse worlds that had not been visible to him before, or not as clearly. For him—as for physicians the world over—the text was a guide, not a destination. Floyer's excitement was in the "real" effects that could be elicited from practitioners like himself, who interacted with patients. It was the imaginary contact with bodily practice that excited him, even when invoked by words of foreign antiquity, from which his own interpretations could be constructed. He could then turn to the touching of the pulses of real patients in his own practice with a fresh sense of what to feel, seeking out patterns in his sensations of other bodies. Similarly, Japanese physicians considered new Chinese ideas about disease to be helpful in understanding the mutability of illnesses they seemed to be encountering for the first time. It was not only their personal intellectual ambitions but the hope for healthful change in patients that moved many of those who struggled to understand Chinese texts, or even to represent a substance like chocolate in Chinese and Manchu for the sake of the emperor. For all of them, a translation worked if it invoked something indicative of a new experience that could affect not only minds but bodies.

To explore the methods by which aspects of Chinese medicine were translated to other places we therefore begin with two studies that investigate the activities of Jesuit missionaries, who developed into central intermediaries for all kinds of translations between China and Europe, in both directions. Members of the Society of Jesus embarked on missionary activities in Portuguese Asia almost immediately after their founding in 1540, and unlike other missionary orders developed a policy of persuasion by accommodation. That is,

57 Quine, "Meaning and Translation," p. 171.

the Jesuits developed practices of *imitatio* and *accomodatio*: to dress and speak like the people with whom they interacted while also aligning their teachings and practices as much as possible with local traditions, thereby making acceptance of Jesuit teachings only a small step further. The policy led to criticisms of the Jesuits within the church on the grounds that accommodation posed a danger of corrupting authentic Catholic teaching, and the so-called Rites Controversy eventually went against the Society. Yet accommodation and related methods brought the Jesuits not only converts but a reputation for adaptability and for breadth and depth of learning.[58]

Most importantly for our concerns the linguistic expertise of the Jesuits made them important intellectual intermediaries. In the late 1570s, two Jesuits in Macao, Michele Ruggieri and Matteo Ricci, began intensive study of the Chinese language for their mission; in 1583 they entered China proper. They quickly identified the mandarins as a "sect," which they called the "literati," and whom they decided to mirror. As Athanasius Kircher, S.J., later put it in his book about China, "The most ancient and indigenous Chinese sect is the literati, which rules this kingdom, has many books, and is more praised than the others."[59] From 1595 onward, therefore, Jesuits cultivated the speech and garb of the literati, engaging their Chinese peers in conversation about many aspects of learning, translating their most esteemed European texts into Chinese and occasionally the reverse, and writing extensively about China and their own activities.

Marta Hanson and Gianna Pomata start us off with a comprehensive study of Jesuit methods of translation by examining one of the classical pulse texts, the *Maijue*, printed in Latin in the first part of the *Specimen Medicinae Sinicae*

58 My thanks to Jeffrey Muller for conversations about accommodationism, and for his very helpful "The Jesuit Strategy of Accommodation," in *Jesuit Image Theory*, edited by Wietse de Boer, Karl A. E. Enenkel, and Walter S. Melion (Leiden: Brill, 2016), pp. 461–492. I have also found the following to be especially helpful: David E. Mungello, *Curious Land: Jesuit Accommodation and the Origins of Sinology* (Stuttgart: Franz Steiner Verlag, 1985); Erik Zürcher, "Jesuit Accommodation and the Chinese Cultural Imperative," in *The Chinese Rites Controversy: Its History and Meaning*, edited by D. E. Mungello (Nettetal: Steyler Verlag, 1994), pp. 31–64; Joan-Pau Rubiés, "The Concept of Cultural Dialogue and the Jesuit Method of Accommodation: Between Idolatry and Civilization," *Archivum Historicum Societatis Iesu* 74 (2005): 237–280; Roger Hart, *Imagined Civilizations: China, the West, and Their First Encounter* (Baltimore: Johns Hopkins University Press, 2013); Ananya Chakravarti, "The Many Faces of Baltasar Da Costa: *Imitatio* and *Accommodatio* in the Seventeenth Century Madurai Mission," *Etnográfica* 18 (2014): 135–158. On the China mission, see Liam Matthew Brockey, *Journey to the East: The Jesuit Mission to China, 1579–1724* (Cambridge, MA: Havard University Press, 2007).

59 Athanasius Kircher, *China Illustrata*, translated by Charles D. Van Tuyl (1986), p. 122. Available at <http://hotgates.stanford.edu/Eyes/library/kircher.pdf>.

(1682). They explore why this text might have been chosen for translation, examining the much earlier effort to make it available in Persian, highlighting in contrast the ways in which the Jesuit versions dropped its rhyming patterns and blurred the original distinctions between the text and commentary in order to make it less exotic for their European audiences. The initial translator, Michael Boym, also employed familiar Latin terminology for *yin* and *yang*, further domesticating the text. The later translator of the text into French, Du Halde, or his editor, Hervieu, went even further, making further cuts, introducing tables, and otherwise further easing the comprehension of the *Maijue.* Hanson and Pomata conclude that by using a range of tools and methods the translators creatively navigated between literary languages and structures, carefully moving along bridges of commensurability and so easing the introduction of European audiences to the basic methods of Chinese pulse diagnosis.

Beatriz Puente-Ballesteros's study of chocolate at the emperor's court moves in the other direction, investigating how the Jesuits interacted with imperial officials in offering Chinese and Manchu explanations for foods and medicines they introduced from overseas. Her examination of the documents about chocolate, sent from Beijing to the emperor while he was away hunting—in the form of official memorials—brings us very close to the daily processes of intercultural translation, which clearly included a deep understanding on the part of the various parties about the languages of European and classical Chinese medicine. For instance, she shows how the Jesuits framed most of their explanations in terms of classical European medicine while also taking into account the famous *Bencao gangmu,* although in doing so adding contraindications, a category not familiar in *bencao* texts. For them, the two classical systems spoke to one another. The emperor, however, wanted to take chocolate as a new medicine while the Jesuit court apothecary, Giuseppe Baudino, mainly considered it an especially nourishing food, aligning it with tea: whether for the frictions in its framing or because of its taste, the emperor tried it once but not again. Despite all the efforts of the various intermediaries, the result did not quite bring European and Chinese rulers into an accommodating harmony. In this case, the possibility of commensurability based on the common bodily effects of ingested substances remained just beyond reach. But Puente-Ballesteros's careful account of the effort that went into this moment of hoped-for accommodation gives us a close look at the resources and methods available to the court Jesuits and their interlocutors.

Another set of chapters draws on the responses of practitioners to therapeutic practices. Japanese practitioners had long been conversant with Chinese texts but interpreted them according to their own sensibilities, with implications for what Europeans came to understand about the nature of

acupuncture. Wei Yu Wayne Tan explores the transformation of acupuncture and *qi* (or *ki*) in Japan within the shifting priorities of seventeenth-century *kanpo*. For Japanese practitioners, classical Chinese medicine provided not a model for imitation but a resource to be drawn on as they thought fit. Among their departures were increasingly differentiated methods of acupuncture. But Tan's study also brings to light the medical lineages with whom Willem ten Rhijne was in contact when he learned about acupuncture. For a visitor like the Dutch Ten Rhijne, the differentiation between Chinese and Japanese approaches to acupuncture therapy was obscure, as were their differences in comparison to some of the terms in classical European medicine that provided confusing metaphorical parallels. But through his reports in Latin and Dutch one can glimpse the practices of his model methods of acupuncture, from the important Irie and Mubun lineages, whose views and methods Tan brightly illuminates.

Ten Rhijne also had a hand in bringing therapeutic moxibustion to the notice of Europeans. He had encouraged a minister in the Dutch East Indies, Hermann Busschoff, who had been successfully treated for gout by the method, to publish. Margaret Garber explores how the practice further came to be imported and domesticated in Germany, digging into the many reports about the burning of moxa that surfaced in the journal of an association of physicians, the Academia Naturae Curiosorum (later called the Leopoldina). The members of the academy were eager for medical novelties, and after 1675 an interest in collecting information related to East Asia emerged, providing the foundation for the contemporary development of exotic botany as well as *chinoiserie*. Garber introduces an approach she terms "interpretative domestication" to explain how the German physicians argued about and adopted moxa. Was moxibustion simply another method of cauterization? That practice had been known in Europe since antiquity. Attention turned to various causal explanations, and also to the moxa itself, at first as an aspect of Asian botany and then made more familiar when variants and substitutes were found in German lands, although arguments persisted about whether the local plants really had the same results. Garber's account of the interpretative domestication of moxibustion again points to how, when physicians wished to evaluate new methods, therapeutic effects were deeply intertwined with causal explanations.

Japanese physicians were also responding to a new literature emerging from China centered on a concern for "warm factor" diseases. Those heterogeneous and mutable diseases, and their symptomatic expression in "sand rashes," seemed to be epidemic in the period, causing considerable concern. Although the original identification in the Chinese literature of warm epidemics linked them to distinctly local causes, Japanese physicians adapted many of the

writings about the illnesses to their own circumstances. Daniel Trambaiolo shows us how they did so, as well as illuminating the resulting medical controversies. As Chinese texts began to draw more attention to epidemic diseases, and to the kinds of unseasonal or anomalous *qi* that might be causing them, Japanese physicians responded with their own interpretations, drawing on classical ideas and herbal formulas along with practical experience to counter the new diseases. "Scraping and releasing" techniques began to proliferate as a way of renewing the circulation of *qi*, perhaps in an echo of European methods of bloodletting, although folk remedies were also influential. Once copies of Chinese treatises on warm epidemics began to circulate in early eighteenth-century Japan, debates about causes and methods grew even sharper, giving rise to entirely new theories and treatments. As with European responses to Chinese texts, Japanese physicians took the words more as inspiration than instruction, using the works as resources to be drawn on for innovation in accord with their own clinical experience.

In the last contribution, we cycle back to the significance of translations of Chinese works about the pulse for the medicine of Europe. Many of the medical entries of the famous French *Encyclopédie* were written by members of the medical school of Montpellier, who were especially interested in combatting the so-called mechanical philosophy. The latter view held that matter in motion was responsible for all natural processes yet assumed that elemental matter was inert and subject to forces outside itself (mainly responding to the pressure of other material things). Montpellier "vitalists," on the other hand, considered life to be an expression of the organized substances of living bodies, which contained forces of their own. Motoichi Terada argues that, for the vitalists, the motions of the pulse (sphygmology) became important signs of the state of the powers within bodies. The sphygmological aspect of the vitalist position has been generally overlooked by historians, but when one attends to it the importance of Chinese texts in translation in dialogue with the ancient Hippocratic idea of sympathy (*sympnoia panta*) becomes evident. By the time of Henri Fouquet, Terada shows, the French vitalists had not only assimilated Chinese sphygmology, drawing on Du Halde's encyclopedic study of China that—as we saw in Hanson and Pomata—contained the translation of the *Maijue* by Hervieu. Fouquet also drew on the texts about acupuncture that originated from additional European visitors to Japan, although explaining that therapy's effects in terms of the responses of the nervous system. East Asian medicine was becoming a familiar resource within the European Enlightenment.

By such routes Chinese medicine was already being globalized in the early modern period. It did so not because "it" was a single system but because

different aspects of the practices of China appealed to different kinds of people. It was understood that some of the foundational ideas present in Chinese texts were difficult—even impossible—to translate into other medical cultures adequately, but that did not stop people from speaking on behalf of others, or trying to communicate, or finding inspiration in dimly understood trains of thought. Such processes allowed not only European physicians but medical practitioners in Japan, and even in the Chinese court itself, in turn to consider the helpfulness of knowledge claims produced elsewhere. The number of people involved in the processes of translation was never high, for Chinese medicine was never imposed on the world by a colonial regime, a universal church, or an economic system. But in an indeterminate manner, sometimes with the voice of the translator clearly articulated and at other times barely audible, people, texts, and substances originating in China mingled with others and provoked responses, even being smuggled through carefully guarded gates. Movements of translation suggested new formulations of the real, sparking fresh inquiries and conversations. People who never learned the languages of the empire could see something in the available texts and conversations about it that appealed, alerting them to ways of understanding that floated just out of their reach but that nevertheless touched their worlds. In that sense, at least, the medicines of China worked. And they moved.