

UNEVEN PATHS TO HEALTH AND HEALING:
MEDICINE, POLITICS, AND POWER
IN 19TH-CENTURY AMERICA

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ABSTRACT

Uneven Paths to Health and Healing: Medicine, Politics, and Power In 19th-Century America

Doctor of Medical Humanities Dissertation by

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Medicine and healing in the United States in the 19th century was a pluralistic mosaic of allopathic medicine, neoteric systems of homeopathy and osteopathy, faith-based systems of Christian Science and Seventh Day Adventism, Grahamism, water cures, and patent medicines. The therapeutics of allopathic medicine in the 19th century were venesection, purgatives, and heavy metal medicines, which were used in escalating or “heroic” dosages with significant toxicities and limited clinical benefit. The non-allopathic healing systems arose from allopathy’s inability to effectively address the medical needs of the rapidly growing, highly diverse, and geographically dispersed American population. In this pre-scientific age, non-allopathic healing systems arose from the sociocultural environment, health normative values, and religious beliefs of the day and offered less invasive, less injurious, and potentially more efficacious therapeutics than did allopathic care.

This study is a synchronic historiography focusing on a 100-year period in American history, reflecting the scientific knowledge available at that time and based on first-person accounts by key clinicians of the age. Traditional presentist medical histories focus on scientific achievements and historically erases individuals not contributing directly to 21st-century biomedicine. This work, written from a contextualist perspective

recognizing the significance of the non-allopathic healing systems, reinserts into the historical medical narrative contributions by all healers, especially women and the marginalized.

The core belief structure and the contribution to healing and wellness are elucidated for each healing system. The evolution of medical pluralism over the century is documented, as is the impact on 21st-century medicine. The major findings of the study challenge the belief that scientific advancements were responsible for the decline of non-allopathic healing systems, as the science of the late 19th century did not translate into the introduction of significant new medicines for another three decades. Rather, the Flexner Report, under the direction of the American Medical Association with funding by the Carnegie and Rockefeller Foundations, created sociocultural, financial, and legislative pressures resulting in closure of non-allopathic medical education facilities as well as women's and Black allopathic medical schools and led to medicine and healing becoming a White-, male-dominated allopathic profession for the next seven decades.

KEY WORDS: Allopathic Medicine, Medical Pluralism, 19th Century, Homeopathy, Faith-Based Healing, Osteopathy, Flexner, American Medical Association

DEDICATION

For Madelyn and Lilah, may you always know that no dream is too big, no time is too late, and learning is a wondrous lifelong adventure.

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By writing in the years of COVID and wearing a mask for over two years, I developed a much deeper appreciation of the challenges our 19th-century ancestors faced

dealing with the cholera, typhus, typhoid, yellow fever, and the other epidemics that plagued that century. Without present-day medical knowledge and our rapidly developed vaccines, they were helpless against these repeated onslaughts, and the heroic medicine of the day only contributed to their suffering. I am also extremely fortunate in the wealth of academic research conducted in the last three decades on the financial role of allopathic medicine in enslavement, the structural barriers to women's and Black medical schools, history of medical apartheid, health and wellness movements of the 19th century, historiography of neoteric healing systems, and the impact of Flexner and capitalism on the direction of medicine. In my 427 references I rely heavily on these recently published works and the now available digitized version of key publications from the 19th century, without which my work would not have had the same depth of understanding and detailed specificity.

During the two years of authoring my dissertation I was most fortunate to have the assistance of Maura Grace Harrington Logue as explainer of the intricacies of APA 7th edition style and proofreader. Maura, a Drew PhD alumna, waded through my medical terminology and historical details, helped me with Drew required formatting, and was always an encouraging voice.

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INTRODUCTION

Disease and illness exist in and through the lens of culture and the particular values, limits and contexts that have been assigned to it. As the culture of a people evolves over time, diseases, like other elements in the society's lifespan, are encountered, perceived, and managed differently. (Haller, John S., 2014, p. 63)

The new American republic entered the 19th century as a collection of 16 states perched along the Atlantic coastline and through territorial wars and land purchases became, by the end of that century, a nation crossing the continent to the Pacific and reaching to Alaska and Hawaii. The population swelled from just over five million in 1800 to over 76 million in 1900, with 30 million immigrants arriving from Europe and a quarter of a million from Asia. Each immigrant group arrived with their own social structure, cultural values, religious beliefs, and health practices. Across the continent, living conditions varied significantly with the densely packed industrialized cities in the Northeast, isolated farmsteads across the prairies, newly emerging lakefront cities in the Midwest, and the Hispanic settlements on the West Coast. The completion of the transcontinental railroad in 1869 united the geography of the nation, but America was and continues to be a very heterogeneous society. In this new American Republic populated with numerous nationalities, each with their differing approaches to society, culture and health, a mosaic of medical and healing systems developed based on the medicine of the old world but reforged, enriched, and tailored to the needs and beliefs of the new democracy (Baker, 2006; Brooke, 2020; Brückner, 2012; Klein, 2004).

This first century in American history was a maelstrom of change; unbridled growth; and conflicting and changing social, political, religious, and cultural values, and all this created a mosaic healthcare system vastly different from any elsewhere in the world. It also created an American population with very strident, vocal, divergent, and unassailable opinions on health and healing. My dissertation will document how in the 19th century the new American Republic with a highly diverse and rapidly growing population across a vast land mass became untethered from European medicine and a uniquely American pluralistic medical system arose with a coexisting and competing array of healing systems and practitioners, as well as how by the beginning of the 20th century American medicine was reintegrated into European medicine through the new science of biomedicine. The scope of my dissertation is a century of medical care, and I trace the paths taken by major healing systems including allopathic medicine, neoteric systems of homeopathy and osteopathy, faith-based healing of Christian Science and the Seventh-day Adventist and subsystem of healing of America's enslaved. I will chronicle how each of these healing systems arose in response to unmet clinical need with life expectancy barely middle age in the 19th century, with four out of 10 children not surviving till their sixth birthday and death coming from repeated pandemics, accidents, infections, and lack of proper nutrition. In this age before the advent of antibiotics and vaccines, medicine was not yet a science, but more a system of trial and error. A belief in American exceptionalism and confidence in experiential learning over academic knowledge development fueled the proliferation of new healing systems, created a new definition of health and healing, and redefined the role of a healer. The acceptance of the new healing systems shifted along uneven paths in response not to new clinical data and

evidence but to the changing social, cultural, religious, and political forces of the day. My dissertation addresses the creation of this American mosaic of healing systems, how the components interacted, and how the system evolved over the hundred-year period. My work is a counternarrative to the more common history of medicine which focuses on scientific achievements and views alternative approaches to healing under the lens of 21st-century medicine, dismissing alternative practitioners as hopelessly naive at best or scoundrels at worst. The goal of my research is understanding the mosaic of 19th-century healing and medicine in the context of the scientific knowledge available at that time and in the social, cultural, religious, and political environment of the age and to recognize the individuals who contributed to addressing health and healing in the chaotic uncertain 19th century and provided care, if not cure, to millions of Americans (Ackerknecht, 1982; Baer, 1995, 2001; Klein, 2004; McKeown, 1978; Porter, 1998; Wrobel, 2015).

The medicine that arrived in the new America from England was allopathic medicine, a name given to the mainstream or orthodox medical care which defines a causal agent of disease and seeks to restore health by combatting the forces of nature (Ackerknecht, 1982; Lyons & Petrucelli, 1978; Veith, 1976). In contemporary nomenclature, the neoteric systems have been referred to as alternative, sectarian, or unorthodox, but, for purposes of my dissertation, rather than use those value-laden terms, I will use the neutral term *neoteric* (Baer, 2001; Barasch, 1992; Howard & Salmon, 1980; Rutkow, 2010). America in the 19th century was home to dozens of fledgling neoteric systems, which had negligible impact within and beyond the century. I have chosen to focus my research on homeopathy, osteopathy, Christian Science and Seventh-day Adventism, as each of these had considerable popular support during the 19th century,

each still has a significant role in the 21st century health care, each has extensive and accessible archives, and each used unique strategies to weather the allopathic hegemony of the 20th century (Baer, 2001; Coulter, 1995; Gevitz, 2019; Reid, 1982; Rogers, 1984).

Medical care in the beginning of 19th century was in the pre-scientific stage, and the average life expectancy was 38 for White men and 40 for White women. For non-Whites, life expectancy was at least five years less. The main causes of death and disability that challenged allopathic medicine and the neoteric systems were dysentery, tuberculosis, infection, and venereal disease, with epidemics of typhoid, cholera, yellow fever, and malaria sweeping repeatedly through cities (Lyons & Petrucelli, 1978). The only diagnostic tools available were temperature and percussion, a tapping of the body to identify fluids and organs (Cravens et al., 1996). The only effective allopathic medicines were digitalis for heart disease, vaccination for smallpox, quinine for malaria, colchicine for gout, and opiates for pain (Lyons & Petrucelli, 1978; Whooley, 2013). The primary treatment modalities utilized by allopaths were venesection (bloodletting), emetics, and purgatives, and in the United States medical care was labeled “heroic” in the 19th century, when use of these invasive treatments was taken to extremes and highly toxic chemical compounds such as calomel, mercury, arsenic, antimony, and silver nitrate were used. My dissertation documents how throughout the 19th century the United States continued in a pre-scientific era of medical care and that the scientific advances from Europe did not change American clinical practice until the last decade of the century. While germ theory and its associated scientific advances did not alter allopathic practice in America, a convergence of cultural, political, social, gender, and religious forces challenged the White male allopathic hegemony, creating unique medically pluralistic

inclusive system of health and healing (Flexner & Flexner, 1966; Hutchinson, 1891; Schroeder-Lein, 2012).

Chapter 1 of my dissertation addresses the role of abridgement and inference in historical writing and discusses the two methodological approaches to medical history: the diachronic meta-narrative from a Whig, presentist perspective and the time-bound synchronic narrative from a Prig, contextualist perspective (Butterfield, 1968). In the review of the literature, I cite key Whig publications and discuss how this narrative form disadvantages an adequate understanding of the role and importance of neoteric systems in American health and healing. My dissertation is written from a Prig perspective and utilizes 19th-century archival material and reflects the environment of health and healing in the day. It hopes to provide a more comprehensive and nuanced portrayal of the interaction of gender, race, and neoteric healers with the mainstream allopathic system and seeks to add a significant Prig-focused contribution to the literature. My dissertation addresses the significant absence in the literature of a detailed analysis of the interplay among culture, politics, capitalism, and religion and their effects on allopathic and neoteric medicine and the resultant impact women, minorities, and access to care. I constructed my dissertation based on Hayden White's (1987) historiographic style of emplotment. Emplotment weaves a series of historic events into a chronicle with a structured narrative arc characterized by the key motifs of inauguration, transition, and termination. As with any historical review, my work strives to accurately represent events based on archival documents, not adulterate the past with present-day scientific knowledge (H. V. White, 1987).

The allopathic medical history and the diverged allopathic treatment paradigm created in the United States are the subjects of Chapter 2, which also explores the early development of allopathic medical education and the prominent figures in the medical history of the New Republic (1800–1850). Chapter 3 addresses the complicit relationship between allopathic medicine and the institution of slavery, documenting an integral part of allopathic medicine in supporting the financial transactions associated with slavery and the challenges to duty of care when the enslaver-doctor dyad dictates treatment. The Civil War and its aftermath resulted in a tragic loss of life, restructuring of the social order, economic devastation, and five million newly emancipated people. Chapter 4 addresses the War and how it changed demands on allopathic medicine, seriously questioned the efficacy of its excessive use of the painful and dangerous procedures of bloodletting and purging and challenged its legitimacy as a bastion of White males.

With tenacity and commitment, women and Black people fought to create a space in the White male dominated world of medical education, fought for acceptance in established institutions, and created their own dedicated medical colleges. The importance of these new medical schools and the impact their newly minted graduates are the subject of Chapter 5. As women and Black people fought for an education and health system dedicated to their needs, the White, middle class population veered on another course. Chapter 6 looks at how an imperious belief in the ideal of the Common Man paired with social upheaval, renewed religious fervor, and dissatisfaction with the allopathic medical institutions of the day shaped the American experiment, making it the ideal crucible for creation of the neoteric systems of osteopathy and Seventh-day Adventism and leading to the broad acceptance of homeopathy (Baer, 1995, 2001; N.

Gevitz, 1988; Numbers, 1992). The halcyon age of the neoteric systems and the women's and Black medical colleges spanned the second half of the 19th century. Chapter 7 of my dissertation discusses the American Medical Association, a national trade organization created by the allopathic medical community, which partnered with corporate foundations to use political power, social capital, regulatory measures, and public funding to challenge neoteric healing systems and non-White and women healthcare providers. At the end of that century the shift to progressive politics, faith in science, adherence to social gospel that focused on social reform, addressing inequities and improving quality of life, and unbridled enthusiasm in capitalism resulted in allopathic hegemony. Chapter 8 underscores how a quartet of major universities paired with corporate benefactors created a new standard for medical education through the Flexner Report based on research, hospitals, endowments, and financial resources. The Flexner standards placed insurmountable challenges on new formed medical education institutions and resulted in closure of a significant portion of the medical schools in the United States—primarily, women's, Black, and neoteric institutions—and significantly curtailed access to healing and care for many Americans (Flexner & Flexner, 1966; Harley, 2006; Markel, 2010; Weiss & Miller, 2010).

The last chapter of my dissertation, "Divergent Paths and Learnings for the 21st Century," discusses the structure and impact of the neoteric systems in the 21st century, the significant lessons we have learned from the politics associated with 19th-century medical pluralism, and how the dynamics of politics and power impact all aspects of health and healing today. My exploration of one hundred years in medical history seeks to contribute to the field of medical and health humanities by adding meaningful dialogue

and understanding of the complexities of delivering health care and healing in a highly diverse America then and now.

Stephen Pattison, professor of religion, ethics, and practice at the University of Birmingham, in a 2002 article described a vision of medical humanities as an inclusive discipline or a “broad church,” which invites all into an open dialogue on how the humanities can aid in our understanding, improvement, and delivery of health and healing. Pattison warned that medical humanities can and should be more than just another topic in a medical or health education curriculum and suggested that it has the power to be a transformative activity—“a kind of cultural militant tendency situated within the heart of health care to subvert, diversify, and improve it” (Pattison, 2003). In my doctoral coursework in the medical humanities at Drew University, my courses in medical narrative and medical history had the greatest impact and motivated my decision to focus my dissertation on medical pluralism. Medical history cataloged the major innovations in medical science and told the stories of the individual researchers who struggled against popular beliefs and embedded biases to move the field forward. William Campbell, the professor for my medical history course, is a Nobel Laureate in medicine and humanitarian whose research led to a medicine to treat river blindness. The medical narrative course, taught by Jo Ann Middleton, then director of the Drew medical humanities program, demonstrated the vital role of narratives in the understanding and transmission of medical knowledge. My dissertation builds on Pattison’s pluralistic and inclusive approach to medical humanities, Campbell’s understanding of scientific revolutions, and Middleton’s perspicacity on the importance of narratives.

In the 21st century, medical pluralism has been rebranded as postmodern medical diversity, and although the nomenclature has changed the challenges for patients have not. Cure, care, and wellbeing are still the driving forces in the healing encounter. The United States in the 19th century was a country of massive geographic expansion, a population that grew 25-fold, a higher education system in its infancy, and an allopathic healthcare system unable to meet the needs of patients. A pluralistic system of healers and divergent paths to health arose in this chaotic environment, evolved as new scientific knowledge became known, responded to new patterns of social engagement and public policy, and reflected evolving religious beliefs. The process by which the embryonic health care delivery system of the 19th century evolved into 21st-century biomedicine is, I believe a critical part of our medical humanities heritage and why I have chosen it for the topic of my dissertation, and I hope that this knowledge can provide insight into the challenges that we face in health today and in the future.

Chapter 1

METHODOLOGY AND REVIEW OF LITERATURE

In *The Greatest Benefit to Mankind*, a 1998 seminal work by the noted medical historian Roy Porter, the history of medicine is portrayed as an unbroken triumphant march of allopathic medicine over two millennia with a dazzling array of innovative diagnostic tools, lifesaving medicinal agents, and inspired surgical techniques (Porter, 1998). In this 800-page opus, Porter relegated the neoteric systems to eight pages and ascribed their popularity to “mass literacy, and grassroots discontent, products of the ‘democratic intellect’” (p. 390). Porter’s elitist voice challenged the right of patients to acquire information, seek options, and make decisions about their care. By judging the neoteric systems against 20th-century medical science, Porter medically marginalized the neoteric healing systems, viewing them as aberrant, deceptive, and not efficacious, and in his work the focus is on the legal and regulatory measures allopathic medicine used to delegitimize neoteric healing systems. Porter’s judgement and dismissal of the neoteric healing systems; his unstinting and unquestioning praise of scientific discoveries; and his physician-focused narrative, excluding experiences of patients, is typical of the genre (Ackerknecht, 1982; Duffin, 2010; Flexner & Flexner, 1966; Garland, 1969; Greene et al., 2012; Lyons & Petrucelli, 1978; Rutkow, 2010). Porter’s work is an example of presentism or present-centeredness in medical history. Another term for presentism is *Whig* historical writing, based on the classic work by Herbert Butterfield, *The Whig Interpretation of History*, in which the Whig 19th-century politico/religious narrative identified the current form of government as ideal and reconfigured all previous British history as natural and inevitable evolution leading to Protestantism and Whig government (Butterfield, 1968; Loison, 2016; Wilson & Ashplant, 1988).

Central to all historiographies are the concepts of abridgement and inference. Abridgement is the selection of which surviving documentary relics to include in the narrative, and inference is the perspective from which the significance of these relics is judged (Danto, 1962; Spoerhase et al.). A presentist historiography of medicine creates a diachronic meta-narrative tracing the evolution of science and medicine with 21st-century medical science predefined as the ideal endpoint and abridges the narrative of non-supportive archival materials, judges or infers the value of past science only in terms of its contribution to current knowledge and prunes the narrative of opposing approaches to health and healing. Presentist medical history uses the anachronistic concepts, values, and knowledge of today's biomedicine to create a construal of the past which historically erases or devalues any medical practices, beliefs, or practitioners that were not instrumental toward the establishment of 21st-century biomedicine. This schema of a singular linear thread of scientific achievement that runs from early Greek medicine to our current biomedical industrial complex is challenged by the work of Thomas Kuhn (1970) and others (Ashplant & Wilson, 1988; Baer, 2001; Kuhn, 1970; Loison, 2016; Lyons & Petrucelli, 1978; Porter, 1998; Vogel & Rosenberg, 2017).

Thomas Kuhn in his *The Structure of Scientific Revolutions* (1970, as cited in Kuhn & Hacking, 2012) challenged this presentist, straight-line narrative of the victorious rise of allopathic medicine, which asserts that science is not an objective progression to a final truth with each invention being additive in the march to scientific knowledge. Kuhn's position is that advancement in science occurs not in traditional and ongoing research efforts, but when an anomaly occurs that is incommensurable with current scientific practice, resulting in a crisis through which a new paradigm supplants

the previous one. This perspective sees the scientific path as littered with discarded baggage, dependent on exponential leaps and without a clear end goal in sight (Kuhn, 1968; Kuhn & Kuhn, 1971; Pruitt, 2015).

Literature on the history of medicine written from the presentist perspective often confounds and distorts the differences between science and medicine. In science there are discoveries, new diagnostic tools, new medicines, new surgical techniques, and other potential therapeutic advances. Medicine is the widespread application of these new advances to routine patient care (Sarton, 1935). Alexander Fleming's discovery of penicillin was heralded in 1928, one patient was treated in 1938 and the patient did not survive, and only in 1945 after a herculean war effort by six American pharmaceutical companies in partnership with academic institutions in the United States and United Kingdom was that first safe and stable product available for use by physicians (Clarke, 1949). Joseph Lister published his *Antiseptic Principles of the Practice of Surgery* in 1867, but that did not lead to the sterile operating theaters of today. Lister recommended only rinsing hands with carbolic acid prior to surgery. Lister toured the United States in 1876 to promote his antiseptic techniques but found little interest or acceptance, and the practice was not generally accepted in America for another twenty years (Vogel & Rosenberg, 2017). Physicians did not routinely use surgical gloves until the early 1900s, and widespread use of surgical masks became commonplace in the 1940s (Lyons & Petrucelli, 1978). As these examples show, medicine is a cautionary profession and adapts slowly to change. Further, the step between discovery and commercially available product or procedure can be significant. Whig or presentist history, by focusing on the

science, temporally distorts options for care available to physicians and patients at any point in time.

One interesting exception to the Whiggish linear trajectory of medical history is the 200th anniversary article in *The New England Journal of Medicine (NEJM)*, published in 2012, titled “Therapeutic Revolution and the Challenge of Rational Medicine” (Greene et al., 2012). The sources for this medical review, articles published in *NEJM* focusing on patient care rather than scientific research milestones, accurately reflect scientific knowledge and clinical care of the day. Today’s major medical journals began publication in the 19th century: *NEJM* in 1812; *Journal of the American Medical Association (JAMA)* in 1883; and the British journal *Lancet*, named for the tool physicians used for bloodletting, in 1823. Access through digital archives is available to all issues of these allopathic publications, providing researchers with precise information on the medical knowledge and physician discourse of the day (Foshay, 2000; Halperin, 2016; Müller et al., 2012).

Paul Starr’s (1982) *The Social Transformation of American Medicine*, a 600-page Whiggish opus, is two books in one, focusing on the advances in science within the context of how the sociopolitical environment shapes medicine and how medicine shapes the environment of health and healing. The first book focuses on the professionalization and expansion of allopathic medicine from 1760 to 1930, detailing the political, social, cultural, and regulatory forces that prevented allopathy from gaining sovereignty prior to 1850 and the how the profession overcame these challenges in the latter half of the 19th century. Starr’s scholarship is exemplary but lacks in two areas as he did not explore the importance of religion to health and healing and addressed the neoteric systems only in

the context of how allopathy achieved hegemony over them. My dissertation strives to expand beyond Starr's work and bring a level of understanding to how these same external forces that shaped allopathic medicine also changed the trajectory of neoteric medicine (Starr, 1982). *Curing and Caring: Health and Medicine in Western Religious Traditions* eloquently addresses the critical dimensions for medical care based on the religious thought and faith-based attitudes toward healings for 20 major American religions, and I incorporate these insights and others into my analysis of the neoteric systems (Blasi, 2011; Fuller, 1987; Koenig, 2008; Numbers & Amundsen, 1986).

Whig or presentist medical history views the past through the single lens of contemporary science and medical knowledge, while a Prig interpretation of medical history is, on the other hand, synchronic, focusing narrowly on a specific period and reflective of the environment of that period. The term *Prig* originally referred to a person with narrow-minded superiority, but historians today use it to describe highly focused time-bound scholarship with reliance on key figures of the age, their writings, scientific beliefs, and medical practices, and their socio-cultural impact (Hull, 1979; Loison, 2016). Thomas Kuhn mandated a Prig history, consistently limiting itself to original writings of the period, that do not adulterate the past with present-day knowledge, and that stay within existing knowledge of the period, to focus on the daily experience of the populace and look for internal rather than external consistency (Brush, 2000; Kuhn, 1968). *Anti-presentist*, *contextual*, and *anti-Whig* are other nomenclature used to describe Prig history. For the purposes of my dissertation, I primarily use the terms *Whig* and *Prig*, and based on archival materials I use the nomenclature of the 19th century rather than the politically correct terminology of the 21st century. An example of a Prig history is Susan

Cayleff's (1987) *Wash and Be Healed*, in which she asserted that a movement should be viewed as "a separate system that had internal coherence, popular appeal, and social and medical value in its own right . . . [not] as a short-lived sect competing unsuccessfully for clientele and influence against allopaths" (Cayleff, 1987), p. 5). Since the new Prig approach to the history of science emerged in the 1970s (Graham, 1981), a significant number of publications on the neoteric systems have appeared in the literature as scholars have searched through the wealth of archival information, now more broadly available through digitization, and generated historically accurate accounts of the theory, science, leadership, and practice of homeopathy and osteopathy (Kirschmann, 2004; Rogers, 1984; Stark, 2013; Thomson et al., 2013). What is absent in the postmodern Prig literature on osteopathy and homeopathy is an understanding of how sociocultural and religious forces influenced their restructure and delegitimization, since most authors have focused on just on the impact of regulatory restrictions and scientific advancement (Baer, 1981, 2004; N. Gevitz, 1988; Gevitz, 2019; Vogel & Rosenberg, 2017).

Literature on the Seventh-day Adventists (SDA) falls into three major categories: church doctrine, confrontational, and re-interpretational. *The Spirit of Prophecy* and other original publications by Ellen White, the founder of the SDA church, have been in print continuously since the 19th century, recording her prophetic vision and teaching on health and healing, and until the 1970s they served as an unquestioned archival record supported by historians trained at Adventist colleges and universities (White, 1870). In the 1970s, Adventist leadership recruited outside scholars to their academic institutions and seminaries to upgrade and expand their faculties. The newly minted graduates began to question basic tenets of their religion, and the dissension centered on the Ronald L.

Numbers, whose publication *Prophetess of Health: A Study of Ellen G. White* (1976, 1992), challenged the source of White's teachings, ascribing them not to prophetic visions but documenting them as adaptations of published health literature of the day. Numbers has in the decades since the publication of *Prophetess* become a major voice in the scholarship of religion and science (Numbers, 1974; Numbers, 1998, 2009, 2015; Numbers & Attridge, 2009). In the 1990s, Adventist universities returned to staffing their universities with Adventist-trained faculty, and a dichotomy developed in the interpretation of White's writing, with Numbers and others challenging its divine origin and George Knight becoming the major voice in the re-interpreting and contextualizing White by focusing on her leadership role and historic impact rather than quibbling on the source of her writings (Bull & Lockhart, 2007; GonzÁLez, 2009; Knight, 2011; Levterov, 2016; Reid, 1982; White, 1870, 1942).

The voices from medical anthropology and medical sociology have significantly enriched our understanding of medical history. Their medically diverse postmodern perspective rejects presentism and views allopathic medicine and the neoteric systems as parts of valid pluralistic system of healing in the 19th century. Their scholarship is descriptive rather than judgmental, analyzing the development of neoteric systems, internal structure, pattern of evolution over time, and leading figures. Additionally, the work of medical anthropologists and medical sociologists encourages and judging the validity and legitimacy of systems of treatment against the science knowledge of their time rather than against contemporary biomedicine (Brierley-Jones, 2007; Cayleff, 1987; N. Gevitz, 1988; Numbers, 1974; O'Connor, 1995; Paulus, 2013; Schoepflin, 2003; Wilson, 2014). Hans Baer has contributed significantly to our understanding of medical

pluralism, publishing over the past forty years research on neoteric medicine in the United States, Europe, and Australia (Baer, 2011; H. Baer & I. Coulter, 2008; Baer, 1981, 1982, 1984, 1995, 2001, 2004, 2009, 2013, 2017; H. A. Baer & I. Coulter, 2008).

Women's studies over the past two decades have presented a new perspective on and more nuanced understanding of the role of women as patients and leaders in health and healing in 19th-century America (Leavitt, 1999; Malone et al., 2005). Exceptional scholarship on women in osteopathy (Quinn, 2011), homeopathy (Kirschmann, 2004), and allopathic medicine (Leavitt, 1999; More, 1999a) has changed our vision of medicine from a male-dominated field in the 19th century to one in which women served as physicians, healers, and founders of medical schools and dispensaries, and has given us a glimpse of how their opportunities were curtailed by 20th-century socioeconomic changes and the Flexner Report (Drachman, 1976; More, 1999b).

Allopathic medicine's role in abusing Black bodies has for many decades been ignored, but Harriet Washington's deeply researched and documented *Medical Apartheid* brings the details to light. Works by Daina Ramey Berry, Marie Jenkins Schwarz, and Todd Savitt give voice to the price the enslaved paid for medical progress and highlight the wanton disregard for human dignity and life practiced by allopathic doctors to support America's peculiar institution. Douglas Haynes, Louis Menand, and Michael Yudell documented complicity and support of Northern doctors and the AMA for scientific racism as a justification for enslavement (Berry, 2017; Menand, 2001b; Savitt, 1982; Schwarz, 2006; Washington, 2006; Yudell, 2014).

The Flexner Report, long considered as the major milestone in advancement of 20th-century biomedical training, was instrumental in establishing high standards for

medical education, making clinical research an integral component of medical education and creating a new professional class of physicians (Chapman, 1974; Flexner & Flexner, 1966; Markel, 2010; Stephen, 1974). Recently, the Flexner Report has had a Priggish postmodern reckoning, and scholarship has addressed the question of how the Report obstructed medical educational opportunities for women and minorities, resulted in hospital-focused medical care, instituted a scarcity of medical practitioners, and significantly increased cost of care (Barr, 2011; A. H. Beck, 2004; Harley, 2006; Stephen, 1974; Vogel & Rosenberg, 2017).

The impact of the Flexner Report on Black medical schools' tremendous loss of potential Black doctors and teachers was a major revelation for me, and it is so dispiriting that it took over a hundred years before information published by Robert Baker supported by a half a dozen of the most notable medical historians brought this failure to light. Work by Kendall Campbell et al. (2020) quantified the tens of thousands of Black doctors and teachers that we would have had if the schools remained open. E. H. Harley's and Savitt's work on these forgotten schools gives a true Prig interpretation on efforts of the Black community to create a healthcare system in the midst of Reconstruction (Robert B. Baker et al., 2008; Campbell et al., 2020; Harley, 2006). Through my literature review, I have discovered that writings on 19th-century medical pluralism concentrate on the organizational structure, scientific underpinnings, and leading figures of each healing system, and scholars have given limited attention and analysis to the external factors affecting these systems, such as social mores, religious beliefs, and political power. My dissertation differs from the existing works in a fundamental way, as I recognize that health and healing do not occur in a vacuum, and each section of my dissertation is set in

the social milieu of the day, addressing the primary religious beliefs of the time; identifying most prominent societal values; understanding geographic limitations; and elucidating political, legislative, and regulatory issues around the dispensation of medical care. My approach focuses on the prevailing scientific beliefs of the time, how each neoteric system incorporated them into its system of care, and how this benefited patients intrinsically and extrinsically. My wholistic contextual approach contributes a new exploratory depth and a strong humanistic understanding to 19th-century medical pluralism.

Chapter 2

ALLOPATHIC MEDICINE AND A NEW REPUBLIC

America in the 19th century, according to social critic Gilbert Seldes's (1928) book *The Stammering Century*, was a nation "whose voice loudly proclaimed its unparalleled progress, mildly radical tendencies, and an unshakeable belief in American exceptionalism." The century began with unquestionable optimism; a small band of colonies stretched along the eastern seaboard had defeated one of the most powerful nations of the world to secure their independence. Medicine and public health gave the Continental Army an important military advantage in the battle for independence. George Washington, himself a smallpox survivor, understood the army could be felled by disease as well as battle, and he inoculated his troops against smallpox and instituted quarantine measures, unlike the British troops (Breslaw, 2012; Rhodehamel, 1998; Veith, 1976).

In the first few decades the United States launched the Great American Experiment, fashioning a unique republican form of government, a financial system, and a system of state governments, creating a haven for those seeking religious freedom (Rhodehamel, 1998). The War of 1812 quelled the optimism as the British blockaded the American Navy and burned the newly built capital in Washington, DC, to the ground. With an army unpaid for over a year, the United States was forced to negotiate a humiliating treaty which gave rise to continentalism, the desire for the new nation to span the North American continent with access to two oceans (Bickham, 2012; Brückner, 2012; Latimer, 2007).

The Age of Jackson (1825–1845) was a pivotal point in American history, as Andrew Jackson was the first president who was not an aristocrat from the original

thirteen colonies. Since the turn of the century, voting had gradually expanded from just landowners, and by 1830 included all White men. Jackson's support came from unifying newly enfranchised workers and farmers and signaled a democratization of American society (Bates, 2015; Brooke, 2020). Jackson's election gave rise to the age of the common man, based on self-reliance, focused on experiential rather than academic learning and frontier-based home-grown expertise rather than European imported knowledge. These shifts would have a profound influence on all aspects of American life and set a distinctly pluralistic course for health and healing. Medicine in the first half of the 19th century became unregulated, as states, bowing to the national focus on experiential learning, removed licensing and educational requirements associated with the provision of medical care (N. Gevitz, 1988; J. S. Haller, 2014). In the Jacksonian era, industrialization created jobs, westward expansion created opportunities for land ownership, and significantly lower transportation costs made large-scale emigration possible. Jackson's policies expanded enslavement to new geographies, precipitated genocide of Native Americans, and engendered a belief in America's Manifest Destiny based on inherent exceptionalism and the desire to create a New World that outshone the Old World (Baker, 2006; Merk & Merk, 1963; Morone, 1998; Sparrow, 2017).

As the United States expanded across the continent, the population grew exponentially. U.S. census data from 1800 divided the population of approximately five million, into Whites, which included European Caucasian immigrants and their descendants, numbering four million, and into Blacks, which included free and enslaved Negroes, Native Americans and other non-Caucasians. Over the antebellum period of the next fifty years the numbers swelled to 23.2 million with 19.5 million White people and

3.6 million Black people (Klein, 2004). Immigration was responsible for half of the population growth, with immigrants in the first half of the 19th century arriving from England, Ireland, and Germany. New immigrants to the United States tended to remain in cities, and the resulting urbanization made New York by middle of the century the third largest city in the world, exceeded in population only by London and Paris. Frontier settlement was primarily by native-born Americans and only 15% of the settlers were new immigrants primarily from the British Isles. Despite urbanization and industrialization throughout the antebellum period, America was still a nation of farmers, with 80% of inhabitants living in rural areas (Bates, 2015; Klein, 2004; Sparrow, 2017). Rapid geographic expansion and population growth created a disjointed and undefined society, and the American Literary Renaissance, the Second Great Awakening, and an economy based on enslavement created uniquely American sociocultural values that shaped health and medicine in the new republic.

Heartless Immensity, a phrase from Herman Melville's *Moby Dick*, is the title of Anne Baker's book documenting the challenges of identity confronted by 19th-century Americans, whether newly immigrated or native born in a vast, uncharted country doubling in size every twenty years. While the nation's population was growing rapidly, it was also becoming increasingly diverse culturally, religiously, and ethnically, shifting away from dominance by its White Protestant founders (Baker, 2006; Herman, 2014). In this maelstrom of rootlessness with a population lacking any common ground, a distinct American literary movement arose centering on the writings of Emerson, Melville, Hawthorne, Thoreau, and Whitman. The scholar F. O. Matthiessen dubbed this the American Renaissance (1830–1860), a period of nationalistic writings, related to the

transcendentalist movement, and addressing the issues of democracy, citizenship, enslavement, and a coming new order with the growth of the West. Matthiessen's focus is on White male authors, and the famous Black abolitionist Frederick Douglass and the pioneering feminist Margaret Fuller are omitted from his discussion (Bane, 2020; Matthiessen, 1941; Thurston, 2018). The success of these writers was predicated on the era of newspapers (1825–1850), when many of the great American newspapers first appeared. New York alone had 10 daily newspapers, with the largest two each having a circulation of about 30,000. Since there was no copyright protection till 1845, American newspapers published original articles and opinion pieces for which they paid the author, but also pirated sections from books by American authors. The extensive exposure popularized American authors and reduced focus on British literature (Clark, 1977). Widespread and inexpensive availability of newspapers provided the average American with new, relevant information on religion and politics, and newspapers were the major vehicle for advertising patent medicines and health cures.

The search for religious freedom as much as the search for economic opportunity spurred immigration in the 19th century, and the North American continent quickly became a haven for many disparate religious groups. The principal religions imported from the Old World were Congregationalist, based on Puritanism; Episcopalians, the American version of the Church of England; and Presbyterianism. These Protestant denominations represented 92% of the religious population in 1800, with the minority sects of Baptists, Methodists, and Catholics each representing about 2% of the total (Conforti, 1991; Finke & Stark, 1989).

The Second Great Awakening (1790–1840) redefined the American religious landscape, beginning in small New England towns and reaching out to the corners of society, from industrial urban centers to agricultural communities. Scholars have identified the powerful forces driving renewed religious zeal as a search for community; identity; and a shared purpose based on feeling of displacement, personal anxiety, cultural confusion, and millennialism (the belief that the Second Coming of Jesus was imminent). The prototype American evangelical revivalist camp meeting held in Cane Ridge, Kentucky, in 1801 brought together 20,000 people and charismatic preachers from across the region for a three-day meeting which included emotional outpouring, confessions, and miracles as individuals experienced conversion (Baer, 1988; Finke & Stark, 1989).

The opening of the Erie Canal in 1825 connected the Great Lakes to the Atlantic Ocean, cut the cost of shipping from \$100 a ton to \$8 a ton, created economic prosperity in the Western New York region, expedited the movement of goods and people across the nation, and made New York City a major shipping port. The Canal became a new major thoroughfare, not just for commerce but also for people and ideas. Western New York became home to social movements such as the Oneida utopian community and abolitionism, a major center for the neoteric healing system of water cure, and a hub for revivalism (Bernstein, 2005; Brent Rodriguez Plate, 2017; Hecht, 2003). Charles Grandison Finney, a revivalist preacher, coined the term *burned-over district* for Western New York because the intense spirit of revivalism spread through the area repeatedly like wildfires. Two major religions originated in the area: Mormonism, founded by John Smith in Palmyra, New York, and Millerism, which transitioned into Seventh-day

Adventism, started by William Miller in Low Hampton, New York (Butler, 1986; Conforti, 1991; Gregg, 1890; Hambrick-Stowe, 2011; Rogers, 2010; Seldes, 1928; Stone, 2009).

By 1850, revivalists had reconfigured the American religious landscape, with Methodists (34.2%) becoming the largest sect followed by Baptists (20.5%), while the mainline Protestant religions saw significant declines in membership (Finke & Stark, 1989; Rogers, 2010). Methodism was a minuscule religious group in 1776, with only 65 churches; by midcentury one third of religious adherents were Methodists, represented by 13,302 congregations across the nation (Stone, 2009). Mainline religions, staffed by college-trained mainline pastors, offered a sedate, literate, intellectual message, while Baptist and the Methodist sermons, given by pastors with educations like those of their congregants, were emotional, engaged the participants, and focused on personal responsibility with the message of sin and salvation. Since Baptist and Methodist clergy received token or no salaries and did not require extensive academic training, small communities were able to recruit pastors and support a local congregation. Methodists also engaged circuit rider clergy that traveled to isolated communities with permanent clerical staff (Conforti, 1991; Rogers, 2010; Stone, 2009). The rise of American evangelicalism, especially Methodism, led to the development of faith-based healing systems in a newly pluralistic medical environment, and Methodist focus on community, social activism, and personal responsibility became cornerstones of neoteric health and healing systems. Religious fervor and engaged congregants were significant factors in the daily life of Americans in the 19th century and played a leading role in the abolitionist movement and the temperance movement (Butler, 1986).

Restrictions on the importation of enslaved people began in 1785 with Rhode Island, which was the first state to outlaw the importation of slaves and pass legislation that any enslaved person born within the state after 1785 was free (Whittier, 1894). The 1808 Importation of Slaves Act prohibited bringing any new enslaved people into the United States. For the first half of the 19th century, enslavement was a major political, financial, social, and ethical conflict in America, culminating in the bloodiest war in American history. The Abolitionist movement was widespread with substantial support from religious organizations. John Wesley, the founder of Methodism, called for the eradication of enslavement, a social evil. Evangelical spirituality viewed manumission, the release of slaves, as a compassionate, pious, and benevolent act with the potential promise of salvation (Art, 2005). Works of literature such as *Uncle Tom's Cabin* and public discourse actively urged action against enslavement, and opposition to enslavement was especially vocal after the passage of the 1850 Fugitive Slave Act, which imposed legal and monetary penalties on those aiding enslaved people seeking freedom (Craun, 2019; Stowe & Lynn, 1962).

In the Early Republic, the new nation sought to distinguish itself from the Old World by defining new societal values and new religious beliefs, creating a frontier-focused republic, ensuring its safety and sovereignty and establishing common ground around the issue of enslavement. Health and medicine posed a daunting challenge for a country with a nascent higher education system, a rapidly growing population, an environment that made inhabitants prone to disease and injury, and a populace with ardent experiential and emotional religious beliefs. As a result, the new nation accepted

and refined the traditional or allopathic medicine of the Old World and a medically pluralistic approach to meet its unique challenges emerged.

A Historical Perspective of Allopathic Medicine

Allopathic is the name used for the traditional, historical, or orthodox medicine that arrived with the English immigrants on the shores of the New World, and it was mired in the class distinctions that plagued it in the Old World. The English medical system was multitiered, with the elite Royal College of Physicians, numbering 100 graduates of Oxford and Cambridge, who were licensed members with a university degree and were the equivalent of a House of Lords. As neither Cambridge nor Oxford had an actual medical school, the education of these physicians was based on classical Greek medicine and supplemented with lectures by noted physicians. These physicians were consultants, frequently knighted, and did not provide direct care. Company of Barber-Surgeons in 1800 became the Royal College of Surgeons and served as a sort of House of Commons. A surgeon's training was at private schools near a hospital or through an apprenticeship. Upon completing a qualifying examination, a surgeon received a diploma but did not receive the honorific of doctor. Next in the hierarchy were midwives, and at the bottom were the apothecaries. The average citizen, especially in rural areas, relied on apothecaries for basic health care, midwives for maternal care and childbirth, and surgeons for serious maladies; only the wealthiest had access to physicians. Except for a small, select group of Oxbridge-trained university physicians, trade school- or apprentice-trained surgeons provided virtually all medical care in England, and this was the bifurcated model exported to the United States along with the

tradition of midwives and apothecaries as the first line of care (Durant, 2011; Shorvon & Luxon, 2018).

The New Republic lacked educational infrastructure, medical expertise, medical facilities, and resources for compounding medicines. The first American physicians were ships' surgeons who chose to stay behind on the American shores. These medical pioneers transferred their knowledge via apprenticeship to the next generation, and apprenticeship became the primary mode of physician training. As the demand for medical expertise grew with a burgeoning population and this growing population spread over a wider geographical area, entrepreneurs established for-profit medical schools which varied in quality, and which were much like trade schools with no educational requirements for admission. For purposes of my dissertation, I use the term *doctor* to refer to an American practitioner trained through either an apprenticeship or a for-profit school and reserve the name *physician* for a medical practitioner with a university education. The doctors in America, like the surgeons in England, trained in private schools, but unlike England, America did not have a hospital medical infrastructure, so American education of doctors lacked hospital training and supervision. Americans in the 19th century valued experiential learning and balked at government regulations, so American doctors did not have qualifying examinations or licensure requirements (Ackerknecht, 1982; Baer, 2001; Chapman, 1974; Porter, 1998). The first American medical school was founded in 1765, the College of Philadelphia, and by 1800, America had four universities offering a degree in medicine: the University of Pennsylvania, Harvard, Colombia, and Dartmouth, modeled on Oxbridge with instruction in the classics and medicine, usually staffed by physicians trained in England or Scotland with Galen's

model as the core of medical education program. At these first universities America educated young men for the clergy, law, and medicine, and medicine was viewed as the least desirable, prestigious, and lucrative of these chosen careers, only pursued by 15% of university students (Rothstein, 1987; Veith, 1976).

Galen of Pergamon (129–216 CE), a second-century Greek, was the most important physician and philosopher in imperial Rome, and his theories were the basis for medical knowledge for 14 centuries after his death, with some of his practices, like checking a patient's pulse, on which he wrote 16 books, still in use today. Galen built on the theories of Hippocrates (460–377 BCE), who was the first to separate medicine from religion and posit that disease etiology was natural, not sent from the gods, and likewise treatment needed earthly rather than divine intervention. The *Hippocratic Corpus*, comprising 60 works, is ascribed to him, but it is doubtful that he authored all the materials (Kosak, 2018; Schiefsky, 2005). The *Corpus* theorized that all disease was an imbalance of the four essential humors, each of which was related to a different element and disposition. The humors were black bile (earth, melancholy), yellow bile (fire, choleric), blood (air, sanguine), and phlegm (water, phlegmatic). Hippocratic medicine diagnosed based on patient observation and did not see specific diseases as having unique causal agents; rather, it maintained that all disease was due to humoral imbalance, and symptomology merely identified how to address the imbalance. Treatments focused on returning the patient to homeostasis by evacuative techniques such as bloodletting, sweating, blistering, and purging (Ackerknecht, 1982; Löwy & Löwy, 2010; Mattern, 2008; Porter, 1998; Shapiro, 1997).

Galen was an extremely prolific writer with over 350 titles credited directly to him, making up fully half of all extant ancient Greek medical literature. During the Dark Ages, after the fall of the Roman Empire, Europe lost knowledge of Galen's work but it continued to be widely used in the Byzantine Empire, was translated into Arabic, and incorporated into Arabic medicine, and was translated into Latin during the Renaissance and became central to European medical studies. Galen traveled through Alexandria, Egypt; Africa; and India, gathering information on local medicines and their uses. Galen acquired his knowledge of anatomy and his surgical experience by treating injuries of gladiators. Galen was the first true medical scientist, researching drugs, studying anatomy, exploring sensory perception, conducting animal dissection (as Greece did not allow human dissection), identifying psychosomatic conditions, describing the circulatory system, and differentiating venous and aortic blood. Galen advanced on the work of Hippocrates by setting it within a context of anatomy and physiology (Bettmann, 1979; Lyons & Petrucelli, 1978; McClellan & Dorn, 2006).

Galenic publications formed the basis of the university physician's medical curriculum, but the concept of sickness caused by humors and the cure through redressing an imbalance was common knowledge to all doctors and patients in 19th-century America. Galenic medicine had been the standard of care for centuries with the basic depletion treatments of bloodletting, emetics, diuretics, and cathartics, and only the agents used as purgatives had varied over the years. Doctors assessed patients based on external measures of symptomology—pulse, temperature, bowel movements, sweating, and percussion of internal organs—and determined measures required to restore humoral equilibrium (Bettmann, 1979).

The first mention of bloodletting as a therapeutic intervention is in Ebers Papyrus (1500 BCE), a compendium of 842 prescriptions for common ailments. Galen had identified the difference between arterial and venous blood; he considered blood the critical humor but did not understand it circulated in the body. Galenic medicine ascribed illnesses to excesses of blood pooling in parts of the body with the prescribed treatment of removing the blood, thus the blockage. Bloodletting was done by piercing the appropriate part of the body with a lancet or by the application of leeches. In the 19th century, 35 separate locations on the body were used for bloodletting depending on the ailment. Bloodletting played a leading role in the medical armamentarium, with doctors receiving a case of lancets of assorted sizes upon completion of medical training (fortunately, in modern times they receive a stethoscope) and the first British medical journal was named *The Lancet* (Osler, 1909; Veith, 1976).

The *Hippocratic Corpus* listed four hundred medicinal agents, primarily plant based, and of those more than sixty were cathartics (Hippocrates et al., 1886; Kremers & Urdang, 1940). Graeco-Arabic medicine at the turn of the first millennium built on the work of Galen and expanded the pharmacopeia to over 3,000 medicinal agents based on minerals, plants, and animals (Porter, 1998). By the 19th century the list of potential depletion agents in the *materia medica* had further multiplied, and highly toxic chemical compounds such as calomel, mercury, arsenic, antimony, and silver nitrate became standard therapies (Flexner & Flexner, 1966; Hutchinson, 1891; Schroeder-Lein, 2012). In the pre-scientific era, Galenic medicine saw the body as a wholistic system, did not seek to identify a specific biological agent of disease, identified which humor was out of balance, and attempted realignment. There was no differentiation of treatment by disease,

and arsenic, for example, was given to treat epilepsy, skin conditions, cancer, indigestion, and numerous other diseases (Lyons & Petrucelli, 1978).

The 19th-century medical practitioner had few drugs at his disposal that we know now to be efficacious. Arthur Shapiro (1923–1995), who reviewed 4,875 different remedies and 16,842 prescriptions written by healers before the 20th century, identified as effective only quinine for malaria, vaccine for smallpox, mercury for syphilis, ipecac for dysentery, digitalis for dropsy and other cardiac conditions, iodine for goiter, and colchicum for gout (Haller, John S., 2014; Shapiro, 1997). Oliver Wendell Holmes (1809–1894), one of the most prominent physicians of the day, declared “If the whole of the *materia medica* . . . could be sunk to the bottom of the sea, it would be all the better for mankind, and all the worse for the fishes” (Holmes, 1891b, p. xv). Despite the dearth of healing medicines, patients got better: opium or a derivative reduced pain, bloodletting reduced fever, and most bodies healed themselves despite the medication given rather than because of it. In all therapeutic encounters, belief in the doctor’s ability to heal and trust in effectiveness the drugs received are critical. In the 19th century, doctors administered active placebos, drugs that elicited a physical response, but do not directly treat the cause of the disease. In *The Powerful Placebo* Arthur K. Shapiro (1997), who has spent forty years studying placebos, relates how a patient’s belief that drugs causing diarrhea, vomiting, excessive sweating, or urination expel noxious agents from the body and restore equilibrium of humors can be a powerful placebo and support the patient’s return to health (Shapiro, 1997).

The English colonists brought a bifurcated medical training system to the United States, and the Early Republic replicated that model with university-trained physicians

and community-educated doctors. The basic tenets of Galenic medicine became the basis for medical education in the United States, but the unique disease landscape of the American continent and the American spirit of unbridled experimentation and exceptionalism would transform the practice of medicine in the United States. Midwives played a leading role in maternal care and childbirth; physicians attended only 20% of births in 1800, and that number increased to only 40% five decades later. Further, throughout the antebellum period, 95% of all births were at home, not the hospital. The British model of apothecaries as principal providers of care in rural areas did not find fertile ground in America, and Americans' commitment to self-reliance created a culture of patent medicines and medical handbooks.

American allopathic medicine spent the first half of the 19th century in an unwinnable battle against epidemics that repeatedly arose in the major trading cities, whose overcrowded housing, poor sanitation, and inadequate nutrition made them ideal breeding grounds. The virulence of epidemics was greatest among marginalized groups such as destitute urban dwellers, Native Americans, slaves, and soldiers, and puerperal fever, a disease associated with childbirth, was a major scourge for women. Malaria and yellow fever came to America from Africa on slave ships and disproportionately felled Whites with no built-in immunity to the diseases. Mosquitoes transmitted yellow fever, dubbed *the American Plague*, which was responsible for one especially deadly epidemic in Philadelphia, then the nation's capital, in 1793, and 10% of the city's population perished. Yellow fever epidemic repeatedly broke out in all the major ports on the East Coast in the first half of the 19th century. Cholera, caused by bacterial contamination of food or water, is one of the deadliest diseases and can cause death in a matter of hours.

Originally confined to India and East Asia, cholera arrived through the coast ports and struck cities in the American Midwest, following the path of traders and farming pioneers moving westward. Influenza, a viral disease we are all well familiar with, had two major outbreaks in 1847 and 1851. Dengue fever, another viral disease found especially in the South; typhus; and spotted fever, or cerebrospinal meningitis, all had eruptions in the first half of the century (Bates, 2015; Lobel, 2016; Shah, 2015).

Allopathic medicine did not understand the etiology of these diseases, and its Galenic pharmacopeia of purgatives only would have produced additional suffering without any medicinal benefit. Wealthy residents appreciated the highly infectious nature of these diseases, and their response was typically to flee to the countryside. In many cases, doctors, realizing the futility of their therapeutics and the potential danger to themselves, joined the exodus. This left a struggling community to care for their sick members and bury their dead with only religion, which through the recent surge of evangelicalism had become a more vivid and personal part of their lives, to offer solace and comfort. Some perished, many more survived, and Americans began to question the value of medical intervention and lose trust in doctors, setting in place the questioning and searching for alternatives for health and healing in the second half of the century. The repeated failure by allopathy to effectively address the onslaught of epidemics also gave rise to heroic medicine (Leach & Coleman, 2019; Osler, 1913; Powell & Landau, 1965; Shryock, 1931; Simpson, 1954; Wehrman, 2014).

America Creates a Heroic Variant of Allopathic Medicine

Benjamin Rush (1746–1813), a Surgeon-General of the Revolutionary Army and a signer of the Declaration of Independence (D'Elia, 1966; Kunitz & Rush, 1970),

established heroic medicine, a new American variant of allopathy. The name that Rush used for his system of medicine was “copious depletion,” but medical professionals and laymen alike quickly applied the rubric “heroic medicine.” Rush’s medical education included an American medical apprenticeship and formal allopathic medical training at the University of Edinburgh. During the yellow fever epidemic in Philadelphia in 1773, when wealthy White residents and doctors fled fearing infection, Rush stayed, treating the poor remaining residents, as many as 125 patients per day. Rush’s criticism of his colleagues for abandoning their duty to care made him a folk hero. Rush’s belief was that the more dire the disease, the more drastic the intervention required to shock the body back into humoral equilibrium, and he attributed his medical successes in the yellow fever epidemic to a treatment of rapid depletion bloodletting and purging, which drained up to 80% of blood from the human body (Finger, 2012; Kopperman, 2004; Rush, 1970; Veith, 1976).

In this era, with clinical trials a century away, speculation, anecdotal evidence, and common lore served to define clinical effectiveness. Rush’s national renown from the Revolution, European medical training, and heroic stature from the yellow fever epidemic led to the rapid widespread acceptance of heroic medicine. In addition to bloodletting by lancet or leeches, invasive treatments, emetics, and purging taken to extremes—utilizing highly toxic chemical compounds such as calomel, mercury, arsenic, antimony, and silver nitrate—were the hallmarks of heroic medicine. Treatment was not specific to the disease, and epilepsy, skin conditions, cancer, indigestion, and more were all treated with arsenic. Even when treatments were effective in reducing symptoms, as in the case of mercury as treatment of syphilis, the side effects of the drug, including

shaking, paralysis, loss of teeth, and facial disfiguration, were often horrendous (Flexner & Flexner, 1966; Hutchinson, 1891; Lyons & Petrucelli, 1978; Parascandola, 2009; Schroeder-Lein, 2012). The American revolutionary spirit, national ideal of “bigger is better,” and disdain for Old World practices all contributed to the allopathic and lay communities embracing Rush and the painful and harsh remedies associated with heroic treatments for fifty years after Europe had eschewed such practices. Rush cemented his legacy and therapy by establishing the first American allopathic medical school in 1775 in Philadelphia, where he taught as professor of chemistry for almost forty years, influencing generations of students; co-founding the free Philadelphia Dispensary; and serving on the staff of the Philadelphia Hospital, the first American hospital (Kopperman, 2004; Sullivan, 1994; Toledo, 2004; Veith, 1976).

In the New Republic under Rush, allopathy lived in a world of Galenic humors with drug toxicity equaling efficacy, and both doctor and patient viewed more expurgation as better, as it removed critical blockage from the body, strengthening the body rather than weakening an already compromised system. In “Death of a President” David Morens details the care of George Washington when he became ill with acute bacterial epiglottitis. His three physicians treated him with heroic depletion advocated by Rush, through four bloodlettings, removing almost 40% of the blood from his body; applied cantharides on his throat, feet, arms, and legs (poisonous blistering preparation); injected calomel (mercury derivative) followed by a tartar emetic; and instituted gargles of vinegar, leading to an agonizing death over a 12-hour period (Morens & Morens, 1999). Based on today’s medical knowledge, we know that none of these drugs or therapies had any medicinal value in treating Washington’s disease: they were toxic

placebos with no benefit but were detrimental to health; only an antibiotic and a tracheotomy would have saved his life (Abrams, 2013; Burch, 2013; Morens & Morens, 1999; Rutkow, 2010).

Rush was a towering medical thought leader in the age of the New Republic, but he and his therapies also had detractors who questioned his search for causation associated with epidemics. During the Philadelphia 1793 epidemic Rush determined the locus of the largest number of cases was near the harbor and identified a wharf with putrefied coffee. Further inspection showed the wharf also contained decayed vegetables and putrid animal hides. Rush, supported by wharf officials, insisted these unsanitary conditions rather than personal transmission from arriving infected sailors was the cause of the epidemic, and to further make his point took out an advertisement to that effect in the newspaper. Fellow medical professionals, city officials, and the lay public rejected the challenge to their economy as a major port, refused to equate sanitation and disease and accept a non-Galenic disease etiology, and attacked Rush and his speculations in newspapers, resulting severe damage to his medical practice. Rush sued the publications and received a \$5,000 (\$47,000 today) settlement, but the damage to his practice was irreversible. It would be another ninety years before Robert Koch and Louis Pasteur developed germ theory and identified causal bacilli, and a yellow fever vaccine was not developed until 1935 (Burch, 2013; Kunitz & Rush, 1970; Rush & Corner, 1948; Rush & Runes, 2013; Shah, 2015; Veith, 1976).

Rush represented the best and the worse of allopathic medicine as he was an abolitionist and highly active in the anti-slavery movement, but he also accepted hierarchical racial theories and contributed to the corpus of scientific racism with his

diseased-based theory for racial difference. His commitment to Galen's theory, combined with his propensity for aggressive treatment, led him to a horrific theory of race in which he proposed that Black skin color and other physical characteristics were the result of a type of congenital leprous disease, and he recommended segregation until a cure or disease regression occurred. Black enslaved people were "sick" White people, according to Rush, and he believed unblocking and rebalancing the humors, especially black bile, could result in a change in skin color (D'Elia, 1969; Driggers Edward, 2019).

Rush never resumed his medical practice after the yellow fever debacle; he devoted his efforts to teaching, writing, and treatment of the mentally ill at the Philadelphia Hospital. His 1812 publication, *Medical Inquiries and Observations Upon the Diseases of the Mind*, was the first and for a score of decades the only reference text on neurotic and psychotic mental disorders, and Rush is the father of American psychiatry. Rush was also a social reformer who was president of the Abolitionist Society of America, promoted temperance, and advocated for humane treatment for prisoners and the mentally ill (D'Elia, 1966; Driggers Edward, 2019; Kunitz & Rush, 1970; Nash, 1997; Toledo, 2004).

Oliver Wendell Holmes was an ardent critic of heroic therapy and a major voice in medicine and literature in the New Republic. After a year of law school, Holmes decided to pursue a career in medicine, training as an apprentice to James Jackson. While medical training in the United States and England was practical and rudimentary, Edinburgh, Paris, and Germany boasted major university research-based medical schools. Holmes studied for 3 years at Ecole de Médecine in Paris, a true teaching hospital. His Paris education included the numerical method of clinical investigation, an early

approach to statistical analysis to correlate symptomatology, pathology, and treatment outcomes, research on the futility of bloodletting and *methode expectante*, dubbed by critics as therapeutic nihilism, a supportive therapeutic approach which aids the body's natural healing rather than harsh interventional treatment. Upon his return to America, Holmes earned a degree in medicine from Harvard Medical and established himself as a clinician, professor at Dartmouth, and founder of Tremont Medical School which later merged with Harvard (Cohen, 2020; Fitz, 1943; Holmes, 1891b).

Holmes challenged American medicine to move from arrogance, grandiosity, bias, and slavish devotion to past practices to the early scientific medical care he learned in Paris. Puerperal fever, an infectious disease known as *the Doctor's Plague*, was a major cause of death after childbirth, and Holmes applied the numerical method learned in Paris to understand its etiology. Leading obstetricians of the day challenged his findings that the doctors and bedding carried disease and should use antiseptic precautions. He published a pamphlet, *Puerperal Fever as a Private Pestilence*, to directly reach the public about the risks. Women continued to be at risk until the discovery of prontosil, the first drug effective against puerperal fever, in 1935 (Wootton, 2006). In *Medical Essays 1842-1882*, Holmes attributed excesses in American way of life to heroic medicine "What wonder that the stars and stripes wave overdoses of ninety grains of sulphate quinine and that the American eagle screams with delight to see three drachms of calomel" (p. 193), and he challenged Rush's reported success with yellow fever in Philadelphia, asking why it could not be replicated in successive epidemics in Norfolk and New Orleans. Holmes hurled some of harshest comments in *Essays* at

homeopathy, which will be discussed in the next section (Fitz, 1943; Holmes, 1891b; Hutchinson, 1891; Schroeder-Lein, 2012; Sullivan, 1994; Tubbs et al., 2012).

Allopathic medicine and social reform formed a questionable alliance. While individual allopathic physicians may have been supportive of abolition and women's rights, the profession, its medical publications, and its medical education system clearly supported the status quo. An attempt by Holmes in 1850 to register a free Black man at Harvard medical school resulted in the student body voting to refuse to share a classroom with him, and the attempt to register women there resulted in a similar boycott (Menand, 2001a; Tubbs et al., 2012). The allopathic medical community founded the American Medical Association (AMA) in 1847 to professionalize its position and prevent encroachment by other healthcare providers. While the AMA stated that part of its mission was to improve public health, it did not take a position on enslavement or oppose the use of enslaved people for anatomical, surgical, or medicinal research. An egregious example is J. Marion Sims (1813–1883), whom the AMA identifies as the father of gynecology and who developed his technique for repairing fistulas resulting from difficult childbirth by operating on enslaved women. In 1905 the AMA Hall of Fame inducted Sims along with Rush and Holmes. By the end of the first half of the 19th century, allopathic medicine was floundering, as the public rejected the toxicities associated with heroic medicine coupled with its evident lack of efficacy. Additionally, legislatures repealed licensure laws, and the most minimal professional training conferred the title *doctor*. The public sentiment turned against allopathy, viewing it as a medical system with questionable therapeutics, as well as questionable practitioners. Americans sought alternative healthcare options and turned to homeopathy, patent medicines, and

health movements (D. B. Cooper Owens, 2017; Owens, 2017; Savitt, 1982; Wailoo, 2018; Wall, 2020).

Chapter 3

AMERICA'S NEW PATHS TO HEALING AND HEALTH

Samuel Hahnemann (1755–1843) was a German scholar and physician trained in the European allopathic medical tradition, who became disillusioned with medicine because of the painful, debilitating treatments available and their questionable efficacy. He accepted the basic tenets of allopathic medical science about anatomy, physiology, and biological chemistry but rejected the allopathic approach to therapeutics with caustic chemicals such as emetics and purgatives, bloodletting, and leeches because they weakened the body, disrupting natural healing. He saw the role of the physician as helping the body in healing itself. Based on the work of William Cullen, chair of the Institute of Medicine in Edinburgh, Hahnemann began exploring cinchona (Jesuit's bark: a tonic used to treat fever) and as proposed by Cullen conducted experiments on himself to determine specific drug effects at different doses. Hahnemann expanded his experiments to other drugs and doses and in 1796 published *New Principles for Ascertaining the Curative Powers of Drugs* in which he defined his *law of similars*: each drug has its own set of symptoms or pathogenesis, and a medicine which causes a symptom is effective in treating it. For example, quinine drug, which causes a fever, is effective in treating the fever associated with malaria. Hahnemann further theorized a second law regarding dosage as the *law of infinitesimals*. By the law of infinitesimals, the process of dynamization modifies a drug to the point where its potency maximizes, and its side effects minimize. According to Hahnemann, dynamization releases the *dynamis* or energy from the drug through a repeated process of dilution and shaking between dilution until only a diluent or essence of the drug remains, which he called the

infinitesimal dose. Central to the homeopathic medical model was the concept of *proving*, from the German *prufung*. Hahnemann first tested drugs in healthy volunteers to determine their action, symptomatic suppression, and appropriate dosing, and he conducted testing in both men and women to assess drugs' safety and efficacy by gender. Hahnemann's work modeled modern clinical trials: Phase 1 tests the drug in healthy volunteers, Phase 2 determines dosing, and only at Phase 3 is clinical efficacy measured. However, unlike Hahnemann's work, clinical research studies today still do not incorporate a gender-specific approach. In his 1810 publication, *Organon of Rational Healing*, he proposed a theory of medicine which viewed disease as the totality of changes in body and mind as seen by the physician and felt by the patient. Disease resulted from a disturbance of the vital life force or *vis medicatrix naturae*, which caused the sensations and symptoms of the disease. He defined new therapeutic medicines and described their proving and their precise manufacture requirements (Ackerknecht, 1982; Baer, 2001; Coulter, 1995; Holt, 1845; Jütte, 2014; Kirschmann, 2004; Rogers, 1984).

Homeopathy incorporated the science and research of the day and instilled a unifying structure to medication administration and patient care. In a heroic regimen, like the one administered to George Washington, with multiple bleedings, multiple drugs (or polypharmacy in today's nomenclature), blistering, emetics, and calomel by injection, this plethora of therapies makes it impossible, if the patient recovers, to identify which individual treatments were beneficial and which were not. Hahnemann focused on building the body's strength and giving a patient one drug at a time, assessing response, and either titrating or changing medication. While allopathic medicine considered volume of evacuation as a measure of efficacy, homeopathic medicine focused directly on

symptom reduction. A single drug regimen provided a clear measure of clinical improvement and prevented adverse events from drug interactions. Homeopathic medicines had undergone provings and dose calibration by gender, and this guaranteed a patient received an appropriate dosage and one with the fewest side effects. The homeopathic system clearly defined drug safety and measured efficacy scientifically. While homeopathic drugs were based on calibration from the provings and tailored to gender and age, allopathy relied on the chemist or physician compounding, which could vary significantly from batch to batch in potency and contamination.

Homeopathy came to America with the Germans, who after the British and Irish represented the largest group of immigrants to the New Republic. Homeopathy fit the ethos of 19th-century America: it was new, it had a veneer of science but was not elitist, its theoretical basis of aiding the body resonated with the democratic ideal of self-reliance, it recognized the spirituality of a life force, it was not British, and it offered medicines that promised cure without the frightening and debilitating pain of heroic treatments. Homeopathy established medical schools in the major American cities, spreading quickly from the East Coast to central states. By the midcentury, homeopathy became the second largest medical system in 19th-century America, seriously rivaling allopathy (Baer, 2011; Kirschmann, 2004; Rogers, 1984).

Women, just as they were a major force in the religious revivalism movement, became a major force in the acceptance of homeopathy. During the 19th century, 40% of the deaths recorded were in children under the age of five. Based on the medical literature of the time, allopathic physicians had little interest in the diseases of childhood and viewed death in infancy as an inevitable consequence of children's frailty (Nancy Schrom

& Daniel Blake, 1986). Women, not wishing to subject their children to either the casual indifference of allopathic physicians or the drastic and painful measures of heroic medicine, flocked to homeopathy's gentler therapeutics. Hahnemann's concern for his own 10 children was, in part, responsible for his development of specific homeopathic treatments for children, and his understanding of gender differences led to dose optimization for each sex and the development of specific therapeutics for women. Henry Newell Guernsey's homeopathic textbook on obstetrics and pediatrics compiled therapies for women and children, and his *Plain Talks on Avoided Subjects* served as a guide to sex education. The "taking the case" patient interview model of homeopathy through which the practitioner strove to understand the physical, mental, and emotional components of an illness resonated with women, in an age when their voices were often ignored. Homeopathy admitted women into their medical schools. Prominent homeopathic physicians include Susan Edson, who served as personal physician to President James Garfield and his family. Edson and fellow homeopathic physician Caroline Browne were founders of the National Woman Suffrage Association (NWSA). In homeopathy women found an environment responsive to the health needs of themselves and their families, opportunities for education, and an environment aligned with their ideas of social justice (Brierley-Jones, 2007; Guernsey, 1894; Holt, 1845; Kirschmann, 2004; Thompson, 2015).

As homeopathy grew in prominence, allopathic physicians increasingly opposed it, and homeopathic physicians strove to establish their scientific credibility. From the perspective of 20th-century biomedicine, maximizing a medicine's potential by dilution and shaking seems hopelessly naïve and misguided, so it is important to remember that

this is a Prig history where we measure by the yardstick of the day rather than a future one with considerable additional scientific knowledge. It is also important to remember that the medications dispensed by allopathic physicians of the day had no proven efficacy and in most cases were toxic and deleterious to health. Whether or not the medications dispensed by homeopathic physicians provided true medicinal value, the homeopathic approach to care created a supportive environment for healing in three important ways. The interaction with the homeopathic physician began with “taking the case,” an interaction where the physician and patient work together to understand the disease, the physician by what he sees and the patient by what they feel. This process acknowledged and respected the needs of the patient’s mind and body, a positive step toward healing. The homeopathic research evaluated medications to determine which dosing was most effective based on the gender and age of the patient, assuring the patient that their dose would be safe, appropriate, and not excessive, again an important distinction from heroic therapies. Finally, homeopathic care recognized a vital role for women in the healing process, seeing them as ideal caregivers and accepting them into homeopathic medical education. While allopathic medicine was militaristic, authoritarian, and exclusively male, homeopathic medicine was collaborative, gentle, and open to all genders (Coulter, 1995; Fee et al., 2002; Guernsey, 1894; Guernsey & Guernsey, 1887; Holt, 1845; Kirschmann, 1999, 2004).

Challenges to Homeopathy

In 1842, Oliver Wendell Holmes in his *Homeopathy and Its Kindred Delusion* challenged homeopathy on validity of the research, questionability of case studies, attributing cause, and effect relationship when there was only a temporal one, and

impossibility of highly diluted drugs having a biological impact (Holmes, 1891a). As discussed earlier, Holmes also eviscerated homeopathic medicine, and after identifying problems he retreated from the difficult challenge of searching for solutions and devoted himself to writing witty travelogues and bad poetry, leaving medicine to compassionate and resolute practitioners. Without the tools of biochemistry, microscopy, germ theory, and other later day scientific inventions and without double-blind research, not introduced till the 1950s, Hahnemann's research attempts were flawed; still, they were more stringent and systematic than any in allopathic medicine at the time. Holmes's assertion that homeopathic drugs were placebos because of extensive dilution is understandable, but it is worthwhile to discuss the role of placebos. William Cullen (1710–1790) coined the term *placebo* to describe a subtherapeutic dose of an active agent, which he administered to satisfy the patient, not to provide clinical benefit. However, the term now refers to a substance or treatment designed to have no inherent therapeutic value. A placebo can be a person, a drug, an emotional interaction, or even a place that results in a beneficial change in the patient's health. The critical elements of any placebo are belief and trust, which have a major psychological impact which can translate into a physiological response. In our Prig history, we cannot evaluate allopathic and homeopathic medicines with the tools of 21st-century science; we can only observe that each was prescribed based on the theory, knowledge, and practice of the day. The critical difference between the two was that homeopathic agents posed less risk to the patient, and this plus the scientific testing of medicines paired with a wholistic approach to the patient's suffering made homeopathy resonate with social reformers in 19th-century America, including women's rights activists, abolitionists, New England

transcendentalists, and adherents to other egalitarian movements, as did other patient-focused approaches to care (Baer, 1995; Haller, John S., 2014; Holmes, 1891a; Jütte, 2014; Kirschmann, 2004; Palmer, 1882; Shapiro, 1997).

In the beginning of the 19th century, the expansion of voting rights to all free White males, rapid industrialization, virtually unlimited land for expansion, success in a second war with Great Britain, and a rapidly growing economy created an America which was a land of opportunity and promise for new European immigrants, westward farming expansionists, the rapidly growing merchant middle class, and White plantation owners. As the newly enfranchised White male population seized the reins of government from the established Puritan founders, the Republic gained a new sense of global power and conviction of its manifest destiny to span the continent. In this new order, common sense, rather than formal education, was the epitome of knowledge and individual rights were paramount. The era of unbridled healthcare democracy and cultural nationalism began when America declared medical independence with *Every Man His Own Doctor* by John Tennant. Originally published in 1734, Tennant's book combined newly discovered indigenous medicines, recognized European botanicals, and popular home remedies into a printed pharmacopeia of medicinal herbs for treating common ailments, for example Seneca snakeroot for gout. By the middle of the 19th century most American households relied on *Primitive Physick*, *Domestic Medicine*, or other home health manuals as a primary source of medical information and potential therapeutic treatment. Most Americans rarely sought care by a medical professional because of disenchantment with and ineffectiveness of heroic medicine, lack of financial resources, or physical distance.

In addition to herbal medicines and home health manuals, patent medicines were a mainstay of therapeutic self-treatment options.

The 19th century was an incredibly lucrative epoch for the American proprietary or patent medicines industry. The terms *patent medicine*, *proprietary medicine*, and *nostrum* (which comes from the Latin *nostrum remedium*, meaning *our remedy*) are used interchangeably to denote a therapeutic concoction whose ingredients are known only to the manufacturer. For purposes of my dissertation, I use the term *nostrums*, since these products had highly questionable clinical value, frequently containing copious quantities of alcohol or opium, and it is inappropriate to term them *medicines*. Bateman's Pectoral Drops, Turlington Balsam, The Angel of Bethesda, Venice Treacle, and Daffy's Elixir were the creative names of early British imports to the Americas. Whereas in Britain, apothecaries sold nostrums, in 19th-century America there were no restraints on what nostrums could be sold, what medical claims were associated with them, or where they could be sold. After the Revolution, the imports of British nostrums declined, but the American demand grew due to increased population and decreased reliance on and confidence in medical practitioners. The first American patent was issued in 1796 and with marketing and manufacturing rights assured, the era of aggressive promotion of nostrums began (Potter, 1954; Young, 1961, 1972).

The American patent medicine industry drew its strength from the failings of allopathic medicine and heroic therapy. Safety became a major marketing technique for nostrums, as they touted their absence of calomel or mercury, and nostrums even offered a cure for mercurial disease. The invention of the sugar-coated pill proved a boon to the sale of nostrums, with palatability improving compliance and engendering confidence

regarding a lack of toxicity. American nostrum developers cleverly captured the American spirit of exceptionalism by asserting that only ingredients from American soil such as Indian medicinal agents could effectively treat local diseases and marketed products such as Dr. Kilmer's Swamp Root or Mr. Morse's Indian Root Pills. Fictitious medical degrees, Latin terms, inventive bottles, and artistic packaging all added to the allure and differentiation of these nostrums.

Success of a particular nostrum was not predicated on efficacy—only on the effectiveness of its marketing. With free public education the United States had attained a high degree of literacy by the middle of the 19th century, and the number of newspapers had grown from 200 in 1800 to 4,000 by 1850, creating an inexpensive and widely circulated outlet for nostrum advertising. Print advertising, pamphlets, handbills, posters, and human sandwich boards all carried a nostrum's brand message. Benjamin Brandreth (1809–1880), through the early and effective use of advertising, created one of the top selling cure-all nostrums, the “Vegetable Universal Pill,” and a congressional committee reported he grossed \$600,000 (equivalent to \$20 million today) in sales and spent \$100,000 on advertising, giving rise to the title of John Harvey Young's book *The Toadstool Millionaires* (Vogel & Rosenberg, 2017; Warner, 1991; Young, 1960, 1961, 1972).

While in the Jacksonian medical democracy, nostrum manufacturers made fortunes, average Americans relied on medicines, and medical men argued over the competing benefits of allopathic and homeopathic medications, part of the American public chose to reject all medicinal preparations. Joe Shew (1816-1855) and Russell T. Trall (1812-1877) in the 1840s, both European-trained allopathic physicians, founded

hydropathy, or the water cure movement, in America in the 1840s and established the first treatment facility in New York City (Shew, 1845). As hydropathic therapy involved residence for a period at a water-cure establishment, of which there were 213 in the United States, the hydropathic movement was centered in major Northeastern cities where wealthy inhabitants had the resources and time for treatment.

By stressing healthy living and the ability of the body to cure itself, hydropathy supplied a gentle, safe, and patient-centered approach to healing. Where allopathic doctors saw their role as battling disease with toxic chemicals, the water-cure was customized to the patient's "reactive powers," modifying the water temperature and duration of treatment to the constitution of the patient (Cayleff, 1987; N. Gevitz, 1988). Trall established a treatment regimen, hygeio-therapy, which included Grahamism, massage, electrotherapy, fresh air, and exercise (Baer, 2001; Horsell & Trall). Through their publication *Water Care Journal*, which had a circulation of over 100,000 at its peak, Shew and Trall popularized hydropathy and widely disseminated information on self-treatment (Cayleff, 1987).

A health movement led by Sylvester Graham (1794–1851) rejected institutional answers to health and advocated self-betterment, healthy living, and nutrition. Graham trained as a Presbyterian minister and unsuccessfully tried to preach a gospel that combined God and temperance. In 1830 he accepted a full-time lecturing position with the Pennsylvania Temperance Society. Graham expanded his health views beyond temperance, and the 1832 cholera epidemic created a frightened and sedulous population looking for answers not available from the medical community. Graham's approach to health was based on moderation and avoidance of certain forms of stimulation—dietary

and sexual—and his physiology of subsistence rejected the rampant capitalism of the day. Graham promoted vegetarianism not on a religious or humanitarian ground, but a physiological one, as meat eating perverted natural hunger instinct while coarse fibrous products like his Graham cracker supported it. He decried alcohol, defined sexual desire as a pathological state, and promoted abstinence. In his view, sexual activity was physiologically stimulating, and it disturbed inner chemical and vital balance and left the body weaker than before. Through his publication, *The Graham Journal of Health and Longevity*, Graham reached a broad consumer audience with his message espousing hydropathy, restrictive nutrition, and other therapeutics in the quest for self-mastery (Graham, 1837; Graham & Wanzer, 1869; Noever, 1983; Shryock, 1931).

In first half of the 19th century the medical environment in the New Republic was vastly different than that of the Old World, a situation that is not addressed in the narratives representing the triumphant march of scientific medicine. While European allopathic medicine embraced scientific research, American allopathic medicine pursued a course of heroic medicine based on a militaristic attack on disease with an ever more powerful arsenal of drugs given in ever escalating combinations and doses. Under Jacksonian democracy with the removal of licensure requirements, anyone could establish a medical school or attach the appellation “doctor” to their name, and both proliferated across the continent. Homeopathic medicine brought structure and science to medical care with tested and safer medications, as well as a more wholistic approach to healing and care, and certified homeopathic medical schools graduated well-trained physicians, of which 30% were women. Homeopathy became a clear threat to the prestige and livelihood of allopathic physicians, and allopathic physicians began to

organize establishing the American Medical Association (AMA) in 1847. Literacy and capitalism met to create the world of marketing and advertising, and millions could be made on any self-professed miracle cure. As many Americans embraced magic and promises of doctors and nostrums, others chose antebellum health reform movements focusing on natural living; natural cures; self-mastery; and rejection of alcohol stimulants, nostrums, or heroic medicinal agents. By the midcentury America had become a vast nation spanning the continent with an air of exceptionalism, a firm belief in capitalism, and a highly fragmented, medically pluralistic healthcare environment. A divisive and destructive war would begin the second half of the 19th century, forcing Americans to reassess and redefine their beliefs in social order, culture, religion, health, and disease (Baer, 2011; Coulter, 1995; Kirschmann, 2004; Starr, 1982).

Chapter 4

ALLOPATHIC MEDICINE AND AMERICA'S PECULIAR INSTITUTION

John C. Calhoun (1782–1850) in 1837 coined the term “peculiar (sic) institution of the South” in a speech to Congress where he positioned enslavement as “positive good” and the South’s distinct approach to the coexistence of two different races. Calhoun’s speech was in response to a deluge of abolitionist petitions to Congress and an apologist attempt to reframe the issue by comparing the supposed paternalistic care of the Southern enslaved to the challenges faced by free Black men in the North who struggled in a segregated racist environment to secure employment, housing, and health care (Calhoun & Crallé, 1883). “Peculiar institution” became a popular catch phrase, transforming the horror that was enslavement into an innocent sounding unique social structure. While Calhoun’s denigrating description of Black people and his specious description of Southern benevolence were detestable, he accurately described the toll of racism and segregation in the North. By this point in history, Black people represented 20% of the U.S. population; and allopathic medicine was the primary medical system in slaveholding states. In this section I will examine the significant role allopathic medicine played in the evaluation of Black bodies for sale and insurance, how allopathic medicine used Black bodies for research without consent, and how allopathic medicine supported the breeding of enslaved people. The Southern peculiar institution of enslavement could not have functioned as a commercial enterprise without the sanction and support of allopathic medicine (Byrd, 2000; Klein, 2004; Savitt, 2007; Washington, 2006; Wilkerson, 2020).

Biology of Racial Hierarchy

By the beginning of the 19th century the hegemony of scientific racism was complete; originating in the leading scientific minds of Europe, it became the rationale for enslavement, colonialism, and genocide. Carolus Linnaeus (1707–1778), a Swedish taxonomist and physician, published his 1756 seminal work, *Systema Naturae*, a formal system of binominal nomenclature (genus and species) for all plants, animals, and minerals. In this book, he classified humankind as *Homo sapiens* under which he defined four subspecies based on their geographic origin: *H. s. asiaticus*, *H. s. europaeus albus*, *H. s. afer niger*, and *H. s. americanus*. Linnaeus ascribed positive social characteristics to the White European ideal and increasingly pejorative ones based on how much the subspecies differed from the White ideal. Johann F. Blumenbach (1752–1822) expanded on the Linnaeus classifications, identifying five racial groups as Caucasian (white), Mongolian (yellow), Malayan (brown), Ethiopian (black), and American (yellow) in the 1865 second edition of his *On the Natural Varieties of Mankind*. In these theories, racial distinctiveness was based on geographic origin and observable physical traits such as skin color, facial characteristics, and body type. Interestingly, even Charles Darwin's (1809–1982) troublesome theories of natural selection and evolution did little to dislodge belief in these stratifications (Baker, 1998; Blumenbach et al., 1865; Charles, 2020; Darwin & Darwin, 1894; Lovchik, 2018; Menand, 2001b; Reid, 2009).

American scientific racism was based on the pseudosciences of craniometry, a measurement of the cranium or skull; phrenology, a study of head shape which links it to personality, character, and intelligence; and physiognomy, which is based on facial features. All three of these defined Caucasian or White as the highest level of human

attainment and attached ever greater derogatory characteristics to races depending on how far they deviated from the White ideal. Samuel Gorge Morton, a physician with medical degrees from the Universities of Edinburgh and Philadelphia, and America's preeminent anthropologist, amassed a collection of six hundred crania, or human skulls from around the world, called "The American Golgotha." He measured the cranial capacity of each of these skulls. Based on his craniometric measurements he published skull catalogue which documented a decrease in cranial capacity, moving from white to yellow to brown to black races. Morton took cranial size as an indicator of native intelligence, educability, social competence, and cultural capability. Morton's work was deeply flawed: he could not guarantee the racial authenticity of the crania, as they were all donated; did not adjust for differences in gender or body size; and wantonly discarded conflicting data. Morton did, however, make over-generalizations about the races, with Caucasians as the epitome of intellectual achievement; Native Americans as averse to agriculture; and Ethiopian Black people as indolent, childlike, and needing supervision. Morton's research gained an important convert in Louis Agassiz (1807–1873), the renowned Swiss-born physician, biologist, and geologist who espoused Morton's racially biased theory on a speaking tour through the United States. Further, as a professor at Harvard he trained the next generation of natural history academics. The pseudoscience and associated racism of Morton and Agassiz legitimized Black enslavement in the South, displacement and genocide of American Indians, and segregation and racial discrimination in the North (Agassiz & Agassiz, 1886; Marks, 2016; Menand, 2001b; Sussman, 2014; Yudell, 2014).

Allopathic Medicine and the Commercialization of Enslavement

In the United States, enslavement, medicine, and capitalism were intimate bedfellows. White allopathic doctors played a vital role in the American institution of slavery and the pseudoscientific hierarchical structure of race perpetrated by leading scientists, and universities of the North sanctioned their actions. In the typical medical encounter, the dyad is doctor-patient, but within the peculiar institution of enslavement, the patient was removed from the equation: the medical dyad was doctor-enslaver, and the enslaved patient was powerless. Owners held complete control over the bodies of enslaved people, determining access to medical care, subjecting the enslaved to whatever medicines or medical procedures they chose, and providing remuneration to the doctor. The objective of medical care was not the physical and emotional health of the patient but maximizing the production value of a human asset regardless of the cost to the individual. Through their role in the slave-based economy, allopathic doctors in the South acquired wealth, social prestige, and enslaved bodies for research, and the African American community developed a deep distrust of medical science that continues to this century (Blanton, 1947; Byrd, 2000; Savitt, 1982; Wall, 2020).

The first encounter of an enslaved person with the medical establishment was on the shores of Africa, where a ship's surgeon examined captive natives to determine their suitability for transport to the Americas. The surgeon conducted degrading, invasive examinations on people and selected individuals based on strength, birthing potential, current market needs, and potential selling price. Of greatest value were captives who had experience tending animals, farming, and crafting, as these were skills required on the

large plantations of the South. Raiders targeted small villages, taking whole families, and destroying coastal communities (Charles, 2020; Radburn & Eltis, 2019).

The surgeon, second only to the captain in salary, was responsible for all aspects of shipboard life for the human cargo. The transport of 1.2 million Africans to the Americas was part of the Triangle Trade whereby ships left from European ports for Africa where they procured the human cargo. The next leg of the journey, called the Middle Voyage, took the captives to a slave trading port in the Americas. In the final leg of the Triangle Trade journey ships returned to European ports laden with American products, usually sugar, molasses, rum, cotton, or woolens. Forty percent of the ships carrying human cargo to the North American continent sailed under the British flag. Ships were crowded, lacking adequate sanitary facilities, clean water, or sufficient rations. Disease, especially amoebic dysentery, was rampant, and the loss of life ranged from 15–30% depending on the length of the voyage. The ship's crew also endured the poor rations, harsh flogging, and exposure to disease, with typically 20% dying during the voyage, making the enterprise even more profitable as fewer crew needed to be paid at the end of the voyage. Slave ships were routinely insured for the loss of the ship or its human cargo, with underwriters paying thirty pounds for the death of a male, so loss of life posed no financial burden to slavers. During the passage captives were routinely physically and psychologically terrorized and beaten to ensure docility at upcoming slave auction, and rape was common (Byrd, 2000; Coughtry, 1981; Equiano, 1837; Hochschild, 2005; Kelley, 2016; Mustakeem, 2016; Pearson & Richardson, 2019; Radburn & Eltis, 2019).

Upon arrival on the American shores, often at Charleston and New Orleans, the two largest slave markets, the enslaved were given a cursory examination. Healthy persons were transferred to slave pens for holding prior to auction, those with contagious disease sent to quarantine, and those medically compromised to slave infirmaries owned by allopathic physicians to improve their health prior to sale. At slave auctions, a White male allopathic doctor conducted public invasive physical examinations including internal examinations of enslaved people to certify the “soundness” of their health for purposes of determining their price prior to sale. What constituted a “sound versus unsound” person was debated in the medical journals of the day. In 1860 the top price of a male in optimal health in New Orleans was \$1,800, over 10 times the average annual income of a Northern worker (De Bow, 1854; Halperin, 2013), and average selling prices were \$792 for males and \$494 for females (Berry, 2017). The value of enslaved women was both as workers and for the next generation of marketable exploited people they would birth. Allopathic physicians attested to the health and probable fertility of the enslaved person, providing the buyer with a warrant. For insurance purposes an enslaved person was a terminable annuity, and doctors attested to their potential life span and anticipated number of productive years. Enslavers purchased insurance coverage against premature death of an enslaved person, most often through cholera, malaria, yellow fever, and influenza epidemics that periodically swept the area. For example, the 1832 cholera epidemic resulted in the deaths of thousands of enslaved people and losses to slave holders amounted to the equivalent of \$1.3 billion in 2020 dollars (Fenner, 1851; Genovese, 1960). To protect themselves and to prevent slaveholders from hastening the death of the aged or disabled, insurance companies only issued a policy for 3 to 5 years

and at the end of the term of policy the allopathic physician reexamined and attested to health for a new policy to be issued. In the case of a death claim, insurance companies required proof that an appropriate allopathic medical intervention had occurred.

Insurance covered all aspects of enslavement, including policies covering the cost of recapture or replacement of runaways. An allopathic doctor's health evaluation of an enslaved person was central to determining the worth of a plantation and for dividing assets in the case of a will. The South's peculiar institution could not have functioned without allopathic doctors who were essential to all the financial transactions associated with slavery. Fees charged by allopathic doctors included certification fees of \$2 to \$10 for an opinion of soundness for an individual, \$10 to \$50 for a soundness opinion if a legal issue was involved, and \$25 for an insurance claim required post-mortem.

Supporting the slavery infrastructure, rather than the actual provision of medical care, became for many doctors a primary source of income (Fisher, 1968). Insurance and allopathic doctors' services were two of a slaveholder's largest financial outlays, and doctors enriched themselves through the process and secured a highly respected place in the social order. In slaveholding states, for-profit medical colleges abounded, as individuals sought to join this lucrative profession, medical journals flourished, and three types of medical institutions associated with care for the enslaved arose: the infirmary, the hospital, and private physician clinics (Byrd, 2000; Coughtry, 1981; Genovese, 1960; Kelley, 2016; Kenny, 2010; Mustakeem, 2016; Pearson & Richardson, 2019; Radburn & Eltis, 2019).

The Atlantic slave trade created the slave infirmary to address potential contagious disease, identify the debilitated, and certify health and soundness of mind in

preparation for auction of enslaved people. Infirmaries flourished as mostly British ships deposited their human cargo at the major slave trading ports of Charleston and New Orleans. The 1808 ban on the importation of enslaved people created an unmet demand for new enslaved workers and a rapid increase in the value of the enslaved and their progeny. The White male allopathic medical community partnered with Southern slaveholders to establish slave hospitals and private physician clinics that focused on increasing the productive years of the currently enslaved and slave breeding to increase the pool of available enslaved workers. Proponents of slavery argued that enlightened self-interest and Christian virtue lead to a paternalistic approach to treatment of and medical care for the enslaved. The truer picture is most probably that, then as now, capitalism was the governing principle and that a slaveholder sought to optimize the value of their enslaved human asset by limiting their expenditures on food and housing and maximizing output through long work days, and the White male medical community served as the mechanism of control to assure that an enslaved person returns to productivity as quickly as possible and women birth as many children as possible. The average lifespan of an enslaved person in the antebellum period was 30 for a male and 35 for a female. The enslaved, in their weakened state from poor diet and physical exhaustion paired with their crowded inhospitable living conditions, were highly vulnerable to every passing epidemic, prey to illness associated with nutritional deficits, highly susceptible respiratory and intestinal seasonal diseases, and at substantial risk of workplace injuries. Additionally, women bore the burden of repeated pregnancies in such harsh conditions. The premature death or disability of an enslaved person created a major monetary loss for the slaveholder, and the White male allopathic medical community was

quick to appreciate that this created a lucrative financial opportunity. By 1861, advertisements appeared across seven Southern states promoting over 40 institutions, including private physician clinics, medical colleges with associated hospitals, and infirmaries, all focused on the fecundity and health of the enslaved. With allopathic medicine clearly focus on the mercenary needs of the enslavers rather than the health and safety of the enslaved, a parallel approach to healing developed, the slave health subsystem (Blanton, 1947; Fisher, 1968; Savitt, 2007).

Medical care of the enslaved, treated as human chattel, was totally under the discretion and control of the slaveholder, who was primarily interested in maximizing the value of the enslaved human asset. The allopathic male medical community caring for enslaved people prioritized the needs of the slaveholder over providing care and succor to the afflicted. For enslaved persons, with their bodies already weakened by a combination of overwork, inadequate housing, and poor nutrition, allopathic treatment by a minimally trained White male allopathic doctor armed with the heroic excess of depletion therapies of bleeding, sweating, and purging, was a terrifying prospect. Medical decisions and treatment choices were determined between the doctor and the slaveholder, who engaged the doctor's services and paid his bill. Enslaved people were forcibly subjected to harsh and debilitation heroic treatments by allopathic physicians and to medical procedures such as sterilization or amputation without consultation or consent. Enslaved people justifiably exhibited *iatrophobia*, or a fear of allopathic medical care, and frequently hid illnesses from owners, relying instead on a slave health subsystem based on African healing traditions. Various names have been used for the enslaved and free members of the medical workforce that constituted the slave health subsystem. These included

bondwomen (female enslaved persons) midwives, herbalists, traditional root doctors, spiritual healers, and kitchen physicks. As all these practitioners approached the treatment of illness in a similar manner, described in the following paragraph, I will use the general term *Black folk healer* when referring to them.

Black Health Subsystem and Network of Black Folk Healers

Black folk healers used their sensory experiences of sight, smell, and touch to understand bodily processes and to construct a framework for disease management. They, unlike allopathic practitioners, recognized the importance of social/emotional components in the illness experience. Only by addressing the physical and emotional manifestations of the disease could therapeutics be efficacious and curative. Black folk healers in the slave health subsystem, denied access to formal education, acquired their medical expertise experientially, building on African holistic healing traditions, proficiency with botanical medicines from Africa, discovery of new beneficial botanicals in the Americas, secondhand knowledge from home health manuals, and practical experience as nurses and other healthcare roles working in White or slave hospitals. The slave health subsystem represented more than an alternative to slaveholder controlled allopathic care: it created a channel for access to safer, culturally and emotionally supportive healing and care; challenged the authority of allopathic medicine; reaffirmed the diasporic identity; built community; and was a furtherance for survival in a hostile environment (Fenner, 1851; Gomez, 2017; Kenny, 2010; Rip, 2019; Savitt, 2007; Schiebinger, 2017; Schwartz, 2001; Washington, 2006).

For over two hundred years, beginning with the earliest arrival of enslaved people and lasting through the Civil War, the slave health subsystem was a critical health

delivery system for Black people in the United States and by 1860 it served five million people or 16% of the United States population. Yet in Roy Porter's triumphant *Greatest Benefit to Mankind* medical history epic or other tomes of that nature, the slave health subsystem is not discussed. While Porter discussed at length slave physicians in early Rome, his work and that of other Whig medical historians fails to acknowledge significant contributions from Black folk healers to medicine in the New Republic. Only in the past two decades have the achievements of enslaved healers been researched and documented by Prig scholars to give a truer and more comprehensive picture of medical care in the first half of the 19th century (Baer, 1982; D. B. Cooper Owens, 2017; Gomez, 2017; McGregory, 2017; Pierce, 1917; Schweninger, 1998; Washington, 2008; Washington, 2006).

The first enslaved healer who contributed significantly to health in the early days of the New American Republic was Onesimus (fl. 1706–1717), who introduced America to African inoculation practices in 1721 and prevented a major smallpox epidemic in Boston. Onesimus's contribution came 80 years before the publication in 1801 of Edward Jenner's (1749–1843) *On the Origin of the Vaccine Inoculation*. Jenner took material from a cowpox pustular lesion and applied it to a scarified arm, a process he named *vaccination* (from Latin "vacca," "cow"). Onesimus was enslaved to Cotton Mather (1663–1728), a prominent Puritan minister and scientist and author of *The Wonders of the Invisible World*, a justification for the Salem witch trials. Onesimus was knowledgeable in African medicine and literate, and he acquainted Mather with the African practice of person-to-person inoculation (now called *variolation*) by taking material from a smallpox pustular lesion with a thorn or knife and inserting it into the arm of the person being

inoculated, resulting in the development of mild symptoms of the disease, but conferring lifetime immunity. Mather confirmed with other enslaved people in Boston that smallpox inoculation was well established and almost universal among Africans and that if enslaved cargo did not have scarring indicative of inoculation, the slave ship captain often took them ashore in coastal Guinea to have them inoculated, as this increased their selling price. When the 1721 smallpox epidemic could not be controlled by standard quarantine measures, Mather's proposal for inoculation was strenuously opposed by the allopathic medical community, the press, and the public, primarily because it was based on African medicine and the information about the process came from the enslaved. The only doctor that agreed to perform inoculations was Zabdiel Boylston, and only three hundred people were inoculated; however, the results were significant, as only 2% of the inoculated perished as opposed to 12% who acquired the disease naturally (Boylston & Williams, 2008). The African technique of variolation was unknown to the British army during the Revolutionary War, and they were unprotected since Jenner's vaccination technique was still three decades away. George Washington was able to weaponize smallpox in the Revolutionary War by variolating his troops and sending soldiers infected with smallpox into battle with unvaccinated British soldiers (Baer, 1982; Colman, 1721; Donnan, 1930; Dummer et al., 1722; Esparza et al., 2018; Herbert, 1975; Jenner, 1801; Mather & Mather, 1862; Minardi, 2004; Washington, 2006).

James Derham (1659–1735) was one of the earliest and most prominent enslaved healers. He was born in Philadelphia and his doctor slaveholder, John Kearsley, Jr., taught him to read and write and trained him in compounding medicines and assisting in medical care. After Kearsley's death he was sold to a series of doctor slaveholders and

continued to acquire medical knowledge and skills. Robert Dove, a doctor slaveholder in New Orleans, acquired him after the Revolutionary War and freed him 3 years later, so impressed was he with his medical acumen. Derham's specialty was geographic medicine, and he became an authority on the diseases of the Mississippi Delta and on the drugs for treating them. Like Derham, enslaved healers who developed important new therapeutic agents were often rewarded and recognized with manumission. Major contributions by enslaved healers include in 1729 an efficacious treatment for syphilis by an unnamed Virginia folk healer; in 1751 an antidote for snakebite by Cesar, a South Carolina folk healer; and a treatment for rabies pioneered by Primus, an enslaved healer. Wilcie Elfe, who began as an apprentice to a White pharmacist, became a research chemist, creating patented medicines which became popular through the South. Enslaved folk healers were central to the slave health subsystem and were becoming an increasingly competitive presence for allopathic physicians until 1831 (D. B. Cooper Owens, 2017; "James Derham," 1912; Owens, 2017; Washington, 2006).

The 1831 rebellion led by Nat Turner (1800–1831), an enslaved man, in which over two hundred enslaved people and 50 White people died, raised fears among the White minority and resulted in States restricting the teaching of reading and writing to the enslaved and prohibiting travel, assembly, and medical practice or care for sick persons by enslaved persons. The medical strictures were a result of a growing preference among Whites for enslaved healers over White allopathic physicians due to Black folk medicine having greater efficacy and less toxicity than the allopathic heroic venesection and purging. White physicians justified the new restriction based on fear mongering that those enslaved healers would poison White patients. The story of Doctor Jack of

Tennessee illustrates how central Black folk medicine had become to the provision of care. When one renowned Black enslaved healer, Doctor Jack (1783–1854) of Tennessee, was precluded from providing care, the communities sent 20 petitions to the state legislature requesting an exemption for him. The petitions attested to Doctor Jack’s moral character, honesty, and proper deportment and described his acumen in treating long-standing and difficult-to-treat illnesses. The largest petition carried over two hundred signatures, and one petition had over twenty female signatories, a rarity in that time. Doctor Jack did not receive his exemption but continued to practice shielded by the communities. At age 70 he opened an office in downtown Nashville after having purchased his freedom. Gifted enslaved healers, with their knowledge and skills built on observation and experience, were the backbone of the slave health subsystem in the South and in the rest of the country allopathic medicine grew (Blanton, 1947; Byrd, 2000; Washington, 2008; Washington, 2006).

Structural and Comparative Anatomy Redefines Allopathic Medicine

Without any legal requirements regarding education and no provisions for licensure, the number of individuals self-identifying as allopathic doctors grew to 40,755 in 1850 and to 55,055 10 years later. According to census data the U.S. population in 1860 was 1.7 million, and the 55,055 allopathic practitioners represented 324 doctors per 100,000 of population. To appreciate this overabundance of medical men, we can contrast this with today’s high tech and highly specialized medical field where currently we only have 331 physicians per 100,000 of population (Rothstein, 1987; Zhang et al., 2020). The allopathic medical community was overpopulated, undereducated, and under siege. Neoteric health systems, such as hydropathy, Grahamism, and homeopathy, began

to make significant inroads into the domain of medical care by offering safer and gentler alternatives to the allopathic heroic treatments of the day. Patent medicines or nostrums, the direct-to-consumer drugs of their day, were widely advertised, readily and cheaply available, and less expensive alternatives to allopathic medical care. Health publications touting self-healing through diet, water, and botanicals were popular, and Graham's longevity guide and Trall's monthly *Water-Cure Journal* enjoyed readership in the tens of thousands. The democratization of medical practice and the bevy of alternative healthcare practitioners posed a serious threat to financial security of allopathic doctors, and the profession sought ways to assert its authority, delegitimize competitors, and establish dominance (Cayleff, 1987; Kirschmann, 2004; Noever, 1983; Shryock, 1931; Young, 1972).

Allopathic medicine advanced little in the first half of the 19th century. After consigning George Washington in 1799 to a painful death with the heroic, excessive, and ineffective treatments of the day, in 1841 the allopathic medical community used the same arsenal of therapies to hasten the death of another president, William Henry Harrison. Harrison became ill with a cold which the allopaths diagnosed as lower lobe pneumonia and treated Harrison with cupping and blistering; he was purged with ipecac, castor oil, and calomel; fed a Native American remedy, Virginia snakeweed; and given opium, brandy, and whiskey to alleviate the pain. Harrison died 31 days into his term as president, and pleurisy was listed as the cause, but a postmortem discovered that all the heroic allopathic therapies accomplished was drug-induced hepatitis. Based on the records of Harrison's personal physician, infectious disease specialists in 2014 diagnosed Harrison's illness as bacterial enteric fever and death due to septic shock and went on to

say that based on the therapies available in the day, noninterference and allowing the body to heal itself would have afforded the best opportunity for survival, demonstrating vividly the benefits of neoteric therapies (Jones, 2006; McHugh & Mackowiak, 2014).

By midcentury, allopathic practitioners had achieved little understanding of disease etiology, still relying on the theories of Galen from a millennium before, while the understanding and application of germ theory was still decades away. Diagnosis continued to be superficial, focusing on pulse, respiration, and color of skin and urine. The stethoscope, as the only new diagnostic tool added to a doctor's armamentarium, invented in 1819, was now used for auscultation and percussion. Of hundreds of drugs listed in the United States Pharmacopoeia only 20 of the medications had true curative potential, and medicinal chemistry was still a century into the future. By midcentury doctors still relied on venesection, cupping, and administration of potent emetics and purgatives. Based archival hospital records from Massachusetts (1850) and Baltimore (1848), on the average two-thirds of patients were subjected to heroic and potentially lethal dosages of these therapies. Lacking new and effective therapeutics, the antebellum allopathic medical community turned to anatomical knowledge as a key opportunity to distinguish themselves from the neoteric healing system and patient self-directed treatments. Understanding structural and comparative anatomy and the ability to identify physiological abnormalities gave the allopathic profession a sheen of science and the allopathic doctor a singular advantage in disease diagnosis and treatment (Armstrong & Armstrong, 1991; Lyons & Petrucelli, 1978; Rothstein, 1987; William, 1987).

In the 1840s the mainstay of the curriculum of most medical schools was 5 months of didactic, theoretical lectures, and an apprenticeship was required to gain

practical experience. The number of allopathic medical schools in United States had grown from 4 in 1800 to 47 by 1860. Interestingly, when Pennsylvania Medical School, the first medical school in America and one of the foremost in the country, in 1847 expanded its course of study from 5 to 6 months, enrollment declined as students were unwilling to devote the additional time and tuition money to their education, and the school returned to the 5-month curriculum 6 years later. In the fierce competition for students, education and practical training in anatomy became a critical differentiator. Harvard Medical School, to remain competitive and at the forefront of research, relocated from Cambridge to Boston in 1810 for better access to patients from a nearby Alms House for classroom “firsthand” demonstrations and an increased availability of cadavers from nearby graveyards. As dissection became central in medical education, so began the traffic in human bodies (Holt, 1845; Kaufman, 1976; Rogers, 1984; Rothstein, 1972, 1987; Sappol, 2002; Shew, 1845; Shryock, 1931; Wootton, 2006; Young, 1960).

At the beginning of the 19th century, the only legally available cadavers were those of executed criminals, and this represented a woefully minuscule number of bodies. In the American capitalist society, money and market need always trump ethics and legality, and grave robbing become a mainstay for providing needed cadavers to the medical community. For example, Jefferson Medical School in Philadelphia, in its promotional literature, touted the efficiency of its medical “harvesting” schedule with bodies being exhumed within 24 to 72 hours of burial and rapid transport to the dissection theaters at the school, which were large, well lit, and well ventilated, with excellent viewing from all benches. Targets for resurrectionists, who provided cadavers for elite Northern medical schools, were of course the poor, the disenfranchised, and the

marginalized. Bodies were most often taken from potter's fields where unclaimed bodies were buried, sailor cemeteries and Negro Burial Grounds. In the late 18th century Black people represented 15% of New York City's population, and the Negro Burial Ground provided an abundant and easily accessible source of bodies for Columbia medical students. The Black community, seeing the graves of their loved ones wantonly desecrated, and their bodies trafficked, petitioned the city council to restrict dissection to bodies of convicted criminals, but no action was taken. Increasingly brazen acts by the resurrectionists resulted in Doctors Mobs of angry citizens challenging the practice of dissection. The resulting violence led to New York passing the first Anti-Resurrectionist Act in 1789 specifically outlawing body snatching and the desecration of graves and making provisions for bodies of convicted criminals to be available for research. Harvard joined the Massachusetts Medical Society in lobbying for legislation expanded the availability of cadavers for dissection. In 1831 the Massachusetts Anatomical Act was passed, authorizing that any unclaimed body would be available to medical schools for dissection. The Massachusetts Anatomical Act was the model for legislation in most other Northern states, and while this expanded the pool of available cadavers, there was still unmet demand. Unclaimed bodies remained the primary source of medical cadavers until 1968, when the United States passed the Uniform Anatomy Gift Act, establishing rights around the donation of bodies for medical research. The law, amended in 1987, permits donation but prohibits the sale of dead bodies. Currently medical schools receive 110,000 bodies as volunteered donations, but a domestic cadaver market established in the 1800s continues to this day, supplying bodies for medical device companies,

hospitals, doctors, and other researchers (Cheney, 2007; Elizondo-Omaña et al., 2005; Lyons & Petrucelli, 1978; Rothstein, 1987; Shultz, 2005).

The unparalleled growth in the number of medical schools in the late antebellum period with the associated ever-growing and unmet demand for anatomical specimens created the beginnings of the domestic cadaver market where bodies of the enslaved were shipped from the South to the elite medical schools of the North. The glorious histories of these academic institutions neglect to mention that their lauded anatomical research was on the enslaved, who had no protection for their bodies in life or in death. Southern allopathic doctors were the source and the conduit for the domestic cadaver market. Southern physicians aggressively sought dissection subjects by advertising in local newspapers for the enslaved who were aged, sick, and deemed incurable and often identifying the diseases or diseased organs such as liver, kidney, spleen, stomach, etc., for which the highest price would be paid, with prices ranging from \$5 to \$40 (in today's illegal market, prices for cadavers or individual body parts range from \$10,000–100,000). From the South, bodies of the enslaved were shipped in cadaver bags for short transit to neighboring states but hidden in barrels filled with whiskey or brine for lengthier illegal journeys to Northern states. The enslavers profited once again through the sale of the enslaved denied dignity even in death (Berry, 2017; Byrd, 2000; Cheney, 2007; Elizondo-Omaña et al., 2005; Fee, 2015; Jones-Rogers, 2019; Kaufman, 1976; Sappol, 2002).

Biological Control Over and Experimentation on Enslaved Women

As allopathic doctors advanced their understanding of anatomy through dissection, they moved significantly into two new areas of medicine: surgery and

obstetrics. Southern allopathic physicians led the way, building their knowledge of anatomy and surgical techniques using the bodies of the enslaved. In the antebellum period surgery was a dangerous undertaking, without adequate surgical pain control and with the potential for life-threatening post-surgical infections. Before the introduction of effective anesthetic agents, alcohol, opiates, and various soporific agents were used, but none of these had the ability to safely induce the deep sleep required for invasive and protracted procedures. Knowledge of chloroform, ether, and nitrous oxide was available as early as 1831, but their medical applications and common use did not come till decades later. The first documented uses of anesthetics were ether in 1842 by Cranford W. Long (1815–1878) of Georgia for minor surgeries, and nitrous oxide by a dentist, Horace Wells (1815–1845) in Connecticut in 1844. The term *anesthesia* was coined by Oliver Wendell Homes (1809–1894) to describe these agents, which gained acceptance gradually after the first public demonstration of pain-free surgery in Boston in 1846. Although anesthesia allowed for safer and more complex procedures, lack of sterile procedures and with antibiotics still one hundred years away, surgery was often a treatment of last resort. The issues of pain and death posed no challenge to Southern allopathic doctors as they experimented with an enslaved population, who was denied any control over their bodies (Blanton, 1947; D. Cooper Owens, 2017; Fisher, 1968; Holmes, 1891a; Jones-Rogers, 2019; Lyons & Petrucelli, 1978; Wall, 2020).

Anarcha, Betsey, and Lucy were enslaved women traded to J. Marion Sims (1813–1883), an allopathic doctor, for him to practice his surgical techniques. The deal brokered was that their enslaver would provide their clothing and pay their taxes and that Sims could perform any surgical procedure that did not directly endanger their lives. For

four years Sim subjected the women to repeated surgical procedures without the benefit of anesthesia in the search for a surgical technique to correct vesicovaginal fistulas (VVF), which can occur after a protracted and difficult childbirth and results in urine leaking from the bladder into the vagina; this condition frequently occurred in enslaved women because their bodies were too young, too underfed, and too physically exhausted to manage the rigors of childbirth. When Lucy nearly died from pain of the 27 surgical assaults on her body and a severe case of septicemia, Sims purchased her so as not to violate the deal with her enslaver. Anarcha was subjected to 30 operations before Sims could perfect his surgical technique and in *A Herstory of Pain* (2021) Joanne Godley gave a voice to the horror and suffering Anarcha must have experienced. Sims's surgical research on VVF addressed a previously incurable medical condition, significantly improved affected women's quality of life, and prevented infections and other major complications. He designed the speculum, the sigmoid catheter, and the Sims's position for examination and surgery. However, the surgical procedure for which Sims received international renown was developed by subjecting vulnerable, powerless, enslaved women to unimaginable pain and suffering from an unconscionable number of repeated surgical procedures. Sims recognized the questionable ethics of his behavior and when describing his research in medical journals did not disclose the race of the research subjects or the number of procedures to which they had been subjected, and he even alluded to the fact they had given consent. In his autobiography Sims devoted more paragraphs to addressing difficulty finding housing in New York, where he moved in 1853 and in 1855 established the first allopathic Women's Hospital, than to the three enslaved women whose bodies he used so cruelly and callously to make his remarkable

surgical breakthrough possible. The AMA glorified Sims as the “Father of Gynecology”, and a bronze statue of Sims in surgical attire, the first public statue ever dedicated to a doctor, was erected in 1894 in Bryant Park. The statue was relocated to the New York Academy of Medicine in 1934 to accommodate subway construction and in 1981, amid protests regarding Sims’s treatment of enslaved women, the statue was moved to Greenwood Cemetery where he is interred. Sims’s surgical research on the enslaved was not unique. The partnership between White slaveholders and Southern allopathic doctors was based on mutual advantage, with the enslaved voicelessly subjected to experimentation. Allopathic physicians openly advertised for the injured or diseased on whom they could build their surgical credentials and experiment with new therapeutics, and slaveholders were eager to have the injured enslaved returned to health and productivity at no cost to them. Neither the doctor nor the slaveholder was concerned about the price paid by enslaved bodies in pain, suffering, degradation, and early death (D. Cooper Owens, 2017; Fisher, 1968; Godley, 2021; Ojanuga, 1993; Savitt, 1982; Sims, 1852; Sims & Sims, 1885; Wailoo, 2018; Wall, 2006; Wall, 2020; Ward, 1936).

Nowhere was collusion between allopathic doctors and slaveholders greater than in the production of the next generation of enslaved people. In the United States Constitution there is only one specific date and one specific dollar amount. The date is January 1, 1808, when the federal ban on the importation of enslaved people was enacted, and the dollar amount is the limit of \$10 of duty that could be charged for importation of a person. The duty limit was set to ensure the continued profitability of the slave trade. The ban on importation of slaves came at a time when the New Republic was virtually doubling in size with the Louisiana Purchase and bursting with new lands to clear and

cultivate. The architect of both the land purchase and the importation ban was Thomas Jefferson, owner of three hundred enslaved persons, and Virginia, his home state, benefited most from the confluence of these two events. Virginia had the largest enslaved population of any state and an African American community dating back to the 17th century. In Virginia, the land was cleared, and farms were established; and through monocrop planting of cotton or tobacco, the fertility of the land was reduced, making farming less and less profitable. Enslaved women birthed five to ten children during their lifetime, and the population of enslaved people increased 25% every decade. With infertile land and an overabundance of enslaved workers, Virginia became the center of breeding and sale of native-born enslaved people, and the ban on importation removed less expensive African slaves from the market, significantly increasing the value of Virginia-born enslaved persons. Jefferson recorded the buying and selling of his slaves in a "Farm Journal," in which he ascribed greater value to enslaved woman who produced an offspring every two years than to the strongest field hand (Cohen, 1969; Richard et al., 1976; Sublette & Sublette, 2015).

The scope and impact of breeding enslaved persons is quantified in Michael Tadman's *Slave Trading in the Ante-Bellum South* (1979), where he used economic analysis to determine that from 1820 to 1860 domestic trade in enslaved people grew exponentially, with between 560,000 and 690,00 million being sold from Upper Southern states to Lower ones. Tadman's analysis showed that the majority of those trafficked in the slave trade were between the ages of 10 and 19 and evenly divided between males and females. These enslaved children, sold in their early teens, were chained together in a coffle and force marched to the Southern states where a lifetime of brutal toil clearing

land and the back-breaking work of growing cotton awaited them. Harriett Beecher Stowe's *Uncle Tom's Cabin* told the story of the heartbreak of birthing a child, the specter of losing them to such a horrific fate, and the ends to which a mother would go to protect her child. Stowe's emotional narrative, first published as a serial in an abolitionist publication, was issued in book form in 1852, selling 300,000 copies in its first year and becoming an international best seller that dramatized the harsh and dehumanizing conditions of enslavement (Hochman, 2011; Stowe & Lynn, 1962). While the Southern states were dependent on an ever-increasing supply of enslaved labor and with a sickly 12-year-old selling for \$380, \$11,000 today, moral outrage was trumped by economic gains. Slaveholder assets and wealth were measured by the number of enslaved bodies held, and slaveholders looked to the allopathic medical community for assistance in managing their valuable human holdings, leading allopathic doctors to prioritize the economic needs of slaveholders over the physical and emotional needs of their enslaved patients (Conrad & Meyer, 1964; Jennings, 1990; Schermerhorn, 2015; Stowe, 2019; Sublette & Sublette, 2015; Tadman, 1979).

By 1860 the allopathic medical community in the South had grown to 18,500 doctors who had, in response to rapidly growing demand for more enslaved workers, expanded their sphere of influence into obstetrics and gynecology, an area previously dominated by midwives. The Indian Removal Act of 1830 relocated hundreds of thousands of Indians from their ancestral homes in Southern states in a march called the "Vale of Tears" to less fertile and inhabitable land in the West, with a significant loss of life enroute (Smithers, 2018). Enslaved workers were needed to clear the forests in the newly opened lands under harsh living and brutal working conditions. This created an

endless demand for laborers, which made the business of breeding the enslaved highly lucrative. The Southern allopathic physician, by controlling all aspects of pregnancy and maternal care, sought financial gain and increase in status and influence. Enslaved women, already powerless and sexually exploited, suffered dehumanization at the hands of White allopathic doctors. While doctors examined White women partially clothed, in private, and treated them respectfully, the enslaved women's bodies were unclothed and exposed when subjected to the most intimate invasion. In a time when there was no clinical understanding of infertility, allopathic doctors resorted to the heroic medicine of the day, addressing the condition with bleeding, evacuating, and purging using a myriad of harsh chemicals, such as calomel (mercury chloride), arsenic, quinine, sudorifics, anodynes, and opiates, which are now known to be teratogenic. While miscarriages and still births were most probably caused by poor nutrition, overwork, and unhygienic conditions or an underage body, allopathic doctors blamed the enslaved women rather than address the root causes with their enslaver. In the case of difficult births, a doctor who little understood or had few resources to deal with the condition usually resorted to heroic toxic medicines and basics of bleeding, blistering, and purging. With limited knowledge of anatomy, inexperience in surgical techniques, and the unavailability of antibiotics, an allopathic physician could do little to repair internal damage resulting from difficult childbirth. Enslaved women were aware of the failings of allopathic heroic medicine and the associated toxicities and would hide their conditions from their enslavers, relying instead on the slave health subsystem with its gentler medicines, healing hands, and compassionate practitioners. The mother was blamed for an infant's failure to thrive, and neither doctor nor enslaver addressed the environmental causes.

“Birthing a Slave” by Marie Jenkins Schwartz (2006), a well-documented study of the obstetrics and gynecology in the antebellum period that brilliantly captures the experiences of women under enslavement, is an excellent source for additional information. The obsession with controlling women’s bodies, especially Black women’s bodies, continues to this day and by mid-2021, according to the Guttmacher Report, 90 legislative actions restricting abortion, the most of any year since *Roe v. Wade* in 1973, had been enacted, bringing the total restrictions to 1,380, and the majority and the most draconian of these are in Southern states (Berry, 2017; D. Cooper Owens, 2017; Davis, 2000; Han et al., 2020; Kenny, 2010; Lyons & Petrucelli, 1978; Merritt, 2020; Owens, 2017; Savitt, 1978; Schwartz, 2001; Smithers, 2018; Ward, 1936; Washington, 2008; Washington, 2006; Whitfield et al., 2010; Withycombe, 2019).

Allopathic Medical Literature as a Voice for Enslavement

In the antebellum period enslaved people were the most significant financial asset for most Southern plantation owners, making medical research on the enslaved not a pursuit of science but an effort to maintain and expand the commercial value of this asset. In the midcentury over two hundred Southern medical journals avidly discussed management of enslaved bodies, documenting the dangerous, degrading, and dehumanizing surgical and medicinal experiments conducted on those bodies and espousing a scientific rationale for White supremacy and Black subjugation. White Southern slaveholding allopathic doctors, such as Josiah Clark Nott (1804–1873) and Samuel A. Cartwright (1793–1863), constructed a medical narrative of Black enslaved people through their biased lens, clouded European values and culture, membership in the slavocracy and commitment to Southern nationalism, and a capitalist system based on the

availability of free labor. Nott, educated in Pennsylvania and Paris, established his scientific credibility in his research into yellow fever. Losing four children to yellow fever, Nott disputed the popularly held belief that miasma was the causal agent, and instead pursued and published on the insect vector theory for yellow fever, linking mosquitoes with the spread of the disease. As a biblical scholar and early anthropologist, Nott rejected the concepts of evolution and common descent, arguing that neither the biblical nor ethnological research supported monogenesis, and promulgated a theory of racial hierarchy. Cartwright was the leading voice espousing enslavement theory and attempting to dampen growing abolitionist sentiment in the antebellum period. His writing appeared extensively in both professional journals and the lay press, and he acquired the moniker “Professor of Diseases of the Negro.” Cartwright’s medical theory promulgated the concept of a docile, childlike Black race unable to function without White paternalistic management and identified the following enslaved behaviors as medical conditions: Black people who run away have drapetomania; those who commit offenses have rascality; and if they do not respond to punishment, dysaesthesia ethiopica is the cause (Cartwright, 1851). Cartwright prescribed whipping as appropriate punishment for what he defined as deviant behaviors, giving medical sanction to this vicious and inhumane treatment of the enslaved. Cartwright’s views, supported by medical luminaries such as Louis Agassiz of Harvard and Samuel Morton with his collection of crania, of a biodeterminist model of race declaring biological differences between races and different therapeutic approaches to medical care became the accepted doctrine in Northern and Southern medical schools. Interestingly, while Cartwright authored the *Diseases and Peculiarities of the Negro Race* documenting the differences between the races,

allopathic doctors based their understanding of anatomy and physiology on the dissection of primarily Black bodies and surgery they perfected on Black bodies which benefited their White patients (Carmichael Emmett, 1948; Cartwright, 1851; Daher et al., 2021; Fisher, 1968; Guillory, 1968; Haller, 1972; Menand, 2001b; Nott, 1844; Nott et al., 2016; Nott et al., 1854; Porter, 1998; Savitt, 1982; Wheelock, 2016; Willoughby, 2018).

Erwin Ackerknecht's behaviorist approach to writing the history of medicine insists that there is an important distinction between how medicine is preached and how medicine is practiced. For a more complete picture of Southern medical care, we need to look beyond the writings of prominent racial theorists of the day and consider how a doctor delivered daily bedside patient care, and the best source of this information is individual published case narratives that appeared in Southern medical journals of the period. The number of medical journals in the United States doubled in a decade, going from 110 in 1840 to 204 in 1849, and a quarter of these were in slaveholding Southern or Western states. Transylvania Medical College of Kentucky was the largest and most influential medical school of the South, founded at the turn of the century; it had graduated 8,000 doctors by 1859. The *Transylvania Journal of Medicine* published medical treatment narratives, and a 1936 article by Lunsford Yandell tells of nine difficult dysentery cases, one of whom died (his son), and two of whom recovered (his wife and a close family friend) despite the ineffectiveness of medicines administered. Yandell's case histories repeated an often-told tale of the limitations of the medicines of the day and the inability of practicing doctors to curb the epidemics of yellow fever and dysentery that engulfed White and Black members of a community. They further illustrate the reliance on bleeding, blistering, purgatives, and the toxic heroic medicinal

compounds used on patients both north and south of the Mason-Dixon line. While the doctor was a central member of the structure that supported slavery, case histories demonstrate that doctors of the day used the same materia medica in treating White and Black patients (Ackerknecht, 1967, 1982; Numbers & Savitt, 1989; Stowe, 2004; Stowe, 1996; Taylor, 1963; Ward, 1994; Wright Jr, 2006; Yandell, 1836).

In *The Greatest Benefit to Mankind* by Roy Porter, Agassiz, Cartwright, and Nott do not appear; Morton gets a mention, noting that he studied in Paris, but there is no mention of his crania; Sims has less than a page, with his VVF procedure lauded as an important discovery of the age; and the health of the enslaved receives two pages, mostly focusing on their resistance to malaria due to the sickle-cell trait. Porter's 800-page triumphant march of medicine opus edits out scientific racism, allopathic doctors' role in the slavocracy, and questionable experimental ethics, presenting a vastly distinct perspective of allopathic medicine in the antebellum period. Fortunately, outstanding Prig medical histories of the past two decades, such as Harriet A. Washington's *Medical Apartheid* (2006), have documented how allopathic medical knowledge in the antebellum period was gained by exacting a brutal toll on America's enslaved. Allopathic doctors, by serving not in the role of healers of patients but rather as enablers for the brutish, dehumanizing, capitalist system of slavery, were able to enhance their professional standing, strengthen their position in the community, and gain political influence (Byrd, 2000; Haller, 1972; Porter, 1998; Rutkow, 2010; Savitt, 2007; Schwartz, 2001; Starr, 1982; Ward, 1936; Washington, 2006).

Chapter 5

CIVIL WAR (1861–1865) AND RECONSTRUCTION (1865–1877)

By 1851 the United States was an economically divided nation. In the North the economy was diverse, composed of \$186 million in manufacturing, \$21.3 in mining, \$171.3 in commerce and trade, \$20.5 million in forestry and fishing, and \$264.5 in agriculture, but the South was predominately dependent on agriculture with its revenues of only \$259.7 million and no significant manufacturing capabilities (Bates, 2015). The availability of unpaid slave labor both supported the development of agriculture and discouraged the development of other industries requiring education, training, and equipment. The North benefited from the invention of coal-fueled steam engines which replaced water-driven power in mills, increasing the efficiency and manufacturing throughout and which also spawned the growth and profitability of the mining industry. The North had an efficient transportation system, with the Erie Canal connecting the Great Lakes to the Atlantic Ocean, reducing transportation costs and time for shipping freight. Railroad track laid across the country increased tenfold during the antebellum period in the North and West, and the use of railroads to move people and cargo doubled. A stable currency and efficient financial systems, courtesy of Alexander Hamilton, supported rapid expansion of manufacturing facilities, and management exports and protective tariffs for textiles increased profits on Northern manufactured goods but decreased profits on cotton production. These economics were at the heart of the slavery issue: as the North was expanding into new market areas, building infrastructure, and improving technology, the South was locked into an agricultural economy not supportable without unpaid labor (Adams, 2000, 2019; Bernstein, 2005; Bernstein, 2004;

Coclanis & Engerman, 2013; Engerman, 2007; Gordon, 2004; Klein, 2004; Sparrow, 2017).

The Civil War tore the fabric of the New American Republic and was the inevitable collision of Southern economic necessity and Northern resolve for abolition and social justice. The Civil War involved 2,893,304 enlisted soldiers over four bloody years, and the narrative presented in history books records courageous battles, brilliant strategies, valiant and resolute warriors, and tragic counts of those fallen in battle. This militaristic narrative neglects the greatest deadliest villain in this conflict: disease. From detailed records for the Union Army and estimates for the Confederate Army, whose records were not as well preserved, we know that actual battlefield injuries accounted for the deaths of 110,070 Union soldiers and 94,000 Confederate soldiers. For every soldier who died in battle another two died from disease; disease fatalities for the Union were 249,458 and for the Confederacy were 164,000 (Livermore, 1901; Wilbur, 1998). These 617,528 wartime deaths are more than the number of American lives that have been lost in all military conflicts since the Civil War. Based on the United States population at the time, one in ten military age Northern men died in the war, and the horrific estimate for the South was that one in four military age White men died. Additionally, approximately 35,000 Black soldiers were lost in this bloodiest of all wars, and there was not a family in the country that escaped personal loss. This unimaginable carnage made clear for all Americans the limitations of the allopathic medicine of the day, which did not have the medicines, the surgical techniques, or the support structure to manage battlefield injuries nor the understanding, tools, or medicines to manage the epidemics that felled the armies off the battlefield. An in-depth discussion of all the medical aspects of the War is beyond

the scope of this dissertation but my analysis includes the major causes of death and clinical resources available. My focus will be on the aftermath of the Civil War and the challenges posed by Black and women doctors to the White male allopathic community, the rise of neoteric healing systems in response to the War, and the politics and power struggle within the newly pluralistic healing community that led to the establishment of an allopathic hegemony (Brooks, 1966; Humphreys, 2013; Schroeder-Lein, 2008; Shryock, 1962; Wilbur, 1998).

The bloodshed on the battlefields of the Civil War was almost unimaginable. Medical knowledge had not advanced significantly since the Revolutionary War three quarters of a century earlier, and the military medical system was under-resourced with too few doctors, no supportive medical staff, limited ambulance service, and no system of structured field hospitals. For example, at Gettysburg the Union entered the battle with 94,000 troops supported by 1,000 ambulances with 3,000 drivers and stretcher bearers and 650 medical officers. With over 23,000 injured in three days of fighting, the challenge of evacuating the injured amid a raging battle, triaging, and treating became overwhelming as the battle shifted and resources need to be redeployed to the front lines (Adams, 1952; Livermore, 1901; Wilbur, 1998). Medical treatment was primitive by today's standards; the allopathic tools of the lancet for bleeding and the mercurial calomel for purging were useless for shattered bodies, antiseptic procedures were not followed (Lister's theory of bacterial spread of infections was known but American surgeons still believed the noxious miasma theory of airborne spread of infection), and surgery without the support of today's surgical team was limited to manual removal of bullets and suturing and amputation of damaged limbs. Repair of injury to internal organs

was beyond the surgeon's skill and infection was highly probable under battlefield conditions for soldiers who sustained wounds to their torso, and over two thirds succumbed to their injuries. By World War II only 3% of American soldiers wounded in battle died, as medical care was advanced by ambulatory field hospitals, evacuation procedures, and the availability of penicillin, but in the Civil War even a minor injury could prove deadly. The war began with the U.S. Army having only 113 doctors on staff, and the ranks swelled to 3,000 doctors serving in the Confederate army and 12,000 doctors supporting Union forces. The doctors risking their lives to care for the injured and dying on the battlefield did not come from the elite medical schools of the Northeast. Many of the educated medical elite chose to spend postgraduate training in Vienna or Paris over the bloodied fields of battle, and prominent Southern allopathic doctor J. Marion Sims, who used enslaved bodies to develop his surgical techniques, spent the war in Europe on a lecture tour (Packard, 1963; Reilly, 2016; Shryock, 1962; Sims & Sims, 1885; Wailoo, 2018).

At look at the medicinal drugs purchased by the Union Army doctors vividly shows the limitations of heroic allopathic medicine. Of the 67 items on the list the majority were purgative or evacuative agents and a broad assortment of botanical extracts, and the only items of the list of proven medicinal value were quinine, opium, morphine, chloroform, soda bicarbonate, and belladonna. Two of the more interesting products on the medications list were as spiritus frumenti (whiskey) and vinum album (sherry). Over the course of the war among the Army purchases of surgical equipment were 596 general operating cases and 77 minor operating cases, an inadequate number for such a lengthy and bloody conflict. The Army also invested in 3,955 electro-magnetic

machines; such a significant investment in questionable technology indicated there were lobbyists at work even then. With such a paucity of resources, one must respect the doctors on the front lines of the war who were often newly minted from medical school, general practitioners with no experience with life-threatening gunshot wounds, without specialized surgical training or equipment. They worked without adequate anesthetics for surgery, without trained surgical assistants, with nursing care and custodial services most often done by recuperating soldiers, and without medicines to effectively manage infection. Their efforts to provide the highest quality of care possible under exhausting and dangerous conditions is noteworthy (Humphreys, 2013; Keen, 1918; Rutkow, 2010; Savage, 2000; Shryock, 1962; Wilbur, 1998).

War makes a perfect breeding ground for disease, with unhygienic conditions, poor nutrition, crowded quarters, and exhausted soldiers, and the Civil War cost America 413,458 young male lives. Many more soldiers survived, but with their health seriously compromised in response to physical and emotional trauma. The massive death toll arose from the living conditions found in military encampments, in hospitals, and most egregiously in military prisons. The most common ailments were gastrointestinal ones, for which allopathic doctors had no effective therapeutics; the current treatments of bleeding and purging exacerbated the disease and weakened the patient. Just looking at the Union Army, for whom more accurate statistics are available, the over a quarter of a million soldiers who died from disease were most frequently affected by diarrhea or dysentery, which afflicted 70% of soldiers and resulted in the death of 44,558. Typhoid, caused by water contaminated with fecal matter was common in Washington, D.C., during the war, caused 34,833 deaths included that of Abraham Lincoln's son. Quinine

was a known preventative for malaria, but the drug had limited availability, especially in the South which saw the greatest number of cases. Among Union soldiers, malaria afflicted 1,315,955, 10,063 died of the disease, and others suffered long-term complications from their illness. Of the 29,510 tuberculosis cases, 6,946 perished during the war, but more died of the disease in the following years. Pneumonia, yellow fever, typhus, smallpox, and even measles all added to the death toll. Nearly 200,000 soldiers were diagnosed with syphilis or gonorrhea, incurable diseases that they brought home to their communities. The Civil War tested the limits of medical care, took a terrible toll in human life, and resulted in lifelong disability for many survivors and the broad spread of sexually transmitted diseases, and yet the valiant militaristic narrative continues and the country is littered with statues of battle victorious generals who watched their soldiers felled by disease more often than by battle (Barnes & United States. Surgeon-General's, 1870; Freemon, 1993; Humphreys, 2013; Schroeder-Lein, 2008, 2012).

As with all wars, when a great multitude of bodies are shattered and standard techniques and tools are ineffective, surgeons explore new options to reconstruct the broken appendages, control bleeding, and dealing with internal organ damage in a valiant attempt to save young lives. Surgical advances that arose from the Civil War included more effective protocols for administering anesthetics, more effective techniques to control arterial bleeding, primitive attempts in neurosurgery, and the first recorded plastic surgical procedure. As the war progressed, systems for battlefield management of the injured improved significantly with improvements to evacuation procedures as a dedicated ambulance service was added, compared to the beginning of the conflict when the same vehicles that carried the injured could also be commandeered to deliver

ammunition or supplies to the front lines. In the North, treatment moved from makeshift hospitals on the field of battle to large city-based hospitals of 1,000 beds each with trains and boats for moving the injured to the new general and specialized hospitals. A Richmond facility containing five separate hospitals was the largest Confederate treatment center, caring for over 4,000 patients. A new understanding of the spread of disease led to a successful treatment of gangrene using bromide and patient isolation and new quarantine management protocols eradicated yellow fever. No substantive new medicines were developed during the war, but better surgical techniques and better triaging of battlefield care were developed. One critical change that resulted from the four years of conflict was that practitioners of allopathic medicine finally rejected the heroic approach to treatment after seeing ample proof that in treating battle injuries or managing the spread of epidemics, massive doses of potentially toxic agents and repeated bloodletting were of little benefit. Allopathic medicine relinquished its heroic treatments but did not gain any new therapeutics to replace them. American doctors did not accept germ theory and Koch's postulates until the 1890s, vaccines were not available till the beginning of the 20th century. Antibiotics were still three quarters of a century away, so although the bleeding and purgatives had been shown as ineffective, allopathic medicine continued to use them, only in smaller and less toxic dosages. The war left a great part of the landscape of the Southern states in desolation with homes, farms, and cities destroyed and the healthcare system in shambles (Humphreys, 2013; Morantz-Sanchez, 1985; Reilly, 2016; Schultz, 1992; Shryock, 1962; Starr, 1982).

Allopathic medical care in the South was inextricably embedded into the institution of slavery, and the emancipation of five million individuals left them without a

system for medical care. Prior to the Civil War, slave hospitals established by White doctors and supported by fees paid by plantation owners existed in major cities for care of enslaved patients, but most care was provided either through White allopathic doctors attending to enslaved patients on plantations or through the informal slave health subsystem and the Black folk healers who constituted its medical workforce. After the destruction of the plantation system, the backbone of Southern commerce and social and medical services, allopathic doctors lost their primary source of income: treating and evaluating enslaved people on behalf of plantation owners. As the newly emancipated population migrated to cities in search of jobs and homes, they required health services but lacked the financial resources to engage White allopathic care and they were separated from the informal slave health system which had operated in the rural agricultural environment (Byrd, 2000; Gamble, 1995, 2016; Savitt, 2007; Wilbur, 1998).

The Freedmen's Bureau established in 1865 to provide food, clothing, education, and medical care to refugees and formerly enslaved Black people. The Bureau was structured to provide short-term support until local communities could establish their own infrastructure and services. The Freedmen's Bureau by 1867 had founded 45 hospitals with a capacity of 5,292 beds located principally in the major cities, to which many of the five million previously enslaved people had migrated. The Bureau's organizational resources were overwhelmed by demand and constricted by insufficient financial support, inability to recruit key doctors, and lack of proper hospital facilities. By 1872 all Bureau hospitals except the one in Washington, D.C., had closed. The new hospitals which arose in the South during the Reconstruction Era set the pattern for a segregated health system which persisted for the next hundred years, White doctor-run establishments allocated

subpar segregated facilities to the Black population and excluded Black medical professionals. The racial divide in allopathic medicine and the Black community's commitment to care which began with the slave health subsystem fueled the development of Black medical schools and Black-founded and controlled hospitals, which will be discussed in Chapter 7 (R. B. Baker et al., 2009; Gamble, 1995, 2021; Rodríguez et al., 2017; Savitt, 2007).

Chapter 6

NEOTERIC HEALING SYSTEMS AND THE RISE OF MEDICAL PLURALISM

The Civil War reconfigured American society and realigned political, social, cultural, and financial institutions. The War challenged critical beliefs in America about the institutions of religion and medicine. The cruel death toll on the battlefield and the desolation caused by so many young soldiers succumbing to disease led the next generation to search for alternatives to allopathic medicine for health and healing. The neoteric healing systems that arose in the second half of the 19th century came from individuals who either from the devastating loss of loved ones or from personal frustration in seeking treatment for their own ailments, looked beyond the allopathic materia medica to find healing and health through alternative theories of disease, personal self-care, religious conviction, and community support. I will limit my discussion of the neoteric groups to five that dominated the second half of the 19th century, homeopathy (discussed earlier), osteopathy based on spinal manipulation, hydropathy with its water-based therapeutics, and the faith-based healing of Christian Science and Seventh-day Adventism, as these were the dominant groups then and are still present as healing systems into the 21st century.

Homeopathy, as discussed previously, accepted the basic allopathic premises of anatomy, physiology, and disease presentation, but homeopathic medicines were based on a central belief in similars and gender-specific infinitesimal dosages of a therapeutic agent. In the first half of the 19th century, allopathy and homeopathy argued over appropriate treatment regimens and approaches to patient care, but they peaceably

coexisted with a porous line dividing the two as they often shared patients and medical facilities. During the Civil War allopathic medicine began clearly delineating the differences between itself and homeopathic medicine and asserting its superiority. Allopathic doctors refused to serve with homeopathic doctors, and the Union Army disqualified homeopathic doctors from serving as military surgeons. This government-sanctioned devaluation of the skills of homeopathic physicians was the first step to creating an unbreachable divide between the two groups. Homeopathy was originally predominately in the northeastern states, but post-Civil War spread across the nation and began attracting affluent middle-class patients. Homeopathy's rejection of caustic chemicals, bloodletting, and leeches and view that disease resulted from a disturbance of the vital life force as seen by the physician and felt by the patient resonated with the better educated populace and represented a gentler approach to treating childhood diseases. Homeopathy became the second largest medical system in 19th century America, with 13 medical schools, located in most major cities and open to men and women. By 1900 there were 15,000 practicing homeopathic physicians, of which 2,500 were women, and women represented 18% of the total homeopathic medical school graduates in the United States by 1900. Homeopathy politically, socially, and economically challenged the hegemony of allopathic medicine, and its inclusiveness of women changed the dynamics of medical care by affording a woman the option of treatment by a same-sex provider. (Ackerknecht, 1982; Baer, 2001; Coulter, 1995; Haller, John S., 2014; Haller, 2009; Jütte, 2014; Smith-Rosenberg & Rosenberg, 1973; Thompson, 2015).

Osteopathy: Medicine From the American Frontier

Osteopathy was a uniquely American neoteric disease treatment model, and it was the medicine of the frontier. Andrew Taylor Still (1828–1917), a dedicated abolitionist, trained as an allopathic physician and served as a doctor during the Civil War but became disenchanted with heroic medicine based on his wartime experience and the inability of allopathic care to save the lives of his wife and three daughters when stricken with spinal meningitis. Still was a devout Methodist, whose rejection of alcohol made him question the value of medicinal spirits and the various chemicals used in heroic medicine (Moore, 2012). The healing system Still developed shared commonalities with the three-thousand-year-old Chinese practice of bone setting, which focused on alleviating pain by through manipulation of bones, stretching and realigning ligaments and alleviating blockages of essential fluids in the body. Articles on the ancient Chinese practices appeared in *The British Medical Journal* as early as 1868 and in *The Lancet* in 1871, and interestingly both articles discussed the threat of successful bone setters to the careers and finances of allopathic physicians (Hood, 1871). With the influx of Asian immigrants to the western United States by midcentury, bone setters and their practices most probably reached Kansas where Still was practicing medicine, but his autobiography gives no mention of exposure to Chinese theories and practices (Still, 1897, 1899). Still declared that the clinical practice he termed *osteopathy* was based on his study of anatomy which he performed on exhumed Native American remains; his study of physiology, chemistry, and mineralogy; his technical expertise on the structure and workings of machinery; and his religious belief that an Intelligent Maker of man provided with a human's body the necessary resources to cure illness. Osteopathy was based on two basic tenets: the human

body has the natural ability to heal itself and disease is caused by mechanical derangement in the body and cured through proper alignment of muscle, tendons, and bones, especially the spinal column. Central to Still's therapeutics was the concept of touch: the physician uses palpation to determine misalignment and blockages in the patient's system and then uses his hands to manipulate the body and make the necessary corrections (Baer, 1995, 2001; Hood, 1871; Kirschmann, 2004; Lyons & Petrucelli, 1978; Still, 1899).

In 1892, Still opened the first osteopathic medical school in Kirksville, Ohio, in conjunction with William Smith (1862-1912), an Edinburgh-trained physician, and the school they founded conferred a Doctor of Osteopathy (DO) degree on graduates. From the beginning, the 16 osteopathic medical schools established in the Midwest accepted women. While most allopathic medical schools in the Midwest were 1-year diploma mills, Still staffed the osteopathic schools with qualified instructors, and these schools had a four-term matriculation requirement. Since both osteopathy and homeopathy had an individual founder who published detailed documentation on the theory and practice of their therapeutics and controlled the establishment and accreditation of associated medical schools, there was an important consistency in the extent and quality of education that a doctor with a DHM in homeopathy or DO degree in osteopathy received, and this was not at all true for the Doctor of Medicine (MD) graduates of allopathic schools which had no common entrance requirement, educational duration, or diagnostic and treatment manuals (Gevitz, 2019; Haller, 2005; Hamonet, 2003; Kirschmann, 2004; Paulus, 2013; Quinn, 2011; Still, 1899; Thomson et al., 2013).

While on the surface osteopathy appears to be a mechanistic medical treatment—find the obstruction and manipulate the body to relieve the blockage—the concept of healing hands made it resonate with the strongly religious population of the Midwest. Without the crowded environment and poor sanitation of the cities, the Midwest was spared some of the serious infectious diseases that were rampant in cities at the time, and osteopaths treated mostly injuries and childhood and chronic disease, for which gentle touch and supportive care were an effective companion to the body’s self-healing (Norman Gevitz, 1988; Hamonet, 2003; Paulus, 2013; Quinn, 2011; Selby & Twain, 1980; Still, 1897; Thomson et al., 2013).

A Generation Embraces Faith-Based Healing Systems

While osteopathy and homeopathy sought cure through physical manipulation and use of diluted chemical agents, faith-based healing offered a spiritual approach to health and healing in the second half of the 19th century. The Second Great Awakening in the early 19th century changed the religious face of America. Revivalist meetings led by evangelical Protestant preachers brought thousands of followers to active faith and a commitment to Christian perfection and evangelism. The Awakening inspired innovative ideas of what it meant to be a true and pure Christian in terms of what to eat and drink, how to dress, and how to engage with the community at large. During this period, two women, Mary Baker Eddy (1821–1910) and Ellen White (1827–1915), redefined the relationship of God with health and established the two largest faith-based approaches to healing originating in the United States (Conforti, 1991; Leavitt, 1999).

Eddy first set forth her principles of science and healing in *The Science of Man, By Which the Sick Are Healed* published in 1870. Her original name for her teaching was

Moral Science and she later changed the name to *Christian Science*. Eddy's healing system was based on New Thought, a 19th-century movement that emphasized mind over matter and metaphysical healing. She was a student of Phineas Quimby (1802–1866), who first used mesmerism to heal but later espoused mental suggestion alone for healing illness (Baer, 2001). Plagued with various stress-associated physical illnesses and lengthy bouts of depression, Eddy explored the various non-allopathic healing systems of the time in her quest for symptomatic relief. Her ability to find pain relief and improved mobility by turning to the bible after she experienced a severe fall prompted her to consolidate her teaching into a cohesive philosophy of healing (Eddy, 1994; Gevitz, 2015; Schoepflin, 2003).

Science and Health: With Key to the Scriptures written by Eddy in 1875 is a 700-page guide to the tenets of Christian Science. Eddy believed that only God existed, God was one both male and female, and humans and the universe are God's reflections. Her philosophy denied the reality of disease, sin, and death because God is all and is good. Eddy saw recovery from illness as scientific proof of the beliefs of Christian Science. Her approach to healing involved the healer first changing the patient's belief they are sick through discussion, then using his mind to change the patient's thoughts. Finally, the healer realizes the truth and the patient is freed from their illness (Gevitz, 2015; Leavitt, 1999).

When the church experienced a loss of membership, Eddy very successfully retrenched. She focused on publishing her writings in weekly and monthly newsletters, launched the *Christian Science Monitor*, and established reading rooms in all major cities. Membership went from 8,724 in 1890 to 47,083 in 1908; in 1908, 72.4% of

Christian Scientists were women. In addition to explaining the role of the Scientist healers, Eddy established a role for nurses and avoided direct confrontation with allopathic physicians by endorsing vaccines as they became available. After an unfortunate death of a mother and baby, she restricted the role of Christian Science in obstetrics (Gevitz, 2015; McKay, 1989; Schoepflin, 2003).

Ellen White (1827–1915) was born in New England just six miles from Eddy's home, and the women were close in age. Like Eddy, White suffered from ill health and sought relief through the healing systems of the time. As she developed her own healings, she first rejected allopathy and then all other neoteric system except hydropathy, which she credited for saving the lives of her two sons from diphtheria. After the near death of her children, White began experiencing trances and receiving instructions from heaven on the optimal path to health and wellness. Her recommendations were similar to those of other health reformers of the time: vegan diet, no spirits, infrequent sex, and no physicians or medicines (Numbers, 1974). White viewed herself as a latter-day prophet and was originally involved with a sect called the Millerites, who believed that Christ's return to earth was imminent. In one of her trances, White received a visit from an angel who asserted that Christ would not return until Saturday, so Saturday rather than Sunday was observed as the Sabbath; thus, the Seventh-day Adventist Church (SDA) was formed under White's leadership (González, 2009; Levterov, 2016; Nikolai, 2003; Numbers, 1992; White, 1942).

In 1864, White and her husband established their Western Health Reform Institute in Battle Creek, Michigan, modeled on a the largest hydropathy center in Dansville, New York. Staff included both male and female doctors trained at the facility. Dr. John Harvey

Kellogg (1853–1943) managed the facility and turned it into a premier sanitarium with satellite branches across the country. While Kellogg developed specialized food such as corn flakes, it was his brother who became wealthy by commercializing them. When Kellogg was excommunicated from the Adventist church in 1907 for challenging White's claim of divine inspiration, he took the Battle Creek medical school and sanitarium with him. White established a new medical school and sanitarium in Loma Linda, California, where female practitioners and nurses were welcome, as White did not think it appropriate for men to treat women patients. In addition to *The Ministry of Healing*, her major work, White published 40 books and 6,000 articles and, like Eddy, managed a successful publishing house to disseminate her teachings. White established a global presence for the Adventists with her travel in the 1880s and 1890s to Europe, Australia, and New Zealand and created a network of 33 sanitariums on six continents (Baer, 2001; Levterov, 2016; Numbers, 1992; Reid, 1982).

By the end of the 19th century, the neoteric healing systems created a mosaic of healing systems across the vast continental spread of America and reached to Europe and beyond. America became a mosaic of competing healthcare systems, with Christian Science and Mary Baker Eddy ensconced in Boston and a major force in the Northeast; homeopathy, with its home in Philadelphia, started in the Northeast and followed the German immigrants westward; osteopathy, the child of the prairies, dominated the Midwest; and Ellen White moved her ministry across the country and established the West Coast as the home of the Adventists. America now had a regionalized approach to healing, and this growth was at the expense of allopathic medicine. Neoteric healing systems benefited from an overall improvement in American health, as in the second half

of the 19th century disease rates declined, childhood mortality declined, and life expectancy rose, not because of the development of new medicines or heroic treatments, but through public health initiatives which were guiding principles of the neoteric care. Focus on clean water, proper sanitation, less crowding, better hygiene, healthier eating, and lifestyle changed the composition of a healer's medical practice. Epidemics of cholera, anthrax, rabies, tetanus, and diphtheria became less of a threat. Before the advent of antibiotics and vaccines, neither allopathy nor neoteric medicine could provide curative therapeutics, and supportive care and patients' own recuperative powers most often determined outcomes. While allopathic physicians focused on disease and clung tightly to their mantra of military action against disease and the strongest drugs at the highest dosages, the neoteric healing systems approached illness and health as a partnership between the patient and the healer. For them, disease was not a target to be routed and destroyed; rather, the body has the internal resources to fight disease, and the goal of the healer was to support the sufferer through their illness through gentle therapies, healing touch, water baths, prayer, and understanding. Each of the neoteric systems had a unique approach: osteopathy used therapeutic touch, homeopathy created safe medications, hydropathy used water as a vehicle to wellness, and Christian Science and Adventism used prayer and divine intercession for cure.

The story of Mark Twain (1835–1910), American writer, humorist, and lecturer, was typical of why individuals sought care outside of allopathic medicine. Twain's 2-year-old daughter died from meningitis despite allopathic care which include the standard regimens of bleeding, purging, and mercury containing calomel, and when another daughter developed epilepsy, he, as I can well imagine most parents, did not wish to see

her subjected to allopathy's therapeutics of the day, including bleeding and skull trephination (drilling a hole in the skull)—the first effective allopathic medicine for epilepsy, phenobarbital, was not discovered till 1916. Instead, Twain sought osteopathic care for his child, and while osteopathic manipulations did not cure the child's disease, they did significantly reduced symptoms. Twain touted the fact that both he and osteopathy both hailed from Missouri, the Banner State, sought osteopathic care for himself and his wife, and went on to be a vocal proponent for osteopathy, effectively lobbying the New York legislature on behalf of osteopathic medicine.

While therapeutic approaches such as osteopathy, homeopathy, and faith-based healing may not have been able to cure disease, they could provide comfort, community support, and a path to a healthier lifestyle. I see the neoteric and faith-based healing systems as precursors to treatment modalities like physical therapy, psychotherapy, diet management, meditation and other non-surgical non-medical therapeutic approaches that are recognized today for their value of ameliorating symptoms, even though they cannot remove the disease causal agent. A significant commonality of the neoteric and faith-based healing systems was their acceptance of women their ranks, and the next chapter will discuss the founding of women's and Black medical schools (Baer, 2001; N. Gevitz, 1988; Lyons & Petrucelli, 1978; Singer et al., 2020; Sullivan, 1994; Vogel & Rosenberg, 2017).

Chapter 7

WOMEN'S AND BLACK MEDICAL SCHOOLS

The therapeutics of allopathic medicine had not changed significantly from the beginning through the middle of the 19th century. Without established standards for education or licensure, the allopathic medical profession became populated with doctors of widely varied medical credentials, including a medical apprenticeship; a year at a commercial for-profit medical school; or the typical 2-year curriculum at an elite, endowed Northeastern medical school—all allowed an individual the designation of MD. Allopathic medicine, with its stronghold in Southern states was linked to the increasingly contested issue of slavery, and Northern and Southern medical schools closed their doors to Black students and women, under the guise that admitting these students would devalue a degree from their medical school. While allopathic medicine remained the bastion of White males, neoteric healing systems, such as homeopathy and hydropathy, broadened their appeal by reaching directly to women with safer, pleasant-tasting medications; a focus on wholistic care; information on in-home self-care; a broad message of inclusivity; and support for the nascent attempts by women to carve out a greater role in public life. Neoteric medicine appreciated the vital role women always played as healers and offered women an opportunity for a medical education, while allopathic medicine stood steadfast in its exclusionary practices. Women and Black people fought for a medical education by both challenging admittances to existing medical schools and founding their own women's or Black medical schools (Baer, 2001; Fee et al., 2002; Gamble, 2021; N. Gevitz, 1988; More, 1999b; Starr, 1982; Wrobel, 2015).

Proto-Feminism and Women's Medical Colleges

Margaret Fuller (1810–1850), in her *Woman in the 19th Century*, the first American proto-feminist manifesto, called for women to take charge of their own destiny—to move beyond the roles of just wives and mothers, pursue equality, and challenge the exclusivity of male-only professions. She also asserted that women needed to take control of their bodies and was an early and highly vocal advocate for birth control. With a clear divide in the 19th century between the public sphere and the domestic sphere, few women could meet the immense challenge of the patriarchal allopathic hegemony and secure admittance to a for-profit or endowed medical school, which were committed to not alienating their current male student body. A separatist political strategy gained popularity in the mid-19th century as women sought to control their own destiny and avoid token representation in the male bastions of education. Through women's medical colleges women sought to create their own distinct medical education sphere (Bishop, 1977; Fee et al., 2002; Freedman, 1979; Fuller & Fuller, 1855; Morantz-Sanchez, 1985; Walsh, 1977).

A year before Elizabeth Blackwell (1821–1910) set the historical precedent of being the first woman to graduate from a coeducational allopathic medical school in 1849, pioneering women established the first women's medical college in Boston. In 1848 the Women's Rights convention in Seneca Falls asserted to 11 equal rights for women; two of the most important were the equal right to employment and the equal right to vote. The right to vote took seven decades to achieve, but a major step forward in job equality in the medical field came with the establishment of the Boston Female Medical College (later changed to New England Women's Medical College) by Samuel

Gregory, a graduate of Eclectic Pennsylvania Medical College, in 1848. *Doctress of Medicine* was the original title for graduates from this institution, but this was changed to *Doctor* based on suggestions that this feminized version indicated inferiority. When the New England Women's Medical College faltered financially in 1873, it merged with Massachusetts Homeopathic Hospital, which held a state charter for a medical school and created Boston University Medical School, a homeopathic institution and the third coeducational medical school in the country. An eclectic-trained doctor founded the school; allopathic and homeopathic doctors staffed it, and it later merged with a homeopathic institution, so both allopaths and homeopaths lay claim to the establishment of this female medical school. Seventy-five percent of the students in the first year of the new Boston University Medical school were women, and the school continued as a bastion for the education of women and Black people. The first Black woman graduated from this school was Rebecca Lee Crumpler in 1860, and she went on to distinguish herself after the Civil War by setting up a tent hospital in Richmond for the 10,000 newly emancipated enslaved people who gathered there. Despite Crumpler's achievement as an academic pioneer and her outstanding record of service, her story was unrecognized until recently in the White, male narrative of medicine, and Boston University did not acknowledge her contributions until 125 years after her death, when they erected a statute in her honor (Blanchard, 1978; Drachman, 1976; Drachman, 1982, 1984; Fee et al., 2002; Ferry, 2021; Freedman, 1979; Fuller & Fuller, 1855; Gassett, 1855; N. Gevitz, 1988; Kirschmann, 1999; Laskowski, 2020; Mocci, 2018; Nimura, 2021; Robinson, 1982; Vigil-Fowler & Desai, 2021; Wellman, 2010).

Homeopathy, a medical practice that arrived from Germany at the beginning of the 19th century, was the most scientific of the neoteric healing systems, based on a system of drug efficacy trials, detailed case reporting, and a materia medica of low toxicity therapeutics. The first homeopathic medical school in the United States was established in Allentown, Pennsylvania, in 1835. By the antebellum period homeopathy was well established in the Northeast and Midwest and practiced by an amalgam of doctors who had graduated from homeopathic medical schools, allopathic doctors who incorporated homeopathic medicines into the treatment protocols, and lay advocates of homeopathic care. Homeopathy, from the beginning, clearly understood the importance of gender in determining appropriate care. All provings, the homeopathic process by which the effectiveness of a medication is determined, were conducted separately on healthy volunteers, both men and women, to identify the drug's action and its physiological and psychogenic responses for each gender. This in turn determined its potential efficacy and the appropriate use in people, as well as the appropriate dosage for each gender. Homeopathic medicine needed women as participants in its gender-specific provings (drug testing) research; the homeopathic patient population was estimated as two thirds female; and homeopathy received strong endorsement from such liberal and equalitarian organizations as the Quakers, New England Transcendentalists, the Suffrage Movement, and newly settled Germanic Midwestern communities. All these factors contributed to homeopathy being more receptive to including women in its professional ranks. Homeopathic patients tended to come from a higher socio-economic strata, be more likely to favor social reform, and be more socially prominent, which meant they were more receptive to women in medicine and had the financial resources and social

capital to support women's educational institutions (Baer, 1989, 1995; Coulter, 1995; Davis, 1999; Haller, John S., 2014; Holt, 1845; Kaufman, 1971; Kirschmann, 1999, 2004; Lippe, 1866; Woodson, 2002).

Early in the 19th century, homeopathic medical schools, especially newly established ones looking for additional revenue, occasionally accepted women, but as the popularity of homeopathy grew and the number of male applicants increased, women were gradually excluded. By the antebellum period women seeking a medical education found that the prominent homeopathic medical schools closed to them. Dedicated women's medical schools were established in New England (1848), Philadelphia (1850), New York (1863), and St. Louis (1867) to meet the growing demand, and these schools graduated whole classes of women homeopathic doctors, shifting the composition of homeopathic practitioners. By the end of the 19th century 18% of all homeopathic medical school graduates were women. The New York Medical College and Hospital for Women (NYMCHW), founded by in 1863 by Clemence Lozier (1813–1888), an ardent feminist and homeopathic physician specializing in obstetrics and gynecology, and Elizabeth Cady Stanton (1815–1902), the women's rights advocate behind the 1848 Seneca Falls Convention and lay homeopath, was the most influential homeopathic training institution and treatment facility of the day, with 150 beds dedicated to women and children and 3,000 outpatients seen annually. The NYMCHW set rigorous educational standards, requiring 3 years of classroom instruction and two dissections, while the typical allopathic medical school required 2 years of study and one year of dissection, if any. The NYMCHW graduated the first female Canadian doctor, Emily Stowe (1831–1903), who had been unable to gain entrance to a Canadian medical school,

and in 1867 the third Black woman doctor Susan McKinney Steward (1847–1913). By the end of the antebellum era, women were firmly entrenched in homeopathic medicine, with four women's medical schools and a rapidly growing coterie of practitioners. With a socially influential and financially secure patient base principally in the Northeastern and Midwestern states, homeopathic medicine had clearly differentiated itself from allopathic medicine (Coulter, 1995; Davis, 1978; Drachman, 1976; Fee, 2015; Haller, 2005; Kaufman, 1976; Kirschmann, 1999, 2004; Rogers, 1984; Wellman, 2010).

In the Whiggish linear narrative, the White male medical patriarchy focuses on Elizabeth Blackwell, a woman who sought for years to scale the closed doors of allopathic academia and found success by accident. The students at Geneva Medical School, a small institution in upstate New York, thinking it was a prank by a competing school, voted unanimously to admit her and then voted equally unanimously to bar women from matriculating once Blackwell graduated. Blackwell's commitment to pursuing a career in medicine was legendary and unwavering. During her postgraduate training in Paris in obstetrics, discharge from the eye of a newborn splashed on her and both of her eyes were infected with gonorrheal conjunctivitis, a potentially blinding disease now treatable with antibiotics. The allopathic medicine of the day she was treated with included cauterizing her eyelids, eyewashes with collyrium (combination of rosewater, ammonia, and sulfuric acid), leeches, mercury, purgatives, hellebore, belladonna, and opium for what must have been unbearable pain. This amalgam of caustic agents was not dissimilar to those administered to George Washington and shows what little progress allopathic medicine had made in a half a century. Fortunately, Blackwell lost vision only in her left eye and continued her work for another 50 years.

With her sister, Emily Blackwell (1826–1910), and Marie Zakrzewska (1829–1902), Blackwell opened a Dispensary for Women and Children in New York in 1857 and established a short-lived Women’s Medical School in 1868 to respond to the homeopathic NYMCHW that had opened in New York 5 years earlier and had become a major force in education and women’s health care in the city.

Blackwell was not a supporter of women’s rights, but a voice for exceptionalism within gender rather than gender equality and opportunity for women. She had earned a medical degree despite obstacles as did her sister, Emily, who after Rush Medical School was closed to women in 1863 midway through her studies, completed her degree at Cleveland Medical College; hence, what the Blackwell sisters achieved was available to any woman with intelligence, determination, and commitment. Blackwell rejected the importance of female institution building and the creation of a medical culture more aligned with female values. She was vehement that a coeducational environment was required for proper medical education and that the pursuit of a medical career should require the student to forsake marriage and family. By focusing on and idealizing Blackwell, allopathic medicine created a professional narrative that rejected gender equality, devalued the women’s medical schools, challenged the homeopathic approach to gender specificity and inclusion, justified token representation of women in patriarchal coeducational medical schools, and identified the exemplar of a woman doctor as an exceedingly rare individual and a male-defined desexualized creature. This narrative assured continued dominance of White males in allopathic medical education, severely restricted women from entering the field, and challenged the authority and credibility of neoteric healing systems. Blackwell’s graduation was not a major step forward for

women; it was a singular accomplishment for one woman, and Blackwell's views supported White male hegemony in medicine and closed rather than opened doors for women seeking to enter the profession and transform it to be more aligned with feminine values and practice.

The achievement that we should be recognizing is the establishment of women's medical schools, both homeopathic and allopathic, which gave access to medical training to large numbers of women and Black individuals, created curriculum focusing on obstetrics and gynecology, and provided women with the first the opportunity to receive medical care from a woman doctor. The newly graduated women doctors quickly found themselves locked out of practice at existing allopathic hospitals, and they established their own hospitals dedicated to the care of women and children and created a system of dispensary care to meet the healing needs of indigent women and children in their communities. In the antebellum period, women's medical schools had broadened the options for medical education, redefined obstetric and gynecological care, and reshaped the healthcare delivery system. By the 1870 census, America had 525 women with medical degrees, more than in the rest of the world combined, and in 1905, 210 students were enrolled in the three women's medical colleges while 852 were enrolled in the 96 allopathic colleges that allowed women. This early success for women and a similar effective program for creating Black medical schools would be challenged in the coming decades by the AMA, and the Flexner Report is discussed in future chapters (Bishop, 1977; Blackwell, 1859; Blackwell & Blackwell, 1860; Blackwell & Friedberg, 1914; Fee, 2015; Flexner, 1910; Freedman, 1979; Kirschmann, 1999; Morantz-Sanchez, 1985; More, 1999b; Nimura, 2021; Sahli, 1977; Starr, 1982; Zakrzewska & Dall, 1860).

Black Medical Colleges Serve Newly Emancipated Population

Booker T. Washington (1856–1915) was emancipated at the age of 9 and built a legacy as an educator and a conservative voice for the Black community. He urged Negro self-reliance and solidarity and temporary acceptance of discrimination while striving for change through education, improved material prosperity, and increased social capital. Black medical schools and Black-controlled hospitals grew out of this commitment to provide care for the community and opportunities for Black medical professionals. In 1881 Washington was appointed head of the newly established Tuskegee Normal and Industrial Institute, funded by the Alabama legislature as “school for coloreds,” and through his efforts it became Tuskegee Institute, a leading American educational institution with 200 faculty, a student body of 1,500, and education in 38 trades or professions and included the second Black-controlled hospital and nursing training school (1882). At the time Tuskegee was founded, no medical school in the South accepted Black students and only a handful of schools did in the North. Just as two decades earlier, a specialized women’s medical school offered the greatest opportunity to maximize the women’s entrance to the field, now dedicated Black medical schools could most quickly meet the needs of Black doctors.

The first Black medical schools were funded by Northern missionary groups and are classified as missionary in origin. They included Meharry in Nashville (1876) and Flint in New Orleans (1889), both supported by the Methodist Episcopal Church. Leonard Medical School (1882) at Shaw University in Raleigh Was affiliated with the American Baptist Mission Society. Of the 15 Black medical schools founded in the second half of the 19th century, seven were missionary in origin. The United States

Congress originally established Howard University medical department, but the medical program relied on private philanthropy for ongoing financial support. Independent entrepreneurial Black doctors founded an additional seven medical schools to accommodate candidates for medical education who could not be placed in the existing missionary schools and to meet the ongoing demand from the communities for Black doctors. These independent medical schools, which occasionally might have had investors, relied primarily on student fees to meet their financial needs; thus, they were classified as proprietary or for-profit. Both missionary and proprietary Black medical schools struggled because of lack of resources, lack of qualified instructors willing to teach at a Black institution, providing for students who had limited resources, and the escalating cost for supplies and equipment as medicine moved to a more scientific footing by the end of the 19th century. These constraints fell hardest on the proprietary institutions with no Northern mission societies, religious sect donors, or well-heeled graduates to lobby for additional resources. The graduates of the Black medical schools faced major obstacles in both the North and South in providing their patients with hospital-based care (Robert B. Baker et al., 2009; Harley, 2006; Rodríguez et al., 2017; Savitt, 2006; Savitt, 2007).

At the end of the 19th century, only three of the 29 hospitals in New York City, one of the most liberal metropolises, would allow Black doctors to treat patients or perform surgery in their facilities, and only 19 of the 29 would admit Black patients. Newly minted Black MDs struggled for access to hospital privileges in both the North and the South, and Black patients requiring hospitalization were restricted to segregated units with more limited facilities. The Black spirit of self-reliance and solidarity led to the

founding of Black-controlled hospitals, with the first being Provident Hospital (1891) in Chicago, Frederick Douglass Memorial Hospital (1895) in Philadelphia, Home Infirmary (1906) in Clarksville, Tennessee, and the already mentioned Tuskegee Institute (1892). Black-controlled hospitals assured that Black doctors could provide a continuum of care if patients needed surgery or other hospital care and assuring that Black patients were treated with respect and dignity and not relegated to second-rate care or facilities. When Emma Reynolds, a talented Black student, was denied admission to every nursing school in Chicago, and the Chicago Black community, including doctors, clubwomen, and journalists, funded Provident Hospital and nursing school, an institution dedicated to the training of Black healthcare personnel. White business leaders from industries such as meat packing, farm equipment, and transportation, all of which relied on the Black workers migrating from the South, appreciated the changing demographics of the city, and supported the Black hospital and nursing school which were critical to meeting the healthcare needs of the burgeoning Black community. Finances of this nascent Black medical infrastructure were precarious, as newly resettled Black workers worked at low-paying jobs and had limited resources to pay for health services. There were no wealthy alumni to support the institutions and multitude of community services, and medical education required support from Black philanthropists. Black medical educational institutions met a critical need in America during reconstruction. The importance of the Black community and its commitment to these early grassroots efforts cannot be overstated nor can the critical support from missionary societies in creating and sustaining these Black medical education initiatives. By the end of the 19th century, as advances in science changed the practice of medicine, the existence of Black medical

schools was challenged by the AMA and Abraham Flexner's (1866-1959) landmark research for the Carnegie Corporation (R. B. Baker et al., 2009; Gamble, 1995; Savitt, 2006; Wilkerson, 2010).

Chapter 8

AMERICAN MEDICAL ASSOCIATION AND THE END OF AN ERA

In first half of the 19th century a New World medical environment was created that differed vastly from that of the Old World. While European allopathic medicine embraced scientific research, American allopathic medicine continued a course of heroic medicine based on militarist attack on disease with an ever more powerful arsenal of drugs given in ever escalating combinations and doses. Under Jacksonian democracy with the removal of licensure requirements, anyone could train medical apprentices, establish a medical school, or attach the appellation “doctor” to their name, and medical schools and medical practitioners proliferated across the continent. Homeopathic medicine brought structure and scientific methods to drug research, although from our 21st-century perspective we know that homeopathic medicines had questionable efficacy; still, they were less caustic and debilitating than the bleeding and purging of allopathic care. Homeopathic medicine grew to 20 medical schools in 16 states, and five women’s medical schools were established. White male allopathic practitioners viewed their professional authority, which was the basis for their social prestige and the guarantor of their livelihood, as challenged by the rapid growth and community acceptance of these new healers, their gentler therapeutics, and their patient-focused approach to care. Other threats to the allopathic community came from literacy and capitalism, which combined to create an unregulated market for medicinal agents. Advertising could turn any self-professed miracle cure or new nostrum into a financial bonanza. Some Americans embraced miracle cure potions or the promise of neoteric therapies, and others relied on medical almanacs and self-treatment. Antebellum health reform movements prospered

with their focus on natural living; botanical cures; self-mastery; and rejection of alcohol, stimulants, nostrums, and heroic medicinal agents. Allopathic medicine was under siege from without, but it was also victim to its own inadequacies (Bishop, 1977; Kaufman, 1971; Malone et al., 2005; Starr, 1982; Wootton, 2006; Young, 1961, 1984).

The quality of medical education in America had declined precipitously by the antebellum period. In 1800, America had four allopathic medical schools—at the University of Pennsylvania, Harvard, Colombia, and Dartmouth (Rothstein, 1987; Veith, 1976); all were modeled on European institutions of higher learning with instruction in Galenic theory, anatomy and heroic therapeutics. Philanthropically funded Northeastern allopathic medical schools continued maintain high admission standards while excluding all but White male applicants. As the population of the United States grew and moved southward and westward, the demand for medical care grew exponentially, and simultaneously under the Jacksonian era and the reign of the common man, all licensure requirements were lifted. Capitalism became a driving force in allopathic medical education with the advent of for-profit medical schools that arose primarily west of the Appalachians, and some were diploma mills requiring only a high school education for admission, offering only a year of academic training. Ability to pay the fees was a more important criterion for success than was academic competence. The for-profit schools graduated young men sometimes barely 20 years old with only classroom instruction, a limited understand of anatomy, without dissection experience, no structured clinical practicums, and no supervised surgical experience. By 1859, 30% of the allopathic physicians in practice came from the for-profit schools, and these poorly trained practitioners added impetus to the public losing confidence and faith in allopathic

medical care. For-profit medical education remained an allopathic phenomenon. Women's medical schools, blessed with an overabundance of qualified female aspirants, wealthy committed supporters, and the need to establish credibility, maintained exacting standards for admission and training. Homeopathic medical schools built on a rigid program of research and training; admitting both qualified men and women also led to an ample pool of outstanding enrollees and adequate resourcing. Homeopathic and women's medical schools were situated in major metropolitan areas, the domain of the elite allopathic school and a clear and present danger to the hegemony of White male allopathic medicine in these highly lucrative and influential patient populations (Baer, 1995, 2001; Chapman, 1974; Davis, 1978; Davis & Butler, 1855; Flexner & Flexner, 1966; Rothstein, 1987; Wrobel, 2015).

The American Medical Association and Allopathic Professionalism

This vast nation, spanning the continent, with an entrenched belief in exceptionalism and an unwavering commitment to capitalism, created a highly fragmented, medically pluralistic, competitive healthcare environment. What had been the allopathic domain of White males graduating from established medical schools was threatened in the antebellum period by women and homeopathic doctors entering the field and by the market being flooded with poorly educated and underqualified allopathic doctors graduating from for-profit medical schools. The major growth in new medical schools was in the South and the West, and the influence of Northeast allopathic medical establishment was being diminished. With the new incomers from the for-profit schools, medicine was moving towards becoming a trade rather than a profession akin to law or religion. In the United States medicine was moving to a consumer-driven market where

allopathic medical knowledge and authority were being questioned and the oversupply of doctors resulted in downward pressure on professional fees and diminishing pool of potential patients. Prior to 1846, allopathic doctors organized in loosely based and unaligned state and local associations with no political power, focusing on community issues, exchanging of medical knowledge, and professional camaraderie. Established and influential allopathic doctors in major cities, led by Nathan Davis Smith of the Medical Society of New York, recognized the limitations of this state-specific, fragmented, and decentralized approach, and created a national organization for allopathic medicine, the AMA which held its first convention held in New York in 1847. The AMA, conceived as a confederation of state and local medical societies, medical colleges, and hospitals, identified its goals as building internal consensus on values, defining the shared economic interests and creating professional legitimacy through national standards. The AMA's efforts were supported by the *Journal of the American Medical Association (JAMA)*, first published in 1883, designed to be an authoritative national publication to compete with 204 medical publications then in print which voiced conflicting and sometimes dubious opinions on medical care, medical ethics, and scientific research (Baer, 1990; Robert B. Baker et al., 2008; Fishbein & Bierring, 1947; Foshay, 2000; Pace & Lundberg, 1996).

The allopathic community recognized that it needed to engage the entire country if it wished to assert dominance through social, cultural, and political forces, and to redefine the parameters of who qualified as a healthcare provider by gender, race, and clinical orientation. Membership from the Southern states was critical to the AMA mission and while abolitionists and enslavers battled for the soul of America, allopathic

doctors placed professional success above the ethical issue of slavery and charted a course that both engaged and supported slave holding states. Philadelphia was the medical metropolis of the new nation with two allopathic medical colleges, Pennsylvania, and Jefferson; a homeopathic medical school; and a women's medical school. Forty percent of the students at Philadelphia's two allopathic schools were students from the South, and most other premier Northern medical schools likewise depended on Southern medical students to fill their classrooms. The allopathic medical curriculum of Pennsylvania, Jefferson, and other Northern allopathic medical colleges taught the dogma of White European racial superiority and justified the mental inferiority of women and Black people based on the craniometric work of scientific racists, such as Philadelphia's own Samuel Morton and his "American Golgotha" skull collection. Women's or homeopathic medical colleges, which in most cases actively supported abolition, did not support the scientific racism aggressively promoted in allopathic medical training. The AMA used the scientific racism of the day to justify allopathic medical acceptance of slavery and at its 1850 convention a Medical Sciences cited Morton and his *Crania Americana* and research on yellow fever epidemics to assert polygenesis: that Black people are a different race, and therefore their subjugation is justified. Although the population of the Southern states was only 9 million compared to 22 million in the North and the number of doctors in the South was significantly lower than in the North, the AMA strove to insure Southern participation by holding 43% of its conventions in the antebellum period in Southern states and electing 43% of its presidents from the South (Coulter, 1995; Haynes, 2005; Kirschmann, 1999; Menand, 2001b; Morton & Combe, 1839; Nott et al., 1854; Rogers, 1984; Sappol, 2002; Sussman, 2014).

The AMA grew in stature at the end of the 19th century, became a significant voice in America's healthcare policy, asserted ever-greater control over medical education and refused to admit Black doctors to its ranks. Sarah Hackett Stevenson was the first woman admitted for membership to the AMA in 1876. Black physicians were not recognized as members of the AMA until 1888, and when the AMA published its first *American Medical Directory* in 1906, (*col*) designating *colored* appeared after the names of Black physicians, a practice the AMA did not abolish until 1936. Black physicians continued to be excluded from state medical societies, principally in Southern states, and it was not until 1964 that the AMA issued a policy against denial of membership in a society based on race (Robert B. Baker et al., 2008, 2009)

Recognizing the need to give a national voice to the needs of Black healthcare professionals and patients, the National Medical Association (NMA) was founded in 1895 and the first issue of *The Journal of the National Medical Association* was published in 1909, which began the scholarly discussion on improving care and outcomes for Black Americans. With the expectation of a Black population of over ten million by 1912, the NMA realized that to assure access to adequate health care for this growing population, more Black physicians, hospitals, and trained healthcare workers were required. America, at this time and for the next half century, pursued a policy of segregation with purportedly "separate but equal" facilities. This dual system of segregated medicine restricted Black Americans to subpar separate hospital facilities. The AMA excluded Black doctors from key educational and training opportunities, and their practice locations were limited. Only with the Civil Rights Acts of 1965 was discrimination in government-funded healthcare programs and facilities disallowed. The

2009 article on “Creating a Segregated Medical Profession” in *The Journal of the National Medical Association* authored by the Writing Group on the History of African Americans, which included seven of the nation’s leading medical historians, details the steps taken by the AMA since its founding in 1847 to exclude Black physicians from membership and highlights the AMA’s political actions to over the years to prevent equality in access to healthcare. As a result of this article the AMA created a Health Equity Task Force which in 2021 issued the AMA’s plan for addressing structural racism and assuring health equity (R. B. Baker et al., 2008; R. B. Baker et al., 2009; Rivara et al., 2021; Washington, 2006; Yele Aluko, 2008).

The AMA spent its first decade and a half not only failing to address slavery, the most significant social, moral, and political issue of the day, but also choosing to ignore the 30% of the allopathic community who were receiving subpar medical education in for-profit medical schools. For-profit schools tended to be in the South and West, areas the AMA considered critical for solidifying a national presence. The AMA did not wish to alienate these potential AMA members, so they focused on a policy of exclusion to handicap women, homeopathic doctors, and neoteric healers who challenged their prestige, power, and livelihood. Lacking licensure laws, the AMA could not prevent homeopaths, newly minted women doctors, or other neoteric healing professionals from actively seeking and treating patients, but they could limit their access to medical resources. The AMA’s first step was a code of professional ethics, which prohibited membership in the AMA of non-allopathic doctors and included a consultation clause which prevented allopathic physicians from actively participating in the care of a patient who was also being treated by non-allopathic professional. This led to state allopathic

medical societies excluding women, homeopathic and eclectic practitioners, and Black doctors from membership and prohibiting allopathic physicians from teaching at non-allopathic, women, or Black medical schools. By the mid-19th century, medical care was moving increasingly toward hospital-based care, and public funding controlled by allopathic physicians was replacing private philanthropy for construction and maintenance of municipal hospitals. Limiting admitting privileges at municipal hospitals to White male, allopathic doctors closed options for care for women and Black doctors and neoteric healers. Each of these exclusionary steps reduced the credibility, prestige, and earning capabilities of non-allopathic practitioners, and began the delegitimization of all non-allopathic medical care, a process consolidated during the Civil War that resulted in the exclusion of non-allopathic doctors from serving as military surgeons. A quite different narrative appears in the triumphant saga of medicine by Porter and others, who portrayed the AMA as a central unifying force which raised educational standards for allopathic medicine, discredited dangerous medical practices, and built a new medical model centered on hospital-based care. The actual case in point was that late into the 19th century allopathic medicine was still wedded to heroic medicine with its bleeding and purging, hospital care was an unattainable luxury for most Americans, and the AMA worked aggressively to exclude women and Black doctors from its ranks. The growth of women's and Black medical schools in the late 19th century challenged the dominance and control of the healing profession by allopathic White males. The increasing number of neoteric and for-profit medical schools added new practitioners to the field and threatened the exclusivity and income of graduates from elite medical schools. The value of an MD degree was in question as educational standards varied widely between allopathic

medical schools, which did not have the standardized curriculum and consistent therapeutics found in DHM or DO training. To address these broad issues of educational quality the Carnegie Foundation for the Advancement of Teaching (CF-AT) funded a study in cooperation with the AMA Council on Medical Education (CME) and headed by Abraham Flexner (1866–1959) to conduct an on-site assessment of 155 U.S. and Canadian medical schools. The Carnegie study resulted in the publication in 1910 of *Report No. 4, or Medical Education in the United States and Canada* or as it is more commonly known, *the Flexner Report*, and it forever change the face of medical education in the United States. (Armstrong & Armstrong, 1991; Baer, 2001; Baker, 2006; Coulter, 1995; Ebert, 2012; Flannery, 1999; Flexner & Flexner, 1966; N. Gevitz, 1988; Haller, 2005; Haynes, 2005; Kaufman, 1971; Kirschmann, 2004; Lyons & Petrucelli, 1978; Pace & Lundberg, 1996; Porter, 1998; Rogers, 1984; Willms; Young, 1967, 1972).

Chapter 9

THE FLEXNER REPORT AND CORPORATE MEDICINE

The Gilded Age: A Tale of Today written by Mark Twain and Charles Dudley and published in 1873 chronicled the building of vast fortunes in unregulated industries, an age of unbridled materialism, and a political system awash in corruption. The entrepreneurs amassing wealth through monopolies in oil, steel, and transportation were dubbed “robber barons” and two of the wealthiest of these were John D. Rockefeller and Andrew Carnegie, who after securing a dominant position in the control of America’s natural resources, industrial production, and transportation created foundations and educational institutions to expand their control of society, science, and education, and who ultimately played pivotal roles in the restructuring medical education and the creation of the biomedical industrial complex (Brown, 1980; Bruce & Young, 1988; Twain & Warner, 1964).

While the Civil War tore the country apart and brought death and loss to millions of Americans, it was a boon for robber barons. Producing and processing steel for weapons and fortifications, trains to transport troops, and oil to power the machinery of war and after the war, reconstruction created new opportunities as the war-torn South struggled to rebuild. In an environment without unions, industrialists built their wealth at the expense of workers, while a government policy of laissez-faire monopolies thrived and price gouging was the norm, and a small minority enjoyed opulent lifestyles while most struggled to meet basic needs. The Civil War brought an end to an American economy driven by agriculture and small business and ushered in the new order of industrialization, corporations, and technological investment. In 1846 Edward Everett,

the new president of Harvard, declared a new mission for American universities, stating that Harvard would no longer focus on educating clergy, lawyers, and other gentlemanly professions; rather, the school would be a bastion of science and technology. The wealthy textile manufacturer and railroad magnate Abbott Lawrence quickly underwrote the plan creating the Lawrence Scientific School at Harvard and began practice of *scientific philanthropy*, which unlike charitable giving in its quest to ameliorate current ills sought instead a technical and preventative approach to future challenges. This was the age of social Darwinism, which was based on the Darwinian concept of survival of the fittest and fit well with the American belief in rugged individualism and which totally ignored the social, economic, and structural issues that result in poverty and disease. Scientific philanthropy not only changed the course of American university education from studying the classics to focusing on scientific discovery, but it also resulted in the wealthiest men in the 1870s and 1880s building institutions to immortalize their names and conduct research supporting their business interests—Rensselaer, Johns Hopkins, Case, Tulane, Clark, Pratt, Vanderbilt, Stanford, Cornell, and others, which are today's most preeminent and best-endowed educational institutions. This new collaboration of money, education, and science resulted an innovative approach to medical education, of which Johns Hopkins became the exemplar and led to the Flexner Report (Berliner, 1985; Bremner, 1956; Brown, 1980; Parker, 1994; Vogel & Rosenberg, 2017; Wheatley, 1988).

Johns Hopkins Establishes a New Standard in Medical Education

Johns Hopkins (1795–1873), a Quaker philanthropist, made his fortune from transportation and finance as a key investor in Baltimore and Ohio Railroad (B & O Railroad) and a year before his death made the largest bequest of the day, \$7 million

(equivalent to \$11 billion today) to establish a university, hospital, and medical school in Baltimore dedicated to the science of health care. The Johns Hopkins Hospital opened in 1889 and the Medical School opened four years later. In what is now the Welch Medical Library hangs a portrait by Johns Singer Sargent (1856–1925) painted in 1905 of Johns Hopkins's most illustrious faculty, William Henry Welch (1850–1934), a pathologist, head of laboratory sciences and instrumental in the creation of Rockefeller Institute; William Osler (1849–1919), an internist noted for his landmark 1892 text *Principles and Practice of Medicine*; William Stewart Halsted, a surgeon who introduced the radical mastectomy for treatment of breast cancer; and Howard Kelly, a surgeon and one of the first to introduce radium for the treatment of cancer. The triumphant march of medicine narrative heralds the achievements of these four, but interestingly if we look at their therapeutics through the lens of 21st-century biomedicine: Halsted's procedure appears barbaric, severely scarring women and destroying their quality of life and is of no value in treating invasive disease; Kelly's use of radium was in toxic dosages and of no benefit even in localized disease; Welch's contribution can be seen as self-serving and career building; only Osler's achievements would be viewed positively. Osler, a Canadian graduate of McGill Medical School and a resolute humanist, in his *Principles and Practice of Medicine* and 1,500 additional publications articulated the critical need for appreciating the needs of the patient, the limitations of the medical arts, and understanding motivation of the practitioner. In his fifty years as an educator, Osler taught at McGill, University of Pennsylvania, Johns Hopkins, and Oxford and influenced physicians in the three largest English-speaking countries. Osler's beliefs that medicine is an art, not a trade; that it is a calling, not a business, in which the heart and the head are

equally important; and that in treating disease there are no certainties, only possibilities are as relevant today as they were in the century and a half ago when they were written. While Welch, Halsted, and Kelly are heralded in the triumphant march of science narrative of Porter and others, a lesser value is assigned to Osler's contribution as an educator, humanist, ethicist, and patient advocate, and the philosophies of the three scientific careerists, not Osler, were the basis for Johns Hopkins Medical School and the Flexner Report (Bruce & Young, 1988; Harvey et al., 1989; Leach & Coleman, 2019; Osler, 1909, 1912; Silverman, 2011).

As in all things, when founding of the Johns Hopkins Medical School floundered through lack of funds, women stepped into the breach. The value of Hopkins's original endowment was reduced due to a recession in the 1880s causing financial difficulties at the B & O Railroad. With the endowment significantly reduced and building the hospital utilizing all the funds remaining, the future of the medical school looked bleak. Additionally, the medical sages of the day challenged Welch's vision of the modern high-tech institution where laboratory work replaced didactic lecture with a focus on experimental rather than tradition medicine. The costs of laboratories facilities added exponentially to building costs and were beyond the scope of an already very diminished endowment fund. With a very decidedly different approach to educating the next generation of doctors and an ongoing battle for now very scarce financial resources, the hospital threatened to create its own education training, and Welch's vision was in serious jeopardy and without a new endowment for the medical school.

The Friday Evening Group, five educational activist women who had been already been instrumental in founding the Bryn Mawr School for women, offered to raise

necessary funds, but with a critical caveat (Berliner, 1985; Brown & Flexner, 1979; Flexner & Flexner, 1966; Harvey et al., 1989; Jarrett, 2011; Silverman, 2011). James Carey Thomas (1833–1897) described the generous offer of the women to raise funds as a cure worse than the disease, because the women stipulated that financial support was predicated on women being admitted to the medical school. Nevertheless, the Johns Hopkins Medical School owes its existence in large part to The Friday Evening Group. The Group's two members most involved with the medical school were Mary Elizabeth Garrett (1854–1915) and Martha Carey Thomas (1857–1935). Other members were Mamie Gwinn, Elizabeth King, and Julia Rogers. Together, these five were the wealthiest, most socially prominent, and most influential women in Baltimore, and four of their fathers were on the board of trustees at Johns Hopkins. Garrett became the wealthiest unmarried woman in America from a fortune left her by her father, a long-time president of the B & O Railroad. Thomas, the daughter of a Quaker doctor in Baltimore, was a graduate of Cornell University and as Johns Hopkins was closed to women, she pursued her education in Europe, graduating with a doctorate in linguistics from the University of Zurich. She went on to become a founding dean of Bryn Mawr and president there for 26 years. The women organized a national "Women's Fund for the Higher Medical Education of Women" and quickly raised \$100,000. The trustees, not eager for women in their medical school, refused the money and instead demanded \$500,000, an amount needed to both establish a school based on Welch's research focus and to maintain it, before admission of women would be considered. By 1892 the future of the medical school was seriously in jeopardy and in danger of losing faculty already recruited. The Women's Committee had raised \$200,000, and Garrett added \$306,977 to

the funds collected to reach the goal of \$500,000. Working with Thomas, who had trained in Europe and was familiar with the educational rigor of European medical schools, Garrett made her gift contingent upon on the medical school establishing entrance requirements including bachelor's degree, knowledge of French and German, completion of pre-medical science courses, that women be admitted on same footing as men, that the medical school be integrated into, and that it award the Doctor of Medicine degree after a 4-year course of study. Garrett stipulated that a "Women's Fund Memorial Building" be erected as part of the school, and finally, to ensure her stipulations would continue to be met, a committee of five women would monitor their implementation, otherwise all monies would revert to her estate. Garrett's financial support ensured a future for Welch's vision of Johns Hopkins Medical School; her stipulations set a new standard for medical school admission, ensured a 4-year curriculum, created a place for women in medicine (the first class of medical students included 14 men and three women), and cleverly created a mechanism to monitor compliance. She even commissioned John Singer Sargent to paint the portrait of the four doctors (Flexner & Flexner, 1966; Hiatt & Stockton, 2004; Jarrett, 2011; Kathleen Waters, 2008; Wheatley, 1988)

The vision of Welch and the financial resources of Mary Elizabeth Garrett created the first world-class medical school in the United States, which linked science, research, and clinical hospital practice, and was the equal to the fine medical educational institutions founded in Europe a century earlier. Allopathic medicine in America had finally come of age, and Johns Hopkins became the exemplar for what capitalism and science could achieve, but America was not committed to medical education which

continued to be funded through private philanthropy, with some state support but no investment on the national level. By 1892 there were 5 endowed chairs in medicine in the United States, but 171 endowed chairs for theology with a significant geographic concentration: the medicine chairs were in the Northeast, the theology ones were in the South and West. Endowed medical schools were training twice as many students as theology schools, but in 1892 funds allocated for medical education were \$611,214 and \$17,599,979 was allocated for theology. Allopathic medicine required significantly more public and private resources to reach the promise of the Johns Hopkins model, but the challenge was the chaotic American medical education landscape populated with allopathic medical schools, few well-endowed and well regarded, but a considerable number were for-profit commercial enterprises. Newly established women's and Black allopathic medical schools vied for financial support from individuals and government, the number of homeopathic, osteopathic, and even eclectic medical training institutions was growing. Resources and respect for allopathic medical education, as now defined by the Johns Hopkins model, could not be achieved without the assurance of quality and consistency and corporate America through the Carnegie Foundation, and the AMA became the arbiters of what was appropriate medical training (Flexner & Flexner, 1966; Vogel & Rosenberg, 2017; Weiss & Miller, 2010).

The Flexner Report Redefines Access to Medical Education

The number of American medical schools grew from 52 in 1850 to 160 in 1900, and the growth was principally among commercial for-profit schools and specialized schools for women and Black people. The White male AMA member doctors from established, endowed schools were increasingly competing for patients, community

respect, political influence, social standing, and economic resources with these newly minted healers. Allopathic medicine was still in the pre-scientific stage, as it was before the heyday of new vaccines and beneficial therapeutics and after the evident failure of heroic regimens. The AMA sought to curb this overabundance of new entrants into the healing profession by focusing their efforts on reforming medical education and creating a Council on Medical Education (CME). The AMA CME issued basic education requirements, which were well below the Johns Hopkins standard, of a high school degree, and 5 years of college plus a sixth-year hospital internship. The AMA CME also attempted to grade the quality of education at a medical school by measuring the number of the school's graduates who passed the state licensure examinations, and later they expanded the quality measurement criteria to include facilities, faculty, and admission requirements. In 1906 the AMA CME inspected 160 schools and rated 82 as Class A, 46 as Class B, and the remaining 32 as Class C unredeemable; however, the AMA never published the results, as the AMA ethics prohibited public criticism of other physicians and the AMA had no power to enforce any proposed guidelines. The AMA needed an unimpeachable third party with social and political clout to establish and enforce medical education standards and found a willing partner in the Carnegie Foundation (Robert B. Baker et al., 2009; Bigelow et al., 1850; Davis, 1978; Starr, 1982; Weiss & Miller, 2010).

Andrew Carnegie (1853–1935) was dubbed “King of Steel” as he became one of the wealthiest men in America building his fortune through steel and railroads. In his 1889 article “Wealth” Carnegie articulated his approach to philanthropy, including “man who dies rich dies disgraced,” as Carnegie espoused the distribution of an individual's fortune during their lifetime so they do not die unwept or unsung. Monies should go to

institutions that provide man opportunities to better himself such as parks and cultural and educational institutions. Carnegie distributed \$350 million, equivalent to \$5.2 billion in today's dollars, principally through the Carnegie Foundation, which was chartered as a corporation and was one the was the largest philanthropic trusts of the day. In 1908 the Carnegie Foundation for the Advancement of Teaching (CF-AT), after viewing the medical school evaluation material compiled by the AMA CME, agreed to fund an evaluation of American and Canadian medical schools in conjunction with the AMA (Carnegie, 1889; Vogel & Rosenberg, 2017; Wall, 1970).

The CF-AT was established in 1905 to standardize higher education and upgrade the quality of faculty in America's colleges and universities. The AMA request allowed the CF-AT to move into the domain of professional education and further advance its mission of broadening education in science. The Carnegie Foundation selected Abraham Flexner (1866–1959) to conduct the medical school survey supported by Nathan Porter Cowell (1870–1936) from the AMA CME. Flexner, an educational reformer, received his undergraduate degree from Johns Hopkins, ran his own school, and went on to study psychology and education at Harvard and then the University of Berlin. The Carnegie Foundation chose Flexner based on his 1904 publication, *The American College*, and the sentiment that a study by a non-physician would have more credibility and would engender less antagonism in the medical community. Flexner, though not a physician, had personal links to Johns Hopkins and the Rockefeller Foundation through his brother, Simon Flexner (1863–1946), who did a fellowship at Johns Hopkins and served on its faculty before becoming head of the Rockefeller Institute for Medical Research (RIMR). Flexner modeled his study on *Medical Education in the German Universities* by

Theodore Billroth, the work of the AMA CME, and the model of Johns Hopkins created by Welch's vision and Garrett's financial support and stipulations. Flexner supported the German model: that a doctor was a scientist first, trained in laboratories and then receiving clinical training on hospital wards. This supported the goals of the Rockefeller and Carnegie Foundations to move science to the forefront of American education.

Adequate laboratory facilities and affiliation with a hospital became two major evaluation criteria in Flexner's study. Other critical measures were a suitable endowment, highly trained faculty, and stringent admission requirements. The Flexner evaluation criteria emphasized medical research, redefined patient care as scientific endeavor, made financial resources for faculty and facilities of paramount importance, and virtually assured that many talented individuals in America would lose the opportunity for a medical education and that patients would, in this culling of medical providers, lose access to care. The impact on medical schools across the country was immediate and dramatic (Berliner, 1985; Brown & Flexner, 1979; Cooke et al., 2006; Flexner, 1910; Flexner & Flexner, 1966; Halperin et al., 2010; Starr, 1982).

In 1910 CF-AT issued its Bulletin No. 4: *Medical Education in the United States and Canada* authored by Abraham Flexner and referred to as the *Flexner Report*. Flexner had over a 2-year period personally inspected 155 schools on behalf of the Carnegie Foundation. The schools, hoping for funding from the Carnegie Foundation, welcomed Flexner and provided him with details on their finances, students, and faculties. The Carnegie Foundation pressured schools reluctant to cooperate by asserting that medical schools, regardless of their funding source, were public service corporations and therefore required to submit to scrutiny by interested parties. Interestingly, though

Carnegie termed medical schools “public service corporations,” yet the Flexner report made no attempt to quantify how well these schools served their communities. The Report made no attempt to measure the competence of a school’s graduates, at least the AMA in their nascent efforts looked at number of a school’s graduates passing licensure exams. Finally, the Report did not contain any metrics associated with patient care. No, the Flexner evaluation was all about money and science; medical schools should be engines of scientific research with an elite faculty funded by corporate dollars. The Flexner study was designed based on the German research model, with primary input from two pathologists, William Welch, and Simon Flexner; guided by two major corporations, Carnegie, and Rockefeller; and serving the needs of the AMA, a professional lobbying group; as such, the study had no interest in the needs of patients and their communities. As a result of the Report and new accreditation requirements, 50% of medical schools closed over the next 20 years, and the impact fell most severely on already underserved populations and communities (Berliner, 1985; Cooke et al., 2006; Duffy, 2011; Halperin et al., 2010; Hiatt & Stockton, 2004; Nevins, 2010; Wheatley, 1988).

Porter and the triumphant march of medicine tout the Flexner Report as a celebrated achievement, which cleansed America’s medical education system of its undesirable elements, closed questionable for-profit institutions, and ushered in a new era of science-based medicine. Certainly, corporate-funded research became central to medical education; the AMA became a medical trust controlling medical education in perpetuity through the CME, halving the number of medical schools. This decrease in the availability of medical education benefitted individual doctors: as their numbers declined,

their professional prestige, their professional authority, their social status, and most importantly their incomes rose. Whether society benefited from the Flexner Report is another question, and it is important to look more closely at its impact on women, minorities, neoteric practitioners, patient care, and healthcare access. Ranking schools on their endowments and their faculties created an unfair bias against newly formed Black medical schools, all of which were barely two decades old and were still in the formative stage, in the process of building resources, and which most often reached underserved, less affluent populations. The Flexner Report's impact was greatest on Black medical schools which educated Black doctors and built Black hospitals and often were the only source of care as segregation precluded Black Americans from treatment in White institutions. Thirteen Black medical schools closed, leaving only two to serve a population of 8.8 million Black citizens, almost 12% of the U.S. population at the time. In 2020, Campbell et al. published a landmark study in JAMA on how much more diverse the medical profession would be if only an additional five Black medical schools had remained and in open. In 2019, 1,238 Black medical students (2% of total) graduated from allopathic medical schools in America, with 285 coming from the three Historically Black Colleges & Universities (HBCUs), and Campbell et al. estimated that had five additional HBCU medical schools remained open, an additional five hundred Black doctors would now be graduating annually. The five additional HBCUs would conservatively have educated an additional 27,773 Black doctors in the years since Flexner, and perhaps the percent of Black faculty in medical schools would be greater than the abysmal 4% it is today (R. B. Baker et al., 2009; Byrd, 2000; Campbell et al.,

2020; Daher et al., 2021; Lynn E & Richard M, 2012; Porter, 1998; Riley, 2008; Vigil-Fowler & Desai, 2021).

The Flexner report exalted the four-hundred-year-old Prussian medical school system and compared it to American medical schools, most of which had been in existence for less than fifty years. Flexner based its case against commercial medical schools, including women's and Black institutions, on comparisons to the structure, faculty, and finances of the University of Berlin. Flexner calculated that an adequate medical school would need to have five main departments: anatomy, bacteriology, chemistry, pathology, and physiology/pharmacology, and that each department's budget would need to be between \$10–15,000 per annum. He then argued that student fees could never support these necessary costs, and the commercial medical school was not a viable structure. Flexner's argument against women's medical schools was also based on this unsustainable cost model and the rationale that adequate opportunities for women were available in existing medical schools. Ninety-one allopathic medical schools currently had women enrolled, according to Flexner's data, and the number of women at these schools declined from 946 in 1904 to 752 in 1909. The three women's medical colleges also saw a decline in enrollment from 183 in 1904 to 169 in 1909. Flexner argued that existing institutions could accommodate the small pool of highly qualified women and that rather than shore up marginal women's institutions, public and private financial support should go to coeducational institutions where both sexes could benefit. Having rationalized away the need for women's medical schools, commercial medical schools, and most Black medical schools, Flexner met a stronger challenge with neoteric medical training institutions (Flexner, 1910).

Flexner termed homeopathy, osteopathy, and eclecticism as *sectarian*, while this dissertation uses the term *neoteric*. At the time of the Flexner Report there were 15 homeopathic, eight osteopathic, and nine eclectic medical schools. Homeopathy was a distinguished hundred-year-old medical practice tracing its lineage to Germany with the first American medical school opening in Pennsylvania in 1835. Homeopathic medical care was well established by 1900 with 22 homeopathic medical schools and a supportive system of over one hundred homeopathic hospitals; more than one thousand pharmacies; and an established regulatory body founded in 1844, the American Institute of Homeopathy. Homeopathy offered patient focus, gentle therapeutics, and clinical success since it did not employ the harsh heavy metal drugs, bleeding, and purging associated with allopathic care and did not weaken body. Medical education in homeopathic schools included the same basics of anatomy and physiology as allopathy, research on drugs, and doses, and schools had high admission standards. Homeopathy's adherents included literary elite, public figures, and even John D. Rockefeller. Osteopathy had similar credentials to homeopathy: gentle therapeutics; consistent education; and high-level supporters in literary, cultural, and social strata. Flexner did not directly challenge either of these popular medical practices, but he called for the creation of state licensure boards to measure all medical practitioners with a stringent examination to ascertain medical knowledge and professional competency. At the time of Flexner's report, 49 states and territories had in place 82 different boards of medical examiners with different standards and widely varied credentials on the part of the examiners, as many were political appointments. Flexner was appalled that most of the New York Licensure Board were homeopaths, osteopaths, and eclectics, while the majority of the practicing doctors in the

state were allopaths. Flexner felt strong credentialing bodies would weed out the sectarians from practice and suggested that sectarians from schools not meeting the Flexner standards not be allowed to sit for examination (Flexner, 1910).

In the traditional presentist or Whiggish linear history of medicine narrative, Flexner is hailed as pivotal force in changing the face of American medical education, but one wonders if the authors of these narratives have actually read the 400-page report. In the two narrative pages Flexner devoted to Black medical schools, he complained that the 10 million Black Americans were a serious threat to transmitting hookworm, tuberculosis, and contagious diseases to the 60 million White Americans; that the “make-believe” of Black medical schools was intolerable; that Black doctors should be trained in hygiene rather than surgery; and that Black doctors should only treat Black patients and their practices should be limited to villages and plantations. Flexner recommended that only 31 medical schools graduating 2,000 doctors per annum remain of the current 131, that 20 states have no medical schools, and that medical schools be in large cities where there is adequate access to “clinical matter,” meaning bodies for research and dissection. He decried the subventions of religious and philanthropic organizations supporting medical schools based on community need. Flexner cited declining numbers of women entering medical schools, from 1,129 in 1904 to 931 in 1909, as proof women are less interested in entering the field. State licensure required women medical school graduates to complete a hospital internship, and hospitals refused to accept women for internships. The decline of women pursuing medical school education resulted from women’s inability to practice despite obtaining a medical degree. The Flexner Report is biased toward the endowed established institutions, and the majority of the 31 schools to remain

were in the 13 original colonies. The United States had spread across the continent, but medical education should stay in the hands of the elite of the original colonies. The Flexner Report was a recommendation and had no enforcement powers; it was remarkably similar to the 1906 analysis conducted by the AMA CME but never published. The imprimatur of the Carnegie Foundation certainly carried weight, and nine of the largest corporate philanthropies gave \$134 million to support medical education at top-tier institutions, assuring their continued dominance. While top-tier institutions benefited from corporate largesse, middle-tier institutions resisted higher entrance requirements, and 20 years later still only 92% required 2 years of college for admittance. Lacking funding, these middle-tier institutions were unable to fund the required laboratories and secure scientifically trained faculty. The Flexner Report contributed to the closing of poorly-rated medical schools, as students questioned the wisdom of pursuing an education at an institution defined as failing. Recent research looking at the impact of the Flexner Report on its hundredth anniversary by Howard Berliner, Thomas Duffy, and others suggests that the Flexner Report did not change medical education as significantly as touted in most triumphant march of medicine narratives. Elite schools prospered from corporate funding; middle-tier schools did not significantly change for another twenty years; and only newly founded Black, women's, and neoteric medical schools struggling to become established and serve their communities were crushed under the combined power of the AMA, Carnegie, and Rockefeller (Berliner, 1977; Berliner, 1985; Colwell, 1925; Cooke et al., 2006; Duffy, 2011; Flexner, 1910; Flexner & Flexner, 1966; Savitt, 2006; Savitt, 2000).

Flexner's greatest impact came through his recommendations on state licensure. In 1912, state licensure boards created a voluntary organization, the Federation of State Licensure Boards, to standardize requirements across states. The Federation accepted the AMA CME's rating system for medical schools and the AMA now controlled medical school accreditation in most of America. In 1935 the AMA, now a medical trust, used its new power to lobby legislatures and strip accreditation from non-allopathic institutions. The newly anointed AMA control of medical schools assured that the profession remained White, male, and Protestant, by setting in place strict quotas on the admission of women, Black Americans, Jews, Catholics, and other marginalized groups—quotas that remained in place for the next fifty years. Funding from the Rockefeller and Carnegie Foundations determined the institutions that would prosper, guided their research, and created the modern biomedical industrial complex of today (Barr, 2011; Andrew H. Beck, 2004; Cooke et al., 2006; Flexner, 1910; Flexner, 1998; Flexner & Flexner, 1966; Hiatt & Stockton, 2004; Savitt, 2006; Weiss & Miller, 2010).

Chapter 10

POST-MODERN MEDICAL DIVERSITY AND 21ST-CENTURY MEDICINE

Allopathic medicine began the 19th century as a questionably effective healing system, based on 2,000-year-old Greek medical theory, and now is a monolithic biomedical enterprise wielding political power, economic advantage, and significant sociocultural authority. Despite a lack of any significant advances in allopathic therapeutics in the 19th century, allopathic medicine by the end of that century achieved hegemony through political and regulatory maneuvering, the control of hospitals, corporate funding and gender and racial control measures. The newly dominant allopathic medicine delegitimized the mosaic of neoteric healing systems by devaluating experiential knowledge, challenging the value of passive interventions, advancing scientific research, controlling medical education, and siphoning social and financial support away from neoteric institutions. Neoteric healing systems were eclipsed by allopathic medicine by the beginning of the 20th century, but their presence is still vibrant in the medical environment of today.

The neoteric systems of the 19th century have adapted to the hegemony of biomedicine in diverse ways. Osteopathic medicine in 2021 is an integral part of the U.S. healthcare system, with 110,0379 practicing osteopathic physicians (about 9.9% of all physicians in the United States) and 37 osteopathic medical schools with a curriculum identical to that of allopathic schools. The number of osteopathic physicians almost doubled from 2010 to 2020 making it the fastest growing segment of the medical profession. Sixty-five percent of osteopathic medical school graduates enroll in allopathic post-graduate training, and osteopaths are eligible to take the same licensure examination

as allopathic graduates. Most osteopathic physicians practice primary care medicine, and their practices are more often in less populous geographies (Barnes et al., 2015; Gevitz, 2019; Johnson & Kurtz, 2002).

In 1936, New York Homeopathic College, the last homeopathic institution, changed its name to New York Medical College, and so ended the era of homeopathic medical schools in America. The science of treatment by similars, infinitesimal dosing, and clinical proving trials could not survive the scrutiny of modern biomedicine. The American Foundation for Homeopathy (AFH), founded in 1924, was an attempt to blend modern science and homeopathic principles of patient care. As homeopathic hospitals and medical schools kept alive Hahnemann's vision and found a receptive audience in Americans disillusioned with the growing hegemony of the AMA and with the depersonalization of science, and who were seeking more wholistic approach to care. The AMA rejected an attempt to integrate homeopathy as a subspecialty of allopathic internal medicine, and homeopathy continued without any professional credentialing. Homeopathy was often a haven for parents seeking an alternative to harsh allopathic therapies for their small, vulnerable children, and these parents became the staunchest adherents to and financial supporters of homeopathy well into the 20th century. Homeopathy was reborn in the 1970s when new generations responded to its anti-science message, its criticism of the profit motive in medicine, its rejection of public health initiatives such as fluoridation and vaccination, and distrust of the collusion between doctors and pharmaceutical companies. The AFH offers educational courses in homeopathy to medical and lay personnel, but there is no specific credentialing for the field (N. Gevitz, 1988; Kirschmann, 2004)

In the United States the patent drug companies of the 1800s became the pharmaceutical companies of today. The Pure Food and Drug Act of 1906 forced patent medicines or nostrums with exaggerated, unsubstantiated claims and dangerous ingredients from the market. Entrepreneurs, like Eli Lilly, G. D. Searle, the McNeil Brothers, William Upjohn, Wallace Calvin Abbott, John K. Smith and Mahlon Kline used the opportunity to patent the manufacturing processing for naturally occurring medicinal agents and through innovative packing and effective marketing dominate the sale of these agents directly to the public, pharmacies, and doctors. While American companies consolidated around the sale of existing compounds, German and Swiss chemical companies used their expertise in organic chemicals and dyes to identify new chemical medicinal agents that would be sold only by prescription, also called ethical pharmaceuticals. The golden age of pharmaceuticals was ushered in the 1940 with the commercialization of penicillin developed by Pfizer, who shared the patent with eight other pharmaceutical companies during World War II to maximize wartime production. In the post war period both governments and individual companies invested heavily in research resulting in a plethora of new agents and the standardization of the clinical trial process to measure their effectiveness. Global pharmaceutical companies through patent protection now controlled access to medicines and built large sales forces and marketing organizations to promote their products to the medical community and the result was the biomedical industrial complex (Bentley, 2005; Malerba & Orsenigo, 2015).

Seventh-day Adventism is today the 12th largest religion globally, with 22 million members. Adventist Health is a major global presence in health care with a worldwide network of 227 hospitals, 133 nursing homes, 673 clinics, over a million and a half

inpatient visits, and over 20 million outpatient visits annually in 200 countries. Through its relief agency (ADRA), it provides aid in over 118 countries. In the United States, Adventist Health System has 71 church-owned hospitals run as business concerns, making it the nation's largest Protestant nonprofit healthcare system. Additionally, several small institutions modeled on the 1907 Madison Sanitarium focus on lifestyle and diet. Loma Linda University includes medical, dental, public health, and allied professional schools. Adventist Health care today subscribes to the use of all tested and approved drugs but retains its religious heritage and commitment to restrictions against drinking, smoking, and meat-eating. Research on the Adventist healthy lifestyle shows women live an additional 4 years and men an additional 6 years through adherence to the regimen. The food business has been a significant source of funding for the church since 1877, when John Harvey Kellogg began selling his cereal and crackers. Kellogg offered Ellen White the rights to his cereal when he parted ways with Adventism, but she refused, and Kellogg's brother, W. K. Kellogg, went on to create the cereal empire. Adventist foods are sold under the Loma Linda brand in the United States (Bull & Lockhart, 2007; Gevitz, 2014; Jose Miguel & Luz Stella, 2015; Numbers & Amundsen, 1986; Reid, 1982; Thomson et al., 2013).

Christian Science has significantly dwindled in popularity. It now has less than 100,000 adherents in the United States but has a global reach with reading rooms in 65 countries. Christian Science runs nursing facilities and respite care facilities, and it provides visiting nurse services both in the United States and internationally. Nurses provide practical care and spiritual assistance to individuals seeking healing through Christian Science. *Christian Science Monitor*, started by Mary Baker Eddy in 1908 as an

alternative media outlet to respond to criticism about Christian Science in the national press, was published daily until 2009 when it moved to a weekly format. It now has an estimated 10,000 subscribers and distribution online and through reading rooms (Gevitz, 2015; McKay, 1989; Schoepflin, 2003; Vogel & Rosenberg, 2017)

Only 18.7% of the 1,341,682 physicians currently practicing in the United States are members of the AMA but through its control of medical education, the organization is still a major force in American health care. The AMA controls credentialing for medical specialties, medical schools and is a major force in political lobbying. In the true spirit of Flexner, the AMA continues to restrict the construction of new allopathic medical schools to maintain scarcity and protect doctor's status and income and the America has become increasingly dependent on osteopathic physicians and foreign medical school graduates. Of the physicians in practice in the United States in 2020, 22.9% are graduates of a foreign medical school and 9.9% have graduated from American osteopathic medical schools. Women's medical schools suffered a decisive blow under Flexner, but women now represent 36.2% of the physicians in active practice and based on 2019-2020 data are 53.6% of the students enrolled in medical schools in the U.S are women. Only two Black medical schools remained after Flexner and they represent 2.5% of the medical schools in the U.S., but they graduate 14% of all Black medical students. The AMA policy of deliberate scarcity of physicians poses a major challenge for the U.S. healthcare system with 11.8 % of the doctors currently in practice over the age of 70 their retirement will have a major impact on access to care (Hiatt & Stockton, 2004; Miller & Weiss, 2012; Young et al., 2021).

The AMA has constantly fought against any attempts to provide comprehensive health care for Americans, as this would be a potential threat to individual physicians' autonomy and income. In 1934, the AMA adopted a position against mandatory health insurance; in 1939, the AMA opposed the Wagner-Dingell bill to establish a health insurance program under the Social Security Act; and in 1963, the AMA opposed Medicare legislation. The 2008 JAMA article by Baker et al. brilliantly documented the AMA's pattern of repeated racial discrimination, opposition to health legislation and pattern of bias in medical education. The AMA has in the years since its foundation in 1847 been a stronger voice for asserting own its power through control of education and assuring economic advantage and significant sociocultural authority for physicians than for social justice, racial equality, or the welfare of patients (Baer, 2011; Robert B. Baker et al., 2008, 2009; Savitt, 2007).

In a world where there is not a cure, the best path to health and wellness is through disease avoidance—a lesson the world has learned with the COVID-19 pandemic. The neoteric and faith-based healing systems focused on factors which an individual could control in their environment to prevent illness: healthy eating, avoiding alcohol and other stimulants, exercise, cleanliness, outdoor activities, and spiritual support. Through the extensive publications by water-cure practitioners Eddy and White, these messages on health and wellness reached a vast majority of Americans, not just adherents to these philosophies. By the end of the 19th century, disease rates declined, childhood mortality declined, and life expectancy rose—not because of the development of new medicines or heroic treatments, but through public health initiatives which adopted many of the guiding principles of the neoteric systems. Focus on clean water,

proper sanitation, less crowding, better hygiene, reduced the incidence cholera, anthrax, dysentery, tetanus, and diphtheria (Baer, 2001; N. Gevitz, 1988; Lyons & Petrucelli, 1978; Singer et al., 2020).

Roy Porter and other chroniclers of the narrative of brilliant scientific discoveries, mostly by White males, propelling great new strides in medicine are little interested in the struggles of a New Republic seeking to provide healing and medicine to a rapidly growing population in an era before medicine found its scientific footing. My dissertation, on the other hand, celebrates individuals of all races and genders, with alternative scientific or religious beliefs, who in the 19th century, seeing the untold suffering and the futility of allopathic care, utilized the resources and knowledge available to them at the time to provide succor, care, and mitigation of symptoms in this pre-scientific age—before understanding bacteriology and before access to basic tools like vaccines and antibiotics. While allopathic physicians focused on disease and clung tightly to their mantra of military action against disease and the strongest drugs at the highest dosages, the neoteric healing systems approached illness and health as a partnership between the patient and the healer. For them, disease was not a target to be routed and destroyed; rather, the body has the internal resources to fight disease, and the goal of the healer was to support the sufferer through their illness through gentle therapies, healing touch, water baths, prayer, and understanding. Each of the neoteric systems had a unique approach: osteopathy used therapeutic touch, homeopathy created safe medications, hydrotherapy used water as a vehicle to wellness, and Christian Science and Adventism used prayer and divine intercession for cure. How each of these therapeutic approaches, while they may not have been able to cure disease, but provided

comfort, community support, and a path to a healthier lifestyle and how their influence continues today is, I believe, a critical part of our medical humanities heritage. Only by appreciating the history of 19th century paths to health and healing —what each has contributed to medical care and how each evolved in response to political, social, cultural, and economic forces —can we come to a wholistic understanding of the challenges and pitfalls of postmodern medical diversity.

In 2021, we find ourselves dealing with the COVID-19 pandemic, not significantly differently than the typhoid, cholera, yellow fever, and malaria epidemics that repeatedly afflicted Americans in the 19th century. The wealthy, then and now, have fled to the countryside, and best medical advice is limited to hygiene and environmental prevention in the absence of a cure. Sonia Shah's *Pandemic* (2015) brilliantly documents the timeless challenges faced in dealing with pandemics: crowds, corruption, sanitation, denial, locomotion, and blame. Historically, it has taken on the average of 50 years from the time the culprit causal agents are showed to the point where a vaccine is widely available. We are fortunate that in the 21st century we have the medical science and technology to significantly expedite the vaccine development process; the greater challenge is now to overcome vaccine resistance on the part of the public. Living through a pandemic has hopefully given us greater empathy and insight to the challenges faced by 19th-century Americans in seeking health and healing in an environment of limited medical knowledge. I trust that my research on medical pluralism in 19th century will provide insight into how politics, social norms, scientific advances, and religion shape attitudes toward health and healing, understanding of how the medical narrative is as important as data and statistics in communicating medical knowledge and engendering

community support, and further dialogue on the critical issues that face us in 21st-century medicine.

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