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# The historian in the pandemic: what has been done about the history of nonconventional medicine in epidemics?

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### Abstract

From governments to the general public, one may ask about the possible contributions of historians, if any, to the understanding and management of global disasters, as e.g. the on-going coronavirus disease 2019 (COVID-19). Given the confuse situation at the onset of the pandemic in terms of diagnosis, treatment, and prevention, a look into past experience with nonconventional medicine seemed relevant. In the present study I surveyed secondary literature on the role of Chinese medicine, Āyurveda, and homeopathy over time. The quantitative results were disappointing: nothing on Āyurveda, and one single study each on Chinese medicine and homeopathy. The quality of the former compensates for the numerical shortage. The case of homeopathy is rather sui generis, since this medical system was born and blossomed during epidemics and pandemics. I conclude with a short comment on reference sources, which might serve as point of departure for future studies of Āyurveda in epidemics.

### Keywords

Epidemics; pandemics; nonconventional medicine; history

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#### Introduction

When coronavirus disease 2019 (COVID-19) hit Germany, the government called a committee of experts to advise it. Unique in the world, this committee included humanities scholars, including the reputed director of the Max Planck Institute for the History of Science, Jürgen Renn. In April 2020, Alex Langstaff, from the Los Angeles Review of Books, interviewed an international group of historians of public health, epidemics, and disaster science. The experts were asked to reflect on how history was being used in the coverage of the pandemic, and how they were responding to the virus in their work. Nayan Shah, professor of American Studies and Ethnicity and History at the University of Southern California-who has published on epidemics and race in the United States-commented to be fascinated by the novelties associated with the COVID-19 pandemic: the role of new media, therapeutic experimentation, and alternative medicine-Traditional Chinese Medicine (TCM), Ayurveda, homeopathy. Shah's examples do not seem to be fortuitous-these are known as "whole medical systems," i.e. complete systems of medical theory and practice apart from conventional Western medicine. For the present bibliographical assay, I looked for secondary literature on the history of TCM, Ayurveda, and homeopathy in epidemics/pandemics. The results were disappointing: I could not locate any on Ayurveda, and only one scholarly study for both Chinese medicine and homeopathy. The quality of the former compensates for the quantitative shortage. The case of homeopathy is rather sui generis, since this medical system was born and blossomed during epidemics and pandemics. I conclude with a short comment on reference sources, which might serve as point of departure for future studies of Ayurveda in epidemics.

#### Medicine in China

Before anything else, one should bear in mind that TCM is not an ancient, but a recent medical system, and extremely recent at that. Indeed, it emerged as a response of the then newborn People's Republic of China (1949) to the exceedingly poor state of health care in the country. More in particular, TCM is a product of the Cultural Revolution (1966–1976) through the Party calls *Gu wei jin yong* (Let the past serve the present) and *Zhong xi yi jie he* (Let's integrate Chinese and Western medicine). In few words, to revise and strengthen the concepts, methods, and resources of the millenary Chinese medical tradition according to modern scientific standards.<sup>1</sup>

Twentieth-century Chinese historiography has contributed to this program by providing historical-epistemological support to TCM through evidence gathered from antiquity to the present time. The result is a narrative of linear continuity linking together famous physicians of the past, in the style older, whiggish scholarship used to do for Western science. This goal naturally demands assimilating past concepts and methods to those of contemporary science and medicine. This aim is particularly clear in the case of epidemics: along history, the Chinese developed many different concepts to understand and manage

<sup>&</sup>lt;sup>1</sup> Georges Métailié, "How Traditional Chinese Materia Medica Entered Modern Medicine, 1956–1977," in *Rotas, Mapas & Intercâmbios da História da Ciência*, ed. Ana M. Alfonso-Goldfarb et al. (São Paulo: EDUC, 2020), 76-82. ebook available at <u>https://play.google.com/books/reader?id=gtbpDwAAQBAJ&printsec=frontcover&pg=GBS.PP1</u> For an analysis of its success, see Silvia Waisse, "Blunting Occam's Razor, or When Less Is Not Best: Pluralism in the Global Health Care Marketplace," *Quinto Sol* 24, no. 3 (2020): 1–19.

simultaneous collective disorders, which within the framework of TCM were assimilated to acute infectious diseases.

One such concept is *Wenbing* (Warm Disease) and is the subject of an entire book devoted to a historical study of epidemics in China: Martha Hanson's *Speaking of Epidemics in Chinese Medicine*.<sup>2</sup> Hanson is not interested in the continuity between older and new Chinese medicine as such, but in tracing down the journey of a medical concept across time. This she calls "biography of disease," and fully matches the prevailing understanding of the history of science as laid down by Georges Canguilhem.<sup>3</sup> To remind briefly, epistemic objects travel in time, to be reconfigured under definite contextual conditions in different space-time crossroads. The result is no longer linear continuity, but narratives that reveal both breaks and permanence, i.e. (dis)continuity.<sup>4</sup>

Contextual conditions depend on general sociohistorical, economic, and political circumstances, among many other factors. Similarly, also varying systems of beliefs and epistemological constructs need to be taken into account in historical analysis. Hanson masterfully deals with all these conditioning aspects. Yet, by the same token, readers are expected to be already familiar with the history of China, as well as with the basic notions and textual canons that underpinned Chinese medicine since antiquity. This is the single caveat before opening the book and immersing in a wonderful journey across time... and also space!

After the proposal of a "biography of disease," a second leading thread in Hanson's narrative is her discovery that the notion of *Wenbing* was not only reconfigured over time, but also across a spatial gradient, from the cold and dry North to the hot and humid South. This aspect she characterizes as "geographical imagination," and is intimately linked to climate, and the broader environment in general, signalled by a strong influence of seasonality indigenous to the Chinese agrarian society.

The resulting picture is considerably different from that provided by standard scholarship. According to the latter, *Wenbing* came to the foreground in the late Ming dynasty (1368–1644) especially as a response to a series of severe epidemic outbreaks in 1641/2. One particular work embodied these developments, the *Treatise on Warm Epidemics* (*Wenji lun*) by Wu Youxing (alternatively spelled Youke) from 1642. This book is praised to this day for the fact its author dismissed moral and cosmological speculations, but sought for a natural cause of disease, namely, a specific pathogen in the environment. Editions multiplied in the following decades, giving rise to an expanding network of physicians no longer willing to believe that the traditional medical canons were final repositories of all medical wisdom. With this, also attention to regional and local clinical experience grew. This new flexible approach made room for updates, revisions, and entire reorganizations, thus favouring the continuous expansion of medical knowledge, leading straight to the recent TCM. For this final development to occur, it sufficed to assimilate *Wenbing* (and other concepts representing epidemics) to the acute infectious diseases of contemporary Western medicine.

<sup>&</sup>lt;sup>2</sup> Marta E. Hanson, *Speaking of Epidemics in Chinese Medicine: Disease and the Geographic Imagination in Late Imperial China* (London: Routledge, 2011).

<sup>&</sup>lt;sup>3</sup> Georges Canguilhem, "Objet de l'histoire des sciences," in Études d'histoire et de philosophie des sciences: concernant les vivants et la vie, 7th ed. (Paris: J. Vrin, 1994), 9–23.

<sup>&</sup>lt;sup>4</sup> This representation –(dis)continuity—has led the studies performed by researchers affiliated with CESIMA for about thirty years. See Ana M. Alfonso-Goldfarb, "Documents, Methods, and Identity of History of Science," *Circumscribere* 4 (2008): 1–4. More recently the term and spelling have found wider echoes, see e.g. Eric J. Engstrom, "Some Reflections on Historiographic Strategies for the Neurosciences," in *Philosophical Issues in Psychiatry III*, ed. Kenneth S. Kendler, & Josef Parnas (Oxford: Oxford University Press, 2015), 140–144.

Yet, Hanson shows that *Wenbing* can be traced down to much earlier sources. Instead of a single, linear genealogy, Hanson identified several, in a sort of "reverse" branching off: the farther one goes back in time, the more lineages one finds. Consistently, she located representations of *Wenbing* in the oldest medical canons from the Han dynasty (202 BCE–220 CE), however, under the broader, umbrella category of Cold Damage (*shanghan*).

Hanson identified a first instance of (dis)continuity in the work of Zhang Ji (150–219). In his *Treatise on Cold Damage and Miscellaneous Disorders* (*Shanghan zabing lun*, 196–219), Zhang Ji hypothesized that in the case of febrile diseases, pathogenic Cold develops in the winter, but remains dormant until the spring and summer, when it manifests as Warm and Hot diseases respectively.

Zhang Ji's work remained unknown until it was rediscovered as part of the Song dynasty's (960–1279) educational program, when it achieved wide circulation for the first time, and eventually became canonical. From this perspective, the later break introduced by Wu Youxing can be reread as making *Wenbing* a separate category, independent from Cold Damage, based on the occurrence of a specific pestilential, or deviant, *qi*, in opposition to the traditional conception of unseasonable *qi*.

In parallel, those familiar with the political history of China will immediately perceive a geographical shift from the North to the South. Indeed, from Song to the end of Ming, the South gradually overtook the North, until becoming dominant in the medical discourse. Hanson emphasizes, with a separate chapter, this "new Ming medical boundaries," in which new notions, as person-to-person transmission of disease, had a place, as also new illnesses characteristic of the Far South. The "anomalous" diseases of the Far South reinforced the perception of weaknesses in orthodox medical doctrines. One example is the work by Zhang Heteng (d. 1635) who focused his attention on Summer-Heat damage, a disease endemic in the tropics, but overlooked by the classics. With his analysis, Zhang Heteng challenged the dominance of the earlier Cold Damage tradition, insisting on that different conditions demanded equally different treatments, adapted to the local circumstances.

This novel view triggered a new body of learning on epidemics and *Wenbing* along the eighteenth century. These profound epistemological changes led to the emergence of many different traditions starting in the nineteenth century, not only to systematize the new doctrines, but also to find a place for *Wenbing* in canonical antiquity, as can be seen e.g. in Wu Tang's *Systematic Analysis of Warm Diseases (Wenbing tiaobian)* from 1798. Yet, one further element came to make this already complicated landscape even more complex: the introduction of Western medical perspectives, which starting 1871 became the standard.

The conclusion chapter of Hanson's book is devoted to the twentieth century: between Qing and the establishment of the Republic (1911), indigenous Chinese medicine fell in absolute disfavour, to the point modernizers attempted to fully outlaw it. In this, they faced the opposition of right-wing nationalists, who defended the indigenous version. Within this context, by the 1920s/30s, the meaning of *Wenbing* underwent one further shift. Based on the ubiquitous geographical argument, it was adduced that Western medicine was inappropriate for the Chinese climate and population. New genealogies were developed, whereby *Wenbing* attained parity with other currents of medical learning, and its genealogy was severed from the main line of the Cold Damage. Hanson observes that late twentiethcentury authorities accepted these new lineages in their medical textbooks, and thus made *Wenbing* an official current of thought.

The success of this program is illustrated by the case of the severe acute respiratory syndrome (SARS) epidemic of 2002/3, which was interpreted and approached within TCM

from the perspective of the *Wenbing* doctrine. Very recent publications show that many researchers also sought to characterize the 2020 COVID-19 epidemic in TCM terms, with advocates for *Wenbing* or other indigenous disease concepts.<sup>5</sup>

#### Homeopathy

The historical origins of homeopathy are intimately linked to infectious, epidemic or endemic diseases. Indeed, the problem that led Samuel Hahnemann (1755–1843) to his initial insight, in 1790, was malaria.

One of the main medical enigmas in Hahnemann's time was the effectiveness of Peruvian bark (*Cinchona officinalis* L.) in the so-called "intermittent fevers." According to the prevailingly view, Peruvian bark was a "bitter" drug, consequently, it bore the "hot" quality. How could a "hot" medicine heal fever, i.e. a "hot" disorder? This contradiction was inadmissible, and many explanations were attempted to overcome it. Following a cue by the respected physician Albrecht von Haller (1708–1770), Hahnemann self-experimented with Peruvian bark. According to him, the drug elicited the exact symptoms he had suffered when a victim of malaria: he devoted the rest of his life to the demonstration of this principle of *therapeutic similitude*.

The second, and probably best-known aspect of homeopathy, is the use of extremely *small doses*. Once again, this development took place within the context of an epidemic disease, to wit, scarlet fever, which at that time had devastating effects—just remember Beth March in Louisa May Alcott's *Little Women*.

With scarlet fever and small doses we come to the main problem any historian has to face when dealing with the history of homeopathy.

Homeopathy represents a unique case: it is the single theoretically and practically complete medical system different from conventional medicine originated in the West. What is at stake here, therefore, is not a clash between different ontological or cosmological views, but divergences in the understanding of the basic assumptions of Western science, and its application to the conservation and recovery of health. For this reason, both advocates and adversaries of homeopathy debate its legitimacy from its very inception—a debate that remains unsolved to this day. While the mass media periodically publicize, usually sensationalistic developments, for an accurate assessment of the scientific grounds of this endless controversy it suffices to run a search in PubMed (<u>https://pubmed.ncbi.nlm.nih.gov/</u>) namely, the basic database of peer-reviewed medical publications.

Historians did not escape this quagmire, but adopted one of the two positions. For the traditional historiography, homeopathy is an alien phenomenon counter flowing progress in medicine. Just as an example, in Roy Porter's *Cambridge Illustrated History of Medicine*, the section "The Founding of Homeopathy" is placed in a page of its own, outside the main text, in the chapter on alternative approaches to medicine developed by nonphysicians, and thus excluded from the chapter on eighteenth-century medical science.<sup>6</sup>

The second position is that of homeopathy advocates, none of whom are professional historians. The number of these works is inestimable. The classical reference is Richard Haehl's *Samuel Hahnemann: Sein Leben und Schaffen*, in English *Samuel Hahnemann, his Life and* 

<sup>&</sup>lt;sup>5</sup> See e.g. Xia Ren, Xin-Xin Shao, Xiu-Xue, *et al.,* "Identifying Potential Treatments of COVID-19 from Traditional Medicine (TCM) Using a Data-driven Approach," *Journal of Ethnopharmacology* 258 (2020): 112-932.

<sup>&</sup>lt;sup>6</sup> Roy Porter, ed., The Cambridge Illustrated History of Medicine (Cambridge: Cambridge University Press, 2001).

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*Work,* from 1922; the second volume entirely consists of transcriptions of documents, correspondence, etc.<sup>7</sup> A second traditional source is Thomas L. Bradford's *The Life and Letters of Dr. Samuel Hahnemann* (1895).<sup>8</sup>

Examples of analytical, rather than partisan studies performed with more up-to-date historiographical approaches to the history of medicine are Rudolf Tischner's *Geschichte der Homöpathie*,<sup>9</sup> Georg Bayr's, *Hahnemanns Selbstversuch mit der Chinarinde im Jahre 1790*,<sup>10</sup> and Silvia Waisse's *Hahnemann: Um Médico de Seu Tempo*.<sup>11</sup> A comprehensive biography of Hahnemann was published in 2005 by Robert Jütte, *Samuel Hahnemann: Begründer der Homöopthie*.<sup>12</sup> Professor Jütte is the director of the Institute of History of Medicine (Institut für Geschichte der Medizin der Robert Bosch Stiftung, IGM, Stuttgart), which archive hosts Hahnemann's papers, among a wealth of precious sources and materials for the history of homeopathy. The Institute further publishes the journal *Medizin, Gesellschaft und Geschichte (MedGG)*, the yearbook *Beihefte zur MedGG*, and the collection *Quellen und Studien zur Homöopathiegeschichte*.

The latter collection—*Sources and Studies on the History of Homeopathy*—is the main repository of monographs on specific aspects of the history of homeopathy.<sup>13</sup> The lion's share of scholarship, however, is included in publications that address definite aspects of homeopathy theory and practice with variable intention, not necessarily in the standard media for publication of historical studies. As a result, these studies are difficult to locate. Coming back to scarlet fever, as paradigmatic example, it is usually not discussed as such, but as the context for the first public notice about the extraordinarily small homeopathic doses.<sup>14</sup>

Epidemics provided the early homeopaths the occasion to prove the effectiveness of the new medical system. The first global challenge came with the cholera pandemic of the 1830s. There is a wealth of documents at IGM, filed as "Cholera papers." However, to this day, no historian has performed a thorough study of these documents—the single available one concerns the role Hahnemann personally played on this occasion.<sup>15</sup> Bernard Leary analysed the British experience in the 1854 cholera epidemic, however, he only addressed the refusal of the health authorities to consider the outcomes achieved by the homeopaths.<sup>16</sup>

The aim of research always was to ensure the survival of homeopathy against attacks that never stopped. In 1900, Thomas Bradford published "a compilation of all available sources" enabling comparisons between the outcomes of homeopathy and other medical treatments in public institutions and private practice.<sup>17</sup> This book, indeed, consists of a

<sup>&</sup>lt;sup>7</sup> Richard Haehl, *Samuel Hahnemann: Sein Leben und Schaffen* (Leipzig: Willmar Schwabe, 1922)/*Samuel Hahnemann, his Life and Work* (London: Homoeopathic Publishing Company, 1922).

<sup>&</sup>lt;sup>8</sup> Thomas L. Bradford, The Life and Letters of Dr. Samuel Hahnemann (Philadelphia: Boericke & Tafel, 1895).

<sup>&</sup>lt;sup>9</sup> Rudolf Tischner, Geschichte der Homöpathie (Leipzig: Wilmar Schwabe, 1932–34).

<sup>&</sup>lt;sup>10</sup> Georg Bayr, Hahnemanns Selbstversuch mit der Chinarinde im Jahre 1790 (Heidelberg: Karl F. Haug, 1989).

<sup>&</sup>lt;sup>11</sup> Silvia Waisse, Hahnemann: Um Médico de Seu Tempo (São Paulo: EDUC, 2005).

<sup>&</sup>lt;sup>12</sup> Robert Jütte, Samuel Hahnemann: Begründer der Homöopathie (München: dvt, 2005).

<sup>&</sup>lt;sup>13</sup> Subjects include correspondence between patients and physicians, homeopathy and hospitals, homeopathy at universities, regional and national developments, individual homeopaths, among others.

<sup>&</sup>lt;sup>14</sup> See e.g. Silvia Waisse, "The Science of High Dilutions in Historical Context," *Homeopathy* 101, no. 2 (2012): 129–137.

<sup>&</sup>lt;sup>15</sup> Karl F. Scheible, Hahnemann und die Cholera (Stuttgart: Karl F. Haug, 1994).

<sup>&</sup>lt;sup>16</sup> Leary, "Cholera and Homoeopathy in the Nineteenth Century," *British Homoeopathic Journal* 76, no. 4 (1987): 190–194; and "Cholera 1854: Update," *British Homoeopathic Journal* 83, no. 2 (1994): 117–121.

<sup>&</sup>lt;sup>17</sup> Thomas L. Bradford, *The Logic of Figures* (Philadelphia: Boericke & Tafel, 1900).

patchwork of data on general statistics, diseases including cholera, yellow fever, pneumonia, and typhus fever, of children in homes, and insane asylums, without any criticism of sources, analysis, or inferences.

In an effort to rigorously document the accumulated experience with homeopathy in epidemics, the Canadian homeopath André Saine began gathering documents, and in 2005 announced the imminent publication of a book entitled *The Weight of Evidence: Homeopathy in Times of Epidemics and Related Statistics*. Yet, it has not seen the light to this day. In a lecture delivered in 2017,<sup>18</sup> Saine observed that the evidence thus gathered was overwhelming— more than 10,000 references, and a manuscript draft of about 2,500 pages. A sample of the type of work he is performing is available at <u>homeopathy.ca/debates.shtml</u>. As can be seen, treatment is rather anecdotical. But the wealth of sources collected by Saine will undoubted-ly feed countless scholarly studies once the book is published.<sup>19</sup>

This leaves us with one single scholarly historical study of homeopathy in epidemics, namely that by Stefanie Jahn on the influenza pandemic of 1918 ("Spanish flu").<sup>20</sup>

Jahn compiled data from primary sources from several countries in three continents, which she intended to subject to systematic analysis. Her first conclusion concerns the quality of the data: secondary literature was scarce, repetitive, and triumphalist. Only success cases were reported, and mostly in an anecdotical manner. Homeopaths did not provide information on their methods for data collection, criteria used for analysis, or the population recruited as controls.

The main questions that oriented Jahn's analysis were similarities and differences in local, national, and international approaches to treatment, and the status of homeopathy in the eye of the health authorities and the public. Her intention to subject the data to critical analysis was hindered by their poor quality. Yet she successfully achieved a historical reconstruction, with thorough consideration of context, and of the theory and practice of homeopathy at that time.

While Jahn's original intention was not to analyse efficacy/effectiveness, surprisingly, against homeopathy traditional lore, she found that the outcomes of homeopathy were poorer than those of conventional medicine among hospitalized patients (mortality of up to 70%). In regard to outpatients (mortality of less than 5%), comparisons were impossible, because there are no data on the patients treated with conventional medicine, which number, moreover, was incomparably higher than that of the homeopathy patients.

I can anticipate objections from homeopaths worldwide. For the community of practitioners, the effectiveness of homeopathy in epidemics is a given, a fact that does not need further demonstration. To substantiate these claims, homeopaths quote a stereotypical list of bibliographic references, repeated from one publication to the next. Yet, such references are

<sup>&</sup>lt;sup>18</sup> "Homeopathy in Times of Epidemics: A Brief Overview," 72 LMHI Homeopathic World Congress, Leipzig, 14– 17 June 2017 (unpublished), presentation available at <u>http://www.lmhi-congress-2017.de/wp-</u> <u>content/uploads/2017/07/Proceedings Saine DF05-01 EN.pdf</u>

<sup>&</sup>lt;sup>19</sup> Mr. Saine did not respond any of the e-mails this author sent him, asking to comment on his project for the present essay.

<sup>&</sup>lt;sup>20</sup> Stefanie Jahn, "Spanische Grippe" und Homöopathie: Die Behandlung der Pandemie im internationalen Vergleich (Essen: KVC Verlag, 2015), derived from her doctoral dissertation, defended at the Institute of History and Ethics of Medicine, Medical School, University of Hamburg, 2013. A summary of her work, in English, is available as "Homeopathy in the 1918 Influenza Pandemic," American Journal of Homeopathic Medicine 108, no. 4 (2015): 160–170. There is also a study of homeopathy in meningitis epidemics in Brazil, interesting from the ethnographic, but not the historiographic perspective, see Paulo S.J. Daruiche, "Homeopatia nas Epidemias: Estudo de Caso com Base em Experiências Recentes," MSc dissertation, Federal University of São Paulo, 2012.

uncheckable, and decidedly non-scholarly.<sup>21</sup> Shortly, the same situation of 100 years ago described by Jahn.

Much work still needs to be done to understand the multifaceted aspects of the history of homeopathy in epidemics, beyond the merely pragmatic goal of looking for evidence of efficacy/effectiveness. A good example is the study of the development of isopathy by Marion Baschin.<sup>22</sup> Isopathy consists in the use of the same agent—prepared according to the homeopathic pharmaceutical technique—that causes a disease to heal it. It is currently advocated in some homeopathic circles to replace conventional vaccination, and has been used at least once in a nationwide epidemic of leptospirosis in Cuba.<sup>23</sup>

# Āyurveda

The history of traditional Indian medical systems has several aspects in common with Chinese medicine—tradition remained alive and kicking until the massive influence of Western science starting in the nineteenth century. In the case of India, this trend is even more remarkable, especially under the influence of the British rulers.<sup>24</sup> Also as in China, after independence (1947) successive governments actively sought to institutionalize traditional medical systems, leading to the current Ministry of AYUSH—Āyurveda, Yoga, Unani, Sid-dha, and Homeopathy. Āyurveda and Siddha are indigenous approaches, which predate the formation of the Indian nation. Medical systems from other countries were integrated and are now a part of the Indian medical traditions, to wit, Unani and homeopathy. Yoga, in turn, is an indigenous product, which, however, was not originally conceived of as a medical system, but as a philosophical tradition.<sup>25</sup> In the present essay, I only discuss Āyurveda, for being considered the oldest on-going medical system in South Asia.

The Indian project has not been as systematic and successful as the Chinese. A search into current literature on indigenous medicine and pandemics shows practitioners seeking to demonstrate that classical sources, dating even from the Vedic period, in the Bronze Age (1500–1100 BCE) made references to "microorganisms."<sup>26</sup> As P. Ram Manohar—who is

<sup>&</sup>lt;sup>21</sup> Dorothy Shepherd, *Homoeopathy in Epidemic Diseases* (Saffron Walden: The C.W. Daniel Company Limited, 1996); Todd A. Hoover, "Homeopathic Prophylaxis: Fact or Fiction," Journal of the American Institute of Homeopathy 94, no. 3 (2001): 168–175; Edward Shalts, *The American Institute of Homeopathy Handbook for Parents* (San Francisco: Jossey-Bass, 2005)— this unbelievable "reference" is quoted for a chapter entitled 'Consistently Proven Effective."

<sup>&</sup>lt;sup>22</sup> Marion Baschin, Isopathie und Homöopathie: Eine Wechselbeziehung zwischen Ablehnung und Integration (Essen: KVC Verlag, 2016).

<sup>&</sup>lt;sup>23</sup> Gustavo Bracho, Enrique Varela, Rolando Fernández, *et al.*, "Large-scale Application of Highly-diluted Bacteria for Leptospirosis Epidemic Control," *Homeopathy* 99, no. 3 (2010): 156–166.

<sup>&</sup>lt;sup>24</sup> As a result, there is a considerable number of studies on the history of medicine in the colonial period (1859– 1947), see e.g. Madhuri Sharma, *Indigenous and Western Medicine in Colonial India* (New Delhi: Cambridge University Press India, 2012); Mark Harrison, *Public Health in British India: Anglo-Indian Preventive Medicine*, 1859–1914 (Cambridge: Cambridge University Press, 2008); Biswamoy Pati, & Mark Harrison, eds., *The Social History of Health and Medicine in Colonial India* (London: Routledge, 2009); Biswamoy Pati, & Mark Harrison, *Society, Medicine and Politics in Colonial India* (London: Routledge, 2018).

<sup>&</sup>lt;sup>25</sup> Dagmar Benner, "Healing and Medicine in Āyurveda and South Asia," in *Encyclopedia of Religion*, 2<sup>nd</sup> ed., ed. Lindsay Jones, 3852–3858 (New York: MacMillan, 2005).

<sup>&</sup>lt;sup>26</sup> See, e.g., Babita Yadav, K. Sandhya, Sulochana Bhat, Nayaranam Srikanth, & Madan M. Padhi, "Advocacy of Ayurveda in Epidemic Diseases," *Proceedings of the 4th World Ayurveda Congress*, Bangaluru, 9–13 December 2010, 198–202. The basis is the concept of *krmi*, worms, see G. Jan Meulenbeld, *The Mādhavanidāna and its Chief Commentary* (Leiden: E.J. Brill, 1974), ch. VII. Since *krmi* could be invisible, modern practitioners made an immediate leap to "microorganisms;" see Kumari Ranjana, Dubey S. Vijay, Singh K. Amrendra, "Basic Concept of Krimi in

closely monitoring current trends of research in Āyurveda —observes, the lion's share corresponds to historical and philological studies, whereas thorough epistemological revisions of concepts and theories are still lacking.<sup>27</sup>

Among historians of medicine, work is evolving rather slowly, probably as a function of the vast textual corpora, which moreover underwent considerable changes over the course of two millennia.<sup>28</sup> The most comprehensive and critical edition of Sanskrit medical literature was published just 20 years ago.<sup>29</sup> For epidemics, or more properly, contagious diseases in general, I could locate only two essays written by historians of medicine, both in the proceedings of a conference on contagion in pre-modern societies held at the Wellcome Institute for the History of Medicine in 1993.<sup>30</sup> Similarly to the present-day Āyurveda practitioners, both Das and Zysk take an anachronistic point of departure: they look into the classical literature for something similar to the modern concept of contagion, inherently associated with microorganisms.

Das' study is eminently philological—he looks for instances of the verb *sam\car* and derivatives, meaning "move together/around/over to," i.e. passing from one to another. Analysis led him to conclude that contagion did not play a significant role in early Āyurve-da pathology, since it was immersed into a magical worldview, according to which the world was ruled by "powers," which within a primarily moral and ethical context, could "seize" people. Diseases were just one of the various means through which such "powers" acted.

Zysk's essay is much more difficult to analyse, as a function of absurd ideas on common medical notions one cannot help wondering where did he get them from. So he states that contagion involves direct, physical contact, while infection consists in the "dissemination of diseases without physical contact." Then we find that, against all evidence, Zysk contends that leprosy is not a contagious disease with person-to-person transmission! But if one passes over Zysk's misinterpretations and focuses on his philological work, one is rewarded by his finding of a most interesting notion in the *Suśrutasamhitā*—one of the classic Āyurveda sources, a compilation that in its present form, probably dates to the third century CE. This notion, brought to the foreground by eleventh- and twelfth century commentators, is that of *upasarga*, which refers to diseases caused by contact with persons afflicted by diseases such as fever. This is a section much quoted by scholars, and states that among others, diseases resulting from contact with a sick person (*upasarga*) pass from person to person through sexual intercourse, touching them, breathing near them, eating from a vessel they

Ayurveda," Ayurline: International Journal of Research in Indian Medicine 1, no. 4 (2017): 1–5; Saliha Siddiqui, & Kalpana Patni, "A Review on Ayurvedic Concept of Krimi & Its Management," International Journal of Research in Ayurveda and Pharmacy 9, no. 5 (2018): 19–23. The historical study by P. Ram Manohar does not add much, but a diagram of the best known classifications of *krmi*; see "Accounts of Pathogenic Organisms in the Early Texts of Ayurveda," Indian Journal of History of Science 47, no. 4 (2021): 549–559. Clearly, the concept of *krmi*, mentioned in the Vedas and the classic Āyurveda sources, deserves the type of scholarly study Hanson performed for Wenbing. <sup>27</sup> P. Ram Manohar, "A Narrative Review of Research in Ayurveda," International Institute for Asian Studies—Newsletter, 65 (2013): 34–35. He further observes that the successful case of reserpine failed to become the blue-print for similar future breakthroughs.

<sup>&</sup>lt;sup>28</sup> For a bibliography, see Dominik Wujastyk, "Indian Medicine," *Oxford Bibliographies Online*. Available at <u>www.oxfordbibliographiesonline.com/vie</u>

<sup>&</sup>lt;sup>29</sup> G. Jan Meulenbeld, A History of Indian Medical Literature (Leiden: Brill, 1999-2002).

<sup>&</sup>lt;sup>30</sup> Lawrence I. Conrad, & Dominik Wujastyk, eds. *Contagion: Perspectives from Pre-Modern Societies* (London: Routledge, 2000). The case of pre-modern India is addressed by Rahul P. Das, "Notions of 'Contagion' in Classical Indian Medical Texts," 55–78; and Kenneth G. Zysk, "Does Ancient Indian Medicine Have a Theory of Contagion?, " 79–96.

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used, sharing the bed or a seat with them, or wearing their clothes, garlands, or unguents. It will not come as a surprise, then, that this same passage is transcribed in the report of the first known case of a COVID-19 patient treated entirely with Āyurveda.<sup>31</sup>

A second much quoted passage is in the famous Charakasamhitā, another classical compilation, in the first or second century CE, of much earlier sources, which devotes an entire chapter to janapaddodhvamsnīya, epidemics, literally, the destruction of large populations. The concept is presented in response to the following question:<sup>32</sup> how can one single disease cause an epidemic all at once amongst people who do not have the same constitution, diet, body strength, sympathetic action, mentality or age? While, indeed, people differ in some aspects, at the same time they are exposed to similar circumstances—the quality of the air (wind), of the water, of the land or place, and of time seasons. When these conditions become discordant, disease arises at the same time, with the same characteristics, and causes an epidemic "destruction of a locality." This representation of janapaddodhvamsnīya remains in present-day Ayurveda.<sup>33</sup> Interestingly, the root of "discordance" is human misbehaviour, arising from intellectual and volitional derangement leading to wrong action. Therefore, epidemics involve an essential biomoral component, as is discussed by Rachel Berger.<sup>34</sup> This interrelationship between human behaviour, environment, health, and disease is extremely relevant, and might bear considerable implications for the present time, provided stakeholders abandon anachronistic approaches, but try to understand the past in its own terms.

<sup>&</sup>lt;sup>31</sup> P.L.T. Grija, & Nithya Sivan. "Ayurvedic Treatment of COVID-19/SARS-CoV-2: A Case Report," *Journal of Ayurveda and Integrative Medicine*, e-pub ahead of print 19 June 2020 doi: 10.1016/j.jaim.2020.06.001. COVID-19, in turn, is described as a *janapadodhwamsa vikara* (epidemic disease), on the authority of the *Charakasamhitā*, discussed below.

<sup>&</sup>lt;sup>32</sup> Here I transcribed from Dominik Wujastyk, *The Roots of Ayurveda* (New Delhi: Penguin Books, 1998), 79 et seq.

<sup>&</sup>lt;sup>33</sup> Babita *et al.* give the example of swine flu, observing that, as a fact, it can be applied to all epidemic diseases. See also Sarmah Jyotirmoy, & Sarma D. Rekha, "Concept of Epidemic Diseases in Ayurveda," *International Journal of Health Research and Medico Legal Practice*," 2, no. 1 (2016): 24–28.

<sup>&</sup>lt;sup>34</sup> Rachel Berger, Ayurveda Made Modern: Political Histories of Indigenous Medicine in Northern India, 1900–1955 (Houndmills: Palgrave-Macmillan, 2013), ch. 1. See also Zysk; and Wujastyk, *Roots of Ayuveda*, 81 et seq.