Intermingling of the Old and New:

The Formation of Various German-American Medical Culture in Colonial and Early America, 1730-1820

A Dissertation Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

Jane Jiyoung Chang

December 2025

Copyright © 2025 by Jane Chang.

All rights reserved.

ACKNOWLEDGEMENTS

This dissertation would have not been possible without the support of my colleagues and professors at Knoxville. I am eternally grateful to my patient and kind advisor Denise Phillips, who was patient and ever encouraging to me throughout my time at UTK. I am lucky and ecstatic to have been your advisee. I also appreciate the members of my committee members, who helped shape and refine my writing from angles. I learned much from Kristen Block about the ever-growing field of the Atlantic World and enjoyed your emphasis on taking care of yourself while in graduate school/academia. Susan Lawrence's seminar and expertise on medicine was pivotal in hearkening me back towards the history of medicine—guess I could not fully abandon my background in the sciences and medicine. Katy Chiles's wisdom on how to appropriately write about Black and Indigenous history was very helpful. I would also like to give a shout out to Beau Gaitors and Sara Ritchey for being supportive human beings and listening to my concerns.

Of course, this project would not have come to fruition without the support of several generous institutions that funded my research. I would like to thank the American Philosophical Society, the Library Company of Philadelphia, the German Society of Pennsylvania, the German Historical Institute, and the Moravian Archives.

While in Pennsylvania, I was able to meet and befriend many archivists and librarians who constantly suggested sources and guide me in their archives. I extend my greatest appreciation to Paul M. Peucker and Thomas J. McCullough at the Moravian Archives; Frank Trommler, Bettina Hess, and Maria Sturm at the Joseph P. Horner

Memorial Library; Lisa Minardi, Sheila Joy, and Christopher Malone at the Lutheran Archives; Max Moeller at the Library Company of Philadelphia; and Andrew Prock at the Ursinus College. All of you were essential to making the archival work fulfilling and fun. I truly enjoyed our conversations outside the archives as well.

My time at UTK was not the easiest by any means, but I was blessed to have friends and colleagues who were there to lend an ear and be silly: Caitlin Lewis, Jason Jonson, Kyle Vratarich, Van Knopf, Camron Lewin, Stacie Beach, and Allie Richardson. I thoroughly appreciated not only how we struggle-bonded through our ordeals in the program, but also our off-campus conversations on Final Fantasy and the city life with Jeff Saba. I was always reenergized with my coffee dates with Camron Lewin—you were a real, steadfast friend who understood my inner conflicts.

Thank you, Jesse, for being a loving and wonderful partner. You were always patient and encouraging throughout the writing process. I especially appreciate your late-night snacks and your keen ability to proofread and be a thesaurus.

Finally, I have my family to thank for supporting me in my academic endeavors from the very beginning. Thanks, Jasmine, for being a supportive sister through and through. I did not end up obtaining my MD, but I did end up becoming Dr. Chang. Omma and Appa, this is all for you.

ABSTRACT

My dissertation explores educated medical practice within the wider landscape of healing in German-speaking communities in colonial and early America (c. 1730-1820) rather than treating medicine as the domain of elite, university-trained men. Centered on Pennsylvania and specific sites in the South, this study argues that "German-American" medicine was made in practice. In particular, eighteenth-century Pennsylvania was home to German communities and a bustling print culture providing valuable insights into their social, cultural, and political activities. Whereas Germans in Europe were more accustomed to a structured system of medical care, Germans in North America found themselves in a strange, new land with both new remedies and new local diseases. As there was little trained medical assistance in the colonies, Germans resorted to medical books and recipes brought from home. As such, there was an intermingling of both untrained and trained laymen, women, clergy, and physicians who provided medical care from transatlantic prescriptions and local ecologies in German communities in colonial America. My project serves to examine the emergence of "German-American" medical practices and networks that integrated new knowledge of their local surroundings with knowledge utilized back home.

TABLE OF CONTENTS

INTRODUCTION 1

CHAPTER 1: GERMANS IN THE AMERICAN REPUBLIC OF LETTERS FEATURING MINISTER-PHYSICIANS 15

Heinrich Melchior Mühlenberg and the Preservation of Pietist Medical Thought in Pennsylvania .. 25

George de Benneville: Medical Pluralism and the Spirit of Unity 29

The Hallesian Current in Schwenkfelder Medicine: Abraham Wagner 38

Town Pastor vs. Town Physician: Case Study with the Salzburgers in Ebenezer, GA 43

Conclusion 61

CHAPTER 2: EUROPEAN EXPECTATIONS VS. COLONIAL REALITIES: MORAVIAN MEDICINE IN EIGHTEENTH-CENTURY AMERICA (1740-1810) 64

"Sprightly" Teacher and Botanist: Anna Rosina Gambold (1762-1821) 77

The Move to Springplace and Harnessing Anna's Interests with the Region's Flora (1805-1821)... 84

Conclusion 111

CHAPTER 3: ECLECTIC AND EVERYDAY HEALING IN KALENDER IN PENNSYLVANIA, 1730-1815 113

A Man of Many Trades: Christopher Sauer (1695-1758) 119

The Sauer Kräuterbuch (1762-1778) 133

Health Manuals in the German Press in Early America (1700-1815) 143

The Deliberation of New World vs. Old World Flora by European Settlers 147

Humoral Therapeutics in the Almanacs 149

Conclusion 160

CHAPTER 4: THE MIDWIFE'S BOOKLET: GERMAN WOMEN'S HEALTH IN EARLY AMERICA 162

Hebammen at Work: Susanna Rohrer Müller and Rosina Heydrich..... 201

Conclusion 212

CONCLUSION 214

BIBLIOGRAPHY 221

Primary Sources 221

Secondary Sources 229

VITA 263

LIST OF TABLES

Table 1 199

LIST OF FIGURES

Figure 1: George de Benneville, "Medicina Pensylvania," c. 1770, page 59, Historical Medical Library of the College of Physicians of Philadelphia, https://digitalarchives.powerlibrary.org/papd/islandora/object/papd%3Acppmss_803. 35

Figure 2: Abraham Wagner, "Remediorum Specimina Ex Praxi A.W.," 1743-89, page 169, The Schwenkfelder Library and Heritage Center, https://digitalarchives.powerlibrary.org/papd/islandora/object/papd%3Acppmss_798. 41

Figure 3: Plan of the Hortus Medicus in Bethabara, 1761. Drawing by Christian Gottlieb Reuter (Moravian Archives, Winston-Salem, NC), https://heald.nga.gov/mediawiki/index.php?title=File:1944.jpg&oldid=15665. 73

Figure 4: Birthday poem and drawing of forget-me-nots, by Maria Louisa Schropp, Bethlehem, 27 June 1796, KliestColl 8, Moravian Archives, Bethlehem, PA. 82

Figure 5: Well wishes and drawing of pink roses and forget-me-nots, n.d., KliestColl6, Moravian Archives, Bethlehem, PA. 83

Figure 6: Birthday poem and drawings of pink roses, forget-me-nots, garnish, and ribbon, by Anna Rosina Kliest, 9 June 1804, KliestColl9, Moravian Archives, Bethlehem, PA. 84

Figure 7: Astrology page from the 1772 issue of *Der Hoch-Deutsch Americanische Calender* 116

Figure 8 146

Figure 9: Title page of Kurzegefaßtes Weiber-Büchlein. Enthält Aristotels und Alberti Magni Hebammen-Kunst, mit den darzu gehörigen Recepten. Die Zehente Auflage (Harrisburg, Pa.: Benjamin Mayer, 1799). 165

Figure 10: Kurzegefaßtes Weiber-Büchlein (Ephrata, PA: Benjamin Mayer, 1799). 178

Figure 11: Kurzgefaßtes Weiber-Büchlein, Welches sehr nutzlichen Unterricht für Schwangere Weiber und Hebammen (Reading, PA: Gottlob Jungmann and Carl Andreas Bruckmann, 1802), http://resource.nlm.nih.gov/9314731. 179

Figure 12: Reproduced from Justine Siegemund's Die Chur-Brandenburgische Hof-Wehe-Mutter (Leipzig: Braun, 1724),10-11, https://mdz-nbn-resolving.de/urn:nbn:de:bvb:12-bsb11219537-1..... 186

Figure 13: Illustration of a child with one foot towards the exit of the birth canal. Reproduced from Eucharius Rösslin's Der Schwanngeren, Frawen vnd Hebammen Rosengarten (Ausgburg: Steyner, 1528), http://resolver.sub.uni-goettingen.de/purl?PPN559069138. 190

Figure 14: Reproduced from Justine Siegemund's Die Chur-Brandenburgische Hof-Wehe-Mutter (Leipzig: Braun, 1724),18-9, https://mdz-nbn-resolving.de/urn:nbn:de:bvb:12-bsb11219537-1. 190

Figure 15: "The Form of a Child in the Womb, disrobed of its Tunicles, proper and common." Reproduced from Aristotle's Compleat Masterpiece. In Three Parts, 28th ed. (London, 1762), 48..... 195

INTRODUCTION

Between 1680 and 1780, more than a hundred thousand German-speaking people migrated to British North America, accounting for 8.6% of the population overall (second to the British) and a third of the population in Pennsylvania.[1] Aaron Spencer Fogleman contends that German-speaking immigrants constituted the largest European immigrant group in the eighteenth century to the United States. Despite these statistics, scholarship on the Atlantic World has overlooked German-speaking immigrants.[2] We know a great deal about the Atlantic worlds created by the Spanish, Portuguese, British, and French, but comparatively little about the networks that linked Central Europe to the Americas. David Blackbourn argues the need to recognize the existence of a "German Atlantic" in the three centuries after 1500 as they maintained a notable presence and helped shape the Atlantic world. These Germans have remained invisible to us as they were "chameleons, or shape-shifters," merging into the local background and empires of other states.[3]

One of the central problems that new immigrants faced to the colonies was the question of how to preserve health and treat illness under circumstances that were significantly different from the ones that they had left behind. The literature on healing and health in early America is abundant; past work has focused on specific diseases and epidemics, agricultural and food pathways, Native American medicine, and more. Aside

---

[1] "The Germans in America," *Area Studies European Division,* last modified 23 April 2014, https://www.loc.gov/rr/european/imde/germchro.html.

[2] The limited texts that focus on Germans in the Atlantic World include Michelle Gillespie and Robert Beachy's *German Moravians in the Atlantic World* (New York: Berghahn Books, 2007); and Hartmut Lehmann, Hermann Wellenreuther, and Renate Wilson's *In Search of Peace and Prosperity: New German Settlements in Eighteenth-Century Europe and America* (University Park, PA: Pennsylvania State University Press, 2000).

[3] David Blackbourn, *Germany in the World: A Global History, 1500-2000* (New York: Liveright, 2023), xv.

from Renate Wilson's and Katherine M. Faull's works on German medical networks of the Pietists and Moravians, however, much of the scholarship on early colonial American medicine has been limited to Anglo-American contexts.[4] I seek to rectify this gap in the literature by illuminating the formation of a German-speaking American medical culture between 1730 and 1820. Expanding our purview beyond educated elite men, my dissertation will illuminate the remarkably diverse (yet overlooked) groups of people who helped formulate this new culture. My project explores eighteenth-century German settlers in British America, who found themselves in a strange new land—one with an unfamiliar climate, new plants, and new diseases.

Compared to the treatment provided in eighteenth-century Germany, where people had access to a wide range of formal and informal medical resources, infrastructure for trained medical personnel and knowledge did not exist in the early phases of settlement in North America. Over the course of the eighteenth century, educated medical practitioners from Europe did practice in the American colonies, but an integrated hierarchical network with academically trained physicians at the center ultimately did not come to fruition in the colonies. Rather, diverse practitioners provided medical services with varying degrees of training and orthodoxy. Moreover, sources such as newspapers and almanacs conveyed a wealth of information regarding the natural world: these include astronomy, astrology, and medicine. Natural knowledge, which historians once associated only with famous European thinkers and theorists, was

[4] See Wilson, *Pious Traders in Medicine*; Renate Wilson, "Moravian Physicians and their Medicine in Colonial North America: European Models and Colonial Reality," in *Pious Pursuits,* 65-80; Katherine M. Faull, ed. *Speaking to Body and Soul: Instructions for the Moravian Choir Helpers, 1785-1786* (University Park: Pennsylvania State University, 2017).

produced not only by the trained "scientists," but also enslaved and free Blacks, merchants, apothecaries, lay people, indigenous people, and women.[5]

During the eighteenth century, there was a notable audience for medical self-help texts in German communities in North America. As David L. Cowen and Renate Wilson cover in their 1997 article, "The Traffic in Medical Ideas," German-speaking people in the Pennsylvania and adjoining areas relied on traditions and practices brought over from their homelands. Many of the medical texts imported to the colonies were geared towards the educated layman, and the expansion of local presses after the Revolution saw that "lower-priced books of more practically oriented domestic medicine, homey medicine, and folk medicine" found their way into the public.[6] One of the more famous books in Europe was Christian Friedrich Richter's *Höchst-nöthige Erkenntnis des Menschen, sonderlich nach dem Leibe und natürlichen Leben*, intended for an "*ungelehrt"* [that is, not university-educated] audience. Despite being one of the early examples of the *Populärmedizin* of the eighteenth century, Cowen and Wilson point out that it does not belong to the same group as the "collection of recipes, secreta, and magic that had come down in myriad form from the Late Middle Ages through the early modern period."[7] In addition to the domestic health manuals such as John Wesley's *Primitive Physick* (1747), Samuel-Auguste Tissot's *Avis au peuple* (1763), and William Buchan's *Domestic*

---

[5] Conevery B. Valencius, David I. Spanagel and their coauthors underline how in recent decades, historians have challenged the assumption of the "founder's knowledge," that is, intellectual breakthroughs achieved by prominent figures such as Benjamin Franklin and Thomas Jefferson. Conevery Bolton Valencius, et al., "Science in Early America: Print Culture and the Sciences of Territoriality," *Journal of the Early Republic* 36 (2016): 74.
[6] David L. Cowen and Renate Wilson, "The Traffic in Medical Ideas: Popular Medical Texts as German Imports and American Imprints," *Caduceus* 13 (1997): 75.
[7] Cowen and Wilson, "The Traffic in Medical Ideas," 69.

Medicine (1769), publications from the Pennsylvania press reflected matters relevant to healing and medicine. It was not until the late nineteenth century that these German medical imprints became overshadowed by texts framed by the professionalization of medicine. The German medical experience in early colonial America offers insight into a different medical culture that integrates European/German and local knowledge.

In recent decades, historians of medicine have shifted focus to the cultural history of medicine, moving away from institutional and biographical histories towards a less Western-centric history of medicine that appreciates the interchanges and pluralities of health.[8] Scholars now put greater emphasis on a broader source base; they "now stress the fluidity, eclecticism and exchanges rather than the dichotomies between elite/regular and popular/irregular medical culture/practitioners."[9] My dissertation delves into this further by exploring the emergence of a German-American medical culture in colonial America between 1730 and 1820. Eighteenth-century Pennsylvania was home to German-speaking settlers and a vibrant print culture that sheds light on their social, cultural, and political lives. Whereas German-speakers in Europe were accustomed to a more structured system of medical care, German settlers in North America had to grapple with the unfamiliar environs of a foreign land. Trained medical personnel and assistance were few and far between in the colonies, yet German ties back to Central Europe persisted through medical recipe and self-help books brought over to the New World. Moreover, colonists were able to utilize the local flora and fauna to create new remedies.

---

[8] Jonathan Andrews, "History of Medicine: Health, Medicine and Disease in the Eighteenth Century," *Journal for Eighteenth-Century Studies* 34, no. 4 (2011): 504-505.
[9] Andrews, "History of Medicine," 506.

Utilizing a variety of sources such as health manuals, midwifery ledgers, and almanacs (*Calender*), I expand the work laid out by Renate Wilson in *Pious Traders in Medicine* (2000), which documents the international pharmaceutical network between the Francke Foundations in Halle and North America; her work argues that there was a multicultural medical culture and market that relied on the publication of texts and medicinal imports from Europe. The Halle Orphanage was crucial institute in providing pharmaceutical goods to the British colonies, but they ultimately remained a "market niche in German communities."[10]What is less clear, however, is how medical knowledge circulated in German settler communities on the outskirts of the major cities, and how it interacted with other kinds of healing practices and traditions. This poses not only an interesting question about the shape of medical culture in early colonial America, but also about the development of science more broadly.

An open question this dissertation considers is not the primacy of a shared "Germanness," but how religious communities shaped medical practice among German-speaking settlers in colonial America. Lutheran Pietists, exemplified by Heinrich Melchior Mühlenberg and Johann Martin Boltizus, privileged order and standardized preparations from Halle, folding therapeutics into their ministerial duties as care for bodies and as well as souls. By contrast, dissenting religious groups such as the Moravians and Separatists, were more inclined to integrate local and indigenous knowledge, experiment with New World botanicals, and circulate domestic recipes in the

[10] Wilson, *Pious Traders in* Medicine, 3. As the market for medical treatment and products grew substantially, people had greater opportunities to exercise a choice in medical care (as epitomized in the concept of the "medical marketplace").

vernacular. Recasting identity in confessional rather than ethnic terms clarifies why "German" communities diverged markedly in practice: it was their religious styles of authority and pedagogy (not national identity) that organized therapeutic choices. This reframing sits along broader debates about German identity: following Paul Spickard and H. Glenn Penny, I treat "Germanness" as historically contingent while emphasizing that religion was the engine of medical authority and adaptation in early America.[11]

Since the 1970s, the scholarship in the history of medicine has undergone significant re-evaluation; it has been fraught with debates and interpretations about the methods and meanings of medical history.[12] To briefly summarize, historians during the

---

[11]As immigration is part of the narrative of these German-speaking settlers, our understanding of their identity is based on an "interlocking set of unexamined assumptions about how various racial and ethnic groups" functions in relation to each other. Paul Spickard, *Almost All Aliens: Immigration, Race, and Colonialism in American History and Identity* (New York: Routledge, 2007), 5-6. Although set in a later period, H. Glenn Penny's study *Kindred by Choice* (2013) also asks such questions about national identity in relation to Native Americans. Glenn Penny shows us that the Germans' fascination with Indigenous Americans can shed light about "German cultures, transnational and transcultural histories, and the relationships between Europeans and non-Europeans." H. Glenn Penny, *Kindred by Choice: Germans and American Indians since 1800* (Chapel Hill: University of North Carolina Press), 6.

[12] One of the seminal publications in the 1980s was Roy Porter's article, "The Patient's View: Doing Medical History from Below," where (as the title suggests) Porters called for scholars to put the patient front and center. Porter numbered among the ranks in the academic community of the burgeoning new social history. Taking a page from E.P. Thompson's *The Making of the English Working Class* (1963), Porter took Thompson's approach and applied it to the history of medicine. On the French side, Michel Foucault has seemingly emerged as one of the champions of revitalizing silenced voices with his *Folie et déraison* (1961), where the asylum stood as the ultimate symbol for tyrannical structure of biopower, knowledge, discourse, and control. Assuming a more pessimistic stance of the patient, Foucault minimized the agency of the patient, arguing that they had "no place in the 'universe of our discourse.'" Quoted in Carlo Ginzburg, *The Cheese and the Worms: The Cosmos of a Sixteenth-Century Miller,* translated by John and Ann C. Tedeschi (Baltimore: John Hopkins University Press, 1980), 127. Porter's approach offered a counterbalance to Foucault's model, instead presenting a "view of lay initiative, resilience, and capacity to play the system." While Porter's suggestions for histories of the patient has been received warmly by academics, others such as the Swiss historian Flurin Condrau have lamented that such histories from below overlook the "global forces that govern history" and the "evolution of those discursive, institutional, or social processes that shape representations of illness and broader healthcare systems." In other words, we ought to broaden our analysis of these patients to the social, political, and intellectual cultures of their time. See Roy Porter, "The Patient's View: Doing Medical History from Below," *Theory and Society* 14, no. 2 (1985): 194. For more details on the Foucauldian and Porterian models, see Alexandra Bacopoulos-Viau, and Aude Fauvel, "The Patient's Turn: Roy Porter and Psychiatry's Tales, Thirty Years on," *Medical History* 60, no. 1 (2016): 1-18.

1970s and 1980s heavily leaned towards social constructionism in analyzing the field, in contrast to the old Whiggish history, which emphasized the past as a journey towards enlightenment and progress. Social constructivism stressed the "ways in which scientific and medical ideas and practices are shaped in a given context."[13] Deeper appreciation for globalism and diversity has shaped the history of medicine to become "more appreciative of interchanges, of pluralities and of differing racial and cultural composition in differing health contexts."[14] This in turn has sparked new research on Latin American, Asian, indigenous, and African medicine and health. Notable works in this vein include Londa Schiebinger's study of the myriad pathways associated with botanical species and knowledge and Pratik Chakrabarti's survey of the British West and East Indies which traces the development of the British medical system in the colonies.[15] Both books revise the narrative demonstrating that medicine did not develop "out of its own 'progressive' momentum…but as a product of its material context."[16] Institutional and biographical histories have somewhat fallen out of favor; instead, historians have sought better understandings of the "pre-scientific" medicine and socio-professional milieu that expands beyond educated physicians, apothecaries, and midwives to include "quacks,"

---

[13] Mark Jackson, introduction to *The Oxford Handbook of the History of* Medicine, edited by Mark Jackson (Oxford: Oxford University Press, 2011), 7. During the 1970s and 1980s, social constructivism gave scholars a better conceptual tool to study the relationship between medicine and society, but the field continued to be divided over not only methods and sources, but also the purpose and relevance of medical history. The historiographical dispute between Thomas McKeown and John F. Hutchinson encapsulates the tension of how the history of medicine should be written and analyzed with the former suggesting closer engagements between the past and present vs. the latter's insisting that McKeown's vision would distort the past.

[14] Andrews, "History of Medicine," 505.

[15] Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge, MA: Harvard University Press, 2004); Pratik Chakrabarti, *Materials and Medicine: Trade, Conquest and Therapeutics in the Eighteenth Century* (Manchester: Manchester University Press, 2010).

[16] Chakrabarti, *Materials and Medicine*, 3.

and other "illicit" practitioners. As Mary Lindemann points out, postulating such dichotomies such as elite/popular and academic/lay medicine is problematic: instead, we should see early modern medicine best characterized by "the presence of a broad substratum of common beliefs about health, illness, and therapeutics that most members of society shared."[17]

The history of eighteenth-century medicine in Europe has garnered significant attention, particularly the relationship between the Enlightenment and medicine. More recently, the interface between medicine and religion has generated interesting questions.[18] For example, Kelly Wisecup offers a new framework that focuses on both European settlers' responses to disease in the New World (specifically in New England) and European medical philosophies, taking into account the context of indigenous and African medical knowledge. Wisecup makes an important distinction in pointing out that colonial studies "rest on a view of European representational strategies as remaining *stable* in colonial encounters."[19] According to her, traveling to the New World transformed Europeans' bodies and minds and as a result, they could not identify with

---

[17] Mary Lindemann, *Medicine and Society in Early Modern Europe* (Cambridge: Cambridge University Press, 1999), 16-7.

[18] For example, see Ole Peter Grell and Andrew Cunningham, eds., *Medicine and Religion in Enlightenment Europe* (Aldershot: Ashgate, 2007); Maria Pia Donato, *Sudden Death: Medicine and Religion in Eighteenth-Century Rome* (Burlington, VT: Ashgate, 2014); Philippa Koch, *The Course of God's Providence: Religion, Health, and the Body in Early America* (New York: New York University Press, 2021). For works on early modern Europe, see Lindemann, *Medicine and Society in Early Modern Europe*; Michael Stolberg, *Experiencing Illness and the Sick Body in Early Modern Europe*, translated by Leonard Unglaub and Logan Kennedy (New York: Palgrave, 2011). For the German context, see Mary Lindemann, *Health and Healing in Eighteenth-Century Germany;* Thomas H. Broman, *The Transformation of German Academic Medicine, 1750-1820* (Cambridge: Cambridge University Press, 1996); Alisha Rankin, *Panaceia's Daughters: Noblewomen as Healers in Early Modern Germany* (Chicago: University of Chicago Press, 2013); Barbara Duden, *Woman Beneath the Skin: A Doctor's Patients in Eighteenth-Century Germany,* translated by Thomas Dunlap (Cambridge, MA: Harvard University Press, 1991).

[19] Kelly Wisecup, *Medical Encounters: Knowledge and Identity in Early American Literatures* (Amherst: University of Massachusetts Press, 2013), 9.

their counterparts in the Old World. Using the concept of *historia*, European settlers departed from the familiar European medical traditions and "altered conventional narrative strategies of describing [and addressing] illness and healing."[20] Wisecup's methodology opens up historical avenues for reading colonists' sources dotted with external influences. As Thomas Neville Bonner underscores, medical culture is rooted "in particular historical and cultural circumstances that have varied from country to country."[21]

We are now only beginning to understand how Protestant churches played a role in shaping networks of people, trade, and communication. Research on medical culture among the German communities in early America has not been explored to the same degree as the British. Wilson's research primarily focuses on the trade of drugs, not the practice and structure of medical care.[22] In contrast to New England, where the population retained strong ties to Britain, Philadelphia was from the onset a conglomeration of multiple European and indigenous medical traditions and skills. Most publications on medicine in colonial Pennsylvania, where a significant proportion of German immigrants settled, deal with the establishment of the medical school in Philadelphia in 1765 what we now know today as the University of Pennsylvania. Philadelphia served as a major entrepôt in the eighteenth century in large part due to the Huguenot and German networks, most notably the medical enterprises set up by the

---

[20] Wisecup, *Medical Encounters,* 9.
[21] Thomas Neville Bonner, *Becoming a Physician: Medical Education in Britain, France, Germany, and the United States, 1750-1945* (New York: Oxford University Press), 14.
[22] See also Renate Wilson, "Trading in Drugs through Philadelphia in the Eighteenth Century: A Transatlantic Enterprise," *Social History of Medicine* 26, no. 3 (2013): 354.

Francke Foundations of Halle. The city also boasts an abundance of German sources, i.e., newspapers and almanacs, thanks to the printing press established by Christopher Sauer in 1738. Currently, there is no scholarship that has examined the German press and its role in shaping medical culture among German-speaking settlers in the early- and mid-eighteenth century; interestingly, this is not the case for books and newspapers published in the nineteenth century.[23] The exception to this generalization is Hermann Wellenreuther's book on German-American broadsides, a specific type of media used by Germans in Pennsylvania. These broadsides covered a range of topics including medical problems and advice, advertising goods and services, and production methods.[24] One of the benefits of the broadside is how cheap they were, allowing for greater accessibility among readers. In his book, Wellenreuther has a brief section on broadsides devoted to medical problems, revealing that Germans were most concerned with three health issues: kidney stones and gallstones, pregnancy problems, and gout.[25] Broadsides served as an important means to disseminate information.

My source base combines on a combination of manuscript and print materials that capture practice on the ground as well as the infrastructures that sustained it. I refer to the unpublished medical manuscripts from George de Benneville's *Medicina Pensylvania* to Abraham Wagner's *Remediorum Specimina* that highlight their eclectic method of treatment alongside the midwives' ledgers kept by Susanna Rohrer Müller and Rosina

---

[23] For example, see Achim Kopp, "Abraham Reeser Horne's *Pennsylvania German Manual,*" *Yearbook of German-American Studies* 45 (2010): 107-28.
[24] Hermann Wellenreuther, *Citizens in a Strange Land: A Study of German-American Broadsides and Their Meaning for Germans in North America, 1730-1830* (University Park: Pennsylvania State University Press, 2013), 49.
[25] Wellenreuther, *Citizens in a Strange Land,* 81.

Heydrich, which left behind records of hundreds of births and domestic recipes for women's and children's health. I pair these with German almanacs (*Calender*), specifically the Sauers' *Der Hoch-Deutsch Americanische Calender* and its serialized *Kräuterbuch*, and other health manuals in circulation to reconstruct how advice, remedies and materia medica moved between households and practitioners. This dissertation also relies on official correspondence and institutional records that linked the Halle Orphanage with the ministers and congregations in Pennsylvania and Georgia; we also see the Moravians and their detailed documentation, whose day-to-day notes illuminate medical adaptation in the mission settlements (through gardens and local exchange) rather than simple transfer from European centers.

In reviewing these sources, it will be important to discern the "practices of reading and note-taking" calling for the "deliberate selection of selection and linking of different kinds of knowledge."[26] Physicians in colonial America not only referred to the knowledge transferred from the Old World but also integrated new knowledge obtained from other origins such as indigenous Americans and other Europeans. Elaine Leong has shown in her study of an annotated medical text can help us recover otherwise invisible medical practices. In early modern England, the Tallamy family's annotated copy of *The Art of Distillation* (1651) is an excellent example of how a single book can encompass layers of epistemic work that compiled recipes, advice, and excerpts from different kinds of knowledge.[27] Building on this approach, I treat each recipe as a small map of

[26] Tara Alberts, Sietske Fransen, and Elaine Leong, "Translating Medicine, ca. 800-1900: Articulations and Disarticulations," *Osiris* 37 (2022): 11.
[27] See Elaine Leong, "When the Tallamys Met John French: Translating, Printing, and Reading *The Art of Distillation*," *Osiris* 37 (2022): 89-112.

ingredients and their paths. For example, when a manuscript calls for Hallesian staples (e.g., polychrest pills or *essentia dulcis*), it can be read as a claim on Old World authority. As a counter example, another remedy can be interpreted as a record of translation by substitution. Sometimes, certain plants were swapped for functional equivalents grown in the New World. A syrup made from the root of mayapple (*Podophyllum peltatum*) had purgative properties, which indigenous tribes of eastern North America employed as a strong emetic. I follow the ingredients, whether imported or cultivated, to show how remedies in German-speaking communities were assembled at the intersection of European pharmacopoeias and colonial ecologies.

My dissertation argues that German-speaking medical practice in North America from 1730 to 1820 was forged from transatlantic prescriptions and local ecologies. In religious-centered settings in Chapter 1 and 2, confessional identities matter: Lutheran Pietists geared towards Hallesian discipline, whereas Moravians and other dissenters were open to adapting pragmatically. In the arenas of accessible print and women's health (Chapters 3 and 4), religious influence recedes. Vernacular prints and household routines and care took precedence in the world of German families and midwives. Across four chapter, I follow how remedies and knowledge moved across pulpits and missions, through almanacs and gardens, and in lying-in rooms.

Chapter 1 traces a spectrum of medical authority among German-speaking Protestant in the British colonies. At one end, we have Lutheran Pietists such as Heinrich Melchior Mühlenberg in Pennsylvania and Johann Martin Boltzius in Georgia, who valued structure and the standardized preparations of the Francke Foundations; on the

other side, figures like George de Benneville and Abraham Wagner placed more emphasis on eclectic care colored by experimental tinkering. Justus Heinrich Christian Helmut and John Christopher Kunze appear not as physicians but as a foundation for education and language through which Hallesian discipline travelled. These men show how authority in an unregulated market was assembled from correspondence and patronage (often, but not only) from Halle and from the local environment.

Chapter 2 shifts the lens to Moravian settlements from Bethabara, North Carolina, to Springplace, Georgia. Here, we follow medical care adapted locally rather than prescriptions imposed from a center. Moravian healing appears as a practice created from gardens and local exchange: Brethren and Sister made cures possible with what the locale afforded and incorporated Indigenous and Black knowledge when useful and necessary. The chapter situates the Moravians historically as a global network with local missions across America and focuses on the integral role that women played in sustaining the mission and community. What held these systems together was reliability and trust rather than formal credentials featured in Chapter 1.

Chapter 3 turns to German almanacs, or *Calender*. These were read as everyday publications of regimen and remedy: cheap prints that condensed European learning into a form that households could easily refer to while incorporating New World plants and eclectic cures for readers with no formal medical training. The Sauers' press and *Der Hoch-Deutsch Americanische Calender* serve as the primary study. The elder Sauer intended his serialized *Kurzgefaßtes Kräuterbuch* to be accessible and affordable for German families so they could own a manual filled with household recipes and helpful

remedies. Advice about animal health was an important topic covered in these almanacs as well because of its link to people and the environment in early America.

Chapter 4 covers women's health through the *Weiber-Büchlein*, the only German midwifery text printed in early America, and the ledgers of the midwives Susanna Rohrer Müller and Rosina Heydrich. The midwife's booklet is read as a deliberate transmuted compilation for Pennsylvania Germans rather than a simple translation. Its recognition of the central role of the midwife and its selective borrowings from English and German traditions makes this a notable text to study. The manuscripts left behind by Müller and Heydrich supply practice on the ground: records of children successfully delivered and recipes for maintaining the health of the pregnant mother, aftercare, and advice for the child's health. The works of these two midwives showcase how German midwifery in the early republic persisted as a vital female practice in German households distinct from their English counterparts who were increasingly put on the sidelines in the early nineteenth century.

CHAPTER 1: GERMANS IN THE AMERICAN REPUBLIC OF LETTERS FEATURING MINISTER-PHYSICIANS

This chapter explores German-speaking ministers who paired pastoral leadership with hands-on healing in colonial America from 1745 to 1776. The figures of interest include Schwenkfelder Abraham Wagner (1717-1763), Huguenot George de Benneville (1703-1793), and Heinrich Melchior Mühlenberg (1711-1787). Two contemporaries, Justus Heinrich Christian Helmut (1745-1825) and John Christopher Kunze (1744-1807) figure here as philological builders of German literacy whose occasional forays into science and public health framed (but did not define) the medical work treated in this chapter. While most of these men were in Pennsylvania, especially in the Philadelphia area, this chapter also branches beyond Pennsylvania to the Salzburger settlement in Ebenezer, Georgia, where I examine the medical development and debates that arose between the physician Christian Ernst Thilo (1708-1765) and lead pastor Johann Martin Boltzius (1703-1765). German medical practices ranged from a strict fidelity in Hallesian medicine to an adaptive, eclectic empiricism, revealing a complex and ambiguous pattern of healthcare in colonial America.

Renate Wilson has studied the German Pietist networks of the Francke Foundation in Halle, Germany, and its interaction with the American medical environment throughout the eighteenth century in *Pious Traders in Medicine* (2000). In her work, the Foundations occupied a medical niche in the colonies, suppling medications and books "oriented to domestic German consumption."[28] She makes a compelling

[28] Renate Wilson, *Pious Traders in Medicine: A German Pharmaceutical Network in Eighteenth-Century North America* (University Park, PA: Pennsylvania State University Press: 2000), 209.

argument for the presence of a "specifically German medical culture and market in eighteenth-century North America" but laments that we remain woefully ignorant of community and medical practices in rural and small urban settlements.[29] This chapter delves into this question by taking a microscopic look into the medical care provided by the men mentioned above. These practitioners had different principles for taking care of their community. While they sometimes advocated for the format of treatment emanating from Halle, they sometimes also opted for more eclectic practices that adapted to an unfamiliar landscape. In order to understand their commitments and strategies, I will also examine how they negotiated trust and credibility in essentially an unregulated medical market. While state authorities in eighteenth-century Germany required all health practitioners (e.g., surgeons, apothecaries, midwives) to submit credentials to the local medical board (*collegium medicum*) and obtain the license to practice, such regulations did not exist in the American colonies.[30]

The Halle Orphanage (*das hallesche Waisenhaus*) was the institutional facility that served as the headquarters for the Francke Foundations. The Orphanage comprised of an "elite school, or *Pädagogium*, for the sons of noblemen; schools for the sons of artisans, soldiers, and clergy; a hospital; an apothecary; a bookshop; a botanical garden;

---

[29] Wilson, *Pious Traders in Medicine,* 6, 221. In particular, religious communities such as a Schwenkfelders and Moravians had large German populations.

[30] These Collegium Medicum existed much earlier in certain states such as Ulm and Nuremberg. See Alexa Grob and Hans Joachim Winckelmann, "Das Collegium Medicum Zu Ulm," *Sudhoffs Archiv* 98, no. 1 (2014): 109–23; Susan Splinter, "'Ein Jeder Der Stadt Nürnberg Bestelter Medicus Und Physicus Ordinarius Soil Geloben ...' Medizinale Strukturen Nürnbergs Zu Beginn Des 18. Jahrhunderts," *Würzburger Medizinhistorische Mittelungen* 30 (2011): 334–39. The Prussian government established a collegium as early as 1685. For an overview on the German state and medicine, see Chapter 1 of Mary Lindemann's *Health & Healing in Eighteenth-Century Germany* (Baltimore: Johns Hopkins University Press, 1996), 22-71.

and a gallery of architectural models, *naturalia,* and scientific instruments."[31]It was the motherhouse that engaged in the flow of people, publications, and pharmaceuticals throughout Europe and settlements in North America. The first generation of Pietist ministers such as Mühlenberg and Boltzius had access to medications produced by the Halle Orphanage to sell and administer to their communities. Halle also served as the center of correspondence that set expectations for these pastors in the American colonies. The focus on the Pietists at Halle in the eighteenth century is significant because the Francke Foundations was entangled with the political on-goings of the Prussian state. Royal privileges granted Halle the ability to operate; in return, Halle aided the state with a culture of order that fit broader cameralist ambitions.

Understanding the Orphanage's role in the context of the Prussian state can help articulate the medical infrastructure it supported in the American colonies and why figures such as Mühlenberg and Boltzius strictly abided by the medical products sent from Halle. Kelly Koan Whitmer explains how the Orphanage was a "police institution" that functioned in "an insulated infrastructure of entrepreneurial activity" overseen by the state.[32] By extensions, this applied to the medical trade and networks that the Orphanage had sown across the globe. Closely associated with the Orphanage, the University of Halle was an alternate space meant to cultivate academic dialogue and reconciliation and

---

[31] Kelly Joan Whitmer, *The Halle Orphanage as Scientific Community: Observation, Eclecticism, and Pietism in the Early Enlightenment* (Chicago: University of Chicago Press, 2015), 1.
[32] Whitmer, *The Halle Orphanage as Scientific Community,* 9-10. Kaiser Friedrich Wilhelm I toured the Orphanage in 1720 and was heeding the advice of cameralists and "police scientists" who called for oversight of the activities of institutes such as the Orphanage (which were granted some degree of freedom) as long as they served the state beneficially. William Clark, *Academic Charisma and the Origins of the Research University* (Chicago: University of Chicago Press, 2006), 13.

promote harmony among the four faculties: theology, law, medicine, and philosophy.[33] Tensions nevertheless persisted in the colonies between ministers and physicians. This is noteworthy when read alongside the medical stances of Mühlenberg and Boltzius, who were quick to criticize therapeutics practices recommended outside Halle. Authorities from Halle did, however, make requests to their ministers in the colonies to send seeds and plants from the New World to better understand local histories and relationships between species and place.[34] Indeed, Georg Ernst Stahl and Friedrich Hoffmann, both professors of medicine at the University of Halle, did not necessarily disapprove of Indigenous plants and minerals in therapeutic preparations.[35] Perhaps the fervorous defense of Hallesian medicines by the pastors in the colonies was undergirded in financial reasons: the selling of medicines generated some revenue for the ministers themselves, and Orphanage financially relied on its "profitable trade with the nostrums of its pharmacy shop."[36]

Heinrich Mühlenberg and Johann Boltzius were major proponents of Hallesian medications and arguably served as a sort of "medical police" [*Medizinische Polizei*] in

---

[33] Whitmer, 11. For this "new attitude towards academic controversy" by Halle's professors, see John Robert Holloran, "Professors of Enlightenment at the University of Halle, 1690-1730" (PhD Dissertation, University of Virginia, 2000).

[34] In one letter from Gotthilf August Francke to Mühlenberg, Francke relays a request from Lord von Münchhausen to "collect some of the most rare flowers and smaller plants and to send seeds from these" along with very specific directions on how to preserve and send them. Letter 89 in Heinrich Melchior Mühlenberg, *The Correspondence of Heinrich Melchior Mühlenberg: 1470-1747*, ed. Helmut T. Lehmann and John Walter Kleiner, vol. 2 (Rockport, ME: Picton Press, 1997), 110. See H. Otto Sibum, "Experimentalists in the Republic of Letters," *Science in Context* 16, no. 1/2 (2003): 89–120.

[35] Stahl preferred "milder medicines" than Hoffman. See Christa Habrich, "Characteristics of Eighteenth-Century Therapeutics in Germany," in *Essays in the History of Therapeutics*, ed. W.F. Bynum and V. Nutton (Amsterdam: Rodopi, 1991), 39–50.

[36] Andreas-Holger Maehle, *Drugs on Trial: Experimental Pharmacology and Therapeutic Innovation in the Eighteenth Century* (Amsterdam: Rodopi, 1999), 27.

the New World.[37] In Prussia, the state was intent on establishing a form of public health (a term that emerged in the nineteenth century) as a form of governance in accordance with cameralism, which was "aimed at mobilizing all available resources of a territory and its population in the serve of a common good."[38] Scientific cameralism became institutionalized in 1727 when Frederick Wilhelm I created university chairs at the universities of Halle and Frankfurt an der Oder. Andre Wakefield's provocative book *The Disordered Police State* (2009) makes us reevaluate ideas on cameralism in early modern Germany in relation to a well-oiled police state: an organized structure of human and natural sciences would yield prosperity, but in reality, cameralism was inherently dishonest, focused "on the interests of the prince and his treasure" and functioning more as "good publicity than as tools of discipline."[39] The Halle Orphanage was just one branch that represented this. In order to secure funding from generous donors, the Orphanage made sure to minimize (or outright conceal) the less glamourous aspects of colonial life as was the case for the Ebenezer settlement.

Both Mühlenberg and Boltzius kept continuous correspondence with the Pietists back in Halle, requesting resupplies of medicines and books for the German settlers in the colonies. The director of the Francke Foundations, Gotthilf August Francke, acquiesced to Mühlenberg's orders, whereas Boltzius had to grapple with what very little they

---

[37] Mary Lindemann explains "medical police" was intended by cameralists to inject mercantilism into medicine in the German-speaking countries during the seventeenth and eighteenth centuries. The "'well-ordered police state' (a sort of proto-welfare state rather than a dictatorial one) sought to enhance the health of the population as well as to boost its size." Mary Lindemann, *Medicine and Society in Early Modern Europe* (Cambridge: Cambridge University Press, 1999), 135.
[38] Claudia Stein, "The Birth of Biopower in Eighteenth-Century Germany," *Medical History* 55 (2011): 334.
[39] Andre Wakefield, *The Disordered Police State: German Cameralism as Science and Practice* (Chicago: University of Chicago Press, 2009), 142-3.

obtained from Halle (as most of the Orphanage's focus was on Pennsylvania). Nevertheless, Boltzius attested to the efficacy of the Hallesian medicines and objected to the more experimental approaches taken by physicians of the Ebenezer settlement. In the same vein, Mühlenberg endorsed his support for using Hallesian medication and expressed his disapproval of the more eclectic medical practices that deviated from Halle. Yet not all these men adhered to institutional orthodoxy. Providers such as Thilo who was constantly juggling between directives of his clerical supervisors and the settlers' "expectations of free care and ample medications" did not bode well with the likes of Mühlenberg and Boltzius.[40] The medical approaches of the Schwenkfelder Abraham Wagner and Universalist George de Benneville were shaped by practical experience and a willingness to adapt with their engagements with local Indigenous communities.

Unlike Muhlenberg, Wagner and de Benneville were not educated at Halle; nevertheless, both men were trained in radical Pietist circles. Wagner had no formal university education (to our knowledge) but obtained medical training starting at a young age from Dr. Melchior Heebner [Hübner]. Little is known about de Benneville's medical background; the biography by Albert D. Bell states that de Benneville obtained his doctorate from "a pietist medical faculty"[41] before 1739 and practiced medicine near Mons, Belgium. Renate Wilson too notes that he had "medical training in apparently

---

[40] Renate Wilson, "Moravian Physicians and Their Medicine in Colonial North Ameerica: European Models and Colonial Reality," in *Pious Pursuits: German Moravians in the Atlantic World*, ed. Michele Gillespie and Robert Beachy (New York: Berghahn Books, 2007), 68.

[41] Albert D. Bell, *The Life and Times of Dr. George de Benneville (1703-1793)* (Boston, MA: Universalist Church of America, 1953), 4. Louis Meier also speculates that de Benneville obtained his doctorate from a Pietist faculty in Belgium before 1739 but without citation. See Louis A. Meier, *Early Pennsylvania Medicine. A Representative Early American Medical History, Montgomery County, Pennsylvania, 1682 to 1799.* (Boyertown, PA: Gilbert Print Co., 1976), 87.

radical medical settings in Germany." However, none of the citations delve into de Benneville's education.[42] To some extent, their therapeutic and medical preparations were influenced by Halle methods—Wagner moreso due to his acquaintance with Mühlenberg.[43] Wagner had a more direct link to Halle as he obtained certain ingredients and medications such as bezoar powder and *pulvis vitalis* from the armamentarium, but he also dabbled in local botanical remedies and ingredients seen in his *Remediorum Specimina*.[44] At the same time, Wagner crossed paths with de Benneville during the latter's residence with Saur from 1741 to 1742, where he thereafter moved to Oley Valley (known today as Berks County, Pennsylvania). De Benneville's medical remedies were based on knowledge shared between himself and Indigenous tribes: he learned local botany while teaching the benefits of the vegetation of the Old World. This is seen through his recipes in his formulary *Medicina Pensylvania.* This text reflects a synthesis of Galenic, chemical, and herbal traditions. Wagner and de Benneville will be interesting to study closely together as they kept in correspondence for at least twenty years, and Wagner's manuscript mentions other German physicians including that of his mentor Hübner and de Benneville.

---

[42] Renate Wilson, "The Transmission of Medical and Pharmaceutical Knowledge to Colonial North America," in *Medical Theory and Therapeutic Practice in the Eighteenth Century* (Stuttgart: Franz Steiner Verlag, 2008), 197, fn 1. Only one of her citations (the 1997 Habrich article) specifically mentions de Benneville. The other sources explore the different features of therapeutics in eighteenth-century Germany, such as the intellectual conflict between George Ernst Stahl and Friedrich Hoffman.

[43] Wagner's observations of the pleurisy epidemic in 1748 and prescriptions caught the attention of Muhlenberg Sr., who began to establish a rapport with Wagner. See Abraham Wagner, "Remediorum Specimina Ex Praxi A.W.," 1743-89, page 19-20, The Schwenkfelder Library and Heritage Center, https://digitalarchives.powerlibrary.org/papd/islandora/object/papd%3Acppmss_798.

[44] For a list of ingredients imported from Halle, see Table 3.1-3.3 in Renate Wilson's *Pious Traders in Medicine: A German Pharmaceutical Network in Eighteenth-Century North America,* 72-77.

In the eighteenth century, physicians like other natural philosophers of the day continuously were negotiating a dual universe: "the everyday world of their profession and the more refined world of their intellectual hobbies."[45] There was not only the correspondence between the physician and his patients on treating and preventing illnesses, but also the exchange between physicians with other medical practitioners on topics ranging from medicine to botany, philosophy, and theology. The cast of characters mentioned in the first paragraph share some commonalities in their background. While none held university degrees in medicine (with the exception of Thilo and possibly de Benneville), most had obtained an education at a university in Europe or trained at the Halle Orphanage. For example, Mühlenberg studied theology at Göttingen and Halle, yet due to the close association between medicine and religion at the Institute, he familiarized himself with simple medical treatment and sold Halle medications in Pennsylvania.

Religion was the underlying factor that shaped the core of an ongoing debate amongst these minister practitioners, that is, how specific medical treatments affected the physical treatment—and by extension, the spiritual health—of one's body. Moreover, religion served as a glue for binding German settlers back to the Old World. The German network was strong and apparent not only within British America, but also across the Atlantic to Central Europe, mainly in Halle; the underlying thread linking these men together was a pastor-physician repertoire and German confessional ties that stretched from local congregations across the Atlantic with Halle as a prominent node. Among the German pastors in the colonies, Heinrich Melchior Mühlenberg pursued a tight coupling

[45] Brockliss, "The Republic of Letters and French physicians on the eve of the French Revolution," 254.

of pastoral oversight alongside standardized therapeutics (in line with the Francke Foundations). One of the greatest attentions were given by Pietist Lutheran pastors to the sick and dying: as Mühlenberg wrote, "Books and medicine belong to our concern and calling, the one for the soul and the other for the body."[46] Thus, in Mühlenberg's correspondence and planning, medicine was integral to his program of communal order by offering a reliable supply of trusted preparations. I begin with Mühlenberg because of his strong institutional ties to Halle and personal connections to the other subsequent figures in this chapter.

Colleagues of Mühlenberg within the Halle-based Pietist network, John C. Kunze and Justus Heinrich Christian Helmut, matter here chiefly for their philological and pedagogical work aimed at fostering the German language in Pennsylvania and New York. Like Mühlenberg, both Helmut and Kunze served as lead pastors at St. Michael's and Zion's parish in Philadelphia and were closely tied to Mühlenberg's circle. Neither Helmut nor Kunze received formal training in medicine. Kunze, who later became Mühlenberg's son-in-law, moved in learned circles in America and Halle and "had not been indifferent to an investigation of medical jurisprudence."[47] He emigrated to America in 1770 on behalf of the Halle Orphanage to support Mühlenberg as it became more difficult for the Hallesian pastors to keep their flocks from employing pastors who did not

---

[46] Theodore G. Tappert, "The Influence of Pietism in Colonial American Lutheranism," in *Continental Pietism and Early American Christianity*, ed. F. Ernest Stoeffler (Eugene, OR: Wipf & Stock, 2007), 31. Henry Melchior Muhlenberg, *The Journals of Henry Melchior Muhlenberg*, ed. Theodore G. Tappert and John W. Doberstein, vol. 3 (Philadelphia, PA: Evangelical Lutheran Ministerium of Pennsylvania and Adjacent States, 1958), 543.

[47] Henrietta M. Oakley, "Famous Pennsylvania-Germans: Rev. John C. Kunze, D.D.," in *The Pennsylvania-German* 3, no. 3 (July 1902): 103.

have the approval of the *Pennsylvanische Ministerium*. Kunze eventually took charge of Mühlenberg's desire to build a seminary for German settlers.[48]

Helmut likewise worked towards launching a Lutheran seminary in the Americas, but major disagreements on church policy ultimately "prevented a productive cooperation and fueled rivalry over financial and human resources."[49] Most of Helmut's writings focused on topics of music, theology, and local history. Nevertheless, Helmut did have to grapple with the constant environment of illness and disease in Philadelphia during the mid-eighteenth century and wrote "A Short Account of the Yellow Fever in Philadelphia for the Reflecting Christian" in 1763 when an epidemic of yellow fever hit the city. While Helmut incorrectly identified "some damaged coffee" from "another climate" as cause for the outbreak, the treatise was semi-scientific and partially theological in its content; he had no qualms in explaining that the fever was "a deserved punishment of a just, as well as [a] merciful God."[50] As many afflicted with the disease were on death's bed, Helmut attended to those who had called for him: "I have been called to several sick persons, who till that time, had looked upon the religion of Jesus as a matter of the utmost indifference, but to whom that truth now gave the greatest comfort…I may cherish the unmerited hope, that the Lord graciously made use of me, to lead many a soul to

---

[48] Markus Berger, "The Hallensian Pastor John Christopher Kunze (1744-1807) and His Attempts at Establishing a Preacher Seminary in North America," in *Transatlantic Encounters in History of Education* (New York: Routledge, 2020), 75-6. Founded in 1748 by Heinrich M. Mühlenberg, the *Pennsylvanische Ministerium* was an ecclesiastical body of all Lutheran congregations in Pennsylvania to which congregations could ask for pastors. Mühlenberg had considered for quite some time in establishing a preacher seminary in North America, but the authorities back at Halle indicated no interest in such an endeavor due to the high costs in supporting it.

[49] Markus Berger, "The Hallensian Pastor John Christopher Kunze (1744-1807) and His Attempts at Establishing a Preacher Seminary in North America," 76.

[50] J. Henry C. Helmut, *A Short Account of the Yellow Fever in Philadelphia, for the Reflecting Christian*, translated by Charles Erdmann (Philadelphia: Jones, Hoff, & Derrick, 1794), 8-10.

salvation."[51] If we overlook the jeremiad against the drunkards, gluttons ("people who made their belly their God"), and people with a "loose and abandoned way of living,"[52] Helmut's ministry during the epidemic echoed other German ministers' model of attending to both the physical and spiritual needs of their congregation. Kunze and Helmut's relevance for this chapter is structural: both operated within the infrastructure set up by Halle within which the minister-physicians worked.

Heinrich Melchior Mühlenberg and the Preservation of Pietist Medical Thought in Pennsylvania

When Heinrich Melchior Mühlenberg first arrived in Pennsylvania in 1742, he stepped into a colonial landscape far removed from the ordered institutions of the Old World. Having studied at Göttingen and Halle, Mühlenberg accepted the call to serve the Lutheran congregations in Pennsylvania. The first few years in Pennsylvania were plagued with difficulties as vagabond ministers such as Count Nikolaus von Zinzendorf took hold over the Lutheran congregations in Pennsylvania. Representing the orthodox Lutheran position and true spiritual son to Francke, Mühlenberg was the "embodiment of the Lutheran '*Amtskirche,*' the Lutheran established church" and looked with horror at the likes of Zinzendorf. Unfortunately for Mühlenberg, his traditional concept of the pastorate clashed with the majority of Lutherans residing in Pennsylvania, who hailed from Baden and Württemberg and were wary of the *Amtskirche*.[53] A recurrent issue Mühlenberg brought up in his letters to Halle was the lack of order in the colonies,

---

[51] Helmut, *A Short Account of the Yellow Fever in Philadelphia*, 34-6.
[52] Helmut, *A Short Account of the Yellow Fever in Philadelphia*, 21.
[53] Hermann Wellenreuther, "Heinrich Melchior Mühlenberg and the Pietisms in Colonial America," in *Pietism in Germany and North America 1680-1820*, ed. Jonathan Strom, Hartmut Lehmann, and James Van Horn Melton (Surrey: Ashgate, 2009), 129.

whether it was the established position of churches or lack of credentials by numerous pastors.[54] On top of this, he had to abide an environment with limited recourse to adequate medical care. In a 1743 letter to Francke and Friedrich Michael Ziegenhagen (court preacher to King George I of Great Britain), he commented on how "there are no real doctors or physicians here; the majority are surgeons [*chirurgi]* and do not know much about internal medicine; in addition, they are terribly expensive, for which reason the poor people are most neglected."[55] Under these circumstances, the pastoral role easily extended into medical care. Mühlenberg's familiarity with the Francke Foundations' therapeutic repertoire quickly became indispensable not only as a healer, but also as a kind of *medizinische Polizei* for his community, guarding against what he perceived as unsafe and illegitimate practices.

From his earliest correspondence, Mühlenberg signaled an unambiguous allegiance to Halle's remedies. He repeatedly requested shipments of items including polychrest pills, *essentia dulcis*, *pilulae purantes*, and "essence for opening the spleen," using them for his own ailments as well as for the members of his congregations.[56] His faith in these preparations rested not only on their origins in the Foundations' dispensatory, but also on his own experiences having enrolled in medical courses at

---

[54] Mühlenberg, *The Correspondence of Heinrich Melchior Mühlenberg:* 2: 40-1, 87. His disgruntlement with the absence of order can also be extended to the various medical practices of the colonies.
[55] *The Correspondence of Heinrich Melchior Mühlenberg,* 1: 127. The mention of King George I of Hanover is important because of his German heritage, explaining why he and his officials had a clear stake in Protestant German publics across the empire.
[56] "My medicine is almost used up; I have used much for myself, but also for the poor people in the country. If I could obtain a quantity of the polychrest pills, I would be very pleased, for they do much good. I do not suppose that I could obtain the prescription? I would also like to have a quantity of essence for opening the spleen, *essentia dulcis* and *pululae purantes et contra obstructions." The Correspondence of Heinrich Melchior Mühlenberg,* 1: 113.

Halle. Reports sent back to Halle described successful recoveries that he attributed to the "blessed Halle medicine."[57] In the fall of 1748, Mühlenberg explained that Pastor Brunnholtz had an "outbreak of military fever and it was so deadly and critical that he was twice in his death throes. Admittedly, he had two English doctors, but the Essentia dulcis, next to God, helped to put him on his feet again after a long and difficult confinement."[58] Despite being attended to by two English physicians, it was an Hallesian product that ultimately led to Brunnholtz's recovery. Such accounts reinforced the credibility of Halle's therapeutics in the colonial setting and generated within German communities a demand for such drugs.

For Mühlenberg, adherence to the exact prescriptions and ingredients from Halle was not a matter open to debate. He viewed deviations from their recipes, whether through local improvisation or commercial imitation, as both medically suspect and spiritually irresponsible. This stance brought him into competition with figures such as printer Christoph Sauer, who began producing and marketing counterfeit Hallesian medicines to meet local demand: "As soon as Sauer observed that we had procured medicine from Halle a couple of times and that people were singing its praises, he placed a notice in his paper that he himself could produce the genuine Halle medicines. He also faked all sorts of them and sells them at quite a price. It was hardly possible for us to begin with and maintain a stockpile of books and medicines without a printing press."[59]

---

[57] In a letter dated 15 June 1751, Mühlenberg remarks that "already for several years I have thought and written that…the blessed Halle medicine was very effective in this country and could be obtained quite cheaply." *The Correspondence of Heinrich Melchior Mühlenberg,* 2: 126.
[58] *The Correspondence of Heinrich Melchior Mühlenberg,* 2: 43.
[59] *The Correspondence of Heinrich Melchior Mühlenberg,* 2: 127.

According to Mühlenberg, such practices threatened the integrity of the Francke Foundations' work and undermined the trust on which medical authority rested according to Mühlenberg.

Having spent at least a decade in the colonies (mostly in Pennsylvania but also in New York and Georgia), Mühlenberg wanted to establish local infrastructure that would better serve the German community while also securing the continued distribution of Halle medicines. For several years, he made continuous proposals to Francke for creating a small printing press and an orphanage: "I have always thought that a small printing press would be necessary and useful. My idea and proposal of an orphanage will probably come to nothing because poverty reigns everywhere in Europe also, and there are too many expenditures for good causes, etc., etc. …In addition, I would also like to keep a supply of the blessed Halle medicines."[60] Although these ventures failed to materialize due to limited resources and hesitation from Francke himself, they reveal Mühlenberg's vision for embedding the Halle Orphanage's mission into the fabric of Pennsylvania's German-speaking communities both religiously and medically. He even served as an intermediary for a Heinrich Jr. Schleydorn, who wanted to study medicine at Halle, beseeching the "Very Reverend Fathers in Halle" to "instruct him in the apothecary of the blessed institutions."[61] Mühlenberg's career in Pennsylvania thus

---

[60] The rather depressing tone in this letter may be due to Francke's delay in giving an answer with regards to Mühlenberg's proposal as he had suggested previously (many times) the creation of an orphanage and printing press in Pennsylvania to benefit the children and Lutheran cause. *The Correspondence of Heinrich Melchior Mühlenberg,* 2: 259. Francke later gives a direct response in September 1752, citing a "lack of workers and material support." Hesitation for the creation of a Lutheran printing press was due to fears that Halle pastors would become involved in political controversies and the inability to control what publications would be issued. *The Correspondence of Heinrich Melchior Mühlenberg,* 2: 223, 267 fn 8.
[61] *The Correspondence of Heinrich Melchior Mühlenberg,* 2: 263.

reflected an unbroken thread to his Hallesian background. While others, such as Abraham Wagner and George de Benneville, adapted to colonial realities through more eclectic and locally-based treatments, Mühlenberg resisted such departures. His ministry fused the theological and medical orthodoxy, anchoring German settlers to a shared Old World heritage of Pietist discipline. In doing so, he helped preserve a medical culture stemming from Halle in the colonies despite a push towards improvisation and change.

George de Benneville: Medical Pluralism and the Spirit of Unity

Read alongside Mühlenberg, George de Benneville (1703–1793) presents a different configuration of medicine and ministry—one that characterized by medical and religious pluralism in the American colonies. Whereas Mühlenberg leaned toward institutional channels and routinized procedure, de Benneville favored hands-on experimentation and vernacular instruction. This is evident in de Benneville's manuscript *Medicina Pensylvania,* an English and German working manual that blended chemical preparations with household therapeutics, legible to readers across different levels of medical literacy. A French Huguenot born in England, de Benneville arrived in Philadelphia, Pennsylvania, in 1741 in frail health. His arrival became the subject of a well-known anecdote: Christopher Sauer, the radical German printer, reportedly had recurring dreams of a sick man arriving by ship with a voice commanding Sauer to bring the sick man to his home. When he mentioned the dream to his wife, she urged him to heed the voice and go to the wharf. Sauer ultimately went to the docks and met the sickly

de Benneville, whom he brought into his home.[62] It is highly unlikely that Sauer had zero knowledge of who de Benneville was as Sauer had made inquiries for assistance in publishing a Bible in the German language, and de Benneville received letters and reports from America about this task while living in Mons. Through Sauer, de Benneville was introduced to a network of leading religious and political leaders that allowed him to become acquainted in the intellectual and cultural life of Pennsylvania. He assisted Sauer in publishing the Sauer Bible and eventually settled in Oley Valley (modern Berks County), where he established a school open to "German youths, French Huguenot children, and Indigenous American boys and girls."[63]

While de Benneville was not formally trained at the University of Halle, he studied medicine through radical Pietist circles. His practice embodied the same ideals of integration and synthesis that characterized his theological outlook. Outside the classroom, he worked closely with nearby Indigenous communities. He learned the medicinal properties of New World plants from them and in return taught them medical treatments from the Old World.[64] This exchange is central to understanding his healing and religious philosophy, which exhibited an extraordinary understanding and respect for different belief systems. De Benneville maintained strong ties with religious minorities in the region, including the Moravians, the Ephrata Cloister, and especially the Schwenkfelders, to whom he served as a trusted physician alongside Abraham Wagner.

---

[62] De B. Randolph Keim, ed., "De Benneville-Bertolet: A Colonial Romance," *The Keim and Allied Families in America and Europe* 1, no. 12 (1899): 373.
[63] Bell, *The Life and Times of Dr. George de Benneville (1703-1793)*, 35.
[64] De Benneville once said that "he had learned as much about botany from the Indians as he had been able to teach them." Bell, *The Life and Times of Dr. George de Benneville (1703-1793)*, 35.

The Schwenkfelder community knew that "should professional service be needed, their faithful friends, Dr. George de Benneville, the Universalist of Oley, later of Bristol, –and Dr. Abraham Wagner of Worchester, were called upon."[65] David Schultze, the Schwenkfelder chronicler, praised de Benneville as one who dispensed "medicine for the body and sermons for the spirit."[66] His preaching attracted large crowds to the point that the Moravians lost influence in Oley, where Moravian leader Nikolaus Zinzendorf blamed the "separatists [who] excited most sorely against everything that smacks of a social order, religious people brought, through the horrible errors, into mistrust and fear towards future stirrings of grace, and finally so many souls that really desired to escape bewitched into a false teaching and society."[67] The ardor of the Moravian missionaries to convert as many people possible served as a foil to de Benneville's universal faith, where "all symbols of the same truth are equally valid." Embracing the notion that multiple faiths could express the same truth, de Benneville believed that "no church is pure in all things, so none can be found that does not contain some truth. Glorious truths are found in every church and religion under the sun."[68]

---

[65] Quoted in Bell, *The Life and Times of Dr. George de Benneville (1703-1793)*, 41.
[66] David Schultze, *The Journals and Papers of David Schultze*, trans. Andrew S. Berky, vol. 1 (Pennsburg, PA: The Schwenkfelder Library, 2009), 90.
[67] Quoted in Walter C. Klein, *Johann Conrad Beissel: Mystic and Martinet (1690-1768)* (Philadelphia: University of Pennsylvania Press, 1942). 106. Zinzendorf was particularly invested in the mission in Oley. Due to a "disagreement between the pastor [Andrew Ascehnbach] and his people, which engendered partisanship, and the appearance of new claimants at this time for spiritual sway in Oley, the Moravians lost influence, and eventually, in 1765, withdrew altogether from the field." Morton L. Montgomery, *History of Berks County in Pennsylvania* (Philadelphia: Everts, Peck & Richards, 1886), 366. The Moravians also built a school to offset the influence of surrounding sects including de Benneville's.
[68] Quoted in Bell, *The Life and Times of Dr. George de Benneville (1703-1793)*, 36, 62. Bell also explains that de Benneville kept a lexicon manuscript containing English and German definitions of Indigenous words and phrases. However, I have been unable to find such text.

This ecumenical philosophy took written form in de Benneville's medical manuscript *Medicina Pensylvania* (c. 1770s), one of the only extant works. Rather being than a polished treatise, the *Medicina Pensylvania* is part recipe book, part instructional handbook, and part personal notebook. The format of the text is intriguing: pages on the left-hand side are written in English, whereas the right-hand side are written in German. Despite his Huguenot background, none of the text is in French though he did use Latin in his introductory, unpaginated *Materia Medicamentum* that lists plant, animal, and mineral ingredients (numbering 22 pages). The recipes are translated faithfully with a couple missing in German as shown on page 59, where de Benneville seemed to have been experimenting [see Figure 1]. As Renate Wilson points out, de Benneville's translations of his sections register cultural difference, calibrating terms for his German readers rather than translating from the English literally. The title for the work is English reads *Medicina Pensylvania Or The Pensylvania Physician*; in German, it reads *Medicina Pensylvania Oder die Pennsylvanische Land Artz*. The term *Land Artz* (translated as "country doctor") over the loftier "physician" denotes a more modest qualifier that aligned not only with the "culture of humility" associated with Protestant dissident sects, but also the Enlightenment ideal of popular medicine associated with the Swiss physician Samuel-Auguste Tissot situates his manual within that broader project of practical and educative medicine rather than a "medical text for physicians."[69]

Formally, de Benneville divided his manuscript into four parts:

I. The Theory and Practice of Pharmacy

[69] Ramsey, "The Popularization of Medicine in France," 110.

II. A Distribution of Medicinal Simples, According to their Virtues and Sensible Qualities; The Description, Use, and dose of Each Article
III. Directions for Extemporaneous Prescription, with a Select Number of Elegant Forms, with the Astralis and Other Diseases in General
IV. With a Introduction, How to Judge the Diseases by the Urine, and the Knowledge of the Pulse Beating, For the Use of Mankind by a French Author G. R. B. Senior.

The table of contents function more as a loose outline for the manuscript. For instance, Section I appears to be roughly subsumed under Section II, where each subsection of materia medica (including simples, preserves, salts, juices, oils, and spirits) provides a general overview from their properties to general preparation or preservation. For example, de Benneville prefaced the section titled "Salts and Saline Preparations" with the following paragraph: "Salt is an Earth which in water is dissolvent but not to take its crystallization a part in its least particles, unaltered in its form, as also in blood its form remains constantly the same without loosing its quality, and in common Salt the square grains which we find again in Urin, unaltered in its form, salts may be divided into the following description."[70] From Section II onward, the manuscript can be followed straightforwardly: the entries provide precise instructions on required ingredients, doseage, what ailments the remedy addressed, and whether it was to be accompanied with other substances e.g., sugar or tea. While many remedies appear to be geared towards a more learned audience via the prevalence of chemical preparations (with ingredients such as mercury and Peruvian bark), it also devotes significant attention to therapeutic recipes reminiscent of the self-help/domestic handbooks discussed in Chapter

[70] George de Benneville, "Medicina Pensylvania," c. 1770, page 57, Historical Medical Library of the College of Physicians of Philadelphia, https://digitalarchives.powerlibrary.org/papd/islandora/object/papd%3Acppmss_803.

3.[71] This point is further supported by the manuscript's possible use for personal reasons as his sons, Daniel and George, also followed in their father's footsteps and became physicians.[72] In effect, de Benneville was creating a medical *Volksaufklärung* in the colonies: a vernacular instruction for household caretakers and an artisan epistemology for the more learned practitioners of medicine. The remedies drew upon both Galenic, chemical, and therapeutic paradigms, yet recipes are framed in a way that balanced recognizable Old World preparations with locally obtainable plants. It features ingredients familiar to Native American medicine, such as snakeroot, sassafras, sarsaparilla root, burdock root, ginseng, and all-heal (*Prunella vulgaris*).[73]

The properties of the herbs in the *Medicina Pensylvania* are functional rather than polemical. Entries sort out recipes based on what the ingredients do in the bodies and how they can be prepared; this orientation highlighted New World plants for Old World equivalents. For a weak stomach, de Benneville had a recipe for "Wormwood water Compounded" that called for two pounds of wormwood, two ounces of cardamom seeds, half a pound of coriander seeds, and four gallons of "good spirit" set together for some

---

[71] De Benneville notes how mercury is used "by the Mechanicks and Medicus for killing worms, venereal diseases, to open the obstructions of the viscerum…and [require] great care." De Benneville, "Medicina Pensylvania," c. 1770, page 75.

[72] Bell, *The Life and Times of Dr. George de Benneville (1703-1793)*, 48. His sons, Daniel and George, also followed in their father's footsteps and became physicians. Daniel de Benneville served as the surgeon of the Thirteenth Virginia Regiment during the Revolutionary War. Thus it was likely that the entries in the *Medinca Pensylvania* were studied and utilized by his family.

[73] De Benneville recommends a tea made from Sassafras and burdock root for "cleft or chops in the skin." Both ingredients are known in Native American medicine for alleviating dermatological issues. There is a recipe for a "Gonorrha virulent" that refers to a tea "made of liqr. Sanet, sassaparilla root, sassafras, radix china and all heal, also an injection of R. of Myrr, Honey, and sweet milk injected warm". All-heal has a long history in Indigenous culture as an herbal remedy for throat ailments. De Benneville, "Medicina Pensylvania," c. 1770, page 90-1.

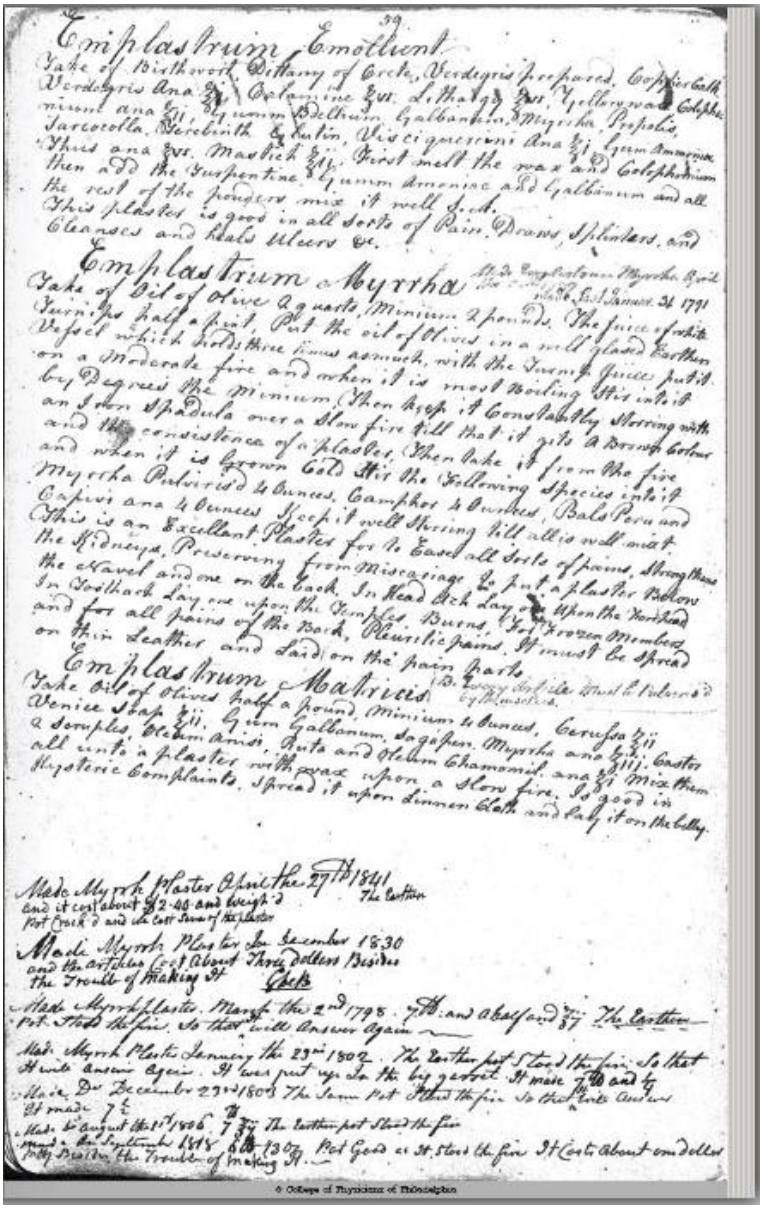


Figure 1: George de Benneville, “Medicina Pensylvania,” c. 1770, page 59, Historical Medical Library of the College of Physicians of Philadelphia, https://digitalarchives.powerlibrary.org/papd/islandora/object/papd%3Acppmss_803.

The notes and observations de Benneville make about his Myrrh Plaster at the very bottom are not translated into German. He mainly notes the price of making it and its durability against fire.

time.[74] In another example, de Benneville provided two recipes for lime water to address scorbutic complaints: one made with quick lime, and the other made with a mixture of herbs and plants that could be found.[75]

De Benneville's openness to experiment and adaption illustrates a receptivity to medical syncretism that crossed cultural and religious boundaries. De Benneville formulated his own version of a familiar Hallensian medication, the *essentia dulcis*.[76] Though he prescribed a version of the popular gold tincture, he downplayed its importance in the *Medicina Pensylvania* as being "of no great consequence in medicine."[77] However, in private correspondence and personal exchange, he affirmed its utility and offered to pass along the recipe and medicinal training to colleagues such as the Ephrata chronicler Ezechiel Sangmeister, who wrote an unflattering account of life at the Ephrata Cloister titled *Leben und Wandel* [Life and Conduct]. Sangmeister, who did not dabble in matters of alchemy, kindly refused this offer.[78] In spite of De Benneville's

---

[74] De Benneville, "Medicina Pensylvania," 54. De Benneville did not specify the species of snakeroot in his manuscript, but I surmise he referred to either Virginia snakeroot or white snakeroot—both were used to alleviate stomach pains. In early modern European recipes, herbs often had multiple "virtues" for targeting certain health problems including angelica, agrimony, saffron, and peppermint. See Elaine Leong, "Making Medicines in the Early Modern Household," *Bulletin of the History of Medicine* 82, no. 1 (2008): 145–68.
[75] Recipe uses guaiacum wood (found in the Caribbean and South America), liquorice, sassafras bark, and coriander seeds. De Benneville, "Medicina Pensylvania," 60.
[76] *Essenetia dulcis*, or gold tincture, was a secret remedy which was purported to be derived from pure gold. It is composed of a combination of "black powder" and "mineral balsam." Christian Ernest Kleinfeld, *Kurze Beschreibung von Verfertigung einer Essentia dulcis, nebst zwei von ihr entsprungenden Medicamenten, nehmlich: des schwarzen Pulvers und des sogenanten Balsami mineralis*. Ms. Codex 502, fol. 1r. It was advertised being applicable against many serious diseases such as epilepsy, gout, birth pains, and contracture: "Wobei auch zugleich gewisse Gründe und Reguin angeweisen werden, nach welchen sich selbiger so whol Medici, als auch Ungelehrte, bei allerhand schweren Kranckheiten, als Contractur, Epilepsie, Gicht, Podagra, Stein-Schmertzen, schwere Geburten, Blut-Stürtzungen, &c. nicht weniger auch bey allerhand andern…" John Ferguson, *Bibliotheca Chemica: A Catalogue of the Alchemical, Chemical and Pharmaceutical Books in the Collection of the Late James Young of Kelly and Durris,* vol. 2 (Glasgow: James Maclehose and Sons: 1906), 273.
[77] Benneville, "Medicina Pensylvania," 18.
[78] Ezechiel Sangmeister, *Das Leben Und Wandel Des Gott Ruhenten Und Seligen Br. Ezechiel Sangmeisters*, vol. 2 (Ephrata: Joseph Bauman, 1825), 57-8. De Benneville even went as far as to will the

versatility on medical approaches, his eclecticism had limits. De Benneville denounced opportunistic medical authorities who potentially put the individual's life in danger. Sangmeister recounts an occasion where a Brother Samuel had been selling a dangerous purgative to the poor people. In response, Brother Beneville told Sangmeister that "preachers murder souls and doctors murder bodies."[79]

De Benneville's approach to medicine was defined more by practical, lived participation in an intellectual culture grounded in medical and religious pluralism. His eclectic medical approach and his commitment to religious unity contributed to a version of medicine and knowledge that blurred cultural boundaries. He demonstrates that the German medical landscape was sustained not only by classical training via university, but also through empirical engagement with Indigenous and multiple religious communities. De Benneville's *Medicina Pensylvania* is a curious manuscript because of its theoretical underpinnings. It was never published, even as domestic medical handbooks were flourishing on the colonial market around the 1770s with works such John Wesley's *Primitive Physick* (Philadelphia, 1764), Tissot's *Advice to the People* (Philadelphia, 1771) and William Buchan's *Domestic Medicine* (Philadelphia, 1772). Christopher Sauer

---

recipe of his gold tincture if he were to die. "daß wann ich zu ihm kommen wolte, so wolte er mich in der Medicin und in allem unterrichten, dann er fühlete daß ich eine Fähigkeit dazu hätte, und so solte ich auch an seiner Tinctur mit Theil haben, und so er vor mir sterben solte, wolte er seinen Leuten schriftlich und mündlich befehlen, daß diese Buttel mein seyn solte." [If I were to come to him, he would teach me medicine and everything else, for he felt I had the ability to do so, and I should also share a part of his tincture, and should he die before me, he would order his people in writing and verbally, that this bottle should be mine.]

[79] Nach diesem so fragte den Bruder Benneville von wegen gemeldeten Purgirungen, so sagte er: es seyen die schlechtsten die man bekommen könne, und Bruder Samuel machte mir weis, es seyen die besten, und verkaufte sie häufig denen armen Leuten. Ja wohl pflegte Bruder Beneville zu sagen, die Prediger ermorden die Seelen und die Doctor den Leib. Ezechiel Sangmeister, *Das Leben Und Wandel Des Gott Ruhenten Und Seligen Br. Ezechiel Sangmeisters*, vol. 2 (Ephrata: Joseph Bauman, 1825), 14.

(the second) serialized his *Kurzgefaßtes Kräuterbuch* in *Der Hoch-Deutsch Americanische Calender* between 1762 and 1778 as well. Considering the success of these manuals, publishing a bilingual manual with practical health advice by de Benneville was not unfathomable; moreover, de Benneville's management of his own apothecary in the Germantown area would have supplied a suitable audience.[80] Perhaps the untimeliness of the Revolutionary War dashed those hopes as Sauer's press was confiscated by American patriots on account of his loyalist sympathies.[81] Against this backdrop, the *Medicina Pensylvania* strongly reads like a publishable draft that became eclipsed by the war and shift post-Revolutionary landscape.

The Hallesian Current in Schwenkfelder Medicine: Abraham Wagner

Born in the rural village of Harpersdorf in Silesia in 1715, Abraham Wagner was raised in a Schwenkfelder household. Wagner stood as the last in a distinguished line of Silesian Schwenkfelder practitioners to a tradition of medical service stretching back to Martin John, Jr. (1624–1707), his maternal great-grandfather George Hauptmann (1635–1722), and his tutor and mentor Melchior Heebner (1668–1738). Wagner received his education and training from Heebner, who emigrated to Pennsylvania in 1734. Indeed, Wagner's "lifelong vocation was medicine."[82] Wagner's early life was defined by the precarious existence of the Schwenkfelders, whose dissent from the uneasy status quo of Lutheranism and Catholicism made them religious refugees. After fleeing to Saxony, the

---

[80]

[81] Despite the competition Sauer faced with these health manuals, it is not out of the realm of possibilities that Sauer would have very well printed de Benneville's work since he was very close to the Sauer family.

[82] L. Allen Viehmeyer, "Abraham Wagner and George de Benneville: Physicians of Body and Soul," in *Medical Theory and Therapeutic Practice in the Eighteenth Century*, ed. Jürgen Helm and Renate Wilson (Stuttgart: Franz Steiner Verlag, 2008), 262-4.

Wagner family found a moment's respite in Berthelsdorf, where Count Ludwig von Zinzendorf had created small havens for religious refugees. Once Zinzendorf was exiled by decree in 1735, it also removed all assurance of protection for the Schwenkfelders in Saxony, prompting the Wagners to undertake the voyage to America in the spring of 1737.[83]

Information about the first decade of the Wagners' arrival in the Pennsylvania is spotty, but Andrew S. Berky suggests that Abraham Wagner lived with Heebner in Worcester Township (just twenty miles outside of Philadelphia) continuing his studies in medicine, becoming familiar with Indigenous herbs, and assisting the aging physician with his patient visits. Upon Heebner's death in 1738, Wagner inherited not only his mentor's medical books and supplies, but potentially his patient base as well.[84] Within a couple of years since his arrival, Wagner connected with the prominent religious figures including Heinrich Melchior Mühlenberg, Zinzendorf, and George de Benneville. Like de Benneville, Wagner shared an openness to the value of local botanicals. However, Wagner was more inclined towards utilizing Hallesian medications in his remedies perhaps due to his close acquaintance with Mühlenberg, an emissary of the Francke Foundations. Letters exchanged between Wagner and Mühlenberg indicated a level of respect between the two ministers, which itself is noteworthy considering the latter's disapproval of sects that deviated from traditional Lutheranism.[85] Mühlenberg clearly had

---

[83] Andrew S. Berky, *Practitioner in Physick: A Biography of Abraham Wagner, 1717-1763* (Norristown, PA: The Schwenkfelder Library, 1954), 16.
[84] Berky, *Practitioner in Physick,* 25-6.
[85] Wagner even wrote a letter to Mühlenberg dating September 1, 1753, defending himself as a "Schwenkfelder doctor": "It would not be surprising if you felt some disgust at me because I bear, or must bear, the name of a wicked heretic, through no fault of my own. To be sure, I cannot and must not call myself after any human being, as St. Paul forbade (1 Cor. 3:4), nor may I base my faith and knowledge of

faith in the Schwenkfelder's medical aptitude as he willingly distributed therapeutics from Halle to Wagner and ordered "the usual [medicinal] ingredients for my family."[86] Despite this respect for the Hallesian dispensatory, Wagner shared de Benneville's therapeutic openness: his medical practice was fluid and not constrained by the traditions of Halle.

Wagner's surviving manuscript, the *Remediorum Specimina* (1743–1789), closely parallels de Benneville's *Medicina Pensylvania* in its practical recipes and experimental bent as we see parts throughout his writing where he crossed out certain parts or substituted ingredients throughout the text [see Figure 2]. In his remedies, there are different strands of medical approaches, making use of New World plants and classical antidotes though primarily through imperial trade networks.[87] Ingredients like ipecacuanha and jalap entered European pharmacopoeias before they appeared in German household recipes. Wagner can then be viewed as a practitioner who was willing to work with New World botanicals that had already been naturalized in European therapeutics. Nevertheless, the contents of the *Remediorum Specimina* reveal a stronger commitment to Halle's materia medica. Wagner's approach to a 1748 outbreak of pleurisy in Pennsylvania exemplifies his faith in Hallesian drugs and piqued Mühlenberg's interest

---

God on man's writings." Heinrich Melchior Mühlenberg, *The Correspondence of Heinrich Melchior Mühlenberg: 1753-1756*, ed. Wolfgang Splitter and Timothy J. Wengert, vol. 3 (Rockport, ME: Picton Press, 2009), 25.

[86] Letter 177, Mühlenberg to Abraham Wagner, Providence, 22 June 1757 in *The Correspondence of Heinrich Melchior Mühlenberg,* 4:25. In the letter, Mühlenberg asks for "one ounce each of *aloes hepatica*, *Myrrhis electa*, *nitro purificata* and *pulvis Rhubarberi* and *saffron* for one shilling."

[87] Ipecucuana (ipecacuanha), Giapala (jalap), and sassafras root make multiple appearances throughout his recipes. Ipecucuana and jalap were often recommended as an emetic and laxative. Sassafras root was effective against rheumatism and scabies. Wagner, "Remediorum Specimina Ex Praxi A.W.," p. 22, 31, 63, 80. As for classical ingredients, he commonly uses *elixir proprietatis*, touted by Paracelsus for a concoction for long life.

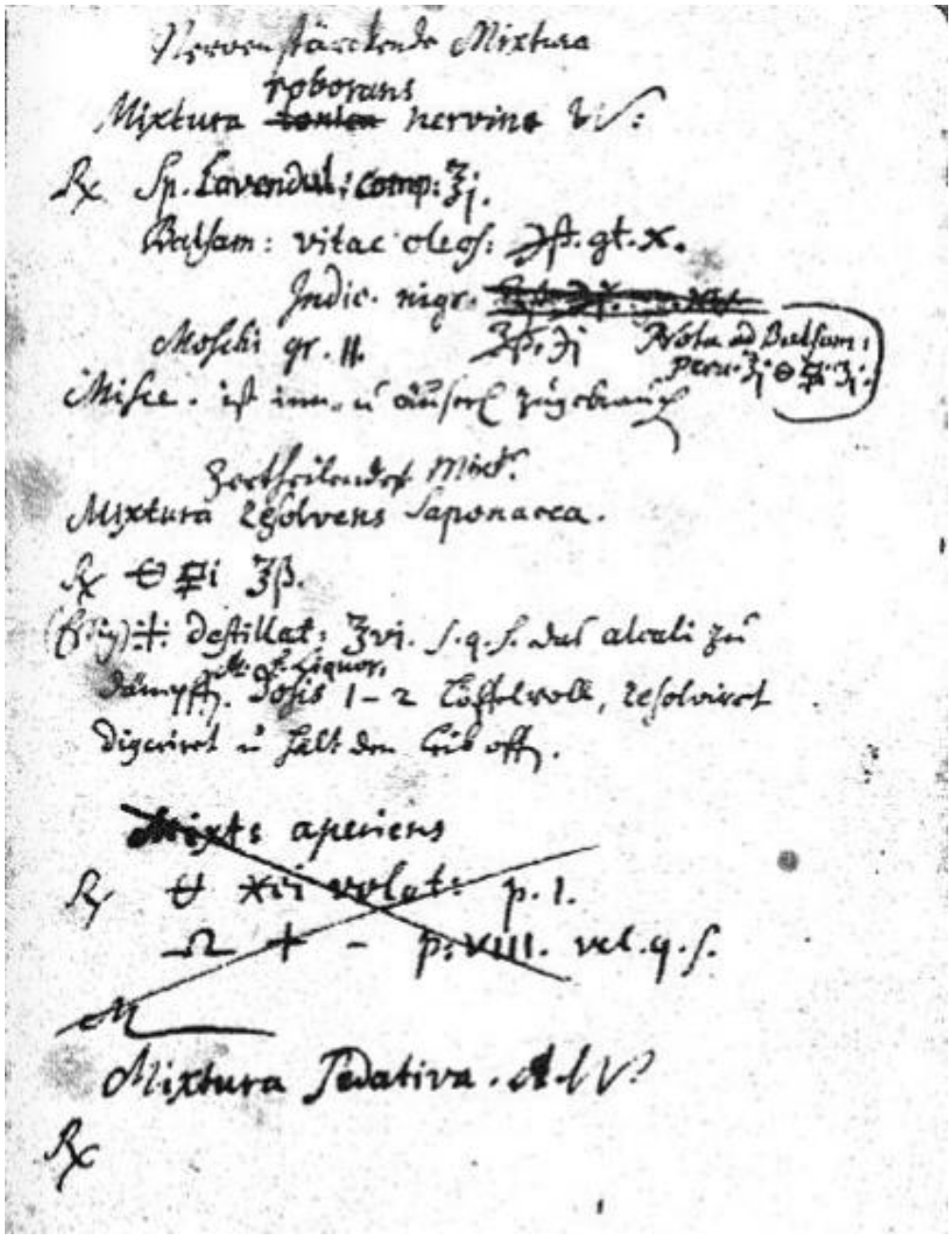


Figure 2: Abraham Wagner, "Remediorum Specimina Ex Praxi A.W.," 1743-89, page 169, The Schwenkfelder Library and Heritage Center, https://digitalarchives.powerlibrary.org/papd/islandora/object/papd%3Acppmss_798.

There are crossed out parts or sections where he adds/changes certain ingredients. In this recipe for a *nervenstärkende Mixtura*, there is a note (circled) for "Balsam Peru" beside the lines he crossed out.

in the burgeoning Schwenkfelder physician. Wagner wrote his observations of pleurisy in his manuscript and formulated his own recovery treatment: "due to congestion and ebullition in the blood, I prescribed the Hallesian bezoar alone or mixed with my bezoar or edelstein powder…Once the turmoil in the blood has calmed, my bezoar powder or Edelstein powder promoted sweating."[88] He also recommended a mild bloodletting "right from the onset" of the infection but not further as "only the best blood would have been lost."[89] There is a possible reference to de Benneville, mentioning "another practitioner in Oley" who agreed with the benefits of bloodletting only on the first day of illness.[90] One of his female patients was able to recover completely [*völlig restitairet*] from pleurisy via a regimen of the Hallesian and bezoar powders and a tartar-ammonia mixture.[91] While it is up for debate whether the Hallesian prescriptions successfully healed the woman, their regular use in Wagner's practices speaks to his confidence in the healing properties. Other examples of known medications from the Halle armamentarium included the *hallisch Polychrest Pillen* and *essentia alexipharmaca Stahlii* (named after Hallesian physician Georg Ernst Stahl).[92] The Hallesian influence is unmistakable in his treatments.

Despite this underlying tendency towards Halle, Wagner's practice still reflected the circumstances in which he operated. He collaborated with nearby German physicians

---

[88] Wagner, "Remediorum Specimina Ex Praxi A.W.," p. 19-21.
[89] Wagner, "Remediorum Specimina Ex Praxi A.W.," p. 20. "Den vollblütig u[nd] ans Aderlassen gewohnt Person habe gleich im Anfang eine Aderlaß erlaubet, welches güt befunden worden, besonders auf dem Füß…aber nach 2 Tage habe die Aderlaß – erlaubt, den das Blüt ging sehr geschwind in die Faulung, da dem nur das beste Blüt wäre forgegangen seyn." Wagner, "Remediorum Specimina Ex Praxi A.W.," 1743-89, page 20-1.
[90] "welches ein anderer Christler practicus in Oley auch aufgenommen [?]." Wagner, "Remediorum Specimina Ex Praxi A.W.," 1743-89, page 20.
[91] Wagner, "Remediorum Specimina Ex Praxi A.W.," p. 23.
[92] Wagner, "Remediorum Specimina Ex Praxi A.W.," p. 46, 51.

tested remedies with local ingredients. Both Wagner and de Benneville belonged to radical Pietist circles outside Halle's formal control, and their authority did not stem from their formal education but rather in their sustained service to their communities. Among the Schwenkfelders, they formed a bulwark of trusted care. While de Benneville's medical pluralism was matched by his universalist theology, Wagner's religiosity was expressed through the Pietist ethic of humility and practical charity. Together, they illustrate a continuum: one leaning towards unrestrained experimentation, and the other through Hallesian methods, both tempered by local conditions. Mühlenberg, by contrast, stood firmly at the end of the spectrum, policing the medical boundaries of his community to ensure that Halle's remedies remained the gold standard in Pennsylvania.

Town Pastor vs. Town Physician: Case Study with the Salzburgers in Ebenezer, GA

The experience of Salzburg exiles from their homeland, which James Van Horn Melton describes as "the largest religious expulsion in eighteenth-century Europe and the last major paroxysm of religious persecution in the Holy Roman Empire," across the Atlantic offers yet another side of the therapeutic world of these minister-physicians.[93] Its lead pastors, reverends Johann Martin Boltzius and Israel Christian Gronau, maintained regular correspondence to London and Halle and navigated a medical landscape shaped by advice and supplies from Halle and local practice. Against this light, Ebenezer highlights how pastoral care and medicinal provisioning were negotiated more tightly than the German-speaking communities in Pennsylvania highlighted through the dispute between the pastors Boltizus and Gronau and the medical providers of Ebenezer, Johann

[93] James Van Horn Melton. *Religion, Community, and Slavery on the Colonial Southern Frontier* (New York, NY: Cambridge University Press. 2015), 1.

Andreas Zwifler and later Christian Ernst Thilo. Boltzius and Gronau did their best to mitigate the Salzburgers' suffering based on Hallesian counsel and medication.[94] Zwifler was among the initial group who journeyed to Ebenezer; he was an apothecary by trade and not a learned physician.[95] In contrast, Thilo was highly recommended by Gotthilf August Francke, the son of August Hermann Francke, who lauded Thilo as a "Learned Gentleman of great acquirements in the Knowledge and Practice of Physick…to assist You and your Congregation in the Quality of Physician Surgeon and Apothecary."[96] Yet both men practiced more eclectically than the pastors preferred (such relying on local flora or obtaining supplies through London channels), diverging from Halle's therapeutic priorities. Ebenezer then sets another example of the *medizinische Polizei* previously associated with Mühlenberg.

The literature available on colonial Ebenezer tends to hone in on its founding and its religious leaders and ecclesiastical development.[97] While Renate Wilson does look at the impact Halle had on Ebenezer in her 1988 dissertation, she mainly does so from an

---

[94]For the different types of diseases and illnesses that plagued the Ebenezer settlement, see George Fenwick Jones, *The Georgia Dutch: From the Rhine and Danube to the Savannah, 1733-1783* (Athens, GA: University of Georgia Press, 1992), 231-7.

[95] Jones, *The Georgia Dutch,* 236. Much of Zwifler's treatments relied on producing and administrating different cures for the Ebenezer Salzburgers.

[96] Henry Newman, *Henry Newman's Salzburger Letterbooks*, ed. George Fenwick Jones (Athens, GA: University of Georgia Press, 1966), 209. Thilo studied at the Martin Luther University in Halle-Wittenberg. At the same time, he also practiced and taught medicine at the Francke Foundation. See Jones, *The Georgia Dutch,* 237.

[97] See Philip A. Strobel, *The Salzburgers and Their Descendants: Being the History of a Colony of Germans (Lutheran) Protestants, Who Emigrated to Georgia in 1734, and Settled at Ebenezer, Twenty-Give Miles Above the City of Savannah* (Baltimore: T. Newton Kurtz, 1855); Hermann Winde, "Die Frühgeschichte der Lutherischen Kirche in Georgia: Dargestellt nach den Archivalien der Franckescen Stiftungen in Halle unde der Universitätbibliothek in Tübingen," PhD diss., (Martin-Luther -Universität-Halle-Wittenberg, 1960)

economic viewpoint.[98] Her later book, *Pious Traders in Medicine* (2000), would briefly touch upon the Ebenezer settlement. She mainly discusses the "gentle medicine" practiced by physician Ernst Thilo.[99] In the past decade, the Salzburgers make appearances in several essays in books dealing with Pietism; as for monographs, we have Charlotte Haver's *Von Salzburg nach Amerika* (2011) and Melton's *Religion, Community, and Slavery on the Colonial Southern Frontier* (2015).[100] With the exception of Phillipa Koch's 2016 essay that examines three different Protestant groups (Puritans, Pietists, and Methodists) and their engagement with contemporary medical debates, we have an incomplete overview of the medical culture in Ebenezer, GA.[101] I am primarily interested in the medical practices in the Salzburger community from 1734 to 1765 as it was a complex system encompassing (but not limited to) knowledge from Halle, home remedies from Germany, experimentation with New World botanicals, and more. Furthermore, it is worth looking into how Boltzius and Gronau sometimes made an effort to compare themselves [positively] to their German-speaking counterparts in Pennsylvania. Considering how close the settlement was with the British, Ebenezer provides a different perspective to the German settlers' experience in Pennsylvania and the middle colonies with the Moravians. Pastors including Boltzius and Mühlenberg had

---

[98] See Renate Wilson, "Halle and Ebenezer: Pietism, Agriculture and Commerce in Colonial Georgia," PhD diss., (University of Maryland, 1988).
[99] Renate Wilson, *Pious Traders in Medicine, 184.*
[100] For example, see Alexander Pyrges, "Religion in the Atlantic World: The Ebenezer Communication Network, 1732-1828)," in *Pietism in Germany and North America, 1680-1820*, edited by Jonathan Strom (New York: Routledge, 2016): 51-67; James Van Horn Melton, "From Alpine Miner to Low-Country Yeoman: The Transatlantic Worlds of a Georgia Salzburger 1693-1761," *Past and Present* 2008, no. 201: 91-140; Timothy Scott Reeves, "Seeing the Salzburgers in their Books," *Theological Librarianship* 11, no. 1 (2018): 1-11.
[101] Phillipa Koch, "Experience and the Soul in Eighteenth-Century Medicine," *Church History* 85. No. 3 (2016): 552-86.

intended on structuring communal life in Ebenezer in line with Halle. Indeed, one of the Ebenezer's projects included an orphanage/school akin to the *Waisenhaus* in Halle, which performed various functions beyond its educational capabilities.[102]

In the winter of 1733, a contract was formed between the Salzburgers and the British government, where the former "had to promise with hand and mouth to be subject to the English government" and in exchange were promised the "enjoyment of the rights and freedoms of the land."[103] The Salzburgers were supported by the Society for Promoting Christian Knowledge (SPCK), an English society that promoted Christian knowledge in Britain and her colonies. How did the British come to support a group of Lutheran German exiles? The king at the time, King George II, had a German court preacher named Friedrich Zeigenhagen who served as a prominent member for the SPCK. Zeigenhagen alongside Samuel Urlsperger, another major member of the society and the senior minister at St. Anne's Church in Augsburg, called for the SPCK to support the resettlement of the Salzburgers in the New World at the behest of the Francke Foundation.

While the Salzburgers upheld their loyalty to the British, they also maintained communication and connections to Germany, especially to Halle, where the Ebenezer settlement periodically received goods such as medicine and books. Most of what contemporaries knew about the settlement circulated through the *Urlsperger Reports*. In

---

[102] For more on the Ebenezer orphanage, Christian Marie Koch, "Salzburger Migrants and Communal Memory in Georgia" (PhD Dissertation, University of Paderborn, 2019), 80-1.
[103] Samuel Urlsperger, "The Travel Diary of the Two Pastors Messrs. Boltzius and Gronau Which the Two Have Kept from Halle to Georgia and for Some Time After Their Arrival in That Land," in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, edited by George Fenwick Jones, vol. 1 (Athens: University of Georgia Press, 1968).

these reports, Samuel Urlsperger collected, collated, and edited the pastors' letters and diaries and occasionally included letters from members of the congregation. Boltzius regularly reported back to Francke in Halle on the status of the Salzburger settlement (namely on cooperating with different religious faiths, managing livelihood in a hostile new environment, and his frustrations with Thilo's medical practices). Despite his training at Halle under Johann Juncker (a student of George Ernst Stahl), Thilo detracted from Halle's therapeutic approaches, particularly in handling malaria outbreak of 1736 in Ebenezer, opting instead for an eclectic approach similar to that of Wagner and de Benneville. The question of utilizing quinine comes front and center to the heart of this medical debate. Rather than rely on Thilo, Boltzius turned to their "own minimal missionary medical training in Halle, empirical observations, networks of female medical knowledge, and articles from the popular press."[104] Boltzius and Gronau extensively wrote to Francke for requests for medication and medical advice over the ensuing theoretical clashes with Thilo. They made painstaking efforts to send their and other residents' correspondences back to London and Halle/Augsburg.

This section takes Alexander Pyrges' approach in his essay on the Ebenezer communication network, where he critiques one of the main strands of thought regarding the Ebenezer settlement, namely the argument portraying Ebenezer as a "miniature version of the Halle Orphanage," which stresses a unidirectional influence from the Old World to Georgia.[105] The scholarship is most likely geared towards this interpretation as

[104] Philippa. Koch, "Experience and the Soul in Eighteenth-Century Medicine," *Church History* 85, no. 3 (2016): 569.
[105] Pyrges, "Religion in the Atlantic World," 52.

most of the sources sent from Georgia back to the Old World were reviewed and edited by Urlsperger. In order to illustrate Halle as the primary force in making the Ebenezer undertaking a success, Urlsperger omitted elements "he thought best unsaid" to bolster support for German Protestantism, strengthen Anglo-German diplomatic networks, and bring further patronage to European religious refugees.[106] Nevertheless, the reports, letters, and diary entries from Boltzius and Gronau reveal a rocky start for the Salzburgers upon their arrival in Ebenezer in 1734: being plagued by countless illnesses, struggling to maintain enough medication for their congregation, and acclimating to a new climate and environment.

The well-being of his congregation members constituted a leading concern for Boltzius, and he has many entries on caring for the both the physical and spiritual health of those who fell ill. Boltzius may have had a peculiar interest in medicine due to being a sickly as a child: "among so many young boys, I found myself almost constantly dragging a sick body around and being a burden to others as well, even though, because of the fatherly care of the Directors, I suffered no lack of necessary care."[107] Before the arrival of Ernst Thilo to Ebenezer in February 1738, Ebenezer had medical access via the

---

[B] Ben Marsh, foreword to *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 1 (Athens: University of Georgia Press, 1968). It is also interesting because Renate Wilson argues in her article on the missing Salzburger diaries of 1744-45 that Urlsperger excluded them from the *Ausführliche Nachrichten* [Detailed Reports] to avoid the publication of offensive news, a policy that also applied to missions in Pennsylvania not only to protect the sponsors of these missions and their goals, but also to preserve the "delicate denominational and political alliances that enabled German ministers from Halle to engage in missionary work in British colonies." Renate Wilson, "Public Works and Piety in Ebenezer: The Missing Salzburger Diaries of 1744-1745," *The Georgia Historical Quarterly* 77, no. 2 (1993): 338.

[107] Johann Martin Boltzius, "Another Letter from the Same [Boltzius] to One of His Relatives, [From Ebenezer] of the Same Date [May 6, 1734], in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 1 (Athens: University of Georgia Press, 1968).

apothecary Johann Andreas Zwifler, who also served as the doctor of the settlement albeit informally as he did not have medical training: "der Apotheker Zwifler arbeitet längst auch als Arzt für die Salzburger und bei Notfällen auch für die Indianer, weil es weit und breit niemanden gibt, der die Kranken versorgen oder bei Verletzungen eine erste Hilfe leisten kann."[108] Zwifler was known for his botanical knowledge to the extent that Boltzius and Gronau made an effort to "apply [them]selves diligently to the study of plants" with Zwifler so that they may impart the knowledge to the community. As growing and having a steady supply food was one of utmost importance to the Salzburgers, Boltzius noted in his diary on April 22, 1734, how they searched the forest for "good herbs," which not only included produce such as spinach, young onions, and hyssop, but also medicinal plants that they could "impart some knowledge to."[109]

In the early years of the settlement, the Salzburgers were constantly confronted by multiple diseases including dysentery, malaria, and scurvy. Especially in the first two years, Boltzius often remarked on how they lacked "good medicine." Occasionally, he would also note that some medicine were "not sufficient" enough and pursued other home remedies outside Ebenezer, e.g., Savannah.[110] Nevertheless, the ill Salzburgers had

---

[108] "The pharmacist Zwifler has worked long as a doctor for both the Salzburgers and in emergencies for the Indians, because there is nobody far and wide who can look after the sick and provide first aid for injuries." He was known for being an excellent expert on medicinal herbs. Christopher Lindenmeyer, *Rebeller, Opfer, Siedler: Die Vertreibung der Salzburger Protestanten* (Salzburg: Verlag Anton Pustet, 2015), 17-8.

[109] Urlsperger, "The Travel Diary of the Two Pastors Messrs. Boltzius and Gronau Which the Two Have Kept from Halle to Georgia and for Some Time After Their Arrival in That Land."

[110] See entries for October 13th and 17th of 1734 in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 2 (Athens: University of Georgia Press, 1969). See also entries for July 24, 1734, and January 10, 1735, in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 2. "As some of our Salzburgers are suffering from scurvy, and as our medicines are not sufficient, we have decided that one of us shall go to Savannah to learn what home cures are used here for this disease."

"great faith in [their] medicines"[111] and consulted with Boltzius, Gronau, and Zwifler for advice. Based on the letters and diaries of the lead pastors, medical services were provided by one of the following: the services of Mr. Zwifler, who was "constantly getting much practice in matters about which he knew nothing previously"; treatment from Boltzius and Gronau, who relied on the advice and medicines sent over from Halle; and household remedies of the residents, who resorted to this in order to save on what limited money they had but often made their "ills even worse."[112] The dynamic between Zwifler and Boltzius/Gronau over medical matters is interesting as their relationship swayed between being friendly on one hand to being contentious on the other. From 1734-35, Botlzius and Gronau have several accounts for Mr. Zwifler's growing experience as a physician. In the early periods of settlement, Zwifler told them that he wanted to "concentrate all of his efforts on the patients without accepting any pay whatsoever as long as provisions are furnished."[113] However, this stance shifted beginning in 1736, where he declared to Oglethrope and the two pastors that he would "seek his bread elsewhere so he will not have to live on other people's charity."[114] Ultimately, Zwifler does indeed depart in March 1737 from British North America to London to earn some money for his return to his home in Hungary [present day Slovakia]. But Zwifler's medical trajectory in Ebenezer is worth studying because in

---

[111] Entry for July 25, 1734, in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 2.
[112] See entries for February 28, 1735, and January 22, 1735 respectively in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 2.
[113] Entry for January 22, 1735, in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 2.
[114] Entry for July 5, 1736, in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 3 (Athens: University of Georgia Press, 1972).

certain occasions, we see clashes arise regarding different treatments between Boltzius and Zwifler, a theme that would continue with the replacement of the latter with Thilo.

While the former did direct most medical attention to the latter, Boltzius did not shy away from prescribing medication from Halle under special circumstances.[115] Moreover, he supplemented these medicines with "warm drinks" (mainly in the cases of diarrhea and dysentery) alongside singing hymnals, praying, and reading from the Bible in efforts to tend to the spiritual health of the ill. There is one isolated incident where Boltzius and Zwifler butt heads with each other over one particular patient named Mrs. Moshammer. With her, Boltzius laments over how "she [is] a good example of his [Zwifler's] unsuccessful cure at home in the pious Herzog, who vomited blood after taking one of his emetics and has been miserable ever since and seems to have an injury…In these circumstances we can no longer expect the good people to make use of his advice and cures. Some of them have become stronger and healthier after discarding his medicines." Upon the community requesting for him to adjust his treatments, Zwifler denounced this as "fault-finding and obstinacy" and became "very angry."[116] Zwifler obtained his ingredients for medication through London rather than Halle—though he was not averse to utilizing them. Over the course of his stay in Ebenezer, he practiced various surgical procedures including bloodletting, cupping, and bandaging, which more

[115] In the entry for September 10, 1734, Boltzius describes how a Mr. Rauschgott was so sick that he "not only recommended the use of several medicines (until now he has faithfully followed Mr. Zwifler's advice and taken his medicines), but also arranged for better bodily care for him and engaged a woman who is to wait on him day and night." See Urlsperger, ed., *Detailed Reports on the Salzburger Emigrants Who Settled in America* vol. 2 (Athens: University of Georgia Press, 1969).
[116] Entry for September 15, 1735, in *Detailed Reports on the Salzburger Emigrants Who Settled in America* vol. 2.

often than not "turned out badly."[117] As for making and prescribing medication, he relied primarily on Weisbach's medical book for recipes; when he did not have readily access to all the ingredients, replaced them with substitutes found in the local environment to the disapproval of Boltzius, who had gifted Zwifler a copy of Christian Friedrich Richter's *Die höchst-nöthige Erkenntniss des Menschen, sonderlich nach dem Leibe und natürlich Leben* (1741).[118] By the end of the year, however, Zwifler makes good on his negative conduct up until he departs Ebenezer—though in a few rare cases, he did withhold from offering medicine to his patients (as is the case with a Mr. Christian Schweikert due to his "rudeness and unusual behavior")[119]

Before proceeding onto the trepidations that Boltzius faced in Ebenezer with the new physician Ernst Thilo in the 1740s, taking the time to dissect the spiritual and physical care that Boltzius provided his congregation (sometimes with and without the approval of Thilo) can provide us a broader picture of the medical debates in not only early modern America, but also in Europe—considering that Boltzius sent regular correspondences back to Halle and London and made it a point to adhere to the "established" medical theories and treatments from the Francke Foundations. Indeed, in

---

[117] Entry for September 18, 1753, in *Detailed Reports on the Salzburger Emigrants Who Settled in America* vol. 2. Boltzius sardonically remarks that if Zwifler were to continue with his medical experimentations that "he can cure many more to death."

[118] Christoph Friedrich Richter studied medicine and theology at Halle and garnered the attention of August Hermann Francke, who admired the doctor's originality in creating remedies. Indeed, he is credited for discovering the *essentia dulcis*, which "brought about therapeutic benefit but also ensured greatly-needed financial aid to the ever-mounting Orphanage expenses." Boltzius and Gronau commonly prescribed *Essentia dulcis* among the Salzburgers to relieve inflammation and pain. Richter's manual was utilized by Halle missionaries and travelers across the globe such as India and North America. See Sydney H. Moore, "Christian Friedrich Richter," *The Evangelical Quarterly* 37, no. 2 (1965): 95. See also Eckhard Altmann, *Christian Friedrich Richter (1676-1711): Arzt, Apotheker und Liederdichter des hallescehen Pietismus* (Witten: Luther-Verlag, 1972), 41-94.

[119] Entry for November 14, 1753, in in *Detailed Reports on the Salzburger Emigrants Who Settled in America* vol. 2.

the early years of the settlement before Zwifler eventually became the town physician, many ill Salzburgers referred to Boltzius and Gronau for medicine: "Our listeners have great faith in our medicines and they often consult with us."[120] In this section, I take a page from Philippa Koch, where she argues that eighteenth-century Protestants interpreted medicine as an opportunity to do God's work by getting rid of "both the individual and social body of physical and spiritual corruption." The role of the soul in the one's bodily health proved to be a "central point of dialogue between religion and medicine."[121] While Koch analyzes this in the context of Boltzius's frustration with Thilo's more experimental (depending on his "inspiration") treatment, I investigate Boltzius and Gronau's home visits to the ill and what they provided, prioritizing the survival of their community above all. Despite being far removed from the centers of medicine and universities, the Ebenezer ministers were nevertheless actively engaged in the medical debates of the eighteenth century that have been overlooked by scholars for too long.

In their daily logs, Boltzius and Gronau take the time to note the sick people in his congregation and their efforts at alleviating pain; they made it a priority to make sure that the spiritual health of the afflicted were tended to as it was often the case that they could not do much for the physical pain. In these instances, they sang hymns, prayed with the sick, read scripture, or provided tea/soup. Boltzius made sure to pay special attention to look after the pregnant women in his congregation. As many of the sick people primarily

---

[120] Entry for July 25, 1734, in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 2.
[121] Koch, "Experience and the Soul in Eighteenth-Century Medicine," 554, 567.

consumed salted food, Boltzius made regular requests to Commissioner Jean Vat, who reported to the Society in London, for a fresh supply of meat so that "healthful soups could be prepared" for struggling pregnant women.[122] In situations where the Halle medications had little to no effect on the physical ailments of the sick, Boltzius and Gronau prepared soups made of "flour and ground up Indian corn or rice"[123] alongside tea to provide some nutrients and liquids. In several cases, Boltizus notes how patients end up feeling much better with tea and scripture/prayer.[124] As medications from Halle were often in short supply, Boltzius and Gronau turned to other ways of intervention to try and take care as many as they could.

Boltzius's drive to tend to members of his sick congregation elicited positive reactions from them. On January 8, 1741, Boltzius visits Simon Steiner, who was debilitated from bad fits of coughing and congestion (perhaps quartan fever, a form of malaria). Earlier, Boltzius received Thilo's permission to prescribe some *essentia dulcis* for him as it had done "splendid service" for another sick person.[125] The "dangerously ill Steiner" had sent for Boltzius, requesting "consolation from the word of God and wished [for them] to pray with him and for him." Later in the evening after dinner, Steiner experiences a "bad attack of coughing" and tries to "spew out something that was rattling

---

[122] See entries for April 16, 1735, and June 16, 1735, in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 2.
[123] Entry for April 20, 1735, *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 2.
[124] Here, I give two examples: Boltzius noted that Mrs. Brand, who was struggling with dysentery for a long time, "has finally been cured with the administration of much tea and coffee." Likewise for a Mrs. Bacher, she became "much better after using a household remedy which some other woman had given her, and warm drink helps her a great deal." Entry for September 15, 1735, in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 2.
[125] Entry for January 8, 1741, in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 8.

in his chest." During the ordeal, Boltzius, Gronau, and Kalcher (a friend of Steiner) were praying until "he fell asleep and was at once relieved from his pains and struggle."[126] Although Steiner ultimately succumbed to the disease, his call for Boltzius and Gronau reveals their roles not only as spiritual leaders, but also authorities of the physical body.

It is also around this time that we see a divide between Boltzius and Thilo as the former wished for the usage of medicines (specifically *cortex peruvianus*, or the Cinchona tree, which contained quinine) during this outbreak of malaria as he believed in their efficacy in combatting the disease, whereas Thilo did not believe in the effects of medication on malaria and instead counseled "sweat and patience."[127] The disagreement over the treatment of malaria stemmed from theoretical debates taking place in the medical school at Halle. Humoralism was still a prevalent school of thought amongst medical circles. Among its supporters, Georg Ernst Stahl was a vitalist and anti-mechanistic professor who served as the Chair of Medicine at the University of Halle from 1694-1715 and would afterwards serve as the first court physician to Frederick William I until his death. Stahl believed of the importance of "physiological motions" within the body.[128] Thus, fevers were the body's way of healing by letting nature takes its course. Stahl's students included Johann Samuel Carl and Johann Juncker (also Thilo's

---

[126] Entry for January 8, 1741, in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 8 (Athens: University of Georgia Press, 1985).
[127] Entry for February 1, 1741, in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 8 (Athens: University of Georgia Press, 1985).
[128] For more on Stahl's medical thoughts, see Johanna Geyer-Kordesch, "Georg's Ernst Stahl's radical Pietist medicine and its influence on the German Enlightenment," in *The Medica Enlightenment of the Eighteenth Century*, edited by Andrew Cunningham and Roger French (Cambridge: Cambridge University Press, 1990): 67-87.

teacher). As quinine alleviated fever, Stahl and his students dissuaded the use of it.[129] Boltzius and Gronau would take matters into their own hands and administered quinine to their congregation as they found Thilo's methods unreliable, which ironically followed the medical debates in Halle to some extent. Instead, they listened to the advice of Herr Urlsperger's physician, Herr Doctor [Octavanius] Plohs (Ploss), who recommended a recipe for the curing of *Fieber-Kuchen* (fever clot associated with malaria) which included *cortex peruvinis*. Thilo, however, rejected Plohs' prescription as it did not follow the *methodo organica*, the medical doctrine developed by Stahl which emphasized the role of the soul and its power to influence the body both physiologically and pathologically.[130] Francke reprimanded them in 1743 and 1745 upon reading reports of quinine use in Ebenezer, warning them in language based on humoralism that quinine "plugs" or "jams" fever and potentially worsened symptoms.[131] Even though they were not directly involved in the medical debates at Halle, Boltzius and Gronau remained very active as medical providers in the community—even more so considering how lackadaisically Thilo offered his services to the Salzburgers.

Over the course of the 1740s and 1750s, Boltzius and Gronau's approach to medicine was ever evolving since they not only relied on the advice and medicine sent from Halle but also turned to (or rejected) other networks of medical knowledge albeit

---

[129] While that is not to say that the Stahl academic lineage shared exact ideas and doctrine, it does explain why Thilo was quite adamant on letting the fever pass naturally. For an article that challenges the conception of a unified "Pietist medicine," see Jürgen Helm, *Krakenheit, Bekehrung und Reform. Medizin und Krankenfu2rsorge im Halleschen Pietismus* (Tübingen: Max Niemeyer, 2006).
[130] For more on the *methodo organica*, see Chapter 1 of John H. Zammito's *The Gestation of German Biology Philosophy and Physiology from Stahl to Schelling* (Chicago: University of Chicago Press, 2018), 13-36.
[131] Koch, "Experience and the Soul in Eighteenth-Century Medicine," 572.

begrudgingly. In 1741, they recount two different physicians whom he interacts with: Jean-François Reynier and Jean Baptiste Bourquin. Reynier was a French Huguenot who joined the Moravian Church and served the Moravian community in Savannah beginning in 1735, and Bourquin was a French-Swiss surgeon who specialized in amputation in Purysburg, SC. Boltzius mentions Reynier [mistakenly calls him John Renniger] in his entry on April 26, 1741, disturbed by Reynier's "pretended miracle with a crocodile" and his mercury treatment for constipation with the "Salzburger N., who got sick during some business in N. [Savannah] by his imprudent and violent cure."[132] Part of the reason Boltzius disliked Reynier may be contributed to the fact that inhabitants of Ebenezer began to visit Reynier for treatment thereby acting as competition to Boltzius, Gronau, and Thilo. We also see a similar trend with the surgeon in Purysburg, whom Gronau discusses more in the daily logs. One of the Salzburgers, a N. Ernst, dislocated his left hand and became severely infected as it was not examined. N. Ernst traveled to Purysburg to receive a diagnosis from Bourquin who determined it was necessary to amputate his arm "before gangrene or cancer set in." Gronau had urged against amputation, pointing out that in Purysburg, the residents liked to "use all kinds of violent Negro-cures."[133] Due to worsening conditions of his hand, N. Ernst decides to proceed with the amputation. In spite of his disapproval, Gronau is asked by N. Ernst to

---

[132] Entry for April 26, 1741, in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 8 (Athens: University of Georgia Press, 1985). Boltzius proceeds to note that "Mr. Thilo was very shocked and also called it a murder-cure." The "miracle of the crocodile" may refer to something that Reynier learned from the Yuchis; Aaron Spencer Fogleman argues that the treatment may have been effective as locals remembered it for years even after his departure from Georgia. See Aaron Spencer Fogleman, *Two Troubled Souls: An Eighteenth-Century Couple's Spiritual Journey in the Atlantic World* (Chapel Hill: University of North Carolina Press, 2013), 59-60.

[133] Entry for August 21, 1741, in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 8 (Athens: University of Georgia Press, 1985).

accompany him to Purysburg for the procedure, and he accepts because he wanted to be there for Ernst's sake and wished "to begin and end the treatment with prayer."[134] Ernst ultimately recovers—though he faced a close call with death over a ruptured internal apostema [abscess]—and the success of Bourquin spreads around Ebenezer, bolstering his reputation. However, Boltzius writes that because the surgeon "has little understanding of medicine, as a matter of conscience I must discourage rather than advise people to entrust themselves to him."[135] In these two instances, we see that Boltzius and Gronau were not too keen on outside providers for the Salzburgers. This mindset also applied to recipes developed in the colonies: "We hope that, in Charleston, we can acquire all the ingredients for [the prescriptions] that we are lacking here. [We do not wish to take part in any of the incautious cures in this country, but the caution that has been practiced among us so far has a strong dose of negligence and carelessness, as everyone can see.]"[136] This aligns with their critique of Thilo and his experimentation with medical recipes using local ingredients in lieu of ingredients sent from Halle.

While Boltzius and Gronau's reports and daily logs of the Ebenezer settlement were transparent about the new yet difficult health conditions suffered by the Salzburgers, it is not evident (aside from a few occurrences outlined above) of the constant frustration and distress that Boltzius and Gronau endured with Thilo's professional and personal choices. However, as we see in Boltzius' personal

---

[134] Entry for August 24, 1741, in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 8 (Athens: University of Georgia Press, 1985).
[135] Entry for Oct. 20, 1741, in Entry for August 21, 1741, in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 8 (Athens: University of Georgia Press, 1985).
[136] Entry for November 12, 1741, in *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger, vol. 8 (Athens: University of Georgia Press, 1985).

correspondences to Germany, mainly to Gotthilf August Francke and Samuel Urslperger in Halle and Augsburg respectively. Only several months following Thilo's arrival to Ebenezer, Boltzius writes to Francke about "Herr Thilo and of what, against all expectations, took place with him" in the settlement regarding his intention to marry a "young Reformed maiden who at the time was still a maid in my [Boltzius'] house."[137] Even more distressing was Thilo's neglect of his obligations to Ebenezer to the point that Boltzius and Gronau had to "soothe the people in the community for whom he [Thilo] has cared poorly in their illnesses. Had it not been for the medicines that been sent over by Halle, Boltzius and Gronau would not been able to tend to the sick: "We consider it to be a divine direction that for the emergency use of medicines Your Reverence referred us not to Herr Thilo but sent over to us a lovely supply for our own disposition."[138] Boltzius' scathing appraisal speaks to the troubles caused by Thilo: "He is useful to the community in nothing."[139]

As noted multiple times in several letters, the ministers criticize Thilo for his "astounding and unusual methods" or treatment based on his enthusiastic conviction or inspiration (*Enthusiastische Überzeugung*). In the first year of Ernst's residence in Ebenezer, it was not Thilo but Gronau who had to learn and perform bloodletting as people wished to receive the procedure: "he [Thilo] does not apply himself to it, but my

---

[137] Johann Martin Boltzius to Gotthilf August Francke, August 26, 1738, in *The Letters of Johann Martin Boltzius, Lutheran Pastor in Ebenezer, Georgia: German Pietism in Colonial America, 1733-1765*, vol. 1, edited and translated by Russell C. Kleckley (Lewiston, NY: 2009), 245. See also Johann Martin Boltzius and Israel Christian Gronau to Friedrich Michael Ziegenhagen, August 26, 1738, in *The Letters of Johann Martin Boltzius*, 247.
[138] Johann Martin Boltzius to Gotthilf August Francke, August 26, 1738, in *The Letters of Johann Martin Boltzius,* 245.
[139] Johann Martin Boltzius and Israel Christian Gronau to Friedrich Michael Ziegenhagen, August 26, 1738, in *The Letters of Johann Martin Boltzius*, 249.

dear colleague Herr Gronau has a free hand for it and is still performing it with very good success and to the praise of God."[140] Boltzius and Gronau responded to the needs and wants of the sick Salzburgers, who wanted medication, bandages, and certain procedures such as bloodletting. This was similar to the Black Caribbean ritual practitioners in Pablo Gómez's *The Experiential Caribbean* (2017), whose "power and knowledge-creating strategies were based on experiential phenomena they manufactured anew on the basis of localized circumstances in different Caribbean locales."[141] In other words, not only were Boltzius and Gronau integral in shaping the medical realities of the Salzburgers' bodies, but also the Salzburgers themselves in their desire to obtain treatment from the ministers.

Although we see an improvement in relations between Boltzius and Thilo by the second year of Thilo's stay (1740), it is primarily in spiritual matters as Thilo makes efforts to attend service regularly which may be attributed to his marriage to the aforementioned young maiden of the Helfenstein woman. During the malaria outbreak of 1740, Boltzius remarks that "Herr Thilo certainly does not take an active interest in the patients" despite him having "improved himself very much."[142] Boltzius continues to make similar statements up to 1742, when he mentions the surgeon Johann Ludwig Mayer, who had arrived to the settlement in 1741 and also practiced in Ebenezer alongside Thilo (sometimes as a substitute and other times as a competitor according to Renate Wilson).[143] Boltzius befriended and came to rely on Mayer as Thilo continued to

---

[140] Boltzius and Gronau to Ziegenhagen, August 26, 1738, 248.
[141] Pablo F. Gómez, *The Experiential Caribbean: Creating Knowledge and Healing in the Early Modern Atlantic* (Chapel Hill: University of North Carolina Press, 2017), 2.
[142] Johann Martin Boltzius and Israel Christian Gronau to Gotthilf August Francke, May 29, 1740, in *The Letters of Johann Martin Boltzius,* 299.
[143]Renate Wilson. *Pious Traders in Medicine,* 184.

be "exceptionally indolent in performing his office with the patients."[144] Indeed, once Gronau became infirmed in 1744, Boltzius appointed Mayer as the town's schoolmaster, praising him for providing "much benefit as a surgeon" and "good service in the school."[145] Moreover, patients lamented about Thilo's higher prices in contrast to Mayer's services; Boltzius explains to Francke how Thilo "takes from our poor patients": one patient named Ridelsberger had to pay Thilo 3 pounds Sterling and the surgeon Mayer 1 pound 10 shilling for his 3-month illness and cure.[146] Despite this roller coaster of a relationship between Boltzius/Gronau and Thilo, there is a "stabilization" of their relationship by 1744, especially with Thilo's "diligent"[147] tending to Gronau who had been forced to stay home due to a worsening illness which had lasted a year. While Boltzius and Gronau had their differences with Thilo in their engagement with medicine, those differences illustrate a portrait of early American medicine provided by German university-educated physicians and ministers that has not been closely looked at.

Conclusion

This chapter has traced how German-speaking ministers in British North America provided medical care for their communities as a crucial part of their pastoral duties between 1745 and 1776. The cases reveal the different levels of medical treatment that was tempered according to local needs, congregational expectations, and counsel from

---

[144] Johann Martin Boltzius and Israel Christian Gronau to Gotthilf August Francke, July 26, 1742, in *The Letters of Johann Martin Boltzius,* 351.
[145] Johann Martin Boltzius to Gotthilf August Francke, December 29, 1744, in *The Letters of Johann Martin Boltzius,* 421.
[146] Johann Martin Boltzius and Israel Christian Gronau to Gotthilf August Francke, August 1743, in *The Letters of Johann Martin Boltzius,* 373.
[147] Johann Martin Boltzius to Gotthilf August Francke, December 29, 1744, in *The Letters of Johann Martin Boltzius,* 422.

the Halle Orphanage. Halle was the prominent node from which the circulation of knowledge and goods came from, but it was not only one: other faiths, e.g., Schwenkfelder and Moravian (discussed in the following chapter), also mattered, as did London and Indigenous exchanges. Heinrich Melchior Mühlenberg stands out as the clearest advocate for "structured" medicine akin to the cameralist vision of the Orphanage: recognized preparation and supply from Halle, carefully planned logistics, and ministerial oversight. I label this as a kind of *medizinische Polizei* as part of the cameralist goal rooted back in Prussia. Mühlenberg's letters framed medicine as ordered community governance, obtaining the trusted remedies for German speakers in Pennsylvania. In Ebenezer, Johann Martin Boltzius and Israel Christian Gronau followed suit in this regard. Their appeals to Hallesian guidance from Gotthilf August Francke brought them into a sustained debate with Johann Andreas Zwifler and Christian Ernst Thilo, who favored using local plants and personal judgments. Boltzius and Thilo's disagreements over the use of quinine underscore the continuous negotiation of what constituted as safe and responsible care for the Salzburgers. Technically, both men were following what was "approved" from Halle; Boltzius heeded the instructions given by Francke whereas Thilo complied with the stance of his mentor, Georg Ernst Stahl.

Against the more Halle-leaning methods, George de Benneville and Abraham Wagner opted more for experimentation, eclectic care, and local knowledge. De Benneville's *Medicina Pensylvania* represents a work of medical *Volksaufklärung* geared towards a bilingual audience from dispensing practitioners to the lay person. It being unpublished probably speaks more to its untimeliness as its structure suggests that it was

meant to be printed. Wagner, who trained with Dr. Melchior Heebner through his Schwenkfelder ties, similarly blended Hallesian ingredients and formulas with local botanicals, showing how "authorized" remedies and empirical testing could be conciliated.

Although mentioned briefly, Justus Heinrich Christian Helmut and John Christopher Kunze appear not as minister-physicians, but as an important part of the scaffolding operating in German medical landscape in North America. Helmut and Kunze belonged to the same Hallesian project of cameralism—only their tools were schools and curriculum rather than medical care. They had connections to the Orphanage and worked to transplant Halle's curriculum by helping create an educational system for German students. Beyond the parish, both Helmut and Kunze were professors at the University of the State of Pennsylvania (today known as the University of Pennsylvania) and aimed to normalize the German language in education. In other words, they translated Hallesian order into community governance in a different way from Mühlenberg and Boltzius, that is, by nurturing German literacy and education.

Altogether, these men illuminate how authority in an unregulated market was assembled: through official correspondence and patronage (often, but not only, from Halle) and medical care predicated on trusted medicines or eclectic cures. They show that German medicine in the colonies was not simply imported but frequently adapted. Pastors curated and policed; practitioners experimented and taught; and communities judged what worked. The result is a German-Atlantic therapeutic field in flux that was not solely reliant on a single center back in Europe.

CHAPTER 2: EUROPEAN EXPECTATIONS VS. COLONIAL REALITIES: MORAVIAN MEDICINE IN EIGHTEENTH-CENTURY AMERICA (1740-1810)

The Moravians, or Unitas Fratrum ("Unity of Brethren"), provide an excellent framework for studying medicine in the Atlantic World that allows us to move beyond comparative analysis and consider a more global and interconnected German history. Having built a diasporic community across the globe ranging from Africa, the Caribbean, India, and Suriname, the Moravians established tightly knit religious communities in an unknown new land that "necessitated a measure of self-determination and pragmatism"[148] away from the European models of settlement. We have merely scratched the surface over the central role that Protestant networks played in the British colonies, particularly with German Pietists.[149] While my first chapter discussed the Pietist network created by the Francke Foundations in Halle and how minister-practitioners fostered medical authority in British North America, this chapter shifts the lens to another German network that operated from Herrnhut, Germany: the Moravians, who "more than any other Protestant sect, proved adept…in securing new adherents in the unlikeliest of communities and in the unlikeliest of places."[150] They came to North America hoping to

[148] Michele Gillespie and Robert Beachy, Introduction to *Pious Pursuits: German Moravians in the Atlantic World* (New York: Berghahn Books, 2007), 9.
[149] There have been some great texts on Pietism in the Atlantic World in the past couple decades including Hartmut Lehmann, James Van Horn Melton, and Jonathan Strom's *Pietism in Germany and North America 1680-1820* (Aldershot: Ashgate Publishing, 2009); Jonathan Strom, ed., *Pietism and Community in Europe and North America, 1650-1850* (Leiden: Brill, 2010). For texts on the Moravians, see Gillespie and Beachy's aforementioned book *Pious Pursuits*; Katherine Carté Engel, "Moravians in the Eighteenth-Century Atlantic World," *Journal of Moravian History* 12, no. 1 (2012): 1-19; Benjamin M. Pietrenka, *Religion on the Margins* (University Park, PA: Pennsylvania State University Press, 2024).
[150] Gillespie and Beachy, Introduction to *Pious Pursuits*, 3.

evangelize the specific localities they inhabited, while also maintaining ties back to Europe.

Like many other communities throughout the British colonies, the Moravians also had to contend with a strange territory fraught with new diseases. Unlike the Pietist network rooted in Halle, however, we know little of Moravian medical networks, where Moravian physicians were trained, and how they practiced.[151] Renate Wilson explains how the northern, more populated *Gemeine* ("community" or "congregation") such as Bethlehem were adequately staffed by physicians and other medical practitioners; however, medical provisions in outlying settlements were scarce and uneven. As medical care constituted a primary concern among the Moravian Brethren, especially those who resided in these missionary settlements, this chapter sets out to insert the Moravians into the history of medicine in British America. The Moravians in America move the narrative from centralized prescriptions to lived therapeutics, showing how one global church managed illness in particular places and in turn shaped Moravian medicine. With one deliberate exception (Hans Martin Kalberlahn, the surgeon at Bethabara), this chapter follows Moravian caregivers who were not formally trained in medicine. The figures that follow constructed workable therapeutics from gardens, almanacs, and local exchange rather than learned credentials. In doing so, my work joins and expands the scholarship on spiritual-medical encounters in the Atlantic.[152]

---

[151] The literature on Moravian medicine and healers/physicians in British America is scant. See Renate Wilson, "Moravian Physicians and Their Medicine in Colonial North America: European models and Colonial Reality," in *Pious Pursuits: German Moravians in the Atlantic World* (New York: Berghahn Books, 2007): 65-82 and Christopher E. Hendricks, "Hans Martin Kalberlahn: Moravians, Medicine, and the Laboratory at Bethabara," *XVIII: New Perspectives on the Eighteenth Century* 17, no. 1 (2020): 33-63.
[152] See Aaron Spncer Fogleman's *Two Troubled Souls: An Eighteenth-Century Couple's Spiritual Journey in the Atlantic World* (Chapel Hill: University of North Carolina Press, 2013).

In contrast to my first chapter's emphasis on transatlantic institutional connections, I examine the Moravians at the microlevel, observing the day-to-day activities of the missionaries in America. As Katherine Engle argues, Herrnhut sought to strengthen transatlantic ties and expand the Moravian presence throughout the Atlantic world, but settlements like Bethabara, NC, and Springplace, GA, learned that survival depended on disciplined attention to local conditions: an ethos mirrored in the therapeutic works of the Schwenkfelder Abraham Wagner and Universalist George de Benneville.[153] One of the successful ways that Moravian communities sustained themselves was through cultivating gardens for subsistence and medicinal plants as seen through the Bethabara settlement in North Carolina and Springplace mission in Georgia. Medical practice in Moravian communities unfolded within a divided medical economy. In the urban sprawls of Bethlehem, the town was the site of an apothecary that supplied medicines not only for the Brethren but also the surrounding areas as well.[154] In the rural settlements of Bethabara and Springplace, care was secured through cultivation, adjustments, and trust. This chapter pays particular attention to the lives of Moravian women (both European and Indigenous—and in rare instances, Black) as they shared common ground inherent in the gendered roles they occupied. Attending to their work allows us to see how medical knowledge was produced and translated through bedside practice, shared remedies, and cross-cultural exchange.

---

[153] Engel, "Moravians in the Eighteenth-Century Atlantic World," *Journal of Moravian History* 12, no. 1 (2012), 14.

[154] "Dr. Matthew Otto was the first Apothecary in the town, and in this County. He established his Laboratory about 1745. The medicines were prepared with great care, and were sent to Philadelphia, where they were in much demand." John Hill Martin, *Historical Sketch of Bethlehem in Pennsylvania, With Some Account of the Moravian Church* (Philadelphia: John L. Pile, 1873), 180.

The Moravians led by August Gottlieb Spangenberg, David Nitschmann and his wife Anna first arrived at the British colonies in early 1735 after negotiating with James Oglethorpe and the Trustees of Georgia to settle in Savannah. Initially, the Moravians had planned on travelling and working with a group of Schwenkfelder refugees and the Lutheran Salzburgers; however, the former proceeded to go to Pennsylvania at the last minute, and the latter moved a few miles upwards to Ebenezer under the auspices of Samuel Urlsperger (the same discussed in the previous chapter responsible for editing the "Detailed Reports on the Salzburger Emigrants who Settled in America"), who urged against associating with the Moravians.[155] As the situation in Savannah worsened, many Moravians dispersed—returning back to Europe or even travelling north to Pennsylvania. In 1740, the Moravians obtained help from the evangelist George Whitefield, who had invited those remaining in Savannah to join him to Pennsylvania, where he intended to construct a school for orphaned children. Though theological disputes resulted in a separation from Whitefield (only to reconcile a year afterwards), the Moravians purchased 500 acres of land and established the settlement of Bethlehem. Soon afterwards, they purchased 5000 acres from Whitefield to build Nazareth as well.[156] Although the settlement in Georgia was small and ultimately failed, it served as an important stepping stone for the founding of other important communities in Pennsylvania.

---

[155] For more details on early settlement plans of the Moravians in Georgia, see Adelaide L. Fries, *The Moravians in Georgia, 1735-1740* (Raleigh, NC: Edwards & Broughton, 1905). On top of the tensions with the Salzburgers reaching a peak, the Savannah settlement dissolved due to its location, which was conducive to disease and unsustainable for growing crops.

[156] "The Moravian Founding of Nazareth, Pennsylvania," *This Month in Moravian History,* 91 (2015).

With Bethlehem serving as the pivotal center for Moravian activities, the Church wanted to expand and establish a foothold in the South. A door was open for such an opportunity in 1751 when Count Nikolaus Zinzendorf agreed to purchase from John Carteret, the Earl of Granville, one hundred thousand acres of land in Piedmont, North Carolina. The following year, Spangenberg led a team to survey the land and reported "the land on which we are now encamped seems to me to have been reserved by the Lord for the Brethren."[157] Spangenberg suggested that the settlement be named *Wachau* or Wachovia in honor of Zinzendorf's ancestral estate in Austria. An expedition of fifteen Brethren set out from Bethlehem on October 8, 1753, and arrived at Bethabara on November 17. Twelve of the men remained in Wachovia to begin laying the foundation for what would become the Bethabara settlement; one of the Brethren, Hans Martin Kalberlahn (1722-1759), served as the community's indispensable healer and a revealing figure for this chapter's shift from center-periphery to ground-level practice. Originally born in Drontheim, Norway, Kalberlahn began his training as a surgeon at age fifteen and became acquainted with the Moravians while training with a surgeon in Copenhagen in 1745. In 1747, he travelled to the Moravian community in Herrnhaag and became a physician for the Single Brethren there in 1750. The Church appointed Kalberlahn as physician for the initial group of pioneers to settle in North Carolina in 1753.[158]

The early years of settlement's founding and growth were characterized by not only rapid development, but also difficulties and tension. The Brethren were focused on

---

[157] Adelaide L. Fries, ed., *Records of the Moravians in North Carolina*, vol. 1 (Raleigh: Edwards & Broughton Company, 1922, 59.
[158] William S. Powell, ed., *Dictionary of North Carolina Biography*, vol. 3 (Chapel Hill: University of North Carolina Press, 1988), 341.

developing the infrastructure for a stable community: clearing the land, planting crops, tending to livestock, and building houses and workshops for industry. In the first two years, provisions were tight as the Brethren and Sisters mainly relied on a diet of corn, milk, and cornmeal.[159] The Moravians did not rely on hunting as their task was "to make a farm and cultivate the ground, and partly because game is scarce."[160] At the same time, they also welcomed new inhabitants (numbering sixty-five by 1756) and a constant flow of visitors who required food, lodging, and medical care.[161] With the Seven Years' War (1754-1764) unfolding around them, residents were concerned as their town was right "on the frontier, and the first to be attacked."[162] Under the looming threat of Cherokee attack, the Brethren hastily built a palisade around the settlement and granted haven for refugees (non-Moravians and Moravians).

The large influx of people to Bethabara stretched the capacity and resources of the Brethren as noted in the 1755 memorabilia: "for 231 persons who spent the night here…we were able to share our little store of food."[163] Over time, the settlement was able to become self-sufficient agriculturally but also through bartering with the Cherokees or visitors. In 1759, "there arose a great lack of food in the country for 100 miles around us, and our gracious Father in Heaven had so ordered it that we not only had enough for ourselves but were able to help many hundreds of people who came to us."[164]

---

[159] Issues revolving around lack of food can be found in the Moravian records. In 1753, see entries from Oct. 16, Nov. 21, and Dec. 3. In 1754. Fries, ed., *Records of the Moravians in North Carolina*, 1:76, 81, 83.
[160] Fries, ed., *Records of the Moravians in North Carolina*, 1:104.
[161] Fries, ed., *Records of the Moravians in North Carolina*, 1:156. By then, the town had also constructed twelve structures including a *Gemeine Haus,* mill, tailor shop, and wash house.
[162] Fries, ed., *Records of the Moravians in North Carolina*, 1:159.
[163] Fries, ed., *Records of the Moravians in North Carolina*, 1:121.
[164] Fries, ed., *Records of the Moravians in North Carolina*, 1:206. At one point, the refugees outnumbered the Brethren: 89 Moravians lived in Bethabara, and they took care of 120 refugees in town and another 120

To alleviate some of the pressure on the community, the residents had built a "Strangers' Cabin" to house refugees, which had a room to accommodate sick guests.[165] Nevertheless, the overcrowding of refugees caused an outbreak of typhus in 1759, which had spread throughout North Carolina and Virginia. Kalberlahn, who had spent about a year in Bethlehem to marry, returned to Bethabara on May 30, 1759, and immediately tended to the injured and sickly patients. He eventually contracted the disease while treating the Moravian and refugee populations and succumbed to it on July 28, 1759. The medical groundwork that Kalberlahn paved in Wachovia, however, did not die with him. His successor August Schubert (1733-1781) would take the reins as the region's doctor, expanding on Kalberlahn's laboratory (leading to the construction of an apothecary) and restoring the medical garden, which had been left in disrepair for three years by the interim doctor Jacob Bonn after Kalberlahn's death.[166]

Records of the Bethabara settlement note the scale of Kalberlahn's work. As potentially one of the only doctors in the region, Kalberlahn had a large practice, attracting an extensive patient base—some who travelled over a hundred miles to obtain treatment (even as far as Virginia).[167] In a harsh landscape where access to imported medication and treatment was few and far between, Kalberlahn worked "marvels with the few instruments he could carry, supplemented by tar…and the medicinal herbs he raised

---

people who stayed at the mill. Christopher Hendricks, "Hans Martin Kalberlahn: Moravians, Medicine, and the Laboratory at Bethabara," *XVIII: New Perspectives on the Eighteenth Century* 17, no. 1 (2020): 45-6.

[165] Fries, ed., *Records of the Moravians in North Carolina*, 1:94. "By evening our lodging place of strangers was finished. It is built of wide rails laid up like logs, and has a small fireplace, so that in case of need we can lodge two sick guests."

[166] Hendricks, "Hans Martin Kalberlahn," 48-9.

[167] Kalberlahn also traveled "far and wide to visit patients." Fries, ed., *Records of the Moravians in North Carolina*, 1:105.

in the remarkable little garden."[168] Kalberlahn's therapeutics exemplify methodical treatment anchored in local conditions that foregrounds this chapter. Much of his materia medica were manufactured from plants grown from the medical garden (*hortus medicus*) in Bethabara, which he designed and began in the fall of 1754.[169] For example, tar water was popular within the community as a reputed preventative against small pox, and the Brethren regularly gathered pine branches to help Kalberlahn make tar water.[170] Based on the small plan drawn by Christian Gottlieb Reuter (1717-1777), Moravian surveyor and architect of the Wachovia Tract, the medical garden featured various plants straddling the Old and New Worlds [see Figure 3]. A 1759 plan of the Upland Garden by Reuter mentioned a specific section of the garden that was "planted only with seed which was brought personally from Germany": parsley, turnip-rooted parsley, Hamburg parsley, onions, red cabbage, beets, celery, kerbel, field salad or corn salad, spinach, garlic, mangolds, cress, red cabbage, radish, cauliflower, cabbage, spoonwort, scurvy grass, capper, kohlrabi, and marjoram.[171]

Settlers cultivated transplants that had long been naturalized into European gardens (e.g., pumpkins, tobacco, beans, corn) while also experimenting with crops that

---

[168] Fries, ed., *Records of the Moravians in North Carolina*, 1:218.

[169] The medical garden was one out of several gardens in Bethabara; other gardens included the Upland Garden (also referred to as the 'Community Garden' or' Vegetable Garden'), the Bottom Garden (presumably an expansion of the Upland Garden) along with the Bean and Hops Garden and Hops and Potato Garden. For more on the layout of the gardens in Bethabara, see Flora Ann L. Bynum, "Old World Gardens in the New World: The Gardens of the Moravian Settlement of Bethabara in North Carolina, 1753-72," *Journal of Garden History* 16, no. 2 (1996): 70–86.

[170] There are multiple entries recording how the Brethren gathered tar wood or pine branches for Br. Kalberlahn. See Fries, ed., *Records of the Moravians in North Carolina*, 1:94, 98, 100, 161, 181. There was a report in *The Gentleman's Magazine* in 1739 describing how several patients were cured of smallpox after drinking tar water in Charles Town, South Carolina. For more on tar water as a medicine in the eighteenth century, see Mirrek Tobiáš Hošman, "George Berkeley's Tar-Water Medicine," *Early Science and Medicine* 25 (2020): 173–93.

[171] Bynum, "Old World Gardens in the New World," 77.

were novel to Reuter including gourds, muskmelons, and sweet potatoes.[172] At the behest of Kalberlahn, the Moravians added medicinal herbs such as fennel, caraway, parsley, poppy, sage, and anise to the garden.[173] The "internationalism" of Moravian gardening was one way the Moravian sisters distinguished themselves from their neighbors: it allowed them to create connections elsewhere in the world.[174] Seen against the Hallesian pharmacopoeia discussed in Chapter 1, where pastors such as Heinrich Melchior Mühlenberg leveraged trusted preparations as a structured way of providing medical care, Bethabara shows the complementary face of German Protestant medicine in North America: a settlement where authority grew from competence under constraint. In addition to his garden, Kalberlahn set up a laboratory in 1757 where he could operate on his patients and distill and extract compounds, turning a frontier outpost into a site of production of remedies.[175] Kalberlahn's practice did not depend on the medical supplies sent from Bethlehem or Herrnhut. Instead, it relied on an economy of making rather than importing exemplified through the production of tar water and herbal therapeutics.

Medical care in Bethabara was inseparable from its social geography. As Wachovia was conceived to be "an axis for the expanding Piedmont economy with links

---

[172] Bynum, "Old World Gardens in the New World," 84.
[173] John Anthony Caruso, *The Appalachian Frontier: America's First Surge Westward* (Knoxville: University of Tennessee Press, 2003), 36. Bynum includes the list of ninety-six plants that Reuter presented with his plan of the *Hortus Medicus*. The herbs above were included in the list. Bynum includes a translation of this list along with both the older and modern botanical names for the plants, see Bynum, "Old World Gardens in the New World," 83.
[174] Compared to say a seventeenth-century English garden, a Moravian garden would have been "full of unfamiliar shapes, colours and smells." Ron Southern, "Strangers below: An Archaeology of Distinctions in an Eighteenth-Century Religious Community," in *Archaeologies of the British: Explorations of Identity in Great Britain and Its Colonies 1600-1945*, ed. Susan Lawrence (London: Routledge, 2003), 97.
[175] Stanley South, *Historical Archaeology in Wachovia: Excavating Eighteenth-Century Bethabara and Moravian Pottery* (New York: Kluwer Academic Publishers, 1999), 85-91.

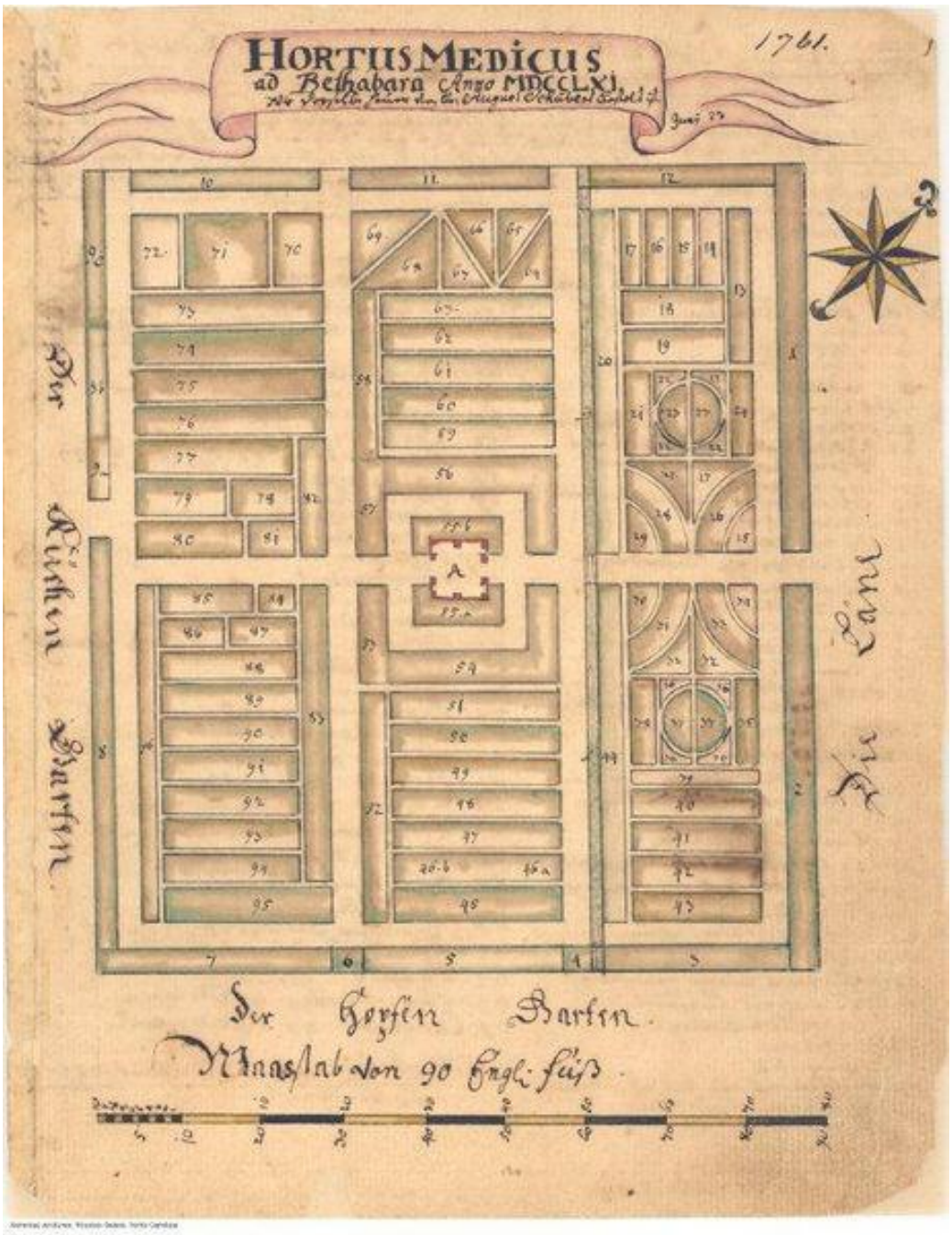


Figure 3: Plan of the Hortus Medicus in Bethabara, 1761. Drawing by Christian Gottlieb Reuter (Moravian Archives, Winston-Salem, NC), https://heald.nga.gov/mediawiki/index.php?title=File:1944.jpg&oldid=15665.

to surrounding communities and larger regional trading centers,"[176] Bethabara welcomed all sorts of passersby including members of the Cherokee and Creek tribes, who traded and rested there. The Cherokee looked favorably on the settlement, having described it as "the Dutch fort, where there are good People and much bread."[177] The people who came and went mattered as it positioned the Moravians as hosts whose obligations extended beyond their choirs to Indigenous visitors and non-Moravian neighbors. It is feasible then that Moravians like Kalberlahn interacted and exchanged therapeutic and botanical knowledge with the many people he aided. Indeed, the high demand for his services brought in much needed income to the settlement via a bartering system.[178] Kalberlahn's medical prowess and dedication fostered goodwill with one of his patients, Isaac Ferry, who was "one of their best neighbors."[179] In this sense, Bethabara functioned as economic and medical center up until 1772 when Moravian authorities directed their attention to Salem.

While this section primarily focused on Kalberlahn as a practitioner, the communal Moravian economy known as the *General Oeconomie* contributed to the Bethabara's success and rapid growth. The Anglican clergyman Charles Woodmason described how "They have Mills, Furnaces, Forges, Potteries, Founderies, All Trades,

---

[176] Jon F. Sensbach, *A Separate Canaan: The Making of an Afro-Moravian World in North Carolina, 1763-1840* (Chapel Hill: University of North Carolina Press, 1996), 56.
[177] Fries, ed., *Records of the Moravians in North Carolina*, 1:191. Although the Cherokee were aligned with the British during the Seven Years' War, tensions were still present between the Moravians and Cherokee. For instance, two occasions in May of 1756 make this evident. See entries from May 18 and May 25; Fries, ed., *Records of the Moravians in North Carolina*, 1:165-6.
[178] As resources were limited, Kalberlahn accepted a variety of goods for his services including corn, cows, and a bear on one occasion. Fries, ed., *Records of the Moravians in North Carolina*, 1:82, 94, 101.
[179] Ferry became an important trading partner for the Brethren at Bethabara. He regularly ate with them, brought work for the town's tailor, and even accepted a letter to be forwarded to London via Br. Van Vleck in New York. Fries, ed., *Records of the Moravians in North Carolina*, 1:128.

and all things in and among themselves…they have All things (save Women) in Common: and receive to their Community Persons of all Nations, Religion, and Language…And having all things free, setting all Hands at Work according to their Ability (for they are all *Bees*, not a Drone suffer'd in the Hive)."[180] Bethabara shows how Moravian care was inseparable from the making of a town and how survival in the wilderness necessitated an attention to the local conditions and circumstances of the land. The systems Kalberlahn assembled such as the medical garden and the medical laboratory helped stabilize life in Wachovia. With a steady flow of traffic and the ability to provide relief during the Seven Years' War, Bethabara functioned as a regional center for travelers and settlers in the Carolina Piedmont before the Moravians made the move to Salem. In accordance with its namesake ("House of Passage"), Bethabara was a corridor through which people, diseases, and provisions traversed.

If Bethabara shows a physician providing care from their own labor and crops, Otto Christoph Krogstrup (1714-1785) gives us a glance into a minister (with no medical background) doing similar work in the Moravian communities in Pennsylvania. Krogstrup was a Dane who studied theology in Copenhagen. In 1748, he joined the Moravian Church and accepted a calling to travel to Bethlehem to minister in the surrounding areas. In Pennsylvania, he ministered for congregations in Philadelphia, Lititz, York, and Lancaster. He also briefly worked in Graceham, Maryland. What links him to the medical life of the Moravians is an untitled 27-page manuscript: a compact

[180] Charles Woodmason, *The Carolina Backcountry on the Eve of the Revolution: The Journal and Other Writings of Charles Woodmason, Anglican Itinerant*, ed. Richard J. Hooker (Chapel Hill: University of North Carolina Press, 1953), 78.

herbal containing descriptions and recipes of forty-three plants and an entry on ammonium.[181] Upon closer examination, the notebook is essentially a concise version of Christoph Saur's *Kräuterbuch,* the herbal serialized in Saur's *Der Hoch-Deutsch Americanische Calender* published between 1738 and 1777.[182] Just as Saur would have wanted, Krogstrup's manuscript reads less like a treatise than a personal handbook that a pastor could easily carry and consult while visiting the sick.

The notebook's content confirms that purpose. Following Saur's formatting, entries give the name in German followed by their English and Latin names; reasons for the plant's use are noted first. Rather than exactly copying the text from Saur's herbal, Krogstrup only included certain timings and preparations of remedies. He often omitted the humoral properties and flavors associated with each plant. In short, he took the advice and recipes that a practitioner would find useful: salves for burns and bites, teas for easing indigestion or urinary problems, teas to relieve fevers, gentle emetics. The emphasis falls on what could be easily remembered, procured, and prepared—in line with this chapter's attention to everyday care.

Krogstrup operated within Bethlehem's governance, and the remedies in his notebook were attuned to Pennsylvania's ecologies. The plants he listed were among those that households could easily grow or gather. It is important to note though that many of the herbs that German settlers grew in their gardens were familiar to them in the

---

[181] Otto Christoph Krogstrup, "Untitled Notebook," ca. 1770, PP KROChr 42, Moravian Archives. Translations are mine.

[182] Krogstrup seems to have taken bits and pieces of information from the issues from 1762 to 1764. The first entry Krogstrup's notebook begins with *Aland-Würzel* [Elecampane] and ends with *Odermennig* [Agrimony]. The striking difference is Krogstrup's final entry "von Ammonium" [on Ammonium]. I talk further in-depth about Saur and his almanacs in chapter 3.

Old World. However, the therapeutic properties of certain plants also reflected knowledge from their Indigenous neighbors. The medicinal properties and remedies of these herbs overlapped with regards to what ailments they addressed. Take purslane and agrimony as examples. Purslane was noted for its effectiveness for dermatological problems such as burns, bruises, and insect bites. Native Americans made a tea from purslane as a gastrointestinal aid and diuretic. In Krogstrup's notes, purslane eaten raw is "an excellent remedy for heartburn and upset stomach." Additionally, a mixture of finely crushed purslane and burdock with sugar is beneficial for those suffering from burning and leaking of urine.[183] As for agrimony, Krogstrup recommended this herb as to drive away fever and alleviate liver problems; the Iroquois likewise made a decoction from agrimony to help with liver problems.[184] When compared beside Kalberlahn at Bethabara, Krogstrup shows the same obligation in administering care and exemplifies another case of on-the-ground therapeutics in the Moravian world. From the colonial world of Kalberlahn and Krogstrup, the narrative moves forward to the early nineteenth century, where Anna Rosina Gambold's experiences follow similar logistics of care in a more Anglophone setting in Georgia.

"Sprightly" Teacher and Botanist: Anna Rosina Gambold (1762-1821)

I now turn to a Moravian Sister [*Schwester*] who exercised that same pragmatism of therapeutic care in her community: Anna Rosina Gambold (née Kleist). After spending

---

[183] The Cherokee, Iroquois, and Navaho utilized purslane in different ways. On Native American use of purslane, see Daniel E. Moerman, *Medicinal Plants of Native America*, vol. 1 (Ann Arbor: University of Michigan, 1986), 22-3. Krogstrup, "Untitled Notebook," PP KROChr 42, p. 11. "So man den Burzel roh ein Salat od. Gekocht isst oder davon trinket, so ist es ein köstlich arzuung wider das Sodbrunnen u. erbrechen des Magens…Wer mit brennen u. tropfen urin geplagt ist, der gebraucht oft --- ---- gestossenen Burzel u. [Lattich?] Samen mit Zúcker vermischt. Der distillierte wasser getruncken Löffel u. Löffel allem einmal."
[184] Moerman, *Medicinal Plants of Native America*, 1:44.

almost two decades (1788-1805) as a tutor at the Moravian Female Seminary for Young Ladies in Bethlehem, Anna moved with her husband John Gambold to the Moravian mission at Springplace, GA, in the heart of Cherokee Nation. Here, she led a school and carefully tended to a garden. Discussing Anna broadens the lens of cross-cultural traffic in medical knowledge. The Springplace diaries show how healing was sustained by Moravian sisters, Cherokee women, and Black slaves. Cherokee society, which had followed a clan-based matrilineal kinship system for a very long time, saw the diminishment of power for Cherokee women following the American Revolutionary War. Nevertheless, women continued to "engage in subsistence agriculture, gather wild foodstuffs, prepare food, care for children, and make most household goods."[185] Moravian women also embraced this division of labor as women's lives were dictated by the choir system, where congregations were divided into specific choirs based on sex, age, and marital state. Cherokee and Moravian women shared a special connection to the botanical world as they were responsible for tending to the fields and gardens. Anna specified 38 plants (out of a list of 264 genera) and their various uses that were utilized by the Cherokee, implying close collaboration between them.[186] Indeed, some of the plant specimens labeled "Cherokee" in Gotthilf Henry Ernst Mühlenberg's (a son of Heinrich

---

[185] Anna Smith, "Unlikely Sisters: Cherokee and Moravian Women in the Early Nineteenth Century," in *Pious Pursuits: German Moravians in the Atlantic World* (New York: Berghahn Books, 2007), 194. For more on the societal shift on Cherokee women around this time, see Theda Perdue, *Cherokee Women: Gender and Cultural Change, 1700-1835* (Lincoln: University of Nebraska, 1998). Krogstrup, "Untitled Notebook," PP KROChr 42, p.26.

[186] At the end of her "Plants of the Cherokee country" (1819), Anna included a separate alphabetical list of plants (starting with *"Acer rubrum"* and ending with "*Yucca filamentosa*") that the Cherokee used as food, medicines, dyes, and fibers. See Anna Rosina Gambold, "Plants of the Cherokee Country: A list of plants found in the neighborhood of Connasarga River, (Cherokee Country), where Springplace is situated," *American Journal of Science* 1, no. 3 (1819): 250-1.

Melchior Mühlenberg) *Catalogus Plantarum Americae Septentrionalis* (1813) credited Anna for her contributions.[187]

Anna's botanical interests and skills at the Springplace Mission attracted not only Cherokee women but also European botanists. Her observations in "Plants of the Cherokee country: A list of plants found in the neighborhood of Conasarga River (Cherokee Country) where Springplace is situated" (1819) was even published in the *American Journal of Science and Arts*.[188] Moreover, Anna's vegetable and medicinal garden at Springplace garnered the respect of local and foreign visitors. The Portuguese botanist, the abbé José Francisco Corrêa da Serra, wrote to a friend back in England about a pleasant surprise while visiting the United State from 1812 to 1820 "in the midst of the wilderness, to find a botanic garden not indeed like that at Paris, or yours at Kew, but a botanic garden, containing many exotic and medicinal plants, the professor, Mrs. Gambold, describing them by their Linnaean names."[189] The idea of mission gardens held a prominent place in the "process of converting and civilizing natives."[190] As we see with Gambold, however, she was more concerned with learning, teaching, and treating the

---

[187] Daniel L. McKinley notes that Anna provided Mühlenberg's flora from the Cherokee with information on at least 83 species. See Daniel L. McKinley, "Anna Rosina (Kliest) Gambold (1762-1821), Moravian Missionary to the Cherokees, with Special Reference to her Botanical Interests," *Transactions of the Moravian Historical Society* 28, (1994): 60.

[188] Two botanists, a Mr. de Serra (a Portuguese who lived in Philadelphia) and Mr. Gilmer (a Virginian), visited Springplace and were impressed by the gardens. Another botanist, Constantine Samuel Rafinesque called her "the first female botanical writer." See James R. Troyer, "Early American Moravian Botanists in North Carolina and Elsewhere," *Journal of the North Carolina Academy of Science* 125, no. 1 (2009): 2.

[189] Quoted in John Hendley Barnhard, "The Botanical Correspondents of Schweinitz," *Bartonia,* no. 16 (1934): 26.

[190] Michael T. Bravo has a perceptive essay on Moravian mission gardens. See Michael T. Bravo, "Mission Gardens: Natural History and Global Expansion, 1720-1820," in *Colonial Botany: Science, Commerce, and Politics in the Early Modern World*, edited by Londa Schiebinger and Claudia Swan (Philadelphia: University of Pennsylvania Press, 2005): 49-65. Bravo does not focus on the American scene and instead examines Moravian gardens in the West Indies and Greenland.

Cherokee and Black population at Springplace; that is not to say that this imperialist tendency was absent with Gambold's case, but I want to underscore Anna's connection with the Cherokee and Black women and children. Specifically, I look at the experience of an enslaved Black woman named Pleasant whom the Gambolds (John and Anna) brought with them to relieve "the Sisters of much of the hard manual labor incident to caring for the ever increasing number of passing Indians."[191] Although Pleasant's voice is absent in the historical records, we can piece together her experience and interactions with the Moravian missionaries and Cherokee people.

Despite the contributions Anna Rosina Gambold made to the botanical world (being the first published female botanist in Georgia), historians have discussed her primarily in the context of her botanical appendix in Cherokee territory and her spiritual endeavors at Springplace.[192] The exception to this is Tiya Miles book *The House on Diamond Hill: A Cherokee Plantation Story* (2010), where Miles maps out the Gambolds' relationship to their slave Pleasant and how Pleasant's unwillingness to work quickly and humbly for her "Moravian masters was an expression of her rejection of [the Moravians'] complete authority over her."[193] Building on Miles' insights on the liminal spaces of enslaved Blacks and the Cherokee, I shift the focus to what has received far less

---

[191] Rev. Edmund Schwarze, *History of the Moravian Missions Among Southern Indian Tribes of the United States* (Bethlehem, PA: Times Publishing Company, 1923), 83.
[192] For scholarship on Anna Rosina Gambold, see McKinley, "Anna Rosina (Kliest) Gambold (1762-1821), Moravian Missionary to the Cherokees, with Special Reference to her Botanical Interests," 59-99; Smith, "Unlikely Sisters," in *Pious Pursuits: German Moravians in the Atlantic World* (New York: Berghahn Books, 2007): 191-206; James R. Troyer mentions her in "Early American Moravian Botanists in North Carolina and Elsewhere," *Journal of the North Carolina Academy of Science* 125, no. 1 (2009): 1-6; there is a brief entry for Gambold in Barnhard's "The Botanical Correspondents of Schweinitz," 26.
[193] Tiya Miles, *The House on Diamond Hill: A Cherokee Plantation Story* (Chapel Hill: University of North Carolina Press, 2010).

attention in scholarship: the medical landscape of Springplace. Seen through the mission garden, visitation routines, and exchanges with Cherokee women and enslaved Blacks, I offer a more transparent account of healing at Springplace. To see how this medical culture took shape, I look back to Anna's years as a tutor at the Bethlehem Female Seminary from 1788 to 1805 prior to her move to Springplace.

Anna Gambold (then Kliest) was beloved by her students as she developed her pupils' love of the arts, especially poetry: "Sister Kleist…drew from the stores of her gifted mind for the benefit and amusement of her pupils, with rare skill clothing the ideas of her poetic fancy in the garb of a simple diction, such as falls naturally and forcibly on the ears of childhood."[194] Her students were so fond of Sister Kleist that several pupils wrote poems as gifts to her [see Figures 4 and 5]. They also school seemed to be inspired from Anna's artistic style [see Figure 6]. Surviving archival work suggests that she kept some of the drawings made by her students.[195] In the Kliest Collection, pink roses and forget-me-nots were popular flowers drawn by the students. Anna's love for botany flourished while teaching at the Female Seminary: "As she walked out in the fields, she taught her joyous flock the lessons of wisdom from the great book of nature spread open before them. The flowers, the trees, the stones, the clouds, the stars,– these were chapters in the manual she consulted for her teachings."[196] She supported her students' eagerness

---

[194] William C. Reichel, *A History of the Rise, Progress, and Present Condition of the Bethlehem Seminary for Young Ladies at Bethlehem, PA: with a catalogue of its pupils, 1785-1858* (Philadelphia: J.B. Lippincott & Co., 1858), 54.
[195] There are several drawings of flowers at the Moravian Archives in Bethlehem, PA. See "Collection of Drawings and Prints," DP b. 1131.3-1131.6, Moravian Archives, Bethlehem, PA.
[196] Reichel, *A History of the Rise, Progress, and Present Condition of the Bethlehem Seminary for Young Ladies at Bethlehem, PA*, 147.

to tend to the garden and secured flowers with them to plant.[197] In the school's journal, where the students had the opportunity to write about their day, Helena Ship recorded that "Sister Kliest took miss Blakely and myself to fetch some flowers for our garden."[198] Her habit of teaching and learning through cultivation shaped the way she approached healing as she travelled down south.

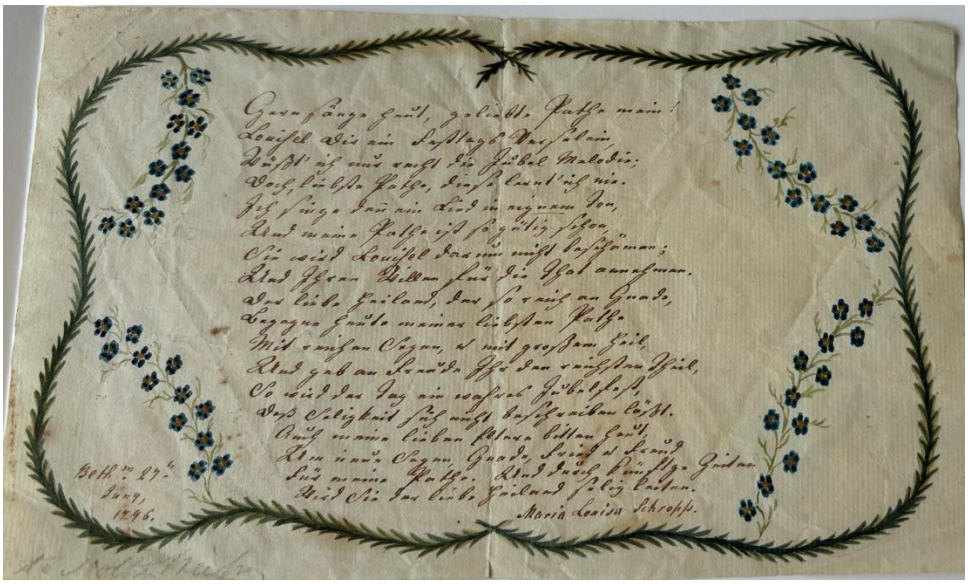


Figure 4: Birthday poem and drawing of forget-me-nots, by Maria Louisa Schropp, Bethlehem, 27 June 1796, KliestColl 8, Moravian Archives, Bethlehem, PA.

This specific poem is addressed to "Patty," but the style of the flowers resembles a birthday poem drawn by Anna Gambold Kliest (in Figure)

[197] In the spring of 1788, the students often accounted how they worked in the garden—and often set back by the sheep who broke the fence presumably surrounding the garden. See entries for March and April, "School Journal, January 1 - December 5," 1789, Fem Sem 286, Moravian Archives, p. 70-3.
[198] Entry for April 4, 1788. "School Journal, January 1 - December 5," 1789, Fem Sem 286, Moravian Archives, p. 73.

Figure 5: Well wishes and drawing of pink roses and forget-me-nots, n.d., KliestColl6, Moravian Archives, Bethlehem, PA.

The addressee and drawer are not specified.

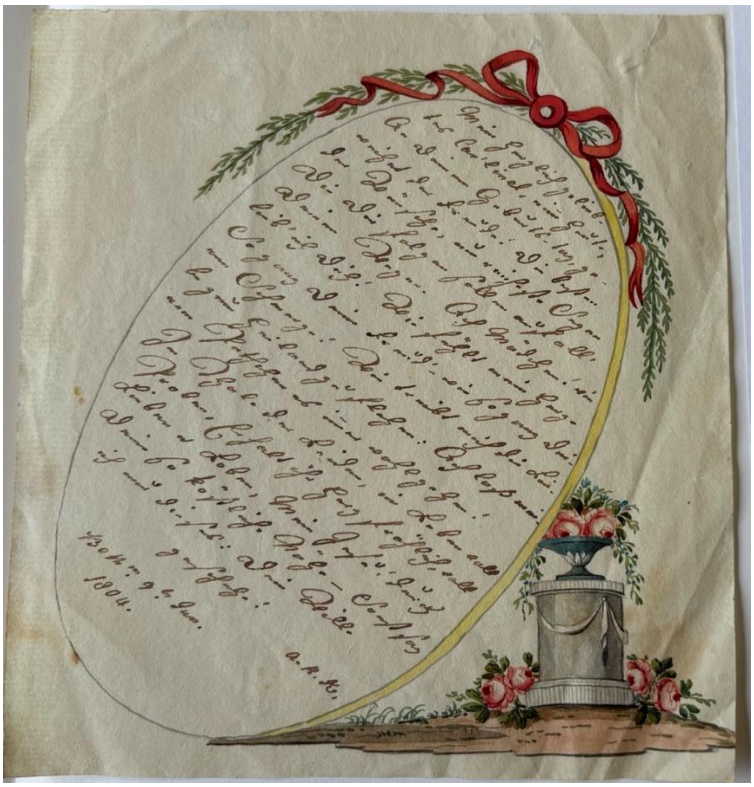


Figure 6: Birthday poem and drawings of pink roses, forget-me-nots, garnish, and ribbon, by Anna Rosina Kliest, 9 June 1804, KliestColl9, Moravian Archives, Bethlehem, PA.

The Move to Springplace and Harnessing Anna's Interests with the Region's Flora (1805-1821)

In 1800, the Moravian missionaries accepted an invitation from the Cherokees, i.e., the Upper Town Cherokee chief James Vann and his wife "Peggy" Scott Van (also known as Margaret Ann Crutchfield once she remarried), who sold them the lot to Springplace. Centrally located in Cherokee Nation, Springplace served as a "welcoming center on the Federal Road connecting August, Georgia, to Nashville, Tennessee."[199] The Cherokees requested that the missionaries teach their children English rather than

[199] Rowena McClinton, ed., introduction to *The Moravian Springplace Mission to the Cherokees, Abridged Edition* (Lincoln: University of Nebraska Press, 2010), 2.

German so that they may live peacefully with their English neighbors. Furthermore, "co-existence with Anglo-America would forestall further land cessions" as settlers were hungry and eager to obtain and dislodge the Cherokees from their domain.

At Bethlehem, Anna met John Gambold (1760-1827) and married him in 1805, becoming his second wife. Anna may have always held an "interest and love" for Indigenous Americans as even when she taught at the female seminary, one of the recitations she made was titled "The Aborigines of America."[200] Anna's eagerness to work with the Native Americans only heightened from her journey accompanying George Henry Loskiel to the Indigenous community in Goshen, Ohio, in 1803:

> As you who know her [Anna] heart's good bent
> Can think, she found her element
> There 'mong the brown ones, whom she loved,
> So that her joy could not be moved.[201]

Anna ended up writing his diary in metrical form using a combination of Loskiel's notes and her own observations despite it being published under his name. Goshen was Loskiel's primary destination, which was a settlement set up by David Zeisberger for Moravian Native Americans in 1789. Here, Anna and Loskiel met with Zeisberger and John Heckewelder, who was scarcely less distinguished than Zeisberger and published several works related to the Native Americans, their language, and customs. Aside from a letter written to the Indigenous people at Goshen from Springplace, there are no known

---

[200] "Her interest and love for the Indians she probably imbibed when she accompanied George Henry Loskiel—historian of Moravian missions to northern American Indians—on a visit to the Indian mission on the Muskingum." Schwarze, *History of the Moravian Missions Among Southern Indian Tribes of the United States,* 83.

[201] George Heinrich Loskiel, *Extempore on a Wagon; a metrical narrative of a journey from Bethlehem, PA., to the Indian town of Goshen, Ohio, in the autumn of 1803* (Lancaster: Samuel H. Zahm & Co., 1887), 41. Originally called *Extempore auf dem* Wagen, the diary was translated by Joseph Maximilian Hark in 1887.

extant writings by Anna during her brief stay at Goshen. However, Benjamin Mortimer made several references to Sister Anna in his diaries at Goshen. One notable mention he writes about is one local, Kaschates, who "though convinced of the truth of the gospel, …has followed a heathenish life. He says that he still thinks much of the words that Sr. Kliest (whom he calls his sister) spoke to him. But, as we learnt afterwards, what Br. Zeisberger said to him to day [that he must 'renounce all heathenism, and the attachment to every kind of sin'], much displeased him, & in consequence of the affront he took, he very seldom attended the meetings at the ensuing festivals."[202] While we have no account of the interaction between Sister Anna and Kaschates, we can only assume that Anna was more diplomatic in her mission encounters, taking a different approach to the harsh critique of Indigenous culture taken by Zeisberger. Unlike most missionaries, Anna focused on building trust among the Indigenous people.

The Moravians' success amongst Native American tribes compared to other Protestant missions is well documented in secondary literature, particularly along native communities in Pennsylvania, New York, Ohio, and Connecticut.[203] Gender may have factored into this success as Protestants were typically confined to converting men in light of the lack of schools and convents run by nuns. For example, the Mahicans and

---

[202] Quoted in McKinley, "Anna Rosina (Kliest) Gambold (1762-1821), Moravian Missionary to the Cherokees," 76.

[203] See the following works for Moravian missions in North America: Lindsay R. Richwine, "Girl Talk: How Friendships between Moravian and Native Women Sustained the Moravian Mission at Shamokin Pennsylvania, 1742-1749," *The Cupola: Student* Publications 933; Rachel Wheeler, *To Live Upon Hope: Mohicans and Missionaries in the Eighteenth-Century Northeast* (Ithaca: Cornell University Press, 2008); Corinna Dally-Starna and William A. Starna, "American Indians and Moravians in Southern New England," in *Germans and Indians: Fantasies, Encounters, Projections*, edited by Colin G. Calloway, Gerd Gemünden, and Susanne Zantop (Lincoln, University of Nebraska Press, 2002), 83-96; Jane T. Merritt, "Dreaming of the Savior's Blood: Moravians and the Great Awakening in Pennsylvania," *The William and Mary Quarterly* 54, no. 4 (1997): 723-46.

Delawares were initially more responsive to the Moravians, who sent both Sisters and Brethren to work among the Indigenous communities.[204] Because of her "eminent talents and gifts," the Moravians sent Anna to Springplace to educate the Cherokee youth. In Bethlehem, Anna broke up the monotony of the classroom routine by the "offerings of her fertile inventions" including an island excursion, mountain hikes, and a "moonlit transit across the ferry." She made it a point to teach her students about the natural world, "leading them unconsciously into the secrets of science by practical and familiar illustration."[205] Although I cite Edmund Schwarze's description of Anna here, I do acknowledge that his work portrays the Moravians in a favorable light. Nonetheless, writings from Anna's students underscore that she was effective in forging relationships.

Anna was quite popular among her young Cherokee scholars as their praises of their tutoress reverberated back to the mothers. The mother of one student, John Gut-Se-ye-die, visited the mission and was so moved by the Gospel explained through the children that she "say weeping, and taking Mrs. Gambold by the hand, expressed the wish that she lived nearer the missionaries that she might often hear the Word of God."[206] The successful feats of the school garnered the favorable attention of nearby Cherokee Chiefs, whose children were attending Anna's school; Chuleoa, who was once "a decided and bitter enemy," even softened his opinion and delivered an oration at Springplace to the children there (including his own son Tom A-ea-ru-ea) reminding them to be grateful

---

[204] Kathleen M. Brown, "Gender Frontiers and Early Encounters," in *The Oxford Handbook of American Women's and Gender History,* edited by Ellen Hartigan-O'Connor and Lisa G. Materson (Oxford: Oxford University Press, 2018), 29-30.
[205] Rev. Edmund Schwarze, *History of the Moravian Missions Among Southern Indian Tribes of the United States,* 84.
[206] Schwarze, *History of the Moravian Missions Among Southern Indian Tribes of the United States,* 86.

to the missionaries "instruct[ing] them in every useful art" going so far as to consider them his own children.[207]

Alongside providing education for Cherokee children, the Moravians also provided visitors (Native Americans and passing Brethren/Sisters) with food, clothing, and shelter—to the point of inconveniencing the missionaries at times. Wayfaring Indians also made use of the garden, helping themselves to anything they pleased," and "frequently experienced dearth of provisions."[208] For the Moravians, hospitality was inseparable from care. The local natives would often request meat, but the Moravians were unable to fulfill this request often due to cattle and pigs running away or being stolen. During their residence at Springplace, Anna carefully noted hunger as an issue among the Cherokees and the visits they had from "hungry Indians": "We also decided not to always serve the many hungry Indian guests bread all the time, as usual, but rather other food."[209] In an entry from December 25, 1810, the Moravians received "two hungry Indian boys" who had been driven from their homeland due to hunger.[210] Sometimes, this resulted in the natives resorting to stealing from the Moravian's orchards. Anna took exceeding care to cultivate the community gardens; she tended to the "orderly and cleanly pruned apple and peach orchards, a vegetable garden to grow beans, squash, pumpkins, turnips, and sweet potatoes, a spacious springhouse to store milk, cheese, and

---

[207] Schwarze, *History of the Moravian Missions Among Southern Indian Tribes of the United States,* 86.
[208] Schwarze, *History of the Moravian Missions Among Southern Indian Tribes of the United States,* 66, 86. We must reconsider the captivity narrative of Indigenous Americans here as hunger was the result of the conflicts between European settlers and Native Americans. See the introduction of Lisa Brooks' *Our Beloved Kin: A New History of King Philip's War* (New Haven: Yale University Press, 2018).
[209] Rowena McClinton, ed., *The Moravian Springplace Mission to the Cherokees: 1805-1813*, vol. 1 (Lincoln: University of Nebraska Press, 2007), 26, 423.
[210] Rowena McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition* (Lincoln: University of Nebraska Press, 2010), 74.

butter, a flower garden, plant nursery, and two large fields for corn, flax, oats, hay, and wheat."[211]

Anna's gardening skills and teaching endeavors won over the hearts of the Cherokees and even elicited words of praise from the surgeon and Congregationalist minister Elias Cornelius (1794-1832), who wrote in his diary that "Mrs. G[ambold] is quite a botanist, and has a very good garden of plants, both ornamental and medicinal."[212] The Gambolds even took the time to oblige requests from curious correspondents from abroad such as the English naturalist Henry Steinhauer. Steinhauer, a Moravian teacher at Fulneck, England, expressed "a wish to see some of the botanical products of that country. Sister Gambold sent me, last autumn, between twelve and fourteen hundred specimens of dried plants, besides near a hundred packets of seeds, several minerals, specimens of all the Indian manufactures of cane, etc., and a number of other curiosities."[213] Steinhauer's letter reaffirms the scale of Anna's collection and also demonstrates that her garden supplied not only the mission but a wider exchange of materials and knowledge.

---

[211] Rowena McClinton, introduction to *The Moravian Springplace Mission to the Cherokees, Abridged Edition,* 9. Apples were apparently popularly requested as trade items by the Indigenous people. In an entry from July 5, 1815, one "Indian woman asked for apples in exchange for dried meat…We said it was impossible to accede to her this time, because our apples were still small and unripe. She went away annoyed. One cannot describe how the Indians hunger for this fruit." McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition,* 75.

[212] B.B. Edwards, *Memoir of the Rev. Elias Cornelius* (Boston: Perkins, Marvin, & Co., 1834): 86-7. On a funny note, Cornelius makes a curious observation that the Gambolds "had raised all their coffee their family used." The Gambolds used okra, or *Hibiscus esculentus*, for coffee. See Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, edited by Rowena McClinton (Lincoln: University of Nebraska Press, 2007), 1: 289.

[213] Schwarze, *History of the Moravian Missions Among Southern Indian Tribes of the United States,* 113. For more on Steinhauer, see Hugh S. Torrens, "The Moravian Minister Rev. Henry Steinhauer (1782-1818); His Work on Fossil Plants, Their First 'scientific' Description and the Planned Mineral Botany," *History of Palaeobotany: Selected Essays* 241, no. 1 (2005): 13–28.

Anna was one of the few individuals who learned Indigenous knowledge and credited it. At the end of her list of plants published in the *American Journal of Science and Arts*, Anna appended a two-page section with observations and uses of plants native to North America. She explains how the local people employed each species; she did not name specific tribe(s) and instead referred to them as "Indians." For instance, the roots of *Calycanthus floridus* [calycanthaeceae] "are used as (though very strong) emetics. The seeds to poison wolves."[214] Anna also took the time to record cures that she herself did not use. With *Podophyllum peltatum* [mandrake or mayapple], she noted that a syrup made from its roots can be given as a purgative, and "a drop of the juice of its fresh root in the ear is a cure for deafness." Crucially, she marks the latter as hearsay: "so I have been told, I never witnessed it."[215] Though unverified by her, Anna showed a receptivity to Indigenous remedies. It is clear that Anna and the Springplace Mission fostered trust in the Cherokee community in Georgia not only with her green thumb, but also her prowess as an educator. Her agricultural efforts made Springplace a "bright light in a dark, very dark place."[216]

During her stay from 1805 until her death in 1821, Anna immersed herself in teaching English, her botanical and geographical skills, and Christianity to her Cherokee students and parents. In the diaries left behind by the Moravians (Anna primarily wrote

---

[214] The Cherokee used this plant in a variety of ways including as a strong emetic, poison for wolves, sores and hives, eye medicine, and a urinary aid. Moerman, *Medicinal Plants of Native America*, vol. 1 (Ann Arbor: University of Michigan, 1986), 98. Anna Rosina Gambold, "Plants of the Cherokee Country,": 250.
[215] Gambold, "Plants of the Cherokee Country," 251. For the uses of mandrake as a cure for deafness by Indigenous Americans, see Margaret G. Kelly and Jonathan L. Hartwell, "The Biological Effects and the Chemical Composition of Podophyllin. A Review," *Journal of the National Cancer Institute* 14, no. 4 (1954): 967–1010.
[216] The quote is taken from the diary of the Reverend Elias Cornelius, who urged Anna to publish her botanical findings. B.B. Edwards, *Memoir of the Rev. Elias Cornelius,* 88.

between October 1, 1805, to June 30, 1820), we see how Springplace served as a locus "for conversions, rejections of Christianity, annuity distributions at neighbor James Vann's plantation and elsewhere."[217] The mission faced problems as well with students regarding illnesses and truancy, parent-teacher issues, the death of a student, and rumors of missionary mistreatment. In a similar vein to John Heckewelder and his writings, the Gambolds observed the intrinsic Cherokee norms, values, and the struggles they underwent and put these onto writing, bringing the Cherokee voice to light. Rowena McClinton argues that Anna Rosina Gambold considered the "Cherokee worldview as tangential to her role as evangelical" duties.[218] While this was true to some extent, especially when it came to acts that conflicted with Christianity (e.g., drinking and the "magic arts"[219]), Anna nonetheless kept detailed records of the Cherokee experience and culture at the mission. She conversed with them and learned about their history, the medicinal qualities of the region's flora, and Cherokee spirituality—though she did disapprove of it. Going through the diary entries, it is quite evident that several Cherokee leaders were receptive to the school led by the Gambolds. In 1806, The Flea requested the Gambolds to take his grandson as a pupil despite the "number of schools [that] have been set up" across the country. Due to lack of space early on, it was impossible for them "to feed and board more than four." As an alternative, John Gambold suggested that his grandson could live with Mr. Vann while attending school at the mission. In response,

[217] McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition,* xx. Other missionaries wrote in the diary from time to time including Gottlieb Byhan and Anna's husband, John. I will clarify in my writing if someone other than the Gambolds wrote in the diary.
[218] McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition,* xx.
[219] McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition,* 82.

The Flea "did not want to hear anything about this, because he wanted his child to be entrusted to *us*, not to *Mr. Vann*. …He himself asked pleadingly and repeated that he wanted to have the child with us, not Vann."[220] While we can only assume that The Flea was so adamant on letting his grandson reside with the missionaries to obtain a firm grasp on the English language, his determination supports the idea that Gambolds' schooling was one of good repute—and indeed, the Gambolds later received him as a student as seen below.

The inhabitants at Springplace Mission were not spared from disease or injury, and medical circumstances were exacerbated by the lack of a doctor. Whenever a student became sick, the Moravians would either utilize plants from the medicinal garden or refer to the closest Cherokee authority for medical advice. When several students including one named Dick were sick with fever, Dick's grandfather, The Flea, visited the mission (to the delight of the Gambolds) and treated the children with an emetic from root (possibly the *Liriodendrum tulipifera*).[221] Despite tending to the ill children, The Flea assured the Gambolds that "he was satisfied with [their] treatment of the sick children" and requested some herbs from the medicinal garden, which they were happy to give

---

[220] The Flea was the grandfather of Dick Dyeentohee, son of Dick and Goadi of Chickamauga, who attended the Springplace mission school from 1807 to 1809. The Flea frequently visited the mission to see his grandson and attend services held by the Brethren. Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, 1:122-3. The Gambolds make several mentions of the Presbyterian minister Gideon Blackburn's school on the Hiwassee River in Tennessee, which boasted around 50 students. *The Moravian Springplace Mission to the Cherokees*, 1: 177-8. John Gambold had an opportunity to visit the school when he was in the area to search for and escort some Brethren who were expected to arrive at Springplace. He recommended the school to "our friends on the Hiwasse." *The Moravian Springplace Mission to the Cherokees*, 1:184.

[221] The diary does not specify which root he used, it may be from the root of *Liriodendrum tulipifera*, which the Cherokees made as a tea to treat fevers and poultices. See Gambold, "Plants of the Cherokee Country," 250.

him.[222] Local demand for seeds, herbs, and medication (along with food and housing) from the Moravians were frequent.[223]

The Gambolds were very willing to help out the local people whenever possible, but not all cases went so smoothly. Now and then, the missionaries were unsuccessful or outright refrained from treating an illness or ailment. Edmund Falling, whose brother was killed in a duel with James Vann in the summer of 1806, came looking for the Gambolds because his wife had "an illness that no one whose advice has been sought has really understood." They expressed their discomfort in the diary about advising or helping the couple because "one is suspected of having poisoned them if one is not successful."[224] In this specific circumstance, one can only assume that the Gambolds were hesitant to diagnose and care for Mrs. Falling due to heightened tensions between the Fallings and Mr. Vann to the point that "the Negroes and Indians [were] afraid to go [to Falling's house] because they fear for their lives."[225] The Gambolds ultimately were sorry for their inability to help the poor wife, but this episode shows them recognizing that illness and care were bound to social relations and reputation, a view consistent with Cherokee concepts of health. For the Cherokees, maintaining and restoring health are "understood as social processes." James Saubaugh elaborates in an article on the Cherokee concept of well-being and its association with the "white path," or *Duyukya* [the path of harmony or

---

[222] McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition*, 27.
[223] See entries for July 2, 1805; June 25, 1806; August 13, 1806; and September 12, 1806. Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, 1:59, 122, 129.
[224] Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, 1:119.
[225] Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, 1:104. Indeed, one of the Vann's slaves (Little Isaac) narrowly missed an encounter with death when he was instructed by James Vann to retrieve the deceased John Falling, whose body had been surrounded by his clan.

being in balance]. Following this path is not "a matter of simply keeping to 'specific customs or ways of doing things. Rather, it is 'a condition of human relationships' that are reciprocal with all living beings."[226] Balance is only maintained or restored through ritual practice where both women and men play crucial roles as medical practitioners to administer medicines and constantly evaluate and utilize new knowledge obtained from the environment, "employing methods that are intrinsically conservative, yet dynamic and flexible."[227] The Gambolds were uncertain in their capacity to treat Mrs. Falling, and rather than worsen relations with the Fallings, they opted to not treat her.

In certain cases, the Moravians relied on the medical care of the Cherokees and acquiesced to them as seen through John Ridge, the son of The Ridge or Major Ridge (Kah-nung-da-thl-geh, which translates to "the man who walks on the mountaintop"). Suffering from a "sore eye," the Moravians took him on August 6, 1811, under the care of Peggy Scott Vann, where they believed he would be better taken care with a member from the community; John eventually returned home briefly to see "an old woman in their neighborhood" and arrived back in better condition.[228] John had previously battled with this eye condition as entries dating back to 1806 document this infection in addition to a rash and severe headache. Here, the Gambolds solicited the help of a local, Clement Vann (the father of James Vann), about the treatment suggested for John. After being reassured about the efficacy of the treatment, which unfortunately is not detailed further on, the Gambolds noted that "it is a difficult thing to use such treatments for Indian

---

[226] James Sarbaugh, "Cherokee Concepts About Health and Healing," *Anthropology: Weaving Our Discipline with Community* 45, no. 1 (2020): 97-8.
[227] McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition*, 1.
[228] McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition*, 28.

children…If they are not effective, one could come under suspicion by the Indians. Hence, in such cases we ask advice from experienced people who have lived in this country for a long time and are seen as belonging to the nation."[229] Once again, the Moravians were explicit in acknowledging their shortcomings to cure the child and kept an open mind in utilizing the remedies of the Cherokee. Not only did the missionaries have to resort to the medical advice and cures of the Indigenous population, but the diary does detail on how the Moravians' Black slave Pleasant made a bitter tea that help resolve the vomiting and stomach pains caused by the large consumption of "the flower tops of honeysuckle [*Pfingstblumen*] or peonies."[230] Pleasant had a tenuous relationship with the Moravians, warning other slaves and Cherokee that "[T]hese people's religion is nothing but hypocrisy, this place is a very hell on earth."[231] During times of illness, Blacks and Cherokees sometimes turned to one another for aid. Pleasant nursed Peggy when she was severely ill; likewise, Peggy Vann sent for a Cherokee doctor to examine an enslaved man.[232] I expand on this in the next section dealing with the racialized medical contexts of the Springplace Mission.

The Moravians' treatment of the Cherokee at Springplace did not go unnoticed among the Chiefs of the nation. In an entry from February 1811, the diary mentions a visit by old Chief Koychezetel, who had recently been present at a Cherokee Council at Oostanaula, and how the community had "thought up ways of getting rid of the many white people who had penetrated their country" on account of the poor treatment of the

---

[229] Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, 1:142.
[230] McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition*, 29.
[231] Tiya Miles, *The House on Diamond Hill,* 84.
[232] Miles, *The House on Diamond Hill,* 106.

local tribes. A few months later in May, Chief Koychezetel and his wife returned to Springplace and reaffirmed that "the white people must *all* leave the nation. …[However] We do not view *you* [the Moravians] as *white people* at all, but rather as *Indians*. God sent you to teach our people. You are here to *love us*; not to desire our land."[233] Indeed, the Moravians were invested and kept up-to-date on the U.S. government's political handling and responses to the murders of Native Americans—for instance, the Gnadenhütten massacre in 1782. The Gambolds were critical of the government's policy over Indigenous land: "all the government's love for justice, all its good-will over against the Indians good for nothing."[234] In April 1819, once the Cherokee National Council declared to the federal government that it would no longer cede land, the Cherokees celebrated their resolve to retain their homelands by putting out "old fires and having new fires made," which was then accompanied by a "dance of joy."[235] Typically, the Moravians did not condone such celebrations and dances as they often disturbed Holy Communion or service.[236] But in this case, the dancing did not disturb them, indicating support for their neighbors.

In their observations of Cherokee rituals, the Moravians recorded how public rites such as dancing were connected to health and shaped local life. They wrote about the Green Corn Dance, "the most sacred of all ceremonies, [which] allowed Cherokees to

---

[233] McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition,* 69-70.
[234] McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition*, 73.
[235] McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition,* 73.
[236] For example, on August 24,1818, the entry notes that there was a dance in the evening and "a horrible clamor." The missionaries proceeded to pray for the "poor people." McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition*, 104.

experience timelessness and unity with their world."[237] According to Frank Speck and Leonard Broom, "the purposes of dance rites bear some functional similarities to the specifically medicinal formulas reported by Mooney and Olbrechts. The medical formulas are the private properties of medicine men; the dance rites are social and communal, free to all and for the benefit of all. The medical formulas exist to cure maladies and afflictions already manifested in symptoms among sufferers; the dance rites are prophylactic. The principles that insure individual health and social welfare (collective and individual well-being) are inculcated in the dances."[238] The Springplace diary read rituals such as the Green Corn Dance through a therapeutic lens: "Each year before they begin eating the new corn…a family dance follows, and then they eat the first fresh beans in the year. Indeed, in this case, a good medicine and a day of fasting are supposed to do the same thing with respect to their health."[239] Here, the Gambolds acknowledged that dances were not mere entertainment but health practices embedded in ceremony, even if they sometimes conflicted with the desires of the mission.

While the Moravians accommodated and accepted Cherokee traditions, there were also instances where each culture at the mission clashed with the other thus challenging "the other to appreciate cultural differences while clinging to their respective spiritual values."[240] Specifically, the Gambolds expressed their dismay with *anetso,* also known as

---

[237] John D. Loftin and Benjamin E. Frey, *People of Kituwah: The Old Ways of the Eastern Cherokees* (Oakland: University of California, 2024), 54-55.
[238] Frank G. Speck and Leonard Broom, *Cherokee Dance and Drama* (Norman: University of Oklahoma, 1993), 19.
[239] McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition,* 98.
[240] Rowena McClinton, "The Moravian Missionaries of Bethlehem and Salem," in *Ethnographics and Exchanges: Native Americans, Moravians, and Catholics in Early North* America, edited by A.G. Roeber (University Park, PA: Pennsylvania State University Press, 2008), 120.

the "Cherokee ball game" in English parlance. However, the stances of the Moravians over the ball game are more complex and not as clear cut as we think for certain entries in the diary reveal a more ambivalent attitude towards it. Moreover, they overlooked the medical significance and rituals inherent in the ball game. Michael J. Zogry identifies *anetso* as a "ceremonial complex (or cycle)," which defies simple classification and entails a "group or cycle of individual ritual activities performed in a standardized sequence as parts of a single ritual event." The *anetso* ceremonial complex includes the presence of a religious specialist or "conjurer" who influences the players and outcome of the game, purification of the body via bathing in running water, divination, use of formulas, scarification (scratching), consumption and application of medicine, dietary and contact proscriptions, and dancing.[241] The Morvians at Springplace mentioned "nightlong" dances before a ball game that caused a "horrible clamor." However, the Brethren did not bemoan the game itself for its rituals, but rather how it potentially disturbed services and sleep and affected their pupils.[242] For instance, they did not mind the "few [who] came to our spring to find a root that is supposed to bring a ball player success and good luck."[243] The Moravians did not condemn the complex for its medical rituals; their chief objection was practical.

---

[241] Michael J. Zogry, *Anetso, the Cherokee Ball Game: At the Center of Ceremony and Identity* (Chapel Hill: University of North Carolina Press, 2010), 2-3. I use the missionaries' descriptions to frame their categories of Cherokee practice and authority (in this case, the conjurer) through their lens as Christians.
[242] McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition,* 103-4. "We did not let [the dance] disturb our Holy Communion; rather, we commended the oppressive feeling around us to the sweet nearness of our dear Savior for a blessed sleep." The Moravians often wrote about how their students would return drunk after attending the festivities of the ball game. See entries in 1808 on May 31, June 4, and June 5 in Rowena McClinton, ed., *The Moravian Springplace Mission to the Cherokees: 1805-1813*, 1: 266-7.
[243] McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition,* 103. The herb the Cherokee looked for was most likely crabapple. Players rubbed decoction made of wild crabapple or

Two activities associated with the cycle involve gambling and drinking much to the distress of the Moravians: "at the ball play ground, which looked like a battlefield, [Brethren Gambold] found about thirty Indians, some still very badly injured and covered with blood, and some drunk. Our hearts still ached and now fervent sighs for the salvation of these miserable heathens rose to the *Redeemer of the World*."[244] Despite the condemnation of *anetso*, the documentation by missionaries opens up a venue for Cherokee voices, which are often silent in the historical record. But the mere mention of *anetso* and its persistence during a period where Cherokee cultural activities were discouraged and forced to stop by the U.S. government highlights an enduring statement of identity—the "staking of an ontological position."[245] Joel W. Martin encourages scholars to look "behind the writings of missionaries and historians who depended too heavily on the missionaries' versions of events and ventriloquize their assumptions."[246] Catherine Corman goes further to make historians wary of the dilemma of "succumb[ing] to the kind of romantic language that obscures missionaries' complicated role in these Christian communities."[247] I treat the Springplace diary as partial but valuable evidence to see how Cherokee health practices operated and how Moravians noticed, negotiated, and sometimes borrowed from it.

---

ironwood to strengthen themselves. James Mooney, "The Cherokee Ball Play," *American Anthropologist* 3, no. 2 (1890): 124.

[244] McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition,* 102.

[245] Zogry, *Anetso, the Cherokee Ball Game,* 68.

[246] Joel W. Martin, "Visions of Revitalization in the Eastern Woodlands: Can a Middle-Aged Theory Stretch to Embrace the First Cherokee Converts?," in *Reassessing Revitalization Movements: Perspectives from North America and the Pacific Islands*, edited by Michael E. Harkin (Lincoln: University of Nebraska Press, 2004), 86.

[247] Catherine A. Corman, review of *Writing Indians: Literacy, Christianity, and Native Community in Early America,* by Hilary E. Wyss, and *The Brainerd Journal: A Mission to the Cherokees, 1817-1823,* by Philip H. Viles, Jr., *The William and Mary Quarterly* 58, no. 3 (July 2001): 745.

The missionaries did not necessarily oppose the game itself and instead were more concerned with its health consequences: exposure to alcohol and violence. At the same time, the Gambolds were aware of cultural significance the ball game had in Cherokee society; excellence on the field conferred status "hardly less coveted than fame as a warrior."[248] The Gambolds noted the impact *anetso* had on their male Cherokee pupils in a July 1808 letter to the bishop Carl Gotthold Reichel: "That ball game seems also to have had a bad effect on our Indian children. It seems that they imagined that because of it they were at once accepted into the class of men, and believed they could demand more freedom." They continue on to report that Mr. [James] Vann invited the children "to have them practice playing ball. …As unwilling as we permitted this, still we could not prevent it, since *the thing itself is not bad*, and we let them go with much good advice and heavy hearts."[249] The account here contradicts other statements in the diary concerning ball play, where the Gambolds refer to it as "a quite unholy thing."[250] However, such negative sentiments corresponded with wanton destruction and drunkenness.

Subsequent cases underscore this point. In 1815, the father of the student Dawzizi, the Tyger, had his horse stolen from three Native Americans after a drunken brawl.[251] Heavy alcohol consumption brought the Moravians and Cherokee women much

---

[248] Zogry, *Anetso, the Cherokee Ball Game,* 67.
[249] Daniel C. Crews and Richard W. Starbuck, eds., *Records of the Moravians among the Cherokees*, vol. 3 (Tahlequa, OK: Cherokee Heritage Press, 2011), 1170.
[250] Entry from October 1811 in McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition,* 99-100.
[251] "Toward evening the Tyger, our Dawzizi's father, came very tired and spent the night here. In vain he had looked for his beautiful horse the entire day. After they had beaten him to the ground almost unconscious, three Indians who were completely unknown to him had stolen it from him at the ball play. Other horses were led away, mistreated in one way or another and made unrecognizable, and then driven

woe. The Tyger had a drunken outburst one night and "threatened to beat his good wife and little son, who had taken refuge with us." Dawzizi convinced his father to go "with him to Vann's plantation, where he entrusted him to a Negro to watch over him."[252] If we consider how alcohol abuse disrupted Cherokee society as a whole—even the sponsor of the Springplace Mission, James Vann, was not immune to alcoholism—the refuge the Moravians offered to Cherokee women and their children is worth examining.[253] There were increasing reports by the Gambolds of Cherokee men physically abusing their spouses under the influence of alcohol beginning in the 1800s. For example, in 1813, a Cherokee woman named Naki was "chased out of the house" by her "otherwise very good and sober husband, The Trunk, [who] had gotten drunk." Six days later, the Trunk "in his drunkenness…mistreated his wife very horribly and would have killed her if Harry, a Negro, who was also present, had not torn her from his anger and bound him." She then fled into the woods with her children and met with the Gambolds, "crying loudly" and with "their meager clothing…completely torn."[254] In this context, the Moravians' role is most visible in immediate care by offering a safe place to Naki and her children. The diary neither romanticizes nor reduces *anetso* to sport; they trace how ceremony coexisted with medical problems and how the mission responded to them. Alcohol abuse went in tandem with abuse towards women, and the Gambolds were

---

into the woods." McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition,* 99-100.

[252] McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition,* 102.

[253] Tiya Miles thoroughly discusses the multiple abuses James Vann committed not only on women but also his Black slaves and does not require further elaboration in my chapter. Vann himself is complex figure who acclimated and simultaneously rejected the Euro-American colonial presence. See Tiya Miles, *The House on Diamond Hill*.

[254] Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, 1: 522, 524.

witnesses to this drastic shift in Cherokee society, which embraced a matrilineal culture where women "experienced an array of rights and pursued sexual pleasure while being highly respected within their own culture."[255] The Gambolds' documentations of alcohol abuse and domestic abuse among their Cherokee neighbors shed light to a violent reversal in gender relations. Tiya Miles explains that Cherokee men began to take on the recognizable characteristics of "white southern masculinity," which included the toxic habits of gambling, heavy drinking, and domestic abuse.[256]

A final note in the cases above is the involvement of Black slaves and how they protected Cherokee women from the violent, drunken outbursts of their spouses. With the Trunk and Tyger, the intervention of Harry and Vann's unnamed slave respectively highlight the vulnerability of both Cherokee women and Black slaves to physical abuse. Moreover, the Gambolds and other Moravians at the mission were not passive bystanders in the incidents of alcohol and domestic abuse; they intervened by providing shelter and solace to the affected women and children. Even the mistress of the Diamond Hill plantation, Peggy Scott Vann, was not spared from the violent outbursts of her husband and became the primary victim of his inebriated rage. She often relayed to the missionaries the threats directed at her.[257] The Moravians, who "considered it our duty

---

[255] Karen Coody Cooper, *Women in Charge: Female Power and Leadership in American Indian Nations of Eastern North* America (Jefferson, NC: McFarland & Company, 2022), 8. With the arrival of Europeans to the New World, the matrilineal structure of the Cherokee and other tribes became overshadowed by patrilineal practices. According to Theda Perdue, "gender did not shape their [the Cherokee] organization of the world," and men "never tried to dominate their wives." Theda Perdue, *Cherokee Women: Gender and Culture Change, 1700-1835* (Lincoln: University of Nebraska Press, 1998), 39-40, 45.
[256] Miles, *The House on Diamond Hill*, 114.
[257] In the entry from February 3, 1805, Peggy "came to us very alarmed and told us that Mr. Vann wanted to shoot her—that he had already shot a pistol at her but instead shot the horse, the one on which he was riding, through the neck." On another occasion on June 17, 1805, Mr. Vann "mistreated his wife so badly

for one of us to speak with him when he was sober again and to speak with him heart to heart," repeatedly tried to address his drunken behavior, but James Vann maintained a fearful reputation that often times "nothing could be done with him." When they were able to speak with him, he "jumped out of bed, took the bottle, and drank as in a rage. He said that it was his house, and he could drink, dance, fornicate, and do whatever he wanted in it; it was not anyone's business."[258] Despite their fervent prayers for James Vann to stop drinking, these pleas went unanswered. The Moravians bore witness to a "critical-cultural reckoning in Cherokee society," where traditional Cherokee social order weakened only to be overshadowed by practices of gender and state violence more common to Euro-American society.[259] Whenever possible, the Moravians treated the victims: one Cherokee woman, Sarah Hicks, who was "attacked by a totally naked drunken Indian…with a thick cudgel," dealt with an incapacitated arm for a week and suffered a fever as a result. The Gambolds did "what they could to relieve her pain," and the Brethrens Hicks and Crutchfield "hurried immediately on horseback toward Mountjoy in order to see whether they could intercept the culprit in the woods or would find him…to prevent any further wickedness."[260] Through the accounts of the Moravians at Springplace, we see evidence of Cherokee gender relations being tilted askew vis-à-vis alcoholism and the missionaries' responses in consoling the afflicted Cherokee women.

---

that it cannot be repeated." Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, 1:44, 57.

[258] Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, 1:57.

[259] Miles, *The House on Diamond Hill,* 129.

[260] Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, 2:62-3.

The Moravians' Acquiescence and Unease on Slavery: Unearthing a Racial Dimension of Health at Springplace

The previous section above makes cursory mention to the Black slaves who intervened in the domestic abuse of Cherokee women at James Vann's estate, or rather plantation. These point to more than incidental encounters: they reveal how care at the mission depended on the labor and knowledge that crossed Cherokee, Moravian, and enslaved worlds. Enslaved people appear at crucial junctures as first responders, cooks, healers, and as patients themselves. The archive is partial and often withholds names, but medical work at Springplace was collective, and enslaved Blacks' labor made it possible. Tiya Miles has written a meticulous article on the restoration history of the Chief Vann House and expands on the history of slavery in the plantation home in her book *The House on Diamond Hill* (2010).[261] Miles comes to odds with the romanticism, pride, and reverence that Southerners have associated with the "Showplace of the Cherokee Nation."[262] Instead, she expands on this narrative and sees the house as a "sieve for contemporary place-based identity formation and as a site of historical struggle for human dignity and survival."[263] Miles elaborates on the myriad textures of life that were present on Vann's plantation, centering her study on the Cherokees and Black slaves

---

[261] Tiya Miles, "Showplace of the Cherokee Nation": Race and the Making of a Southern House Museum, *The Public Historian* 33, no, 4 (2011): 11-34.
[262] Helen McDonald Exum, "Showplace of the Cherokees," *Chattanooga News-Free Press,* April 25, 1971, Penelope Allen Collection, University of Tennessee Libraries. The archaeologist Clemens de Baillou evokes a lot of the more lofty feelings connected to the Chief Vann House in an article: "The Chief Vann House in its faded dignity and its romantic decay, appealed to any minds and attracted not only historians but also those persons whose imagination loves to live in the past." Clemens de Baillou, "The Chief Vann House at Spring Place, Georgia," *Early Georgia* 2 (1957): 3. Several years later in another article, Baillou writes "the house is considered a landmark and a light in the darkness of the past." See Clemens De Bailoou, "James Vann, a Cherokee Chief," *The Georgia Review* 17, no. 3 (1963): 271.
[263] Miles, 3.

during a pivotal moment in American history. To an extent, she also addresses the white visitors and neighbors of Diamond Hill including the Moravians at Springplace Mission. However, her analysis on the Moravians, particularly the Gambolds, focus on the cruel treatment of the Gambolds' slave Pleasant and her consistent attempts thwarting her work as a mission slave.

In 1805, the Moravian Church in Salem, North Carolina purchased a Black woman by the name of Pleasant from Caspar Stolz to serve as a domestic slave for the church and school at Springplace. Pleasant served the Springplace Mission for almost 30 years, longer than anyone else there—white or Black. She was pregnant with her son Michael when purchased and gave birth to the "mulatto infant"[264] en route to Springplace (surmised to be the son of Stolz himself). Pleasant was primarily in charge of cooking and cleaning for the missionaries and children of the school. However, she also tended to a garden containing medicinal plants and variety of vegetables. While attending to her responsibilities, Pleasant also exuded a powerful personality and a strong will that brought the Gambolds much anguish. Indeed, her sharp tongue was occasionally met with conflict with some of the Black women on Chief Vann's plantation. In one incident, one Black slave Jenny complained to the Gambolds about Pleasant, who had "reproached her about a quarrel [Jenny] had had with her husband soon after the lovefeast" and had spoken "very loudly and angrily" against her.[265] Pleasant lived under the threat of violence lodged by John Gambold, who almost resorted to using the whip to punish her in

[264] Christian Lewis Benzien, "Letters from Christian Lewis Benzien to members of the Unity Elders Conference, 1805," in *Records of the Moravians in North Carolina,* edited by Adelaide L. Fries (Raleigh: The North Carolina Historical Commission), 2827.
[265] Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, 1:153.

a letter dated from September 28, 1806: "With her, that is Pleasant, we had a difficult time a short while ago, so that I almost had to reach for the whip."[266] In spite of the series of criticisms directed at her, Pleasant continued to hamper her Moravian owners at every turn: levelling curses and sarcastic responses, rejecting the faith embraced by them, and setting her own agenda when it came to her responsibilities. Most importantly, her healing knowledge and techniques made her sought after by ailing Black slaves and Cherokees.

This section situates Springplace alongside a contrasting Atlantic scene experienced by Jean-François Reynier, the French Huguenot chronicled in Aaron Spencer Fogleman's *Two Troubled Souls* (2013). In Paramaribo, Reynier observed a stratified medical marketplace in which the barbers (*Barbiere*) and surgeons (*Chirurgen*) prioritized treating the white colonial population (*blanken*), leaving enslaved Africans with little formal care. However, in Springplace, access to professional medical care was restricted; the Moravians cared for their neighbors and enslaved Blacks alongside their own. James Vann, who owned approximately 70 slaves, often sent them out to Springplace to help the Moravians out with gardening, harvesting crops, herding cattle and pigs, and cleaning.[267] Moreover, the slaves were free to join the congregation on the mission. In the diary, the Gambolds often noted whenever Black slaves and visitors attended service. In this section, I focus mainly on Pleasant and several other Black

---

[266] Crews and Starbuck, eds., *Records of the Moravians among the Cherokees*, 3: 964.
[267] James Vann, who owned one of the largest enslaved populations in the South, allowed the Gambolds to "borrow" his slaves for help and to attend services as it was within easy walking distance to the mission. Ulrike Wiethaus, "Becoming American at the Moravian Missions in Springplace and Oothcaloga," in *Moravian Americans and Their Neighbors, 1772-1822*, ed. Ulrike Wiethaus and Grant P. McAllister (Leiden: Brill, 2023), 423.

slaves and their roles in cultivating a unique medical environment that combined Euro-American, Black, and Indigenous healing knowledge/techniques—an aspect on the Vann estate that deserves further examination.

The diaries document numerous occasions where the Sisters tended to the Black slaves. On October 30, 1805, the Moravian sisters found an unnamed Black woman acutely ill and revived her. Another entry on April 14, 1806, reported Cherokee students and a Black woman named Nanny who became infected with scabies and were subsequently treated by Anna.[268] The Moravians were perhaps less enthusiastic about seeking unfamiliar remedies belonging to the Cherokee people and Black slaves but nevertheless had no qualms in referring to them when necessary. An outbreak of lice in April 1806 had the Moravians "doctoring [the children] hard all the time" while Pleasant worked "to make a salve to clean our heads again."[269] In 1807, the Gambolds beseeched Mother Vann, the mother of James Vann, for a cure on a "bad rash" [scabies] that had appeared among their students.[270] The Moravians also sent Pleasant "over many nights to watch" over an unnamed female slave who was bedridden at the request of Mrs. Vann, who "could not arrange it that one of the many Nergroes could watch with the sick woman or do her the least kindness."[271] That bedside trust extended to the hearth, where the Gambolds sometimes acquiesced to letting Pleasant cook as the diary often documented shortages of meat; as such, they were always grateful to receive fish,

---

[268] Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, 1:71, 95-6.
[269] Crews and Starbuck, eds., *Records of the Moravians among the Cherokees*, 3: 917.
[270] Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, 1:189.
[271] Crews and Starbuck, eds., *Records of the Moravians among the Cherokees*, 3: 1212.

venison, and turkey from local visitors and residents. One amusing anecdote with Pleasant cooking involves her eagerly asking the Gambolds to cook an opossum that Brother Byhan had shot late one night. They note that "opossum is a very tasty food for the Indians…We were happy to have her do this [for herself and the children]."[272] The Gambolds may not have partook in the feast, but it does indicate a special occasion (and treat) shared between the Indigenous and Black groups. These shared remedies and meals illustrate how they healed and nourished the community at Springplace.

Although the Moravians frowned upon the institution of slavery, it nevertheless became woven "into the fabric of the Moravian polity."[273] They condoned slavery but practiced an "eccentric type of slavery" according to Seth Moglen; the Moravians "did not punish enslaved men and women by burning them alive or severing limbs. They did not rely on the lash to enforce work-discipline. …they neither sanctioned nor appear to have tolerated sexual violence against enslaved people."[274] Moglen argues that the Moravian Church in the American colonies espoused a mystical strand of Christianity that simultaneously inspired a form of egalitarianism yet paradoxically justified domination. Moglen's argument comes into conversation with the works of Jon Sensbach and Daniel Crews, the latter who served as director of the Moravian Archives from 1991-2014. In *A Separate Canaan* (1998), Sensbach argues that the Moravians acknowledged "black humanity" thus heralding a sense of fluidity in the American caste system. This

---

[272] Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, 1:131-2.
[273] Sensbach, *A Separate Canaan,* 65.
[274] Seth Moglen, "Enslaved in the City on a Hill: The Archive of Moravian Slavery and the Practical Past," *History of the Present* 6, no. 2 (2016): 162.

slowly transformed in the second half of the eighteenth century when racial categories hardened to a "bleak, seemingly undifferentiated historical sweep of racial oppression." For Crews, the Moravians welcomed enslaved Black to attend service and worship together with white Moravians in the eighteenth century. By 1789, however, the principle of racial segregation slowly crept into Moravian society as evident through separate communions for Black members of the Church and separate burial grounds: "Negroes [sic] are assigned special seats and the cup is given them last of all."[275] Pleasant herself, who returned to the Moravian Church in NC and died in 1838, is potentially buried at the St. Philips Church in Winston-Salem, NC, where over 200 unmarked graves were discovered in 2018.[276]

In the winter of 1816, Joseph Crutchfield, James Vann's overseer, relayed to the Gambolds that his wife Margaret Ann (or Peggy), whom he had married after her husband's death, fell seriously ill. Anna Gambold went to see her and entrusted her care to Pleasant when she departed.[277] On a different occasion, when the Cherokee Charles Hicks was suffering from a critical illness, he requested "a Negro woman to care for him."[278] The Cherokees were not merely at the receiving end when it came to medical

---

[275] See Sensback, *A Separate Canaan*, xxi; C. Daniel Crews, *Neither Slave Nor Free: Moravians, Slavery, and a Church That Endures* (Winston-Salem: Moravian Archives, 1998); quote found in Ulricke Wiethaus, "Becoming American at the Moravian Missions in Springplace and Oothcaloga," in *Moravian Americans and their Neighbors, 1772-1822,* edited by Ulrike Wiethaus and Grant P. McAllister (Leiden: Koninklijke Brill, 2023), 439.

[276] Jenny Drabble, "Graves of 200 slaves discovered at St. Philips Moravian Graveyard; site in Old Salem to be mapped," *Winston-Salem* Journal, last modified 1 August 2018, https://journalnow.com/news/local/graves-of-200-slaves-discovered-at-st-philips-moravian-graveyard-site-in-old-salem-to/article_45168c64-5d06-5f3b-9009-feef7e7a1de4.html.

[277] "Brother Crutchfield reported to us that his dear wife had become seriously ill. Sister Gambold went to her immediately and stayed until midday. In the afternoon we entrusted her care to our Negro." Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, 2:140.

[278] Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, 2:192.

aid; the reverse applied as well. Throughout her life, Anna recorded how Pleasant suffered from leg/ankle pain. As a result, Pleasant often sought relief from the pain and asked for a remedy that the Moravians were untrained in, i.e., bleeding. Therefore, they turned to Earbob, an elderly Cherokee practitioner who "began to distinguish himself as a conjurer among his nation."[279] Almost two decades later, Pleasant continued to receive this same treatment from Billy Thompson as documented in June 6, 1821: "Today we also sent for Billy Thompson and asked him to come here and bleed our old Negro woman Pleasant because she has been suffering with a sore leg for a long time. He gladly performed this service for us."[280] It is possible that Anna suspected Pleasant of avoiding the completion of her assigned tasks, but she sanctioned her demand of seeing a local healer because Pleasant "stood at the center of the mission's domestic life,"[281] tending to the needs of the countless visitors and inhabitants of Springplace and Chief Vann's House. It is clear in the historical record that Pleasant did have knowledge of the remedies used by the Moravians on top of her own recipes to cure ailments (shown in the example of the tea she brewed discussed earlier in the chapter). When Mrs. Hall, the wife of the blacksmith Samuel Hall, asked the Gambolds for some goldenrod for her husband's "hurting eyes," they sent Pleasant to the garden to obtain the botanical.[282] Entries such as these display a level of confidence and reliance that the missionaries held

[279] Quoted in Miles, *The House on Diamond Hill*, 95. "The Old Indian Earbob bled [Pleasant] yesterday around the ankles with a flint-stone because she complained of pain there."
[280] McClinton, *The Moravian Springplace Mission to the Cherokees, Abridged Edition,* 81.
[281] Miles, *The House on Diamond Hill*, 94.
[282] Anna Rosina Gambold, and John Gambold, *The Moravian Springplace Mission to the Cherokees*, 1:113.

towards Pleasant. It is unequivocal that without Pleasant, the daily activities at Springplace would have grinded to a halt.

Conclusion

Examined together, the slices of life in the Moravian missions across eastern North America reveal a culture of healing built from the ground up. In Bethabara, NC, we saw how one trained physician provided not only for his settlement but spanning beyond the Piedmont region through his medical garden and laboratory. With Krogstrup, we explore a minister around Pennsylvania who condensed printed advice from a popular German almanac into a notebook that could be referred to for general care. At Springplace, GA, Anna Rosina Gambold and the Sisters' experiences created an eclectic medical landscape colored by the efforts and knowledge of the local inhabitants.

These mission communities show a pattern about the Moravians' medical culture: apart from Kalberlahn, the Brethren and Sisters administering therapeutic care were not university-educated physicians, yet they made healing serviceable to their communities, which branched outside their congregation. The materials for remedies were familiar and accessible made possible through the carefully-tended medical gardens of Kalberlahn and Anna Gambold. Providing care also coincided with feeding refugees and visitors. Medical authority was not based on educational credentials but reliability and trust, namely the ability to address injuries and illnesses with what the locale afforded and reproduce cures. Therapeutics functioned as a shared craft. The Brethren at Bethabara took care of Kalberlahn's garden and went out to collect plants for the doctor; the Sisters at Springplace helped cultivate the mission's garden and provided support for their

Indigenous sisters during times of illness and hardship. Openness to Indigenous and Black practices was not taken for granted and at times served the Moravians practically. If Chapter 1 traced the transatlantic spine of German Protestant care bolstered by the Halle Orphanage, this chapter has focused on the local joints of such care: the routines that sustained bodies in these Moravian communities when direct assistance and supplies were not always possible to acquire. Instead of presenting a narrative of medicine as a transfer from European centers to colonial peripheries, the Moravian experience shows healing as a practice adapted in situ and nurtured by gardens, notebooks, and neighbors. It is in the daily work of keeping people and missions alive that Moravian medicine shines in North America in the eighteenth and early nineteenth centuries.

CHAPTER 3: ECLECTIC AND EVERYDAY HEALING IN *KALENDER* IN PENNSYLVANIA, 1730-1815

Almanacs were common books in eighteenth-century colonial households, second only to the Bible in their ubiquity. Due to their low cost and accessibility, almanacs were an integral part of colonial life; they provided their readers with a wide range of information from medical advice to weather forecasts.[283] Indeed, almanacs were a mainstay of colonial printing and provide historians with a valuable glimpse into lay medical beliefs and practices in early America. As Clark Elliott said, the almanac transcended social divisions by appealing to people of "every Rank and Character."[284]

The format of almanacs in North America underwent a shift between the seventeenth and eighteenth centuries. The first almanacs (also called "Harvard" almanacs because Harvard graduates and students often printed them) published during the seventeenth century emphasized "astronomy, learning, and Puritan doctrine" over the "heathenish prognostications" of health and weather. Harvard almanac publishers slowly began to lose readership as readers wanted less piety, more predictions, and above all, astrology. [285] The basic format of almanacs, familiar to us from examples like *Poor Richard's Almanack*, had stabilized by the eighteenth century: a calendar, astrological

---

[283] David D. Denker, "American Almanacs in the Eighteenth Century," *The Journal of the Rutgers University Libraries* 18, no. 1 (1954): 14, 21. Denker argued that almanacs were "publications of prime importance second only to the Bible" and one of the only printed material found in colonial homes.
[284] From Clark Elliott's *The Connecticut Almanack, for 1767*. Quoted in T.J. Tomlin, *A Divinity for All Persuasions: Almanacs and Early American Religious Life* (New York, NY: Oxford University Press, 2014).
[285] Thomas A. Horrocks, *Popular Print and Popular Medicine: Almanacs and Health Advice in Early America* (Amherst: University of Massachusetts Press, 2008), 3. In 1639, William Pierce issued the first almanac in British North America titled An Almanac Calculated for New England by Mr. Pierce, Mariner, in Cambridge, Massachusetts.

and astronomical information, and weather forecasts. Over the course of the century, publishers added local and federal court dates, advertisements, agricultural advice, political discussion, and essays on a variety of subjects (including health remedies and advice).

By 1763, approximately 3% of colonial imprints were published in a foreign language, of which 88% were German.[286] While Anglophone almanacs have garnered more attention from historians of medicine, German almanacs (*Kalender*) have badly been studied.[287] In *Folk Medicine of the Pennsylania Germans* (1970), Thomas R. Brendle and Claude Unger have compiled a collection of diseases, diagnoses, and remedies, but there is not yet been an in-depth analysis of the medical landscape of German-speaking communities in Pennsylvania. This chapter expands upon Brendle and Unger's works by examining the medical advice included in German *Kalender* provided between 1730 and 1815. There are a number of suggestive differences between the German and the English sources. Whereas by the 1750s English almanacs steadily phased out their more extensive astrological advice related to herbs and bloodletting and instead confined their astrological information to "weather predictions, phases of the moon, and…signs of the zodiac…indicating the moon's place for each day," German *Kalender* continued to include astrology, the "Zodiac Man," and a section for home remedies for

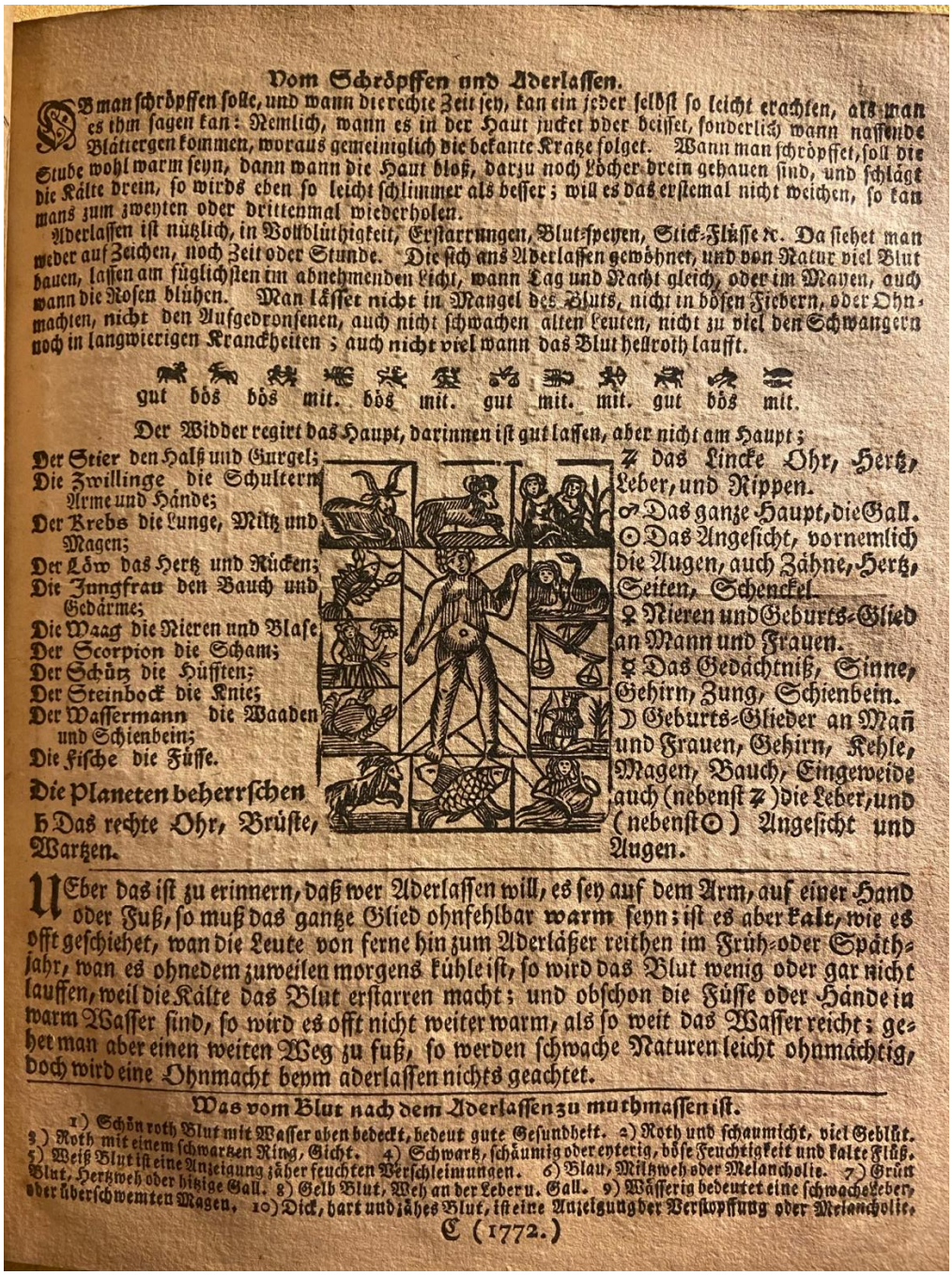
---

[286] Thomas L. Purvis, *Colonial America to 1763* (New York: Facts On File, 1999), 252.
[287] York-Gotharat Mix and his co-authors Bianca Weyers and Gabriele Krieg have a chapter on how *Kalender* shaped the ethnocultural identity of German-speakers in America in the eighteenth and nineteenth centuries, i.e. how they were perceived by others and by themselves and their values represented in the *Kalender*. However, they do not focus on the medical content in these almanacs. See York-Gothart Mix, Bianca Weyers, and Gabriele Krieg, eds., "Sociocultural Regional Identities in Eighteenth- and Nineteenth-Century Popular German-American Almanacs," in *Deutsch-Amerikanische Kalender Des 18. Und 19. Jahrhunderts: BIbliographie und Kommentar*, vol. 1 (De Gruyter, 2011), 1-39.

much longer, although this information had begun to fall away by the turn of the century see Figure 7]. Also accompanying the "Zodiac Man" was a section on "cupping and bloodletting" [*Vom Schröpffen und Aderlassen*]. Why such information persisted is a puzzle. Perhaps it was there for decorative purposes or was expected by German readers as a form of memory aid.

The pivotal figures I study in this chapter are Christopher Sauer (1693-1758) and his son Christopher Sauer II (1721-1784) and the press they operated. The father was a jack-of-all-trades but most renowned for his successful press for German speakers in the colonies. Born in the Palatinate, Sauer settled in Germantown, PA, in 1734 and tried his hand at printing. Originally a tailor, Sauer also dabbled in other trades. He sold patent medicines from Germany and made clocks; he even opened an apothecary shop where he practiced bloodletting. Sauer's early printing projects consisted of hymnals and devotional texts for several German churches including the Lutherans, Pietists, Anabaptists, and Moravians.[288] Most importantly, he published his first almanac, *Der Hoch-Deutsche Americanische Calender,* in 1739, printing it in the Fraktur typeface that most German readers were more familiar with; this almanac remained in circulation until 1833 well after Sauer's death, carried on by his son Christopher Sauer II (1721-1784). Not much has been published about the son, but many of the remedies included in this chapter revolves around the ones that the son published in *Der Hoch-Deutsch*

[288] Hans Leaman, "Johann Christoph Sauer (1658-1758)," *Immigrant Entrepreneurship*, last accessed November 22, 2024, https://www.immigrantentrepreneurship.org/entries/johann-christoph-sauer/. Sauer published the first American editions of Martin Luther's *Small Catechism* (1744) and texts by John Wesley. He also printed German translations of classics such as Thomas a Kepmis' *Imitation of Christ* (1742) and John Bunyan's *Pilgrim's Progress* (1755).



Vom Schröpffen und Aderlassen.

Ob man schröpffen solle, und wann die rechte Zeit sey, kan ein jeder selbst so leicht erachten, als man es ihm sagen kan: Nemlich, wann es in der Haut jucket oder beisset, sonderlich wann nassende Blättergen kommen, woraus gemeiniglich die bekante Kratze folget. Wann man schröpffet, soll die Stube wohl warm seyn, dann wann die Haut bloß, darzu noch Löcher drein gehauen sind, und schlägt die Kälte drein, so wirds eben so leicht schlimmer als besser; will es das erstemal nicht weichen, so kan mans zum zweyten oder drittenmal wiederholen.

Aderlassen ist nützlich, in Vollblüthigkeit, Erstarrungen, Blut-speyen, Stick-Flüsse ꝛc. Da siehet man weder auf Zeichen, noch Zeit oder Stunde. Die sich ans Aderlassen gewöhnet, und von Natur viel Blut hauen, lassen am füglichsten im abnehmenden Licht, wann Tag und Nacht gleich, oder im Mayen, auch wann die Rosen blühen. Man lässet nicht in Mangel des Bluts, nicht in bösen Fiebern, oder Ohnmachten, nicht den Aufgedronsenen, auch nicht schwachen alten Leuten, nicht zu viel den Schwangern noch in langwierigen Kranckheiten; auch nicht viel wann das Blut hellroth laufft.

gut bös bös mit. bös mit. gut mit. mit. gut bös mit.

Der Widder regirt das Haupt, darinnen ist gut lassen, aber nicht am Haupt;

Der Stier den Halß und Gurgel;
Die Zwillinge die Schultern Arme und Hände;
Der Krebs die Lunge, Miltz und Magen;
Der Löw das Hertz und Rücken;
Die Jungfrau den Bauch und Gedärme;
Die Waag die Nieren und Blase;
Der Scorpion die Scham;
Der Schütz die Hüfften;
Der Steinbock die Knie;
Der Wassermann die Waaden und Schienbein;
Die Fische die Füsse.

Die Planeten beherrschen

♄ Das rechte Ohr, Brüste, Wartzen.

♃ das Lincke Ohr, Hertz, Leber, und Rippen.

♂ Das ganze Haupt, die Gall.

☉ Das Angesicht, vornemlich die Augen, auch Zähne, Hertz, Seiten, Schenckel.

♀ Nieren und Geburts-Glied an Mann und Frauen.

☿ Das Gedächtniß, Sinne, Gehirn, Zung, Schienbein.

☽ Geburts-Glieder an Mañ und Frauen, Gehirn, Kehle, Magen, Bauch, Eingeweide auch (nebenst ♃) die Leber, und (nebenst ☉) Angesicht und Augen.

Ueber das ist zu erinnern, daß wer Aderlassen will, es sey auf dem Arm, auf einer Hand oder Fuß, so muß das gantze Glied ohnfehlbar **warm** seyn; ist es aber **kalt**, wie es offt geschiehet, wan die Leute von ferne hin zum Aderläßer reithen im Früh- oder Späthjahr, wan es ohnedem zuweilen morgens kühle ist, so wird das Blut wenig oder gar nicht lauffen, weil die Kälte das Blut erstarren macht; und obschon die Füsse oder Hände in warm Wasser sind, so wird es offt nicht weiter warm, als so weit das Wasser reicht; gehet man aber einen weiten Weg zu fuß, so werden schwache Naturen leicht ohnmächtig, doch wird eine Ohnmacht beym aderlassen nichts geachtet.

Was vom Blut nach dem Aderlassen zu muthmassen ist.

1) Schön roth Blut mit Wasser oben bedeckt, bedeut gute Gesundheit. 2) Roth und schaumicht, viel Geblüt. 3) Roth mit einem schwartzen Ring, Gicht. 4) Schwartz, schäumig oder eyterig, böse Feuchtigkeit und kalte Flüß. 5) Weiß Blut ist eine Anzeigung zäher feuchten Verschleimungen. 6) Blau, Miltzweh oder Melancholie. 7) Grün Blut, Hertzweh oder hitzige Gall. 8) Gelb Blut, Weh an der Leber u. Gall. 9) Wässerig bedeutet eine schwache Leber, oder überschwemten Magen. 10) Dick, hart und zähes Blut, ist eine Anzeigung der Verstopffung oder Melancholie.

C (1772.)

Figure 7: Astrology page from the 1772 issue of *Der Hoch-Deutsch Americanische Calender*.

Americanische Calender, which remained one of the most popularly circulated almanacs in Pennsylvania in the eighteenth and early nineteenth centuries, annually disseminating around 8,000 to 10,000 copies.[289] For the purposes of the chapter, Sauer is used to refer to his son unless otherwise stated.

This chapter focuses primarily on the edition of *Der Hoch-Deutsch Americanische Calender* published from 1760 and 1814 although I also had access to a few earlier volumes.[290] I also examine multiple years of *Der Neue, Gemeinnützige Landwirthschafts Calender* (published in Lancaster by Johann Albrecht) and *Americanischer Stadt und Land Calender* (published in Philadelphia by Conrad Bentler).[291] For comparative purposes, I consider individual issues of several other *Kalender* as well: *Americanischer Stadt und Land Calender; Americanischer Haus-und Wirthschafts-Calender; Der Neuste, Verbessert und Zuverläßige Americanische Calender; Der Neue Americanische Landwirthscafts-Calender;* and *Der Vereinigten Staaten Calender*. In my examination of these *Kalender*, several interesting patterns emerged. In the early issues published from 1740-1780, references to medical botany made frequent appearances in these *Kalender.* Compared to Benjamin Franklin's *Poor Richard's Alamanac*, which mainly contained maxims such as the popular "Early to bed and early to rise, makes a man healthy, wealthy and wise,"[292] Sauer's *Hoch Deutsch-*

---

[289] Ralph Frasca, "'To Rescue the Germans Out of Sauer's Hands': Benjamin Franklin's German-Language Printing Partnerships," *The Pennsylvania Magazine of History and Biography* 121, no. 4 (October 1994): 338.
[290] Unfortunately, I am missing the issues between 1749 and 1759.
[291] For *Der Neue, Gemeinnützige Landwirthschafts Calender*, I have almost all the issues from 1790 to 1817. For the *Americanischer Stadt und Land Calender*, I mostly have the issues from 1785 to 1818.
[292] Benjamin Franklin, "Poor Richard, 1735," Founders Online, *National Archives, https://founders.archives.gov/documents/Franklin/01-02-02-0001.*

Americanische Calender contained more detailed medical advice and recipes. In particular, Sauer's remedies brought together all modalities of healing and presented them in accessible form for the German-speaking masses in North America.

One of the most significant examples is the *Kräuterbuch* published bit by bit in Sauer's *Hoch-Deutsch Americanische Calender* from 1762-1778; Christopher Sauer Jr., son of the esteemed printer, adopted this knowledge from Dr. Theodor Zwinger, Jr., (1658-1724) from the University of Basil "for the benefit of neighbors and in view of the fact that many people live far from a physician; that many a patient may lose his life before a doctor's help may be obtained; that it is not always within one's means to meet an exorbitant fee; that certain physicians are sometimes very long in performing a cure and that an apothecary in preparing medicines often substitutes one ingredient for another."[293] Sauer Junior adapted Zwinger's treatise but included commentary considering the original descriptions and therapeutic properties of local flora and fauna taken from Indigenous Americans, enslaved Blacks, and British settlers.

Because a majority of German settlers in British North America lived in rural areas, almanacs constituted a widely used (if not, the only) source of material for matters of health. Alongside these almanacs, health manuals were another source of information for German readers, and I examine *Kalender* in the context of other publications on health. This chapter sets to trace how medical knowledge circulated within German-speaking communities in Pennsylvania by laying out the different intellectual pathways (whether it came from Great Britain, Central Europe, local/Indigenous sources) through

[293] Quoted in Thomas R. Brendle and Claude W. Unger, *Folk Medicine of the Pennsylvania Germans: The Non-Occult Cures* (New York: Augustus M. Kelley, 1970), 265.

which botanical knowledge was transmitted in the colonies. Permanent in the Sauer remedies are the concerns with diet and regime, typical of so much of eighteenth-century medicine. In the almanacs, the Sauers offered an amalgamation of different medical traditions, emphasizing fluidity and eclecticism rather than theoretical consistencies.

A Man of Many Trades: Christopher Sauer (1695-1758)

Christopher Sauer, née Johann Christoph Sauer, was born in a small Palatine town called Laudenburg on February 2, 1695, and grew up in the county of Wittgenstein, which was one of the few regions in the early eighteenth-century Germany that was more lenient towards nonchurch separatists and fostered three established churches: Catholic, Lutheran, and Reformed. In the Wittgenstein, the small village of Schwarzenau was the center of settlement of the religious group called the Dunkers, or the Church of the Brethren, which Sauer was associated with. Sauer married Marie Christine around 1720 and celebrated the birth of his son, Christopher Sauer II, on September 26, 1721. In 1724, Sauer joined the groups of religiously persecuted Germans who emigrated to Pennsylvania in search of religious freedom and economic opportunity and settled in Germantown, PA.[294] Upon his arrival, Sauer began farming in Lancaster County but found himself quickly in the midst of a schism with the Ephrata Colony, founded by Conrad Biessel. Sauer and Biessel had been "congenial spirits in Germany," but that changed when Sauer's wife left him to join Biessel and the Ephrata Cloister. As farming

[294] Donald F. Durnbaugh and Luther, "Christopher Sauer Pennsylvania-German Printer: His Youth in Germany and Later Relationships with Europe," *The Pennsylvania Magazine of History and Biography* 82, no. 3 (1958): 316–40.

did not generate enough revenue for him and his son, he returned to Germantown where he worked in various trades as a carpenter, wheelwright, and cabinet-maker.[295]

During this time, Sauer lived for some time with the Germantown physician Christopher Witt (1675-1765), who represented the interconnections between "sympathetic magic, folk beliefs, humoral medicine, and alchemical theories."[296] Witt was also one out of several others in Philadelphia to maintain a large physic garden, establishing "probably one of the first botanical garden in America, antedating [William] Bartram's garden by 20 years." If anything, his garden was more extensive and more varied than Batram's famous institution.[297] Witt achieved renown in town for his medical and mystic prowess—indeed, he obtained the nickname *Hexenmeister* for being well-versed in astrology, astronomy, and botany. Before starting his printing business, the elder Sauer apprenticed under Witt as a clockmaker, and it is possible that Sauer may have "received some instruction in the mechanical and curative arts."[298] Although there is no concrete evidence that Witt actually taught Sauer (as there is very little to no extant record left behind by Witt), the Sauers and Witt participated in a botanical and medical network that transcended national borders in the New World. It is reasonable to speculate that Sauer likely learned a range of skills from Witt.

---

[295] Julius Friedrich Sachse, *The German Sectarians of Pennsylvania, 1742-1800: A Critical and Legendary History of the Ephrata Cloister and the Dunkers* (Philadelphia: P.C. Stockhausen, 1990), 313-4.
[296] Sachse, *The German Sectarians of Pennsylvania, 1742-1800,* 104.
[297] Steven J. Peitzman and Lisabet M. Holloway, "In Sickness and in Heath: Some Highlights of Medical Practice in Germantown's Past," *Germantown Crier* 39, no. 3 (1987): 53. See also M.I. Wilbert, "Dr. Christopher Witt. An Early American Botanist and a Man of Many and Varied Attainments," *The American Journal of Pharmacy* 76 (1904): 316.
[298] Julius Friedrich Sachse, *The German Sectarians of Pennsylvania, 1742-1800: A Critical and Legendary History of the Ephrata Cloister and the Dunkers* (Philadelphia: P.C. Stockhausen, 1990), 313.

Around the mid-1730s, Sauer showed an interest in printing when he perceived the need for a press for German readers. Sauer had no training as a printer and initially turned to Halle for support. Gottlieb August Francke wrote in a letter to Friedrich Michael Ziegenhagen in 1735 about a John Christopher Sauer who requested in a letter for type to be brought over and sent to him for printing in North America in exchange for reimbursement later. Francke, however, believed that because "the people here are overloaded with other things, they cannot acquiesce him; moreover, I doubt whether any particular benefit could be achieved by a printing press in the West Indies."[299] Sauer may have been unsuccessful obtaining help from the Hallesian Pietists, but he ultimately built his own press and obtained some type through friends in Frankfurt.[300] Once Sauer did establish himself as a well-known printer, however, the Francke Foundations did find Sauer's monopoly disconcerting in no large part due to his Separatist position.[301] Heinrich Melchior Muhlenberg wrote to the Halle in great detail about the need to establish a print shop in response to Sauer's press, which Halle reluctantly granted.[302]

---

[299] "den einer Namens Johann Christoph Sauer, der Ew. Hochehrwürden wohl nicht unbekannt sein möchte, hieher geschrieben hat, darinnen folgende besondere Umstände berichtet warden…Jetzt gedachter Sauer hat in diesem seinen Brief verlangt, daß man ihm einige Schriften zum Druck allhier einkaufen und senden mochte, und das1 er das ausgelegte Geld an Ew. Hochehrwürden erstatten wolle; da man aber allhier mit andern Dingen überladen ist, so kann man ihm darin nicht fügen, überdem so zweifle ich auch, das durch eine Druckerei in Westindien sonderlicher Nutzen geschafft warden möchte." W.J. Mann, B.M. Schmucker, and W. Germann, *Nachrichten von Den Vereinigten Deutschen Evangelisch-Lutherischen Gemeinen in Nord-America, Absonderlich in Pensylvanien [Sic]* (Allentown, PA: Diehl & Co., 1886), 58-59.

[300] Durnbaugh has a discussion on Sauer's relationship with Christopher Schütz (1693-1780) who owned a new type foundry in Frankfurt. Sauer was thankful for Schütz having sent him hymnals and religious texts for free distribution in Pennsylvania. See Durnbaugh, Christopher Sauer Pennsylvania-German Printer," 327-8.

[301] On an interesting note, Sauer's relation to the institutional church was characterized by mistrust, and though he was often associated with the Dunkers, Sauer's contemporaries identified him more as a Separatist. He published news of troubles between the Lutherans and Reformed, which earned him the ire of Heinrich Melchior Muhlenberg. See Donald F. Durnbaugh, "Was Christopher Sauer a Dunker?," *The Pennsylvania Magazine of History and Biography* 93, no. 3 (1969): 383–91.

[302] Thomas Müller-Bahlke, "Communication as Risk: The Beginnings of the Halle Correspondence with the Pennsylvania Lutherans," in *In Search of Peace and Prosperity: New German Settlements in Eighteenth-*

Although Sauer obtained a medical degree from Halle, there is no record of his apothecary selling ingredients from Halle or maintaining a close affiliation with the Orphanage. On the contrary, Heinrich Melchior Mühlenberg accused the elder Sauer of selling cheap imitations of Hallesian products.[303] Sauer and Mühlenberg had a rather contentious relationship over the printing of Bibles, distribution of medicine, and Charity School movement. In a report back to Halle on March 6, 1745, Mühlenberg wrote that "The German printer here, named Christopher Sauer, had sought up to that time, both in private and in public, to make both myself and my office odious. His reason was that I had, as a matter of conscience, advised my congregation to be very cautious when they purchased any of the Bibles which he had lately printed, and carefully to examine whether he had not interpolated some notions of his own, for he is wont to embrace every other opportunity, in his almanacs and in his newspapers, to traduce the Lutheran Church."[304]

Sauer's early motivations for establishing a printing press revolved around religious reasons: one of the first books to leave his press was a hymnal for the Ephrata

---

Century Europe and America, ed. Hartmut Lehmann, Hermann Wellenreuther, and Renate Wilson (University Park, PA: Pennsylvania State University Press, 2000), 153.

[303] Renate Wilson, *Pious Traders in Medicine: A German Pharmaceutical Network in Eighteenth-Century North America* (University Park, PA: Pennsylvania State University Press, 2000), 135. See also Donald F. Durnbaugh, "J.C. Sauer and H.M. Mühlenberg: German-American Protagonists in Colonial North America," in *Halle Pietism, Colonial North America and the Young United States*, ed. Hans-Jürgen Grabbe (Stuttgart, Germany: Franz Steiner Verlag, 2008), 93–112. Julius Friedrich Sachse has an illuminating section on the elder Sauer's role in North America distributing books and reports from the Francke Institute in Halle. Specifically, Sauer had permission from Halle to sell the Canstein Bible, which was the standard Lutheran Bible at the time. However, many German-speaking settlers in Pennsylvania (namely, the Separatists) objected to the Halle Bibles and requested the Berleburg Bible. Being the businessman he was, Sauer sold both versions, eliciting responses from the Lutheran and Reformed congregations including Mühlenberg himself. See Sachse, 1-7.

[304] Theodore G. Tappert and John W. Doberstein, trans., *The Journals of Henry Melchior Muhlenberg*, vol. 1 (Philadelphia: The Muhlenberg Press, 1942), 96.

group. But early in his printing endeavors, Sauer had already indicated an interest in printing "an album [*Stammbuch*] and almanac, [where] he would then not only always print theological matter in the almanacs but also introduce home remedies for all sorts of illnesses."[305] Above all, Sauer was a major proponent for anyone to be able to buy his almanac and obtain information that he thought useful, including the weather forecasts and medical recipes. There is one amusing story where a man named Welker had planned a trip to Philadelphia from Sumneytown and referred to Sauer's *Kalender*, which had promised fair weather. As a result, Walker did not prepare a cover for his wagon and was met during his journey with some "very disagreeable rain." Upon his arrival, Welker dropped by Sauer's press in Germantown to reprimand him. In response, Sauer defended himself by explaining that "for although it was I that made the almanac, the Lord God made the weather, etc."[306] Having received several more complaints from readers, Sauer included a preface for his *Kalender* that explained the purposes and intent of an almanac and that he was not responsible for inaccuracies or unreliability of the information presented. For the weather, he procured information such as the weather by studying English almanacs and comparing them with astrological prognostications.

Regardless of whether the forecast was correct or incorrect, the elder Sauer and son emphasized his intent to obtain handy knowledge (not just limited to the weather) and make it comprehensible to all readers. Most of all, this applied to his pharmacopeia and lists of remedies. With respect to a newly discovered treatment against tuberculosis

---

[305] Quoted in Durnbaugh, Christopher Sauer Pennsylvania-German Printer," 328.
[306] Abraham H. Cassel, "The German Almanac of Christopher Sauer," *The Pennsylvania Magazine of History and Biography* 6, no. 1 (1882): 61. On his return trip back, Welker would fare well with fair weather.

[*Lungen-Sucht*], the younger Sauer was no friend to leaving his "readers in ignorance about a secret that was once so important."[307] In another instance, he even encouraged these "safe and costless remedies" [sichere Mittel, und kosten nichts] over the "unscrupulous and clueless doctors who often do more harm than good with their fever purges mixed with poison."[308] Here, we see a very strong stance against the use of harsh chemicals associated with Paracelsus and opting for simpler ingredients. A tried-and-true remedy for wounds that Sauer recommended in one issue was made of two ingredients: powdered sugar and tree oil. More importantly, this "Wund-Balsam" could be "easily made by anyone" [von jedermann leicht zu machender].[309] For those German-speaking families and settlers who lived by the wayside from the bigger towns, the *Hoch-Deutsch Americanische Calendar* offered a means to treat illnesses and injuries that otherwise was not available.

The approach the Sauers had towards medicine was not defined by the theoretical medical debates. Instead, they had a strong empirical bent. This approach is denoted by a "rejection of looking for causes, giving precedence instead to the treatment of illnesses based on the observation of symptoms."[310] As shown in the remedies described throughout this chapter, Sauer had little interest in identifying the causes of illnesses—

---

[307] Sauer, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1772*.
[308] Diese sind sichere Mittel, und kosten nichts; da im gegentheil öffters gewissenloße oder unverständige Docter mit ihren mit Gift vermengten Fieber-Purgierungen mehr Schaden als Nutzen thun. Ironically, this was under the section titled "All kinds of useful *doctor* remedies for fever." Saur, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1773* (Germantown: Christoph Saur, 1773).
[309] Sauer, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1772*.
[310] Claire Crignon, Carsten Zelle, and Nunzio Allocca, Introduction to *Medical Empiricism and Philosophy of Human Nature in the 17th and 18th Century* (Leiden: Brill, 2013), 1.

and when he did, he usually attributed it to an imbalance in the body. Instead, he directly provided a practical remedy (typically used successfully by some nobleman or individual in Europe). Sauer made it a point to trace (whenever possible) the origins of the remedies published in *Der Hoch-Deutsche Americanische Calendar*. Some countries he listed included England, Ireland, and France. In other cases, he purchased the recipe for a cure himself and published it so his readers could use it. He did this for a recipe against gout and aching limbs, for which he paid 8 pence for it—he reported that someone had even paid 50 pounds of sterling! Sauer's *Kalender* presented remedies that had their origins from a myriad of sources, and Sauer often cited where certain cures came from whether it was passed down through hearsay or copied from health manuals such as John Wesley's *Primitive Physic* (1747). His *Calender* is written within a Galenic framework, but in this broader humoral frame, he worked deliberately for eclectic and pragmatic reasons. His commitment to domestic, reproducible medicine offered German readers a familiar form of care in colonial and early America.

In *Women Healers: Gender, Authority, and Medicine in Early Philadelphia* (2022), Susan H. Brandt argued that "healers from the Netherlands and the German states were more likely than British immigrants to transmit the legacy of Paracelsian chemical medicine, vitalism, and transmutational alchemy to the colonies. They represented religious groups like German Pietists, Lutherans, Moravians, Schwenkfelders, Kelpian mystics, and Dutch Reformed believers."[311] Brandt specifically mentions three strands of medical tradition here, but I argue that Sauer was not invested at all in the theoretical

[311] Susan H. Brandt, *Women Healers: Gender, Authority, and Medicine in Early Philadelphia* (Philadelphia: University of Pennsylvania Press, 2022), 103.

medical debates. His medical recipes in his *Kalender* had influences from several different medical theories, but above all, Sauer was concerned with providing remedies that were effective in addressing an illness or malady. Though many households did not avoid the use of chemicals and minerals (such as antimony) in medical treatment, families were more likely to refer to herbs and other botanicals, and this was reflected in Sauer's *Kräuterbuch* and therapeutic remedies. Aside from antimony and the occasionally-mentioned gold leaf, Sauer opted for the more easily accessible herbs and food ingredients for his cures and even regarded with suspicion some of the harsher medicines that doctors prescribed.

Nonetheless, as an exception that proves the rule, it is interesting to track the trajectory of the gold leaf in the almanacs, a remedy that had roots in the Paracelsian and alchemical traditions. As the proponent for chemically prepared treatment, Parcelsus prescribed *aurum potabile* (potable gold) for melancholy. After his death, physicians in the Paracelsian school of thought continued to favor the medicinal value of gold but concentrated more on mercury and antimony. According to its advocates, gold "through its perfections and incorruptibility was considered to be most valuable when taken in food or drink or in medicine, helping amongst other things to prevent fainting or the cardiac passion, preventing disease and prolonging life."[312] The sixteenth-century German physician Oswald Croll (c. 1560-1608) experimented with over a hundred

[312] Angela Montford, *Health, Sickness, Medicine and the Friars in the Thirteenth and Fourteenth Centuries* (London: Routledge, 2017), 203.

different ways of preparing potable gold and highly recommended his preparation of it called "fulminating gold" or as he called it "Calx of Sol."[313]

By the early eighteenth century, gold also had many vocal critics. Eminent physicians such as Hermann Boerhaave (1668-1738), Robert James (1703-1776), and William Cullen (1710-1790) argued for the dubious virtues of gold.[314] One of the most famous pharmaceuticals produced at the Halle Orphanage, however, was *essentia dulcis*, which contained a tincture of gold. The Halle Foundations' successful venture into pharmaceuticals can be attributed to Christian Friedrich Richter and his brother Christian Sigismund, who engaged in extensive chemical experiments. In 1700, Francke received a manuscript from someone named Burgstaller detailing on "wonder drug derived from gold" and passed it on to the Richters for testing. In a year, the Richters successfully created *essentia dulcis*, which proved effective in treating spotted fever in Halle.[315] It also had its uses in a tonic as a "female fortifier."[316] The demand for *essentia dulcis* remained steady and high for most of the eighteenth century both in Europe and abroad. Heinrich Melchior Mühlenberg, who I discussed in my previous chapter, ranked *essentia dulcis* at the top of his list for most requested items from Halle.[317] Between 1710 and 1720, sales of the medicine brought in 9,000 thaler per year and reached a maximum of 36,000 thaler

---

[313] H. Carrington Bolton, "Historical Notes on the Gold-Cure," *New York Academy of Sciences* 11, no. 6–8 (1892): 153.
[314] Higby, 135-6.
[315] The ownership rights and issue of pricing created a fissure between Richter and August Hermann Francke after 1704. Douglas H. Shantz, *An Introduction to German Pietism: Protestant Renewal at the Dawn of Modern Europe* (Baltimore: John Hopkins University Press, 2013), 137.
[316] Renate Wilson, "Eighteenth-Century Practitioners of Medicine from Central Europe: The Pietist Connection," in *Apothecaries and the Drug Trade: Essays in Celebration of the Work of David L. Cowen*, ed. Gregory J. Higby and Elaine C. Stroud (Madison, WI: American Institute of the History of Pharmacy, 2001), 42.
[317] Wilson, "Eighteenth-Century Practitioners of Medicine from Central Europe," 41.

per year in 1761.[318] The Halle Orphanage sent regular shipments of Halle medications to Mühlenberg and Johann Martin Boltzius in Ebenezer, GA, and *essentia dulcis* was their significant product. Mühlenberg was a long-standing advocate of efficacy of items from the Halle armamentarium. Nevertheless, due to a patient population that maintained high demand for the Halle medications, Mühlenberg wrote in a 1759 letter expressing an openness to manufacturing certain medicines: "enough common medications are produced here by chymicis and galenicis. However, the message should be that we will produce *ess. dulcis, pulvis vitalis and essentia antihypochondriaca* etc., for these can cure where other remedies fail."[319]

Older figures living in the colonies such as the patriarch Muhlenberg and Boltzius fall into the category that were loyal to administering the Hallesian proprietary medications. On the opposite side of the coin, we have individuals like Muhlenberg's son, Gotthilf Heinrich Ernst Muhlenberg (called Henry by those closest to him) who represented a younger and new generation of naturalists who followed a framework not constrained by the remedies coming from Halle. Like Henry, Sauer Jr. also integrated and accommodated plants from the New World into his remedies (though it is clear that he preferred species from the Old World). Often in his *Kalender*, we see recipes that he copied from reliable folk remedies that have stood the test of time but in some instances, he switches out an ingredient or offers an alternative preparation. For the most part, Sauer

[318] Shantz, 136. Sachse estimates the revenue from *essentia dulcis* amounted to $20,000. Julius Friedrich Sachse, *The German Pietists of Provincial Pennsylvania*, 57.
[319] Quoted in Wilson, "Eighteenth-Century Practitioners of Medicine from Central Europe", 42.

stuck to his roots with using or importing plants from the Old World, showing a dependency on ideas and food brought from Europe.

It is difficult to ascertain where the Sauers obtained their ingredients for their apothecary as there is no paper trail left behind. It may be possible that he obtained ingredients from the Halle compendium to the chagrin of Heinrich Muhlenberg. There is no mention of Sauer distributing *essentia dulca*, but he did recommend gold leaf as a remedy for stopping blood and drying wounds. To stop the bleeding and heal the wound, one needs to "take a small piece of gold leaf together with a sheet of paper laid in between, press it onto the opening of the vein so that that the gold touches the skin. No further bandages are needed. It is understood that for all bleeding wounds, nothing stops blood more quickly than the gold leaf without a plaster or salve."[320] Sauer also wrote about gold leaf as being more effective [*so werde solches alle erwünschte Dienste thun auf eine vollkomnere Art als obiges mit den wollenen Lappen*] in preventing scars left behind from pores. His initial directions call for covering the face with a piece of flannel or woolen cloth to prevent the pores' exposure to air.[321] Gold leaf as an ingredient was not uncommon in the early modern period, but it made less of an appearance during the

[320] Weil beim Aderlassen, sonderlich auf der Hand, die Binde sehr beschwerlich ist, so hat ist zur Stillung des Bluts und Heilung der Wunde, als man nimmt ein klein Stücklein Laub-Gold mit samt dem Papier wo das Gold zwischen liegt, und drückt es auf die Oeffnung der Ader, daß – Gold auf die Haut kommt, so braucht es weiter keines Zubindens, solches wird auch von allen blutenden Wunden verstanden, daß nichts das Blut eher stille, als das Laub-Gold, ohne einiges Pflaster oder Salbe. Das erstere, nehmlich vom Aderlassen hat man probirt und ist gut befunden, das lez- tere steht jedem zur Probe fren. Under *Blut zu stillen und fliessende Wunden zu trocknen* in Christoph Saur, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1770* (Germantown: Christoph Saur, 1770).

[321] *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1770* (Germantown: Christoph Saur, 1770).

eighteenth century.[322] Sauer did not align himself with the theoretical discussions of medicine unlike the Hallesian authorities for instance. In the following section, Sauer's treatments for scurvy offer another example of Sauer's theoretical eclecticism.

The history of scurvy during the age of discovery and exploration is probably best encapsulated by imbroglio. I do not recap on the complicated history of the disease here, which has been well documented by historians such as Jonathan Lamb.[323] I do remark, however, on the discipline's focus of British explorers and intellectuals, specifically James Lind and Captain James Cook. As a result, I want to integrate the perspective of German thinkers vis-à-vis health advice that was present in the Sauer's *Kalender*.

Scurvy is famous as a plague of eighteenth-century navies, yet the experience of scurvy was not solely a problem for mariners. German settlers who came to the New World also had to contend with the disease, which was apparent in the therapeutic advice given for treating scurvy in the *Kalender*. In the accounts on scurvy, there were two primary yet rival positions over its causes: one group believed scurvy was on account of a deficiency in diet, whereas the other group believed it was brought on by a toxic state caused by bad airs ("miasma") in the environment or poison in food. Concerning nutrition, thinkers were divided over "a diet that was either deficient or defective."[324]

---

[322] For uses of gold in pre-eighteenth century, see C.J. Duffin, C. Gardner-Thorpe, and R.T.J. Moody, *Geology and Medicine: Historical Connections* (London: The Geological Society, 2017).
[323] I agree with Lamb's assertation that it minimizes the "uneven and awkward rhythm of this tale of a disease not easily identified or readily curable." Jonathan Lamb, *Scurvy: The Disease of Discovery* (Princeton: Princeton University Press, 2016), 8.
[324] Lamb, *Scurvy*, 39. Mark Harrison elaborates on this complex and controversial nature of scurvy in his article. His comparison between Thomas Trotter (1760-1832) and Gilbert Blane (1749-1834) really showcases the intricacies of the medical debate as they had opposing views but advocated for the same remedy, i.e. prescribing lemon and lemon juice for the Royal Navy. See Mark Harrison, "Scurvy on Sea and Land: Political Economy and Natural History, c. 1780-c.1850," *Journal for Maritime Research* 15, no. 1 (2013): 10-12.

Different degrees of emphasis were placed on certain factors, but there was a commonality among scholars concerning the etiology of scurvy, which was based in the humoral tradition. In the 1775 issue of the *Hoch-Deutsch Americanische Calender*, *Scharbock* is traced back to a bad and untidy diet consisting of a lot of heavily salted meat. The patient must fully abstain from all meat, especially salted and cured meat, and salted strong drinks. Instead, the patient's diet must consist entirely of vegetables, flour- and milk-based foods.[325] The cure itself is interesting as it calls for washing one's mouth with your own urine or a broth made of vinegar and water if scurvy affected only the mouth and teeth. Otherwise, if the disease is present throughout the blood and other parts of the body, it must be cleared gently with cleaning agents, especially cream of tartar [?] [*Cremortartary*]. Sauer published multiple remedies for scurvy in both his sections on useful recipes and *Kräuterbuch.* In 1770, there is a cure against scurvy under *Verschiedene merckwürdige Stücke und nützliche Recepte*:

> **Wider den Scharbock [Against scurvy]**
> Nimm Alant-Wurtzel, Meerrettig, jedes 4 Loth,
> Vermuth 2 Loth, Backbungen ein Loth, Brun-
> nentreß 2 Hände voll, giesse 2 Quart Wein und
> ein Quart Wasser dazu, und koche es in einem ver-
> deckten Geschirr in einem Kessel mit Wasser. Man
> kann den Tranck mit Hönig süß machen, und des
> Tags 3 mal ein Tschill davon trincken.
> NB. Kan man die Backbungen nicht haben, so
> nimm eine Handvoll Löffelkraut [scurvy grass] dazu.[326]

---

[325] Und weil diese Krankheit von einer schlechten unordentlichen Lebensart, viel und hart gesalzenem Fleisch und Küchen etc. entstehet, so muß ein Patient in selcher Zeit sich alles Fleischessens, und sonderlich geräuchert und gesalzen Fleisch, und gesalzener ---- [illegible], auch starker Geträncke, gänzlich enthalten, und seine ganze Nahrung aus Gemüsen, Mehl-und Milch-Speisen bestehen lassen. Christoph Saur, *Der Hoch-Deutsch Americanische Calender, Auf Das Jahr Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi 1775* (Germantown: Christoph Saur, 1775.

[326] Take 4 Loth each of the root of elecampane and horseradish, 2 Loth of vermouth, a Loth of baking powder, 2 handfuls of watercress; combine it with 2 quarts of wine and a quart of water and cook it in a

Indeed, both watercress and scurvy grass were very effective in treating scurvy due to their high vitamin C content. However, there is no rationale behind the recipe given in Sauer's almanac. Medical authors suspected a form of dietary deficiency in the late eighteenth century though few came to a consensus on what precisely was missing.

In Sauer's case, there was a focus on the specific foods, namely heavily salted meats and drinks. The connection between salted meats and scurvy coincides with the putrid theory of scurvy that was embraced by the British physician John Pringle (1707-1782). This theory pinpointed the cause of disease from "'gradually accumulated putrefaction' caused by moist or vitiated air, lack of exercise, deficiency of fresh vegetables and rotten items of diet." Salted meats in particular were prone to becoming putrid. To counteract the process of putrefaction in the body, Pringle proposed "anti-septic" substances such as malt extracts and certain types of tea and acids. In the entry for *Holunderblüte*, or elderflower, in Sauer's *Kräuterbuch* (1771), a tea made from elderflower cleansed and purified the blood by binding the pungent and expelling the scurvy through sweating, urine, and stool.[327] It is clear that Sauer's various treatments against scurvy were conceived in part from the putrid theory advocated by Pringle. But the incorporation of ingredients such as watercress and scurvy grass, a nod to the recommendation made by the British physician James Lind (1716-1794), who is

---

covered dish in a kettle of water. You can sweeten the drink with honey and take it one Tschill of it three times per day. NB. If one does not have backing powder, you can substitute a handful of scurvy grass.

[327] Wann man es in süssen Molcken kocht, und trincket fleissig davon, so reinigt es und fältigie, scharffe, bindere, und scharffrieh das Blut, und vertreibt den den Scharbock, weil es nicht nur die Unreinigken durch den Schweiß, sonder nauch durch den Urin und Stuhlgang gewaltig abführet. Saur, *Der Hoch-Deutsch Americanische Calender, Auf Das Jahr Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi 1771,* (Germantown: Christoph Saur, 1771).

remembered as the man for proposing lemon juice as the cure for scurvy in *A treatise of the scurvy* published in 1753. Funnily enough, Lind references a Dutch remedy in his writing that consisted of an infusion of red cabbage, watercress, and horseradish.[328] Scurvy was considered under several different medical frameworks ranging from the putrid/decay theory to the nervous theories of disease led by William Cullen (1710-1790), where diseases arose from a disorder of the nervous system brought about from poor lifestyles and dispositions. Ultimately, these medical theories were framed within the familiar principles of the Galenic system and echoed in Sauer's eclectic cures against scurvy, which took influence from several European figures. I underscore, however, that Sauer was not partial to any particular medical theory and intent on providing the most effective remedy against scurvy.

The Sauer Kräuterbuch (1762-1778)

Charles E. Rosenberg characterizes the late-colonial and antebellum years as a "golden age" for popular medicine and the dominance of books "crafted for particular segments of a literate yet economically and socially diverse market."[329] Access to formally trained doctors was limited due to financial or geographical constraints in the colonial era, thus a significant amount of medical practice remained in uncredentialed hands. Families brought books with them to the New World, but many botanical recipes and knowledge were reprinted in the colonies. Rosenberg mainly focuses on the English

---

[328] James Lind, *A Treatise on the Scurvy. In Three Parts*, 2nd ed. (London: A. Millar, 1772), 200-1. "The learned Van Swieten says he has often seen whole families cured of the scurvy in Holland, by using an ale, for common drink, in a cask of which some heads of red cabbage cut small, twelve handfulls of water-cresses, or scurvy-grass, and a pound of fresh horse-radish roots had been previously infused (f).
[329] Charles E. Rosenberg, "The Book in the Sickroom: A Tradition of Print and Practice," in *"Every Man His Own Doctor": Popular Medicine in Early America* (Philadelphia: The Library Company of Philadelphia, 1998), 2.

treatises and guides including John Wesley's *Primitive Physick* (1747) and John Tennent's *Every Man his own Doctor: Or, the Poor Planter's Physician* (1734); a German translation (*Ein Jeder sein eigner Doctor*) of the latter was published by Benjamin Franklin and Johann Boehm in 1749. According to Thomas Royce Brendle and Claude W. Unger, however, Tennet's guide was not received well by the German-speaking communities in Pennsylvania.[330] This may partially due to Tennet being a strong advocate for Native American medicine thus its unfamiliarity may not have fit well among the German community. The German translation was also published by Benjamin Franklin, who used the Roman typeface, which again looked strange to German readers.

It was this publication that incited Christopher Sauer II to publish the *Kurzgefaßtes Kräuterbuch* [concise herbal book] as a serialized book over the span of a decade and a half (from 1762 to 1778).[331] Sauer Jr. had intended his parts of his herbal to be taken out from each issue of his *Kalender* so they could be bound together as a single volume once completed. He thought of this idea of a serialized herbal based on the success of veterinary advice in his almanacs during the 1750s, which mainly addressed the health of horses, sheep, and pigs. Additionally, Sauer recognized that a complete book would be more challenging to sell as "his audience was for the most part poor and in no position to lavish money on literary undertakings."[332] By publishing his herbal in installments in his almanac, Sauer offered a cost-effective way for German families to

[330] Brendle and Unger, 223.
[331] From hence forward, I refer to the son as Sauer as he was the primary compiler of the *Kräuterbuch* unless otherwise noted.
[332] Weaver, introduction to *Sauer's Herbal Cures: America's First Book of Botanic Healing,* 6.

own a manual filled with home remedies. Sauer's *Calender* spoke to maladies that German households could treat without seeing a physician; there were multiple remedies for coughs, fevers, worms, toothaches, skin conditions, and urinary problems. Their frequency in the alamanacs helps explain the *Calender*'s appeal as a domestic medical guide.

Some early English health manuals published in the colonies, such as *The English Physician* (1708) had espoused the use of only English plants, ignoring the herbs found in the New World.[333] Sauer at least attempted to accommodate a few New World plants into his herbal such as the jalap and Indian cress; the people's health was married to the land, and in a new environment, Sauer wished for his readers to be able to gather and utilize the plants that were at hand.[334] Sauer did not always denote the exact and correct species of plants and herbs in his *Kräuterbuch*, but there was an expectation for his readers to gather native versions of botanicals found in America if European versions were not on hand.[335] In another example, Tennet's *Every Man His Own* also enumerated medical properties and uses of local plants including "Indian Corn" and "Indian Physick" (*Carapichea ipecacuania*, a plant used primarily as an emetic).[336] Tennet did shy away

---

[333] James L. Reveal, "What's in a Name: Identifying Plants in Pre-Linnaean Botanical Literature," in *Prospecting for Drugs in Ancient and Medieval European Texts: A Scientific Approach*, ed. Bart K. Holland (Amsterdam: Harwood Academic Publishers, 1996), 74.

[334] As a caveat, I do note that botanicals obtained from imperial networks (across Spanish America and the Caribbean) such as jalap, ipecacuanha, guaiacum, and "Jamaica Pepper" (all spice) had been naturalized into European gardens. Nevertheless, this demonstrates how ecumenical Sauer's herbal intended his herbal to be.

[335] Plants such as the European white birch (*Betula pendula*) or European cinquefoil (*Potentilla reptans*) had native equivalents in North America, which were often used by Native American medicine. For white birch, one could substitute paper birch (*Betula papyrifera*) or black birch (*Betula lenta*). For cinquefoil, *Potentilla canadensis* was the New World equivalent. Moerman, *Medicinal Plants of Native America,* 91-2, 889.

[336] John Tennet, *Every Man His Own Doctor: Or, The Poor Planter's Physician* (Williamsburg: William Parks, 1734).

from recommending so-called "specificks" (e.g., mercury, opium, and Peruvian bark) which challenged the assumptions of humoral medicine and were not typically evacuant medicines.[337] Sauer's herbal and Tennet's guide represent a transitional form of medical text that incorporated both the European herbal tradition and the native plants of the New World.

The *Kurzgefaßtes Kräuterbuch* owes a great deal of debt to the Swiss physician and professor Theodore Zwinger (1658-1724) and his *Theatrum Botanicum; das ist, Volkommenes Kräuter-Buch* (1696), and indeed, in the final issue of Sauer's *Kräuterbuch*, Sauer gives credit to Zwinger's work. However, Sauer's herbal was significantly shorter than the original work by Zwinger herbal, which had included over a thousand botanical entries. We can categorize Zwinger's *Theatrum Botanic* as fundamentally a work of botany, not a book of medical simples.[338] Sauer intended the *Kräuterbuch* to be a health manual, and most entries note their therapeutic properties or include a medical recipe similar to Dioscorides' writing. The Greek physician Dioscorides wrote *De materia medica*, which described the medicinal uses of herbs.

Moreover, the *Theatrum Botanicum* was organized according to a pre-Linnean taxonomy. For example, the turnip is a good case in point. Zwinger lumped different types of "turnip" together based on the fact that they all shared a fat root: bryony (*Zaunrübe*), carrots (*gelbe Rüben*), and manioc (*West-Indische Rüben*). Zwinger's son,

---

[337] Tennet, 55. Ironically, specificks remained rather unspecific to a particular ailment or organ. 77-8. Zachary Dorner, *Merchants of Medicines: The Commerce and Coercion of Health in Britain's Long Eighteenth Century* (Chicago: University of Chicago Press, 2020).
[338] Zwingler was more focused on the physical properties of plants akin to the classical naturalist Theophrastus.

Friedrich, acknowledged and apologized for his father's mistakes when he revised and republished the herbal in 1744, but he decided not to rectify the classification errors as that would have entailed a complete overhaul of the volume.[339] In his herbal, Sauer partially ameliorated this problem by using the Linnean system but continued to use some of the names referred by Zwinger.

The Sauer *Kräuterbuch* also included recipes with magical or religious elements. For instance, one remedy against *den Krampff* ("cramps") instructs the individual to take rosemary leaves, chop them finely, and tie them around the painful limb. As a supplementary step, it states that those with a "strong belief only need to tie dried eel skin around the painful area" to relieve the pain:

> **Vor den Krampff.**
> Nimm Roßmarinblätter, zerhacke sie sehr fein,
> nehe solche zwischen Leinene Binden, und binde
> solches um das Glied das mit dem Krampff geplagt
> wird auf die blosse Haut. Wer einen starcken Glau-
> bey [bei] daran hat, darf nur eine getrocknete Aals-Haut
> um das schmershasste Glied binden, so hilfft es schon.[340]

Under his entry for *Angelika,* or angelica (*Angelica archangelica*), Sauer wrote that a potion concocted with this herb "provides a particularly good remedy for injuries brought about by witchcraft" and other "unnatural afflictions."[341]

Like Samuel Auguste Tissot, who expounded the anti-masturbation campaign, Sauer was appalled by any reference to human genitals, menstruation, and conditions that

---

[339] Weaver, 5-6.
[340] Christoph Saur, *Der Hoch-Deutsch Americanische Calender, Auf Das Jahr Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi 1771,* (Germantown: Christoph Saur, 1771).
[341] William Woys Weaver, ed., *Sauer's Herbal Cures: America's First Book of Botanic Healing, 1762-1778* (New York: Routledge, 2001), 41.

may incite sexual excitement. However, Sauer's work included a number of remedies for women's health problems."[342] Outside of the herbal, his *Kalender* also includes recipes for breast pain and advice for nursing women. Under a section dedicated for "proven medical remedies for various human illnesses," there is a recipe for a chest rub to cure women's chest pain made from calisonium (rasom), unbleached wax, linden fire, flaxseed oil, good tree oil, and turpentine oil (coincidentally, this ointment shares some ingredients with Vicks VapoRub used for colds and muscle/joint aches today).[343] There is also a remedy for softening hard breasts that calls for roasting white turnips in hot ash, mixing them with a little rose oil and applying this twice a day while keeping the chest warm with red flannel.[344]

The specification of red flannel is interesting as the color of the material has special therapeutic effects. Beliefs in the curative properties of red flannel seem to have persisted for a long tradition in Pennsylvania; in the late nineteenth century, W.J. Hoffman documented rural Pennsylvanians using a cure remedy for diphtheria (a severe bacterial infection affecting the nose and throat) that involved placing "in a band of red

---

[342] Weaver, ed., *Sauer's Herbal Cures*, 9.

[343] Under the section titled "*Einige bewährte Artzenen-Mittel für mancherley Krankheiten der Menschen"* in the 1787 issue of *Der Hoch-Deutsche Americanische Calender*, the recipe specifies mixing four ounces of calisonium, two ounces of unbleached wax, and an ounce of linden fire (dilates blood vessels and lowers blood pressure) on the stove. Take it off the heat, then add an ounce of flaxseed oil, ounce of good tree oil, and half an ounce of turpentine oil. Stir together with a stick until it becomes cold and forms a plaster. Spread it on a cloth and apply 2-3 times per day. Christoph Saur, *Der Hoch-Deutsch Americanische Calender, Auf Das Jahr 1787. Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi (*Germantown: Leibert und Billmeyer, 1787).

[344] Christoph Saur, *Der Hoch-Deutsch Americanische Calender, Auf Das Jahr 1787. Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi (*Germantown: Leibert und Billmeyer, 1787). *Röstet etlich weisse rüben in heisser asche, zerdrücket und vermischet sie mite in wenig rosen-öhl, leget solches auf die brust, thut dieses des tages zweymal, und haltet die brust mit rothem flannel warm.*

flannel secured about the neck" because of the prevailing belief that "all *red* flannel is medicated."[345]

Certain cures also included anecdotal ones and ones passed down for generations back in Europe. Under the same list of proven remedies in Sauer's 1787 almanac was an assured remedy against stones, i.e., concretions or calculus such as gallstones, adopted from a nobleman in the Palatinate who had been afflicted with this condition and "could not be cured by any medical means" (*durch keine artzenen-mittle curiret werden konte wurde*). However, he was able cure himself by pouring half a pint of boiling water over two ounces of tartar salt. He took a few drop of water per day, gradually adding a few drops of veal broth. Though there was no improvement for the first twelve days, he was completely healthy within four weeks.[346] Like other contemporary publishers, Sauer had no problem referring to proven remedies that had breakthroughs [*Durchbruch*] in other states. One remedy against red dysentery [*rothe Ruhr*] was successful among many soldiers in Ireland when they took a concoction made from four ounces of sheep fat (kidneys) and brandy boiled together and taken warm.[347]

---

[345] W.J. Hoffman, "Folk-Medicine of the Pennsylvania Germans," *Proceedings of the American Philosophical Society* 26, no. 129 (1889): 335. Pennsylvanian Germans also used to "tie a piece of ham fat with a strip of red flannel around the neck to cure a sore throat." Robert J. Benford et al., eds., *Medical Technicians Bulletin: Supplement to U.S. Armed Forces Medical Journal* (Washington: United States Government Printing Office, 1995),

[346] Christoph Saur, *Der Hoch-Deutsch Americanische Calender, Auf Das Jahr 1787. Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi (*Germantown: Leibert und Billmeyer, 1787). *er nahm zwey loth weinsteinsaltz, goß ein halb peint kochend wasser darauf, wodurch sich das Saltz auslösete, that dazu fünf loth ungelöschten kalt, der noch heiß, und erst aus dem kaltofen gekommen war. Von diesem wasser nahm er des tages dreymal, jedesmal dreysig tropfen in kalbfleisch brühe, wovon vorher das fett abgenommen war. In der esten zwölf tagen spürete er gar keine besserung davon; als er aber drey bis vier wochen damit anhielete, wurde er vollkommen gesund.*

[347] Ein bewährtes Mittel, wodurch in Irland viele hunderte sind curirt worden, sonderlich unter denen Soldaten, als diese Kranckheit mit grosser Hefftig- keit daselbst gewüthet hat. Nimm Schaf-Fett, sonderlich von denen Rieren, und guten Brantewein, von jedem 4 Unzen, laß solche ein wenig mit einander kochen, und trincke dann warm von dem Brantewein. Christopher Sauer, *Der Hoch-Deutsch Americanische*

Sauer also modified recipes to include ingredients that were readily accessible in North America from a number of merchants and apothecaries. As previously mentioned, a recipe to alleviate a sprained leg or hand called for the use of *Westindische Korn* [West Indian corn]. Another prominent plant consistently referenced is the Seneca snakeroot (*Polygala senega*), which was used as a cure for venomous rattlesnake bites by the Seneca First Nations. Dr. John Tennant wrote about the root's medicinal properties in an epistle to Dr. R. Mead in 1738 and experimented with it by treating patients suffering from pleurisy and peripneumony (respiratory diseases that shared similar symptoms with poisonous snake bites). Testing was successful, and his findings led to the importation of the root to Europe, where it would become a mainstay in apothecaries for pneumonia.[348] Sauer does not mention the Seneca snakeroot for addressing respiratory diseases, but for gout, blurred vision, and alleviating pain associated with stitches.

Though Sauer integrated medical recipes and knowledge that branched outside medical European traditions, he nevertheless preferred using ingredients most familiar to him. For "ein vortreflicher Wund-Balsam" (an excellent wound balm), the flowers of St. John's wort are filled in a bottle with oil poured over them and left in the sun until a beautiful red oil forms, which can then be applied to wounds for both humans and animals. It also served as a good laxative alongside rhubarb. *St. Johannes-Kraut* and its medicinal use dates back to ancient times. This red oil recipe was popular in Europe and

---

Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1769 (Germantown: Christoph Saur, 1769).

[348] John Tennet, *An Epistle to Dr. Richard Mead, Concerning the Epidemical Diseases of Virginia, Particularly, a Pleurisy and Peripneumony: Wherein Is Shewn the Surprising Efficacy of the Seneca Rattle-Snake Root, in Diseases Owing to a Viscidity and Coagulation of the Blood.* (Edinburgh: P. Matthie, 1742).

was "esteemed as one of the most popular and curative applications in Europe for excoriations, wounds and bruises."[349] In the Americas, there was a species (*Hypericum prolificum* vs. European *Hypericum perforatum*) used by Native Americans as an abortifacient, antidiarrheal, dermatological aid, febrifuge, hemostat, snake bite remedy, and general strengthener.[350] It is not clear if Sauer knew of the application of *Hypericum prolificum* because he makes no mention of it in his *Kräuterbuch* or list of remedies, but his recreation of a cherished European recipe in the British colonies shows how comfortable he was sticking with classic remedies brought from home. Indeed, many of his remedies in his almanac are taken from either Zwinger's herbal or popular home remedies. Nonetheless, Sauer's *Kräuterbuch* and remedies were a complex product of medical thought and knowledge coming from different countries.

Another plant genus found in Europe and North America was the Goldenrod. The European goldenrod (*Solidago virgaurea*), which Sauer wrote about in his herbal, was known for its diuretic and antiseptic properties. Under his entry for [European] Goldenrod, Sauer mentions a tea brewed from its leaves can disinfect wounds and "cleanse the kidneys and bladder exceptionally well of all sand and foul matter."[351] He specified the European variant of the goldenrod in his *Kräuterbuch* in 1762. There was also the American native sweet-scented goldrenrod (*Solidago odora)*, whose leaves could be brewed to make Blue Mountain tea. This tea has a fragrant and sweet anise flavor and

---

[349] W.T. Fernie, *Herbal Simples: Approved for Modern Uses of Cure.* (Philadelphia: Boericke & Tafel, 1897), 288.
[350] Christopher Rollin Hobbs, "St. John's Wort--Ancient Herbal Protector," *Pharmacy in History* 32, no. 4 (1990): 168.
[351] Weaver, 156.

was especially beloved among German settlers. It was first recorded by botanist and physician Johann D. Schöpf (1752-1800).[352] Schöpf served as the chief surgeon for the Ansbach troops for the King George III of Britain. After the war, he remained in the United States and travelled along the northeastern coastline. He published his observations of the natural flora and fauna in *Reise durch einige der vereinigten nordamerikanischen Staaten, nach Ost-Florida und den Bahama-Inseln unternommen in den Jahren 1783 und 1784*. He first partook in the tea at MacDonald's tavern in Bedford County, Pennsylvania: "Hier wurden wir mit noch einer andern einheimischen Theepflanze bekannt; es war eine Gattung Solidago. Man sammlete und dörrte die Blätter davon über gelindem Feuer. Um Fort Littleton sollen viele 100 Pfund von diesem Bohea-Thee, wie sie ihn nannten, gemacht worden seyn [sein], so lang der Chinsische seltner war. Unsere Wirthin lobte seinen guten Geschmackl dem ihrigen war aber nicht viel zu trauen."[353] Tea brewed from *S. odora* had several medicinal benefits as a carminative, stimulant, and diaphoretic. The Cherokee treated multiple illnesses with it as well: "colds, coughs, diarrhea, female problems, fevers, nerves, sore mouth, and tuberculosis."[354] Schröpf's reception to the American variant of the same species was not as favorable, but

---

[352] Paul Standley credits Schoepf for first publishing descriptions of *Solidago odora* in his Reise. See Paul C. Standley, "A Neglected Solidago Name," *Rhodora* 21, no. 243 (1919): 69–70. Merritt Lyndon Fernald and Alfred Charles Kinsley also echo this point in their book. See also Merritt Lyndon Fernald and Alfred Charles Kinserey, *Edible Wild Plants of Eastern North America* (New York: Dover Publications, 2013), 353-4.

[353] Here we became familiar with another native tea plant; it was of the genus Solidago. One collected and dried the leaves over a mild fire. Around Fort Littleton, hundreds of pounds of this Bohea tea, as they called it, were said to been made so long as the Chinese [tea] was scarcer. Our hostess praised its good flavor but it was not to be trusted. Johann David Schöpf, *Reise Durch Einige Der Mittlern Und Südlichen Vereinigten Nordamerikanischen Staaten Nach Ost-Florida Und Den Bahama-Inseln Unternommen in Den Jahren 1783 Und 1784*, vol. 1, 2 vols. (Erlangen: Johann Jacob Palm, 1788), 466. His books (2 volumes) have also been translated into English by Alfred J. Morrison.

[354] Daniel F. Austin, *Florida Ethnobotany* (Boca Raton, FL: CRC Press, 2004), 637.

the sweet goldenrod eventually garnered a favorable reception among the German-speaking community and shared similar therapeutic properties with the European goldenrod.[355]

Health Manuals in the German Press in Early America (1700-1815)

In the mid-eighteenth century, the two major German printing presses in early America were owned by Christopher Sauer and Benjamin Franklin. In a 1753 letter to Peter Collinson, Benjamin Franklin complained in a letter to Peter Collinson about the state of the printing business in Pennsylvania: "of the six printing houses in the Province, two are entirely German, two half German half English and but two entirely English."[356] Franklin worked earnestly to secure his place as the primary provider in the German-language print market, and though he sometimes collaborated with Sauer, Franklin was openly hostile towards him and the other German printers; that, however, was not the case for Conrad Beissel, who joined the German publishing enterprise in 1745—perhaps due to Franklin's acquaintances with members of the Ephrata community such as Conrad Weiser (1696-1760) and John Peter Miller (1709-1796).[357] The Ephrata Cloister operated

---

[355] See Landis Valley Associates, *The Landis Valley Cookbook: Pennsylvania German Foods & Traditions*, 2nd ed. (Mechanicsburg, PA: Stackpole Books, 2009), 8; 273; see also *Annual Report of the Commissioner of Agriculture for the Year 1878.*, vol. 1879 (Washington: Government Printing Office, 1879), 129.

[356] Benjamin Franklin to Peter Collinson, May 9 1753, Founders Online, *National Archives*, https://founders.archives.gov/documents/Franklin/01-04-02-0173#BNFN-01-04-02-0173-fn-0015. The German printers Franklin refers to were Christopher Sauer and Anton Armbrüster. Franklin actually worked together with Armbrüster on the *Neu-eingerichterer Americanischer Geschicts Calender*. The half German half English publishers were probably Samuel Holland and Johann Boehm.

[357] John Hruschka, *How Books Came to America: The Rise of the American Book Trade* (University Park, PA: Pennsylvania State University Press, 2012), 42-8. Franklin also published numerous imprints for Beissel. Indeed, the first few German publications were hymn books for the Ephrata community: *Goettliche Liebes und Lobes Gethoene* ["Divine Melodies of Love and Praise] in 1730, *Vorspiel der Neuen Welt* ["Overture of the New World"] in 1732, and *Jacob's Kampff und Ritter Platz* ["Jacob's Struggle and Knighthood"] in 1736. See J.H. Dubbs, "Ephrata Publications," *The Lancaster Farmer* (Lancaster, PA), May 1880. Aside from the fact that Sauer was Franklin's biggest competitor in the print enterprise, there was an "almanac war" between Sauer and Franklin regarding British imperialism and the role German-

the second German printing press used in Pennsylvania (after Sauer's press), and it ran for a span of about 50 years from 1745 to 1792. The vast majority of Ephrata's publications were religious texts intended primarily for members of the community, but the German-speaking Mennonites also commissioned the press for a German edition of *Martyrs Mirror*, a massive undertaking for the cloister.[358] There were a few works published for more practical reasons. For instance, the Ephrata Cloister published at least 11 copies of *Kurzgefaßtiges Arzney-Büchlein für Menschen und Vieh* [concise medical booklet for humans and livestock], 3 copies of *Kurzgefaßtiges Weiber-Büchlein* [concise women's medical booklet], and 3 copies *Das durch viele Curen bestätigte, und sicher befundene Pferdarzney-Büchlein* [The horse medical booklet, cures proven by many to be safe].[359]

In addition to the health advice present in German almanacs, bibliographical research between 1700 and 1815 shows that publications related to health and medicine accounted for a small number (approximately 50 works out of 2000, or 2.5%).[360] Perhaps

---

speaking subjects had in this context in the 1740s. For more on this, see Bethany Wiggin, "Poor Christoph's Almanac: Popular Media and Imperial Education in Colonial Pennsylvania," in *New Perspectives on German-American Education History: Topics, Trends, Fields of Research* (Kempten, Germany: Julius Klinkhardt, 2017), 43–62.

[358] Fourteen members of the cloister worked on this task for three years to produce 1300 copies of this 1512-page volume. The biggest obstacle was obtaining the appropriate amount of type and paper necessary for the massive project. Hruschka, 46.

[359] Data obtained from Karl John Richard Arndt and Reimer C. Eck, eds., *The First Century of German Language Printing in the United States of America: A Bibliography Based on the Studies of Oswald Seidensticker and Wilbur H. Oda.*, 2 vols. (Göttingen: Niedersächsische Staats- und Universitätsbibliothek, 1989). Two copies of *Das durch viele Curen bestätige, und sicher befundene Pferdarzney-Büchlein* are pirated editions published under different titles in 1805 and 1809 respectively: *Nützliches und Bewährt Befundenes Roßarzney-Büchlein* and *Sicher und bewährt befundenes Gäuls-Doktor Büchlein*.

[360] This statistic includes reprints of books. Karl John Richard Arndt and Reimer C. Eck, eds., *The First Century of German Language Printing in the United States of America: A Bibliography Based on the Studies of Oswald Seidensticker and Wilbur H. Oda.* The bibliography includes only books and almanacs; newspapers are omitted, and information on broadsides has been collected, which the compilers had intended for a third volume. There are a total number of 3151 entries, and historians will find the work

unsurprisingly, the vast majority of books published during this time were mainly religious (e.g., Bibles, sermons, catechisms, and liturgical works).

Although I categorize the works into three groups (American publications, European publications, and a combination of the two), most eighteenth-century books were unabashed republications of originals from Europe [see Figure 8].[361] American publications were works that were first published in the North American colonies, e.g., *Jeder sein eigner Doctor, oder des armen Landmanns Arzt* (the German translation of John Tennet's *Every Man His Own Doctor*). The Ephrata cloister in particular focused on reprints of books that were popular back in Germany and Switzerland, such as Johannes Deigendesch's *Nachrichters: oder Nutzliches und aufrichtiges Roß-Artzney-Büchlein*. This text made its first appearance in Freiburg in 1716. The *Kurzgefaßtes Weiber-Büchlein,* discussed in the next chapter, included advice from such hoary authorities as Aristotle and Swabian bishop Albertus Magnus. In both Europe and North America, this practice of reprinting and compilation was not uncommon in the period before real copyright.

The discussion of animal health also deserves more attention than it has previously received in the wider narrative of colonial health in early America, especially if we consider how intrinsically linked health was through the relationship between people and place (environment and climate). As Andrew Wear has pointed out, "healthy

---

incredibly useful to grasp what type of materials were printed in the first century of German-language printing in America.

[361] Excluding reprints, there were a total of 17 works published in North America on the topic of health and medicine (9 American, 6 European, and 2 combination).

people, animals, and plants indicated prosperity."[362] While settlers were focused on "improving" the land (shaping it in a way that was more familiar to them), this process also entailed not only the introduction of Old World crops and flora, but also of Old

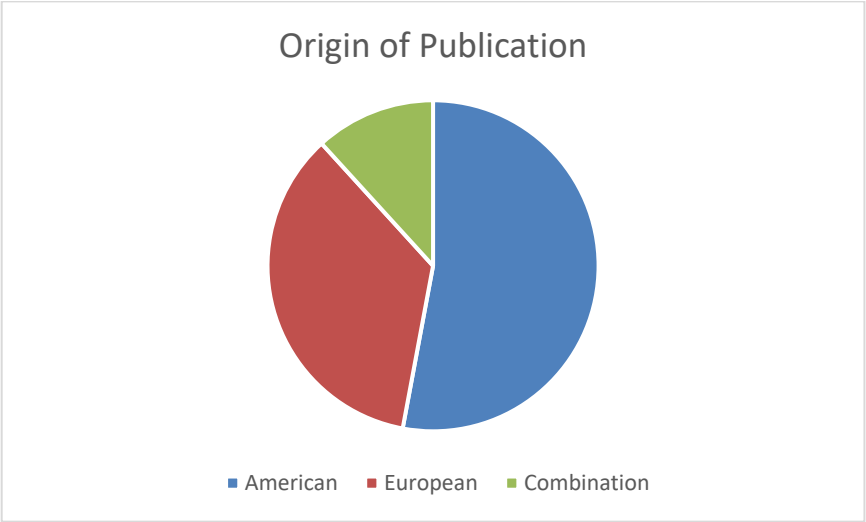


Figure 8

World animals.[363] In the context of German settlers, *Kalender* regularly contained health advice about the diseases of cattle [*Rind* or *Vieh*], sheep [*Schafe*], horses [*Pferde*], and pigs [*Schweine*]. For example, in Sauer's almanac, especially from 1760 to 1870, recipes for humans were followed up by a section designated for the *Krankheiten für Vieh,* or illnesses for livestock. This began to change around 1780, where the sections for *einige bewährte Arzeney-Mittel für mancherley Krankheiten der Menschen* are noticeably

[362] Andrew Wear, "The Prospective Colonist and Strange Environments: Advice on Health and Prosperity," in *Cultivating the Colonies: Colonial States and Their Environmental Legacies*, ed. Christina Folke Ax and et al. (Athens, OH: Ohio University Press, 2011), 22.
[363] Alfred Crosby considers livestock as agents of historical change and part of the European expansion in the transformation of the New World environment. See Chapter 8 of Alfred W. Crosby's *Ecological Imperialism: Biological Expansion of Europe, 900-1900*, 2nd ed. (Cambridge: Cambridge University Press, 2004).

shortened (often limited to a page or two) and replaced by sections on *Anecdoten* or simply general life advice [*einige Hülfsmittel*]. The *Hülfsmittel* in the later editions of *Der Hoch-Deutsch Americanische Calender* were no longer limited to medical advice, a direct contrast from issues published before 1800, which had sections titled *Hülfsmittel für verschiedene Krankheiten der Menschen*, i.e. tips for human disease and illnesses. For example, in the 1805 and 1806 issues, some of the tips include *Die gute Wirkungen des Wurm-Saamens* and *Wohlfeile weisse Farbe zum Anstrich.*[364] We see a similar trends in *Der Neue, Gemeinnützige Landwirthschafts Calender* and the *Americanischer Stadt und Land Calender* with less medical advice for both humans and animals being published. There were replaced by a higher number of fables, songs, and anecdotes.

The Deliberation of New World vs. Old World Flora by European Settlers

Settlers believed that the body was in a state of constant flux due to the influence of food and climate/environment. Alix Cooper's stimulating discussion of the "Indigenous" in *Inventing the Indigenous* (2008) is apt here. Writers in the sixteenth century were concerned over the dichotomy of the "indigenous" (*einheimisch*) versus the "exotic" (*ausländisch*). There was a polarity between "German" and "foreign" natural products expressed by scholars over the course of the sixteenth century, which persisted into the seventeenth and eighteenth centuries.[365] When it came to remedies, herbalists stressed the benefits of local plants native to Europe. At times, they also looked favorably

[364] *Der Hoch-Deutsche Americanische Calender, Auf das Jahr 1805* (Germantown: Michael Billmeyer, 1805); *Der Hoch-Deutsche Americanische Calender, Auf das Jahr 1806* (Germantown: Michael Billmeyer, 1806). The tips translate to "The beneficial effects of worm seed" and "inexpensive white color for paint"
[365] Alix Cooper, *Inventing the Indigenous: Local Knowledge and Natural History in Early Modern Europe* (Cambridge: Cambridge University Press, 2007), 32-8.

at the flora and fauna of the New World, where its natural products were viewed with suspicion by medically trained Europeans, "who feared its impact on the individual complexion."[366] However, Sauer had less qualms accommodating New World plants into his remedies. Examples include the adoption of Amerindian corn, which he refers to as *Westindischen Korn* ("West Indian corn"), for a remedy for quickly straightening a strongly sprained foot or hand. The recipe calls for washing the sprained area with warm vinegar for 4-5 minutes every 4 hours as it promoted the "circulation of fluids to the damaged area and prevent and reduce any swelling." Afterwards, the afflicted area must be coated with strong West Indian corn and then rubbed in firmly.[367] Sauer was not wholly averse to integrating Amerindian knowledge and ingredients in his herbal, which was a shift from the suspicion some medical writers had voiced in earlier periods and persisted into the eighteenth century.[368] Another ingredient that he included in his herbal was jalap (*Ipomoea purga*), which was only grown and harvested in Xalapa, Mexico. Sauer took a page (literally) from Zwinger's *Theatrum Botanicum*, who reported jalap's effectiveness against dropsy (*Wassersucht*), or edema as it is known today: "An denen

---

[366] Rebecca Earle, "'If You Eat Their Food...': Diets and Bodies in Early Colonial Spanish America," *The American Historical Review* 115, no. 3 (June 2010): 699. Earle's article is an excellent work that expands on Jorge Cañizares-Esguerra's *Nature, Empire, and Nation: Explorations of the History of Science in the Iberian World* (2006), which focuses on the significance of climate and Indigenous health during the early colonial era.

[367] Christoph Saur, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1770* (Germantown: Christoph Saur, 1770). The recipe is titled *Ein Mittel einen starck verenckten Fuß oder Hand bald wieder zurecht zu bringen: Man wasche den verenckten Fuß oder Arm nach- dem er zurecht gesetzt ist, mit warm gemach- ten Essig 4 oder 5 Minuten lang alle 4 Studen einmal, dieses wird den Kreißlauff der Flüstigkei- ten an dem beschädigten Ort befördern, und die Ge- schwulst entweder verhindern oder vertreiben… Alle zwei Stund nach Auftegung des Essigs muß der beschädigte Ort mit starckem Westindischen [Korn?] benetzet und hernach starck eingerieben werden.*

[368] Benjamin Rush maintained an interest in the medical practices of Indigenous Americans, but he still viewed their knowledge with skepticism. See Paul E. Kopperman, "The Attitude of Benjamin Rush (1746-1813) towards Native American Medicine," *Journal of Medical Biography* 20, no. 2 (2012): 49–56.

Kräften ist die Jalapa der ersten weit überlegen überlegen, den wegen ihres vielen Gummi, und etzenden Burgier-Saltzes führet sie auch die überflüstigen wässerigen Feuchtigkeiten stärcker aus."[369] Sauer notes the same properties and also mentions its utility for inducing vomiting. Because the plant was "indispensable," it had to be imported from New Spain.[370]

Humoral Therapeutics in the Almanacs

As we see in this chapter, many remedies listed and descriptions of various plants in Sauer's *Kalender* act largely within the Galenic humoral tradition, according to which each individual had a unique humoral composition that connected the whole human to the world. There were other medical paradigms as well that influenced therapeutic practices in the British colonies. As I argued in my first chapter, the Hallesian minister-physicians provided medical services that accounted for both the physical and spiritual health of the patient, an approach based on the teachings of the Halle physicians Georg Ernst Stahl (1659-1734) and Christian Friedrich Richter (1676-1711).[371] The unity of body and soul and pursuing a pious way of life were the "central coordinates in the medicine of the

[369] Theodori Zuingeri, *Theatrum Botanicum*, rev. ed., vol. 1 (Hans Jacob Bischoffs, 1744), 292. "Regarding its powers, the Jalapa is far superior due to its high gum content and caustic Burgier salt. It also expels excess water moisture more strongly."
[370] Weaver, 181.
[371] Stahl and Richter's view on the role of the soul in understanding the human body is apparent in Richter's *Die höchst-nöthige Erkenntniß des Menschen* [The most essential Knowledge of Mankind] (1709), where he explains the connection between the human soul with God and bodily health: "Was nun die Vereinigung selbst betrifft, so bestehet sie in einer solchen genauen Verbindung des Leibes mit der Seele, daß, ob sie gleich sonst ihrer Natur nach ganz divers und unterschieden sind, sie doch nun ein einzig Ding werden, und den Menschen zusammen constituiren" [As for what the union itself concerns, it exists in such an exact connection of the body with the soul that whether they are otherwise wholly diverse and different in Nature, nevertheless they now become a single entity and constitute the human together]. Christian Friedrich Richter, *Die Höchst-Nöthige Erkenntniß Des Menschen* (Leipzig: Jo. Fried. Gleditsch und Sohn, 1710), 79-80.

Pietists."[372] For Galen, one's health was connected with the four humors and temperaments of each person. The human body, viewed as one holistic entity, consisted of four humors: black bile, yellow bile, blood, and phlegm. Factors such as climate, diet, geographic location, sex, and the alignment of the planets impacted the individual's well-being. Thus, a healthy and balanced diet and general moderation contributed to a stable mind and body. Remedies found in German and English almanacs in early America were based on assumptions about the body and health influenced by the traditions of humoralism, originally associated with the Greek doctor Galen.

The consideration of food and balance in particular make for an interesting study because Sauer himself appreciated its importance in health; it is clear in his herbal that Sauer had a sweet tooth for he often suggested ways of sweetening certain tonics with honey/sugar or included recipes for baked goods. His recipe for a ginger candy appears in his 1762 issue, where he published the first bit of his *Kräuterbuch*. He calls for "3 loths of finely ground ginger, fresh lemon rinds well dried and ground to a powder, a half loth each of cinnamon and nutmeg, a quint each of cloves and mace, all of these ground to a fine powder. Then take two pounds of sugar and moisten it with rosewater. Put this in a new stoneware pot over a charcoal stove and let the sugar boil gently until it candies. Then stir in the ground spices and pour into a pewter dish. When it cools, store in a dry place."[373]

---

[372] Thomas Grunewald, et al., "Healing Body and Soul. Medicine and Hygiene in the 18th Century: Annual exhibition of the Francke Foundations 2021 online," *Franckesche Stiftungen,* last modified 2021, https://www.francke-halle.de/en/healing-body-and-soul.

[373] Weaver,155. Ginger was a common ingredient during the colonial era. Fresh ginger was expensive, so common households used ginger powder. Rosewater, made from rose petals steeped in distilled water, was used in sweet cooking such as puddings, custards, cakes and pastries. For more on ingredients used in

Humoral theory did not see illness as a force separate from the body. Instead, people interpreted disease as an imbalance of the humors. Treating someone required restoring equilibrium of the humors by "administering medicines with properties opposite to those associated with the humoral imbalance."[374] Other humoral treatments included bloodletting, vomiting, and dietary changes. One way of maintaining "the body's natural fluids in a proper balance" was to drink water. Sauer wrote a polemic in his almanac issued in 1772 devoted to the *Nutzbarkeit des Wasser-Trinckens* ("the usefulness of drinking water") and discouraged the partaking of "wine, brandy, and strong beer."[375]

Therapeutic advice in the *Kalender* were not only intended to address a certain ailment and offer a remedy for it, but it was also meant to prescribe preventative measures by way of restoring balance to the whole body (a nod to the Galenic theory). Because Sauer's audience was geared towards a wider audience including the subset of the community that lived in isolated areas, many of his remedies offered advice on maintaining a "moderate lifestyle" [*Eine mäßige Lebensart*], emphasizing the balance of Galen's "six things non-natural": air and environment; food (diet) and drink; sleep and wake; motion (exercise) and rest; retention and evacuation; and passions of the mind

---

colonial cooking, see Sandra L. Oliver, *Food in Colonial and Federal America* (Westport, CT: Greenwood Publishing Group, 2005), 74-5.

[374] Horrocks, 43.

[375] I include a small excerpt here. "Das Wasser ist dem Menschen am allergesundesten; dann des Menschen Leben bestehet in einer Gleichen Vermischung der natürlichen Wärme und Feutigkeit; diese Gleichheit aber kan kein anderer Tranck besser erhalten, als das Wasser, in deme das Wasser allein, das allzu hitzige Geblüt mässiget, und die abgegangene natürliche Feuchtigkeiten widerum ersetzet; so ist dann wahr, daß das Wasser dem Menschen am gesündesten seye." [Water is the healthiest thing for humans; because human life exists in an equal mixture of natural warmth and moisture; but no other drink can better sustain this balance than water, in which water alone moderates overly heated blood and restores the lost moisture; so it is true, that water is the healthiest for humans]. Sauer lists many of the benefits which hold true even today, e.g., prevents gout, kidney stones, acid reflux and heartburn. Christopher Sauer, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1772* (Germantown: Christoph Saur, 1772).

(emotions).[376] Therefore, some therapeutic advice was lengthy and compiled from other published sources most likely intended for literate artisans and farmers. More specifically, dietary and lifestyle suggestions often precede the actual treatment for the diseases. Under the entry for *Wassersucht* [dropsy, or edema] in "Einige bewährte Recepte vor Menschen und Vieh aus Buch: Die nützliche Haus-Apotheck genannt" [Some tried and tested recipes for people and animals from the book: the useful home pharmacy], it recommends a diet of "mostly dry food, without drinking too much, rusks [*Zwieback*] dipped in wine, toasted bread, roasted lamb, and all that is warming and dry along with the spices cinnamon and ginger, which are the best." Other helpful ingredients include parsley, celery, garlic, onions, garlic, mustard, and horseradish. Keeping the body warm is essential for minimizing swelling, and physical activity such as walking and riding are excellent. It is not until the end of the entry that we reach some concrete cures against dropsy: one can drink a concoction of sea-onion-powder [*See-Zwiebel-Pulver*] with saltpeter mixed in cinnamon water twice per day, or one can take a tablespoon of whole, unground mustard in a glass of wine every morning and evening.[377]

Settlers in early America including Sauer and other German-speaking settlers adhered to the Galenic paradigm. Sauer wrote a section titled "Von Gesundheit und Kranckheit" in the 1749 edition of *Der Hoch-Deutsche Americanische Calendar.* He explains that in Europe, stargazers predict the outbreak of an epidemic using celestial information. The "poor Adamic race falls under the power of the stars and elements, and

---

[376] Jack W. Berryman, "Motion and Rest: Galen on Exercise and Health," *The Lancet* 380, no. 9838 (2012): 210.
[377] Christoph Saur, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1773* (Germantown: Christoph Saur, 1772).

the meeting or aspects sometimes cause long periods of dry or wet weather; if it is warm and humid, this causes the blood in humans and other animals to rot. Other weather conditions cause the fluids to evaporate and dry up." Sauer continues to describe environmental conditions in Pennsylvania, where "people who live near the swamps and fungi get fever due to too much moisture and vapor from the earth and putrescent air. As a result, this causes the body to become too wide and makes one's blood impure." To purge the impure blood, Sauer recommends "something astringent such as China shells, oak shells, dogwood shells, clean tree root shells, or plantain root (not too much at once, only so much as can lay on a pen) 2-3 times per day."[378]

Scholars such as Thomas A. Horrocks and Louise Hill Curth have discussed the topic of food and therapeutic advice in their works but mainly in English almanacs. The role of food brings up an interesting intersection within the history of medicine. The circulation of Sauer's prints reached deep into the Pennsylvania hinterland. With his *Kräuterbuch*, Sauer provided descriptions of each herb or plant and the appropriate German, English and Latin names along with their respective practical and medical uses. It was "adopted to the comprehension of the most illiterate."[379] A number of treatments

---

[378] "In Pensylvanien ist es gewöhnlich alle Jahre, daß die Leute welche am Wasser wohnen, wo viel Sümpff und Schwambe sind, daß sie das Fieber bekommen von der zuvielen Feuchtigkeit und Dämpffen aus der Erden und saulenden Lufft, da warden dann die Gesäße zu weit, und fället zu viel unreins mit unter den reinen Lebens-Safft, so wird das gantze Blut unrein, wer dann bey zeiten das unreine auspurgirt, und dann etwas zusammenziehends braucht, als China-Schalen, Eichen-Schalen, Hunds-Holtz-Schalen, ode reinige zusammenziehende Baum-Wurtzel-Schalen, oder Wegrig-Wurtzel, es fey von der Spitzen oder breiten Wegrich, doch nicht zu viel auf einmahl, etwa nur so viel als auf einem Pens liegen mag, 2 bis 3 mal des Tags, auch wohl vor starcke und sonst gefunde Naturen einen halben Löffel voll, auch wohl einen gantzen bey starcken Naturen, so gehet das Fieber vorbey; Die schwächliche und sonst tränckliche Naturen nehmen nur wenig." Christoph Saur, *Der Hoch-Deutsch Americanische Calender, Auf Das Jahr Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi 1749* (Germantown: Christoph Saur, 1748), Martin Library of the Sciences.

[379]Cassel, "The German Almanac of Christopher Sauer," 60.

called for ingredients that were readily available (e.g., fruits, herbs, and spices) in the German household or obtainable in the New World environment.

Although the field has changed in recent years, historians of medicine have been more fixated on the therapeutic side of things and as a result overlooked the aspect of preventative medicine, where the topic of food and diet were brought up.[380] Based on quantitative data found by Robert Weston, there was overwhelming evidence in letters written by physicians in France between 1655 and 1789 to "adopt dietary restrictions" to improve one's health.[381] Thus, the eighteenth century is a fertile period for studying the shifts in the medical relationships between the food and body (from preventative medicine to a curative one). Ideas about the role of food and drink gained traction during this period represented by the writings and letters from doctors including Samuel-Auguste Tissot and Scotsman George Cheyne (c. 1671-1743). Cheyne, who himself struggled with obesity for most of his life, wrote *Essay of Health and Long Life* (1724) and *The Natural Method* (1740) that placed regime and diet to the forefront in relation to one's health.[382] His writings influenced prominent figures such as the Methodist leader John Wesley (1703-91), who borrowed entire sections of *The Natural Method* into his manual of popular medicine *Primitive Physic; or An Easy and Natural Method of Curing Most Diseases* (1747). Just like Sauer, Wesley was more concerned with providing a

---

[380] Though it is a bit outdated, Erwin H. Ackerkneckt's book is probably the best example of a survey that overlooks the significance of diet and regimen in the eighteenth century. See Erwin H. Ackerknecht, *Therapeutics from the Primitives to the 20th Century (with an Appendix: History of Dietetics)* (New York: Hafner Press, 1973). For a more recent work, see E.C. Spary's essay "Food," in *A Cultural History of Medicine in the Age of Enlightenment*, ed. Lisa Smith (London: Bloomsbury, 2021), 29–50.
[381] Robert Weston, *Medical Consulting by Letter in France, 1665-1789* (Farnham, Surrey: Ashgate, 2013), 179.
[382] Anne Charlton, "George Cheyne (1671 or 73-1743): 18th-Century Physician," *Journal of Medical Biography* 19, no. 2 (2011): 49–55.

book for anyone while making sure that "his readers [would] have the materials easily at hand."[383]

Certain years such as the issue from 1774 under "All kinds of medicinal remedies" [Allerley nützliche Artzney-Mittel] give direct directions on curing an illness or disease; there are no regimented instructions oriented towards prevention. However, two years prior (1772), the *Kalender* lays out *Gesundsheits Regeln,* or rules for health, which stress balance in one's life to stay "fresh and healthy." To stay free from illness, one had to "always eat and drink moderately; never be too gluttonous…wash your hands, teeth, and eyes."[384] Staying healthy constituted more with one's way of life—to achieve qualitative and humoral balance within the body. Sauer's advice on preventing the "common fever" [*gemeine oder kalte Fieber*] probably best encapsulates this. He goes on at length on the particulars that causes a fever, which was the consequence of a "spoiled stomach laden with water, bile and mucus": the ones most susceptible to this were the people who lived in low places near water, worked extensively in cold and wet places, were outside a lot in the night air, laid on the bare ground, or ate watery and unripe fruit, especially stone fruit.[385] The next set of advice delves on adopting a "fattening lifestyle" [eine mästige Lebensart] to strengthen the stomach and lists out specific herbs and roots

---

[383] William Stroup, "Meat, Ethics, and the Case of John Wesley," in *Orthodoxy and Heresy in Eighteenth-Century Society: Essays from the DeBartolo Conference*, ed. Regina Hewitt and Pat Rogers (Lewisburg: Bucknell University Press, 2002), 273-5.
[384] Christopher Sauer, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1772* (Germantown: Christoph Saur, 1772).
[385] Und weil das sogenandte kalte Fieber einen verdorbenen, mit wässerigkeiten, Galle und Schleim beladenen Magen. zum Fundament hat, (daher Leute die an niedrigen Plätzen bey Wassern wohnen, oder sonst viel im kalten und naßen arbeiten, oder viel in der Nachtluft draussen sind, auf der bloßen Erde liegen, oder wässerig unzeitig Obst, sonderlich Steinobst essen, am meisten damit behastet sind. Christoph Saur, *Der Hoch-Deutsch Americanische Calender, Auf Das Jahr Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi 1775* (Germantown: Christoph Saur, 1775.

that are either effective in removing "unhealthy moisture" during frigid conditions or restoring the stomach to its proper warmth and digestive power once the frost and heat have passed. Each of the humors were associated with a taste profile and elemental quality (i.e., dry or wet). Blood is sweet; yellow bile is bitter; phlegm is salty; and black bile is sour.[386] The type of food and its preparation were important as they impacted the food's humoral affinities. The herbs and roots described above are meant to remove moisture and thus have a "dry" quality (associated with the earth). The fundamental principle of a diet that followed the humoral theory then was to balance the individual's excess humor with its opposite humor.

While not all remedies list out preventative measures, the ones that do focus on foods and drinks to avoid. In a remedy for combatting consumption, Sauer provides the recipe for a syrup and follows up with specific dietary restrictions: One should abstain from pork, wheat bread and salt. The food should not be heavy but nutritious; broths, dried bran and the like are useful along with molasses beer to drink.[387] In an earlier issue of his almanac in 1773, Sauer had another set of directions that gave preventative measures but also a cure for consumption. Medicines were mostly ineffective against this illness. Instead, one must adhere to a moderate lifestyle avoiding "all strong, sour, wrinkled, foods." To address the illness itself, people should consume vegetables, soups made from calves' feet, and chicken broth. Milk and floury foods are beneficial as well,

---

[386] Jacques Jouanna, *Greek Medicine from Hippocrates to Galen: Selected Papers*, ed. Philip van der Eikj, trans. Neil Allies (Brill, 2012), 339 fn 20.

[387] Seine Speise soll nicht schwer aber nayrhast seyn, Brühen, Rocken-Brey und dergleichen, ist dienlich, und Molasses Bier zum Trank. Christopher Sauer, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1777* (Germantown: Christoph Saur, 1777).

particularly fresh goat milk and horse's milk. Sauer did note that these two milks were difficult to obtain but also recommended the breast milk of a healthy woman as one of the best remedies against consumption if they were not disgusted by it.[388]

What particularly stands out between these two remedies is how advice from 1773 includes the emotional disposition, or "the passions," that one should avoid: "anger and all bad emotions are extremely harmful" [Zorn und besstige Gemüthsbewegungen sind höchst schädlich].[389] Under his general rules of health, he urges others to "avoid worry, anger, envy, melancholy."[390] An individual's temperament too played an integral role in the person's health and was connected to the one's emotions. Based on a person's temperament (phlegmatic, choleric, melancholic, or sanguine), certain emotional states manifested as a result of excess of humor: melancholic people with an excess of black bile tended to be sad or depressed, whereas choleric people with an excess of yellow bile were prone to being angry and impulsive. The correlation between emotional state and humoral balance is complex and did not simply equate one's emotional state to wellbeing. Rob Bouddice warns us against our modern understandings of the word 'temperament' as an immaterial quality; in the context of humoralism, emotional

---

[388] It seems that any type of warm soup is ubiquitous for helping any ill person feel better, even in today's culture. Bey der Auszehrung richten die Artzenenen selten viel aus, sondern es kommt mehr auf eine mässige und zu dieser Kranckheit dienende Lebensart an, alle starcke, sauere, faltzige Speißen und Geträncke müssen wie Gift gemiden werden, Milch und Mehl- Speißen. Gemüße, Suppen von Kälber Füßen und Hüner-Brühen sind es eigentlich woran sich ein Schwingsüchtiger halten soll… Geißen Eßels-und Mären-Milch frische getruncken, sind u2beraus dienliche Mittel, die ersteren zwey sind aber hier zu Lande rahr zu friegen, und das leztere auch nicht allezeit zu haben; wer ohne Eckel die Milch von einer gesunden Frauen selbst aus der Brust trincken kann, der wird finden, daß solche eines der besten Artzenenen in der Schwindsucht ist. Saur, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1773.*

[389] Saur, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1773.*

[390] Sauer, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1772.*

disposition was entirely physical and manifested itself through the moods, passions, and so on.[391] Based on this foundation, Sauer's advice for patients to avoid distinct emotions because of how entwined they were with the humors.

Utilizing (not consuming) certain foods as a healing agent/salve was also not unusual. The use of basic food such as bread, flour, and milk in poultices have a long history dating back to ancient times. Nevertheless, the history of poultices (also known as cataplasm) is not very comprehensive, and there are very few works that deal with the subject matter, especially during the eighteenth century.[392] In a similar purview, the use of food itself to alleviate pain is minimal in the literature, but it is worth investigating because Sauer's *Kalender* refers to many poultices, concoctions, and ointments created from food stuffs all meant to be applied to an afflicted body part. Moreover, if we consider the context of the intellectual debate between chemical vs. botanical medicine during the mid- and late-eighteenth century, this belief in the healing power of the natural world through plants and herbs (in contrast to relying on harsh chemical medications) was more welcomed by the common and poor families never mind the difficulty in obtaining specific chemicals. For alleviating pain associated with stitches [*Seitenstechen*], the remedy recommends layers of rolled oats and bread as hot as the person can tolerate. Alternatives such as white bread cooked in milk with oil or butter or heated cabbage

---

[391] Boddice, 56.

[392] Argiro Agelarkis, Benjamin Weeks, and Anagnostis Agelarakis, "Investigation on the Nature, Preparation, and Medical Effectiveness of Hippocratic Cataplasms Potentially Used in the Treatment of Head Trauma among Warriors in Eleutherna and Elsewhere in Ancient Greece," in *Proceedings of the International Archaeological Conference and Symposium - Eleutherna, Crete and the Outside World* (Crete: University of Crete, 2020). Mary Lindemann mentions poultices a few times throughout her book but does not expound much on them. See Mary Lindemann, *Medicine and Society in Early Modern Europe* (Cambridge: Cambridge University Press, 1999).

leaves also worked.[393]A plaster made from mustard seeds and grated horseradish with sourdough could be wrapped in cloth and tied to the soles of one's feet to provide relief from a headache.[394] Some of the remedies addressing breast pain for women are crafted using a combination of food ingredients. To soften hard and swollen breasts, one needs to take a few white turnips and put them in the oven with some bread. Then squeeze out the juice of the turnips, crush them, and scrape an ounce of Bolus Armoniac (a type of red clay that was could be used as a styptic and effective against diarrhea, bloody coughs, and reducing acidity) on them.[395] Make a dressing out of this mixture with fresh butter and place it on the woman as warm as she could tolerate.[396] Another recipe for treating deep wounds in the breast called for a spread made out of good wax, sheep tallow, fresh unsalted butter, rose water and fresh marigolds to be applied to the wounded breast. Medicaments made from organic material were not new by any stretch of the imagination during this period, but its presence in *Kalender* and other housekeeping guides reflects the divide between home remedies and those available for purchase at the apothecary.

---

[393] Christopher Sauer, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1773* (Germantown: Christoph Saur, 1773). Under the section "Vom Seitenstechen," Ueberschläge von geröstetem Haber und Brod, so heiß es der Krancke erleiden kann, einmal übers andere übergelegt; oder welches vielen noch besser zuschlägt, weiß Brod in Milch gekocht, und Baumöl oder frische-Butter dazu gethan, und auch so wie obiges übergelegt. Auch Kohl-oder Cabis Blätter heiß gemacht und über den schmertzhafften Ort gelegt, thut auch gute Dienste.
[394] Sauer, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1773* (Germantown: Christoph Saur, 1773). Under the section "Vors Kopfweh," Man kann auch Senss-Saamen sein stossen und geschabten Mehrrettig mit Sauerteig zu einem Pflaster machen, und auf Tücher geschmiert auf die Fuß-Sohlen binden, und wann es nothig ist es etliche mal wiederholen.
[395] Danae Venieri, et al., "Bridging the Gaps: Bole and Terra Sigillata as Artefacts, as Simples and as Antibacterial Clays," *Minerals (Basel)* 10, no. 4 (2020): 4. According to an study done by the Pharmacy Museum of the University of Basel in 2020 testing the antibacterial properties of six medicinal earths, only the red Armenian bole was found to be antibacterial against both Gram-positive and Gram-negative bacteria.
[396] Sauer, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1769.*

These medicines and ingredients needed to prepare them did not require formal training and allowed the ordinary settler to administer medical treatment within the confines of their own home.

Conclusion

Sauer's *Der Hoch-Deutsch Amerikanische Calender* functioned as part of the medical infrastructure for German readers who did not readily have access to a physician. It provided a combination of remedies and advice that could be helpful to the German household. Within the pages of Sauer's *Calender*, medicine is painted in the popular language of humoralism, yet Sauer's stance is clearly eclectic. He was less focused on engaging with the particularities of a theory but rather what has proven to be effective against an illness or malady. By doing so, he has rendered cures legible and available to German-speaking settlers in Pennsylvania. The serialized *Kräuterbuch* collects the properties and remedies of plants into a procurable herbal. This proved to be the case with Otto Christoph Kropstrup's handbook in Chapter 2. In his herbal, European descriptions and uses of botanicals are provided, but specific specimens of flora were not indicated. As a result, this opened the possibility for finding native equivalents grown in North America as a substitute (e.g., agrimony, birch tree, Seneca snakeroot), which oftentimes shared similar properties. German almanacs did more than simply transmit botanical knowledge from the Old World. They amassed an operable therapeutics for colonial households, blending Old World recipes with substitutes from the New World. The practical and local assemblage of the *Calender* sets the stage in the next chapter to

women's medicine and the *Weiber-Büchlein,* moving from the printed page into the lying-in room.

CHAPTER 4: THE MIDWIFE'S BOOKLET: GERMAN WOMEN'S HEALTH IN EARLY AMERICA

For the first 250 years in American history, childbirth was a social occasion for the laboring mother, often surrounded by her female family members, friends, and the midwife. The delivery room was the dominion of midwifes during colonial times and early American republic; it was also a place where the women involved supported and commiserated with each other while gossiping and sharing the latest rumors and recipes.[397] The childbirth process remained a dangerous affair throughout the eighteenth century and was potentially a time of great joy or sorrow. Certain protocols were followed to ensure a safe delivery. Remedies for mothers and their newborn children shared similarities in seventeenth- and eighteenth-century midwifery texts and were often borrowed from older recipes, but sometimes small alterations were made. Let us use leeks as an example. I have found at least three different remedies using leeks to help the mother during labor. One recipe in England used in the eighteenth century called for a "mixture of [the patient's] husband's urine and the juice of leeks during labor," which was "a notable prescription among Country midwifes, but a horrid medicine and as often mischievous as prescribed."[398] The second remedy came from Nicholas Culpeper's *A Directory for Midwives* (1651), an influential text published in London and widely circulated in America: "the Juice of Leeks being drunk with warm water, hath a mighty

[397] Alyssa Kirkman, "The Meeting of Mothers, Midwives, and Men," *Tenor of Our Times* 2 (2013): 11.
[398] Mary E. Fissell, *Patients, Power, and the Poor in Eighteenth-Century Bristol* (Cambridge: Cambridge University Press, 1991), 60.

Operation to cause speedy Delivery."[399] The third example is found in a 1799 copy of the *Kurzgefaßtes Weiber-Büchlein* [concise women's medical booklet] prescribed leek juice to heal a "woman's secret place" if it was damaged.[400]

Midwifery was held in high esteem in colonial and early America and held a prominent role in the household. Throughout the early modern period up until the nineteenth century, childbearing was viewed as the natural lot, divinely ordained, of women; childbirth was a festive occasion for the community of women; and the delivery was meant to be supervised by a midwife. While historians have been (to some extent) able to construct the historical lives of midwifes in America in the eighteenth century exemplified through the midwife Martha Ballard who recorded her births from 1785 to 1812, there is work to be done regarding German-speaking midwifes in early America. Historians Annemarie Kinzelbach and Gabrielle Robilliard have argued that midwifes held a more privileged position in German society compared to their English counterparts, but it is less clear of their status in the American context. The practice of midwifery nonetheless remained essential in German communities in early America evident by the multiple printings (at least 10 editions) of the *Kurzgefaßtes Weiber-Büchlein*, which first saw its publication by the Ephrata press in 1796.

The scope of this chapter primarily focuses on the early American republic, starting in 1796 and ending around 1810. I also briefly go back to the mid-eighteenth

---

[399] *A Directory for Midwives* appeared in the libraries across New England; see Richard W. Wertz and Dorothy C. Wertz, *Lying-In: A History of Childbirth in America* (New Haven: Yale University Press, 1989), 305; Olav Thulesius, *Nicholas Culpeper: English Physician and Astrologer* (New York, NY: St. Martin's Press, 1992), 181

[400] Welcher Frauen die heimliche Stätte versehret, die nehme Saft von Lauch, und halts darüber, es heilet es. *Kurzgefaßtes Weiber-Büchlein. Enthält Aristotels Und Alberti Magni Hebammen-Kunst, Mit Den Darzu Gehörigen Recepten. Die Zehnte Auflage* (Harrisburg, Pa.: Benjamin Mayer, 1799), 30.

century to discuss the Ephrata Cloister under the leadership of Conrad when the community was at its peak. I address the void regarding German-speaking midwives in early America by analyzing the *Kurzgefaßtes Weiber-Büchlein* (later published under the title *Nützliches und sehr bewährt befundenes Weiber-Büchlein*, or "Useful and well-proven women's booklet"). This small manual, numbering between 40-70 pages depending on the edition, is fascinating piece of work because it was the only German midwifery text printed in America during the eighteenth century and early nineteenth century.[401] I also want to point out the title page of the *Weiber-Büchlein*, which advertises the book "containing the midwifery arts of Aristotle and Albertus Magnus" (Figure 9). The contents of the book were attributed to Aristotle and the medieval Swabian bishop Albertus Magnus, but the reference to Aristotle was in name only and merely an allusion to his popular reputation as a sex expert.[402] The details surrounding the booklet's

[401] Based on the bibliography of German publications between 1728 and 1810 compiled by Karl John Richard Arndt and Reimer C. Eck. See Karl John Richard Arndt and Reimer C. Eck, eds., *The First Century of German Language Printing in the United States of America: A Bibliography Based on the Studies of Oswald Seidensticker and Wilbur H. Oda.*, 2 vols. (Göttingen: Niedersächsische Staats- und Universitätsbibliothek, 1989).

[402] Mary E. Fissell makes this connection to Aristotle as a sex expert back to an earlier pseudo-Aristotle work, *Aristotle's Problems,* published in English in 1595, which contained some of the "most explicit discussions of the mechanics of sex and reproduction" available at the time. Mary E. Fissell, "When the Birds and the Bees Were Not Enough: Aristotle's Masterpiece," *The Public Domain Review*, last edited August 19, 2015, https://publicdomainreview.org/essay/when-the-birds-and-the-bees-were-not-enough-aristotle-s-masterpiece/. Vern L. Bullough also points out how using Aristotle's name gave more credence to a text because "he tended to represent authority on many matters of science." Additionally, there were several other treatises that included Aristotle's name (but not actually written by him) including *Aristotle's Last Legacy, Aristotle's Experienced Midwife,* and *Aristotle's Book of Problems*. Vern L. Bullough, "An Early American Sex Manual, or, Aristotle Who?," *Early American Literature* 7, no. 3 (1973): 236.

Kurzgefaßtes
Weiber = Büchlein.
Enthält
Aristotels und Alberti Magni
Hebammen = Kunst,
mit den darzu gehörigen
Recepten.

Die zehente Auflage.
Im Jahr, 1799.

Figure 9: Title page of Kurzegefaßtes Weiber-Büchlein. Enthält Aristotels und Alberti Magni Hebammen-Kunst, mit den darzu gehörigen Recepten. Die Zehente Auflage (Harrisburg, Pa.: Benjamin Mayer, 1799).

publication gives us greater insight to the peculiarities of this text, especially if we consider it alongside Mary E. Fissell's writings on *Aristotle's Masterpiece*.

Aristotle's Masterpiece, one of the bestselling works on reproduction, was first published in London in 1684 and printed well past the 1930s. The book was actually not written by the ancient Greek philosopher himself but was instead composed largely from two earlier works: Levnius Lemnius's *Secrets Miracles of Nature* (1611) and Thomas

Chamberlayne's *The Compleat Midwife's Practice Enlarged* (1656).[403] One of the questions Fissell is interested in is "how popular writers appropriated bits of knowledge and remade them into something else."[404] It was not uncommon for early modern writers to take the learned writings from older texts and publish it (often under a different name). Unsurprisingly, most of the information in the *Weiber-Büchlein* was plagiarized from various sources. Like Fissell, I am interested in exploring why the publisher selected the specific pieces for the *Weiber-Büchlein*—and why certain aspects were omitted. As the contents of the *Weiber-Büchlein* consisted of a mix mash of knowledge originating from Latin, German, and English works, the booklet was not merely a simple translation. It was transmuted for German readers in America and in particular, the members of the Ephrata Cloister (though not necessarily limited to them). The first part of this chapter focuses on the historical background and contents of the *Weiber-Büchlein*. I argue that the booklet was more than a partial translation of the most popular English sex manual; it was inherently a German publication—and more specifically, a work by the Ephata Cloister—that was tempered to fit the needs of a German community in early America.

Because historians have disproportionally placed more attention on midwifes in the English/American case, my analysis of the *Weiber-Büchlein* in early America provides a window on German midwifery and obstetrics that has been unexplored. In the nineteenth century, obstetricians depicted midwifes in England and America as "ignorant,

---

[403] Mary E. Fissell explains that the popularity of *Aristotle's Masterpiece* was attributed to its cheap price (often found used for a shilling at a market stall) and its explicit sexual content. In the seventeenth century, "books might talk about how seeds met in the womb, for example, but nothing was said about how those seeds got there." Mary E. Fissell, "Prying in the Secrets of Nature: Reading Aristotle's Masterpiece," in *Sources and Methods in the History of Sexuality* (London: Routledge, 2024), 91-2.
[404] Mary E. Fissell, *Vernacular Bodies: The Politics of Reproduction in Early Modern England* (Oxford: Oxford University Press, 2005), 6.

superstitious and dirty," and male physicians "saved" women and children from their ministrations.[405] This narrative was upended by Barbara Ehrenreich and Deirdre English's *Witches, Midwives, and Nurses: A History of Women Healers* (1973), which generated a debate that was laudable for "campaigning for greater access for women to the management of their own health" yet problematic because it perpetuated the myth of the "witch/wise woman/sage femme/midwife link."[406] Tania McIntosh observes that the history of maternity and midwifes has been driven by complex contemporary agendas and resulted in works that is "reductionist in nature" and too focused on the "positives or negatives of progress."[407] As a pivotal work published during a period when women midwifes were becoming increasingly shadowed by the generation of professional man-midwifes, male physicians, and medical institutions, the *Weiber-Büchlein* did not malign the status of the midwife in German-speaking communities in Pennsylvania.[408]

In the second half of the chapter, I discuss two German midwifes, Susanna Rohrer Müller [Miller] (1756-1815) and Rosina Heydrich (1737-1828), who lived and practiced in Pennsylvania. Both women left behind records dated around the late 1700s and early 1800s that showcased their prowess as midwifes. Unfortunately, both manuscripts have

---

[405] Mary E. Fissell, "Man-Midwifery Revisited," in *Reproduction: Antiquity to the Present Day*, ed. N. Hopwood and R. Flemming (Cambridge: Cambridge University Press, 2018), 320. See also Laura E. Ettinger, *Nurse-Midwifery: The Birth of a New American Profession* (Columbus, OH: Ohio State Universiy Press, 2006), 1-10.

[406] David Harley, "Historians as Demonologists: The Myth of the Midwife-Witch," *The Society for the Social History of Medicine* 3, no. 1 (1990): 20.

[407] Tania McIntosh, *A Social History of Maternity and Childbirth: Key Themes in Maternity Care* (New York: Routledge, 2012), 5-6.

[408] The period of the Enlightenment wrought new ideological debates about the division between women and men; in particular, one of the more influential ideas recast female identity as being rooted in the women's reproductive organs. As a result, physicians in the early nineteenth century were invested in the nature of the uterus as a way of "understanding reproduction as a pathological process." Nora Doyle, *Maternal Bodies: Redefining Motherhood in Early America* (Chapel Hill: University of North Carolina Press, 2018), 33, 38.

been damaged by the ravages of time, but the surviving information help piece out the responsibilities and knowledge of a group that have yet to be looked into. Unlike the instructions provided in the *Weiber-Büchlein*, the manuscripts of Susanna and Rosina illustrate the more down-to-earth contributions that both women had in their communities. Moreover, Susanna and Rosina, who were both mothers and presumably self-taught, passed their skills down to their daughters.[409] Midwifes either passed down their experience and knowledge to their daughters or apprentices. Susanna and Rosina left an indelible mark for the families they served based on the incredible number of births both midwifes attended to (1,667 and 1,739 cases respectively). To put it into perspective, the Maine midwife Martha Ballard recorded 816 births between 1785 and 1812. Unlike the *Weiber-Büchlein* which primarily focused on the duties of the midwife in the delivery room, these manuscripts offer a glimpse into the healing and ritualistic traditions of two leading German midwifes in Pennsylvania. In particular, Rosina left a collection of healing remedies (numbering around 150) in her manuscript. Though in a sense, recipe books may lack a narrative frame, a careful reading into these sources can tell us much about women and healing.[410] Recipes often followed a formulaic pattern, and we see it in Rosina's recipes, where she first identified an herb or material for a specific remedy or listed out the symptoms or conditions and the corresponding substance. Most of her remedies dealt with issues regarding women's health. Recipes for

---

[409] M.D. Learned and C.F. Brede, eds., "An Old German Midwife's Record," in *The American Ethnological Survey: Conestoga Expedition, 1902*, vol. 12 (New York: D. Appleton & Company, 1911), 6.
[410] Mary E. Fissell, "Women in Healing Spaces," in *The Cambridge Companion to Early Modern Women's Writing*, ed. Laura Lunger Knoppers (Cambridge: Cambridge University Press, 2009), 153–4. See Elaine Leong, *Recipes and Everyday Knowledge: Medicine, Science, and the Household in Early Modern England* (Chicago: University of Chicago Press, 2018).

various ailments that pregnant women potentially endured were also included in the *Weiber-Büchlein*, but they were less structured—even moreso in early editions of the booklet.

Historians of science investigating the role of print for obstetrics and gynecology will find this chapter enlightening. While we have pioneers such as Elizabeth L. Eisenstein, who argued that print made modern science possible in ways that manuscript culture did not, recent scholars have proposed a more nuanced view.[411] Far fewer texts were available (albeit in much more copies) encapsulated by popular midwifery manuals such as Eucharius Rösslin's *Den Swangern frawen und hebammen Roszgarten* (1513) and Nicholas Culpeper's *A Directory for Midwives* (1651). The former saw almost 100 different editions published in various languages whereas the latter sparked a wave of popular works on midwifery, where each book borrowed from each other liberally (and often without acknowledgement).[412] Andrew Hadfield has pointed out that "the inauguration of cheaply reproducible printed texts altered the relations of intellectual production for ever," allowing for empirical information to be disseminated more

---

[411] Elizabeth Eisenstein, "The Emergence of Print Culture in the West," *Journal of Communication* 30, no. 1 (1980): 99–106; see also her seminal work *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early Modern Europe* (Cambridge: Cambridge University Press, 1979). While scholars have criticized Eisenstein's argument for her monocausal interpretation and technological determinism, others have exhibited a more careful understanding of her analysis. Monica H. Green has a compelling article that explores the harmful ramifications of the dissemination of gynecological texts titled "women's secrets." Monica H. Green, "From 'Diseases of Women' to 'Secrets of Women': The Transformation of Gynecological Literature in the Later Middle Ages," *Journal of Medieval and Early Modern Studies* 30, no. 1 (2000): 5–40. Pam Lieske, ed., *Eighteenth-Century British Midwifery*, vol. 1 (London: Routledge, 2016), xxvii.

[412] Barbara Hanawalt, *Women and Work in Preindustrial Europe* (Bloomington: Indiana University Press, 1986), 99. Culpeper's book had seventeen editions appear before 1777.

easily.[413] The early editions of *Weiber-Büchlein* (up to 1802) were formatted in the more accessible and cheaper octavo size. Although the Ephrata community was but a shadow of its former self by the turn of the century, this booklet was published by those who had connections (i.e., trained) to the Ephrata Cloister, a religious community that promulgated a life of discipline and self-denial.[414] Along with the contents of the booklet itself, the *Weiber-Büchlein*'s success (based on its numerous reprints) among German-speaking communities in Pennsylvania is heavily worth investigating.

Based on the extensive biographical work started by Oswald Seidensticketer and expanded by Karl Richard Arndt and Reimer C. Eck, we know that there were at least ten editions of the *Kurzegefaßtes Weiber-Büchlein* published between 1792 and 1822. This chapter works with nine of them; the one missing is the 1801 edition published by Samuel Saur in Baltimore, Maryland (and is not available in any collections). The popularity of the *Weiber-Büchlein* in late 1700s and early 1800s in German communities in the United States could help us delineate the medical landscape of German-Americans in Pennsylvania. Not only do I intend to trace out the background of the *Weiber-Büchlein*

---

[413] Andrew Hadfield, "National and International Knowledge: The Limits of the Histories of Nations," in *The Renaissance Computer: Knowledge Technology in the First Age of Print*, ed. Neil Rhodes and Jonathan Sawday (London: Routledge, 2000), 105.

[414] Janet R. White describes daily life for the Sisterhood and Brotherhood at Ephrata as "ascetic in the extreme." Few blocks of hours throughout the day were set aside for sleep, and members slept on a narrow wooden benches (~15 inches wide) with a block of wood for a pillow. Meals consisted largely of fruit and vegetables with bread with the occasional lamb stew during the Love Feast; archeological findings of "large numbers of dietary animal bones" show that eating meat was not closely observed. However, there was no evidence of smoking equipment or liquor containers. As for adherence to celibacy, written record about Ephrata indicated that there were sexual activities ongoing within the community. Janet R. White, "The Ephrata Cloister: Intersections of Architecture and Culture in an Eighteenth-Century Utopia," *Utopian Studies* 11, no. 2 (2000): 59-60.

and its revisions over time, but also study it alongside a few of the extant documents left by German midwifes in America.

The differences of the *Weiber-Büchlein*'s successive editions warrant a discussion. The first edition of the booklet in 1796 was the shortest, numbering 24 pages; it specifically dealt with childbirth and provided some general recipes (from "clearing the four complexions" to an eye drop "used for pain and clearing spots in the eyes").[415] Later editions in 1789 and 1799 included excerpts from Culpeper. Interestingly, references to Culpeper were removed in the nineteenth-century editions, but his recipes and advice for facilitating childbirth remained.[416] After the first edition, one of the most noticeable additions was a supplementary section titled *Auserlesen Recepten* [select recipes]. These recipes addressed broader maladies including fever, coughing, and rheumatism. The nineteenth-century prints of the *Weiber-Büchlein* highlighted these recipes and reorganized them into a section for "illnesses for both sexes" and added third section instructions on the art of dyeing. This change became evident by the revised title: *Kurzgefaßtes Weiber-Büchlein, Welches sehr nutzlichen Unterricht für Schwangere Weiber und Hebammen, enthält; Wie auch Die auserlesendsten Arzney-Mittel für aller Arten Krankheiten Beyderley Geschlechts. Ferner: Eine Anweisung zur Färbe-Kunst, Blaue, Roth. etc. etc. etc. zu Färben.* In these versions of the text, the sections on

---

[415] The recipes are as follows: *Ein gut Pulver, das larirt und purgiret alle vier Complexiones ohne Schaden; Ein Wasser, das Gesicht zu schärfen, für die Flecken in Augen; Ein ander köstlich und gut Aquavit, des Tugend man nicht genug loben noch beschreiben kan, dienet zu allen Gebrechen und Krankheiten des Leibes. Kurzgefaßtes Weiber-Büchlein. Enthält Aristotels Und Alberti Magni Hebammen-Kunst, Mit Den Darzu Gehörigen Recepten* (York, PA: Salomon Mayer, 1796), 49-57.

[416] Instead, the book cites "ein sehr berühmter Arzt," or a very famous doctor. *Kurzgefaßtes Weiber-Büchlein, Welches sehr nützlichen Unterricht für Schwangere Weiber und Hebammen, enthält; Wie auch auch Die auserlesenendsten Arzney-Mittel für aller Arten Krankheiten Beyderley Geschlechts. Ferner Eine Anwesigun zur Färbe-Kunst, Balu, Roth, Gelb, etc. zu Färben* (Ephrata, PA: Johann Baumann, 1804), 33.

midwifery and pregnancy remained more or less the same. Some information were reorganized under the recipes section, and additional remedies [*Hülfs-Mittel]* were provided for issues similar to those present in Sauer's *Der Hoch-Deutsch Amerikanische Kalender*: these included spleen disease [*Milz-Krankheit*], falling disease (epilepsy) [*Fallende Sucht*], and fever. Though these changes and additions appear to be innocuous, I argue that they were made to better appeal to German families living in Pennsylvania just as Sauer had done for his *Hülfsmittel für verschiedene Krankheiten der Menschen* section in *Der Hoch-Deutsch Americanische Calender*. Noticeably, there was an increasing trend of publications centered on family and animal medicine in the 1790s.[417] On the contrary, Hermann Wellenreuther has argued that the scarcity of German publications dealing with pregnancy and childbirth indicated that these were not primary concerns for German families and printers in the eighteenth century.[418] However, I argue

[417] The books focused on medicine are as follows: *Kurzgefaßtes Arzney-Büchlein für Menschen und Vieh* (Ephrata, PA: Ephrata Community, 1790); Tobias Hirte, *Ein Neues, auserlesenes, gemeinnütziges Hand-Büchlein. Herausgegeben von Tobias Hirte: Philadelphia* (Chestnut Hill, PA: Samuel Saur, 1793); Peter Gabriel, *Kurzer Bericht Von der Pest; Dessen Ursprung, Zeichen und Eigenschaft: Wieauch einige Haus-Mittel, Recepte, Rauchwerke, und politische Verordnungen bey ansteckenden Krankheiten etc. Beschrieben von Petrus Gabriel, Fürstl. Gärtnerey-Inspector zu Stuttgart* (Chestnut Hill, PA: Samuel Saur, 1793); Sebastion Knuckler, *Neuer Erfahrner, Amerikanischer, Haus-und Stallarzt, mit den natürlichsten, und leichtesten Mitteln, wider alle Kranckheiten, und Schwachheiten, der Menschen und Viehe. zum Nutzen der Deutschen Nation in den Vereinigten Staaten* (Frederic, MD: Matthias Bartgis, 1793); *Kurz gefaßtes Roß-Arzney Büchlein* (Ephrata, PA: Johann Baumann, 1802). The two publications from the Ephrata on this list, (*Kurzegefaßtes Arzney-Büchlein für Menschen und Vieh* and *Roß-Artzney-Büchlein* ("concise medical booklet for humans" and "medical booklet for horses" respectively), both sold very well. The former was in demand given that the book saw at least ten editions between 1790 and 1812. Germans were also concerned about the health of horses as the *Roß-Artzney-Büchlein* was first published in 1770 by Christoph Saur and continued to be printed through the 1800s.

[418] "The German printer Johann Gruber reprinted lectured delivered in the *Churpfälzischen Ammenschule* in Mannheim 'for the use and instruction of German-American midwives,' while the Harrisburg printer Benjamin Mayer reissued the *Kurzgefaßte Weiber-Büchelin* with its précis of what the Pseudo-Aristotle and Albertus Magnus had to say on childbirth. The scarcity of German-language broadsides on medicine, along with the discovery of only two German-language broadsides dealing with pregnancy and giving birth, confirms that neither was a primary concern for German women, families, and printers in the eighteenth century." Hermann Wellenreuther, *Citizens in a Strange Land: A Study of German-American Broadsides*

otherwise as the multiple reprints of the *Weiber-Büchlein* in Pennsylvania suggested that there was a demand for such information.

This chapter centers 1790-1810 because the *Weiber-Büchlein* made several reprints during this period. Yet to explain why the booklet took the form it did, I briefly step back to 1740 and 1794 to discuss the Ephrata context and its press, which printed most editions of the *Weiber-Büchlein* and arranged the manual's content and format. One of the distinguishing characteristics about the editions (barring two) of the *Weiber-Büchlein* was that they were published by printers who had trained at (or had some lineage to) the Ephrata Cloister, the religious community founded by Johann Conrad Beissel in 1728. This is remarkable because the Ephrata press concentrated its efforts in primarily producing religious texts. Indeed, most of the cloister's publications were intended for consumption for members of the community and nearby religious groups including the Mennonites and Quakers. Although it is not known whether they were related by blood, Salomon and Benjamin Mayer took charge of the Ephrata print shop together in the 1790s, which had been leased to them once the press closed in 1794.[419] Under this new ownership, there were at least two medical texts that the press printed: the *Kurzegefaßtes Arzney-Büchlein, für Menschen und Vieh* and the *Kurzegefaßtes Weiber-Büchlein*. The latter was printed at least four times at Ephrata in 1798, 1804, 1806, and 1822. The *Weiber-Büchlein* made its first appearance in 1796 in York, Pennsylvania, by

---

and Their Meaning for Germans in North America, 1730-1830 (University Park, PA: Pennsylvania State University Press, 2013), 78.

[419] Julius Friedrich Sachse, *The German Sectarians of Pennsylvania, 1742-1800: A Critical and Legendary History of the Ephrata Cloister and the Dunkers* (Philadelphia: P.C. Stockhausen, 1990), 480-1.

Salomon [Solomon] Mayer, who proceeded to publish another edition in 1799.[420] The next couple of editions were published by Benjamin Mayer in 1798 and 1799. Benjamin published the tenth edition of the booklet in 1799, but the bibliographical record only shows two prior publications of the text. Within the span of only three years, the *Weiber-Büchlein* saw several revisions and lend credence to the fact that it was a popular medical manual among Germans in Pennsylvania. Nineteenth-century versions of the book were published by the third-generation of the famed Sauer dynasty, Samuel Saur (1767-1820); Gottlob Jungmann and Carl Andreas Bruckmann; and Johann Baumann. Baumann was taught by his father, who was a brother at the Ephrata cloister, and transferred the printing equipment at the cloister to his private house in Ephrata.[421]

Before progressing further on the *Weiber-Büchlein*, a closer look into sexual and gender relations within the Ephrata community before Beissel's death in 1768 may illuminate the contents (or lack thereof) of the booklet itself. While the *Weiber-Büchlein* was first published in 1796, an explanation about the values of the Ephrata Cloister and history of its press provides a clearer purview about why the book was published in the first place—after all, why would an ascetic community require a guide on midwifery? Such stimulating matter had no place for the brothers and sisters of the Ephrata settlement. Aside from its music, Ephrata was known for its emphases on worldly detachment and withdrawal from the outside community. The community maintained division of the sexes (similar to other dissident Protestant groups such as the Moravians)

[420] The Ephrata community also established their presence at the Bermudian creek in York county (about 15 miles from the town of York, PA) in 1758.
[421] Hermann Wellenreuther, *Citizens in a Strange Land,* 17. Wellenreuther clearly lays out one lineage of the print tradition of Ephrata through the Baumann family, which ended in 1830.

and adherence to celibacy. For a spiritual leader who stressed denying physical pleasures of the world, particularly the sexual impulse, Beissel devoted some of his writings and sermons towards sexual imagery.[422] At Ephrata, the celibate brothers, called the Brotherhood of Bethania, lived in a worship house called a Saal. The female branch, initially called the Order of Spiritual Virgins, reorganized in 1746 into the Spiritual Order of the Roses of Sharon [Saron]. Interactions between the sexes were forbidden, but it is recorded that Beissel himself dallied around with the sisters of the cloister—even engaging in sexual relations with several of them.[423] Ironically, it was Beissel who encouraged intercourse among the sisters upon consoling Maria Barbara Knoll (the wife of Jean-François Reynier), who felt guilty for having sex with him: "Was wilst du dann anderst? Das ist ja gut! Daß dirs so gangen ist; das ist das einzige Mittel was dir und denen andern Schwestern den Mangel des Mannes ersetzen kan."[424] Discounting the paradoxical sexual opportunities that Ephrata offered, the sisters at the cloister enjoyed

---

[422] For more on the gendered and bridal imagery in his writings such as the *Dissertation* and *Geistliche Reden*, see Jeff Bach, *Voices of the Turtledoves: The Sacred World of Ephrata* (University Park, PA: Pennsylvania State University Press, 2003), 35-47; Walter C. Klein, *Johann Conrad Beissel: Mystic and Martinet, 1690-1768* (Philadelphia: University of Pennsylvania Press, 1942), 31-73. Klein argues that Beissel's thoughts on marriage was indebted to Ernst Christoph Hochmann von Hochenau (1670-1721), who described five kinds of wedlock: one that was "a respectable form of prostitution"; the second was "purely natural" though less carnal; the third was the union of two Christians, and sex was intended only for reproduction; the fourth was a "wholly spiritual union," or virginity in a sense.

[423] In his study on Jean-François Reynier and his wife Maria Barbara Knoll, Aaron Spencer Fogleman describes Maria Barbara's risqué affair with Beissel and similar experiences that the other sisters had with the flagrant leader. Aaron Spencer Fogleman, *Two Troubled Souls: An Eighteenth-Century Couple's Spiritual Journey in the Atlantic World* (Chapel Hill: University of North Carolina Press, 2013), 214-32.

[424] "What else do you want then? That is good that it happened to you! It is the only way that you and the other sisters can compensate for the absence of your husbands." Ezechiel Sangmeister, *Das Leben Und Wandel Des Gott Ruhenten Und Seligen Br. Ezechiel Sangmeisters*, vol. 3 (Ephrata: Joseph Bauman, 1826), 52.

some degree of economic freedom away from their husbands and sons, assisting with cloister's press with their creation of *Fractur-schriften*.[425]

Additionally, the sisters did administer some medical care within the community. For example, people at Ephrata recognized Maria Barbara's medical acumen (most likely obtained from her travels with her husband) and was referred to as "Doctorin Renierin." One night in February 1765, Beissel himself requested some ointment for his feet from Maria Barbara and had Sister Phoebe [Phöbe] rub his foot with it. Though one may arguably say that he did this for more perverse reasons, Beissel did have the option of seeking counsel from Ole Gideon or one of the male doctors but refused on account of his rage [*Grimm*]. On another occasion, Beissel sent two sisters to attend to Sister Phoebe when she was sick.[426] While medical services at Ephrata was by and large offered by the male brothers, there were contingencies for the sisters to provide medical care. During the Revolutionary War, the Sisterhood of Sharon tended to the wounded soldiers following the Battle of Brandywine (1777) and had to confront the outbreak of typhus fever among their patients. Unfortunately, we do not know much about the cloister around this time as the records from 1773 to 1782 are missing.[427]

With Beissel's death in 1768, he was succeeded by Peter Miller (1709-1796), who was responsible for translating and printing *Martyrs' Mirror.* The Ephrata community experienced a decline with the last celibate member dying in 1813. The press continued

---

[425] Fogleman, 221. The sisters also helped with illustrating manuscript hymnals that Beissal and others composed.
[426] Sangmeister, 3: 37. It was around this time that Beissel was having a short affair with Sister Phoebe. See Fogleman, 227.
[427] D.R. Hertz, *History of Ephrata, Penna: Giving a Brief Sketch of the State and County; the Battle of Brandywine; the Cloister and Monument to Be Erected at Mount Zion; and the Borough of Ephrata* (Philadelphia: H. Ferkler, 1894), 73.

to be in service until 1794, when it would be sold to Solomon and Benjamin Mayer who both trained at Ephrata.[428] There is little in the records after 1770 to help us better understand life at the cloister. However, taking a comparative look at two different broadsides published before and after Beissel's death may help shed some light on the direction of the Ephrata press (and ultimately why the *Weiber-Büchlein* was published differently from earlier editions). Although Miller was not as charismatic as his predecessor, the Ephrata printing press continued to be active under his guidance; the Declaration of Independence was printed in five different languages, and the Continental money was printed during the time that the Continental Congress was in session at Lancaster.[429]

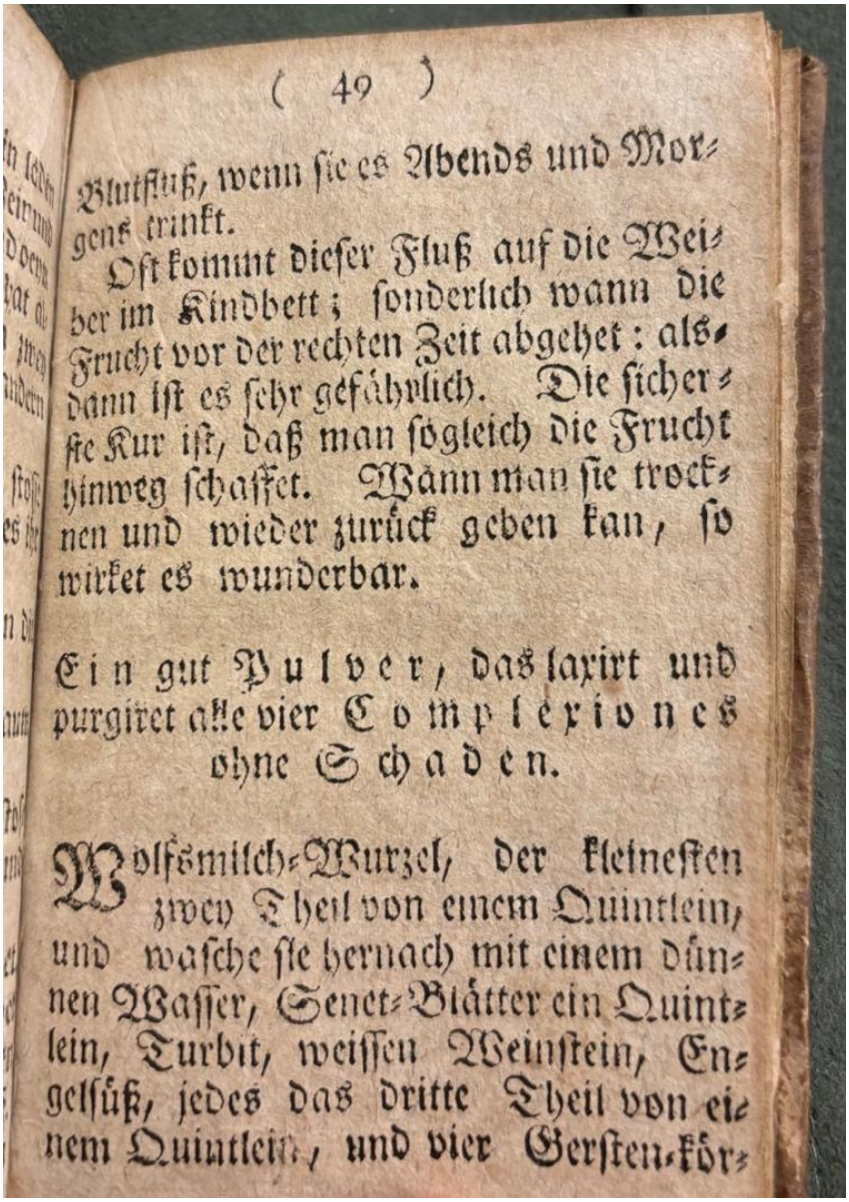
Perhaps, it was a matter of trial-and-error for the press in terms of what would appeal to a larger German audience, but there is arguably a more refined attribute to the editions published in the 1800s, i.e., better organized.[430] To give a concrete example, let us take the 1799 edition from Benjamin Mayer (Figure 10) and 1802 edition (Figure 11). In the earlier edition, there is a bit of disjunction on page 49, which abruptly introduces

---

[428] *Seventh Day Baptists in Europe and America: A Series of Historical Papers Written in Commemoration of the One Hundredth Anniversary of the Organization of the Seventh Day Baptist General Conference, Celebrated at Ashaway, Rhode Island, August 20-25, 1902*, vol. 2 (Plainfield, NJ: American Sabbath Tract Society, 1910), 1071.

[429] Printed Ephemera Collection, *The old Ephrata printing press on which the declaration of independence was printed, and the original house No. 702 Market Street in which it was actually written by Thomas Jefferson*, 1876, PDF, Library of Congress, https://www.loc.gov/item/2020781725/.

[430] Hermann Wellenreuther has analyzed numerous broadsides published by the Ephrata community. For the purposes of this chapter, I want to compare two broadsides: one printed in 1765 and the other in 1786. The first, *Der Sie gist hoch vom Hemmel her*, skillfully blended "graphic design and text" and required "careful study" to contemplate the message in the broadside. The second broadside, *Der Him[m]e list mein Stuhl und die Erde meiner Füse Schemel*, conveyed an impression "not of chaos but of arranged disorder." The illustrations in this broadside displayed "the naïve simplicity of children's drawings."[430] Wellenreuther interprets this style as being a more family-oriented production that intelligently extended religious values into the educational sphere. This pattern from a cluttered to a more "simplistic" quality inherent in the case of broadsides was also reflected in the publication of the *Weiber-Büchlein*.



(49)

Blutfluß, wenn sie es Abends und Morgens trinkt.

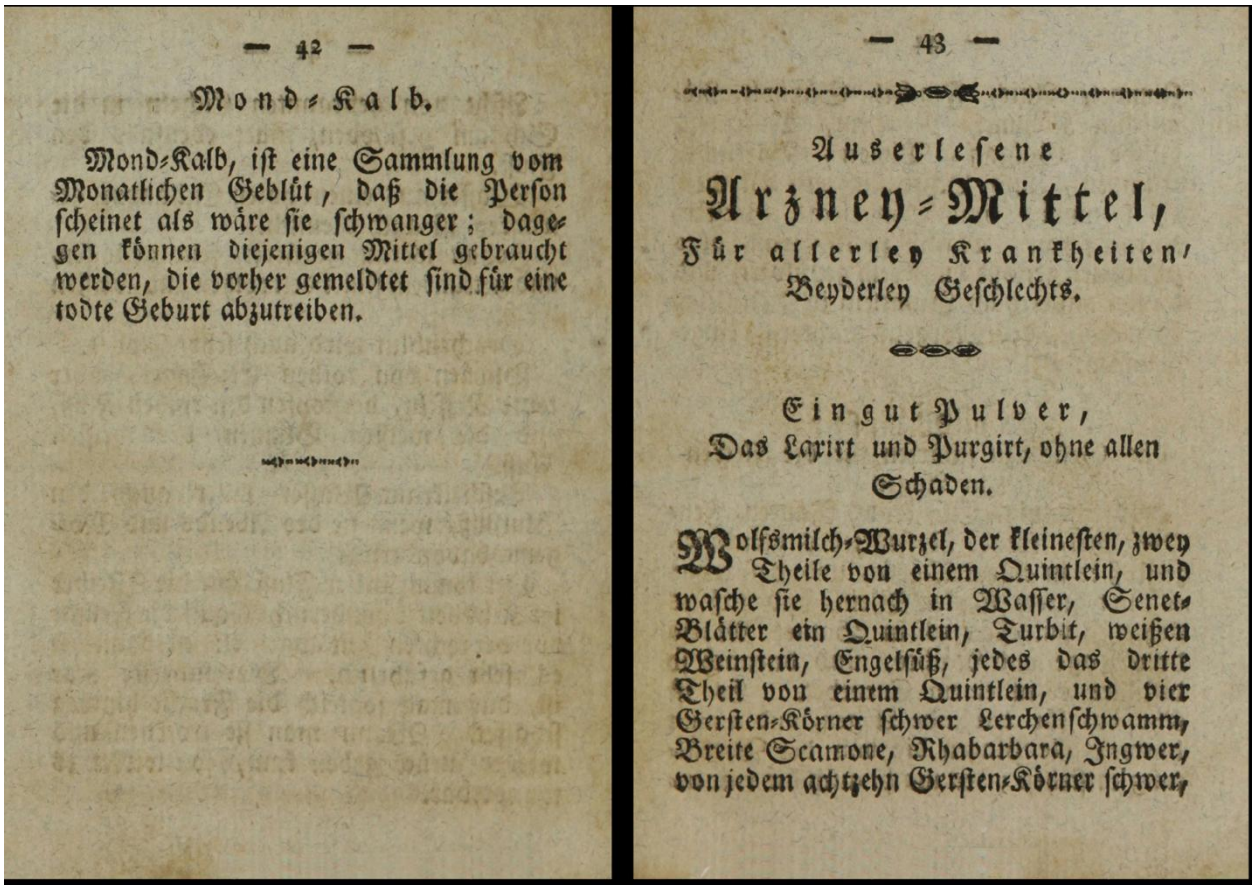
Oft kommt dieser Fluß auf die Weiber im Kindbett; sonderlich wann die Frucht vor der rechten Zeit abgehet: alsdann ist es sehr gefährlich. Die sicherste Kur ist, daß man sogleich die Frucht hinweg schaffet. Wann man sie trocknen und wieder zurück geben kan, so wirket es wunderbar.

Ein gut Pulver, das laxirt und purgiret alle vier Complexiones ohne Schaden.

Wolfsmilch-Wurzel, der kleinesten zwey Theil von einem Quintlein, und wasche sie hernach mit einem dünnen Wasser, Senet-Blätter ein Quintlein, Turbit, weissen Weinstein, Engelsüß, jedes das dritte Theil von einem Quintlein, und vier Gersten-Kör-

Figure 10: Kurzegefaßtes Weiber-Büchlein (Ephrata, PA: Benjamin Mayer, 1799).

This "good powder" recipe is sandwiched between two parts on women's health, specifically on promoting menstrual bleeding and dissection procedures.



— 42 —

Mond-Kalb.

Mond-Kalb, ist eine Sammlung vom Monatlichen Geblüt, daß die Person scheinet als wäre sie schwanger; dagegen können diejenigen Mittel gebraucht werden, die vorher gemeldtet sind für eine todte Geburt abzutreiben.

— 43 —

Auserlesene
Arzney-Mittel,
Für allerley Krankheiten,
Beyderley Geschlechts.

Ein gut Pulver,
Das Laxirt und Purgirt, ohne allen Schaden.

Wolfsmilch-Wurzel, der kleinesten, zwey Theile von einem Quintlein, und wasche sie hernach in Wasser, Senet-Blätter ein Quintlein, Turbit, weißen Weinstein, Engelsüß, jedes das dritte Theil von einem Quintlein, und vier Gersten-Körner schwer Lerchenschwamm, Breite Scamone, Rhabarbara, Ingwer, von jedem achtzehn Gersten-Körner schwer,

Figure 11: Kurzgefaßtes Weiber-Büchlein, Welches sehr nutzlichen Unterricht für Schwangere Weiber und Hebammen (Reading, PA: Gottlob Jungmann and Carl Andreas Bruckmann, 1802), http://resource.nlm.nih.gov/9314731.

The same "good powder" recipe is under a different section of the book devoted to medical remedies.

several recipes addressing general ailments (unrelated to the mother's health): these include a "good powder that clears and purges all four complexes without harm," eye drops for "runny eyes" [*rinnenden Augen*], and a cheap aquavit for various kinds of illnesses of the body.[431] In future editions of the *Weiber-Büchlein* exemplified in image 3, these same recipes were later moved and expanded upon in a separate section of the book

[431] *Kurzgefaßtes Weiber-Büchlein. Die Zehnte Auflage* (Harrisburg, Pa.: Benjamin Mayer, 1799), 49-57. Before these recipes, the booklet covered a plaster for promoting the monthly bleeding.

which primarily covered medical remedies. However, there appear to be no overlap between the recipes between the *Weiber-Büchlein* and *Aristotle's Masterpiece*. Rather, the recipes from the former seem to be taken from various German sources. As a caveat, I do not mean to suggest that these remedies have German origins, but they were recipes passed among German families and communities as Sauer himself admitted that some of his remedies in his *Calender* were obtained from non-German sources. The three recipes described above were taken from a 1700 copy of Albertus Magnus's *Von Weibern und Geburten der Kinder*.[432] While I briefly talked about the use of red flannel in German medicine in the last chapter, the *Weiber-Büchlein* also integrated red flannel in its medical treatments: for preventing sore mouths, facilitating breastfeeding, and staunching bloodflow after the birth.[433] The instructions for easing breastfeeding and stopping heavy blood flow after birth were also found in Sauer's 1787 issue of *Der Hoch-Deutsche Calender* and in *Braucherei* healing respectively.[434] In editions of the *Nützliches und sehr bewährt befundenes Weiber-Büchlein,* there were a couple of recipes adopted from

---

[432] Albertus Magnus, *Von Weibern Und Geburten Der Kinder*, 1700, 76-81.

[433] "Sollte das Geblüt zu stark gehen nach der Geburt, so binde ihr die Dau-men und grossen Zehen mit rothen Ben-del, es hilft wann man es fest anziehet…Gerinnung der Milch ist ein grosser. Schmerzen, daher soll sie die Brüste mit rothem Flannell recht warm halten, und aussaugen lassen, worzu die Kinder ost zu schwach sind, und darum von Erwachsenen muß es gethan werden…Ist aber das Maul wund, so nimm Honig und Essig und wasche es mit einem Stückchen rothen Flannell; schabe auch Röthel und vermische sie mit Ho-nig, und gib es ihm in den Mund." *Kurzgefaßtes Weiber-Büchlein* (Harrisburg, Pa.: Benjamin Mayer, 1799), 37-8, 41-2.

[434] in Sauer's *Calender,* the remedy was specifically for "softening hard breasts" by applying a rub made out of rose oil and roasted white turnips and keeping the breasts warm with red flannel. Christoph Saur, *Der Hoch-Deutsch Americanische Calender, Auf Das Jahr 1787. Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi (*Germantown: Leibert und Billmeyer, 1787). As for stopping blood flow, Patrick J. Donmoyer has uncovered *Braucherei* rituals centered around childbirth: "If bleeding after birth was profuse, one would gently tie a red string around the thumb and big toe to help staunch the flow of blood, or a red band of flannel around the leg." Patrick J. Donmoyer, *Powwowing in Pennsylvania: Healing Rituals of the Dutch Country* (Kutztown, PA: Pennsylvania German Cultural Heritage Center, 2017), 256

Christopher Sauer's *Calender.*[435] In other cases, recipes were adjusted and substituted with different ingredients. In directions for maintaining healthy teeth, the *Weiber-Büchlein* instructs the reader to clean one's teeth each morning and after each meal, rub your teeth with salt, and apply a paste consisting of burned *Rebholz* [?], powdered coals, and honey to keep them white.[436]

It was not an uncommon phenomenon for medical texts to borrow information from earlier sources, and the *Weiber-Büchlein* was a compendium of information from not only a popular medical manual published in America at the time (i.e, *Aristotle's Masterpiece*), but also long-trusted texts in German such as *Das erste Buch Alberti Magni: Von Weibern und Geburten der Kinder* (c. 1575). *Aristotle's Masterpiece*, which saw over 100 different printings, continued to be immensely popular on both sides of the Atlantic up to the early twentieth century.[437] The massive popularity around *Aristotle's Masterpiece* can be attributed to its discussion about mechanics of sexual intercourse and it being geared towards ordinary readers. Its frank explanations of sex proved to be quite

---

[435]The 1806 edition of the *Weiber-Büchlein* has an exact copy of a recipe for children having trouble urinating. In Sauer's almanac, the recipe calls for 5, 7, or 9 drops of radish juice with breast milk: "Wenn die Kinder das Wasser nicht lassen können. So nimm 5, 7, oder 9 Tropfen Rettigsaft, und gieb ihnen solchen mit Muttermilch, er wird das Wasser bald treiben." Christopher Sauer, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1773* (Germantown: Christoph Saur, 1773).

[436] *Kurzgefaßtes Weiber-Büchlein, Welches sehr nützlichen Unterricht für Schwangere Weiber und Hebammen, enthält* (Ephrata, PA: Johann Baumann, 1804), 35. In Sauer's recipe to clean teeth, it calls for an ointment made from honey, a whole nutmeg, a small clove, a spoonful of sage juice, and myrrh applied to the teeth every morning. Christoph Saur, *Der Hoch-Deutsch Americanische Calender, Auf das Jahr Nach der Gnadenreichen Geburt unsers Herrn und Heylandes Jesu Christi 1770* (Germantown: Christoph Saur, 1770).

[437] The book was still being sold in London's Soho sex shops into the 1930s. Kevin Durkin, "Aristotle's Masterpiece," *Verso* (blog), April 20, 2015, https://huntington.org/verso/aristotles-masterpiece. For a more thorough discussion of *Aristotle's Masterpiece*, see Sir D'Arcy Power, "Aristotle's Masterpiece," *The Foundations of Medical History* (Baltimore, 1931), 147-78; Otho T. Beall, Jr., "*Aristotle's Master Piece* in America: A Landmark in the Folklore of Medicine," *WMQ,* 3d Ser., XX (1963): 207-22; and Vern L. Bullough, "An Early American Sex Manual, Or, Aristotle Who?" *Early American Literature* 7 (1973): 236-46.

titillating that the book prompted the Puritan minister Jonathan Edwards to conduct an investigation based on rumors that the young boys in his congregation had obtained a copy of *Aristotle's Masterpiece* in 1744.[438]

To clarify, authors of midwifery books in the early modern period often tip toed (or just outright avoided discussion) around the actual process of a woman becoming pregnant; books talked about how seeds of a woman and man "are united [in the womb] to make the Conception," but they did not discuss how exactly said seeds got to the womb.[439] In 1700, there was no sex education or pornographic magazines akin to what we know today ("the explicit depiction of sexual organs and sexual practices with the aim of arousing sexual feelings"), thus very little recourse when it came to learning about sex. According to Lynn Hunt in *The Invention of Pornography* (1993), pornography in the modern sense emerged as a distinct category in the nineteenth century. She, however, delves into its slow emergence between 1500 and 1800. Early modern pornography was "linked to free-thinking and heresy, to science and natural philosophy, and to attacks on absolutist political authority…[and] was especially revealing about the gender differentiations being developed within the culture of modernity."[440] Rudolph M. Bell's study on Italian self-help manuals during the Renaissance also aligns with Hunt's

---

[438] In Northampton, Massachusetts, Edwards had learned that the younger members of his church "had books in keeping, which they improved to promote lascivious and obscene discourse among the young people." 58-9. Jonathan Edwards and Samuel Hopkins, *The Life and Character of the Late Reverend, Learned, and Pious Mr. Jonathan Edwards.* (Northampton: S&E Butler, 1804). See also Ava Chamberlain, "Bad Books and Bad Boys: The Transformation of Gender in Eighteenth-Century Northampton, Massachusetts," *The New England Quarterly* 75, no. 2 (2002): 179–203.
[439] Nicholas Culpeper, *A Directory for Midwives, or A Guide for Women* (Cornhil: Peter Cole, 1651), 56.
[440] Lynn Hunt, "Introduction" to *The Invention of Pornography: Obscenity and the Origins of Modernity, 1500-1800*, ed. Hunt Lynn (New York, NY: Zone Books, 1993), 9–48. The earliest usage of the term "pornography" appeared in Etienne-Gabriel Peignot's Dictionnaire critique, littéraire et bibliographique des principaux livrew condamnés au feu, supprimés ou censures. Hunt, 14.

argument. In *How to Do It* (1999), there was decidedly a religious influence in these advice manuals where the range of advice ranged from how to be a good midwife to what to do with a "boorish husband or a flirtatious wife." These manuals were intended to be read by "good Catholics before bedtime." One of Bell's key points is that the printed word opened up avenues of communication for religious authorities by allowing them to enter the intimate recesses of private life through confessionals: these pocket-sized books contained the "appropriately delicate but precise words for interrogating the faithful."[441]

While I do not delve into the details of the historical debate on pornography, I acknowledge Manuela Mourão's point that early modern pornographic writing was "an essential arena for changing sexual culture," especially in regards to female sexuality and desire.[442] Taking a closer look at Chapter 37 of the *Aristotle's Masterpiece* (titled "A Word of Advice to both Sexes in the time of Copulation"), it gives specific sexual advice (what we would call foreplay today) on "inflam[ing] the Woman":

> When the Husband cometh into his Wives Chamber, he must entertain her with all kind of dalliance, wanton behaviour, and allurements to Venery, but if he perceive her to be slow and more cold, he must cherish, embrace, and tickle her, and shall not abruptly, the Nerves being suddenly distended, break into the Field of Nature, but rather shall creep in by little and little, intermixing more wanton Kisses with wanton Words and Speeches, handling her Secret Parts and Dugs, that she may take fire and be inflamed to Venery, for so at length the Womb will strive and wax fervent with a desire of casting forth its own Seed, and receiving the Mans Seed to be mixed together therewith.[443]

---

[441] Rudolph M. Bell, *How to Do It: Guides to Good Living for Renaissance Italians* (Chicago: University of Chicago Press, 1999), 8-9.
[442] Manuela Mourão, "The Representatino of Female Desire in Early Modern Pornographic Texts, 1660-1775," *Signs* 24, no. 3 (1999): 574. For more on social and cultural history of sexuality in early modern Europe, see Katherine Crawford, *European Sexualities, 1400-1800* (Cambridge: Cambridge University Press, 2007); Allyson M. Poska, "The Case for Agentic Gender Norms for Women in Early Modern Europe," *Gender & History* 30, no. 2 (2018): 354–65.
[443] Aristotle, *Aristotle's Master-Piece, or The Secrets of Generation Displayed in All the Parts Thereof.* (London: J. How, 1584), 189. Mary E. Fissell explains that the *Masterpiece* is one of the first printed works

The *Masterpiece* was one of the few instances in print that was explicit about the sexual pleasure of women and their arousal. This type of sexual advice focusing on pleasure, however, was notably absent in the *Weiber-Büchlein* like many other popular medical works. Nora Doyle argues that the professionalization of midwifery in the mid-eighteenth century brought a new model of midwifery models where discussions of intercourse and sexual pleasure are almost entirely absent. By erasing the sexual desire of women, medical writers could allow men "to participate with propriety in the formerly female domain of midwifery."[444] I argue that this was not the case for the *Weiber-Büchlein* as German midwifes in America continued to be a respected profession for European immigrant women into the nineteenth and twentieth centuries.[445] The omission of explicit material in the handbook rather can be attributed to the decision of the original publishers in America: although the press assumed new ownership under Solomon and Benjamin Mayer, the types of publications continued to be printed for religious communities yet broadened horizons by publishing almanacs and a newspaper.[446] The discerning aspect of the handbook's complete lack of images related to sex and the female anatomy piques interest because the preoccupation with the uterus and its anatomy became a foundation for the art of midwifery towards the end of the eighteenth century.[447]

---

that addressed women's physical experiences of desire and transformed it into textual knowledge. See Fissell, 94.

[444] Nora Doyle, *Maternal Bodies: Redefining Motherhood in Early America* (Chapel Hill: University of North Carolina Press, 2018), 21.

[445] Kathleen A. Huston, "German Midwifes of Nineteenth- and Twenteith-Century Texas: Women's Work, Culture, and Fighting 'Death in the Room,'" *Southwestern Historical Quarterly* 124, no. 4 (2021): 412–35. Lynne Fallwell, *Modern German Midwifery, 1885-1960* (London: Routledge, 2013).

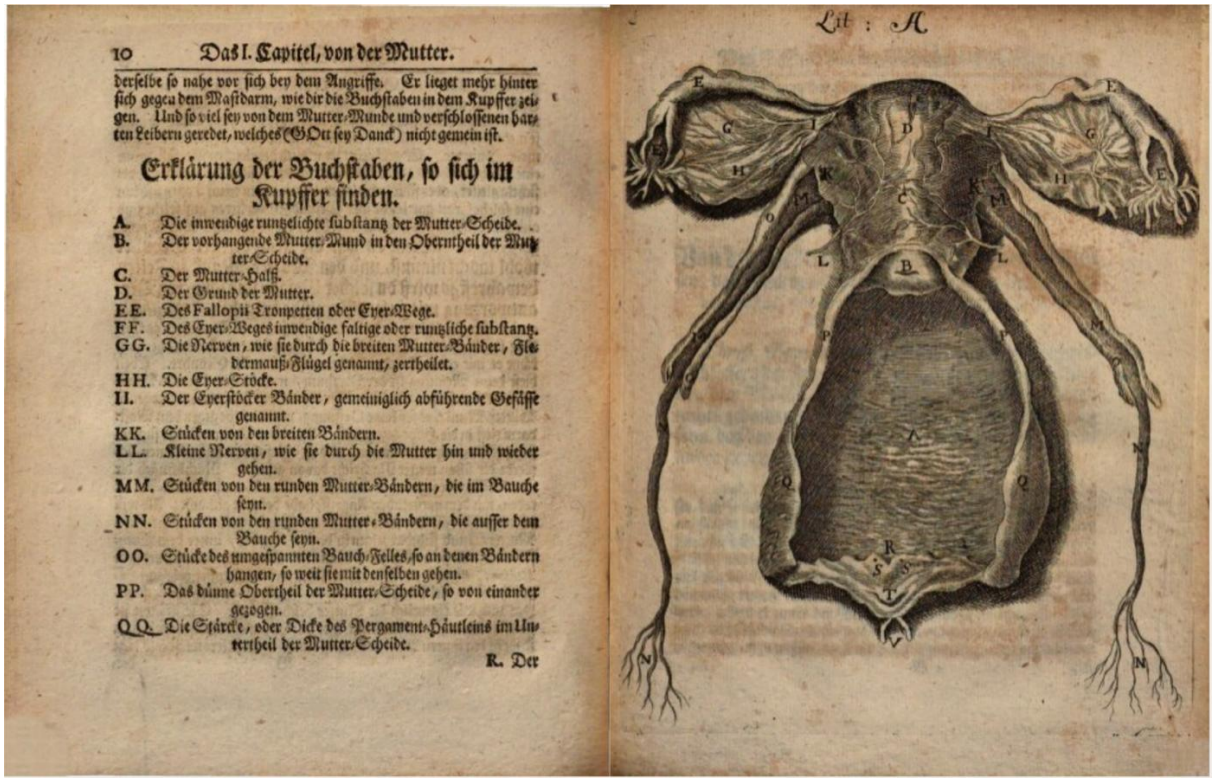
[446] Walter Klinefelter, "Solomon Meyer, Printer and Publisher," *Quarterly of the Pennsylvania German Society* 15, no. 3–4 (1981): 3-5.

[447] Doyle, *Maternal Bodies*, 35.

Elizabeth Eisenstein's study on images in print helps put things in perspective regarding "birth figures" (a term taken from the English translation of Rösslin's *Rosegarten*) in midwifery manuals during the early modern period. According to Eisenstein, "image making was stimulated by printing among Protestants as well as Catholics" in early modern Europe. In scientific fields, repeatable pictures bypassed confusion engendered by ambiguous words.[448] Delivering a baby necessitated a familiarity with the female anatomy, and many early midwifery texts provided readers illustrations of the womb, often labelled with the specific organs associated with pregnancy (see Figure 12). With the advent of print, knowledge in vernacular books that had previously been restricted to the educated slowly became available to groups such as women who could not access this information. Eucharius Rösslin's 1513 *Der Swangern Frauwen und Hebammen Rosegarten* ("Rosegarden for Pregnant Women and Midwifes") and Justine Siegemund's 1690 *Die Chur-Brandenburgische Hoff-Wehe-Mutter* (translated in English as *The Court Midwife*) were two popular German midwifery manuals that integrated numerous illustrations intended to visualize and render the womb, an organ that was saturated with secrecy and power in medieval times, "less mysterious and less problematic."[449] If we consider birth figures as a mode of introducing bodily

[448] Elizabeth Eisenstein, "The Emergence of Print Culture in the West," *Journal of Communication* 30, no. 1 (1980): 99–100.

[449] Rebecca Whiteley's recent book on birth figures in the early modern Europe is a meticulous study that examines how images in early midwifery manuals operated and changed European culture of medical knowledge. Countering existing narratives revolving around birth figures, Whiteley argues that they were "agents of change and empowerment for midwives in this period." Rebecca Whiteley, *Birth Figures: Early Modern Prints and the Pregnant Body* (Chicago: University of Chicago Press, 2023), 3, 10-15. For more on Rösslin, see Monica H. Green, *Making Women's Medicine Masculine: The Rise of Male Authority in Pre-Modern Gynaecology* (Oxford: Oxford University Press, 2008) and Monica H. Green, "The Sources of Eucharius Rösslin's 'Rosegarden for Pregnant Women and Midwives' (1513)," *Medical History* 53 (2009):



10 Das I. Capitel, von der Mutter.

derselbe so nahe vor sich bey dem Angriffe. Er lieget mehr hinter sich gegen dem Mastdarm, wie dir die Buchstaben in dem Kupffer zeigen. Und so viel sey von dem Mutter-Munde und verschlossenen harten Leibern geredet, welches (GOtt sey Danck) nicht gemein ist.

Erklärung der Buchstaben, so sich im Kupffer finden.

A. Die inwendige runtzelichte substantz der Mutter-Scheide.
B. Der vorhangende Mutter-Mund in den Oberntheil der Mutter-Scheide.
C. Der Mutter-Halß.
D. Der Grund der Mutter.
EE. Des Fallopii Trompetten oder Eyer-Wege.
FF. Des Eyer-Weges inwendige faltige oder runtzliche substantz.
GG. Die Nerven, wie sie durch die breiten Mutter-Bänder, Fledermauß-Flügel genannt, zertheilet.
HH. Die Eyer-Stöcke.
II. Der Eyerstöcker Bänder, gemeiniglich abführende Gefässe genannt.
KK. Stücken von den breiten Bändern.
LL. Kleine Nerven, wie sie durch die Mutter hin und wieder gehen.
MM. Stücken von den runden Mutter-Bändern, die im Bauche seyn.
NN. Stücken von den runden Mutter-Bändern, die ausser dem Bauche seyn.
OO. Stücke des umgespannten Bauch-Felles, so an denen Bändern hangen, so weit sie mit denselben gehen.
PP. Das dünne Obertheil der Mutter-Scheide, so von einander gezogen.
QQ. Die Stärcke, oder Dicke des Pergament-Häutleins im Untertheil der Mutter-Scheide.

R. Der

Figure 12: Reproduced from Justine Siegemund's Die Chur-Brandenburgische Hof-Wehe-Mutter (Leipzig: Braun, 1724),10-11, https://mdz-nbn-resolving.de/urn:nbn:de:bvb:12-bsb11219537-1.

knowledge for midwives (male or female), what does this suggest about the *Weiber-Büchlein* and German midwifes in early America?

Medical illustrations of the female womb were featured in *Aristotle's Masterpiece* and *Das erste Buch Alberti Magni*.[450] However, one of the most notable characteristics of the *Weiber-Büchlein* is the absence of images or woodcuts, which were quite prevalent in midwifery manuscripts produced from the twelfth up to the seventeenth centuries. Unlike the two texts it borrowed from, the *Weiber-Büchlein* did not provide readers with any images related to sex or the female anatomy. Moreover, the Ephrata press, which

167–92. On Siegemund, see Justine Siegemund, *The Court Midwife*, ed. and trans. Lynne Tatlock (Chicago: University of Chicago Press, 2005).

[450] The *Masterpiece* also contained eccentric woodcuts depicting "monstrous births" and hairy women.

published some copies of the manual, was known for its woodcuts on *Taufscheine*, or a baptismal certificate. By 1788, Ephrata was one of the leading producers of decorated *Taufscheine* and led printers in the proximate area to begin competing in the *Taufscheine* market.[451] Its capability in producing woodcuts then should not have been an issue for the *Weiber-Büchlein*. Price may have been a limiting factor for leaving out images in the work as the printers were more motivated financially.[452] Moreover, if we consider the size of the booklet, it is feasible. In English, medical writers in the early nineteenth century were "particularly vociferous in their depictions of the powerful uterus" often portraying the organ as being resistant and obstinate.[453] This kind of oppositional rhetoric was absent in the *Weiber-Büchlein*.

The absence of images in the *Weiber-Büchlein* is unusual because one of text's main chapters deals with the posture of the child in the womb during delivery and gives

---

[451] There were fraktur artists who bestowed their work on broadsides printed by the Ephrata press including Otto, Georg Friedrich Speyer (active c. 1774-1802), Arnold Hoevelman (1749-1804), and Friedrich Krebs (*c.* 1749-1815). Russell Earnest and Corinne Earnest, *Flying Leaves and One-Sheets: Pennsylvania German Broadsides, Fraktur and Their Printers* (New Castle, Delaware: Oak Knoll Press, 2005), 40-1.

[452] The most well-known example highlighting this is perhaps the Pietists network between the Old and New Worlds centered in Halle. See Thomas P. Back, "G.A. Francke and the Halle Communication Network: Protection, Politics and Piety," in *Pietism and Community in Europe and North America, 1650-1850*, ed. Jonathan Strom (Leiden: Brill, 2010), 95–109 and Renate Wilson, *Pious Traders in Medicine: A German Pharmaceutical Network in Eighteenth-Century North America* (University Park, PA: Pennsylvania State University Press, 2000). Price did not seem to be an issue for the Ephrata press previously as it had accepted the request from their Mennonite neighbors to translate and print the Martyrs' Mirror in 1745, a vast undertaking that took three years to complete. The effort resulted in the largest book printed in colonial America numbering 1,500 pages and weighing around thirteen pounds after it was bound. Ephrata community consented to publishing the work with "no money down from their Mennonite clients and no guarantee of future income, since the Mennonites were not obligated to buy any copies once they were printed." There were also several hundred unbound copies of *Martyrs' Mirror* by the start of the Revolutionary War in 1775, and Congress paid for about 375 copies as armies used paper to make cartridges and waddings for their guns. Adam Hershberger, "A Gun Wad Martyrs' Mirror," *The Heritage Review* 25 (November 2017): 2. See also David L. Weaver-Zercher, *Martyrs Mirror: A Social History* (Baltimore: Johns Hopkins University Press, 2016), 135.

[453] Doyle, *Maternal Bodies*, 35. The British physician Samuel Merriman described the uterus as an oppositional force against the male midwife. Samuel Merriman, *A Synopsis of the Various Kinds of Difficult Parturition, with Practical Remarks on the Management of Labours* (London: J. Callow, 1814).

meticulous directions in how to safely guide the child out of the birth canal. Under the section concerning birth ("Von der Geburt"), the instructions for handling the delivery of the baby are precise and vary depending based on the child's posture. For example, if the child comes out with one foot alone, the midwife should gently push the child's foot with her hand back (and with the mother slowly rolling herself) and turn the child underneath itself so the head exits first. If, however, the child is unwilling to turn over so that the head comes first, the midwife should direct the other foot towards the birth canal (with its arms and hands sprawled out on its sides).[454] Or in another case, if the child presents a hand first, the midwife should not receive the child; instead, she should hold the child's hand and diligently reach for the child's shoulders so that she can grasp the head and help it exit. Such positioning, however, requires not only the "skillful hand movements" [*geschickte Handgriffe*] of the midwife, but also the ability of the mother to adjust her body.[455] The manual maps out several other circumstances that the midwife must prepare for. Knowledge of such precise advice was crucial to the survival of both the mother and child. Addressing the potential positions of the child was a common topic covered in early midwifery manuals.

---

[454] Wo aber das Kind zum ersten kä-me mit einem Fuß allein, so soll man die Mutter auf den Rücken legen, die Beine über sich, aber das Haupt unter sich, und den Hintern wohl erheben. Die Hebamm soll mit ihrer Hand des Kindes Fuß wieder sein sänftiglich hin- ter sich schieben, dann soll sich die Mut- ter so lang gemählich umwälzen, so lang bis das Kind sein Haupt unter sich kehret zum Ausgang. Wann aber das Kind in Mutterleib sich nicht wolt umwenden, daß das Haupt unter sich kam, so soll die Hebamm den andern Fuß auch zu der Geburt schicken, und dem Kinde aushelfen, doch allewegen die Arm und Hände Neben seiner Seiten hinab ge- strecket. *Kurzgefaßtes Weiber-Büchlein. Enthält Aristotels Und Alberti Magni Hebammen-Kunst, Mit Den Darzu Gehörigen Recepten. Die Zehnte Auflage* (Harrisburg, Pa.: Benjamin Mayer, 1799), 15-16.

[455] Item, ob das Kind eine Hand erzeig- te, so soll die Hebamme das Kind nicht empfangen; sondern mit eingelassener Hand die Schultern des Kindes flei- sig begreifen, und hinter sich heben, und die Hand Gegen des Kindes Seiten hinab stricken, und das Haupt begrei-fen und ihm zum Ausgang helfen. *Kurzgefaßtes Weiber-Büchlein,* 17-8.

In works such as Siegemund's *Die Chur-Brandenburgische Hoff-Wehe-Mutter* and Rösslins' *Der Rosegarten*, the authors devoted sections on the posture of the child during birth. To aid readers with a difficult delivery, fetal illustration accompanied the text. In the *Rosegarten*, we encounter the same advice mentioned above. Alongside it, however, is the corresponding image of a child in the womb foot first towards the birth canal (see Figure 13). We see similar images in Siegemund's manual (see Figure 14). This is one of eight engravings in Chapter 3 that depicts the different postures of the baby during birth. In this engraving, the child's head is properly positioned and pushing through canal, but the body and shoulders lie crooked and requires the help of the midwife (shown by the hand). Birth figures were found throughout many of the publications in Europe from the 1500s up to 1800. Whitely shows that these visual images could address any ambiguities in the text. For the meticulous and intense process that is childbirth, the knowledge to handle the possible positions of the baby during labor could be a matter of life or death for both the mother and child. In these midwifery texts, the physical processes of labor were described in largely abstract terms—and the *Weiber-Büchlein* did not deviate from this.[456] The midwife tasks were not solely relegated to the safe delivery of the child, but also encouraging the mother, administrating fluids and medicines throughout the procedure, managing the afterbirth, cutting the umbilical cord, and (in a last resort) operating a C-section. The concrete visualization of the child in the womb, an organ shrouded in mystery in the early modern period, became more manageable for those women who saw these images. However, Whitely explains that

[456] Whitely, 41.

¶ Wo aber das kind zum erstenn
käm mit einem füß allain. So soll
man die müter da an rucken legen
die bayn vbersich das haupt vnd-
dersich vnd den hyndern wol erhe
ben. Vnd soll die hebam̃ mit yhrer
hand des kyndes füß wider hinder
sich senfftigklichen scheyben. Vñ
sol die mütter sich zum dycker mal
vmbschyeben vnd waltzen / so lãg
biß das kynd sein haupt vndersich
gekeret zů dem außgang. Dar-
nach sol die müter widerumb sitzẽ
auff yhren stůl vnd soll yhr die heb
amme wyder helffen alls ob statt.

Figure 13: Illustration of a child with one foot towards the exit of the birth canal. Reproduced from Eucharius Rösslin's Der Schwanngeren, Frawen vnd Hebammen Rosengarten (Ausgburg: Steyner, 1528), http://resolver.sub.uni-goettingen.de/purl?PPN559069138.

Figure 14: Reproduced from Justine Siegemund's Die Chur-Brandenburgische Hof-Wehe-Mutter (Leipzig: Braun, 1724),18-9, https://mdz-nbn-resolving.de/urn:nbn:de:bvb:12-bsb11219537-1.

these figures also "worked at odds with the texts they illustrated and were interpreted and employed by viewers in many different ways apart from those advised by medical writers."[457] For the Ephrata-trained publishers who printed the *Weiber-Büchlein*, it was not a matter of taking away agency from midwifes but rather simply to save money.

Another telling property of the *Weiber-Büchlein* that strongly suggests the religious nature of the text is apparent by the first page. It contains with a single sentence: "Den Wehmütern, die Gott fürchten, bauet Er Häuser, 2 Mos. I, 21."[458] Aside from this one page, there is not a single mention of God or religious undertones in the contents of the booklet. In comparison, midwifery texts in the 1500s and 1600s contained numerous mentions of the work of God, Jesus, or angels and include scripture throughout their works.[459] This was not uncommon during the 1500s and 1600s because childbirth and pregnancy were deeply embedded in religious terms. Fissell points out that women's reproductive bodies were an important topic "through which aspects of the Protestant Reformation were realized."[460] Then the question stands: why did the Ephrata press, so enveloped with ascetism, leave out any mention to God? This absence is even more glaring considering that many midwifery texts include religious references to God or the Bible. A comparative look between the *Weiber-Büchlein* and a mid-eighteenth century edition of *Aristotle's Masterpiece* may prove to be enlightening.

---

[457] Whitely, 12.
[458] Translated "He builds houses for the midwives, who fear God. Exodus 1:21."
[459] These include popular guides such as Culpeper's *A Directory for Midwives*, Rösslin's *Der Rosegarten*, and *Aristotle's Masterpiece:* all works that the *Weiber-Büchlein* has adapted information from to some extent.
[460] Fissell, *Vernacular Bodies,* 10.

In a 1762 copy of *Aristotle's Masterpiece,* the first part concerning conception and childbirth is sprinkled with mentions of the "Divine Creator" (or "Lord of Nature") and various figures from the Bible including Adam and Eve and King Solomon. Ironically, these chapters explicitly explain to the reader the "parts and instruments of generation" of both men and women and the enjoyment of "conjugal Delights" only in a married state.[461] The last chapter in Part I is devoted to virginity and correctly explains that the lack of the hymen did not necessarily indicate that a woman was not a virgin. The *Masterpiece*'s sections describing the sexual organs may have been too risqué for German readers; the *Weiber-Büchlein* begins with pregnancy, stating that "nature has taught women how to inseminate their domains, making it unnecessary to describe how impregnation should take place."[462] The discussion of virginity in the *Masterpiece* is quite gripping. The book's focus on the sort of mystical quality of a woman's virginity has a sexual undertone: "but I must do the Fair Sex this Justice, to let the World know, that altho' whenever this is found, it be an undoubted Token of Virginity; yet it will not follow, that where this Token is wanting, Virginity is deflowered and lost."[463] The sexual nature over virginity described in the *Masterpiece* was potentially too riveting for the Ephrata publishers, and its omission in the Ephrata midwifery manual is noteworthy because the explicit discussions of copulation was one of the reasons why *Aristotle's Masterpiece* sold very well.

---

[461] *Aristotle's Compleat Masterpiece. In Three Parts: Displaying the Secrets of Nature in the Generation of Man. Regularly Digested into Chapters and Sections, Rendering It Far More Useful and Easy than Any yet Extant. To Which Is Added, A Treasure of Health; or the Family Physician*, 28th ed. (London, 1762), 11, 21.
[462] *Kurzgefaßtes Weiber-Büchlein. Die Zehnte Auflage* (Harrisburg, Pa.: Benjamin Mayer, 1799), 3.
[463] *Aristotle's Compleat Masterpiece,* 32.

Part II of the *Masterpiece* deals with the conception, the pregnant mother's health, and advice for midwives; here, the details are more practical and straightforward, but there were still religious underpinnings throughout this section. One sentence in particular stands out: "For above all, [the midwife] ought to be qualified with the Fear of God, which is the principal Thing in every State and Condition, and will furnish her on all Occasions both with Knowledge and Direction."[464] One of the important duties of the midwife was the baptism of the newborn. In the sixteenth century, Protestant cities in Germany passed ordinances that gave instructions on how to conduct baptisms (in case of emergency). For the midwifes who could not read, they were instructed to see a pastor to learn what to do.[465] The baptism of the newborn remained a significant part of the midwife's responsibilities in eighteenth-century America, where childbirth interwove physical, emotional, and spiritual experience for the mother and other women present during labor.[466] This part of the *Masterpiece* also featured a single (if not, the only) anatomical image of a child's formation in the womb (Figure 15).[467] The birth figure was taken from Andreas Spigelius's *De Fromato Foetu* (1627). What is notable about this figure are the verses from Psalms added beside the labelled parts—something that was not included in the original image. The "makers" (i.e., the writers, editors, publishers) of

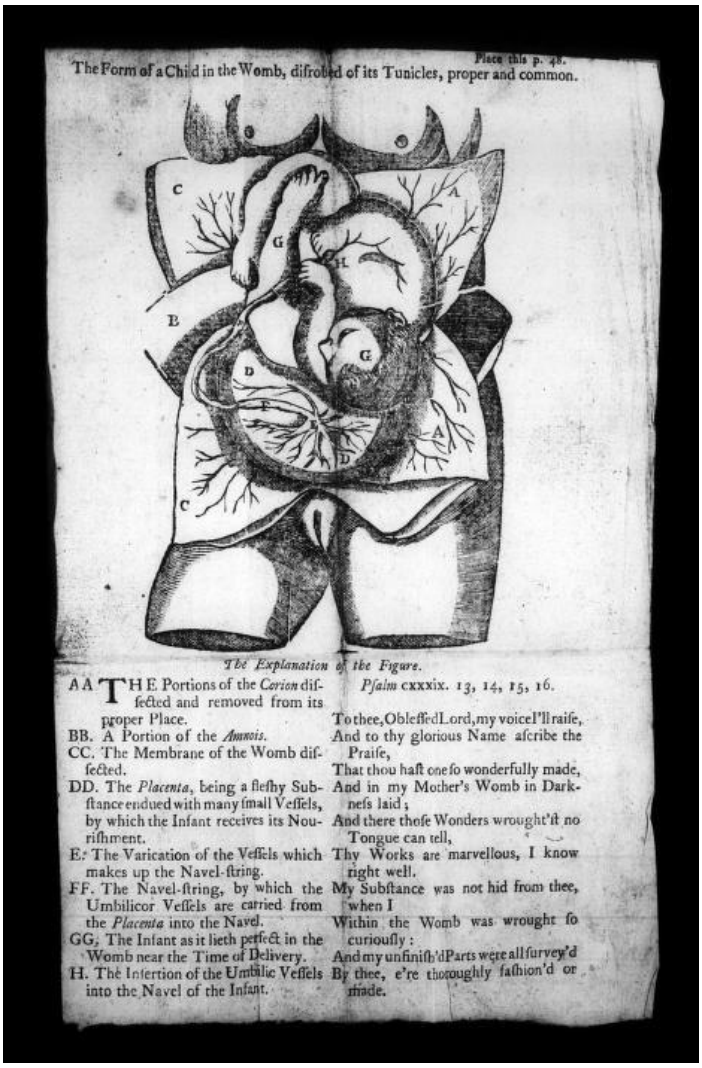
---

[464] *Aristotle's Compleat Masterpiece,* 62.
[465] Merry E. Wiesner-Hanks, "Midwives and Medical Knowledge in Early Modern Germany," in *Healing and Harm: Essays in Honor of Mary Lindemann*, ed. Erica Heinsen-Roach, et al. (New York: Berghahn, 2024), 52.
[466] Shelby M. Balik, "Delivery and Deliverance: Religious Experiences of Childbirth in Eighteenth-Century America," *Church History* 91 (2022): 62-82.
[467] Aside from the distinctive frontispiece depicting two "monstrous" figures (a hairy woman and a Black child born to white parents), the other images in the *Masterpiece* pertain to "monstrous births." Mary E. Fissell explores these "monstrous" images in her article, "Hairy Women and Naked Truths: Gender and the Politics of Knowledge in 'Aristotle's Masterpiece,'" *The William and Mary Quarterly* 60, no. 1 (2003): 43–74.

the *Masterpiece* most likely opted for this religious spin as an attempt to reconcile Christianity and Aristotelian natural knowledge.[468] As this figure shows, providing a pragmatic and visual aid for midwifes could accommodate religious values. However, it may have been too tantalizing for the readers similar to the birth figures portrayed in other midwifery manuals. In comparison to Siegemund's engraving of the female womb, one may argue that the *Masterpiece*'s image is more scandalous as it depicts the private parts of the woman's body, e.g., genitals and breasts.

The midwifery portion of the *Weiber-Büchlein* concludes with a section on the Caesarean section and advancements made on saving the mother and/or the child since the sixteenth century for this procedure. This section of the manual was more contemporary and cited Scottish professors from the University of Edinburgh. There was a C-section operated by the physician Alexander Hamilton (1739-1802) in Edinburgh, which resulted in the successful delivery of the child albeit at the cost of the mother's life. The second case dealt with anatomical experiments on dogs, rats, and frogs conducted by a Doctor Alexander Monro (1697-1767), who reported that the exposure of air to the animals' organs led to their deaths; this caused the intestines to produce a "most violent inflammation."[469] It was not unusual that the *Weiber-Büchlein* included studies from across the Atlantic at the time; it is moreso the fact that much of the content in the

[468] Fissel, "Hairy Women and Naked Truths," 48.
[469] Unlike Alexander Hamilton's work, which went into extensive detail into the Elizabeth Clerk's C-section and Dr. Monro's experiments, the *Weiber-Büchlein* succinctly summarizes the findings. *Kurzgefaßtes Weiber-Büchlein. Die Zehnte Auflage* (Harrisburg, Pa.: Benjamin Mayer, 1799), 57-64. See also Alexander Hamilton, *Outlines of the Theory and Practice of Midwifery*, 4th ed. (Edinburgh: T. Kay, 1796), 294-323.



Place this p. 48.

The Form of a Child in the Womb, disrobed of its Tunicles, proper and common.

The Explanation of the Figure.

AA THE Portions of the *Corion* dissected and removed from its proper Place.

BB. A Portion of the *Amnois.*

CC. The Membrane of the Womb dissected.

DD. The *Placenta*, being a fleshy Substance endued with many small Vessels, by which the Infant receives its Nourishment.

E. The Varication of the Vessels which makes up the Navel-string.

FF. The Navel-string, by which the Umbilicor Vessels are carried from the *Placenta* into the Navel.

GG. The Infant as it lieth perfect in the Womb near the Time of Delivery.

H. The Insertion of the Umbilic Vessels into the Navel of the Infant.

Psalm cxxxix. 13, 14, 15, 16.

To thee, Oblessed Lord, my voice I'll raise,
And to thy glorious Name ascribe the Praise,
That thou hast one so wonderfully made,
And in my Mother's Womb in Darkness laid;
And there those Wonders wrought't no Tongue can tell,
Thy Works are marvellous, I know right well.
My Substance was not hid from thee, when I
Within the Womb was wrought so curiously:
And my unfinish'd Parts were all survey'd
By thee, e're thoroughly fashion'd or made.

Figure 15: "The Form of a Child in the Womb, disrobed of its Tunicles, proper and common." Reproduced from Aristotle's Compleat Masterpiece. In Three Parts, 28th ed. (London, 1762), 48.

booklet combined concurrent knowledge and information from older texts dating back to the sixteenth and seventeenth centuries.

Referencing Hamilton was an interesting decision on the Ephrata printers' parts because he not only gave lectures on the diseases of women and children, but also strongly fought along with his son to make midwifery a compulsory subject for graduating medical school—against opposition from the faculty at the University of

Edinburgh. His first textbook on midwifery, *Elements of Midwifery* (1775) "exploded with rage at the degradation of surgeons" among his colleagues. He reissued a more conciliatory preface under the newly titled *Outlines of the Theory and Practice of Midwifery* in 1784.[470] Though an anti-midwife rhetoric circulated among male physicians in the late-eighteenth century, there were medical men like Hamilton who argued that midwifes be educated in anatomy. Hamilton held separate classes for female students and even wrote a separate textbook for them: the *Outlines of Midwifery* was meant for male students, whereas *A Treatise of Midwifery* (1781) was meant for female students. Records indicate that a German translation of the *Treatise* was available in 1780.[471] It is unknown whether the German translations of Hamilton's texts were available in America. We do know, however, that both of Hamilton's midwifery guides were published in the New England region (namely, Massachusetts and Philadelphia, Pennsylvania).[472] German printers in Pennsylvania thus had access to Hamilton's writings, and the inclusion of his teachings in the *Weiber-Büchlein* serves an intriguing contrast to the rest of the book.

Although its publication was intended for a wider German audience, the *Weiber-Büchlein* nevertheless provides broader insights into the medical culture of a German community in eighteenth-century America. Serving as a text that merged information

---

[470] Marcia D. Nichols, *Fixing Women: The Birth of Obstetrics and Gynecology in Britain and America* (San Francisco, CA: University of California, 2021), 57, fn 43.
[471] Leslie Stephen and Sidney Lee, eds., *The Dictionary of National Biography*, vol. VIII (London: Oxford University Press, 1917),1018.
[472] The Massachusetts printer Isaiah Thomas reprinted both the *Outlines* and *Treatise* in the late eighteenth-century. In Philadelphia, the bookseller Thomas Dobson sold new versions of William Smellie's *A Set of Anatomical Table* accompanied by Hamilton's midwifery texts. Smellie's *Tables* were medical illustrations that "eroticized a classed female body." If they were bound with Hamilton's midwifery texts, it further supports my point that the publishers at Ephrata omitted birth figures on the basis of being too pornographic. Marcia D. Nichols, *Fixing Women: The Birth of Obstetrics and Gynecology in Britain and America* (San Francisco, CA: University of California, 2021), 91, 94-5.

from various sources which included older German and English midwifery books and Alexander Hamilton's texts, the *Weiber-Büchlein* proves to be a peculiar work that challenges the older historical narrative of midwifery as being overtly misogynistic and entailed the dismantling of the "private, powerful all-female authority of the lying-in chamber by male medical practitioners."[473] This was not the case for the publishers at Ephrata. The absence of crucial information such as birth figures in the booklet was not meant to subvert the authority of women and midwifes in the late eighteenth century. The Ephrata press had the means of producing such images, but in order to save on costs, the publishers decided against printing them.

If we take Rebecca Whiteley's point that the production and proliferation of these images grant us a new perspective on early modern medical culture, then the lack of images should temper our understanding of the experiences and knowledge of women as well. Given that we have no record of a German translation of *Aristotle's Masterpiece* in America in the late-eighteenth century, the *Weiber-Büchlein* was possibly the only German midwifery manual published in Pennsylvania. More importantly, it respected the authority of the midwife within the medical tableau and was published during a volatile time (at the turn of the century) when medical institutions and male physicians—at least in Anglo-American obstetrics—were distinguishing themselves as from the "meddlesome" female midwives.[474] For instance, William Buchan, author of *Domestic Medicine* (1772), gave a pithy account of the midwife's role in the birthing room. While he recognized the "skill and attention" of those midwifes successful in delivering a baby,

[473] Whiteley, *Birth Figures,* 8.
[474] Nichols, *Fixing Women,* 118.

he primarily lamented the many "ignorant and officious" midwifes whom he deemed unqualified because of their "superstitious prejudices." Buchan's home medical guide was written for more general ailments, but it did have sections on childbirth. Unlike the *Weiber-Büchlein*, which clearly defines the midwife's duties during childbirth, the directions under pregnancy in *Domestic Medicine* disregard the agency of the midwife and instead recommended that a "skillful surgeon, or man-midwife, ought to be called." The corresponding footnote to this quote also complained about the "ridiculous custom which still prevails in some parts of the country, of collecting a number of women together upon such occasions [childbirth]."[475] A side-by-side comparison of instructions for caring for a pregnant mother during labor highlights this difference in attitude regarding the midwife (see Table 1).

Research on midwifery in Germany during the seventeenth and eighteenth centuries has shown that midwifes remained firmly in the hands of female practitioners, and no "widespread" takeover (like in the English case) occurred.[476] Lynn Fallwell explains that midwifery in modern Germany is an "occupation thoroughly woven into the country's cultural fabric."[477] Moreover, midwives in Germany in the nineteenth century followed a different trajectory from American midwives. Fallwell rejects the conventional historical argument that portray the nineteenth century as a period that "transitioned from traditional midwifery (women-centred, holistic and natural) to

---

[475] William Buchan, *Domestic Medicine: Or, A Treatise on the Prevention and Cure of Diesases by Regimen and Simple Medicines* (London: W. Strahan, 1774), 582-3.
[476] Hans-Christoph Seidel, *Eine neue Kultur des Gebärens. Die Mediklaisierung von Geburt im 18. und 19. Jahrhundert in Deutschland* (Stuttgart: Steiner Verlag, 1998), 420.
[477] Lynne Fallwell, *Modern German Midwifery, 1885-1960* (London: Routledge, 2013), xii.

modern, male-led, institutionally-focused obstetrics." Rather than embracing a linear and dichotomous narrative, Fallwell demonstrates that German midwives took on an active role in the "transition from traditional practice to modern institutionalized health care by organizing and working to achieve other markers of professionalization."[478]

During actual labour, nothing of a heating nature must be given. The woman may, now and then, take a little panado, and her drink ought to be toast and water, or thin groat gruel. Spirits, wines, cordial waters, and other things which are given with a view to strengthen the mother, and promote the birth, for the most part tend only to increase the fever, inflame the womb, and retard the labor.[479]	The midwife must make sure that the woman is not too tightly bound and encourage the mother as much as possible, while also providing strengthening remedies such as fresh eggs, chicken broth and the like. When the birth has advanced, let the mother lie on rugs not far from the fire, place a kiss under her head, let her feet bend back and position her knees as far apart as possible from each other; meanwhile, the midwife should take hold of her, rub her hand and the mother thoroughly with white lily oil or fresh butter and gradually largen the opening.[480]

Table 1

In similar vein, Kathleen A. Huston has observed a community of Texas German midwives in the nineteenth century who provided their services and viewed themselves as "professionals" as opposed to Texas Anglo-American midwifes, who thought of

[478] Fallwell, *Modern German Midwifery,* xii.
[479] Buchan, *Domestic Medicine,* 582-3.
[480] *Kurzgefaßtes Weiber-Büchlein. Die Zehnte Auflage* (Harrisburg, Pa.: Benjamin Mayer, 1799), 8. Die Hebamme hat hierin zu beobachten, daß die Frau nicht hart geschnürt sey, und so viel als möglich ihr Muth zu- sprechen, auch stärkende Mittel einge- ben, als frische Eyer, gute Hinkel-brühe, u. dergl. Wann nun die Geburt also beför dert ist, so laß die Frau auf Tep- piche liegen, nicht gar weit vom Feuer, lege ihr ein Küssen unter das Haupt, und eins unter den Hintern, laß sie ihre Füße zurück biegen und die Knie so weit von einander thun als mög- lich ist; mittlerweile soll die Hebam- me zu ihr greisen, jedoch ihre Hand und die Mutter wohl mit weiß Lilien- öl oder frischer Butter salben, und den Ausgang nach und nach erweitern.

themselves as "neighbor-women helpers."[481] This strong German midwifery tradition can be traced back to the twelfth century. Though women's visibility in institutional sources in Germany declined by 1700, scholars such as Annemarie Kinzelbach and Karen Scheuermann have cautioned against the generalization that German midwifes were marginalized or that their expertise was devalued in the medical community.[482]

The late eighteenth-century in America saw a shift in midwifery manuals geared towards male medical students, away from the midwives. Whereas the *Weiber-Büchlein* was formatted as an octavo, which typically allowed for broader readership and cheaper prices, midwifery works in America denoted a transformation "from a female readership to an exclusively male medical students one." As Marcia D. Nichols traces out, Samuel Bard's *A Compendium of the Theory and Practice of Midwifery* (1808), one of the first American midwifery textbooks, saw each successive edition (totaling five) become larger and more expensive.[483] By 1820, Anglo-American women began to increasingly call for physicians to attend to them during labor as the nineteenth century saw the rise of obstetric and gynecological medicine, mainly dominated by men. That is not to say that midwives were completely relegated to the periphery as healers, but clear obstacles and laws were put in place against midwives, who were portrayed as dangerous and uneducated. This was a stark contrast to colonial times, where the delivery room "belonged to the woman, and in it the midwife was in charge."[484]

---

[481] Kathleen A. Huston, "German Midwifes of Nineteenth- and Twenteith-Century Texas: Women's Work, Culture, and Fighting 'Death in the Room.,'" *Southwestern Historical Quarterly* 124, no. 4 (2021): 412–35.
[482] Annemarie Kinzelbach, "Women and Healthcare in Early Modern German Towns," 619–38; Karen Scheuermann, "Midwifery in Germany: Its Past and Present," *Journal of Nurse-Midwifery* 40, no. 5 (1995): 438–47.
[483] Nichols , *Fixing Women,* 152-3.
[484] Kirkman, 11.

Hebammen at Work: Susanna Rohrer Müller and Rosina Heydrich

Very little is known about German-speaking midwives in early America during the eighteenth century in large part due to the lack of documentary evidence. According to Mary Lindemann, midwifery has been most extensively studied in England and the United States (mainly in the nineteenth century) and has noted the field's emphases on the Anglo-Saxon model, which revolved around the increasing conflict over the medical dominion between women and male physicians. Historians who study midwifery in the German states and cities such as Lindemann and Gabrielle Robilliard have shown otherwise that the key issues that emerged in the English context were less important to the experiences of midwifes elsewhere. In the same vein, Alexandra Michel argues that across history, midwifery was "rooted in local cultures and tradition." Thus, German midwifes in early America potentially brought with them their experiences and knowledge and passed it down to their apprentices orally as their English counterparts did. Transmission of sexual knowledge among women occurred orally in most cases in the sixteenth and seventeenth centuries, but this period also saw a shift towards "a privileging of textual forms of that knowledge."[485] The appearance of the *Weiber-Büchlein* falls in line with this pattern.

In Germany, rhetoric over the status of midwifes was more nuanced and complex that on one hand reflected "the overwhelmingly positive value placed upon the office of midwife by both urban authorities and the community, and on the other, novel ideas about the superiority of male obstetrics," particularly in the second half of the eighteenth

[485] Fissell, *Vernacular Bodies*, 7.

century.[486] Despite Johann George Krünitz's entry on *Heb-Amme* [midwife] in his expansive *Oekonomische Encyklopädie* (an effort amounting to 242 volumes published between 1773 and 1858), which portrayed the art of midwifery quite disparagingly, midwives maintained official positions in various German cities in the early modern period and continued to do so until the end of the eighteenth century.[487] Throughout much of the eighteenth century, mothers too were fearful of male intervention; one midwife, Rosina Willendorf of Wittenberg, noted that "women did not want to have a doctor, [they] would rather die."[488] That is not to assert that women fully placed their trust in midwifes off the bat. Trust had to be built between the mother and midwife, and many communities often relied on these midwives for their expertise on childbirth and childrearing.[489] This also rang true for women in early America. In some cases, we have

---

[486] Gabrielle Robilliard, *Tending Mothers and the Fruits of the Womb: The Work of the Midwife in the Early Modern German City* (Stuttgart, Germany: Franz Steiner Verlag, 2017), 14.

[487] Krünitz wrote a scathing description on the midwives: "For about 100 years in various European countries, but mainly in France, England and Holland, and now also in many places in Germany, the art of midwifery has greatly improved, and there have been no qualms about men being well-trained in this art, far better than ordinary midwives…and one commits a crime against humanity as soon as one allows the whimsical obstinacy of women to sacrifice their freedom and the fruit of their lives to an old woman who does not even know the nature and position of the womb." See Johann Georg Krünitz, "Heb-Amme," in *Oekonomische Encyklopädie Oder Allegemines Ssytem Der Staats- Stadt- Haus- Und Landwirthschaft*, last accessed 21 March 2025, https://www.kruenitz1.uni-trier.de. For example, the cities of Nuremberg, Frankfurt, Munich, and Stuttgart passed ordinances that licensed, regulated and oversaw midwives. According to Merry E. Wiesner, however, no diaries or case books of these midwifes have been discovered. See Merry E. Wiesner, "The Midwives of South Germany and Public/Private Dichotomy," in *The Art of Midwifery: Early Modern Midwives in Europe* (London: Routledge, 1993), 78.

[488] Quoted in Gabrielle Robilliard, "Instruments or Hands? 'Nature' and the Practice of Obstetric Surgeons in Early Eighteenth-Century Germany," *Perceptions of Pregnancy* (blog), May 15, 2018, https://perceptionsofpregnancy.com/2018/05/15/instruments-or-hands-nature-and-the-practice-of-obstetric-surgeons-in-early-eighteenth-century-germany/. See footnote 4.

[489] Trust was *the* essential component in the early modern encounter because it functioned as a sort of switch in the body which enabled the doctor's [or midwive's] to work. Nor was this trust inviolable. In one delivery, Rosina Willendorf (the same midwife mentioned above) had handled the birth of Maria Elisabeth Schipgen in 1717 "so incompetently" that Schipgen submitted a complaint to the mayor and Council of Leipzig on how she suffered 'great damage to the uterus'" because of Willendorf had "tore [her] down there" and caused the vagina to become "completely knotted and swollen." Robilliard, *Tending Mothers and the Fruits of the Womb,* 202, 212.

records of German doctors providing detailed information about the daily tasks and competencies of women working in hospitals. Annemarie Kinzelbach has written an article examining the journal of the Nuremberg physician Johann Christoph Götz (1688-1733). Although the journal does have a gender bias, Götz readily acknowledged the expertise and opinion of women, as he did not completely shun their practices.[490] Thus, German midwives played a vital role in their society for their specialized services. Although a slightly later example, the royal midwife responsible for delivering Queen Victoria and Prince Albert of Saxe-Coburg and Gotha was a German midwife, Charlotte Heidenreich von Siebold (1788-1859).

On the other side of the Atlantic in the small towns and rural areas of Pennsylvania where fewer physicians resided (and often required travelling long distances to see), the medical knowledge of women was valued and relied on by families and pregnant women. In Providence Township, Pennsylvania, the midwife Susanna Rohrer Müller left a meticulous record of the children (numbering 1667) she helped deliver between 1791 and 1815. Susanna had the qualifications typical of midwifes at the time: having married, participating in the "ritual of female congregation at a birth," and experiencing childbirth and motherhood (often with multiple children).[491] Susanna was the mother of seven children and taught two of her daughters (out of five) the practice of midwifery. Susanna not only practiced as a midwife in the country, but also potentially distilled pharmaceuticals and grew medicinal plants on the farm. The Müller household

[490] Kinzelbach, 627-38. For instance, Götz cooperated and exchanged information focusing on women's health with two female doctors, Sabina Clara Wegleiter (1695-1735) and Sabina Elisabetha I Wegleither (*c.* 1665-1734). He also referred to women who practiced outside the circle of officially appointed women.
[491] Robilliard, *Tending Mothers and the Fruits of the Womb,* 82.

distilled whiskey from the corn and rye grown from the farm. Other products were distilled as well including apple jack, peach brandy, sassafras oil, peppermint oil, and pennyroyal oil: the last three were necessary ingredients in many household medical recipes.[492] Susanna's skills as a midwife garnered the respect of physicians and patients. During a difficult delivery of Mrs. O'Brien, Susanna dispatched a messenger to Lancaster to obtain some consultation from a physician. The doctor asked who was attending to the birth, and upon hearing it was Susanna Müller, he replied, "Then it is alright, she knows as much about the case as I do."[493] She successfully delivered the baby safely. This incident suggests that German midwifes in early America played an integral role in obstetrics in their communities.

As for the record Susanna left behind, the contents warrant a closer look. The way she has organized the details is testament to the experienced and business-like quality of her services. Beginning from January 1795 to June 1815, Susanna recorded for each case the exact date, gender and number of children, family name, and amount of money received. Her ledger is more of an account book as the births do not indicate the survival of the baby and/or the mother. Many of her families she helped were of Scotch-Irish origin based on tax lists of the Martic and Providence Townships.[494] Susanne seems to have attended the same families multiple times, attesting to her prowess as a midwife. There are multiple mentions of the same individual throughout the record. For example,

---

[492] In a family story, Susanna's grandson, Peter, travelled 70 miles to Philadelphia to sell 60 ounces of peppermint oil to an apothecary. M.D. Learned and C.F. Brede, eds., "An Old German Midwife's Record," 2-4.
[493] Learned and Brede, eds., 4.
[494] Learned and Brede, eds., 7.

she helped deliver children for a "bile sibrug" [Billy Seabrook] four times between 1797 and 1808. We also see a "David gallens" (also spelled "davit" or "dafed") [David Collins] at least four times between 1799 and 1808.[495]

Another fascinating detail in Susanna's record reveals that she delivered the babies of Black women as well, marked by the epithet "neger." According to Jubilee Marshall, the Black population in Philadelphia consisted of 1,500 people in 1765, and only 100 were free.[496] Black slaves remained a small proportion of the labor force in Philadelphia during the eighteenth century, and slaveholding saw a decline after 1720. This pattern was not mirrored in the rural areas of Pennsylvania and on the contrary showed signs of growth.[497] Depending on where and in what time period they lived, Black women in Pennsylvania in the mid-1700s varied widely. In the rural counties of Pennsylvania, the Black population was thinly scattered across the countryside.[498] In Lancaster County, where Susanna lived, the first United States census in 1790 recorded 347 slaves and 16 freed Blacks; the second census done in 1800 recorded 178 slaves and 786 freed Blacks. Since Susanna resided in Providence Township, where accounts of people living there at the time recounted tales of fighting against the wilderness, and relied on her trusty horse to answer house calls around the countryside, it is safe to

---

[495] For Billy Seabrook, see Learned and Brede, 10, 14, 22, 28. We see David Collins on pages 13, 16, 19, and 27.
[496]Jubilee Marshall, "Race, Death, and Public Health in Early Philadelphia 1750-1793," *Pennsylvania History: A Journal of Mid-Atlantic Studies* 87, no. 2 (2020): 366.
[497] Jean R. Soderlund, "Black Women in Colonial Pennsylvania," *Pennsylvania Magazine of History and Biography* 107 (1983): 49–68. It was not until the passage of the gradual abolition act of 1780 by the Pennsylvania Assembly that saw the slowing down of slaveholding.
[498] Soderlund, "Black Women in Colonial Pennsylvania," 52-3.

assume that most of her clients lived in rural Pennsylvania.[499] Because access to formal medical care was restricted for rural Americans (perhaps moreso for rural Black women), Black mothers relied on a skilled midwife such as Susanna undergo a safe delivery. As such, childbirth was one occasion "that called for the breakdown of racial barriers."[500]

Susanna's ledger differs from that of Rosina Heydrich, who also left behind a birth register kept from 1770 to 1819. Like Susanna, Rosina was a midwife who lived in rural Upper Perkiomen Valley (Montgomery County), but she primarily served the religious congregations nearby for most of the names she recorded were German. A majority of the settlers in the Upper Perkiomen Valley were German and became home to a diverse range of faiths including Lutherans, Reformed, Mennonites, Brethren, Schwenkfelders, and Roman Catholics.[501] Rosina and her family were members of the Schwenkfelder community. Rosina's manuscript not only detailed the 1,739 births she attended over the course of five decades but also had a collection of recipes geared towards the health of women and children.[502] Rosina's records provide slightly more information about the births she attended to. Unlike Susanna who mainly wrote down the names of the fathers in her ledger, Rosina recorded the names of the children. There are

---

[499] Even the town of Lancaster, one of the central hubs in the area, was known as "Hickory-Town" among straggling pioneers.

[500] In New England and the middle colonies, both white and Black women preferred to be in the company of relative and friends during childbirth. That was made difficult for slave women because of their work routines. As such, Black and white women regularly attended each other in childbirth. See Marylynn Salmon, "The Limits of Independence: 1760-1800," in *No Small Courage: A History of Women in the United States*, ed. Nancy F. Cott (Oxford: Oxford University Press, 2000), 123-5.

[501] Jerry A. Chiccarine and David W. Luz, *Images of America: The Upper Perkiomen Valley* (Charleston, SC: Arcadia Publishing, 2007), 7.

[502] Rosina Heydrich, "Rosina Heydrich's Midwifery Manual And Ledger, 1770-1819: Transcription And Translation", Schwenkfelder Library & Heritage Center - Rosina Heydrich's Midwifery Manual and Ledger, 1770-1819, https://digitalarchives.powerlibrary.org/papd/islandora/object/papd%3A53784.

two instances where she lists the parents: her sister Maria, who died after giving birth, and a Jon Fried and his wife Susanna who "are separated."[503] No further information about the parents are given in both manuscripts. Rosina also included abbreviations for certain births, namely "ug" and "miß." Patrick Donmoyer speculates that "ug" meant "ungelich," a variation of "Unglück," an accident or misfortune—perhaps suggesting a failed delivery, death of the mother, or serious complications.[504] Stillborns were noted by "miß" [mißgeburt]. I counted 33 miscarriages or deaths of children (*Todt geboren Sohn/Tochter*).

Rosina's recipes share some overlap with remedies in the *Weiber-Büchlein* that address pain and discomfort associated with pregnancy, regulate menstruation, and promote lactation. A noticeable difference between the manuscript and the midwifery booklet, however, is that the former omits any guidance or direction typical of a midwife's duties: assisting and delivering the baby during labor, rearranging the child's position in the womb, cutting the umbilical cord, and monitoring the health of both mother and child after the birth. Just as Sauer did in his remedies in the *Hoch-Deutsche Calender*, Rosina too focused on esoteric properties of certain plants though Sauer made no references to menstruation. Patrick J. Donmoyer has noted the ritualistic nature of some entries as they recommended the use of healing objects, procedures enacted in a particulate manner or at certain times. This ritualistic aspect of health advice is also present (to a lesser extent) in the remedies of the *Weiber-Büchlein*:

> Promoting monthly bleeding. A plaster of Galbanum placed on the navel is very useful for promoting bloodflow. The herbs that promote bleeding are: balsam,

[503] Rosina Heydrich, "Rosina Heydrich's Midwifery Manual And Ledger, 1770-1819," 19-20.
[504] Heydrich, "Rosina Heydrich's Midwifery Manual And Ledger, 1770-1819," 18 fn 47.

> pennyroyal, [Begonien], sage, majoram, rosemary, verbena, laurel, hyssop, centaury, hazel root, savin, valerian root, yarrow, and oregano, 2c. 2c.
>
> Putting some of these herbs in wine and drinking it, or making tea from them, will promote menstruation; and if that does not work, boil the herbs in water, make a footbath and tie the cooked herbs and place it on your navel, lie in a warm bed, and let the blood flow. One thing to note: these items should be used when the moon is waxing and nearly full: because it is difficult to get the blood flowing when the moon is waning.[505]

In this example, the *Weiber-Büchlein* specifies the importance of the lunar phases when administrating this remedy. This consideration of the moon also coincided with advice for a late period in Culpeper's midwifery guide.[506] A few of the herbs listed above also appear in Rosina's manuscript such as hazel root and dry sage leaves. In addition to these two, Rosina also named castoreum, pennycress, dry blackberry leaves, blueberries, sorrel, wild thyme, gall-apples mixed with plantain juice, nettle leaves boiled and mixed with myrrh, and baths made from lemon balm as ingredients helpful in menstrual bleeding.[507]

Although Rosina placed more emphasis on herbs in her recipes, she did include remedies that utilized metals and "stones" that affected a woman's wellbeing. I want to

---

[505] Die Kräuter welche das Geblüt trei-ben, sind: Balsam, Pennyroyal, Be- donien, Salbey, Majoran, Roßma- rin, Eisenkraut, Lorbeeren, Ysop, Tau- sendgüldenkraut, Hasselwurzel, Sefen- baum, Baldrianwurzel, Dostenkraut, 2c. Einiges von diesen bemeldeten Kräu-tern in Wein gethan und denselben ge-trunken, oder Thee davon gemacht, be- fördert ihre Zeit, und sollte es nicht, so koche besagte Kräuter in Wasser, ma- che ein Fußbad davon, und binde die gekochte Kräuter auf den Nabel, lege dich in ein warm Bette, und lasse zur Ader. Eins ist zu bemerken, daß diese Artikel gebraucht werden sollen, wann der Mond im zunehmen, und schier voll ist: dann es ist schwer das Geblüt in den Gang zu bringen, wann der Mond abnimmt. *Kurzgefaßtes Weiber-Büchlein. Die Zehnte Auflage* (Harrisburg, Pa.: Benjamin Mayer, 1799), 46-7.

[506] Patrick J. Donmoyer, *Powwowing in Pennsylvania: Healing Rituals of the Dutch Country* (Kutztown, PA: Pennsylvania German Cultural Heritage Center, 2017), 278. "Administration of herbal compounds for a late period was to be timed with the waxing moon, as it was to be much harder to treat in the waning moon." In Culpeper's book, the cure for "the stoppage of the Menstrua's" cautioned that medicines be given "a little before the Full Moon or between the New and full Moon…The Moon hath great influence upon all Elementary bodies, but more upon Women than Men, because they are of her own sex."60-1.

[507] Castoreum and sorrel help "regulate menstruation"; pennycress, gall-apples mixed with plantain juice, and dry blackberry leaves are suggested for excessive menstrual bleeding; lemon balm, dry sage, hazel root, wild thyme, and nettle leaves "hasten" menstrual bleeding. Heydrich, "Rosina Heydrich's Midwifery Manual And Ledger, 1770-1819: Transcription And Translation," 2-12.

bring two specific recipes to attention, especially as the *Weiber-Büchlein* did not include such advice regarding healing stones. The first called for iron oxide [*eisen rost*] administered to the female parts to stop menstrual flow or, when drunk, hinders her fertility.[508] As a nod to the chemical philosophy of Paracelsus, Rosina's recommendation for iron oxide is unusual in that no equivalent is found in neither Culpeper's guide nor in the *Masterpiece*. Culpeper did mention the "magnetick virtue" of the Load-stone [lodestone] from time to time in his guide but not in any medical context.[509] A similar remedy can be found in a seventeenth-century English manual titled *The Ladies Dispensatory* (1652), which listed "Rust of Iron applied in a suppository" to "restraine great excesse of Womens monthly purgations."[510] In Paracelsus's chemical philosophy, iron was associated with Mars and associated with masculinity. Rosina's use of iron oxide makes sense then in the context of decreasing feminine qualities, i.e., halting menstrual bleeding and disrupting the woman's fertility. In his writings, Paracelsus only discussed giving women "the element of Mars" when she was suffering "from poverty of the blood and want of nervous strength (anæmia)."[511] The second remedy utilized an

---

[508] "Der Eisen rost gethan an die weibliche Ort stillet iren Fluß getruncken hinder die fruchtbarkeÿt; macht auch haar an kalen orten wachsen." Heydrich, "Rosina Heydrich's Midwifery Manual And Ledger, 1770-1819, 3.

[509] "For Nature being sent in the World by the Eternal God, for the Increase and Multiplication of Things in the Elementary World, hath placed a Magnetic Vertue in the Womb, that it draws the Seed to it, as the Load-stone draws Iron, or the Fire the Light of the Candle." A lodestone is a variety of iron oxide that has magnetic properties and attract iron.

[510] Leonard Sowerby, *The Ladies Dispensator : Containing the Natures, Vertues, and Qualities of All Herbs, and Simples Usefull in Physick* (London: R. Ibbitson, 1652), 156.

[511] "If, for instance, a woman is deficient in the element of Mars, and consequently suffers from poverty of the blood and want of nervous strength (anæmia), we may give her iron, because the astral elements of iron correspond to the astral elements represented by Mars, and will attract them as a magnet attracts iron." Franz Hartmann, *The Life of Philippus Theophrastus Bombast of Hohenheim Known by the Name of Paracelsus and the Substance of His Teachings*, 2nd ed. (London: Kegan Paul, Trench, Trübner, & Co., 1896), 203.

eagle stone to make a woman's birth easier.[512] Eaglestones, also called aetites, were more commonly used as amulets in the Middle Ages to ensure a swift and safe delivery for the mother.[513] In Culpeper's manual, it explains that the aestites stone held near the "privities draws away the child [out of the womb]."[514] The powers of the aestites were widespread across Europe from antiquity to the nineteenth century: price lists in seventeenth-century German lapidaries show that eaglestones were inexpensive and a staple item in apothecaries.[515] The inclusion of the healing properties of minerals and stones such as iron oxide and eaglestones were not atypical in medical advice in the eighteenth century, but it does show a different component of women's health in German medicine that was not featured in the *Weiber-Büchlein*.

Alyssa Kirkman observes that between 1750 and 1810, American doctors and midwifes unhappily shared the profession in obstetrics. This polarization between male physicians and female midwifes solidified further by the turn of the nineteenth century: in Philadelphia, we begin to see a decline in midwifes in the city directory in 1815.[516] In this chapter, I focused on the practice of German midwifery in early America (1790-1810), specifically in Pennsylvania, and how it did not follow the same trajectory of English midwifery through the publications of the *Weiber-Büchlein* and records left by the

---

[512] "Adler steijn einer frawen a--- soll, machen die geburt leichtig ----." Parts of the text are fragmented as indicated by the dashes. Heydrich, "Rosina Heydrich's Midwifery Manual And Ledger, 1770-1819, 4.
[513] Eaglestones were placed on the mother's thighs or belly during delivery. Paul B. Newman, *Growing up in the Middle Ages* (Jefferson, NC: McFarland & Company, 2007), 15.
[514] Nicholas Culpeper, *A Directory for Midwives: Or, a Guide for Women, in Their Conception, Bearing, and Suckling Their Children* (London: S. Ballard, R. Ware, S. Birt, C. Hitch, L. Hawes, and J. Hodges, 1755), 98.
[515] Sandra Cavallo, "Pregnant Stones as Wonders of Nature," in *Reproduction: Antiquity to the Present Day*, ed. N Hopwood and R Flemming (Cambridge: Cambridge University Press, 2018), 672.
[516] Kirkman, "The Meeting of Mothers, Midwifes, and Men," 20-1. Philadelphia listed only male midwifes by 1824.

midwifes Susanna Müller and Rosina Heydrich. I have traced the peculiar history of the various editions of the *Weiber-Büchlein* and the transformations it underwent with successive editions; though we see the booklet borrowed from older midwifery texts, it was nonetheless a product of its time produced primarily for a larger German audience. One of the book's noticeable properties is the absence of birth figures, an anomaly for midwife texts in the early modern era. However, I argue that it was most likely a cost-saving measure.

Unlike English midwifery texts published in the late eighteenth century and early nineteenth century, the *Weiber-Büchlein* recognized the essential role of the midwife in a successful delivery and care of the mother after birth. The important works of midwifes such as Susanna and Rosina only stress this point as they each tended to over 1000 cases. In addition, Rosina's manuscript particularly lends a complementary perspective to the remedies and recipes utilized by German midwifes present in the *Weiber-Büchlein*. Though some of the recipes were borrowed from Culpeper's work, several remedies in the booklet shared herbs and ingredients with Rosina's manuscript. Furthermore, Rosina's remedies for women put an emphasis on the ritualistic and magical properties of certain materials or minerals. This chapter is not intended to rehabilitate the early modern midwife against the "particular Enlightenment piety of the bumbling, inept, and ignorant midwife." Instead, I have focused on the importance of German midwifes and their practice in early America, which have yet to be studied in the historiography.

Conclusion

This chapter shows that German midwifery in the early American republic did not simply follow the familiar Anglo-American narrative of displacement by man-midwifes. Instead, a distinct German print and practices persisted revolving around the much-reprinted *Weiber-Büchlein* and the lived craft of working midwifes such as Susanna Rohrer Müller and Rosina Heydrich. The *Weiber-Büchlein* was not a mere translation of English staples. It was a compiled, edited, and pruned handbook aimed for use in German households that was stripped of titillating sexual material and of the "birth figures" so common in similar European works: choices that reflected audience, piety, and cost rather than an attempt to undercut women's authority in the birthing room. Its textual collage tells us that German readers consumed both long-trusted folk recipes and emerging recommendations from university-trained physicians. This editorial decision aligned with a broader German pattern where female midwifes remained institutionally relevant than in their English contexts. It also explains why the *Weiber-Büchlein*'s recipes expanded in nineteenth-century reprints under general family medicine. Authority over childbirth continued to be managed primarily in bedchambers by women.

On the ground, the ledgers and recipes left by Susanna and Rosina reveal a female profession that was respected and enduring. Their caseloads, which possibly outnumber that of Martha Ballard, point to repeated patronage, collaboration (not capitulation) with physicians, and the training of their daughters.[517] Whereas the *Weiber-Büchlein* locates

[517] It is estimated that Ballard successfully performed 814 deliveries in contrast to Susanna's 1,667 and Rosina's 1,739 deliveries. Laurel Thatcher Ulrich, "'The Living Mother of a Living Child:' Midwifery and Mortality in Postrevolutionary New England," in *Women and Health in America*, ed. Judith Walzer Leavitt (Madison: University of Wisconsin Press, 1999), 51.

the midwife at the heart of safe delivery and aftercare, Susanna's and Rosina's records document hallmarks of a trusted, local standing. Rosina's 150-odd remedies, ranging from emmenagogues timed to lunar phases to stone therapies, selectively overlap with the *Weiber-Büchlein* and almanac medicine, demonstrating how household, manuscript, and print blended together in German communities. Even the racial and confessional breadth of clients underscores the midwife's centrality in rural Pennsylvania's medical society. The historiographical arc towards male professional dominance in the English does not conform in the German case. We instead see an alternative trajectory that complicates the standard displacement thesis. The *Weiber-Büchlein* did not denigrate midwifes, and German families placed their confidence in the practical skill and clinical judgment of midwifes such as Susanna and Rosina.

CONCLUSION

This dissertation has traced how German-speaking medical practice in North America between 1730 and 1820 formulated at the crossroads of transatlantic prescriptions and local therapeutics, tempered by confessional discipline, accessible print, and on-the-ground practice. In the religious confines of Chapters 1 and 2, Lutheran Pietists leaned heavily on Hallesian cures and institutional oversight while Moravians and other dissenting communities proceeded more practically based on what they could obtain at hand. Chapters 3 and 4 deviate away towards religion as the framework and focus on medical care in the household with accessible prints; German *Calender* and the *Weiber-Büchlein* organized knowledge for families to be able to care for themselves against illness. Remedies and therapeutic cures came not only from institutions back in Europe, but also passed through the pulpit and print in the German-speaking communities in colonial and early America. We see local knowledge and plants become integrated into the remedies of physicians George de Benneville and Abraham Wagner as well as in the gardens of Hans Martin Kalberlahn and Anna Rosina Gambold. The result is not a narrative of a singular "German" medicine transplanted to America but a textured therapeutic world characterized by different practices and approaches to health.

Through my study of medical recipes, I show how authority was negotiated between printed pharmacopoeias, missionary networks, Indigenous and Black expertise, and the constraints of environment and climate. Authority was established rather than assumed. In Lutheran Pietist contexts, it coalesced around techniques and recipes from Halle. Heinrich Melchior Mühlenberg and Johann Martin Boltzius's strict adherence to

directives from Halle was more about setting up order in the form of *medizinische Polizei* that was rooted in eighteenth-century Prussia. In the dissenting worlds of de Benneville, Wagner and the Moravians, medical reliability emerged from eclectic means: what cures effectively worked, and what could be procured nearby. There were different contours of medical trust and authority under colonial restraints. This also extended beyond formal care with the publication of cheap print, which functioned as medical infrastructure for German-speaking families in America. *Calender* offered tips for self-treatment and provided familiar folk remedies from the Old World and adapted to utilize plants grown in the New World. German almanacs taught readers to be self-sufficient with respect to health.

The role of women as stabilizers of care to German communities also comes to the forefront in this dissertation. The *Weiber-Büchlein* and the manuscripts of Susanna Rohrer Müller and Rosina Heydrich map out a German midwifery tradition that was not wholly overshadowed by male practitioners. Their accomplishments extend the eclecticism of almanacs into lying-in rooms, taking into consideration local plants and ritual advice for the benefit of mothers and children. In Moravian settings, women's contributions are equally visible: at Springplace, Anna Rosina Gambold and the Sisters tended to the mission garden and cared for their Indigenous Sisters during times of illness and hardship; hospitality was inseparable from care. Anna's botanical skills and knowledge garnered the recognition of visitors and provided food and medicine for the mission. Most therapeutic care fell on the Brethren and Sisters (who did not have

university credentials) and instead relied on gardens and local exchange to sustain their communities.

My study reframes "Germans in America" as a heterogeneous community linked by language and various religious groups through the lens of medicine. The Lutheran Pietists ministers' repeated requests to Halle for supplies and anxieties about counterfeit medicines reveal a deference in authority to a European institution. At the same time, the Moravian case demonstrates a different pattern where the global reach of the Moravian mission reached deep into the frontiers of early America. However, instead of receiving aid from the center (i.e., Bethlehem, PA, or Herrnhut), medical aid was based heavily on what could be grown or obtained through local exchange. In *Hopeful Journeys* (1996), Fogleman argues that German-speaking immigrants in colonial America successfully settled in America by "maintaining some of their old ways and creating new ones" without losing their Germanness. In doing so, they helped create a pluralistic America.[518]

By tracing remedies into colonial households, this project locates German medical authority not only in university-educated physicians and institutions like the Halle Orphanage, but also in the ordinary labor of ministers, printers, and women—addressing largely unanswered questions in the history of German medical expertise during the eighteenth and early nineteenth centuries. Mary Lindemann's seminal *Health and Healing in Eighteenth-Century Germany* (1996) explored the large and varied group of medical providers in Germany hailing from different kinds of backgrounds and training. This dissertation follows German-speakers across the Atlantic and into North America,

[518] Aaron Spencer Fogleman, *Hopeful Journeys: German Immigration, Settlement, and Political Culture in Colonial America, 1717-1775* (Philadelphia, PA: University of Pennsylvania Press, 1996), 11.

and also responds to Mary Fissell's advice to "investigate the relationship between the work we consider medicine and the broader category of attending to the human body."[519] This reconceptualization of medicine allows those "virtually invisible healers" often absent or poorly represented in history to emerge from obscurity.[520] While it is a bit of a stretch to name figures such as Mühlenberg and Sauer as obscure, their involvement in healing in early America is a topic little studied in the history of medicine. Likewise, women like Anna Rosina Gambold and Pleasant attended to the human body at Springplace, Georgia. The ledgers of Susanna Müller and Rosina Heydrich reveal their medical prowess in the care of the parturient woman for German communities in the rural areas of Pennsylvania. German medical expertise constituted a set of practices that were translated, imitated, and even contested in America. Historians have begun to recognize the "multiplicity of healers and heterogeneity of healing practices."[521]

The source base of my study also speaks to a larger scholarship in the history of medicine and the often-expressed criticism that medical practice records (daybooks, medical diaries, patient records, and ledgers) have been neglected by research.[522] Sources such as almanacs and midwifery booklets, previously dismissed as ephemera, yield documentation and a glimpse into a practitioner's practice. With the handbook kept by Otto Christoph Krogstrup, the formularies of de Benneville and Wagner, and mission

---

[519] Mary E. Fissell, "Introduction: Women, Health, and Healing in Early Modern Europe," *Bulletin of the History of Medicine* 82, no. 1 (Spring 2008): 11.
[520] Mary Lindemann, *Medicine and Society in Early Modern Europe*, second edition (New York: Cambridge University Press, 2010), 236.
[521] Lindemann, *Medicine and Society in Early Modern Europe*, 236.
[522] Volker Hess and Sabine Schlegelmilch, "*Cornucopia Officinae Medicae*: Medical Practice Records and Their Origin," in *Medical Practice, 1600-1900*, ed. Martin Dinges, et al. (Leiden: Brill, 2015), 12; Katharina Ernst, "Fragments and Gaps. The Form of Illness Narratives in 18th Century Wurttemberg Pietist Diaries," *Medizin in Gesellschaft und Geschichte* 24 (2005): 35–45.

diaries, I piece together how therapeutic care was administered in German communities, i.e., which recipes were copied from older texts or how ingredients were used and adjusted. Sometimes, medicines from the Old World maintained their authority in certain communities in Pennsylvania. Elsewhere, Germans adopted New World botanicals whenever necessary. More importantly, these records emerge in my writing as constitutive sources of medical authority in German-speaking communities, especially those outside of cities.

Because the core of my findings is grounded in Pennsylvania and select missions in the South, a fuller study on German medical culture in eighteenth and nineteenth centuries would take into consideration the Palatines of New York or the German-speaking enclaves in Louisiana known as *La Cote des Allemands* ("The German Coast"). Two other avenues for further research prove promising: first, compiling and comparing medical advice and recipes from other *Calender* aside from Sauer's almanac to help visualize what type of knowledge was popularly circulated among German speakers. Second, the manuscripts of Susanna and Rosina invite a comparative inquiry with the notebooks left by English midwives to identify similarities and differences in maternal care during this period.

My study ends in 1820 because the eighteenth century captures a particular moment of fluidity with smaller communities, uneven levels of institutionalization, and a therapeutic market shared by laypeople, women, and educated physicians. After 1820, the landscape shifts: the nineteenth century was "the true era of mass migration," and

German emigration experienced a boom, especially in the 1830s and 1840s.[523] This reoriented the geography of German settlement from eighteenth-century Philadelphia and scattered southern missions mainly towards the Midwest and northeastern cities such as New York City and Baltimore.[524] What I have traced locally became large scale, and therapeutic practices underwent major transformations in the nineteenth century. The era also strengthened the transatlantic thread between Germany and the United States. Over the course of the century, American historians traveled to German universities "in search of advanced professional or academic training."[525] In medicine in particular, American physicians were eager to study abroad between 1850 and 1914.[526]

The nineteenth century added new threads to a therapeutic fabric already in place. German-speaking communities in eighteenth-century North America were providing medical care with Hallesian preparations and techniques used by ministers, plants cultivated from Moravian gardens with help from local tribes, recipes clipped from Sauer's *Calender*, and advice taken from midwifes' ledgers and the *Weiber-Büchlein.* These were durable repertoires of therapeutic advice organized well before the systemization and professionalization of medicine in the nineteenth century.

---

[523] Toni Pierenkemper and Richard Tilly, *The German Economy During the Nineteenth Century* (New York: Berghahn, 2004), 94.
[524] Waler D. Kamphoefner, *Germans in America: A Concise History* (Lanham, MD: Rowman & Littlefield, 2021), 66.
[525] Peter Novick, *That Noble Dream: The "Objectivity Question" and the American Historical Profession* (Cambridge: Cambridge University Press, 1988), 21-22. "Graduate or professional training worthy of the name hardly existed in the United States until the century was well advanced."
[526] The historian Thomas N. Bonner estimated that approximately 10,000 American medical students studied in Vienna, 3,000 studied in Berlin, around 1,500 studied elsewhere in Germany, and less than 200 studied in the universities of Switzerland and Austria-Hungary (outside Vienna). Thomas Neville Bonner, *American Doctors and German Universities: A Chapter in International Intellectual Relations, 1870-1914* (Lincoln: University of Nebraska Press, 1963), 39.

German therapeutic care in colonial and early America was pluralistic; authority was negotiated not only within institutions, but also in households, mission settlements, and print. German-American medical practices were not simply transferred intact from the Old World to the New World. In certain cases, Old World regimens endured: nowhere more clearly than in the continued appeal of Hallesian cures. In other settings, medical practice in German-speaking communities illustrated a compilation of healing approaches that combined knowledge from Central Europe and local ecologies. *Calender* and midwifery booklets stitched those strands to everyday practice while ministers administered medical care to their congregations amid physician scarcity, distance, and cost. The materials and ideas from the eighteenth century matter because they document how German-American therapeutics assembled and how German-speaking families managed illness and care before the consolidation of biomedicine.

BIBLIOGRAPHY

Primary Sources

Aristotle's Compleat Masterpiece. In Three Parts: Displaying the Secrets of Nature in the Generation of Man. Regularly Digested into Chapters and Sections, Rendering It Far More Useful and Easy than Any yet Extant. To Which Is Added, A Treasure of Health; or the Family Physician. 28th ed. London, 1762.

Aristotle's Master-Piece, or The Secrets of Generation Displayed in All the Parts Thereof. London: J. How, 1584.

Benneville, George de. "Medicina Pensylvania." c 1770. Historical Medical Library of the College of Physicians of Philadelphia. https://digitalarchives.powerlibrary.org/papd/islandora/object/papd%3Acppmss_803.

Billmeyer, Michael. *Der Hoch-Deutsche Americanische Calender, Auf Das Jahr 1805*. Germantown: Michael Billmeyer, 1804. Joseph P. Horner Library.

Billmeyer, Michael. *Der Hoch-Deutsche Americanische Calender, Auf Das Jahr 1806*. Germantown: Michael Billmeyer, 1805. Joseph P. Horner Library.

Boltzius, Johann Martin. *The Letters of Johann Martin Boltzius, Lutheran Pastor in Ebenezer, Georgia: German Pietism in Colonial America, 1733-1765*. Edited and translated by Russell C. Kleckley. 2 vols. Lewiston, NY: 2009.

Buchan, William. *Domestic Medicine: Or, A Treatise on the Prevention and Cure of Diesases by Regimen and Simple Medicines*. London: W. Strahan, 1774.

Crews, Daniel C., and Richard W. Starbuck, eds. *Records of the Moravians among the Cherokees*. 10 vols. Tahlequa, OK: Cherokee Heritage Press, 2011.

Culpeper, Nicholas. *A Directory for Midwives, or A Guide for Women*. Cornhil: Peter Cole, 1651.

Culpeper, Nicholas. *A Directory for Midwives: Or, a Guide for Women, in Their Conception, Bearing, and Suckling Their Children*. London: S. Ballard, R. Ware, S. Birt, C. Hitch, L. Hawes, and J. Hodges, 1755.

Edwards, B.B. *Memoir of the Rev. Elias Cornelius.* Boston: Perkins, Marvin, & Co., 1834.

Edwards, Jonathan, and Samuel Hopkins. *The Life and Character of the Late Reverend, Learned, and Pious Mr. Jonathan Edwards.* Northampton: S&E Butler, 1804.

Erben, Patrick, et al. *The Francis Daniel Pastorius Reader*. University Park: Pennsylvania State University Press, 2019.

Erd, Peter C., ed. "The Mystic and Theological Document of the Brotherhood of Zion, Concerning the Most Significant Facts of Christian Doctrine (1743)." In *Johann Conrad Beissel and the Ephrata Community: Mystical and Historical Texts*, 195–215. Lewiston: Edwin Mellen Press, 1985.

Ferguson, John. *Bibliotheca Chemica: A Catalogue of the Alchemical, Chemical and Pharmaceutical Books in the Collection of the Late James Young of Kelly and Durris.* Vol. 1. Glasgow: James Maclehose and Sons: 1906.

Fries, Adelaide L., ed. *Records of the Moravians in North Carolina*. 13 vols. Raleigh: Edwards & Broughton Company, 1922.

Gambold, Anna Rosina. "Plants of the Cherokee Country: A list of plants found in the neighborhood of Connasarga River, (Cherokee Country), where Springplace is situated." *American Journal of Science* 1, no. 3 (1819): 245-51.

Gambold, Anna Rosina, and John Gambold. *The Moravian Springplace Mission to the Cherokees*. Edited by Rowena McClinton. 2 vols. Lincoln: University of Nebraska Press, 2007.

Helmut, J. Henry C. *A Short Account of the Yellow Fever in Philadelphia, for the Reflecting Christian*. Translated by Charles Erdmann. Philadelphia: Jones, Hoff, & Derrick, 1794.

Heydrich, Rosina. "Hebamme Büchlein: An Early Pennsylvania Midwife's Ledger and Manual 1770-1819," unpublished manuscript, trans. Patrick J. Donmoyer, Pennsburg.

Kleinfeld, Christian Ernest. *Kurze Beschreibung von Verfertigung einer Essentia dulcis, nebst zwei von ihr entsprungenden Medicamenten, nehmlich: des schwarzen Pulvers und des sogenanten Balsami mineralis*. Rare Book & Manuscript Library, University of Pennsylvania, Philadelphia, PA.

Krogstrup, Otto Christoph. "Untitled Notebook." ca 1770. PP KROChr 42. Moravian Archives.

Kurzgefaßtes Weiber-Büchlein. Enthält Aristotels Und Alberti Magni Hebammen-Kunst, Mit Den Darzu Gehörigen Recepten. Die Zehnte Auflage. Harrisburg, Pa.: Benjamin Mayer, 1799.

Learned, M.D., and C.F. Brede, eds. "An Old German Midwife's Record." In *The American Ethnological Survey: Conestoga Expedition, 1902*, 12:1–25. New York: D. Appleton & Company, 1911.

Lind, James. *A Treatise on the Scurvy. In Three Parts*. 2nd ed. London: A. Millar, 1772.

Loskiel, George Heinrich. *Extempore on a Wagon; a metrical narrative of a journey from Bethlehem, PA., to the Indian town of Goshen, Ohio, in the autumn of 1803*. Lancaster: Samuel H. Zahm & Co., 1887.

Magnus, Albertus. *Von Weibern Und Geburten Der Kinder*. 1700.

Mann, W.J., B.M. Schmucker, and W. Germann. *Nachrichten von Den Vereinigten Deutschen Evangelisch-Lutherischen Gemeinen in Nord-America, Absonderlich in Pensylvanien [Sic]*. Allentown, PA: Diehl & Co., 1886.

McClinton, Rowena, ed. *The Moravian Springplace Mission to the Cherokees: 1805-1813*. 2 vols. Lincoln: University of Nebraska Press, 2007.

McClinton, Rowena. *The Moravian Springplace Mission to the Cherokees, Abridged Edition*. Lincoln: University of Nebraska Press, 2010.

Mühlenberg, Heinrich Melchior. *The Correspondence of Heinrich Melchior Mühlenberg: 1470-1747*. Edited by Helmut T. Lehmann and John Walter Kleiner. Vol. 1. Rockport, ME: Picton Press, 1993.

Muhlenberg, Henry Melchior. *The Journals of Henry Melchior Muhlenberg*. Edited by Theodore G. Tappert and John W. Doberstein. 3 vols. Philadelphia, PA: Evangelical Lutheran Ministerium of Pennsylvania and Adjacent States, 1958.

Newman, Henry. *Henry Newman's Salzburger Letterbooks*. Edited by George Fenwick Jones. Athens, GA: University of Georgia Press, 1966.

Reichel, William C. *A History of the Rise, Progress, and Present Condition of the Bethlehem Seminary with a catalogue of its pupils, 1785-1858.* Philadelphia: J.B. Lippincott & Co., 1858.

Richter, Christian Friedrich. *Die Höchst-Nöthige Erkenntniß Des Menschen, Sonderlich Nach Dem Leibe Und Natürlichem Leben, Oder Ein Deutlicher Unterricht, von Der Gesundheit Und Deren Erhaltung*. Leipzig: Jo. Fried. Gleditsch und Sohn, 1710.

Sangmeister, Ezechiel. *Das Leben Und Wandel Des Gott Ruhenten Und Seligen Br. Ezechiel Sangmeisters*. Vol. 3. Ephrata: Joseph Bauman, 1826.

Saur, Christoph. *Der Hoch-Deutsch Americanische Calender, Auf Das Jahr Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi 1749*. Germantown: Christoph Saur, 1748. Martin Library of the Sciences.

Saur, Christoph. *Der Hoch-Deutsch Americanische Calender, Auf Das Jahr Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi 1769*. Germantown: Christoph Saur, 1768. Joseph P. Horner Library.

Saur, Christoph. *Der Hoch-Deutsch Americanische Calender, Auf Das Jahr Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi 1770*. Germantown: Christoph Saur, 1769. Joseph P. Horner Library.

Saur, Christoph. *Der Hoch-Deutsch Americanische Calender, Auf Das Jahr Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi 1771*. Germantown: Christoph Saur, 1770. Joseph P. Horner Library.

Saur, Christoph. *Der Hoch-Deutsche Americanische Calender, Auf Das Jahr Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi 1772*. Germantown: Christoph Saur, 1771. Joseph P. Horner Library.

Saur, Christoph. *Der Hoch-Deutsch Americanische Calender, Auf Das Jahr Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi 1773*. Germantown: Christoph Saur, 1772. State Library of Pennsylvania.

Saur, Christoph. *Der Hoch-Deutsch Americanische Calender, Auf Das Jahr Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi 1775*. Germantown: Christoph Saur, 1774. Joseph P. Horner Library.

Saur, Christoph. *Der Hoch-Deutsch Americanische Calender, Auf Das Jahr Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi 1777*. Germantown: Christoph Saur, 1776. Joseph P. Horner Library.

Saur, Christoph. *Der Hoch-Deutsche Americanische Calender, Auf Das Jahr Nach Der Gnadenreichen Geburt Unsers Herrn Und Heylandes Jesu Christi 1787*. Germantown: Leibert und Billmeyer, printer, 1786. Joseph P. Horner Library.

"School Journal, January 1 - December 5." 1789. Fem Sem 286. Moravian Archives.

Schöpf, Johann David. *Reise Durch Einige Der Mittlern Und Südlichen Vereinigten Nordamerikanischen Staaten Nach Ost-Florida Und Den Bahama-Inseln*

Unternommen in Den Jahren 1783 Und 1784. Vol. 1. Erlangen: Johann Jacob Palm, 1788.

Schultze, David. *The Journals and Papers of David Schultze*. Translated by Andrew S. Berky. Vol. 1. Pennsburg, PA: The Schwenkfelder Library, 2009.

Schwarze, Rev. Edmund. *History of the Moravian Missions Among Southern Indian Tribes of the United States*. Bethlehem, PA: Times Publishing Company, 1923.

Siegemund, Justine. *The Court Midwife*. Translated by Lynne Tatlock. Chicago: University of Chicago Press, 2005.

Sowerby, Leonard. *The Ladies Dispensatory: Containing the Natures, Vertues, and Qualities of All Herbs, and Simples Usefull in Physick*. London: R. Ibbitson, 1652.

Tennet, John. *An Epistle to Dr. Richard Mead, Concerning the Epidemical Diseases of Virginia, Particularly, a Pleurisy and Peripneumony: Wherein Is Shewn the Surprising Efficacy of the Seneca Rattle-Snake Root, in Diseases Owing to a Viscidity and Coagulation of the Blood.* Edinburgh: P. Matthie, 1742.

Tennet, John. *Every Man His Own Doctor: Or, The Poor Planter's Physician*. Williamsburg: William Parks, 1734.

Tissot, S.A. *Advice to the People in General, with Regard to Their Health*. Translated by J. Kirkpatrick. London: T. Becket and P.A.De Hondt, 1768.

Urlsperger, Samuel. *Detailed Reports on the Salzburger Emigrants Who Settled in America*. Edited by George Fenwick Jones. 16 vols. Athens: University of Georgia Press, 1968-2022.

Wagner, Abraham. “Remediorum Specimina Ex Praxi A.W.” 89 1743. The Schwenkfelder Library and Heritage Center. https://digitalarchives.powerlibrary.org/papd/islandora/object/papd%3Acppmss_798?overlay_query=%20#page/202/mode/2up.

Woodmason, Charles. *The Carolina Backcountry on the Eve of the Revolution: The Journal and Other Writings of Charles Woodmason, Anglican Itinerant*. Edited by Richard J. Hooker. Chapel Hill: University of North Carolina Press, 1953.

Zuingeri, Theodori. *Theatrum Botanicum*. Rev. ed. Vol. 1. Hans Jacob Bischoffs, 1744.

Secondary Sources

Ackerknecht, Erwin H. *Therapeutics from the Primitives to the 20th Century (with an Appendix: History of Dietetics)*. New York: Hafner Press, 1973.

Agelarkis, Argiro, Benjamin Weeks, and Anagnostis Agelarakis. "Investigation on the Nature, Preparation, and Medical Effectiveness of Hippocratic Cataplasms Potentially Used in the Treatment of Head Trauma among Warriors in Eleutherna and Elsewhere in Ancient Greece." *Proceedings of the International Archaeological Conference and Symposium - Eleutherna, Crete and the Outside World* (Crete), University of Crete, 2020.

Ackermann, Evelyn Bernette. *Health Care in the Parisian Countryside, 1880-1914.* New Brunswick, NJ: Rutgers University Press, 1990.

Alberts, Tara, Sietske Fransen, and Elaine Leong. "Translating Medicine, ca. 800-1900: Articulations and Disarticulations." *Osiris* 37 (2022): 1-23.

Andrews, Jonathan. "History of Medicine: Health, Medicine and Disease in the Eighteenth Century." *Journal for Eighteenth-Century Studies* 34, no. 4 (2011): 503-15.

Annual Report of the Commissioner of Agriculture for the Year 1878. Vol. 1879. Washington: Government Printing Office, 1879.

Armitage, David. *The Ideological Origins of the British Empire.* New York: Cambridge University Press, 2000.

Arndt, Karl John Richard, and Reimer C. Eck, eds. *The First Century of German Language Printing in the United States of America: A Bibliography Based on the*

Studies of Oswald Seidensticker and Wilbur H. Oda. 2 vols. Göttingen: Niedersächsische Staats- und Universitätsbibliothek, 1989.

Auman, Karen. "'English Liberties' and German Settlers in Colonial America: The Georgia Salzburgers' Conceptions of Community, 1730-1750." *Early American Studies* 11, no. 1 (2013): 37-54.

Austin, Daniel F. *Florida Ethnobotany*. Boca Raton, FL: CRC Press, 2004.

Bach, Jeff. *Voices of the Turtledoves: The Sacred World of Ephrata*. University Park, PA: Pennsylvania State University Press, 2003.

Bach, Thomas P. "G.A. Francke and the Halle Communication Network: Protection, Politics and Piety." In *Pietism and Community in Europe and North America, 1650-1850*, edited by Jonathan Strom, 95–109. Leiden: Brill, 2010.

Bacopoulos-Viau, Alexandra, and Aude Fauvel. "The Patient's Turn: Roy Porter and Psychiatry's Tales, Thirty Years on." *Medical History* 60, no. 1 (2016): 1-18.

Balik, Shelby M. "Delivery and Deliverance: Religious Experiences of Childbirth in Eighteenth-Century America." *Church History* 91 (2022): 62–82.

Barnhard, John Hendley. "The Botanical Correspondents of Schweinitz." *Bartonia,* no. 16 (1934): 19-36.

Bell, Albert D. *The Life and Times of Dr. George de Benneville (1703-1793)*. Boston, MA: Universalist Church of America, 1953.

Bell, Rudolph M. *How to Do It: Guides to Good Living for Renaissance Italians*. Chicago: University of Chicago Press, 1999.

Benford, Robert J., Bennett F. Avery, Patrick I. McShane, and S.O. Waife, eds. *Medical Technicians Bulletin: Supplement to U.S. Armed Forces Medical Journal*. Washington: United States Government Printing Office, 1995.

Bennett, Bradley C. "Doctrine of Signatures: An Explanation of Medicinal Plant Discovery or Disseminatino of Knowledge?" *Economic Botany* 61, no. 3 (2007): 246–55.

Berger, Markus. "The Hallensian Pastor John Christopher Kunze (1744-1807) and His Attempts at Establishing a Preacher Seminary in North America." In *Transatlantic Encounters in History of Education*, edited by Fanny Isensee, Andreas Oberdorf, and Danile Töpper. New York: Routledge, 2020.

Berky, Andrew S. *Practitioner in Physick: A Biography of Abraham Wagner, 1717-1763*. Norristown, PA: The Schwenkfelder Library, 1954.

Berryman, Jack W. "Motion and Rest: Galen on Exercise and Health." *The Lancet* 380, no. 9838 (2012): 210–11.

Boddice, Rob. *A History of Feelings*. London: Reaktion Books LTD, 2019.

Bolton, H. Carrington. "Historical Notes on the Gold-Cure." *New York Academy of Sciences* 11, nos. 6–8 (1892): 151-56.

Bonner, Thomas Neville. *American Doctors and German Universities: A Chapter in International Intellectual Relations, 1870-1914*. Lincoln: University of Nebraska Press, 1963.

Bonner, Thomas Neville. *Becoming a Physician: Medical Education in Britain, France, Germany, and the United States, 1750-1945.* New York: Oxford University Press.

Broman, Thomas. "Rethinking Professionalization: Theory, Practice, and Professional Ideology in Eighteenth-Century German Medicine." *The Journal of Modern History* 67, no. 4 (1995): 835-872.

Borzelleca, Joseph F. "Paracelsus: Herald of Modern Toxicology." *Toxicological Sciences* 53, no. 1 (2000): 2–4.

Brandt, Susan H. *Women Healers: Gender, Authority, and Medicine in Early Philadelphia*. Philadelphia: University of Pennsylvania Press, 2022.

Bravo, Michael T. "Mission Gardens: Natural History and Global Expansion, 1720-1820." In *Colonial Botany: Science, Commerce, and Politics in the Early Modern World*. Edited by Londa Schiebinger and Claudia Swan. Philadelphia: University of Pennsylvania Press, 2005: 49-65.

Brendle, Thomas R., and Claude W. Unger. *Folk Medicine of the Pennsylvania Germans: The Non-Occult Cures*. New York: Augustus M. Kelley, 1970.

Bret, Patrice. "The letter, the dictionary, and the laboratory: translating chemistry and mineralogy in eighteenth-century France." *Annals of Science* 73, no. 2: 122-42.

Brockliss, Laurence. "The Republic of Letters and French physicians on the eve of the French Revolution: the case of Espirit Calvet." *Gesnerus* 61, no. 3-4 (2004): 254-82.

Broman, Thomas H. *The Transformation of German Academic Medicine, 1750-1820*. Cambridge: Cambridge University Press, 1996.

Bullough, Vern L. "An Early American Sex Manual, or, Aristotle Who?" *Early American Literature* 7, no. 3 (1973): 236–46.

Bynum, Flora Ann L. "Old World Gardens in the New World: The Gardens of the Moravian Settlement of Bethabara in North Carolina, 1753-72." *Journal of Garden History* 16, no. 2 (1996): 70–86.

Calloway, Colin G. *New Worlds for All: Indians, Europeans, and the Remaking of Early America.* Baltimore: Johns Hopkins University Press, 1997.

Caruso, John Anthony. *The Appalachian Frontier: America's First Surge Westward*. Knoxville: University of Tennessee Press, 2003.

Cassel, Abraham H. "The German Almanac of Christopher Sauer." *The Pennsylvania Magazine of History and Biography* 6, no. 1 (1882): 58–68.

Cavallo, Sandra. "Pregnant Stones as Wonders of Nature." In *Reproduction: Antiquity to the Present Day*, edited by N Hopwood and R Flemming, 672. Cambridge: Cambridge University Press, 2018.

Chakrabarti, Pratik. *Materials and Medicine: Trade, Conquest and Therapeutics in the Eighteenth Century*. Manchester: Manchester University Press, 2010.

Chamberlain, Ava. "Bad Books and Bad Boys: The Transformation of Gender in Eighteenth-Century Northampton, Massachusetts." *The New England Quarterly* 75, no. 2 (2002): 179–203.

Charlton, Anne. "George Cheyne (1671 or 73-1743): 18th-Century Physician." *Journal of Medical Biography* 19, no. 2 (2011): 49–55.

Chen, Nancy. *Food, Medicine, and the Quest for Good Health: Nutrition, Medicine, and Culture*. New York: Columbia University Press, 2009.

Chiccarine, Jerry A., and David W. Luz. *Images of America: The Upper Perkiomen Valley*. Charleston, SC: Arcadia Publishing, 2007.

Clark, William. *Academic Charisma and the Origins of the Research University*. Chicago: University of Chicago Press, 2006.

Cohen, H. Floris. ed. "Historians of Science Translating the History of Science." *Isis* 109, no. 4 (2018): 774-79.

Console, Renzo. "Pharmaceutical Use of Gold from Antiquity to the Seventeenth Century." *A History of Geology and Medicine* 375 (2013): 171–91.

Cooper, Alix. *Inventing the Indigenous: Local Knowledge and Natural History in Early Modern Europe*. Cambridge: Cambridge University Press, 2007.

Cooper, Karen Coody. *Women in Charge: Female Power and Leadership in American Indian Nations of Eastern North* America. Jefferson, NC: McFarland & Company, 2022.

Corman, Catherine A. Review of *Writing Indians: Literacy, Christianity, and Native Community in Early America,* by Hilary E. Wyss, and *The Brainerd Journal: A Mission to the Cherokees, 1817-1823,* by Philip H. Viles, Jr. *The William and Mary Quarterly* 58, no. 3 (July 2001): 742-45.

Cowen, David L., and Renate Wilson. "The Traffic in Medical Ideas: Popular Medical Texts as German Imports and American Imprints." *Caduceus* 13 (1997): 67-80.

Crawford, Katherine. *European Sexualities, 1400-1800*. Cambridge: Cambridge University Press, 2007.

Crawford, Matthew James. *The Andean Wonder Drug: Cinchona Bark and Imperial Science in the Spanish Atlantic, 1630-1800.* Pittsburgh, PA: University of Pittsburgh Press, 2016.

Crellin, John. "Theory and Clinical Experience in Eighteenth-Century Extemporaneous Prescriptions—A Reciprocal Relationship?" *A Pharmacy in History* 48, no. 1 (2006): 3-13.

Crignon, Claire, Carsten Zelle, and Nunzio Allocca. Introduction to *Medical Empiricism and Philosophy of Human Nature in the 17th and 18th Century*, 1–12. Leiden: Brill, 2013.

Crosby, Alfred W. *Ecological Imperialism: Biological Expansion of Europe, 900-1900*. 2nd ed. Cambridge: Cambridge University Press, 2004.

Curth, Louise Hill. *English Almanacs, Astrology and Popular Medicine: 1550-1700*. Manchester: Manchester University Press, 2013.

Dietz, Bettina. "Introduction: Special Issue 'Translating and translations in the history of science.'" *Annals of Science* 73, no.2 (2016): 117-21.

Donato, Maria Pia. *Sudden Death: Medicine and Religion in Eighteenth-Century Rome.* Burlington, VT: Ashgate, 2014.

Dorner, Zachary. *Merchants of Medicines: The Commerce and Coercion of Health in Britain's Long Eighteenth Century*. Chicago: University of Chicago Press, 2020.

Doyle, Nora. *Maternal Bodies: Redefining Motherhood in Early America*. Chapel Hill: University of North Carolina Press, 2018.

Duden, Barbara. *Woman Beneath the Skin: A Doctor's Patients in Eighteenth-Century Germany,* translated by Thomas Dunlap. Cambridge, MA: Harvard University Press, 1991.

Duffin, C.J., C. Gardner-Thorpe, and R.T.J. Moody. *Geology and Medicine: Historical Connections*. London: The Geological Society, 2017.

Dupré, Sven, ed. "Translating Science over Time." *Isis* 109, no.2 (2018): 302-45.

Durkin, Kevin. "Aristotle's Masterpiece." *Verso*, April 20, 2015. https://huntington.org/verso/aristotles-masterpiece.

Durnbaugh, Donald F. "Was Christopher Sauer a Dunker?" *The Pennsylvania Magazine of History and Biography* 93, no. 3 (1969): 383–91.

Durnbaugh, Donald F. "J.C. Sauer and H.M. Mühlenberg: German-American Protagonists in Colonial North America." In *Halle Pietism, Colonial North America and the Young United States*, edited by Hans-Jürgen Grabbe, 93–112. Stuttgart, Germany: Franz Steiner Verlag, 2008.

Durnbaugh, Donald F., and Luther. "Christopher Sauer Pennsylvania-German Printer: His Youth in Germany and Later Relationships with Europe." *The Pennsylvania Magazine of History and Biography* 82, no. 3 (1958): 316–40.

Earle, Rebecca. "'If You Eat Their Food...': Diets and Bodies in Early Colonial Spanish America." *The American Historical Review* 115, no. 3 (June 2010): 688–713.

Earle, Rebecca. *The Body of the Conquistador: Food, Race, and the Colonial Experience in Spanish America, 1492-1700*. New York: Cambridge University Press, 2012.

Earnest, Russell, and Corinne Earnest. *Flying Leaves and One-Sheets: Pennsylvania German Broadsides, Fraktur and Their Printers*. New Castle, Delaware: Oak Knoll Press, 2005.

Eisenstadt, Peter. "Almanacs and the Disenchantment of Early America." *Pennsylvania History: A Journal of Mid-Atlantic Studies* 65, no. 2 (Spring 1998): 143–69.

Elshakry, Marwa, and Carla Nappi. "Translations." In *A Companion to the History of Science*, edited by Bernard Lightman, 372-86. Chichester, UK: Wiley-Blackwell, 2016.

Engel, Katherine Carté. "Moravians in the Eighteenth-Century Atlantic World." *Journal of Moravian History* 12, no. 1 (2012): 1-19.

Ernst, Katharina. "Fragments and Gaps. The Form of Illness Narratives in 18th Century Wurttemberg Pietist Diaries." *Medizin in Gesellschaft Und Geschichte* 24 (2005): 35–45.

Ettinger, Laura E. *Nurse-Midwifery: The Birth of a New American Profession*. Columbus, OH: Ohio State Universiy Press, 2006.

Fallwell, Lynne. *Modern German Midwifery, 1885-1960*. London: Routledge, 2013.

Faull, Katherine M., ed. *Speaking to Body and Soul: Instructions for the Moravian Choir Helpers, 1785-1786.* University Park: Pennsylvania State University, 2017.

Fernald, Merritt Lyndon, and Alfred Charles Kinserey. *Edible Wild Plants of Eastern North America*. New York: Dover Publications, 2013.

Fernie, W.T. *Herbal Simples: Approved for Modern Uses of Cure.* Philadelphia: Boericke & Tafel, 1897.

Fissell, Mary E. “Hairy Women and Naked Truths: Gender and the Politics of Knowledge in ‘Aristotle’s Masterpiece.’” *The William and Mary Quarterly* 60, no. 1 (2003): 43–74.

Fissell, Mary E. “Introduction: Women, Health, and Healing in Early Modern Europe.” *Bulletin of the History of Medicine* 82, no. 1 (Spring 2008): 1–17.

Fissell, Mary E. “Man-Midwifery Revisited.” In *Reproduction: Antiquity to the Present Day*, edited by N. Hopwood and R. Flemming, 319–32. Cambridge: Cambridge University Press, 2018.

Fissell, Mary E. *Patients, Power, and the Poor in Eighteenth-Century Bristol*. Cambridge: Cambridge University Press, 1991.

Fissell, Mary E. “Prying in the Secrets of Nature: Reading Aristotle’s Masterpiece.” In *Sources and Methods in the History of Sexuality*, 91–101. London: Routledge, 2024.

Fissell, Mary E. *Vernacular Bodies: The Politics of Reproduction in Early Modern England*. Oxford: Oxford University Press, 2005.

Fissell, Mary E. “When the Birds and the Bees Were Not Enough: Aristotle’s Masterpiece.” The Public Domain Review, August 19, 2015. https://publicdomainreview.org/essay/when-the-birds-and-the-bees-were-not-enough-aristotle-s-masterpiece/.

Fissell, Mary E. “Women in Healing Spaces.” In *The Cambridge Companion to Early Modern Women’s Writing*, edited by Laura Lunger Knoppers, 153–64. Cambridge: Cambridge University Press, 2009.

Flügel, Wolfgang. *Pastoren aus Halle und Ihre Gemeinden in Pennsylvania. 1742-1820: Deutsche Lutheraner Zwischen Persistenz und Assimilation*. Berlin: Walter de Gruyter GmbH, 2019.

Flügel, Wolfgang. "German or English? Halle's Pastors in Pennsylvania and the Search for the Right Language, 1742-1820." In *Babel of the Atlantic,* edited by Bethany Wiggin. University Park, PA: Pennsylvania State University, 2019: 147-72.

Fogleman, Aaron Spencer. *Hopeful Journeys: German Immigration, Settlement, and Political Culture in Colonial America, 1717-1775.* Philadelphia: University of Pennsylvania Press, 1996.

Fogleman, Aaron Spencer. *Two Troubled Souls: An Eighteenth-Century Couple's Spiritual Journey in the Atlantic World*. Chapel Hill: University of North Carolina Press, 2013.

Frasca, Ralph. "'To Rescue the Germans Out of Sauer's Hands': Benjamin Franklin's German-Language Printing Partnerships." *The Pennsylvania Magazine of History and Biography* 121, no. 4 (October 1994): 329–50.

Fries, Adelaide L., and J. Kenneth Pfohl. *The Moravian Church: Yesterday and Today*. Raleigh: Edwards & Broughton Company, 1926.

Gentilcore, David. *Food and Health in Early Modern Europe: Diet, Medicine and Society, 1450-1800*. London: Bloomsbury, 2016.

"The Germans in America." *Area Studies European Division.* Last modified 23 April 2014. https://www.loc.gov/rr/european/imde/germchro.html.

Geyer-Kordesch, Johanna. "Georg's Ernst Stahl's radical Pietist medicine and its influence on the German Enlightenment." In *The Medica Enlightenment of the Eighteenth Century*. Edited by Andrew Cunningham and Roger French. Cambridge: Cambridge University Press, 1990: 67-87.

Gillespie, Michele, and Robert Beachy, eds. *Pious Pursuits: German Moravians in the Atlantic World*. New York: Berghahn, 2007.

Ginzburg, Carlo. *The Cheese and the Worms: The Cosmos of a Sixteenth-Century Miller,* translated by John and Ann C. Tedeschi. Baltimore: John Hopkins University Press, 1980.

Glenn Penny, H. *Kindred by Choice: Germans and American Indians since 1800.* Chapel Hill: University of North Carolina Press.

Gómez, Pablo F. *The Experiential Caribbean: Creating Knowledge and Healing in the Early Modern Atlantic.* Chapel Hill: University of North Carolina Press, 2017.

Gómez, Pablo F. "[Un]Muffled Histories: Translating Bodily Practices in the Early Modern Caribbean." *Osiris* 37, (2022): 233-50.

Green, Monica H. "From 'Diseases of Women' to 'Secrets of Women': The Transformation of Gynecological Literature in the Later Middle Ages." *Journal of Medieval and Early Modern Studies* 30, no. 1 (2000): 5–40.

Green, Monica H. *Making Women's Medicine Masculine: The Rise of Male Authority in Pre-Modern Gynaecology*. Oxford: Oxford University Press, 2008.

Green, Monica H. "The Sources of Eucharius Rösslin's 'Rosegarden for Pregnant Women and Midwives' (1513)." *Medical History* 53 (2009): 167–92.

Grell, Ole Peter, and Andrew Cunningham, eds. *Medicine and Religion in Enlightenment Europe.* Aldershot: Ashgate, 2007.

Grob, Alexa, and Hans Joachim Winckelmann. "Das Collegium Medicum Zu Ulm." *Sudhoffs Archiv* 98, no. 1 (2014): 109–23.

Guerra, Francisco. "Medical Almanacs of the Colonial Period." *Journal of the History of Medicine and Allied Sciences* 16, no. 3 (July 1961): 234–55.

Habrich, Christa. "Chracteristics of Eighteenth-Century Therapeutics in Germany." In *Essays in the History of Therapeutics*, edited by W.F. Bynum and V. Nutton, 39–50. Amsterdam: Rodopi, 1991.

Hadfield, Andrew. "National and International Knowledge: The Limits of the Histories of Nations." In *The Renaissance Computer: Knowledge Technology in the First Age of Print*, edited by Neil Rhodes and Jonathan Sawday, 103–16. London: Routledge, 2000.

Haller Jr., John S. *American Medicine in Transition, 1840-1910*. Urbana: University of Illinois Press, 1981.

Haller Jr., John S. *The History of American Homeopathy: The Academic Years, 1820-1935*. New York: Pharmaceutical Products Press, 2005.

Haller Jr., John S. *The History of American Homeopathy: From Rational Medicine to Holistic Health Care*. New Brunswick, NJ: Rutgers University Press, 2009.

Hamilton, Alexander. *Outlines of the Theory and Practice of Midwifery*. 4th ed. Edinburgh: T. Kay, 1796.

Hanawalt, Barbara. *Women and Work in Preindustrial Europe*. Bloomington: Indiana University Press, 1986.

Hancock, James F. "Fifty Years Later—The Legacy of Alfred Crosby's 'The Columbian Exchange: Biological and Cultural Consequences of 1492.'" *Economic Botany* (2022).

Harley, David. "Historians as Demonologists: The Myth of the Midwife-Witch." *The Society for the Social History of Medicine* 3, no. 1 (1990): 1–26.

Harris, David R., and Richard L. Keefe. "A Histologic Study of Gold Leaf Treated in Experimental Wounds." *The Journal of Investigative Dermatology* 52, no. 6 (1969): 487–94.

Harrison, Mark. "Scurvy on Sea and Land: Political Economy and Natural History, c. 1780-c.1850." *Journal for Maritime Research* 15, no. 1 (2013): 7–25.

Hartmann, Franz. *The Life of Philippus Theophrastus Bombast of Hohenheim Known by the Name of Paracelsus and the Substance of His Teachings*. 2nd ed. London: Kegan Paul, Trench, Trübner, & Co., 1896.

Hendricks, Christopher E. "Hans Martin Kalberlahn: Moravians, Medicine, and the Laboratory at Bethabara." *XVIII New Perspectives on the Eighteenth Century* 17, no. 1 (2020): 33-63.

Hershberger, Adam. "A Gun Wad Martyrs' Mirror." *The Heritage Review* 25 (November 2017): 2–5.

Hertz, D.R. *History of Ephrata, Penna: Giving a Brief Sketch of the State and County; the Battle of Brandywine; the Cloister and Monument to Be Erected at Mount Zion; and the Borough of Ephrata*. Philadelphia: H. Ferkler, 1894.

Hess, Volker, and Sabine Schlegelmilch. "Cornucopia Officinae Medicae: Medical Practice Records and Their Origin." In *Medical Practice, 1600-1900*, edited by Martin Dinges and et al., 11–38. Leiden: Brill, 2015.

Higby, G.J. "Gold in Medicine: A Review of Its Use in the West before 1900." *Gold Bull.* 15, no. 4 (1982): 130–40.

Hobbs, Christopher Rollin. *St. John's Wort--Ancient Herbal Protector*. 32, no. 4 (1990): 166–69.

Hoffman, W.J. "Folk-Medicine of the Pennsylvania Germans." *Proceedings of the American Philosophical Society* 26, no. 129 (1889): 329–52.

Holloran, John Robert. "Professors of Enlightenment at the University of Halle, 1690-1730." PhD Dissertation, University of Virginia, 2000.

Horrocks, Thomas A. *Popular Print and Popular Medicine: Almanacs and Health Advice in Early America*. Amherst: University of Massachusetts Press, 2008.

Horrocks, Thomas A. "Rules, Remedies, and Regiments: Health Advice in Early American Almanacs." In *Right Living: An Anglo-American Tradition of Self-Help Medicine and Hygiene*, edited by Charles E. Rosenberg, 112–46. Baltimore: Johns Hopkins University Press, 2003.

Hošman, Mirrek Tobiáš. "George Berkeley's Tar-Water Medicine." *Early Science and Medicine* 25 (2020): 173–93.

Hruschka, John. *How Books Came to America: The Rise of the American Book Trade*. University Park, PA: Pennsylvania State University Press, 2012.

Hunt, Lynn. Introduction to *The Invention of Pornography: Obscenity and the Origins of Modernity, 1500-1800*, edited by Lynn Hunt, 9–48. New York, NY: Zone Books, 1993.

Huston, Kathleen A. "German Midwifes of Nineteenth- and Twenteith-Century Texas: Women's Work, Culture, and Fighting 'Death in the Room.'" *Southwestern Historical Quarterly* 124, no. 4 (2021): 412–35.

Jackson, Mark. Introduction to *The Oxford Handbook of the History of* Medicine, edited by Mark Jackson, 1-18. Oxford: Oxford University Press, 2011.

Jones, George Fenwick. *The Georgia Dutch: From the Rhine and Danube to the Savannah, 1733-1783*. Athens, GA: University of Georgia Press, 1992.

Jones, George Fenwick. Introduction to *Detailed Reports on the Salzburger Emigrants Who Settled in America*. Vol. 1. Athens, GA: University of Georgia Press, 2021.

Jouanna, Jacques. *Greek Medicine from Hippocrates to Galen: Selected Papers*. Edited by Philip van der Eikj. Translated by Neil Allies. Brill, 2012.

Kamphoefner, Waler D. *Germans in America: A Concise History*. Lanham, MD: Rowman & Littlefield, 2021.

Keim, De B. Randolph, ed. "De Benneville-Bertolet: A Colonial Romance." *The Keim and Allied Families in America and Europe* 1, no. 12 (November 1899): 373.

Kelly, Margaret G., and Jonathan L. Hartwell. "The Biological Effects and the Chemical Composition of Podophyllin. A Review." *Journal of the National Cancer Institute* 14, no. 4 (1954): 967–1010.

Kinzelbach, Annemarie. "Women and Healthcare in Early Modern German Towns." *Renaissance Studies* 28, no. 4 (2014): 619–38.

Kirkman, Alyssa. "The Meeting of Mothers, Midwives, and Men." *Tenor of Our Times* 2 (2013): 11–21.

Klein, Walter C. *Johann Conrad Beissel: Mystic and Martinet, 1690-1768*. Philadelphia: University of Pennsylvania Press, 1942.

Klinefelter, Walter. "Solomon Meyer, Printer and Publisher." *Quarterly of the Pennsylvania German Society* 15, nos. 3–4 (1981): 1–19.

Koch, Christian Marie. "Salzburger Migrants and Communal Memory in Georgia." PhD Dissertation, University of Paderborn, 2019.

Koch, Philippa. *The Course of God's Providence: Religion, Health, and the Body in Early America*. New York: New York University Press, 2021.

Koch, Philippa. "Experience and the Soul in Eighteenth-Century Medicine." *Church History* 85, no. 3 (2016): 552-86.

Koch, Philippa. "Marketing Missions: Material Culture, Theological Convictions, and Empire in 18th-Century Philanthropy." *Religions* 9, no. 7 (2018): 207-.

Kopp, Achim. "Abraham Reeser Horne's *Pennsylvania German Manual.*" *Yearbook of German-American Studies* 45 (2010): 107-28.

Kopperman, Paul E. "The Attitude of Benjamin Rush (1746-1813) towards Native American Medicine." *Journal of Medical Biography* 20, no. 2 (2012): 49–56.

Kriebel, David W. *Powwowing Among the Pennsylvania Dutch: A Traditional Medical Practice in the Modern World*. University Park, PA: Pennsylvania State University Press, 2007.

Krünitz, Johann Georg. "Heb-Amme." In *Oekonomische Encyklopädie Oder Allegemines Ssytem Der Staats- Stadt- Haus- Und Landwirthschaft*, 22:526–60. Berlin, 1789. https://www.kruenitz1.uni-trier.de.

Lamb, Jonathan. *Scurvy: The Disease of Discovery*. Princeton: Princeton University Press, 2016.

Landis Valley Associates. *The Landis Valley Cookbook: Pennsylvania German Foods & Traditions*. 2nd ed. Mechanicsburg, PA: Stackpole Books, 2009.

Leaman, Hans. "Johann Christoph Sauer (1658-1758)." *Immigrant Entrepreneurship*, August 22, 2018. https://www.immigrantentrepreneurship.org/entries/johann-christoph-sauer/.

Lehmann, Hartmut, Hermann Wellenreuther, and Renate Wilson. *In Search of Peace and Prosperity: New German Settlements in Eighteenth-Century Europe and America.* University Park, PA: Pennsylvania State University Press, 2000.

Lemay, Helen Rodnite. *Women's Secrets: A Translation of Pseudo-Albertus Magnus's De Secetis Mulierum with Commentaries*. Albany: State University of New York Press, 1992.

Leong, Elaine. “Making Medicines in the Early Modern Household.” *Bulletin of the History of Medicine* 82, no. 1 (2008): 145–68.

Leong, Elaine. *Recipes and Everyday Knowledge: Medicine, Science, and the Household in Early Modern England*. Chicago: University of Chicago Press, 2018.

Leprêtre, Matti. “Paracelsus, His Herbarius, and the Relevance of Medicinal Herbs in His Medical Thought.” *Daphnis - Zeitschrift Für Deutsche Literatur Und Kultur Der Frühen Neuzeit* 49, no. 3 (2021): 324–78.

Lieske, Pam, ed. *Eighteenth-Century British Midwifery*. Vol. 1. London: Routledge, 2016.

Lindemann, Mary. *Health and Healing in Eighteenth-Century Germany.* Baltimore: John Hopkins University Press, 1996.

Lindemann, Mary. *Medicine and Society in Early Modern Europe*. Second edition. New York: Cambridge University Press, 2010.

Lindemann, Mary. “Professionals? Sisters? Rivals? Midwives in Braunschweig, 1750-1800.” In *The Art of Midwifery: Early Modern Midwives in Europe*, edited by Hilary Marland, 176–91. London: Routledge, 1993.

Lindenmeyer, Christopher. *Rebeller, Opfer, Siedler: Die Vertreibung der Salzburger Protestanten*. Salzburg: Verlag Anton Pustet, 2015.

Lloyd, John Uri. *Origin and History of All the Pharmacopeial Vegetable Drugs*. Cincinnati: Caxton Press, 1929.

Loftin, John D., and Benjamin E. Frey. *People of Kituwah: The Old Ways of the Eastern Cherokees*. Oakland: University of California, 2024.

Maehle, Andreas-Holger. *Drugs on Trial: Experimental Pharmacology and Therapeutic Innovation in the Eighteenth Century*. Amsterdam: Rodopi, 1999.

Marsh, Ben. Foreword to *Detailed Reports on the Salzburger Emigrants Who Settled in America*, by Samuel Urlsperger. Vol. 1. Athens: University of Georgia Press, 1968.

Marshall, Jubilee. "Race, Death, and Public Health in Early Philadelphia 1750-1793." *Pennsylvania History: A Journal of Mid-Atlantic Studies* 87, no. 2 (2020): 364–89.

Martin, Joel W. "Visions of Revitalization in the Eastern Woodlands: Can a Middle-Aged Theory Stretch to Embrace the First Cherokee Converts?" In *Reassessing Revitalization Movements: Perspectives from North America and the Pacific Islands*. Edited by Michael E. Harkin (Lincoln: University of Nebraska Press, 2004): 61-87.

Martin, John Hill. *Historical Sketch of Bethlehem in Pennsylvania, With Some Account of the Moravian Church*. Philadelphia: John L. Pile, 1873.

McClinton, Rowena. "The Moravian Missionaries of Bethlehem and Salem." In *Ethnographics and Exchanges: Native Americans, Moravians, and Catholics in Early North* America. Edited by A.G. Roeber. University Park, PA: Pennsylvania State University Press, 2008: 115-24.

McIntosh, Tania. *A Social History of Maternity and Childbirth: Key Themes in Maternity Care*. New York: Routledge, 2012.

McKinley, Daniel L. "Anna Rosina (Kliest) Gambold (1762-1821), Moravian Missionary to the Cherokees, with Special Reference to her Botanical Interests." *Transactions of the Moravian Historical Society* 28, (1994): 59-99

Meier, Louis A. *Early Pennsylvania Medicine. A Representative Early American Medical History, Montgomery County, Pennsylvania, 1682 to 1799.* Boyertown, PA: Gilbert Print Co., 1976.

Melton, James Van Horn. *Religion, Community, and Slavery on the Colonial Southern Frontier*. New York, NY: Cambridge University Press. 2015.

Merriman, Samuel. *A Synopsis of the Various Kinds of Difficult Parturition, with Practical Remarks on the Management of Labours*. London: J. Callow, 1814.

Michel, Alexandra. "The History of Midwifery in the United States." *Journal of Perinatal & Neonatal Nursing* 38, no. 2 (2024): 122–23.

Miles, Tiya. *The House on Diamond Hill: A Cherokee Plantation Story*. Chapel Hill: University of North Carolina Press, 2010.

Mix, York-Gothart, Bianca Weyers, and Gabriele Krieg, eds. "Sociocultural Regional Identities in Eighteenth- and Nineteenth-Century Popular German-American Almanacs." In *Deutsch-Amerikanische Kalender Des 18. Und 19. Jahrhunderts: BIbliographie Und Kommentar*, 1:1-39. De Gruyter, 2011.

Moerman, Daniel E. *Medicinal Plants of Native America*. Vol. 1. Ann Arbor: University of Michigan, 1986.

Montford, Angela. *Health, Sickness, Medicine and the Friars in the Thirteenth and Fourteenth Centuries*. London: Routledge, 2017.

Montgomery, Morton L. *History of Berks County in Pennsylvania*. Philadelphia: Everts, Peck & Richards, 1886.

Mooney, James. "The Cherokee Ball Play." *American Anthropologist* 3, no. 2 (1890): 105–32.

"The Moravian Founding of Nazareth, Pennsylvania." *This Month in Moravian History,* 91 (2015).

Mourão, Manuela. "The Representatino of Female Desire in Early Modern Pornographic Texts, 1660-1775." *Signs* 24, no. 3 (1999): 573–602.

Müller-Bahlke, Thomas. "Communication as Risk: The Beginnings of the Halle Correspondence with the Pennsylvania Lutherans." In *In Search of Peace and Prosperity: New German Settlements in Eighteenth-Century Europe and America*, edited by Hartmut Lehmann, Hermann Wellenreuther, and Renate Wilson, 139–55. University Park, PA: Pennsylvania State University Press, 2000.

Newman, Paul B. *Growing up in the Middle Ages*. Jefferson, NC: McFarland & Company, 2007.

Newson, Linda A. "Medical Practice in Early Colonial Spanish America: A Prospectus." *Bulletin of Latin American Research* 25, no. 3 (2006): 367-91.

Nichols, Marcia D. *Fixing Women: The Birth of Obstetrics and Gynecology in Britain and America*. San Francisco, CA: University of California, 2021.

Norton, Stata. "A Brief History of Potable Gold." *Molecular Interventions* 8, no. 3 (2008): 120–23.

Novick, Peter. *That Noble Dream: The "Objectivity Question" and the American Historical Profession*. Cambridge: Cambridge University Press, 1988.

Oakley, Henrietta M. "Famous Pennsylvania-Germans: Rev. John C. Kunze, D.D." *The Pennsylvania-German* 3, no. 3 (July 1902): 99-108.

Oliver, Sandra L. *Food in Colonial and Federal America*. Westport, CT: Greenwood Publishing Group, 2005.

Palmer, Steven. *From Popular Medicine to Medical Populism: Doctors, Healers, and Public Power in Costa Rica, 1800-1940.* Durham: Duke University Press, 2003.

Park, Katherine. *Doctors and Medicine in Early Renaissance Florence*. Princeton: Princeton University Press, 1985.

Peitzman, Steven J., and Lisabet M. Holloway. "In Sickness and in Heath: Some Highlights of Medical Practice in Germantown's Past." *Germantown Crier* 39, no. 3 (1987): 53–58.

Perdue, Theda. *Cherokee Women: Gender and Cultural Change, 1700-1835.* Lincoln: University of Nebraska, 1998.

Pierenkemper, Toni, and Richard Tilly. *The German Economy During the Nineteenth Century*. New York: Berghahn, 2004.

Porter, Roy. "The Patient's View: Doing Medical History from Below." *Theory and Society* 14, no. 2 (1985): 175-98.

Poska, Allyson M. "The Case for Agentic Gender Norms for Women in Early Modern Europe." *Gender & History* 30, no. 2 (2018): 354–65.

Powell, William S., ed. *Dictionary of North Carolina Biography*. Vol. 3. Chapel Hill: University of North Carolina Press, 1988.

Pyrges, Alexander. "Religion in the Atlantic World: The Ebenezer Communication Network, 1732-1828)." In *Pietism in Germany and North America, 1680-1820*. Edited by Jonathan Strom. New York: Routledge, 2016: 51-67.

Ramsey, Matthew. "The Popularization of Medicine in France, 1650-1900." In *The Popularization of Medicine, 1650-1850*, edited by Roy Porter, 97–133. London: Routledge, 2001.

Rankin, Alisha. *Panaceia's Daughters: Noblewomen as Healers in Early Modern Germany.* Chicago: University of Chicago Press, 2013.

Reeds, Karen Meier. "Renaissance Humanism and Botany." *Annals of Science* 33, no. 6 (1976): 519–42.

Reveal, James L. "What's in a Name: Identifying Plants in Pre-Linnaean Botanical Literature." In *Prospecting for Drugs in Ancient and Medieval European Texts: A Scientific Approach*, edited by Bart K. Holland, 57–90. Amsterdam: Harwood Academic Publishers, 1996.

Robilliard, Gabrielle. "Midwifery in Early Modern Germany, 1650-1810." PhD Thesis, University of Warwick, 2010.

Robilliard, Gabrielle. "Instruments or Hands? 'Nature' and the Practice of Obstetric Surgeons in Early Eighteenth-Century Germany." *Perceptions of Pregnancy*, May 15, 2018. https://perceptionsofpregnancy.com/2018/05/15/instruments-or-hands-

nature-and-the-practice-of-obstetric-surgeons-in-early-eighteenth-century-germany/.

Robilliard, Gabrielle. *Tending Mothers and the Fruits of the Womb: The Work of the Midwife in the Early Modern German City*. Stuttgart, Germany: Franz Steiner Verlag, 2017.

Robinson, Martha. "New Worlds, New Medicines: Indian Remedies and English Medicine in Early America." *Early American Studies* 3, no. 1 (2005): 94-110.

Roeber, A.G. "J.H.C. Helmut, Evangelical Charity, and the Public Sphere in Pennsylvania, 1793-1800." *The Pennsylvania Magazine of History and Biography,* 121, no. ½ (1997): 77-100.

Roeber, A.G. *Palatines, Liberty, and Property: German Lutherans in Colonial British America.* Baltimore: Johns Hopkins University Press, 1998.

Roeber, A.G. "The von Mosheim Society and the Preservation of German Education and Culture in the New Republic, 1789-1813." In *German Influences on Education in the United States to 1917.* Edited by Henry Geitz, Jürgen Heideking, and Jurgen Herbst. Cambridge: Cambridge University Press, 1995: 157-76.

Rosenberg, Charles E. "The Book in the Sickroom: A Tradition of Print and Practice." In *"Every Man His Own Doctor": Popular Medicine in Early America*. Philadelphia: The Library Company of Philadelphia, 1998.

Roy, G.G. "Red Clay as a Remedy for Sprains." *South Medical Record* 14, no. 12 (1884): 444–45.

Rutter, Lauren A. and et al. "'I Haven't Been Diagnosed, but I Should Be'--Insight into Self-Diagnoses of Common Mental Health Disorders: Cross-Sectional Study." *JMIR Formative Research* 7 (2023): 1–14.

Rütten, Thomas. "Early Modern Medicine." In *The Oxford Handbook of History,* edited by Mark Jackson, 60-81. Oxford: Oxford University Press, 2011.

Sabra, A.I. "The Appropriation and Subsequent Naturalization of Greek Science in Medieval Islam: A Preliminary Statement." *History of Science* 25 (1987): 223-43.

Sachse, Julius Friedrich. *The German Pietists of Provincial Pennsylvania*. Philadelphia: P.C. Stockhausen, 1895.

Sachse, Julius Friedrich. *The German Sectarians of Pennsylvania, 1742-1800: A Critical and Legendary History of the Ephrata Cloister and the Dunkers*. Philadelphia: P.C. Stockhausen, 1990.

Salmon, Marylynn. "The Limits of Independence: 1760-1800." In *No Small Courage: A History of Women in the United States*, edited by Nancy F. Cott, 109–78. Oxford: Oxford University Press, 2000.

Sander, Sabine. *Handwerkschirugen: Sozialgeschichte einer verdrängten Berugsgruppe.* Göttingen: Vandenhoeck & Ruprecht, 1989.

Sarbaugh, James. "Cherokee Concepts About Health and Healing." *Anthropology: Weaving Our Discipline with Community* 45, no. 1 (2020): 93-107.

Scheuermann, Karen. "Midwifery in Germany: Its Past and Present." *Journal of Nurse-Midwifery* 40, no. 5 (1995): 438–47.

Schiebinger, Londa. *Plants and Empire: Colonial Bioprospecting in the Atlantic World.* Cambridge, MA: Harvard University Press, 2004.

Seidel, Hans-Christoph. *Eine Neue Kultur Des Gebärens. Die Mediklaisierung von Geburt Im 18. Und 19. Jahrhundert in Deutschland*. Stuttgart: Steiner Verlag, 1998.

Seventh Day Baptists in Europe and America: A Series of Historical Papers Written in Commemoration of the One Hundredth Anniversary of the Organization of the Seventh Day Baptist General Conference, Celebrated at Ashaway, Rhode Island, August 20-25, 1902. Vol. 2. Plainfield, NJ: American Sabbath Tract Society, 1910.

Shantz, Douglas H. *An Introduction to German Pietism: Protestant Renewal at the Dawn of Modern Europe*. Baltimore: John Hopkins University Press, 2013.

Sibum, H. Otto. "Experimentalists in the Republic of Letters." *Science in Context* 16, no. 1/2 (2003): 89–120.

Singy, Patrick. "The Popularization of Medicine in the Eighteenth Century: Writing, Reading, and Rewriting Samuel Auguste Tissot's *Avis au peuple sur sa santé*." *The Journal of Modern History* 82, no. 4 (2010): 769-800.

Smith, Anna. "Unlikely Sisters: Cherokee and Moravian Women in the Early Nineteenth Century." In *Pious Pursuits: German Moravians in the Atlantic World.* New York: Berghahn Books, 2007), 191-206.

Smith, Helmut Walser. *Germany: A Nation In its Time; Before, During, and After Nationalism, 1500-2000.* New York: Liveright Publishing Corporation, 2020.

Soderlund, Jean R. "Black Women in Colonial Pennsylvania." *Pennsylvania Magazine of History and Biography* 107 (1983): 49–68.

Sonnedecker, Glenn, ed. *Kremers and Urdang's History of Pharmacy*. Madison, WI: American Institute of the History of Pharmacy, 1976.

South, Stanley. *Historical Archaeology in Wachovia: Excavating Eighteenth-Century Bethabara and Moravian Pottery*. New York: Kluwer Academic Publishers, 1999.

Southern, Ron. "Strangers below: An Archaeology of Distinctions in an Eighteenth-Century Religious Community." In *Archaeologies of the British: Explorations of Identity in Great Britain and Its Colonies 1600-1945*, edited by Susan Lawrence, 87–101. London: Routledge, 2003.

Speck, Frank G., and Leonard Broom. *Cherokee Dance and Drama*. Norman: University of Oklahoma, 1993.

Spickard, Paul. *Almost All Aliens: Immigration, Race, and Colonialism in American History and Identity.* New York: Routledge, 2007.

Splinter, Susan. "'Ein Jeder Der Stadt Nürnberg Bestelter Medicus Und Physicus Ordinarius Soil Geloben ...' Medizinale Strukturen Nürnbergs Zu Beginn Des 18. Jahrhunderts." *Würzburger Medizinhistorische Mittelungen* 30 (2011): 334–39.

Spray, E.C. "Health and Medicine in the Enlightenment." In *The Oxford Handbook of the History of Medicine,* edited by Mark Jackson, 82-99. Oxford: Oxford University Press, 2011.

Standley, Paul C. "A Neglected Solidago Name." *Rhodora* 21, no. 243 (1919): 69–70.

Stein, Claudia. “The Birth of Biopower in Eighteenth-Century Germany.” *Medical History* 55 (2011): 331–37.

Stephen, Leslie, and Sidney Lee, eds. *The Dictionary of National Biography*. VIII. London: Oxford University Press, 1917.

Stolberg, Michael. *Experiencing Illness and the Sick Body in Early Modern Europe*, translated by Leonard Unglaub and Logan Kennedy. New York: Palgrave, 2011.

Strom, Jonathan, Hartmut Lehmann, and James Van Horn Melton, eds. *Pietism in Germany and North America 1680-1820*. n.d.

Stroup, William. “Meat, Ethics, and the Case of John Wesley.” In *Orthodoxy and Heresy in Eighteenth-Century Society: Essays from the DeBartolo Conference*, edited by Regina Hewitt and Pat Rogers, 267–80. Lewisburg: Bucknell University Press, 2002.

Tannenbaum, Rebecca. *Health and Wellness in Colonial America.* Santa Barbara, CA: Greenwood, 2012.

Tappert, Theodore G. “The Influence of Pietism in Colonial American Lutheranism.” In *Continental Pietism and Early American Christianity*, edited by F. Ernest Stoeffler, 34–73. Eugene, OR: Wipf & Stock, 2007.

Thulesius, Olav. *Nicholas Culpeper: English Physician and Astrologer*. New York, NY: St. Martin’s Press, 1992.

Tomlin, T.J. *A Divinity for All Persuasions: Almanacs and Early American Religious Life*. New York, NY: Oxford University Press, 2014.

Torrens, Hugh S. “The Moravian Minister Rev. Henry Steinhauer (1782-1818); His Work on Fossil Plants, Their First ‘scientific’ Description and the Planned Mineral Botany.” *History of Palaeobotany: Selected Essays* 241, no. 1 (2005): 13–28.

Troyer, James R. “Early American Moravian Botanists in North Carolina and Elsewhere.” *Journal of the North Carolina Academy of Science* 125, no. 1 (2009): 1-6.

Ulrich, Laurel Thatcher. “‘The Living Mother of a Living Child:’ Midwifery and Mortality in Postrevolutionary New England.” In *Women and Health in America*, edited by Judith Walzer Leavitt, 48–64. Madison: University of Wisconsin Press, 1999.

Valencius, Conevery Bolton, David I. Spanagel, Emily Pawley, Sara Stidstone Gronim, and Paul Lucier. "Science in Early America: Print Culture and the Sciences of Territoriality." *Journal of the Early Republic* 36, no. 1 (2016): 73-123.

Varney, Helen, and Joyce Beebe Thompson. *A History of Midwifery in the United States: The Midwife Said Fear Not*. New York: Springer, 2016.

Venieri, Danae, et al. “Bridging the Gaps: Bole and Terra Sigillata as Artefacts, as Simples and as Antibacterial Clays.” *Minerals (Basel)* 10, no. 4 (2020): 1–16.

Viehmeyer, L. Allen. “Abraham Wagner and George de Benneville: Physicians of Body and Soul.” In *Medical Theory and Therapeutic Practice in the Eighteenth Century*, edited by Jürgen Helm and Renate Wilson, 261–79. Stuttgart: Franz Steiner Verlag, 2008.

Wakefield, Andre. *The Disordered Police State: German Cameralism as Science and Practice*. Chicago: University of Chicago Press, 2009.

Wear, Andrew. "The Prospective Colonist and Strange Environments: Advice on Health and Prosperity." In *Cultivating the Colonies: Colonial States and Their Environmental Legacies*, edited by Christina Folke Ax and et al., 19–46. Athens, OH: Ohio University Press, 2011.

Weaver, William Woys. *As American as Shoofly Pie: The Foodlore and Fakelore of Pennsylvania Dutch Cuisine*. Philadelphia: University of Pennsylvania Press, 2013.

Weaver, William Woys, ed. *Sauer's Herbal Cures: America's First Book of Botanic Healing, 1762-1778*. New York: Routledge, 2001.

Weaver-Zercher, David L. *Martyrs Mirror: A Social History*. Baltimore: Johns Hopkins University Press, 2016.

Wellenreuther, Hermann. "Heinrich Melchior Mühlenberg and the Pietisms in Colonial America." In *Pietism in Germany and North America 1680-1820*, edited by Jonathan Strom, Hartmut Lehmann, and James Van Horn Melton, 127–32. Surrey: Ashgate, 2009.

Wellenreuther, Hermann. *Citizens in a Strange Land: A Study of German-American Broadsides and Their Meaning for Germans in North America, 1730-1830*. University Park, PA: Pennsylvania State University Press, 2013.

Wertz, Richard W., and Dorothy C. Wertz. *Lying-In: A History of Childbirth in America*. New Haven: Yale University Press, 1989.

Weston, Robert. *Medical Consulting by Letter in France, 1665-1789*. Farnham, Surrey: Ashgate, 2013.

White, Janet R. "The Ephrata Cloister: Intersections of Architecture and Culture in an Eighteenth-Century Utopia." *Utopian Studies* 11, no. 2 (2000): 57–76.

Whiteley, Rebecca. *Birth Figures: Early Modern Prints and the Pregnant Body*. Chicago: University of Chicago Press, 2023.

Whitmer, Kelly Joan. *The Halle Orphanage as Scientific Community: Observation, Eclecticism, and Pietism in the Early Enlightenment*. Chicago: University of Chicago Press, 2015.

Wiesner, Merry E. "The Midwives of South Germany and Public/Private Dichotomy." In *The Art of Midwifery: Early Modern Midwives in Europe*, 77–94. London: Routledge, 1993.

Wiesner-Hanks, Merry E. "Midwives and Medical Knowledge in Early Modern Germany." In *Healing and Harm: Essays in Honor of Mary Lindemann*, edited by Erica Heinsen-Roach, et al., 49–58. New York: Berghahn, 2024.

Wiethaus, Ulrike. "Becoming American at the Moravian Missions in Springplace and Oothcaloga." In *Moravian Americans and Their Neighbors, 1772-1822*, edited by Ulrike Wiethaus and Grant P. McAllister, 418–52. Leiden: Brill, 2023.

Wiggin, Bethany. "Poor Christoph's Almanac: Popular Media and Imperial Education in Colonial Pennsylvania." In *New Perspectives on German-American Education History: Topics, Trends, Fields of Research*, 43–62. Kempten, Germany: Julius Klinkhardt, 2017.

Wilbert, M.I. "Dr. Christopher Witt. An Early American Botanist and a Man of Many and Varied Attainments." *The American Journal of Pharmacy* 76 (1904): 311.

Wilson, Renate. "Eighteenth-Century Practitioners of Medicine from Central Europe: The Pietist Connection." In *Apothecaries and the Drug Trade: Essays in Celebration of the Work of David L. Cowen*, edited by Gregory J. Higby and Elaine C. Stroud, 29–56. Madison, WI: American Institute of the History of Pharmacy, 2001.

Wilson, Renate. "Halle and Ebenezer: Pietism, Agriculture and Commerce in Colonial Georgia." PhD diss. University of Maryland, 1988.

Wilson, Renate. "Moravian Physicians and their Medicine in Colonial North America: European Models and Colonial Reality." In *Pious Pursuits: German Moravians in the Atlantic World,* edited by Robert M. Beachy and Michele Gillespie, 65-80. New York: Berghahn Books, 2007.

Wilson, Renate. *Pious Traders in Medicine: A German Pharmaceutical Network in Eighteenth-Century North America.* University Park, PA: Pennsylvania State University, 2000.

Wilson, Renate. "Public Works and Piety in Ebenezer: The Missing Salzburger Diaries of 1744-1745." *The Georgia Historical Quarterly* 77, no. 2 (1993): 336-66.

Wilson, R. "Trading in Drugs through Philadelphia in the Eighteenth Century: A Transatlantic Enterprise." *Social history of Medicine* 26, no. 3 (2013): 352–363.

Wilson, Renate. “The Traffic in Eighteenth-Century Medicines and Medical Ideas and the Medicina Pennsylvania of George de Benneville.” *Pharmacy in History* 44, no. 4 (2002): 142–51.

Wilson, Renate. “The Transmission of Medical and Pharmaceutical Knowledge to Colonial North America.” In *Medical Theory and Therapeutic Practice in the Eighteenth Century*, 197–227. Stuttgart: Franz Steiner Verlag, 2008.

Wilson, Renate, and Woodrow J. Savacool. “The theory and practice of pharmacy in Pennsylvania: Observations on two colonial country doctors.” *Pennsylvania History* 68, no. 1 (2001): 31-65.

Winkler, Louis. “Pennsylvania German Astronomy and Astrology II: The Moon.” *Pennsylvania Folklife* 21, no. 4 (Summer 1972): 23–27.

Wisecup, Kelly. *Medical Encounters: Knowledge and Identity in Early American Literatures*. Amherst: University of Massachusetts Press, 2013.

Zammito, John H. *The Gestation of German Biology: Philosophy and Physiology from Stahl to Schelling*. Chicago: University of Chicago Press, 2018.

Zogry, Michael J. *Anetso, the Cherokee Ball Game: At the Center of Ceremony and Identity.* Chapel Hill: University of North Carolina Press, 2010.

VITA

Jane Jiyoung Chang obtained her Bachelor of Arts in History and Biology from Emory University in 2016 and her Master of Arts in History from the University of Tennessee, Knoxville, in 2022. She obtained her Doctor of Philosophy in History from the University of Tennessee, Knoxville, in 2025, with a concentration in European History.