A Disorder of *Qi*: Breathing Exercise as a Cure for Neurasthenia in Japan, 1900–1945

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ABSTRACT

Neurasthenia became a common disease and caused widespread concern in Japan at the turn of the twentieth century, whereas only a couple of decades earlier the term “nerve” had been unfamiliar, if not unknown, to many Japanese. By exploring the theories and practices of breathing exercise—one of the most popular treatments for neurasthenia at the time—this paper attempts to understand how people who practiced breathing exercises for their nervous ills perceived, conceived, and accordingly cared for their nerves. It argues that they understood “nerve” based on their existing conceptions of *qi*. Neurasthenia was for them a disorder of *qi*, although the *qi* had assumed modern appearances as blood and nervous current. The paper hopes to contribute to the understanding of how the concept of nerves has been accepted and assimilated in East Asia. It also points out the need to understand the varied cultures of nerves not only at the level of concept and metaphor, but also at the level of perception and experience.

KEYWORDS: neurasthenia, breathing exercise, *qi*, quiet-sitting, Futaki Kenzō, Okada Torajirō

The brain and nerves, long regarded as the organs of the psyche, have a long and rich history in the West. Particularly since the mid-seventeenth century, with the progress in neuroanatomy and neurophysiology, the brain and nerves not only have been a focus of medical attention, but have also permeated discussions of personal and social issues and constituted a fundamental part of individual self-awareness and self-knowledge. The widespread concerns about the trauma, exhaustion, and degeneration of the nervous system in the second half of the nineteenth century and the first two decades of the twentieth clearly reflected the extent to which the nerves had become embedded

in people's perception and understanding of themselves, others, and the world in which they lived.¹

Imagine, instead, the experience of people with little idea of, or familiarity with, nerves who were diagnosed in large numbers with a nervous disease and warned that their success and the success of their nation hinged on the health of the nerves. This was the situation in Japan at the turn of the twentieth century. With only a short history in Japan, the nerves remained a bodily concept that was foreign to most Japanese. They could not "feel their nerves" as their Western contemporaries seemingly did "naturally," since the latter's sensibility and capacity were shaped by a rich culture of nerves evolved over centuries. Yet, the number of patients in Japan diagnosed with neurasthenia was growing so fast that the threat of a national epidemic loomed large in the public consciousness, making the health of the brain and nerves an urgent responsibility for both individuals and the nation. The apparent contradiction between the foreign nature of nerves and neurasthenia and the intense public concern with them was an ironic result of the rapid modernization that Japan had undergone since the Meiji Restoration in 1868 and has become the subject of a number of historical studies. Many of these studies have taken modernity and the discontinuity between modernity and tradition to be central themes. As these studies have made clear, the extent to which neurasthenia replaced spiritual and animal possession and *utsu* (*qi* constraint), and became a prevalent mental and emotional disease, reflected the degree of modernization of the Japanese body and mind.² It was only made possible through exchange and collaborative undertakings between the government, the medical profession, the media, and the general public.³ The prevalence of neurasthenia also reflected the anxieties and emotional crises that contemporary

- 1 There is an extensive literature on the rich and diverse nervous cultures of the period. Most studies concern the two representative neuroses of the time, namely, hysteria and neurasthenia. Nervous exhaustion, trauma, and degeneration were the main supposed causes of neurosis at the time and all had wider connotations and repercussions. Marijke Gijswijt-Hofstra and Roy Porter, eds. *Cultures of Neurasthenia from Beard to the First World War* (Amsterdam: New York: Rodopi, 2001); Janet Oppenheim, *"Shattered Nerves": Doctors, Patients, and Depression in Victorian England* (New York: Oxford University Press, 1991); Andreas Killen, *Berlin Electropolis: Shock, Nerves and German Modernity* (Berkeley: University of California Press, 2006); José M. López-Piñero, *Historical Origins of the Concept of Neurosis*, trans. D. Berrios (Cambridge: New York: Cambridge University Press, 1983); Volker Roelcke, "Biologizing Social Facts: An Early 20th Century Debate on Kraepelin's Concepts of Culture, Neurasthenia, and Degeneration", *Cult. Med. Psychiatry*, 1997, 21, 383–403; Mark Micale, *Approaching Hysteria: Disease and Its Interpretations* (Princeton: Princeton University Press, 1995); Mark Micale and Paul Lerner, eds., *Traumatic Pasts: History, Psychiatry and Trauma in the Modern Age, 1870–1930* (Cambridge: Cambridge University Press, 2001).
- 2 Yoshiichi Watarai, *Meiji no Seishin Isetsu: Shinkeibyō, Shinkeisuijaku, Kamigakari* [A Different Perspective on the Meiji Spirit: Nervous Disorder, Neurasthenia, Spiritual Possession] (Tokyo: Iwanami Shyoten, 2003); Akiko Hyōdō, *Seishinbyō no Nihon Kindai* [Mental Illness and Modernity in Japan] (Tokyo: Seikyusha, 2008); Junko Kitanaka, "Utsu no Yamai" [A Disorder of Constraint], in *Kindai Nihon no Shintaikankaku* [The Body Senses in Modern Japan], eds. Shigehisa Kuriyama and Kazutoshi Kitazawa (Tokyo: Seikyusha, 2004), 360–90.
- 3 Masahiro Sato, *Seishinshikkan Gensetsu no Rekishishakaigaku: "Kokoro no Yamai" wa Naze Ryūkōsuru no ka* [Historical Sociology of the Discourses on Mental Disorders: Why have the "Disorders of the Mind" Become Prevalent?] (Tokyo: Shinyosha, 2013).

Japanese experienced in face of the changes and challenges brought about by modernity.⁴ Some intellectuals, moreover, used neurasthenia as a metaphoric tool to reflect on and criticize modernity in general, and the rootless modernization that Japan had been undertaking in particular.⁵

However, as suggested by Daidoji Keiko's recent study of the attempts to accommodate the concept of neurasthenia in traditional Kempo medicine,⁶ the culture of neurasthenia in Japan in the first half of the twentieth century was more diverse and complex than described above, reflecting the diversity of ways in which contemporary Japanese engaged with, reflected upon, and criticized modernity. By examining the theories and practices of the breathing exercise, a very popular treatment for neurasthenia at the time, this paper looks into a particular culture of nerves and tries to understand how the foreign nerve was assimilated and internalized as a body concept, a body theory and, above all, a body sense by people immersed in this culture. By practicing breathing exercises, they learned to perceive, understand, and take care of their nerves in a way incomprehensible to outsiders. The singular culture of nerves provides an example of the socially and culturally embedded nature of "nervous bodies." It also reminds us that the varied cultures of nerves in history and at present could (and should) be analyzed not only at the level of concept and metaphor, but also at the level of perception and experience.⁷

HISTORICAL BACKGROUNDS

Before delving into the world of the breathing exercise, it is useful to learn more about the prevalence of neurasthenia in Japan at the turn of the twentieth century. The Japanese translation of nerve, *shinkei*, was coined by Sugita Gempaku and first present in his translation of a Dutch anatomical book, *Kaitai Shinsho* (New Human Anatomy), in 1774. It is worth noting that Sugita created the term *shinkei* by combining *shinki* (*shenqi* in Chinese), the vital essence moving around the body, and *keimyaku* (*jingmai* in Chinese), the interconnected channels conducting *shinkei*, both of which

4 Sabine Frühstück, "Male Anxieties: Nerve Force, Nation, and the Power of Sexual Knowledge", in *Building a Modern Japan: Science, Technology, and Medicine in the Meiji Era and Beyond*, eds. Morris Low (New York: Palgrave Macmillan, 2005), 37–59; Watarai, *Meiji no Seishin Isetsu*; Sato, *Seishinshikkan Gensetsu no Reikishishakaigaku*, 230–39.

5 Christopher Hill, "Exhausted by their Battles with the World: Neurasthenia and Civilization Critique in Early Twentieth-century Japan", in *Perversion and Modern Japan: Psychoanalysis, Literature, Culture*, eds. Nina Cornyetz and Keith Vincent (London: New York: Routledge, 2010), 242–58.

6 Keiko Daidoji, "Treating Emotion-related Disorders in Japanese Traditional Medicine: Language, Patients and Doctors", *Cult. Med. Psychiatry*, 2013, 37: 59–80.

7 On discussing the body sense of nerve, this paper draws on the approach put forward in the book edited by Kuriyama Shigehisa and Kitazawa Kazutoshi, *Kindai Nihon no Shintaikankaku*. Slowly evolved and deeply embedded within culture, a body sense often does not become distinct until it is subjected to change or comparison. As a result, the approach seems more useful to investigating traditional and non-Western medicines and body cultures and understanding how modern Western medicine has been assimilated and transformed in non-Western contexts. However, with a symmetrical approach to Western and non-Western nervous cultures, this line of research might add new insight to the existing scholarship on the formers and could help understand how they have changed under the influence of the latest neuroscience.

were fundamental concepts in traditional Chinese medicine.⁸ Although there was increasing discussion of the nervous system among medical men over the following century, “nerve” remained a technical term that most lay people never heard of.⁹ Its wider circulation had to wait until after 1868, when Japan set out on a course of rapid modernization and Westernization following the Meiji Restoration. Like other aspects of private and public life, knowledge and practices about the body underwent significant transformation within a short period of time, the extent of which was reflected in the widespread concern about neurasthenia at the turn of the century. Only a couple of decades earlier, the nerves were unfamiliar, if not unknown, to most Japanese, but now their *suijaku* (weakness) had become known as not only the “disease of civilization of the twentieth century,”¹⁰ but also a “national disease” of Japan.¹¹

There was great concern about neurasthenia among the public, as evidenced by the large number of books and newspaper and magazine articles on the disease published in the period. From time to time, concerns were further heightened by celebrity cases diagnosed or self-diagnosed with neurasthenia.¹² The growing number of physicians trained in Western medicine—to whom the new centralized government granted monopoly power in 1874, at the expense of those within traditional medicine—began to diagnose neurasthenia in large numbers of patients, offering them an explanation for their non-specific physical and mental complaints. Neurasthenia was the most often diagnosed and most well-known nervous disorder at the time, since competing disease labels, such as hysteria and hypochondria, which enjoyed much longer histories than neurasthenia in the West, were less often in use and aroused less interest, possibly in part because their Japanese translations gave no clue to their nervous origins.¹³ G. M. Beard’s theory of nervous exhaustion and mixed appraisal of modern civilization appeared to have found a receptive soil in Japan, where decades of modernization and Westernization had brought such drastic change that the danger of modern life seemed self-evident and compelling. The concern about neurasthenia was also reinforced by the circulation of the ideology of Social Darwinism, which portrayed the international and domestic societies as battlefields of “the struggle for survival.” In this war for survival, at stake were both

8 Hugh Shapiro, “Chinese and Western Medicine”, in *Medicine Across Cultures: History and Practice of Medicine in Non-Western Cultures*, ed. Helaine Selin (Dordrecht: Boston; London: Kluwer Academic Publishers, 2003), 365–66. Also see, Shizu Sakai, “Kaitai Shinsho to Jutei Kaitai Shinsho” [Kaitai Shinsho and the Revised Katia Shinsho], in *Otsuki Gentaku no Kenkyu*, ed. Yogakushi Kenkyukai (Kyoto: Shibunkaku Press, 1991), 99–157; S. Kuriyama, “Between Eye and Mind: Japanese Anatomy in the Eighteen Century”, in *Paths to Asian Medical Knowledge*, eds. Charles Lesile and Allan Young (Berkeley: University of California Press, 1992).

9 Junko Kitanaka, *Depression in Japan: Psychiatric Cures for a Society in Distress* (Princeton: Oxford: Princeton University Press, 2012), 57.

10 Hanzan Ishikawa, *Shinkeisuijaku oyobi sono Kaifuku* [Neurasthenia and its Recovery] (Tokyo: Kōgakukai, 1909), 1.

11 Kitanaka, *Depression in Japan*, 55.

12 For instance, Natsume Sōseki, arguably the most influential novelist at the time, was a well-known neurasthenic.

13 Hysteria was transliterated as “hisuteri”; and hypochondria was translated as “shinkishō” (literally, heart-qi disorder).

individuals' aspirations to success and the nation's struggle to catch up with Western powers on the "ladder of civilization." Neurasthenia seemed a risk inherent in these fierce and relentless competitions, posing a serious threat. Its prevalence sometimes generated fears about the degeneration and demise of the entire nation.¹⁴

However, contemporary Japanese' concepts of the nerves were not shaped solely by these Western ideas, and remained complicated and diverse. This diversity was reflected in the variety and popularity of alternative treatments for neurasthenia at the time. To prevent and treat neurasthenia, and to maintain and improve the health of the brain and nerves, Western-medicine doctors prescribed mainly existing Western therapeutics, including electrotherapy, rest cure, nutritional supplement, travel, hydrotherapy, and guidance on a wide range of issues, including lifestyle, diet, and job selection.¹⁵ Aside from these standard treatments, however, there were a lot of alternative treatments on offer, all boasting to be effective cures for neurasthenia. For example, when Ishikawa Hanzan, who was a famous journalist, fell ill with neurasthenia in 1907, he became disillusioned with Western medicine and decided to seek alternative treatment. He was surprised by the variety and easy availability of alternative cures for neurasthenia in Tokyo in 1908.¹⁶ He tried several different treatments, including moxibustion, warm mustard foot bath, barefoot gardening, cold-water scrubbing, a diet regime, a form of hypnotherapy and Zen-sitting, all of which he found effective to some extents.¹⁷ However, among all the alternative cures, it was the breathing exercise that attracted most interest and had the most far-reaching and lasting influence on the culture of neurasthenia in Japan.

FUTAKI'S "ABDOMINAL BREATHING METHOD"

Breathing exercise has been an important and time-honored method for health, moral, and spiritual cultivation in Japan as well as in other Asian cultures. In modern medicine, however, breathing is largely considered a natural function that needs no special care unless compromised. With the increasing dominance of modern medicine, one might have expected less concern, particularly less medical concern, with breathing in Japan. This appeared to be the case in the first few decades of the Meiji era, as only a limited amount of literature on the subject was published in the period. However, interest in breathing exercise revived remarkably with the emergence of various forms of modern breathing exercises in the first decade of the twentieth century. There were such a variety of breathing exercises available, and the public's interest was so high, that several anthologies were published to guide readers

14 Kitanaka, *Depression in Japan*, 57–60; Shōgo Gotō, *Shinkeisuijaku Shō* [*Neurasthenia*], 7th edn (Tokyo: Tenchidō, 1907), 3–6, 60–63, 72–81; Kenji Hihara, *Saishin Shinkeisuijaku Jiryōhō* [*The Latest Self-Treatments for Neurasthenia*] (Tokyo: Yuhōkan, 1912), 4–5, 13–16; Kengo Kanō, *Shinkeisuijaku no Ybōhō* [*Preventive Methods of Neurasthenia*] (Tokyo: Shinbashidō, 1906), 1–4.

15 Kengo Kanō, *Shinkeisuijaku Jiryōhō* [*Self-Treatments for Neurasthenia*] (Tokyo: Shinbashidō, 1909); Gotō, *Shinkeisuijaku Shō*; Hihara, *Saishin Shinkeisuijaku Jiryōhō*; Shūji Kotama, *Kennō Hō* [*Methods of Strengthening the Brain*] (Tokyo: Naigai Shuppan Kyōkai, 1910).

16 Ishikawa, *Shinkeisuijaku oyobi sono Kaifuku*, 65–66.

17 Ibid., 65–114.

through the range of options.¹⁸ In the rediscovery and reinvention of breathing techniques, one of the most important advocates was a medical professor at Tokyo Imperial University, Futaki Kenzō (1873–1966).

A renowned expert in infectious diseases, Futaki, M.D., Ph.D., was educated at Tokyo Imperial University and then went to Germany to study natural immunity in the Institute for Hygiene in Munich under Max von Gruber from 1905 to 1908. He had a distinguished career in the field of microbiology and infectious diseases. He once served as acting director of the National Institute of Infectious Diseases, and founded and was a longtime president of the Japanese Association for Infectious Diseases. In 1955, he received the prestigious Order of Culture (*Bunka Kunshō*) from the Emperor for his academic contributions, which included identifying a subtype of *Shigella*, the infectious agent of dysentery; identifying spirillum minus, the infectious agent of rat-bite fever; and taking the lead in distinguishing Japanese encephalitis from encephalitis lethargica.¹⁹ However, in Japan before 1945, Futaki was best known not for his academic achievement, but for the breathing method that he put forward for the prevention and treatment of neurasthenia. Although often known by the name “Futaki’s abdominal breathing method,” the technique, Futaki always insisted, was not his invention, and he just learned its benefits and therapeutic value from his experience.

Futaki was born into a family of doctors of Han (Chinese) medicine that had for generations served the Kubota domain in the Edo period (1603–1867).²⁰ He related that he had been born with such a feeble constitution, and afflicted with so many diseases in childhood, that his father always feared that he would not survive. He remembered that he grew up jealous of his siblings’ health and vigor and often felt bitter and resentful about being left behind.²¹ Desperate for good health, he could not find an effective way until coming across a health method in two eighteenth-century books that he incidentally picked up from the shelf. No sooner had he put it into practice than his health improved miraculously, and before long he had been able to physically compete with other children.²² The health method came to his rescue again several years later when he fell ill with retrospectively self-diagnosed neurasthenia in his first year of senior high school. Having failed most of his subjects because of his mental conditions, he turned to his childhood panacea and in no time found

18 Hatsujirō Takanashi, ed., *Genkon Ōya Kōkyū Seiza Hō* [*Contemporary Popular Methods of Breathing and Quiet-sitting*] (Tokyo: Shunhodō, 1912); Hatsujirō Takanashi, ed., *Sentetsu Kōkyū Kyōken Jutsu* [*Breathing Health Methods of Ancient Sages*] (Tokyo: Shunhodō, 1912); Tōyō Igakukai, ed., *Jikken Kenkōhō* [*Experimental Health Methods*] (Tokyo: Hōbunkan, 1911); Sakai Matsuo, ed., *Hikaku Kenkyō Nana Ō Kenkōhō* [*A Comparative Study on the Seven Major Health Methods*] (Tokyo: Mangandō Shoten, 1914).

19 Futaki Kenzō Sensei Kinenkai [The Memorial Society of Futaki Kenzō], ed., *Futaki Kenzō Sensei* [*Futaki Kenzō*] (Tokyo: Futaki Kenzō Sensei Kinenkai, 1969), 91–93.

20 Akita Sakigake Shimpō, “Kenbikagami to Genmai to Futaki Kenzō: Tsute” [Microscope, Brown Rice and Futaki Kenzō: A Biography], November 7, 1986.

21 Kenzō Futaki, *Fukushiki Kōkyū* [*Abdominal Breathing*] (Tokyo: Bunseidō, 1911), 15–16; Futaki, *Kenkō e no Mochi: Kanzen Seishoku no Igaku* [*The Way to Health: The Medicine of Perfect Proper Diet*] (Tokyo: Shinkigensha, 1942), 10–11.

22 Futaki, *Fukushiki Kōkyū*, 15–17.

himself not only cured of neurasthenia, but also more composed and lucid than ever before.²³ Thanks to the health method, he was able to go on to study medicine at Tokyo Imperial University and overseas. On his return from Germany, he found that in Japan, as in the West, there were an increasing number of people suffering from neurasthenia. He therefore decided to share his experience and started to study and promote the abdominal breathing method that had helped him so much.²⁴

The authenticity of the founding story of Futaki's breathing method is open to doubt, since Futaki himself later attributed his dramatically improved health in childhood to brown-rice diet that he passionately promoted in 1930–40s.²⁵ It is likely that he actually read those books accredited with inspiring him in childhood, including Hakuin Ekaku's *Oradegama* and *Yasen Kanna* [*Casual Talk in Boat at Night*], Hirata Atsutane's *Izu No Iwaya*, Kaibara Ekiken's *Yōjōkun* [*Teaching on Yōjō*], and Hirano Juisei's *Yōjōketsu* [*Secrets of Cultivating Character*],²⁶ in university years when he developed a keen interest in traditional Chinese Learning (*kangaku*) and National Learning (*kogugaku*) and established long-term relationships with several scholars in these fields.²⁷ It is also doubtful whether he had ever conducted the experiment that, he claimed, confirmed his hypothesis about the therapeutic mechanisms of abdominal breathing.²⁸ However, Futaki's approach to the age-old body technique was truly innovative and, ostensibly at least, in line with the principles of scientific medicine.

Futaki always insisted that the health method was a legacy from the past, and described himself as a scientific researcher attempting to understand its therapeutic effects. Across cultures and countries, he pointed out, there were a variety of breathing methods known under different names, such as *susokukan* (literally, counting-breath introspection), *naikanhō* (literally, method of introspection), and *nantanhō* (literally, method of making pills). They were employed in a wide range of fields, including medicine, moral education, religious practice, and the training of martial arts.²⁹ In the new era, however, Futaki did not think that his testimony alone could arouse people's interest in it, since it was "a time when people won't believe in anything unless it has been

23 Ibid., 17–18.

24 Futaki, "Fukushiki Kōkyū no Hanashi" [On Abdominal Breathing], in *Sentetsu Jikken Fukushiki Kōkyū Hen* [*Experimental Abdominal Breathing Methods of Ancient Sages*], ed. Saburō Nakayama (Tokyo: Shunshūsha, 1911), 26–27.

25 Futaki, *Shokumotsu to Kenkō* [*Food and Health*] (Tokyo: Shūyōdan, 1921), 74–75; Futaki, *Futaki Hakase Kōwa Shū* [*A Collection of Dr. Futaki's Lectures*], 2nd edn (Tokyo: Dainihon Yōseikai, 1939), 492–96, 596; Futaki, *Kenkō e no Mochi*, 219–20.

26 Futaki, *Fukushiki Kōkyū*, 15–17; Futaki, "Fukushiki Kōkyū no Hanashi", 2–20; Saburō Nakayama, "Preface", Nakayama, ed., *Sentetsu Jikken Fukushiki Kōkyū Hen*, i–iv.

27 Akita Sakigake *Shimpo*, "Kenbikagami to Genmai to Futaki Kenzō: Tsute", December 3, 1986.

28 Futaki claimed to have invented a device—"abdominal pressure meter"—and applied it to compare the abdominal pressures of neurasthenic patients and healthy subjects. He, however, never explained the design of the device or applied it in other studies. Nor did he provide the data collected from the experiment. Futaki, "Fukushiki Kōkyū namini Fukuatsu Zōshin ni tsuite", 87–88.

29 Futaki, "Fukushiki Kōkyū namini Fukuatsu Zōshin ni tsuite" [On Abdominal Breathing and the Enhancement of Abdominal Pressure], first published in *Tokyo Komagome Byōin Daigo Kai Hōkoku* [*The Fifth Report of Komagome Hospital*] in 1909, in *Futaki Hakase Ronbun Shū* [*A Collection of Dr. Futaki's Papers*], ed. Itsuma Takagi (Tokyo: Takagi Itsuma, 1933), 87.

proved by science.”³⁰ He was therefore determined to prove and explain the efficacy of abdominal breathing by science. The first step that he took was to rename it as the “abdominal breathing method” and the “method of enhancing abdominal pressure” (*fukuatsu zōshinhō*).³¹

Speaking at the annual conference of National Association of Physicians, Futaki contended that the two new names better captured the essence of the ancient method. He reported that he had invented a device called “abdominal pressure meter” and applied it to compare the abdominal pressures of neurasthenic patients and healthy subjects. The result showed that there was significant reduction of abdominal pressure in neurasthenic patients.³² It, Futaki held, was because modern lifestyle, particularly wearing Western-style clothes and sitting in chairs and at desks (instead of on tatami mats), restricted the movement of abdominal wall, resulting in modern people often unwittingly abandoning abdominal breathing.³³ This, in turn, led to wasting of the muscles of the diaphragm and abdominal wall, which caused the reduction in abdominal pressure. Futaki differentiated two groups of neurasthenic patients by observing their breathing. One group of patients, whose bellies caved in during inhalation, suffered from “floppy diaphragm”; and the other, whose bellies bulged during exhalation, suffered from “flabby abdominal muscles.”³⁴

Futaki held that the reduction of abdominal pressure was the fundamental cause of neurasthenia through a number of mechanisms, the most important of which was that it compromised circulation. Good circulation, Futaki explained, depended not only on the work of the heart, but also on sufficient venous return. Sufficient venous return, in turn, relied on maintenance of venous pressure, which was determined by a number of factors, including the functioning of venous valves, the tone of vessels, and the squeezing forces on veins applied by the surrounding tissues. As the first two factors were involuntary functions, Futaki argued, it was only through enhancing the squeezing forces that people could manage to increase venous return for better circulation. Since the abdominal cavity contained a large number of veins and was the largest reservoir of venous blood within the body, abdominal pressure had a decisive effect on the amount of venous return. He compared the abdomen to a massive venous valve that was crucial to blood overcoming the resistance of the portal venous system and returning to the heart. The abdomen, Futaki argued, was in effect the “abdominal heart” or the “venous heart” and no less important than the heart proper to good circulation.³⁵ Should the abdominal pressure be reduced to a degree not sufficient for pumping blood back into the heart, the blood would stagnate and accumulate. The resulting uneven distribution of blood flow caused “functional anemia,” from which the brain, the most delicate and sensitive organ, would suffer most. Functional anemia, moreover,

30 Futaki, “Fukushiki Kokyū no Hanashi”, 27.

31 Futaki, “Fukushiki Kokyū namini Fukuatsu Zōshin ni tsuite”, 87.

32 Ibid., 87–88.

33 Ibid., 99.

34 Ibid., 92–93.

35 Ibid., 88–91.

could affect all other organs, which would become either congested or anemic, and cause the diverse symptoms of neurasthenia.³⁶

Apart from its effect on blood circulation, Futaki succinctly explained the other mechanisms by which abdominal pressure could affect the nervous system. First, should the tension of the diaphragm be reduced, it would be shaken whenever the body was moving. The heart, sitting on the diaphragm, would in turn be rocked as if on a swing and become prone to palpitation.³⁷ Second, a weak diaphragm and abdominal wall were hypersensitive to stimuli. When something frightening occurred, a flabby diaphragm would relax and rise upwards, and a weak abdominal wall would contract and retract, to a larger degree than under normal tension. In other words, the “frightened reaction” of the body would become more violent than it normally should be. This was one of the causes of the emotional symptoms of neurasthenia, Futaki argued. He agreed with the theory that the mental components of emotion were secondary to the physical ones. It was not that the former induced the latter, but that the former was merely the mental representation of the latter. In a fearful situation, for example, it was the withdrawal reflex that first took place. People would first bend their bodies, which pushed up the diaphragms to press the hearts and induce palpitation and cold sweating. Only when they perceived these physical changes would they realize the emotion of fear. Futaki argued that if people could maintain tension in the diaphragm and abdominal wall and inhibit the withdrawal reflex in the first place, they would be fearless and able to keep composure in any situation. Neurasthenic patients were anxious and fearful all the time because their flabby musculature led to instability of the body.³⁸ Lastly, Futaki held that adequate abdominal pressure could activate the whole nervous system by “massaging” the nerves within the abdominal cavity. If pressure was low, the nervous system would be left in an inactive and sluggish, that is, neurasthenic state.³⁹

After elucidating the physiological and pathological significance of abdominal pressure, Futaki went on to explain the method of abdominal breathing that he had been benefiting from since childhood. He stressed that abdominal breathing was a specific exercise for strengthening the muscles of the diaphragm and abdominal wall and therefore could restore abdominal pressure back to normal. Futaki’s version of abdominal breathing was simple and practical. One first had to sit properly on tatami or, if too weak to do so, in a chair, with belly protruded and shoulders drawn back. Chest and shoulders should be completely relaxed with abdominal and waist muscles tense and ready for action. The head, neck, and trunk should be upright and one should be as calm and quiet as possible.⁴⁰ As to actual methods of breathing, Futaki

36 Ibid., 93–96.

37 Ibid., 95–96.

38 Futaki, “Fukushiki Kokyū no Hanashi”, 41–43. The James-Lange theory of emotion was popular with advocates of breathing exercise in Japan, possibly because it was compatible with their view that proper body position was the key to mental health.

39 Futaki, “Fukushiki Kokyū no Hanashi”, 44–45; Futaki, “Fukushiki Kokyū namini Fukuatsu Zōshin ni tsuite”, 91–92.

40 Futaki, “Fukushiki Kokyū no Hanashi”, 2–5; Futaki, “Fukushiki Kokyū namini Fukuatsu Zōshin ni tsuite”, 97.

differentiated three types: shoulder breathing, chest breathing, and abdominal breathing. Among them, shoulder breathing was the worst in terms of health and most often seen in women and invalids who breathed solely by moving their shoulders. Abdominal breathing was the healthiest.⁴¹ The essence of abdominal breathing lay in that the chest cavity had to be expanded and contracted through the up-and-down movement of the diaphragm, which, in turn, was driven by the to-and-fro movement of the abdominal wall. When inhaling, Futaki taught, one should forcefully bulge the abdominal wall, which would drag down the diaphragm and thus expand the chest cavity. Conversely, when exhaling, one should retract the abdominal wall to push up the diaphragm.⁴² Futaki emphasized that the breathing must be slow, deep, and quiet—he advised a rate of four to six breaths per minute.⁴³ Most importantly, the tension of the abdominal wall must be kept constant while it was bulging and retracting. It should not be rushed forward or backward. Sometimes, one could even apply resistance to its movement by pressing the belly during inhalation or contracting the diaphragm during exhalation to train the abdominal wall.⁴⁴ For neurasthenic patients who suffered severe asthenia of the diaphragm or the abdominal wall, Futaki devised two special training methods: the “bellyband method” (*haraobihō*) and the “bellyband and sitting-salute method” (*haraobi suwarireihō*), both of which were designed to rehabilitate the severely weakened diaphragm or abdominal muscles by increasing resistance to expiration.⁴⁵ Futaki advised patients to have two or three sessions of abdominal breathing daily, with each session lasting fifteen to thirty minutes.⁴⁶ By these methods, Futaki held, one should be able to strengthen the belly to a degree that it felt like a solid and hard plate. It would then function as a powerful “abdominal heart” to invigorate the circulatory system, from which the brain would benefit most. The mind, which should be focused or, as Futaki put it, “placed” on the belly during the exercise, would therefore become amazingly sharp and lucid. Futaki compared the tightened belly and the lucid mind to “a polished mirror,” “a jade plate,” and “a pond of still water” that could reflect every detail with amazing clarity.⁴⁷

Futaki also applied his scientific approach to the promotion of abdominal breathing. He made two glass models of the respiratory and circulatory systems and demonstrated them at the annual conference of physicians to illustrate the physiological mechanisms that he proposed.⁴⁸ He employed them in his public campaign as well. He joined *Shyūyōdan* (literally, the Association for Cultivation)⁴⁹ and went on a lecture tour

41 Futaki, “Fukushiki Kokyū no Hanashi”, 13–14, 22–23.

42 Futaki, “Fukushiki Kokyū namini Fukuatsu Zōshin ni tsuite”, 97–98.

43 Ibid., 97.

44 Ibid., 97.

45 Ibid., 98–99.

46 Ibid., 97.

47 Futaki, “Fukushiki Kokyū no Hanashi”, 56–57.

48 Futaki, “Saibi Fukushiki Kokyū namini Fukuatsu Zōshin ni tsuite” [A Further Study on Abdominal Breathing and Abdominal Pressure], first published in 1911, in *Futaki Hakase Ronbun Shū*, ed. Takagi.

49 *Shūyōdan* is a right-wing organization founded in 1906 by Hasunuma Monzō for social education and promotion of moral and spiritual cultivation, particularly in youth. It promoted patriotism and nationalism and had close association with the government in the militarist period. Futaki joined *Shūyōdan* in late Meiji period and was an active member. He succeeded Hiranuma Kichirō, who was a former prime minister

around the country to promote abdominal breathing. To lay audience, he presented the two models to illustrate the mechanical effect of abdominal pressure on circulation and how abdominal breathing could maintain or enhance the pressure. This was said to have impressed and convinced most of the audience.⁵⁰ He wrote a series of articles on abdominal breathing in the official journal of *Shyūyōdan*, in which he reiterated that he, as a scientist-physician, had scientifically studied and proved its benefits. “Futaki’s abdominal breathing method” quickly became well-known and popular in Japan. His book, *Abdominal Breathing*, was reprinted and republished several times before 1945. Many neurasthenic patients claimed to have benefited from the method. Most of all, a considerable number of Western-medical doctors were also convinced and recommended abdominal breathing as one of the most effective treatments for neurasthenia.⁵¹

In fact, Futaki’s breathing method was only one, and by no means the first, of the many that had emerged in Japan in the ten years from 1905 to 1915.⁵² Perhaps because he enjoyed a privileged position as a medical professor and pioneered in trying to establish scientific and physiological grounds for breathing exercise, he was recognized and respected by most proponents as a great master and his theories were widely adopted and adapted to explain the efficacy of the breathing exercise. Some other theorists further elaborated on the physical effects of abdominal breathing on the nervous system and the body mass. Fujita Reisai (1868–1957), for example, highlighted the stimulating effect of abdominal breathing on the celiac or, as he preferred to call it, “solar” plexus. He argued that the autonomous nervous system was more important than the central nervous system in terms of both mental and physical health. While the latter was responsible for “analytic” intellectual activity, the former determined not only most vital functions, such as respiration, circulation, and nutrition, but also major “synthetic” personality attributes, including emotions and will. Within the autonomous nervous system, he went on to argue, the most important organ was the solar plexus, as it was the most connected and complex nervous plexus within the body. Fujita therefore called it the “abdominal brain” and deemed it more

and convicted of war crime after WWII, as the president of *Shūyōdan* in 1946. Futaki Kenzō Sensei Kinenkai, *Futaki Kenzō Sensei*, 271–74; Kichirō Hiranuma, *Kenkoku no Seishin to Shūyōdan no Shimei* [*The Spirits of Building the Nation and the Missions of Shūyōdan*] (Tokyo: Shūyōdan, 1925); Shūyōdan, ed., *Shyūyōdan Undō Hachi Nen Shi: Waga Juni Shakai Kyoiku no Genryū* [*The Eighty-Year History of Shūyōdan Movement: The Origin of Social Education in Our Country*] (Tokyo: Shūyōdan, 1985).

50 Futaki Kenzō Sensei Kinenkai, *Futaki Kenzō Sensei*, 272.

51 Hihara, *Saishin Shinkeisuijaku Jiryōhō*, 211–21; Kanō, *Shinkeisuijaku Jiryōhō*, 38–39; Kotama, *Kenmō Hō*, 111–14; Sakon Ito, *Seishin Shūyō mato Kenkōhō* [*Health Methods of Mental Cultivation*] (Tokyo: Kanasashi Ōryūdō, 1914), 54–61; Naokata Itō, *Kokyū Seiza Hō* [*Breathing Exercise and Quiet-sitting*] (Tokyo: Shinbashi, 1915).

52 A variety of breathing methods, with varying degrees of “modernization” in theory and technique, were invented and circulated during this period. Fujita Reisai first publicized his “method of harmonizing the breath and the mind” in 1908. Reisai Fujita, *Shinshin Kyōken kore Hiketsu* [*The Secret of Strengthening the Mind and Body*] (Tokyo: Sanyūdō, 1908).

important than the brain proper.⁵³ As the plexus was inside the abdominal cavity, Fujita argued that, on one hand, the morbid shapes and the consequent instability of the belly might cause disturbance to its functioning and on the other, it was possible to activate the solar plexus and hence the whole autonomic nervous system by training and strengthening the belly.⁵⁴ As for Ueno Yōichi (1883–1957), who was a pioneer scholar in industrial psychology and scientific management in Japan,⁵⁵ the therapeutic effects of abdominal breathing consisted in restoring the center of gravity of the body, which had been displaced upwards because of weakening of the abdominal wall in neurasthenic patients, back to the lower belly. With the center of gravity shifting upwards, Ueno argued, the body was like a reverse pyramid and so unstable that all sorts of disquiet, agitation, and unhappiness occurred. Only when the center of gravity was securely placed on the lower belly could people feel themselves firmly rooted in and steadily based on the earth, and thus recover a sense of stability, quietness, and composure.⁵⁶

Unlike most other alternative treatments, which found their customers mainly among rural or lower-class people, breathing exercise won over a considerable numbers of old nobles, elite bureaucrats, intellectuals, and professionals. Among those who regularly practiced breathing exercise were members of the imperial family, faculty staff of Waseda University, influential politicians, and social activists, and a large number of students of the most prestigious Tokyo Imperial University and First Higher School.⁵⁷ Some proponents contended that the effectiveness of breathing exercise proved that there was difference between Japanese's and Westerners' physical as well as psychological constitutions, while others regarded it as an example of how Eastern and Japanese medicine could remedy the inadequacy of Western medicine.⁵⁸ The enthusiasm faded somewhat after around 1920. To be more specific, there was less interest in and emphasis on the physical and physiological effects of breathing exercise on the nervous system. This shift in emphasis occurred in parallel with, and was related to, the rise of the psychological paradigm that regarded neurasthenia as a

53 Fujita, *Kokumin Shinshin Kaizō no Genri to Hōhō, Jōkan* [*The Principles and Methods of Reforming the National Body and Mind, I*], fifth edn (Tokyo: Chyōwado Kyōkai, 1941), 17, 55–62, 130–33, 202.

54 *Ibid.*, 56–57, 62.

55 Ueno was a pioneering scholar of scientific management and respected as the “father of scientific management” in Japan. See the introduction about him on the web site of the Sanno Institute of Management, which he founded in 1942. <http://www.sanno.ac.jp/founder/index.html>.

56 Yōichi Ueno, *Za no Seiri Shinri mato Kenkyū* [*A Physiological and Psychological Study on Sitting*] (Tokyo: Shōshin Dōaikai, 1938), 17–19, 21–22, 64, 67, 75–76.

57 “Shinshin Shūyō Okada Shiki Seiza Hō” [Okadaian Quiet-sitting for the Cultivation of the Mind and Body], first published in 1912, in *Nippon Hito no Mi Kokoro Rei: Kindai Minkan Seishin Ryōhō Sōsho, 1* [*Japanese Body, Mind and Spirit: An Anthology of Modern Folk Psychotherapies, I*], vol. 2, ed. Shin'ichi Yoshinaga (Tokyo: Kuresu Shuppan, 2004), 27–29, 130–57, 253–63, 274–86, 336–406; Seizō Nakanishi, *Koko ni Hito ari: Okada Torajirō no Shōgai* [*A Great Man is Here: The Life of Okada Torajirō*] (Tokyo: Shunzyūsha, 1972), 142–49; Kōzō Komatsu, *Okada Torajirō: Sono Shisō to Jidai* [*Okada Torajirō: His Thoughts and Times*] (Osaka: Sōgensha, 2000), 192–93.

58 Gensai Murai, *Katei no Eisei, Jōkan* [*Household Hygiene, I*], 2nd edn (Tokyo: Jitsugyō no Nihonsha, 1915), 316–18.

psychological, rather than neurological, disorder.⁵⁹ Interest in breathing exercise, however, has never died out. As said at the outset of this section, breathing exercise in Japan is a time-honored method for not only physical, but also mental and spiritual cultivation. For the latter purposes, since then and up until today, there have been a considerable number of people continuing to practice and promote breathing exercise. Besides, many of the folk psychotherapies that began to emerge in Japan from around 1910 adopted breathing exercise as an essential psychotherapeutic technique. These psychotherapies had their roots in both traditional religions and imported Western hypnotism and their development reached its peak in late 1920s.⁶⁰ Many of these later champions of breathing exercise have been, directly or indirectly, inspired by the masters of the early twentieth century. Their writings constituted the majority of the literature about this formative period of modern breathing exercise in Japan.⁶¹ Compared with their predecessors, they no longer give serious thought to the physical and physiological effects of breathing exercise, but instead emphasize its psychological and spiritual benefits. They, also, have tended to see the revival of breathing exercise in the early twentieth century within its longer tradition, as evidence of the continuity and distinctiveness of Eastern culture. A few historians and historically minded scholars have also examined the history. They attributed the flourishing interest in breathing exercise at the time, as well as its recent revival, mainly to the cultural and spiritual void left by modernization.⁶² While these works quite rightly point out the cultural, moral, and spiritual significance of breathing exercise in Japan, both in the past and in modern times, and explain its appeal by the tension between spirituality and scientific rationalism, some interesting questions concerning the body and, more specifically, the nerve remain to be explored, such as, “How did those neurasthenic patients feel their nerves?” “How did they perceive and understand their nervous bodies?” and “How did practicing breathing exercises heal their nerves?” Taking Futaki’s and others’ highly speculative (and apparently false) theories more seriously, we may learn from the therapeutic effectiveness and popularity of breathing exercise some important, but overlooked, dimensions of the nervous and body culture in

59 Edward Shorter, *From Paralysis to Fatigue: A History of Psychosomatic Disorders in the Modern Era* (New York: Free Press, 1992).

60 Shin’ichi Yoshinaga, “The Birth of Japanese Mind Cure Methods”, in *Religion and Psychotherapy in Japan*, eds. Christopher Harding, Fumiaki Iwata and Shin’ichi Yoshinaga (London: New York: Routledge, 2015), 76–102.

61 Komatsu, Okada Torajirō; Nakanishi, Koko ni Hito ari; Sōkajin Sasamura, ed., *Seiza: Okada Torajirō sono Kotoba to Shōgai* [*Quiet-sitting: The Sayings and Life of Okada Torajirō*] (Matsumoto: Mumeikai, 1974); Ryūzō Nakajima, *Seiza: Jissen, Shisō, Rekishi* [*Quiet-sitting: Practice, Thought and History*] (Tokyo, Kenbun-shuppan, 2012).

62 Susumu Shimazono, “*Iyasu Chi*” no Keifu: Kagaku to Shyūkyō no Hazama [*The Genealogy of “Healing Knowledge”: A Narrow Space between Science and Religion*] (Tokyo: Yoshikawa Kōbunkan, 2003); Satoshi Tanaka, *Naze Futoshiko Fuku wa Iyawareru youni Natta no ka?: “Ki” to Kenkōhō no Zuzōgaku* [*Why Has a Bulging Belly Become Disagreeable?: The Iconography of Ki and Health Methods*] (Tokyo: Kawade Shobo Shinsha, 1993); Sakimori Kon, “Kindai Gōrisei no Kanata wo Mezashite: Hida Harumitsuru no Kyōkenjutsu” [*Aiming at the Other Side of Modern Rationality: Harumitsuru Hida’s Health Method*], in *Taishō Shyakai to Kaizō no Chōryū* [*Taishō Society and the Trend of Reform*], ed. Yoshiya Suetake (Tokyo: Yoshikawa Kōbunkan, 2004); Harding et al., eds., *Religion and Psychotherapy in Modern Japan*.

Japan in the early twentieth century, to which some interesting contemporary observations on the effectiveness of breathing exercise provide a clue.

TWO DIFFERENT KINDS OF BODIES

In his 1911 book, an educator, Hotta Sōji, recommended students desperate for better “brainpower” to take breathing exercises, particularly right before exams. Praising it as an effective method of strengthening the brain, he, however, found that many young students felt the procedures too abstract to follow and it was often difficult for them to understand and actually feel its benefits. For them, abdominal breathing was either nothing more than mechanical expansion and contraction of the abdomen, or some kind of mysterious and intangible exercise, and in any case, hardly helpful.⁶³ In contrast, Hashida Kunihiro (1882–1945), a renowned physician and physiologist and a colleague of Futaki’s at Tokyo Imperial University, once said that he opposed Futaki’s physiological theories of breathing exercise but could attest to its therapeutic effectiveness by his own experience.⁶⁴ His attitude was tellingly different from the apathy and resistance of those young students, who were unable to dispute Futaki’s theories but could not benefit from it at all. There seemed to be a generational difference in response to breathing exercise, which Hotta and other advocates of breathing exercise had noted with great concern. Futaki passionately promoted his health method among the youth.⁶⁵ Okada Torajirō called for a greater role for breathing exercise in education and sought to involve more teachers, with the hope that they would in turn influence their students.⁶⁶ Fujita worried that the younger generations had understood the abdomen, which breathing exercise was intended to train, mainly in a metaphorical, rather than a physical or bodily, sense,⁶⁷ and was delighted when he was invited to teach his breathing method to youth inmates at correctional facilities.⁶⁸ Although there was difference within generations, as evidenced by those enthusiastic student practitioners at the First Higher School and Tokyo Imperial University,⁶⁹ the young body seemed to be generally more resistant to breathing exercise, and it was to this young body that those advocates were most anxious to apply the remedy.

On one hand, the difference in response to breathing exercise might be caused by cultural differences between generations, and the effectiveness of breathing exercise thus was dependent upon non-physiological factors that differed generationally and not as universal and self-evident as the scientific theories suggested. Advocates of breathing exercise blamed Western culture and lifestyles for weakening the lower abdomen. For them, the younger generations’ alarming indifference to breathing exercise was a potent source of cultural anxiety and frustration. On the other hand, however, the cultural changes and differences were expressed in the body, and it

63 Hotta, *Zunō Meiseki Hō Hyaku Hanashi*, 125–26.

64 Futaki Kenzō Sensei Kinenkai, *Futaki Kenzō Sensei*, 46.

65 *Ibid.*, 272.

66 Komatsu, *Okada Torajirō*, 154–55; Enosuke Ashita, *Seiza to Kyōiku* [*Quiet-sitting and Education*] (Tokyo: Dōshi Dōkōsha, 1937).

67 Fujita, *Kokumin Shinshin Kaizō no Genri to Hōhō*, *Jōkan*, 15–16.

68 *Ibid.*, 72–73.

69 “Shinshin Shūyō Okada Shiki Seiza Hō”, 336–406.

was the body that had concerned those advocates most. In a sense, there were two different kinds of bodies, which felt the nerves in different ways and thus responded differently to breathing exercise.

Several responding patients' descriptions of their bodily experiences with neurasthenia and breathing exercise reveal how the treatment worked in their bodies. Kishimoto Nobuta (1865–1928), who was a sociological and religious scholar at Waseda University, recalled how he felt when he was afflicted with neurasthenia:

My body then was like a wrecked ship. . . . I felt the mind and the body completely cut off from each other, as if they were two separate existences having no connection at all. It was a state much more severe than disharmony between body and mind. I was stuck in a painful state which should be described as split between the spirit and the flesh.⁷⁰

His suffering did not end until he started practicing breathing exercise and quiet-sitting under the instruction of Okada Torajirō, which effected a complete cure in a short time. Using Futaki's circulatory theory to explain the efficacy, Kishimoto related that his body had become so sensitive, and his blood flow so vigorous, while taking breathing exercises, that the former was involuntarily and violently shaken by the pulsation of the latter.⁷¹ He felt the pain of disunity and disintegration eased. As he became able to "evenly redistribute the blood aggregated in the upper parts of the body by practicing the strengthening-the-belly method,"⁷² he regained control over his body and felt at one with it again, which he described as "I am the belly, the belly is me."⁷³

Similarly, a few other patients benefiting from breathing exercise expressed joy at being able to perceive, command, and cultivate their blood, nerves, and body mass:

Tensing the *tanden* activated the motion of the heart and remarkably elevated blood pressure. The whole blood circulation became very vigorous without any vessel being even slightly dented. As a result, the stiffness of the neck and shoulders [*katakori*] was entirely relieved, like a ditch being thoroughly dredged by pulling the plug. All obstructions were removed.⁷⁴

When the [solar] plexus was pressed to a certain degree, some stimuli reached the spinal cord via sympathetic nerves. Out of reflex, the body suddenly began shaking violently.⁷⁵

70 Nobuta Kishimoto, *Okada Shiki Seiza San Nen* [*The Three Years of Practicing Okadaian Quiet-sitting*] (Tokyo: Dainihontoshō, 1916), 9.

71 Ibid., 61–181.

72 Ibid., 19.

73 Ibid., 280.

74 Shigerō Takeshima, *Seiza to Jinsei* [*Quiet-sitting and Life*] (Tokyo: Meguro Shoten, 1921), 83. Concerning *katakori*, see S. Kuriyama, "The Historical Origins of 'Katakori'", *Japan Review*, 1997, 9: 127–49.

75 Takeshima, *Seiza to Jinsei*, 123.

[Plants] need firm and widely spreading roots. Roots are the foundation of the growth and development of plants. . . . The importance of quiet-sitting to human beings is exactly like that of roots to plants. Quiet-sitting is a natural way to secure and spread the roots. . . . The “roots” mean the center of gravity of the body. . . . To spread the roots of human beings for flourishing growth and development means to securely locate the center of gravity.⁷⁶

These bodily experiences appeared to prove and substantiate the circulatory, neurological, and center-of-gravity-of-the-body theories of breathing exercise, which were literally embodied. These patients, however, seemed able to directly perceive their blood, nerves, and body mass, as if they were endowed with extraordinary senses. It was because of lack of this sensibility that young students could not feel the same sensations and joy. They could not perceive their blood, nerves, and body mass in the same intuitive way, let alone command or cultivate them. The sensibility shaped the senses of both nervous and healthy nerves of most of Futaki’s generation, and was what they were anxious to pass on to their younger generations. A brief look at the historical predecessors of these modern breathing exercises can help understand the origin and nature of this special sense and the break caused by modernity in the Japanese bodies.

MODERN REINCARNATIONS OF *QI*

First, let us consider those eighteenth-century health methods that Futaki claimed to have drawn inspiration from for his abdominal breathing. All of them were designed to strengthen the lower belly for the cultivation of *qi* (*ki* in Japanese). Conceived of as the fundamental principle of the cosmos, *qi* has long, spectacular and complex histories in Chinese and other East Asian cultures, which, however, are beyond the scope of this article. For the present analysis, it is sufficient to know that the theory of *qi* and the related Yin-Yang and Five-Element (*Gogyō*) theories were central to Japanese medicine and martial arts in the Edo period. Not only were diseases understood, and medicines prescribed and administered, according to the elaborate and esoteric theories of *qi*,⁷⁷ but there were also instructions based on simplified and more accessible theories of *qi* teaching lay people how to manage and optimize a wide range of daily activities, such as diet, clothing, sex life, and exercise, to improve health and achieve longevity.⁷⁸ The overriding idea was that the human body was made up of continuous streams of *qi* and also served as the stage that the *qi* flowed on, and that good health was dependent on the flow of *qi* being vigorous, orderly, and harmonious.⁷⁹ To the body of *qi*, breathing was a vital function maintaining and regulating communication between *qi* within

76 “Shinshin Shūyō Okada Shiki Seiza Hō”, 83–86.

77 Keiji Yamada, *Ki no Shizenzō [The Natural Philosophy of Ki]* (Tokyo: Iwanami Shoten, 2002).

78 *Yōjō* (literally, nurturing life), the goal and essences of this genre of medicine, became a daily concern for people from every walk of life after the mid-Edo period. A large number of *yōjō* books recommending various “*yōjō* methods” were published and widely read. Keiko Daidoji, “What the Sick Should Know: Image and Expression of the Body in a Health Manual of the Early Nineteenth Century Japan”, presented at the *First Meeting of the Asian Society for the History of Medicine* (Taipei, 2003), 1.

79 *Ibid.*, 3.

and without the body. It supplied the body with fresh *qi* from the universe and cleared it of evil and harmful *qi*. It was also the gateway into the body for outside influences. As for the lower abdomen, also known as *tanden* or *kikai* (literally, the ocean of *qi*) *tanden*, it was the reservoir and fountainhead of the *qi* flowing within the body. It must be replete with *qi* to prevent exhaustion. As the fountainhead, it had also to be strong to keep the flow of *qi* smooth and brisk. To perfect breathing and strengthen the lower belly, a variety of measures were invented to guide inhaled *qi* toward the lower belly and prevent its stagnation and disorder, of which every author that Futaki drew on had their own version. Hirata Atsutane, for example, taught that while lying in a supine position before sleep, one should take slow, deep breaths, count them, and at the same time forcefully plantar flex the ankles to stretch the belly tight. He thought this would direct the inhaled *qi* downwards to the lower belly.⁸⁰ For the same purpose, Hirano Juisei recommended wrapping a strip of cloth around the body right beneath the lower end of the rib cage to force the inhaled air downwards.⁸¹ Hakuin Ekaku claimed to have learned his method from a reclusive immortal, whose essence was to train the lower belly by breathing exercise to be as solid and hard as untanned cow leather.⁸² He also invented another method called “*nansohō*” (literally, soft-cream method), which consisted of imaging fragrant cream flowing from the top of head to the lower belly.⁸³ All these methods were devised to strengthen the lower belly and keep the flow of *qi* smooth and energetic, which was regarded as the key to health and vigor.

Moreover, *qi*, breathing (*kokyū*) and the abdomen (*hara*) had taken on more and more metaphoric meanings over the Edo period. They became as psychological and spiritual as they were physical and natural. With *qi* and *hara*, many everyday terms describing emotional and moral states are used in the Japanese language. For example, *hara ga tatsu* (literally, “the belly stands up”) means “to be angry”; *hara ga butoi* (literally, “the belly is big”) means “be generous or bighearted”; *kichigai* (literally, “faulty *ki*”) means “mental derangement”; *ki utsu* (literally, “*ki* constraint”) means “melancholia.” Breathing (*kokyū*), moreover, connotes personal or artistic styles or the knack of something. Thus, psychological and esthetic attributes and experiences had often been described and discussed in these terms. Conversely, the status of *qi* was increasingly thought to be closely related to one’s psychological, social, and spiritual life, and able to be influenced by her or his own will and activities. The cultivation of *qi*, in the broad sense, was the cultivation of the self. Apart from improving health, breathing exercise was widely practiced for moral, spiritual, and esthetic cultivation.⁸⁴ In the tradition of Daoism, moreover, it constituted a vital part of various mystical methods for *nentan* (making pills), *furō* (not aging), and *tōsen* (becoming Immortal).⁸⁵

80 Atsutane Hirata, *Izu No Iwaya*, in *Sentetsu Jikken Fukushiki Kokyū Hen*, ed. Nakayama, 1–16.

81 Ibid., 17–34.

82 Ekaku Hakuin, *Yasen Kanna* [*Casual Talk in Boat at Night*] (Osaka: Yamamoto Bunyūdō, 1909), xi.

83 Ibid., 37–42.

84 Yukio Akatsuka, “*Ki*” no *Bunka Ron* [*On the Culture of Ki*] (Tokyo: Soutakusha, 1990); Chavalin Svetanant, *Cultural Conception of “Ki” and “Kokoro”* (Kyoto: International Research Centre for Japanese Studies, 2007).

85 Futaki, “Fukushiki Kokyū namini Fukuatsu Zōshin ni tsuite”, 87; Yamada, *Ki no Shizenzō*, 185–86.

The naturalistic and medical meanings of *qi* and breathing and their moral, spiritual, and esthetic significance had been mutually reinforced and perpetuated, which ensured the passing down of the culture of *qi* from generation to generation. It can be said that the sense and concept of *qi*, whether elaborate or simple, were deeply and pervasively embedded in Edo Japanese's perception and knowledge of the body and the self.⁸⁶ However, the intense concern with the nerve, the brain, and neurasthenia at the turn of the twentieth century reflected the extent to which the *qi* had, as it were, evaporated from the body and the universe. It was increasingly in these terms, instead of *qi*, that people talked and thought about personality, morality, intelligence, and spirituality. The *qi*, however, perhaps had not completely ceased flowing yet. The older generations of neurasthenic patients might be still suffering from disorders of *qi*. They might be still cultivating their *qi* when they took breathing exercises, though the *qi* had assumed different, modernized appearances. From this perspective, we can come to understand how Futaki constructed his theories of abdominal breathing and how it took effect on the modern body. Futaki always stressed that he was not the inventor of breathing exercise. In a sense, he was right to decline the honor. For not only the techniques but also the scientific theories that he put forward were not new.

A closer examination reveals the similarities between the circulatory, neurological, and mechanical models of the effects of breathing exercise and the theory of *qi*. First, the circulating blood in the most influential circulatory model is hardly distinguishable from the circulating *qi*. Inhaled air was now confined to the lung, unlike the traditional *qi* that went on to flow around the body. The flow of *qi*, however, was continued with blood. Blood flow, just like the flow of *qi*, was susceptible to stagnation. Local congestion and anemia, which were the major pathologies of the circulatory system, also had parallels in *qi* medicine. Moreover, the lower belly served a similar function in the old and new models. According to the new theory, the lower belly was the "abdominal" or "venous" heart and functioned as both a pump and a reservoir of blood. It had virtually the same function as the main storage and fountainhead of *qi* in the old theory. In *qi* medicine, the health of the body depended on the sufficient amount and the energetic flow of *qi*. In Futaki's theory, it depended on those of blood. Although Futaki made no direct reference to *qi*, his blood behaved like *qi* in so many respects that it can be said to be a modern version of *qi*.

Second, regarding the nervous system, the theory that stressed the importance of the solar plexus and dubbed it the "abdominal brain" also coincided in many ways with the traditional views of the body. At first look, the theory, which attributed part of the effects of abdominal breathing to massaging of the solar plexus, bore resemblance to that underlying Western electrotherapy for neurasthenia. It, however, accorded the solar plexus and the autonomic nervous system some extraordinary roles that modern medicine could not address. Unlike Western neurology that emphasized

86 Kuriyama's study on the historical origins of *katakori* provides an example of how a complexity of factors could be involved in the emergence and consolidation of a particular body sense. Kuriyama, "The Historical Origins of 'Katakori'."

the brain as the organ of mental function, it not only put much more emphasis on the nervous system functioning as an interconnected and integral whole but also attributed “synthetic” mental functions to the autonomic nervous system, particularly the solar plexus, and regarded the brain as merely an organ of “analytic” mental functions. The so-called “synthetic” function included both the building-up of the body and “synthetic” mental activities, which included the formation of comprehensive and integrated views, the emergence of emotions, and the development of personality and self. By analogy, they compared the development and working of mental functions to the growth of plants. Mental function, according to the model, was not determined by a solitary organ (the brain), but by extensive, interconnected nervous circuits that stemmed from one root, the solar plexus. An active solar plexus was vital to mental as well as physical health. The brain was peripheral in terms of both location and function within the circuits. Most importantly, although the autonomic nervous system was involuntary, people nonetheless could cultivate it much like they cultivated plants. The effect of breathing exercise on the solar plexus was nurturing, like nurturing plant roots, rather than mechanically stimulating.⁸⁷ This conception clearly had its origin in traditional medicine. More specifically, there were unmistakable similarities between the roots and circuits of the nervous system and those of *qi*. The “synthetic” autonomic nervous system was in many ways comparable to the constitutive *qi* system.

Lastly, breathing exercise’s mechanical effect of placing the body’s center of gravity in the lower belly, as well as the pathological consequences of it shifting away, could only be understood by comparing body mass to *qi*. Ueno tried to explain it by physics, arguing that shifting the center of gravity upwards would leave the body like an unsteady inverted triangle and therefore cause anxiety and restlessness.⁸⁸ It was not just a metaphor. The explanation, instead, relied on the notion of body mass as something not static but in motion and this could only be understood by a medicine in which the body was conceived as consisting of *qi* and its center of gravity reflecting *qi*’s distribution. The shifting of body mass was equivalent to the flowing of *qi*. The shifting away of the center of gravity meant the deficiency and exhaustion of *qi* in the fountainhead, namely, the lower belly, and the congestion or solidification of *qi* elsewhere.

Hence, there were striking analogies between the circulatory, neurological, and physical theories of breathing exercise and the traditional theory of *qi*. They all argued that there were some kinds of constitutive elements either literally or figuratively flowing around the body and emphasized the interconnectedness of the body. Through the connecting flow of blood, nervous (electric) current, or body mass, separate organs and body parts were working in coordination rather than independently. All the elements originated from and converged at the lower belly. The lower belly, whether it was the pumping abdominal cavity, the solar plexus or the abdominal body mass, was the origin and driving force of the flow and had to be strong to keep it smooth and vigorous. The failure of the “abdominal heart,” that is, reduction

87 Fujita, *Kokumin Shinshin Kaizō no Genri to Hōhō*, Jōkan, 26, 200–11.

88 Ueno, *Za no Seiri Shinri mato Kenkyū*, 21–22, 75–76.

of abdominal pressure seemed comparable to but was fundamentally different from actual heart failure. Similarly, dysfunction of the solar plexus involved more than excess or lack of nervous agitation. Reduction of abdominal body mass caused more than physical instability. These pathologies could only be understood by comparing the blood, nerves, and body mass to *qi*. Also, by comparing *qi* to these elements, people would be able to conceive of the modern body as an integral and interconnected whole through which *qi* flowed.

In this light, we can now understand those patients' extraordinary sensibility. The key lies in the similarities between *qi* and those conceptually new body elements—nerve, blood, and body mass. In other words, what those benefiting from breathing exercise felt flowing around their bodies was *qi* or, more precisely, the blood, nerves, and body mass behaving like *qi*. The singular bodily experience of people taking breathing exercises can be understood by recognizing as *qi* what they described as blood, nerve current, and body mass. This provides insight into not only the mystery of the extraordinary senses but also the generational difference in response to breathing exercise.

The masters and supporters of breathing exercise in the early twentieth century belonged roughly to the same generation. They were born around the Restoration in 1868 and were in their thirties or forties when modern versions of breathing exercise came into fashion. Many of them received traditional education in childhood and grew up immersed in traditional literature, folklore, religions, medicines, and philosophies. Futaki, for example, was brought up in a Han-medical family. He remembered being interested in traditional medicine, ancient legends, Buddhism and Chinese and National Learning in childhood.⁸⁹ Several others related similar childhood intellectual and cultural experiences.⁹⁰ To them, *qi*, which was extensively embedded in traditional cultures, was by no means a strange or intangible body element. Rather, they were endowed with a sense of *qi* and it flowed around their childhood bodies. The flow seemed to have come to a halt after they started pursuing Western-style higher education. As Western medicine replaced that of *qi* as the norm, they came to accept that it was blood and nerves, rather than *qi*, that made up their body system. *Qi*, however, might still have been flowing in their forgotten or suppressed memories of the body. As a result, the body was, as it were, split. They felt powerless against, and estranged and alienated from, the dominant modern body, as lamented by Kishimoto, who “felt the mind and the body completely cut off from each other” and was “stuck in a painful state which should be described as split between the spirit and the flesh.”⁹¹ The pain of being split might be most strongly felt by people of the elite and professional classes like Futaki and Kishimoto, as they were more deeply immersed in the traditional culture of *qi* and had been taking a leading role in embracing new Western culture, science, and medicine. The aforementioned neurasthenic journalist Ishikawa Hanzan was another example. Ishikawa blamed his illness on his thoughtless

89 Futaki Kenzō Sensei Kinenkai, *Futaki Kenzō Sensei*, 3–5.

90 Ishikawa, *Shinkeisuijaku oyobi sono Kaifuku*, 81–83; Taiki Kōtō, *Okada Shiki Seiza to Rōsō* [*Okadaian Quiet-sitting and Laozi and Zhuangzi*], sixth edition (Tokyo: Ōshima Seishindō, 1939), 6–7.

91 Kishimoto, *Okada Shiki Seiza San Nen*, 9.

adoption of Western health practices and tireless efforts to educate and enlighten his compatriots. While undergoing various alternative treatments, he was struck again and again by memories about his childhood body, such as practicing kendo and other belly-cultivation techniques, which prompted him to reflect on the path that he and the nation had taken.⁹² People like Ishikawa and Kishimoto, who attempted to reunite the past with the present, might find breathing exercise, with the new theories, appealing because it provided a way to reintegrate the split body. On one hand, whether in the form of blood, nervous current, or body mass, the suppressed *qi* was allowed to return and flow around the body again. On the other hand, they were able to perceive, understand, and even control the previously imperceptible blood, nerves, and body mass by comparing them to *qi*. Thereby, they could make sense and take care of their modern body in familiar ways and relieve the painful feeling of alienation from their own body.

Fewer of the younger generations, however, could benefit from breathing exercise in this way. As their sense of *qi* was not as deep-rooted as their fathers' or grandfathers', they found it more difficult to perceive their blood and nerves in the same intuitive way. From the older generations' point of view, the apathy and resistance reflected the cultural amnesia and confusion of body identity among the younger generations, which they were keen to remedy by breathing exercise. Most of the modern breathing exercises were simplified to consist of easily understood and easily followed procedures, partly in order to make them accessible to the younger generations. Some of them, such as Dr. Otabe Shozaburō's six standing forms of deep breathing, consisted of such clear-cut procedures that they very much resembled Western gymnastics. In the first form, for example, participants were asked to follow the leader's command to perform the three procedures: first, "Take a proper standing position;" second, "Raise your arms to shoulder high and at the same time deeply breathe in air for five seconds;" and finally, "Slowly return your arms to the standing position and simultaneously fully breathe out air for five seconds." The procedures were so simple that even a large group could follow the orders to perform them uniformly. Otabe passionately argued that his standing breathing exercises should be introduced and replace Western-style gymnastics as a routine in all modern institutions, particularly in school.⁹³ However, as Hotta noted, the younger generations often found it difficult to feel the benefits of taking breathing exercises. After all, for the therapy to be effective, it was needed to build a sense of *qi* into the younger generations' bodies and create the split. It was a difficult and complicated task and could only be achieved by instilling a whole set of "memories" of traditional body cultures.

A DISORDER OF QI

The singular culture of nerves and nervousness that evolved around breathing exercise undoubtedly also had its roots in broader social, cultural, and political contexts.

92 Ishikawa, *Shinkeisuijaku oyobi sono Kaifuku*.

93 Sōzaburō Otabe, *Fukakokyūhō [Deep Breathing Method]* (Tokyo: Jitsugyō no Nihonsha, 1912), 63–72, 88–98, 101–30.

Although not overtly anti-West or reactionary, many advocates of breathing exercise were wary about the social and cultural changes brought about by modernization and Westernization and felt anxious about the loss of cultural identity. Their reinvention and promotion of breathing exercise as a cure for neurasthenia can be seen as part of the rising cultural nationalism of the time. Apart from breathing exercises, in fact, many of them advocated, at the same time and with the same enthusiasm, other traditional arts, marital arts, and cultural practices, such as judo, kendo, Noh, *gidayu*, tea ceremony, ikebana, and *misogi*. Some argued that because the breathing exercise was essential and integral to these cultural practices, practicing them alone could naturally and more pleasantly achieve the same health benefits, and cure neurasthenia.⁹⁴ The purported cultural significance of breathing exercise, the cultural identity constructed and secured by practicing it, and the social solidarity felt within groups of active participants were all important factors contributing to the therapeutic effectiveness of breathing exercise for neurasthenia, which, after all, was not only a physiological and neurological but also a social and cultural disorder, particularly a disorder of modernization and Westernization. In this regard, both neurasthenia and its cure, namely breathing exercise, fit well into the framework of the oppositions between the traditional and the modern, and the East and the West, that an increasing number of contemporary Japanese applied to make sense of their world.

However, the reinvention of a traditional bodily technique of breathing exercises in order to treat neurasthenia, an illness of modernity, was less defensive or reactionary than progressive and accommodating. Practicing breathing exercise was not merely a way of returning to the past, and its therapeutic effectiveness did not only lie in shielding practitioners from the ever-changing outside world. Instead, it was vital to their healing effects that these modern breathing exercises, with their modernized theories and techniques, enabled people to assimilate the foreign concepts of nerves and nerve weakness (neurasthenia) into their body experiences, body knowledge, and body practices. Thus, with every stroke of the breath, they could feel and cultivate their nerves, intimately. The sense of nerves was neither innate nor purely metaphorical. Although the status of nerves was considered consequential for individuals' and the nation's survival and success, nerves themselves seemed foreign and imperceptible. Breathing exercises cultivated in the body a sharply intuitive and intimate sense of nerves and nervousness and thus, on the level of the body, alleviated the feelings of alienation and disintegration behind the epidemic of neurasthenia in Japan. For those who benefited from the breathing exercise, neurasthenia was not a disorder of exhaustion, trauma, or degeneration, but one of nerve-*qi* being insufficient, stagnated, congested, or chaotic; and thus they could be cured by taking breathing exercises to reinvigorate a vigorous and harmonious flow of the nerve-*qi* around the body. Dubbed the "disease of civilization of the twentieth century," neurasthenia was an oft-used metaphor for the impact of the social and cultural change brought about by modernization and Westernization. Change was also experienced by the body. Successful or not, the efforts to

94 Chinkichi Tōyama, *Fukakokū [Deep Breathing]* (Tokyo: Shinkyōdō, 1912), 15–20, 23–24; Otabe, *Fukakokūhō*, 4–5; Murai, *Katei no Eisei Jōkan*, 216–66.

accommodate the changes within the body by reinventing breathing exercise as a modern treatment reveal a forward-looking dimension of the cultural nationalism in Japan.

Perhaps it was also because breathing techniques afforded intimacy with the body and the self that they had been repeatedly invoked to assimilate new concepts about the self imported from the West. They, for example, were reinvented as induction techniques for hypnosis and psychotherapeutic techniques when the mind and its disorders, in place of the nerve and neurasthenia, became a major concern.⁹⁵ Such development, on one hand, seems natural for a traditional practice of spiritual and religious significance. On the other hand, it was related to the paradigm shift in the theory of neurosis taking place in Western medicine. Interestingly, as the focus has returned to the brain and nervous system with the development and progress of functional neuro-imaging over the last decades, breathing exercise, coupled with meditation, is once again being resurrected and reinvented as a psychotherapeutic method, whose efficacy now can be verified and vivified by the changes in blood flow in relevant parts of the brain. *Qi* may no longer flow as powerfully and ubiquitously as it did before. Nevertheless, there remains a need to intuitively perceive and understand in bodily terms the brain and nerves—the organs of the psyche.

95 Yoshinaga, “The Birth of Japanese Mind Cure Methods”; Yoshinaga, ed., *Saiminjutsu no Reimei: Kindai Nippon Rinshō Shinri no Tanjō* [*The Dawn of Hypnotism: The Birth of Modern Japanese Clinical Psychology*] (Tokyo: Kuresu Shuppan, 2006); Yoshinaga, ed., *Nippon Hito no Mi, Kokoro, Rei: Kindai Minkan Seishin Ryōhō Sōsho 1*; Yoshinaga, ed., *Nippon Hito no Mi, Kokoro, Rei: Kindai Minkan Seishin Ryōhō Sōsho 2* (Tokyo: Kuresu Shuppan, 2004).