

**THE MALADY OF REVOLUTIONS: YELLOW FEVER IN THE ATLANTIC
WORLD, 1793-1828**

by
Katherine Arner

A dissertation submitted to Johns Hopkins University in conformity with the
requirements for the degree of Doctor of Philosophy

Baltimore, Maryland
June 2014

ABSTRACT

Between the late eighteenth and early nineteenth century, revolutions in the Americas and Europe rocked the Atlantic world and introduced new patterns of trade, warfare and migration. The patterns of long-distance trade that knitted the Atlantic World together, and the warfare and political dislocation that threatened to tear it apart also transported yellow fever far from its African origins and transformed it into an alarming health crisis that engulfed the Caribbean, new United States and southern Europe.

This dissertation examines the new ecology for health management that contemporaries created to deal with the crisis. Existing scholarship on medical responses to the yellow fever pandemics focuses on imperial, local or new national contexts. Using the framework of Atlantic History, this dissertation explores how, not unlike yellow fever itself, knowledge about the disease and practices became subject to the global circulation and activities of physicians, military and naval personnel, political refugees, merchants, consuls and lay travelers who connected the diverse ports that hosted outbreaks of the disease. As a result of these actors' complex movements and dislocations during this period, management of the health crisis became a product of exchanges that cut across the new ideological and international boundaries that began to crystallize in this period. What emerged out of the Age of Atlantic Revolutions was a rich tapestry of vibrant medical networks, literature and practices that spanned across new national divides.

Dissertation Committee:

Mary E. Fissell (thesis advisor)

Randall Packard

Philip Morgan

Toby Dtz

Graham Mooney

Acknowledgements

This dissertation has taken me down some unexpected paths, and along the way, I have been fortunate to find guidance and support from many people and institutions. My gratitude runs in so many different directions.

I am indebted to the institutions that provided me with invaluable support – financial and intellectual. The Department of the History of Medicine at Johns Hopkins University has provided me with support for research, writing and conference travel throughout the project. More importantly, the department's faculty, students and lively seminars helped me grow as a scholar. The Program in Early American Economy and Society, the American Philosophical Society, and the Philadelphia Area Consortium for the History of Science enabled transformative research at the Library Company of Philadelphia, the College of Physicians of Philadelphia, the Historical Society of Pennsylvania and the American Philosophical Society. I had the pleasure of working with knowledgeable archivists and librarians along the way: Roy Goodman, Jim Greene, Connie King, and Earl Spamer. I am also grateful to the New York Academy of Medicine. In addition to a generous fellowship to examine some rare archival material in their collections, the New York Academy of Medicine provided me with the opportunity to work with their talented librarian, Arlene Shaner. During the first year of my writing (2011-2012), the Center for Historical Research at Ohio State University provided me with funding, the luxury of an office and a very stimulating academic environment.

I have been privileged to work with generous and talented historians at Johns Hopkins University. My advisor, Mary Fissell, has been a tremendous source of

guidance and wisdom from start to finish. She has also been an incisive and careful reader, and her work has served as a splendid model for clear and engaging prose.

With his impressive knowledge and eye for good scholarship, Philip Morgan sets a high standard for scholarship on Atlantic History that I will continue to try to reach. I am very grateful for his generous support and feedback throughout the process. Toby Ditz provided invaluable comments on my work as well as warm encouragement. I have also benefited from many conversations with Randall Packard about the history of imperial and international health.

Over the course of the project, I have acquired debts from many colleagues and friends who supplied criticism, support and assistance. I would like to thank past and present members of the Atlantic History Seminar at Hopkins, who read drafts of my work with great thoughtfulness: Joe Adelman, Jim Ashton, Rachel Calvin-Whitehead, Joe Clark, Christopher Consolino, Sara Damiano, Andrew Devereux, Stephanie Gamble, Meredith Gaffield, Claire Gherini, Jonathan Gienapp, Katie Gray, Scott Heerman, Cole Jones, Dexnell Peters, Nick Radburn, Katherine Smoak, and Sarah Templier are among the many who offered valuable feedback and warm support in this forum over the past four years. I would also like to thank my fellow graduate students (past and present) in the History of Science, Medicine and Technology: Eli Anders, Andrew Benedict-Nelson, Lisa Boulton, Cassidy Brown, Julia Cumiskey, Sandra Eder, Matthew Franco, James Flowers, Melissa Grafe, Penelope Hardy, Layne Karafantis, Susan Lamb, Seth LeJacq, Adrienne Link, Kirsten Moore, Richard Nash, Alicia Puglionesi, Jean-Olivier Richard, Justin Rivest, Marion Schmidt, and Nick Spicher.

Colleagues outside of Hopkins have contributed greatly as well. Cathy Matson provided support and supplied useful feedback at the very early stage of my research. Melissah Pawlikowski has been a great sounding board for ideas and a true companion from our days as PEAES fellows up until the present. A talented cluster of scholars at the Center of Historical Research helped me refine my ideas as I was beginning to develop my narrative: John Brooke, Michael Liu, Thomas McDow, Tamara Mann-Tweel, and Chris Otter. Erica Charters, Cindy Ermus, Simon Finger, Mark Harrison, and Rana Hogarth have shared their research and ideas at points where their research intersected with my own. I appreciate their exemplary collegiality. I am obliged, too, to the people who offered ideas when I presented my work at the McNeil Center for Early American Studies, the Wellcome Unit for the History of Medicine at Oxford University, the Department of History at the European University Institute, the Department of History at Ohio State University, and the 2013 Summer Academy for Atlantic History.

Without the support of my family – my wife, Antje Krüger, my parents, Mary Arner and Eugene Arner – I would not be where I am today. Their support over the years has made my life infinitely richer. My wife, a fellow academic, listened to my enthusiastic rants about archival finds, let me walk through ideas with her, shared her experiences with the writing process, and gave me so much love and day-to-day support. I cannot thank her enough.

Finally, this dissertation is dedicated to my former mentor, the late Professor Harry Marks. While technically the resident historian of American medicine at Johns Hopkins University, Harry possessed a remarkable wealth of knowledge on topics as wide-ranging as modern American clinical trials, eighteenth-century European disease

theory, public health in colonial India, and international and global health. His breadth in training, ability to make connections across historiographies and generosity all left a lasting impression on me. Six years ago, I approached Harry about doing some readings together in early American medicine. He got back to me with a rich bibliography that included scholarship on the West Indies and continental Europe (“Trust me,” he said). It is because of the way Harry thought about the history of American medicine that I developed a deep appreciation for the potential of Atlantic History. Sadly, Harry passed away before I began this dissertation; but I profited tremendously from that bibliography and our many rigorous discussions. He helped plant the seeds for this project several years ago and remains a source of inspiration to this day.

Table of Contents

Introduction	1
Chapter One Material Revolutions: The Revolutionary Atlantic and the New Ecology for Yellow Fever	19
Chapter Two From British Military Medicine “into a form more diffused”: The Odyssey of Colin Chisholm’s <i>An Essay on the Malignant Pestilential Fever</i> , 1795-1801	38
Chapter Three Revolutionary Migrations in Health: Francophone Refugees and the New Geography of Yellow Fever Medicine	87
Chapter Four Making Commerce into Health Diplomacy: Consuls and Commercial Agents in the Age of Yellow Fever	126
Conclusion	173
Bibliography	182

Introduction

In November of 1817, a Parisian physician stepped off a ship and headed into the port town of Pointe-à-Pitre in Guadeloupe. Doctor Nicholas Chervin's stay would be brief. He was on a particular mission. Over the course of nearly three decades, Europe and the Americas had become engulfed in a series of yellow fever pandemics unprecedented in scale and scope. Chervin was on international quest for information about the origin and character of the disease. Guadeloupe was just one stop on an eight-year journey through the Caribbean and up into the United States.

Upon arrival in Guadeloupe, Chervin paid a visit to the local French consul in order to arrange meetings and correspondence connections with physicians who worked in the town. After learning about Chervin's mission, one local doctor decided to do more than record his opinions on the cause of the disease. Doctor François Chamby sifted through the case histories, letters and publications he had acquired over the years and pulled out a pamphlet he had received from a colleague in the United States. It was a French translation of an 1805 publication by Dr. Edward Miller, an Anglo-American doctor in New York City. Chamby presented the piece in his letter to Chervin: "Doctor Edward Miller, esteemed doctor of the United States, produced an excellent piece on this subject, which he addressed to the governor of New York. This piece, without a doubt, supports the opinions I advance, and it merits the same attention of the administration here."¹ Satisfied, Chervin tucked the doctor's materials into his growing collection of

¹ François Chamby to Nicholas Chervin, 25 November 1817, Nicholas Chervin Papers, 1817-1822. Archives and Manuscripts Collection, Wellcome Trust Library for the History of Medicine, London. The letter contained a long excerpt from Miller's piece and an undated stamp from the French consul. Translation from French my own.

manuscripts. He then proceeded on his journey, repeating this process of building networks in each of the ports he visited throughout the Americas.

By medical historians' accounts, Nicholas Chervin's survey of yellow fever was an extraordinary feat. They tell us about a Parisian doctor who blazed through multiple countries on his own, pulled together the opinions of doctors from scattered locales and then headed back to Paris with a mound of answers to a uniform set of questions.²

Missing from these accounts is the story of a physician navigating an intricate web of networks that already spanned the Americas. In order to pursue his travels and establish letter-writing connections, Chervin relied on the knowledge and connections of a transnational cast of physicians, consuls, non-medical intellectuals and even military personnel. Before Chervin began weaving together materials gathered from different ports, many of the local communities he encountered were already well read in the literatures from communities in other parts of the Atlantic World. His interlocutors directed him to colleagues and materials in other places. Chervin, in sum, was not charting a new course. He was tracing a path along a network that had been built by a range of different actors in various locations. The story of that enterprise is the subject of this dissertation. I argue that Chervin, along with many other physicians, was working within a sprawling epistemic community that had come into being over the past two

² Manfred J. Waserman and Virginia Kay Mayfield. "Nicolas Chervin's Yellow Fever Survey, 1820–1822." *Journal of the History of Medicine and Allied Sciences* 26.1 (1971): 40-51. William Coleman, *Yellow Fever in the North: The Methods of Early Epidemiology* (Madison: University of Wisconsin, 1987), 26-29.

decades. It was a contentious and far-flung community that had nevertheless worked out means of communication and rules of engagement.³

Between the late eighteenth century and early nineteenth century, revolutions in the Americas and Europe ushered in a new era. Turmoil manifested itself not only in new geopolitical fault lines but also dramatic flux in the channels of trade, migration and warfare that shaped the social, cultural and political fabric of the Atlantic World. For historians of disease and medicine, this era of global change has also become characterized by distinctive patterns in epidemic disease. Scholars like J.R. McNeill, K. Patterson and David Geggus have turned to new patterns in global flux in this period with questions about their impact on disease and contemporaries' disease experiences. Using present-day scientific findings and epidemiological methods, they have created a rich story about the creation of a new epidemiological era. According to this scholarship, the flux in trade, warfare and migration transported the disease yellow fever far from its African origins and transformed it into an alarming series of pandemics that linked the Caribbean, new United States and southern Europe.⁴

³ By “epistemic community,” I refer to networks of practitioners actively engaged with hammering out shared epistemologies and rules of engagement. Here, I take inspiration from Matthew Ramsay’s concept of “epistemic community,” which he developed to study the character of eclecticism in early modern French medical culture. He writes: “It may be helpful to think, instead, of epistemic communities, not in the narrow sense in which the term has been used in political science – international teams of experts – but in the sense of groups sharing ways of knowing the world. Such communities are unstable, have porous boundaries, and are continually engaged in exchanges and appropriations. The same individual can belong, at least potentially, to multiple communities, whose principles and beliefs are not always perfectly compatible or even internally consistent.” Matthew Ramsay, “Medical Pluralism in Early Modern France,” in Robert Jütte, ed. *Medical Pluralism: Past – Present – Future* (Stuttgart: Franz Steiner Verlag, 2013), 77

⁴ David Geggus, “Yellow Fever in the 1790s: the British Army in Occupied St. Domingue,” *Medical History* 23 (1979). Ibid., “Slavery War and Revolution in the Greater Caribbean, 1789-1805,” in David Barry Gaspar and David Patrick Geggus, eds., *A Turbulent Time: The French Revolution and the Greater Caribbean* (Indiana University Press, 1997), 1-50; John R. McNeill, *Mosquito Empires: Ecology and War in the Greater Caribbean, 1620-1914* (Cambridge: Cambridge University Press, 2010), 235-266; K. David Patterson, “Yellow Fever Epidemics and Mortality in the United States, 1693-1905,” *Soc. Sci. Med.* 34:8 (1992), 855-865; Billy G. Smith, *Ship of Death: A Voyage That Changed the Atlantic World* (New Haven:

In this dissertation, I argue that warfare, commerce and migration created more than a new global disease environment. Collectively, those channels produced new transnational networks and resources for managing the disease, creating a loosely knit epistemic community. Not unlike yellow fever itself, knowledge and practices were subject to the global circulation and activities of physicians, military and naval personnel, political refugees, merchants, consuls and lay travelers who connected the diverse ports that hosted outbreaks of the disease. As a result of these actors' complex movements and dislocations during this period, management of the health crisis became a product of exchanges that cut across the new ideological and international boundaries that began to crystallize in this period.

I have two larger goals with this study. One is to enrich our understanding of how the Age of Revolutions reshaped the landscape of health and health management. The second seeks to connect this period of the formation of international networks concerned with disease to later developments in international and global health.

Scholarship on the impact of the Age of Revolutions on health and health management is quite rich. It remains deeply fragmented, however, because of two approaches that have come to dominate medical historians' analyses. In stark contrast to historians of disease, medical historians have tended to structure their studies within the geopolitical fault lines that began to crystallize in this period. They read the period teleologically through the lens of revolution and nation-building. Americanists, for example, have created a tremendous amount of scholarship about the medical and public

Yale University Press, 2013), 157-186; Harry Marks, "How Might Biology Matter? Explorations for a Materialist History of Disease," presented to the Johns Hopkins University Department of the History of Science, Medicine and Technology, Baltimore, May 29, 2001.

health responses to the outbreaks that hit the eastern seaboard of the early republic. Yet, they have contained their studies within the boundaries of the new nation. Scholarship about the famous 1793 outbreak in Philadelphia, for example, casts the epidemic as a major local and national event in the early history of the United States.⁵ Few if any have parsed the connections between the events in 1793 and responses to outbreaks in other parts of the Atlantic world. The same problem is inherent in scholarship on European responses, which either disregards the United States or treats it as peripheral.⁶ Such an approach does not help us account for the myriad exchanges that transcended geopolitical divisions during this period and were central to experiences of yellow fever.

Political fragmentation colors scholarly approaches in other ways. Most of these historians have explored the creation of ideas, practices and epistemic communities by

⁵ Important examples include J.H. Powell, *Bring Out Your Dead: the great plague of yellow fever in Philadelphia in 1793* (Philadelphia: University of Pennsylvania Press, 1949); Martin Pernick, "Politics, Parties, and Pestilence: Epidemic Yellow Fever in Philadelphia and the rise of the First Party System," *William and Mary Quarterly*, 3rd Series. 29 (1972), 559-586; the volume of essays edited by J. Worth Estes and Billy G Smith: *A Melancholy Scene of Devastation: The Public Response to the 1793 Philadelphia Yellow Fever Epidemic*, (Canton: Science History Publications, 1997); Sean P. Taylor, "'We Live in the Midst of Death': Yellow Fever, Moral Economy, and Public Health in Philadelphia, 1793-1805," (PhD Diss., Northern Illinois University, 2001); Simon Finger, *The Contagious City: The Politics of Public Health in Early Philadelphia* (Cornell University Press, 2012), 120-152. A notable exception to this trend of situating views in the context of politics is Thomas Apel, "Feverish Bodies, Enlightened Minds: Yellow Fever and Common-Sense Natural Philosophy in the Early American Republic, 1793-1805," (PhD Diss., Georgetown University, 2012). Apel, in contrast to the above scholars, embeds the debates over the cause of yellow fever in disciplines of natural knowledge-making in early republic America.

⁶ For important studies of the European context, see Erwin Ackerknecht, "Anticontagionism between 1821 and 1867," *Bulletin of the History of Medicine* 22 (1948), 562-593; and William Coleman, *Yellow Fever in the North: the methods of early epidemiology*. For the French imperial context, see E.A. Heaman, "The Rise and Fall of Anticontagionism in France," *Canadian Bulletin of the History of Medicine* 12 (1995), 3-25. George Sussman, "From Yellow Fever to Cholera: a Study of French Government Policy, Medical Reformism and Popular Movements in the Epidemic Crises of the Restoration and July Monarchy," (PhD Diss., Yale University, 1971). Important examples of the British imperial context include Mark Harrison, *Medicine in an Age of Commerce and Empire: Britain and Her Colonies, 1660-1830* (Oxford: Oxford University Press, 2010); Catherine E. Kelly, *War and the Militarization of British Army Medicine, 1793-1830* (London: Pickering and Chatto, Ltd., 2010). For the Spanish imperial context, see Andrew L. Knaut, "Yellow Fever and the Late Colonial Public Health Response in the Port of Veracruz," *HAHR*, 77, 4 (Nov. 1997), 619-644; Adrián López Denis, "Disease and Society in Colonial Cuba, 1790-1840," (PhD Diss., University of California Los Angeles, 2007), in particular Chapter 3. For examples of scholars who are beginning to explore the place of American medical writers in the European debates, see Mark Harrison, *Medicine in an Age of Commerce and Empire* (Oxford: Oxford University Press, 2010); *Ibid.*, *Contagion: How Commerce Has Spread Disease* (New Haven and London: Yale University Press, 2012), 80-106.

situating them in the context of the ideological clashes that characterized the period. The assumption here is that ideas about disease, stances on prevention and social resources depended on medical actors' ideological commitments.

This approach has its origins in a very famous 1948 essay by the historian Erwin Ackerknecht, in which he addressed the rancorous debates over interpretations of yellow fever that emerged in Europe in the early nineteenth century. Ackerknecht opened up a new debate about the impact of the Age of Revolutions on disease responses by arguing that factions in debates over the cause disease correlated strongly with the political affiliation of the participating doctors. In France as in England, he argued, critique of contagion was formulated by classically liberal, antiabsolutist critics of the expansive state power and control of the individual embodied by quarantine regimes.⁷

Ackerknecht's article has since inspired similar lines of inquiry among medical historians studying the Age of Revolutions. Americanists, for example, have applied this framework on the other side of the Atlantic in their studies of the local and national responses to the outbreaks in early republic America. In his study of the responses in Philadelphia in the 1790s, Martin Pernick mapped Ackerknecht's argument onto the politics of early America, recasting the statist of Europe as the Federalists of Philadelphia who favored exogenetic explanations. Democratic-Republicans, by contrast, defended anticontagionist interpretations of the disease. The focus on each group reflected the aspect of society that most concerned it: for Federalists, how to

⁷ Erwin Ackerknecht, "Anticontagionism between 1821 and 1867." For more on Ackerknecht's influence in studies of disease control during this period, see Alexandra Minna Stern and Howard Markel, "Commentary: Disease Etiology and Political Ideology: Revisiting Erwin Ackerknecht's Classic 1948 Essay, 'Anticontagionism between 1821 and 1867,'" *International Journal of Epidemiology* 38 (2009), 31-33.

develop a commercial economy without endangering the political health of their community; for Republicans, how to build a local, agriculture-oriented society and avoid the moral and medical enervation they associated with urban spaces. Federalists' apprehensions about the influx of French colonials harboring revolutionary sentiments only magnified their support for quarantine measures. Pernick carried his argument even further by claiming that the bitter clashes among political factions likewise shaped practitioners' perceptions of heroic therapies like bloodletting or mercury.⁸ Pernick's article has, in turn, become the chief reference point for subsequent studies of not only the Philadelphia outbreaks but also those in early national America as a whole.

Recently, Mark Harrison developed a similar set of questions about the context for the practice and epistemologies British naval and military practitioners developed in their efforts to manage health crises in this period. Harrison drew strong correlations between the character of their work and the fact that the vast majority of these men came from the social, political and religious fringes of the British Empire. "There were," he wrote, "intellectual affinities between the outlook of many practitioners working overseas and their religious views, which were often combined with a radical outlook on political matters."⁹ Dissent and political reform in the British empire and its former colonies, according to his argument, played a powerful role in determining practitioners' choices in intellectual allegiance, impulse to experiment as well as their outlook on disease prevention.

⁸ Pernick, "Politics, Parties, and Pestilence: Epidemic Yellow Fever in Philadelphia and the Rise of the First Party System."

⁹ Harrison, *Medicine in Age of Commerce and Empire*, 6.

Harrison has since carried this approach into his studies of international currents in discussions about the disease and quarantine. Taking Ackerknecht as a major point of reference, Mark Harrison embedded multiple medical writers' views on quarantine and disease management in larger, international currents in philanthropy and political reform. As these ideologies spread across Europe and the Atlantic, they permeated medical discussions in different locales. Hence, a broad range of practitioners collectively began articulating sharp critique of quarantine and contagionist interpretations of maritime pandemics as relics of an unenlightened era.¹⁰

All of these scholars helpfully remind us that epidemics and medicine during this period, as in any, must be understood in their broader political, social and cultural context. Still, their efforts to interpret ideas, practices and epistemic communities do not fully capture the complexity of responses to yellow fever. In their quests to correlate ideology and medicine, scholars have run into the problem of oversimplifying both. Margaret Pelling, Christopher Hamlin and E.A. Heaman have all taken Ackerknecht to task for oversights in his study of contemporaries' ideas about disease causation. By conflating contagionism with quarantine, they argue, Ackerknecht overlooked the function of the air in theories of disease transmission, the notion of contingent contagionism and concerns about predisposing causes among populations.¹¹ Martin Pernick's model has proven problematic for similar reasons. As Pernick himself admitted in a later reprint of the article, he oversimplified American medical writers'

¹⁰ Ibid., 50-79.

¹¹ Margaret Pelling, *Cholera, Fever, and English Medicine, 1825-1865* (Oxford: Oxford University Press, 1978); Christopher Hamlin, "Predisposing Causes and Public Health in Early Nineteenth-Century Medical Thought," *Social History of Medicine* 5.1 (1992), 43-70; E.A. Heaman, "The Rise and Fall of Anticontagionism"; Roger Cooter, "Anticontagionism and History's Medical Record," in P. Wright and A. Treacher, eds., *The Problem of Medical Knowledge: Examining the Social Construction of Medicine* (Edinburgh: Edinburgh University Press, 1982), 87-108.

ideas about disease etiology.¹² Since the original publication of his essay, moreover, scholars like John Harley Warner have brought to life the deeply nuanced ways in which Anglo-American physicians crafted therapeutic regimens and tailored them according to the complex local ecological and social contexts.¹³ In light of this scholarship, it is no longer possible to reduce debates over therapeutics to matters of political partisanship. Like disease concepts and ideas about prophylaxis, political ideologies were not as clear-cut as some of these medical historians have thought. When we take into account the sheer fluidity of political identity and conviction during this period, tightly correlating medicine and ideology becomes not only tricky; it can become unhelpful.

For all of the connections historians have made between ideology and medicine, they also leave us with the problem of exceptions and outliers in trends. Many of the above scholars have responded to outliers by qualifying their arguments. In order to account for exchanges and practices that did not correlate directly with ideological convictions, Harrison moderated his arguments about the relationship between Dissent and medical innovation by arguing that that relationship was never simple or unidirectional. He expanded the definition of “Dissent” to accommodate a very broad range of political, religious and social ideologies.¹⁴ The problem with this move is that the concept of “Dissent” loses clear meaning and ultimately masks over the messiness of the global networks and exchanges in which medical writers were immersed. What we have in the end is a picture of the period that remains deeply fragmented.

¹² See the Pernick’s “Afterword,” which he created for the reprint of his article in Pernick, “Politics, Parties, and Pestilence: Epidemic Yellow Fever in Philadelphia and the Rise of the First Party System,” in J. Worth Estes and Billy G. Smith, eds. *A Melancholy Scene of Devastation*, 136-138.

¹³ John Harley Warner, *The Therapeutic Perspective: Medical Practice, Knowledge, and Identity in America, 1820-1885* (Cambridge: Harvard University Press, 1987).

¹⁴ Harrison, *Medicine in an Age of Commerce and Empire*, 5-8.

I want to nuance our understanding of this period by drawing upon a different analytical model, one taken from Atlantic History. In recent years, social and cultural historians have developed fruitful approaches to studying the Atlantic World in the Age of Revolutions. Contrary to traditional narratives that privilege ideology and collective conflict over the structure of the state, scholars like Ashli White and R. Darrell Meadows have encouraged us to attend more carefully to fluctuating networks of commerce and migration as important sources of social, cultural and intellectual change during this period. This approach disrupts narratives that have read this period as the beginning of the seemingly straightforward march of revolution and state-building. Scholars enrich our picture of the period by revealing the patterns of movement, exchange and community that did not map neatly onto emerging geopolitical boundaries during this period. Ashli White, to offer one example, has put this model to good use in her study of the impact of the Haitian Revolution on the Early American Republic. The dominant trope in this scholarship has been that of a chain, a sequence in which political principles and activity at one site inform revolutions on the other. White explored encounters between Americans and revolutionary St. Domingue at the level of dense social, cultural and intellectual ties forged through the channels of commerce and migration, thereby bringing to light the very complex ways in which Americans and French colonials negotiated their relationships to the Revolutionary Atlantic.¹⁵

Historians of science during this period are taking a similar approach. Scholars like James Delbourgo, Simon Schaffer, Kapil Raj and Kathleen Murphy are revising our

¹⁵ Ashli White, *Encountering Revolution: Haiti and the Making of the Early Republic* (Baltimore: Johns Hopkins University Press, 2010); R. Darrell Meadows, "Engineering Exile: Social Networks and the French Atlantic Community, 1789-1809," *French Historical Studies* 23:1 (2000), 67-102.

picture of natural knowledge during this period by doing away with dichotomous frameworks such as center and periphery and shying away from stories about the diffusion of ideas through space. They have, instead, explored channels of global commerce, travel and military activity as pivotal sites of knowledge production about natural phenomena and cultures. Rather than trace the one-way diffusion of ideas, they attend to conduits of circulation, forms of exchange and translation of knowledge. They reveal how knowledge-making became embedded in the activities of a wide range of actors: physicians and lay intellectuals but also merchants, missionaries, military and naval officers, seafarers and even slaves. According to this fresh scholarship, the conjuncture of global revolutions and massive economic transformations during the late eighteenth and early nineteenth century revised practices of making natural knowledge by intensifying global interchange within and beyond the Atlantic World.¹⁶ By adapting these historians' models (and scholarship) in my story of the yellow fever crisis, my dissertation brings the History of Medicine into better dialog with the paradigms and themes of Atlantic History.

My second goal is to spark some critical reflection on the place of the Age of Atlantic Revolutions in the history of international health. Histories of international currents in disease management traditionally begin in the 1850s with the emergence of International Sanitary conferences in Europe and the problem of cholera from the East. Studies of the nineteenth century are, effectively, stories about the formation of pre-

¹⁶ The edited volume of essays by Simon Schaffer, Lissa Roberts, K. Raj, and James Delbourgo exemplifies this historiographic turn. See Simon Schaffer, Lissa Roberts, K. Raj, and James Delbourgo, eds. *The Brokered World: Go-Betweens and Global Intelligence, 1770-1820* (Sagamore Beach: Science History Publications 2009). See also Kathleen Murphy, "Portals of Nature: The Pursuit of Natural History in Eighteenth-Century British Plantation Societies," (Ph.D. diss., Johns Hopkins University, 2007), in particular Chapter 5: "Patriotic Science and Transatlantic Patriots: Natural History in the Age of Revolution."

cursors to familiar twentieth-century institutes like the World Health Organization: formal congresses with nation-state representatives and lettered physicians who set about negotiating preventative measures and reconciling disease theories. These are narratives in which the Americas remain conspicuously absent until the turn of the twentieth century, when the United States began to emerge as a global industrial power with a strong federal state.¹⁷ By attending to global networks rather than looking for precursors of modern international institutes, my study complicates our picture of when, where and how international currents in disease management developed in the new century.

My study begins with a fresh evaluation of how the Age of Revolutions shaped the material conditions for change in health management practices. Historians have traditionally read new troop movements, patterns in shipping and an unprecedented political diaspora as agents in the spread of the yellow fever flavivirus. Even if contemporaries did not think about the disease in terms of viruses and insect vectors, they experienced new levels of mortality, a new geography of outbreaks and unfamiliar symptoms. Those elements, according to historians' accounts, constituted the material conditions for new medicine and disease control measures.

¹⁷ Valeska Huber, "The Unification of the Globe by Disease? The International Sanitary Conferences on Cholera, 1851-1894," *The Historical Journal* 49:2 (2006), 453-476; David P. Fidler, "The Globalization of Public Health: the First 100 Years of International Health Diplomacy," *Bulletin of the World Health Organization* 79:9 (2001), 842-849; Alison Bashford, "Global Biopolitics and the History of World Health," *History of the Human Sciences* 19:1 (2006), 67-88. The United States remains absent from scholarship on this earlier period, largely because historians of medicine and public health continue to view American statecraft and medicine as more insular (and weak compared to European states) prior to the advent of late nineteenth-century American economic and imperial expansion into the Caribbean, South America and the Pacific. For an overview of the historiography, which reflects this viewpoint, see Nancy Tomes, "Introduction: Imperial Medicine and Public Health," in Alfred McCoy and Francisco Antonio Scarano, eds., *Colonial Crucible: Empire and the Making of the Modern American State* (Madison: University of Wisconsin Press, 2009), 273-277.

Chapter One demonstrates that the pathogen and its effects were just part of the picture. For contemporaries, ships, bodies, goods, fauna and built environs constituted the material underpinnings of their medical work. In a period prior to the germ theory and the rise of laboratory-based disease study, medical writers' approaches in therapeutics and study of disease were rooted in mastering the complex interplay of local and global elements that constituted the local environs in which they worked and lived. By rearranging the ecological relations between different sites of fever outbreaks, the Age of Revolutions presented medical writers with more than a new disease ecology. New material circumstances created conditions for a new global ecology of health management by prompting medical writers to re-evaluate the geography of their epistemological practices and identities.

Subsequent chapters explore the resources that emerged out of this new ecology. Chapter Two traces the transformation of British military medical work on yellow fever in the Caribbean into an important globally-oriented resource for practitioners in different parts of the Atlantic World. Military medical personnel expanded greatly in number in the French Revolutionary Caribbean, in large part due to the excesses of yellow fever and its impact on military campaigns. As the disease expanded its radius beyond the West Indies into North America, actors within the Caribbean and in places like post-imperial America newly evaluated their ecological and epistemological relationship to different climates. They looked to military medical personnel's topographies of epidemics and clinical work on bodies in large hospitals as resources for reforming their own management of the disease. New patterns of exchange and adaptation yielded more than the circulation of officers' correspondence and treatises. They also fostered the creation

of new periodicals and new genres of fever treatises that were intended to connect varied readerships and ways of investigating disease across multiple sites. British military medicine, in sum, became an important transnational resource for medical management of the pandemic crisis.

Political dislocation added another layer to this development, as I show in Chapter Three. Francophone refugees fleeing from both France and the revolutionary Caribbean during this period reconfigured the movement of yellow fever and the geography of medical networks confronting the disease. As refugee physicians and surgeons crisscrossed the Atlantic from the Caribbean into the United States and back into Europe, yellow fever became tangled up in their efforts to rebuild social, cultural and political capital throughout the course of their journeys. In the process, many managed not only to adapt and move knowledge but also to broker new networks and translations between Anglophone, Francophone and even Spanish-speaking medical communities.

Chapter Four looks at the ways in which these contemporaries integrated the networks of commerce into their resources for knowledge about disease and distant health management practices. Consuls and commercial agents became particularly important on-the-ground agents for this process. They mediated new health relations between afflicted ports of call. They circulated publications and letters among physicians, policymakers and lay intellectuals. Consuls and commercial agents even penned their own observations on outbreaks for distant medical actors, thereby shaping the new corpus of literature produced from exchanges within the Atlantic World. What emerged out of the Age of Atlantic Revolutions was a rich tapestry of vibrant networks, medical literature and practices that spanned across new national divides.

My story ends when most histories of international health begin: in the 1850s. That scholarship tells us a story about departure from the past and the onset of a new era of international health. According to that narrative, the new climate of internationalism coupled with world capitalist expansion and revolutions in technology created a context for both the dramatic growth in scale of new global health threats, like cholera, as well as new approaches to disease control that centered on multilateral legislative collaboration among states. As in other domains of cultural and political diplomacy in the second half the nineteenth century, European powers began creating new institutions—international sanitary conferences—where state representatives and physicians could work out boundaries in health knowledge, health regulatory cultures, and policy decisions.

I want to complicate this Euro-centric story by pulling us back across the ocean into the world of a Philadelphia physician, René La Roche. La Roche's experiences and perceptions of the global landscape of health speak to the complex legacies of Age of Revolutions. Even though yellow fever had more or less retreated from northern ports and died away in its intensity, La Roche's experiences with outbreaks in the 1850s and his obsession with the disease show that it lingered as a real threat in light of the channels of trade and travel that continued to link places like Philadelphia to the Greater Caribbean. The epistemic communities, corpus and practices that came into being during that earlier era also framed La Roche's approach to the study of maritime pandemics in the 1850s. The son of a former French refugee and a product of training in Philadelphia, La Roche drew upon a rich international *mélange* of literature and networks to study the pandemics that struck Philadelphia in the mid-nineteenth century. Like his forbears, he understood himself and his local community as nodes in very vibrant networks of

exchange that linked them to the Caribbean and Europe. His activities and outlook tell us that the history of the mid-nineteenth century was not simply a story about change and departure in the history of globalization and health. It is also about the complex legacy of commercial and geopolitical expansion during the half century before.

This dissertation relies on a wide range of sources: medical treatises, periodicals, manuscript writings, memoirs, letters and diaries in English, French and Spanish. Many were written by lettered physicians, but not all. Military personnel, lay intellectuals and merchants feature in many of these sources as authors, recipients and sources of information. Most historians have mined these sources for patterns in ideas and practices. In my story about epistemic communities and exchange, I borrow approaches from cultural historians to explore how these sources were produced, how they were used and how they moved.¹⁸ I have read all of these sources with an eye to connections across professional, social and national backgrounds. Doing so has enabled me to recreate networks and patterns in exchange. I have read translations and modifications of works in order to bring to life patterns of cultural, intellectual and professional dexterity that emerged during this period. Periodicals and treatises, moreover, were not just troves of medical information in this period. They feature in my story as important technologies of community-building. Studying the rhetorical and editorial practices of the authors as well as circulation and readership has enabled me to recover the ways in which contemporaries constructed and conceptualized epistemic communities.¹⁹

¹⁸ For more on this methodological turn in the history of medicine, see Mary Fissell, "Making Meaning from the Margins: The New Cultural History of Medicine," in F. Huisman and John Harley Warner, eds., *Locating Medical History* (Baltimore: Johns Hopkins University Press, 2004), 364-389.

¹⁹ For eighteenth-century periodicals as technologies of community-building, see Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (London: Verso, 1991).

A study of such proportions does lead to some necessary limitations. To begin with, this dissertation is not a study of ideas as such. Theories about disease, therapeutics and disease control measures are certainly a part of my story. However, they are secondary to my main interest: epistemic communities and technologies of exchange. My dissertation started out with a focus on the former. In my quest to measure change in ideas about disease and patterns in practice, though, I discovered how little I knew about the character of the communities and technologies that created them. The character of these epistemic communities is important for our understanding about both disease control and Western medical identity in the nineteenth century. I thus made it my mission to bring those epistemic communities to life.

Second, my focus is on a multi-national cast of European and Euro-American men – mainly lettered men. The bulk of the sources that we have speak from their perspectives. I acknowledge that there is more to be said about the place of non-European agents in the processes under investigation here. As many scholars of Atlantic medicine and science have demonstrated, other non-European medical cultures and practices flourished in the Atlantic World. Europeans engaged with these actors in a variety of ways: using them to collect natural knowledge, and borrowing and adapting their medical practices. In lieu of sources that speak from the perspective of these actors, scholars like Londa Schiebinger, Susan Scott Parrish, Kathleen Murphy and Karol Weaver have read European-authored texts against the grain to find evidence of non-Western practices and explore the varied and uneasy ways in which Europeans engaged

with them.²⁰ The sources I investigate here merit a much closer reading of this kind. Drawing upon the insights of these scholars, I believe we would unravel a story about marginalization. The Europeans and Euro-Americans in my story wove together dense webs of correspondence and created an explosion of new print and new print platforms. That process of integration obscured the voices and contributions of slave healers, African creoles and indigenous agents. It is a story about European and Euro-American medical men creating epistemic boundaries.

By looking at the networks and practices these men created, I present another view of how the Age of the Revolutions shaped the global landscape of health management. The epistemic communities and practices that emerged out of the crisis of yellow fever were not products of the new geopolitical and ideological fault lines created during this period. Like the disease, they emerged out of global processes. The story of those networks is a window onto the rich and complex ways in which the channels of warfare, commerce and migration shaped disease experiences during this period.

²⁰ Karol Weaver, *Medical Revolutionaries: The Enslaved Healers of Eighteenth-Century St. Domingue* (Urbana: University of Illinois Press, 2006); Londa Schiebinger, "Scientific Exchange in the Eighteenth-Century Atlantic World," in eds. Bernard Bailyn and Patricia Denault, *Soundings in Atlantic History: Latent Structures and Intellectual Currents, 1500-1830* (Cambridge: Harvard University Press, 2009), 294-328; Kathleen S. Murphy, "Translating the Vernacular: Indigenous and African Knowledge in the Eighteenth-century British Atlantic." *Atlantic Studies* 8.1 (2011), 29-48. Susan Scott Parrish, *American Curiosity: Cultures of Natural History in the British Atlantic World* (Chapel Hill: University of North Carolina Press, 2006). 215-306.

Chapter 1

Material Revolutions: The Revolutionary Atlantic and the New Ecology for Yellow Fever

Introduction

Sometime in 1797, the Scottish military doctor Hector M'Lean took some leave from his wearying post as assistant inspector of hospitals in St. Domingue. Within four years, the former "Pearl of the Antilles" had become the epicenter of revolts, a refugee crisis and new scale of warfare among European powers. M'Lean used the time off not merely to recover but also to process and put into writing the terrifying magnitude and mortality of the fevers he had experienced from his station in that island.

The words "tropical" and "warm," so entrenched in the literature on disease in the Americas, failed to capture what he felt was distinct about the environs in which he had worked. "Perhaps," he began, "the immense mortality which has happened in the West Indies within these four years, is to be attributed to the great numbers who have been sent to that quarter for the purposes of war." Yet the traffic in troops was not enough to account for the range of outbreaks. "Besides sailors and soldiers, war creates room for a great number of speculators; who follow the army from views of commerce." And the movement of bodies and ships within the Caribbean was still not enough; it could not account for what had befallen the major port towns further north in the new United States. It thus "must be admitted, perhaps, that even the climate itself has changed, and has been more injurious to the European constitution, within this period, than at any

former time.”¹ In the end, M’Lean could not find a single descriptor or a unitary cause to give his readers. What he offered instead was his firm conviction that a new and expansive ecological space had opened up in the Americas, and it was the product of a revolutionary world in motion.

M’Lean was one of many medical writers based throughout the Atlantic World who were coming to terms with the cumulative effects of forces that were tearing their political worlds apart: the aftershock of the American Revolution, soaring animosities over the system of slavery and the height of the French and Haitian Revolutions. The impact of this political tumult, as men like M’Lean understood it, was not solely geopolitical and ideological. It was also material. Collectively, these events set in motion unprecedented patterns in shipping and movements of populations across crystallizing political divisions in the Atlantic World during the 1790s and first decade of the nineteenth century.

These material transformations, and medical contemporaries’ reflections thereon, have garnered considerable attention among historians, but for a range of purposes. Many historians of disease and environment have used contemporaries’ accounts of movements in shipping, bodies, goods and fever to reconstruct how the newly integrated the disease ecologies in the Americas unleashed unprecedented waves of hemispheric pandemics of yellow fever in the 1790s and early 1800s. These types of questions have required them to juxtapose American, British, French and Spanish contemporaries’

¹ Hector M’Lean, *An Enquiry into the Nature, and Causes of the Great Mortality among the Troops at St. Domingo; with Practical Remarks on the Fever of that Island; and Directions, for the Conduct of Europeans on their First Arrival in Warm Climates*. By Hector M’Lean, M.D. Assistant Inspector of Hospitals for St. Domingo (London: Printed for T Cadell, Jun. and W. Davies in the Strand, 1797), 72.

interpretations of the Atlantic landscape with present-day concepts of global disease epidemiology.²

Social and cultural historians of medicine have asked different questions by examining what the shifting landscape meant to the medical writers themselves. They have done so by situating those descriptions in the political and ideological contexts in which medical actors operated during this period of upheaval. Hence, scholars such as Martin Pernick have explored ships, bodies, environments and pathogens as sites and sources of sharp political contestation among medical writers. Political flux and geopolitical fragmentation, these historians suggest, is what shaped the meanings medical men attached to the health landscape and even to one another's work.³

In this chapter, I want to bridge these stories of ecological integration on the one hand and socio-political fragmentation on the other by exploring an underexamined facet of what these new patterns of movement meant to medical writers like M'Lean. The ships, bodies, environments and diseases these men anxiously studied, mapped and wrote

² David Geggus, "Yellow Fever in the 1790s: the British Army in Occupied St. Domingue," *Medical History* 23 (1979), 38-58; Ibid., "Slavery War and Revolution in the Greater Caribbean, 1789-1805," in David Barry Gaspar and David Patrick Geggus, eds., *A Turbulent Time: The French Revolution and the Greater Caribbean* (Indiana University Press, 1997), 1-50; K. David Patterson, "Yellow Fever Epidemics and Mortality in the United States, 1693-1905," *Soc. Sci. Med.* 34:8 (1992), 855-865; John R. McNeill, *Mosquito Empires: Ecology and War in the Greater Caribbean, 1620-1914* (Cambridge: Cambridge University Press, 2010), 235-266.

³ Some of the most influential scholarship adopting this cultural approach has focused on the local and Atlantic events surrounding the famous 1793 outbreak in Philadelphia. See Martin Pernick, "Politics, Parties, and Pestilence: Epidemic Yellow Fever in Philadelphia and the Rise of the First Party System," in J. Worthes Estes and Billy G. Smith, eds., *A Melancholy Scene of Devastation: The Public Response to the 1793 Philadelphia Yellow Fever Epidemic* (Philadelphia: Science history Publications, 1997), 119-146; Simon Finger, *The Contagious City: the Politics of Public Health in Early Philadelphia* (Cornell University Press, 2012), 135-152; Billy G. Smith, *Ship of Death: The Voyage that Changed the Atlantic World* (New Haven: Yale University Press, 2013). Caribbeanists are now starting to apply some of this historical work to their studies of health in the West Indies during this period. Adrián López-Denis, for example, situates medical and lay writers' perceptions of Cuba's ecological relations to other parts of the Atlantic world in the larger political context of late colonial Cuban society. See, Adrián López-Denis, "Disease and Society in Colonial Cuba, 1790-1840" (PhD Diss.: University of California Los Angeles, 2007), 73-147.

about were not just agents of disease – by our standards or theirs. Nor were they purely objects of political meaning-making. In a period before the rise of the germ theory and laboratory-based medicine, these elements constituted the material underpinnings of medical writers’ work. As such, they were a central part of their epistemological identities. What medical writers experienced during this period was both a new global disease ecology and new global ecology for their work on the disease. These men, I argue, were making knowledge about disease in a world in which both knowledge-making practices and patterns of disease had changed as a result of the material transformations wrought by revolutions.

This chapter is divided into two parts. The first examines the ecological transformations wrought by the Age of Revolutions. Here, I draw upon the scholarship of historians of disease to show how patterns in warfare, shipping and migration during this period created a new ecology for yellow fever. While epidemics had occurred earlier in the eighteenth century, global movements during the Age of Revolutions created patterns of mortality and epidemic activity that were new to the medical writers who experienced them. Those movements transformed the disease into a health crisis that linked port communities in different parts of the emerging international order.

The second part of the chapter explores what these new movements meant for contemporary interpretations of and responses to the disease. What contemporaries experienced were local and global confluences of shipping, bodies, goods, fauna, and spaces that they needed master in order to map the disease, characterize it and treat it. Revolutionary turmoil in the Atlantic moved and congregated bodies and goods in new ways, created new political and social environments for bodily constitutions and

connected local port ecologies. The turmoil moved and, in some cases, dislocated many of the medical writers themselves. In other words, many of the medical writers I discuss experienced the changes created by revolution in deeply personal ways as they themselves were subject to the forces that they understood to be shaping the new disease environment within which they worked.

What emerged out of this material context was a shared belief among an array of European and Euro-American medical writers that yellow fever was a product of new global arrangements of the shipping, bodies, goods and environs that constituted local sites of outbreaks. Management of the disease became subject to exchange and collaboration among different local sites of fever work within the Atlantic. This outlook became an important precondition for the approaches contemporaries would develop in response to the crisis.

Ecological Revolutions in the Atlantic World

Scientists today understand yellow fever as a viral infection. It becomes epidemic among humans when it circulates among concentrated populations via the vector, the *A aegypti* mosquito, which finds human blood appealing. Yellow fever's geographic range and distribution are determined by characteristics of this vector. The female *A aegypti* lives close to humans and breeds in water containers. It rarely travels more than three hundred meters from its birthplace, except in vessels like ships. To prosper, the mosquito vector needs warm temperature, water and high concentrations of human bodies. For the yellow fever virus to thrive, it requires *A aegypti* mosquitos and susceptible hosts in sufficient quantities. The virus needs to establish a cycle of transmission from mosquito

to human host to mosquito, which requires a lot of mosquitos. Without them, the virus will not move from person to person rapidly enough to sustain a disease outbreaks. People have the disease only seven to ten days, after which they are either immune or dead.⁴

A flavivirus native to West Africa, yellow fever's presence the Atlantic World was tied to the peculiar patterns of migration, commercial development and warfare that made the slave plantation economy in the late seventeenth and eighteenth century. When sugar began to boom in the Caribbean in the mid- to late seventeenth century, it transformed the Americas into a new reservoir for yellow fever. Because the plantation economy rested heavily on labor from Africa, trade between the Americas and Africa expanded and created multiple opportunities for yellow fever to travel across the ocean. Once in the Caribbean, the virus and its vectors found an inviting home. As J.R. McNeill has argued, "sugar wrought an ecological revolution upon dozens of islands and stretches of adjacent continental lowlands."⁵ Settlers felled forests and erected sugar-production facilities. As local plantation economies grew over the course of the eighteenth century, so too did the size of port towns that welcomed ships with labor from Africa and migrants fresh from Europe. Geopolitical rivalries over colonies also brought soldiers from Europe at points throughout this period, during the War of Jenkins's Ear and the Seven Years' War. A regular Atlantic flux in bodies concentrated in urban spaces, water

⁴ J.R. McNeill, *Mosquito Empires*, 40-46.

⁵ Ibid., "Yellow Jack and Geopolitics: Environment, Epidemics, and the Struggles for Empire in the American Tropics, 1650-1825," *OAH Magazine of History* 18.3 (2004), 9-13.

receptacles and a warm climate ensured flare-ups of the disease in the Caribbean between the 1690s and mid-eighteenth century.⁶

Yellow fever occasionally made its way up to mainland North America via the growth of trade between the Caribbean and North American colonies. When island colonies began specializing in sugar, they imported foodstuffs from North America in exchange for plantation products. K. Patterson has identified scattered outbreaks of yellow fever in New York, Boston, Charleston and Philadelphia, most likely spread by this kind of trade in provisions.⁷

The two decades around the turn of the nineteenth century marked a comparatively exceptional chapter in the region's ecological history, prompted by sweeping political changes. In stark contrast to earlier decades, this period saw the emergence of a powerful antislavery movement in Europe in the 1780s and the outbreak of the great universalist revolution in France. Those developments were soon followed by a long period of wave after wave of internal slave and colonist insurrections in the Caribbean. The most powerful of these insurrections, the Haitian Revolution, engulfed France's prize colony St. Domingue in 1791, rattling its plantation economy and power structure. In the wake of that Revolution, French and British imperial powers descended upon St. Domingue and surrounding islands. First the French arrived in 1792 to put a stop to the slave uprisings that contributed to the downfall of the French colony. Then, when the British declared war on Revolutionary France in 1793, they began to play out their conflict in the prized former French colony in addition to surrounding islands,

⁶ Ibid., *Mosquito Empires*, 32-40 and 47-51. See, also, David Geggus, "Yellow Fever in the 1790s," 47-48.

⁷ Patterson, "Yellow Fever Epidemics and Mortality in the United States, 1693-1795," *Social Science and Medicine* 34 (1992), 855-865.

pulling the Spanish into the warfare. The colony's ambivalent position vis-à-vis both the revolutionary government in Paris and the local slave uprisings resulted in a British occupation of ports in and around St. Domingue between 1793 and 1797.⁸

The ecological consequences of this turbulence, as David Geggus and Michael Duffy have shown, were enormous. Revolt and warfare, the very forces fragmenting the political landscape of the Atlantic World, paradoxically managed to integrate ecosystems in new ways. As a result of the onset of the new military activity, the Caribbean witnessed an unprecedented inflow of troops, seamen, military contractors and clerks fresh from different parts of Europe between 1792 and 1815. Many West Indies port towns nearly doubled in population. Along with the new volume of ships coming from Europe, intra-island movements of military, prison and commercial ships swelled in the Caribbean.⁹

French colonial refugees and their slaves were another source of new population movement. Successive political and military cataclysms in St. Domingue between 1791 and 1804 sent tens of thousands of whites, freed coloreds, and slaves back and forth between St. Domingue and Jamaica, Cuba, the south Caribbean as well as to North America and Europe. Their movements, David Geggus has argued, added many numbers

⁸ For two particularly thorough accounts of the warfare, see David Geggus, *Slavery, War, and Revolution: The British Occupation of Saint Domingue, 1793-1798* (Oxford: Clarendon Press, 1982) and Michael Duffy, *The British Army in the West Indies: Society and the Military in the Revolutionary Age* (University Press of Florida, 1998).

⁹ David Geggus brings out the rich texture of these ecological changes in the the circum-Caribbean in "Slavery War and Revolution in the Greater Caribbean, 1789-1805," in David Barry Gaspar and David Patrick Geggus, eds., *A Turbulent Time: The French Revolution and the Greater Caribbean* (Indiana University Press, 1997), 1-50. See also Duffy, 40-90.

to the shipping and bodies that moved from island to island, crowded in ports and sapped local resources.¹⁰

These material developments in the Caribbean were also shaped by the legacies of the American Revolution. Americans engaged the French Revolutionary Atlantic not as a collection of British colonies but rather as an independent nation. As French, British and Spanish European powers took their rivalries to sea, they were forced to loosen their mercantilist policies, resort to neutral shipping, and authorize the importation of neutral goods and carrying ships. Hence, the outbreak of warfare among the European powers between 1793 and 1805 led to the rapid expansion of North American shipping in and between the West Indies and US ports.

In addition to expansion in trade, US port communities felt the effects of the French colonial diaspora. As in the Caribbean, the French and Haitian Revolutions fostered unprecedented waves of migration from St. Domingue to the new United States. The new country's preexisting dense commercial and social ties to the island, together with its politically neutral status, turned port cities ranging from Charleston and Norfolk all the way up to New York and New Haven into prime destinations for thousands of Francophone refugees between 1793 and 1805.¹¹

The entangled elements of trade, warfare and flight in the Americas spilled over into Europe. Warring European powers played out their conflict in Europe, expanding the military and naval traffic moving between Caribbean and European zones of warfare.

¹⁰ *Idem.*, 30-35.

¹¹ R. Darrell Meadows, "Engineering Exile: Social Networks and the French Atlantic Community, 1789-1809," *French Historical Studies* 23:1 (2000), 67-80; Ashli White, *Encountering Revolution: Haiti and the Making of the Early Republic* (Baltimore: Johns Hopkins University Press, 2010), 10-50.

The newly independent Americans had also come to regard not only Caribbean ports but also Spanish, southern French and Italian entrepôts as viable alternative markets for their carrying and export trade. Cities stretching from Madrid all the way to Livorno subsequently experienced an influx of American vessels that transported goods and seamen between the US, West Indies, Spain and various destinations within the Mediterranean and into the Levant.

These ecological reconfigurations multiplied the yellow fever pathogen's opportunities for migration and infection. The sheer volume and geographic breadth of yellow fever studies during this period speak to this phenomenon. The number of periodical articles, publications and dissertation on the subject grew exponentially between 1793 and 1805. Whereas earlier accounts were confined primarily to the English, French and Spanish language, this period saw the production of accounts in other languages, including Italian, Danish and German. Even within those Spanish, French and English accounts, we see greater breadth in geographic coverage – notably, greater representation of mainland America and southern Europe.

A significant bulk of the contemporary work on yellow fever emerged out of the Caribbean theater of the Anglo-French Wars. David Geggus and J.R. McNeil have both demonstrated that revolutionary turmoil in the 1790s created the perfect conditions for yellow fever epidemics to flare up, spread throughout the region and occur with greater frequency than in previous decades. Wartime influxes of non-immunes and their dense concentration in mosquito-infested ports, garrisons and ships created an ideal reservoir for yellow fever in multiple sites within the Caribbean. Large-scale movements of

refugees and armed forces between infected areas not only magnified the level of mortality and frequency of outbreaks. They also extended the disease's radius.¹²

Another large portion of the commentaries came from medical writers along the eastern seaboard in the United States. Between 1793 and 1805, outbreaks occurred with great frequency in a larger number of ports than in prior decades: Portsmouth, Boston, Providence, New Haven, New York, Philadelphia, Wilmington, Baltimore, Norfolk, Charleston and Savannah. The young republic's ties to the revolutionary Caribbean through trade and the migration of refugees created golden opportunities for yellow fever to travel to those northern ports in successive waves.¹³

By 1800, yellow fever began appearing in southern Europe. Once confined largely to the Americas, the disease made its way across the Atlantic via commercial and military/naval traffic from the Americas. Outbreaks began occurring along the Spanish coast in Cadiz (1800) and Gibraltar (1804). By 1804, the disease had spread to Cordoba, Grenada, Valencia, Catalonia, Malaga, and Livorno.¹⁴ The same forces that divided the Atlantic World into a new international order had, by the first decade of the new century, engulfed those different parts of the Atlantic into a new zone of yellow fever activity.

Revolutions in Microclimates

The movements unleashed by the revolutions transformed the material conditions for yellow fever in other ways. In addition to creating a new series of pandemics, the

¹² David Geggus, "Slavery War and Revolution in the Greater Caribbean, 1789-1805," 24-25.

¹³ Patterson, 856.

¹⁴ William Coleman, *Yellow Fever in the North*, 18-20. Lawrence A. Sawchuk, and Stacie D. A. Burke, "Gibraltar's 1804 yellow fever scourge: the search for scapegoats," *Journal of the history of medicine and allied sciences* 53:1 (1998): 3-42.

new scale of movement within the Atlantic World altered the ecologies that civilian and military practitioners needed to make sense of the outbreaks and manage them. Nearly a century before scientists began thinking about yellow fever in terms of microbes and vectors they could isolate in the laboratory and hunt down in the field, medical writers thought about yellow fever and their work on the disease in terms of what we might call “microclimates.”

The British, French, American, Spanish and even Italian writers who studied the disease during this period broadly shared a common framework in medicine. Drawing on the rich legacy of Hippocratic theories in Western European medicine, Euro-American and European practitioners in the eighteenth century developed deeply nuanced interpretative frameworks about health and the local climate. They believed that a person’s constitution, combined with the climate, fauna and built environs collectively created the disease, determined how that fever arose, its severity, its course and how it affected different people. That environment also constituted the material underpinnings of medical writers’ work. As John Harley Warner demonstrated in his study of Anglo-American physicians trained in the US and Europe during this period, practitioners’ epistemological identities were not simply products of a particular school or socio-political context. Those identities were deeply rooted in mastering the complex interplay between the local and global elements that made the environment in which they studied and treated disease.¹⁵ And even though medical theorists began elaborating new and competing ideas about the exact physiology of the body and even about the universality of disease over the course of the new century, this environmentalist framework remained

¹⁵ John Harley Warner, *The Therapeutic Perspective: Medical Practice, Knowledge, and Identity in America, 1820-1885* (Cambridge: Harvard University Press, 1986), 58-63.

deeply entrenched in Euro-American medical cosmology up into the late nineteenth century.¹⁶

While “microclimates” is not an actors’ category, I use it here to highlight the very subtle distinctions contemporaries developed in their assessment of differences and connections among locales within larger regions in and outside of Europe. Contemporaries did use categories like “tropical,” “torrid,” and “warm climate” to categorize the health of these regions. What many historians of colonial and imperial medicine in this period tend to overlook, though, is the fact that these categories were never consistent.¹⁷ As we shall see throughout this dissertation, they were in fact subject to debate and revision. They were subject to debate in part because of the flux in global movement that shaped them.

This context helps us appreciate how contemporary medical writers experienced the material effects of the Revolutions. Writings on fever in this period abound with rich descriptions of shipping routes, movements in populations and the spatial arrangements of port towns. They reveal practitioners trying to make sense of ecological movements and attend to shifting relationships among different microclimates. We will see evidence

¹⁶ See the winter 2012 special issue of the *Bulletin of the History of Medicine*, “Modern Airs, Waters, and Places,” eds. Alison Bashford and Sarah W. Tracy (86:4), especially the epilogue by Charles E. Rosenberg, 661–670. Scholars have also addressed this point about continuities for different imperial contexts during the nineteenth century. For the French context, see Michael A. Osborne, “Resurrecting Hippocrates: Hygienic Sciences and the French Scientific Expeditions to Egypt, Morea and Algeria” in Arnold, ed., *Warm Climates and Western Medicine: the Emergence of Tropical Medicine, 1500-1900* (Rodopi, 1996), 92–93. For the British and Anglo-American context, see Warwick Anderson, “Immunities of Empire: Race, Disease, and the New Tropical Medicine, 1900-1920.” *Bulletin of the History of Medicine* 70:1 (1996): 94-118.

¹⁷ On this point about microclimates as a category of analysis, see Katherine Johnston, “The Constitution of Empire: Place and Bodily Health in the Eighteenth-Century Atlantic World,” *Atlantic Studies* 10:4 (2013), 443-466.

of this pattern of thinking throughout the dissertation. For the sake of developing this point, though, I will guide us through a few concrete examples.

The new scale and scope of warfare, to begin with, altered the ecologies that medical writers analyzed to chart fevers and manage the bodies that succumbed to them. The arrival and occupation of new troops created a dramatic surge in the number of fresh, unseasoned bodies from northern Europe. Mixed alliances between British occupants, French colonials and African-creoles in St. Domingue produced more of a jumble of diverse bodies in the urban towns and regiments Hector M'Lean and his contemporaries experienced. As M'Lean attempted to make sense of the mortality, it was not enough to study the "European" frame's reactions to the "warm climates" that fostered fevers. Rather, the environment of occupied St. Domingue encouraged the exploration of "Differences between the French and English constitutions," French and English habits of diet, "the violence of the disease among Creoles and Negros" and the fatality among the "settlers" populating different parts of the island.¹⁸ That *mélange* of constitutions was also in constant flux. Populations of different groups in St. Domingue – free colored, colonial, military and European immigrants – fell and rose in different urban and rural settings of the island at different points throughout the conflicts.¹⁹

The great diaspora of French colonial refugees also impressed the minds of the contemporaries, and for a number of reasons. While migrations within the Americas were by no means new to contemporaries, the conditions for this diaspora were. Refugees from other local environs within the West Indies presented the problem of new types of

¹⁸ M'Lean, 7-18, 187.

¹⁹ Geggus, *Slavery, War and Revolution*, 228-265.

constitutions medical men needed to account for as they attempted to chart the progress and character of local fevers. How seasoned were the refugees in relation to long-term residents of the ports that hosted them? And what of the effects of flight itself? One French military practitioner, Louis Valentin, asked himself these questions en route to the United States during the turmoil in St. Domingue. “A voyage north,” he wrote, “gave me many opportunities to observe sickness.” It was not unusual for French West Indians to travel from more “torrid” to “temperate” regions for health reasons. Valentin, in contrast, described a “transition from greater ease into the deepest misery” and “untold dangers.” The ships that he experienced and monitored were “so very crowded with people in a miserable state.” Inclemental weather, delays and private raids from French and British corsairs – “untold dangers” – only worsened some of the voyages. A diaspora caused by revolutions transformed the habits, spirits and diet of the former inhabitants of the French islands, and thus their susceptibility to fever²⁰

As those refugees dispersed throughout the region, they also integrated different ports in new ways. Doctor James Clark, stationed in Dominica in 1793 and 1794, attended to the coincidence of multiple outbreaks by factoring in the effects of the arrival of refugees, the ports “being so much crowded by the frequent emigration of the French from the islands that were situated near to us.” The exodus of French refugees in this period, as Clark saw it, was not only engendering new constitutions. It was effectively expanding the relationship among the environs of ports ranging from St. Domingue, Martinique and Dominica all the way to the “Leeward Islands.”²¹ All of these ports were

²⁰ Louis Valetín, *Traité de la Fièvre jaune d’Amérique* (Paris: Maquigonon, 1803), 30-31.

²¹ James Clark, *A treatise on the yellow fever, as it appeared in the island of Dominica, in the years 1793-4-5-6: to which are added, Observations on the bilious remittent fever, on intermittents, dysentery, and*

turning into places where distressed Francophone colonials similarly sapped local resources, and crowded together with the bodies of soldiers and seamen, military clerks and long-term residents in built spaces.

As vessels from North American ports coursed through the Caribbean, crews of unseasoned seamen with “North American” constitutions registered in the minds of different practitioners and port authorities. Clark, for example, took to charting the course of fever outbreaks in Dominica in 1793 and 1794 in relation not only to the diaspora of French refugees and military vessels but also the flux in American shipping. “The arrival of American vessels,” he wrote of an outbreak in the fall of 1793, “convinced us that the short respite [of fever] was more owing to the want of proper subjects for the vitiated atmosphere to act upon, than to the change of its temperature; for in a short time all on board, who had not been in the West Indies before, were seized with it, and although the mortality amongst them was not so great as it had been, yet many died.”²² For Clark, a resident physician in the Caribbean, North American shipping featured as a central, indeed a climactic, stimulus and object of study in the local problem of fevers. American bodies and ships transformed the fever and figured in Clark’s understanding of the fever.

Together with shipping and produce from the Caribbean, French colonial bodies collectively magnified the material presence of the West Indies in the early republican health landscape. It was these images of port ecologies that US-based writers mediated through many early republican treatises, reports and newspaper commentaries. As with

some other west India diseases; also, The Chemical Analysis and Medical Properties of the hot mineral waters in the same Island. By James Clark, M.D. F.R.S.E. and fellow of the College of Physicians of Edinburgh (London : printed for J. Murray and S. Highley, No 32, Fleet Street, M.DCC.XCVII. [1797]), 5-6.

²² Clark, 4-5.

American shipping in the Caribbean, practitioners and laymen in northern ports integrated the goods, bodies and chambers of ships from the West Indies in their understanding of the cause and magnitude of local outbreaks.²³ As for Clark in Dominica and M'Lean in St. Domingue the shifting disease landscapes of Philadelphia and New York during this period encouraged local practitioners to explore the constitutional differences among the “creole French” and “blacks” from “warm climates” in relation to the “natives” and “strangers from Europe.”²⁴

Across the Atlantic, the outbreaks in Europe prompted contemporaries on both sides of the Atlantic to reevaluate the character of “old world” microclimates long understood in relation to plague from the Levant. In 1807, for example, a transatlantic debate spilled over into periodicals on both sides of the Atlantic over the “antiquity of yellow fever.” As one of the authors put it: “It has been contended by some, that the yellow fever is a modern disease, and utterly unknown to Europe, except when imported

²³ Various scholars have addressed this phenomenon in both local and national studies of responses to yellow fever in the early republic. For the role of the West Indies trade and refugee crisis in Philadelphians' perceptions of the yellow fever outbreaks, see J.H. Powell, *Bring out Your Dead: The Great Plague of Yellow Fever in Philadelphia in 1793* (Philadelphia: University of Pennsylvania Press, 1949); Martin Pernick, “Politics, Parties and Pestilence”; Simon P. Taylor, “‘We Live in the Midst of Death’: Yellow Fever, Moral Economy, and Public Health in Philadelphia, 1793-1805.” (PhD Diss., Northern Illinois University, 2001). For New York (and Philadelphia), see Bryan Waterman, *Republic of Intellect: the Friendly Club of New York City and the Making of American Literature* (Baltimore: JHU Press, 2007): “Chapter Five: ‘Here was a fresh matter of discourse’: Yellow Fever, the Medical Repository and Arthur Mervyn.” L.G. Stevenson explored this in the treatises and newspaper commentary of different ports, from Norfolk and Baltimore to Philadelphia, New York, New Haven and Boston. See Stevenson, “Putting Disease on a Map: the Early Use of Spot Maps in the Study of Yellow Fever,” *Journal of the History of Medicine and Allied Sciences* 10.3 (1965), 226-261.

²⁴ Alexander Hosack, *An inaugural essay on the Yellow Fever, as it appeared in this city in 1795. Submitted to the public examination of the faculty of physic, under the authority of the trustees of the Columbia College in the state of New-York, William Samuel Johnson, LL.D. president, for the degree of Doctor of Physic, on the 3d of May, 1797. By Alexander Hosack, Jun. A.M. of New-York* (New York: T. and J. Swords, 1797), 9-11. See also Valentine Seaman, *An Account of the Epidemic Yellow Fever as it Appeared in the City of New York in 1795*, (New York: Hopkins, Webb and Co. no. 40, Pine-Street), 7 and 20; College of Physicians of Philadelphia, *Facts and observations relative to the nature and origin of the pestilential fever, which prevailed in this city, in 1793, 1797, and 1798* (Philadelphia: printed for Thomas Dobson, at the stone house, no. 41, South Second Street., 1798), 19.

from America.”²⁵ The debate, which we will explore in greater depth later on, was an outgrowth of disputes and deliberations over the role of Atlantic naval and commercial traffic in the string of outbreaks along the coast of Spain, in Italy and near France.

It was, lastly, the experience of migration and travel that fueled this sense of ecological change and movement. So many of these commentators were not simply surrounded by motion in shipping and populations. They were themselves in motion. Many of the fever investigators, as we saw in the above examples, were members of a European military and naval medical corps that was unprecedented in scale. The scale and geography of warfare during this period was also such that many of these men did not simply move from metropole to periphery. They cycled through different arenas of warfare: continental America, the Caribbean, southern Europe and even the East Indies.

Medical writers were also among the thousands of French colonial refugees scattered throughout the Atlantic following the French and Haitian Revolutions. As R. Darrell Meadows emphasized, refugees crisscrossed the Atlantic – moving through multiple ports in Europe, the Caribbean and United States. It follows that, like military and naval practitioners, medical refugees were likely to think about the disease in relation to multiple ecological contexts, not just one or two ports. Business pursuits, diplomacy and sociability also guided physicians and lay intellectuals engaged in the channels of shipping.

When we take a closer look at the yellow fever work produced in this period, we discover not only a struggle to work out relationships between different microclimates.

²⁵ See “On the Antiquity of Yellow Fever,” which appeared in *London Medical and Physical Journal* 17 (1807), 124-125; and the *Edinburgh Medical and Surgical Journal* 3 (1807), 301-302. The editors pulled excerpts from the contemporaneous writings of Edward Miller, a New York-based physician.

We find observations culled through travels, conversations from journeys through ports and volumes littered with references to a mélange of materials – some in different languages – from different afflicted parts of the Atlantic. In other words, it was not simply yellow fever itself that became a product of revolutionary movement. The knowledge and resources were too. It is to this phenomenon that we now turn.

Chapter 2

From British Military Medicine “into a form more diffused”: The Odyssey of Colin Chisholm’s *An Essay on the Malignant Pestilential Fever, 1795-1801*

Introduction

In 1795, a military surgeon by the name of Colin Chisholm published a new medical treatise: *An Essay on the Malignant Pestilential Fever introduced into the West Indian Islands from Boullam, on the Coast of Guinea, As it appeared in 1793 and 1794*. The essay, dedicated to “The Medical Gentlemen of His Majesty’s Navy and Army,” promised to throw new light on the “uncommon mortality, which marked the Epidemic” among the British sea and land forces stationed in the West Indies.¹ In modest tone, Chisholm presented his colleagues with a meticulous history of a 1793 epidemic of fever he witnessed in Grenada, a new medical topography of the island, observations of the dissected bodies of victims, and remedies that “will appear bold, perhaps empirical to the European practitioner.”² The work’s reception far exceeded the Scottish surgeon’s expectations. Just five years later, he would scrap that 1795 edition and set about crafting an expansive new volume that could accommodate, in his words, a “more diffused” community of practitioners.³ It was a community that stretched beyond His Majesty’s

¹ Colin Chisholm, *An Essay on the Malignant Pestilential Fever introduced into the West Indian Islands from Boullam, on the Coast of Guinea, As it appeared in 1793 and 1794* (London: Printed for C. Dilly, in the Poultry, 1795), iii.

² *Idem.*, xiii-xiv.

³ *Ibid.*, *An Essay on the Malignant Pestilential Fever, Introduced into the West Indian Islands from Boullam, on the Coast of Guinea, As it Appeared in 1793, 1794, 1795 and 1796. Interspersed with Observations and Facts, tending to prove that the Epidemic existing at Philadelphia, New-York, &c. was the same Fever introduced by Infection imported from the West India Islands: And illustrated by Evidences founded on the State of those Islands, and the Information of the most eminent Practitioners residing on them* (London: Mawman, 1801), xiii.

military and naval hospitals in the West Indies into the East Indies and up to the small public hospitals and private chambers of port cities in the new United States.

Between 1793 and 1805, military and naval medical personnel like Colin Chisholm generated an unprecedented surge in publications on the study and treatment of the “fevers” that ravaged British troops based in the West Indies. The explosion of new medical treatises, as Mark Harrison and Catherine Kelly have shown, fostered the transformation of British military medicine into a vital new resource for managing yellow fever. British military and naval practitioners’ encounters with the disease during this period helped to accelerate not only the production of extensive studies of fever but also the cultivation of distinctly colonial ideas and practices to cope with the mortality. In response to the yellow fever crisis, practitioners like Chisholm cast aside the “usual remedies” and transformed hospitals, ships and local military posts into major centers of “bold” innovation in disease study and treatment.⁴

Harrison and Kelly have framed their studies as stories of a unique enterprise that emerged from the swelling ranks of naval and military practitioners in reaction against the practices and ideas that characterized civilian medical centers in the British metropole. Here I want to expand on these scholars’ insights. The odyssey of Colin Chisholm’s work into “a form more diffused,” I argue, reveals a much more complicated story about what happened to the place of military and naval medicine in the yellow fever crisis. It shows us that military and naval practitioners’ work became subject to

⁴ Mark Harrison, *Medicine in an Age of Commerce and Empire: Britain and Its Tropical Colonies, 1660-1830* (Oxford: Oxford University Press, 2010); Idem., “The Tender Frame of Man’: Disease, Climate and Racial Difference in India and the West Indies, 1760-1860,” *Bulletin of the History of Medicine* 70.1 (1996) 68-93; Catherine Kelly, *War and the Militarization of British Army Medicine, 1793-1830* (London: Pickering and Chatto, 2011).

movement and exchanges that, like the outbreaks, were more global in character, rather than just a dialog between colonies and metropole.

First, transnational migration and ecological exchange within the revolutionary Atlantic shaped the ways in which military and naval practitioners understood the pandemics and, subsequently, the material underpinnings of their medical work. Treatises like Chisholm's reflected military and naval practitioners' struggles to work out the boundaries of their epistemological identities in relation not only to northern Europe but also to practitioners in sites of outbreaks outside of the imperial apparatus.

The second part of the chapter explores the appeal that the medicine performed by British military and naval practitioners held for those outside of the empire. Close attention to the circulation and use of Chisholm's work reveals an audience that extended well beyond the "Medical Gentlemen of His Majesty's Navy and Army" to encompass civilian practitioners in other parts of the Americas. Because of the new hemispheric material circumstances wrought by warfare and conflict, those practitioners came to transcend new geopolitical divisions and turn military and naval medicine into valued resources for innovation in medical topographies, pathological studies and therapeutics. Through medical practice and performance in print, an international *mélange* of practitioners consciously remolded military and naval medicine into an "American" resource for responses to the yellow fever pandemics.

What emerged by the beginning of the new century was a resource for fever work that did not fit familiar categories like "imperial," "military," "torrid" or even "American." However uneasily, military and naval practitioners were producing

emergent epistemologies that accommodated networks of physicians, surgeons and medical writers in multiple sites of yellow fever outbreaks throughout the Atlantic basin.

“To the Medical Gentlemen of His Majesty’s Army and Navy”

Colin Chisholm’s experience with yellow fever in Grenada was rooted in migration and movement. Like many other military medical treatises from this period, his 1795 publication on the outbreak in 1793 is rich with descriptions of populations in Grenada, new patterns in shipping from Africa, inter-colonial traffic and flux in weather patterns. Chisholm may have been nominally a British military medical practitioner on a British colony. His epistemological identity and work on yellow fever, however, were rooted in mastering a local environment that was shaped by the multifarious movements in shipping, people and fauna that blurred the very political and ideological divisions that the Revolutions produced.

While Grenada was technically a British colony at the time of the outbreak, the social and ecological topography of the island was not “British.” To begin with, the population, like that of many other islands, was a product of decades of conflict between French and British imperial powers. In the aftermath of the Seven Years’ War, the French lost the colony to the British. The French recaptured the island during the American War of Independence. Then they formally restored it to Britain with the Treaty of Versailles in 1783.⁵ Throughout this period of contests, the French and British built an economy that rested heavily on slave labor from Africa: cultivating sugar cane, coffee, cotton and indigo. Between 1771 and 1808, more than 29,000 slaves were imported

⁵ George Brizan, *Grenada: Island of Conflict: From Amerindians to People’s Revolution, 1498-1979* (London: Zed Books Ltd., 1984), 23-58.

directly from Africa.⁶ Hence, Grenada presented practitioners like Chisholm with a variety of bodies and constitutions: Africans, African-creoles, long-term French settlers, migrants from other islands within the Caribbean, migrants from North America in the wake of the American Revolution and even Scots fresh from the Highlands.

Practitioners stationed in and near the island were themselves migrants who brought experience with environs in other parts of the Americas. In the aftermath of the American War of Independence, for example, a number of veterans used connections in the army, familial ties or social connections to set up residences and new posts in the Caribbean rather than resettle in Scotland or England. This was the case for Chisholm. While originally from Scotland, Chisholm had not moved directly from metropole to colony. After completing his training as a surgeon at the University of Aberdeen sometime in the late 1760s, Chisholm joined the British forces in North America during the American War of Independence. He completed tours in Georgia and New York City before settling as a planter and military medical practitioner in Demerara.⁷ As we shall

⁶ Idem, 79-85.

⁷ Gordon Goodwon, rev. Jeffrey S. Reznick, "Chisholm, Colin (b. in or after 1747, d. 1825)," *Oxford Dictionary of National Biography*. Douglas Hamilton discusses Chisholm as one example of this larger pattern in Scottish Atlantic migration patterns in the late eighteenth century. See Hamilton, *Scotland, the Caribbean and the Atlantic World, 1750-1820* (Manchester: Manchester University Press, 2005), 68-72. There are other examples of this phenomenon. Another notable figure was Robert Jackson. Robert Jackson arrived in St. Domingue in 1795 with more than medical training at Edinburgh and Leiden. He had begun his medical career in Jamaica during the American Revolution. The war carried him into Georgia before returning him to Kingston in the early 1790s. Jackson was quite explicit about this in two of his works: *A Treatise on the Fevers of Jamaica, with some Observations on the Intermitting Fever of America, and an Appendix Containing some Hints on the Means of Preserving the Health of Soldiers in Hot Climates* (London: John Murray, 1791) and *An Outline of the History and Cure of Fever, Endemic and Contagious; More Expressly the Contagious Fever of Jails, Ships, and Hospitals; The Concentrated Endemic, Vulgarly the Yellow Fever of the West Indies. To which is Added, an Explanation of the Principles of Military Discipline and Economy; With a Scheme of Medical Arrangement for Armies* (Edinburgh: Printed for Mundell & Son, 1798). For Jackson's medical career and biography, see N. Mante-Saakwa, "Jackson, Robert (bap. 1750, d. 1827)," *Oxford Dictionary of National Biography*.

see later on, this hemispheric career would come to play an important role in the evolution of his work on yellow fever.

Geopolitical and ideological developments in the 1790s set in motion new movements in populations and shipping in and around Grenada. It was in this context that Chisholm situated an epidemic of fever in 1793. What set the outbreak apart from previous late summer fevers of the region was not just its severity. He perceived in it a dramatic change in the local arrangements of bodies, spaces and climates that constituted his medical world.

Chisholm located the origin of the outbreak in a ship that arrived from the coast of Africa in February of 1793. Shipping from Africa was by no means new, but the circumstances surrounding this ship were, as Chisholm put it, “in many respects singular.”⁸ Unlike the usual vessels that pulled into St. George’s Bay with African slaves, the *Hankey* arrived with a collection of white middle-class abolitionists. Activism against the slave trade had intensified over the previous couple of decades, and a number of abolitionists started carrying their campaigns abroad by launching colonization projects in Africa that would draw upon the free labor of Africans and Englishmen to produce commodities for the empire. The abolitionists aboard the *Hankey* arrived in Grenada after a failed attempt to establish a free colony in Bulama. Unable to make the journey back to England, they arrived in St. George with many of them sick and the news that two had died during the voyage.⁹

⁸ Chisholm, *An Essay on the Malignant Pestilential Fever*, 83.

⁹ For a closer analysis of the *Hankey* voyage’s role in the Bulama free colony experiment, see Billy G. Smith, *Ship of Death: the Voyage that Changed the Atlantic World* (New Haven: Yale University Press,

For Chisholm, who was used to native Africans arriving from the Guinea coast, the sickness among these voyagers was the product of circumstances particular to their novel colonization efforts:

The negroes of this part of Africa are ferocious in an extraordinary degree; and are even said to be cannibals. This circumstances prevented the erection of any sort of accommodation on shore, during the nine months the Hankey lay there, the settlers were obliged to live on board... These circumstances, joined to the depression of mind consequent upon their disappointment, must certainly be considered as the causes of the malignant fever which broke out among those unfortunate people, sometime after their arrival at Boullam.¹⁰

The health of ships from Africa, according to Chisholm, was tied to the health of colonial and economic ventures in that region. In contrast to the Africans who resided in those regions, a white middle-class abolitionist's constitution was acclimated neither to the physical climate nor to the political climate of that region. In contrast to the slave ship captains who regularly navigated the Africa and the Atlantic voyage, the inability of abolitionists to adapt overburdened the shipping vessels connected to the free colony venture and weakened the voyagers' constitutions. Out of these unique circumstances emerged a fever unlike those Chisholm had witnessed in Grenada before.

The Hankey alone could not account for a fever "unequaled in its destructive nature."¹¹ At the time of the Hankey's arrival, Grenada was also experiencing the effects

2013), 28-97. The Bulama expedition was part of a larger colonization movement, including the famous project of Sierra Leone. See, for example, Stephen J. Braidwood, *Black Poor and White Philanthropists: London's Blacks and the Foundation of the Sierra Leone Settlement, 1786-1791* (Liverpool: Liverpool University Press, 1994).

¹⁰ Chisholm, *An Essay on the Malignant Pestilential Fever*, 85-86.

¹¹ Idem, 89.

of the French and Haitian Revolutions. As we saw in the previous chapter, Britain was organizing one of the largest invasions in history as part of the war against revolutionary France. Warfare between Great Britain and France transformed Grenada into a depot for prisoners of war as well as the chief rendezvous point for vessels bound for England.¹² There, the fog of war blended together and reconstituted the mixtures of bodies and goods that crowded aboard the ships Chisholm attempted to chart. In the very same bay where the Hankey lay, “a letter of marque belonging to Liverpool, brought into St. George’s the crew, thirty in number, of a French vessel she had captured on her passage from England. These, on account of the scarcity of seamen, were distributed among the merchant-men most in want.”¹³ Through impressment, capture of enemy troops en route to Grenada, military travel, and the frequent “scarcity of crews” that beset traveling ships, seamen from diverse ports in the Atlantic grouped, regrouped and moved with their belongings through the different channels of shipping that converged in St. George’s Bay.

Grenada likewise became one of the destinations for the thousands of refugee planters fleeing from St. Domingue in the wake of the Haitian Revolution.¹⁴ In contrast to the “French planters” who resided in Grenada, refugees from other local environs within the West Indies presented the problem of new types of constitutions medical men needed to account for as they attempted to chart the progress and character of local fevers. How seasoned were the refugees in relation to long-term residents of the ports that hosted them? And what of the effects of flight itself? A diaspora caused by

¹² Brizan, 149-150.

¹³ Chisholm, *An Essay on the Malignant Pestilential Fever*, 192.

¹⁴ David Geggus, ““Slavery War and Revolution in the Greater Caribbean, 1789-1805,” in in David Barry Gaspar and David Patrick Geggus, eds., *A Turbulent Time: The French Revolution and the Greater Caribbean* (Indiana University Press, 1997), 25-26.

revolutions transformed the habits, spirits and diet of the former inhabitants of the French islands.

These were new sets of questions Colin Chisholm confronted in addition to the ramifications of new military traffic and abolitionism. He observed, “Surely many of the emigrants from the French islands, particularly Martinique, who from their unhappy situation could not accommodate themselves with their customary modes of living, and whose minds, suffering under the pressure of disappointment and deprivation of property, were subject to an unnatural depression of spirits.”¹⁵ The exodus of French refugees in this period, as Chisholm saw it, had created a unique new diaspora, one that newly integrated the environs of ports ranging from St. Domingue, Martinique to Dominica, the Leeward Islands and up to the United States.

The sheer magnitude, frequency and coincidence of so many fever outbreaks in the Caribbean also inspired Chisholm’s interest in the relationship among different local climates within the Americas. The scale and scope of outbreaks was not lost on practitioners in this period. For this and the above reasons, Chisholm was inclined to think about that 1793 outbreak as a small part in the larger “uncommon mortality” in the “West Indies.”¹⁶ It was a dynamic new interchange of bodies and shipping in and near St. George’s Bay that transformed a “local” fever outbreak in 1793 into “a focus [from which] it spread to the other islands, to Jamaica, St. Domingo, and Philadelphia, by means of vessels on board of which the infection was retained by the clothes, more

¹⁵ Chisholm, *An Essay on the Malignant Pestilential Fever*, 221.

¹⁶ *Idem*, iii.

especially the woolen jackets of the deceased sailors.”¹⁷ Chisholm perceived in the fever crisis a new blending of spaces and micro-environs that linked together the health of a large range of ports-of-call.

In sum, what Chisholm experienced was not merely a sharpened sense of ecological distinctiveness from the environs of northern European medical communities. He experienced the “revolutionary” transformations in his local environs as products of diverse movements within the larger Atlantic world. It was these movements that informed his ideas about the tools and resources necessary to deal with the problem of fever in the 1790s.

In order to map the outbreak, Chisholm drew upon the very maritime traffic that shaped the disease. Networks of ship captains and travelers constituted sources for knowledge about health and climate at points of a ship’s origin, the course of a ship’s journey and the character of health aboard the vessel. Slave-ship captains and a French travel narrative provided testimonies to the good health of the region where the abolitionists had attempted to settle. “I have conversed with several intelligent captains of slave-ships, who have uniformly agreed to this point,” Chisholm wrote. “Many travellers have given their testimony to this effect: the Chevalier de Marchais, in particular, is very full of its praise.”¹⁸ The abolitionists themselves provided information about the plight of their colonization efforts and political circumstances that led to their voyage. Chisholm attributed most of the account to the testimony of “a gentleman [Mr. J.

¹⁷ *Idem*, 98-99.

¹⁸ *Idem.*, 84.

Paiba], who was one of the adventurers in the Boullam Scheme.”¹⁹ In all instances, Chisholm attended to both the degree of a witness’s distance from the object of inquiry and his social status, be he an “intelligent” ship captain or a “gentleman” traveler.²⁰ A combination of character and firsthand experience with the ports and traffic that shaped the disease were what determined one’s ability to contribute to the puzzle of the disease landscape.

Warfare and imperial expansion in the eighteenth century also created resources for Chisholm’s efforts to determine the character of the disease and the right course of treatment. Decades of Anglo-French contests in the region had left more than a legacy of mixed ecologies for fever outbreaks in and around Grenada. Out of these clashes emerged a new corpus of medical literature, one that was the product of transnational exchanges among the practitioners who worked in these environs. The shared experiences of war and imperial expansion in the Americas and Africa had provided a point of convergence among French and British practitioners, who came to operate in similar spaces (i.e. vessels and hospitals), in similar climates with the same concentrations of many patients, who were sick with diseases they had not encountered back in Europe.

Authors of British military medicine during the period of the Seven Years’ War were translated into French. The naval surgeon and physician James Lind’s *Treatise on*

¹⁹ *Idem.*, 83.

²⁰ Steven Shapin developed the point that a combination of travel and social status determined someone’s credibility as a witness to events and the topography of distant places. See Shapin, *A social history of truth: civility and science in seventeenth-century England* (Chicago: University of Chicago Press, 2004), in particular Chapter 6, 243-309. I explore the role of shipping and commercial social networks much more in Chapter 4.

the Scurvy (1753) appeared in French in 1756. His *Essay on Diseases of Europeans in Hot Climates* was published in French in 1785. Similarly, John Pringle's *Observations on the Diseases of the Army* was published in French from its first publication. And even though Doctor John Lining of South Carolina was not a ranking military medical physician, a translation of his 1756 work made its way into a the *Journal de Médecine et Chirurgie* two years after its first appearance in the British periodical *Essays and Observations, Physical and Literary*.²¹ Translations typically remained true to the content of the original. This suggests that conditions for French and British military medicine were similar enough that the direct translation could be widely understood and applied.

Among the British learned men who rose in the ranks of military and naval medicine, knowledge of French could be assumed, as French had emerged as the primary *lingua franca* among the educated elite by the mid eighteenth century. In the Royal Society's *Philosophical Transactions*, therefore, reports were often kept in their original French when published.²² Moreover, untranslated French texts were not uncommon in the libraries of British gentlemen throughout the eighteenth century: a key eighteenth-century French text of military medicine, Dezon's *Lettres sur les principales maladies qui*

²¹ John Lining, "A description of the American yellow fever: in a letter from Dr. John Lining, physician at Charles-town in South Carolina, to Dr. Robert Whytt, professor of medicine in the University of Edinburgh," *Essays and Observations, Physical and Literary*, Vol. II (1756), 370-395. The French translation appeared in a French medical periodical. John Lining, "De La Fievre Jaune D'Amerique," *Journal De Med, Chirurg. et Pharm.*, 8 (1758):408-422.

²² On the rise of vernaculars and the role of French, see Fania Oz-Salzberger, 'The Enlightenment in Translation: Regional and European Aspects' *European Review of History: Revue européenne d'histoire* 13 no. 3 (2006), part II.

ont regné dans les hopitaux de l'armée (never translated into English) appears in the private libraries of at least three British clergymen.²³

French and British authors also cited and borrowed liberally from one another. During the mid eighteenth century, Antoine Poissonnier-Despèrrieres generated new studies of St. Domingue's medical topography. The deputy administrator for medicine in the navy and the colonies, looked not only to the local landscape but also the work of another notable medical figurehead in naval medicine: James Lind.²⁴ Poissonnier-Despèrrieres's *Traité des fièvres de l'isle de S. Domingue* was first published in 1763, and then again in 1766 and 1780. In this work on malignant fevers on the island, he noted that, "man is a flexible animal, who can adapt himself to all climates."²⁵ Poissonnier-Despèrrieres was making a direct reference to James Lind's ideas about disease among Europeans in hot climates. He suggested the same remedies as the British naval physician: a firm regime of moderation and self-discipline, as well as anticeptics like vinegar and acidic fruits. Poissonnier-Despèrrieres also referred to British military medical writings in his published work, particularly Lind and Pringle. Poissonnier-

²³ I am indebted to Erica Charters for directing my attention to this pattern and to the following sources. *A Catalogue of the Libraries of the Revd. Mr Luckyn, the Revd. Mr. Boys, and of the Counsellor Boys of Essex* ... vol. 2 (London: 1757), 349; Benjamin and John White, *A Catalogue of a Large and Valuable Collection of Books in all Languages* ..., (London: 1793), 292; John White, *A Catalogue of Rare, Splendid, and Valuable Books...including the entire Libraries of the Rev Harvey Spragg, ...*, (London: 1798), 310; see also *Medical Essays and Observations, Published by a Society in Edinburgh*, vol. 6 (Edinburgh: 1747), 468. Donald Monro, *Observations on the Means of Preserving the Health of Soldiers*, (London: 1780), vol. 1, 183, vol. 2, 277, 322.

²⁴ For background on Poissonnier-Despèrrieres, see J.E. McClellan, *Colonialism & Science : St. Domingue and the Old Regime* (Chicago : Univesity of Chicago Press, 2010), 140. For Poissonnier-Despèrrieres's influential role in the medical administration of the navy, see Michael Osborne, *The Emergence of Tropical Medicine in France* (Chicago: University of Chicago Press, 2014), 29-32.

²⁵ Antoine Poissonnier-Despèrrieres, *Traité des fièvres de l'isle de S. Domingue* (Paris, 1763), xvi for quotation.

Despèrrièrres, in turn, appeared in the footnotes of British treatises on fevers in the West Indies.²⁶

Chisholm drew upon this corpus as both a model and knowledge resource in his response to the 1793 outbreak. Right at the outset of his 1795 treatise, he introduced James Lind as an epistemological model for his own work:

With the celebrated Dr. Lind, [I] might say, ‘these observations claim the more attention, as not being only a few remarks made in private, or on any one particular fever, which might prove an exception to a general established principle in practice: They are the result of an attention to some hundred patients, whose cases are still preserved.’²⁷

Chisholm, like his military medical forbearers, embraced an approach to treatment and study of yellow fever that was based on empirical and experimental work on the large numbers of patients who tended to crowd military hospitals in the West Indies. As Mark Harrison has observed, British military and naval hospitals in this period provided environments in which practitioners learned to ground their practice firmly upon post-mortem examinations and systematic bedside observation. “No doubt,” Chisholm added, “the means here recommended will appear bold, and perhaps empirical to an European physician; but let prejudice be set aside, and let facts on be attended to, and sure he is, a candid practitioner will find sufficient encouragement to adopt them.”²⁸ A confluence of climates and congregations of bodies unlike those in Great Britain likewise gave

²⁶ James Lind, *An Essay on Diseases Incidental to Europeans in Hot Climates* (London: T. Becket and P.A. De Hondt, 1771), 133.

²⁷ Chisholm, *An Essay on the Malignant Pestilential Fever*, xv.

²⁸ *Idem.*, xiii-xiv.

practitioners the extra impulse to experiment with therapeutic regimens unlike practices more common in the metropole.²⁹

Just as important to Chisholm's practice was the correlation of observations and treatments in his hospital with those of practitioners who shared common work environs. In the context of the material circumstances of the 1790s, those sources encompassed a range of Anglophone and Francophone sources based on work in various parts of the Americas. Like Lind before him, Chisholm readily drew upon the findings of Sir John Pringle, Poissonnier-Despèrrières, Pouppe Desportes and contemporaneous writers to develop his interpretation of the disease and appropriate response. He treated their publications as guides in his local work.

Chisholm's study of the stages of the disease provides us with an excellent example of his methods. Chisholm observed that many of his patients lapsed into a comatose state before convulsing and dying on the fifth day. In order to understand the stages and how to look for the signs in his patients, Chisholm followed a series of steps. He dissected the brains of two patients, and, upon discovering a large quantity of water in both, decided to examine more attentively the eyes of his patients for evidence of dilation, "an appearance," he thought, "which left no room to doubt respecting the state of the brain, and the nature of the symptom it gave rise to." In addition to correlating his

²⁹ For these points about the medical epistemology that tended to characterize the work of British naval and military medical practitioners in the eighteenth century, see Harrison, *Medicine in an Age of Commerce and Empire*, 89-210; Harrison, "Disease and Medicine in the Armies of British India, 1750-1830: The Treatment of Fevers and the Emergence of Tropical Therapeutics," in Geoffrey Hudson, ed., *British Military and Naval Medicine, 1600-1830* (New York: Rodopi, 2007), 87-120. Paul E. Kopperman developed similar arguments about surgeons working for the British army during the Seven Years' War and the American Revolution. See Kopperman, "The British Army in North America and the West Indies, 1755-83: A Medical Perspective," in Geoffrey Hudson, ed., *British Military and Naval Medicine, 1600-1830* (New York: Rodopi, 2007), 51-86.

pathological findings with symptoms, Chisholm correlated his local findings with those of other writers. Poissonnier-Despèrrières' mention of dilation among fever victims in St. Domingue in the 1770s verified Chisholm's observations. Chisholm joined Poissonnier-Despèrrières' classic work with findings more immediately connected to his experience in Grenada in the 1790s. He connected the French physician's observations with those of Doctor Benjamin Rush during the outbreak in Philadelphia in 1793. "Dr. Rush informs us, that a dilation of the pupils was a very general symptom of the malignant pestilential fever, as it appeared in Philadelphia." From his comparative work, Chisholm determined that it was necessary to attend to the symptom, to "lay much stress on this affection of the brain, in forming one's indications of cure."³⁰ As removed as the private quarters and smaller hospitals of Philadelphia were from the large military hospitals of Grenada, material circumstances in the 1790s had, to Chisholm's mind, linked both places in such a way that studies in one American port were applicable to understanding and treating the disease in a Caribbean port.

Circulating, correlating and modifying the findings from connected sites of fever study was how Chisholm improved his approach in monitoring the course of a disease and crafting an appropriate therapeutic regimen. He then exported his own local work abroad to practitioners working in those connected sites. Chisholm, in sum, understood his treatise as a contribution to a larger hemispheric enterprise in light of the transformations in the health landscape. As we shall see presently, he was by no means singular in his approach. The new circumstances of the 1790s helped to launch the

³⁰ Chisholm, *An Essay on the Malignant Pestilential Fever*, 112-113.

Scottish military surgeon on an intellectual and cultural odyssey beyond the familiar corpus of imperial Anglo-French work on the fevers of warm climates.

Making *An Essay American*

Shortly after its publication, Chisholm's treatise began its travels outside of the empire: along the eastern seaboard of the new United States. On July 10, 1795, the *Philadelphia Gazette & Universal Daily Advertiser* promoted Chisholm's work as one with "facts so highly interesting to the citizens of Philadelphia." Printers and booksellers in other cities followed suit, advertising the treatise to readers in port towns ranging from Charleston to Philadelphia all the way up to Boston and New Haven. Large excerpts of Chisholm's treatise appeared in a series of Philadelphia and New York newspapers under the heading "History of the Origin and Progress of the Yellow Fever."³¹ Medical writers in these towns read his work, reflected on its implications, used it and reviewed it for local and regional audiences. By 1799, as we shall see, circulation and discussion of the work had given way to an elaborate review in a domestic medical journal and the creation of an "American" edition, printed in Philadelphia in a different form with a slightly different function. That version then circulated back out to reading audiences in other parts of the world.³²

³¹ See, for example, *Connecticut Courant*, June 29, 1795; *The Boston Gazette, and the Country Journal*, July 6, 1795. Excerpts of Chisholm's treatise appeared in *New York Evening Post*, 1 September 1803 and 2 September 1803; *Poulson's Daily Advertiser* (Philadelphia), 5 September 1803 and 6 September 1803; as well as *New York Herald*, 5 September 1803.

³² Chisholm, *An essay on the malignant pestilential fever introduced into the West Indian Islands from Boullam, on the coast of Guinea, as it appeared in 1793 and 1794. By C. Chisholm, M.D. and surgeon to His Majesty's ordinance in Grenada. To which is annexed, a description of the American yellow fever, which prevailed at Charleston in 1748, in a letter from Dr. John Lining.* (Philadelphia: Printed for Thomas Dobson, at the stone house, no 41, South Second Street, 1799).

The hemispheric journey of Chisholm's treatise illuminates an important but underexamined pattern in British imperial military medicine during this period: its links to North American seaports. When medical writers of the new American republic grappled with the enlarged problem of yellow fever in their ports, they drew upon an array of networks and channels of information connecting them to medical communities and disease ecologies ranging from Chisholm's Grenada to other islands and locales in the broader Atlantic world. Their epistemological tools, disease theories, and practices were derived neither solely through local knowledge nor the knowledge acquired from their former imperial metropole. The West Indies and other "warm climate" regions were incorporated into their medical culture.

These patterns in the circulation and remaking of Chisholm's ideas were a product of the post-imperial status of the new United States. In spite of the geopolitical circumstances that separated the young republic from the British Empire, the intellectual elite of the United States remained deeply enmeshed in the centers of learning, epistolary culture and print circuits that fostered disease study and medical practice in the larger Anglophone world. While many these Americans toured through Great Britain and sat in the lecture halls of the University of Edinburgh, they encountered and established relationships with medical writers (primarily military medical writers) who worked and circulated through the West Indies, East Indies and even both.³³ Americans likewise

³³ Throughout the eighteenth century, the University of Edinburgh served as a major training center for medical men entering the Army, Navy and East India Company. Mark Harrison made an important note about how such an environment would have facilitated connections not only between metropolitan and peripheral actors but also among actors who worked in different colonial settings. See Mark Harrison, *Medicine in the Age of Commerce and Empire*, 30-31 and 262. In his autobiography, Rush commented on the phenomenon of American medical students encountering and being introduced to medical students and famous medical writers "from every part of the British empire." See Rush, *The autobiography of Benjamin*

encountered their publications through post-colonial connections to print sources and networks in Great Britain.³⁴ Hence, metropolitan institutes, social circles and print were not merely centers for ideas and contacts based in Great Britain. North American residents both before and after the Revolution entered into a range of circles and print circuits that offered a *mélange* of materials and actors from different parts of the empire.

Revolutionary tumult in the 1790s introduced ecological and epistemological conditions for these relationships to North American communities to take on new proportions and new epistemic forms, thus reshaping the work of their British imperial counterparts based in the West Indies. The outbreaks, together with new ecological relations between ports in the Americas, magnified the material presence of the West Indies in American ports. These circumstances drove many inhabitants of the US ports to re-evaluate not only their local ecologies but also the relationships between local and West Indies ecologies. As we saw in Chapter 1, American port cities' connections to the region through trade, travel, and a recent large wave of refugees from St. Domingue increased Americans' and Caribbean actors' concern about the relationship between American and Caribbean sites of disease outbreak. This concern in turn stimulated interest in the studies and observations in those different sites.³⁵

Rush : his "Travels through life" together with his Commonplace book for 1789-1813. Ed. with introd. and notes by George W. Corner (Princeton: Published for the American Philosophical Society by Princeton Univ. Press, 1948), 44-45.

³⁴ James N. Green, "The Rise of Book Publishing," in David Hall, Robert A. Gross, and Mary Kelley, eds. *A History of the Book in America: Vol. 2* (Chapel Hill: University of North Carolina Press, 2010), 75-80.

³⁵ See Pernick, "Politics, Parties, and Pestilence: Epidemic Yellow Fever in Philadelphia and the Rise of the First Party System," in J. Worthes Estes and Billy G. Smith, eds., *A Melancholy Scene of Devastation: The Public Response to the 1793 Philadelphia Yellow Fever Epidemic* (Philadelphia: Science history Publications, 1997), in particular 121-127.

What inspired so much interest in Chisholm's account in particular was its direct implications for Americans' interpretation of their local outbreaks during the same period. The yellow fever outbreak that Chisholm observed and interpreted in Grenada occurred in the very same year as a terrible outbreak in Philadelphia. Chisholm had also drawn a direct link between the two, tracing the path of disease along the shipping routes that connected Grenada, Jamaica, St. Domingue and Philadelphia. He thus connected not only the ecologies of Philadelphia and Grenada but also the debates in and about both places.³⁶

As Americans in ports as far north as New York questioned the ecological divide between "sultry" and "hot" climates of the Caribbean and their own, they likewise questioned the material boundaries that defined their therapeutic epistemologies. Many Americans in the 1790s increasingly adapted therapeutic methods from the West Indies, importing them wholesale or at least adapting them in their own innovations in therapeutic approaches to the new disease crisis. Hence the circulation of Chisholm's innovations with mercury among US-based physicians as far north as Philadelphia and New York City. By the early nineteenth century, his method had become influential enough for a New York-based physician to comment: "To the bold and vigorous practice adopted by the celebrated Dr. Chisholm, in the cure of malignant pestilential or yellow fever which prevailed at Grenada, and at other of the West-India island, in 1793, may be attributed the present general employment of mercury in the United States."³⁷ While

³⁶ See Chisholm, *An Essay on the Malignant Pestilential Fever*, 99.

³⁷ John Wakefield Francis, "Observations on Mercury: embracing its Medical History and its abuse as an article of the Materia Medica. By John W. Francis, M.D. Fellow of the College of Physicians and Surgeons of New-York, Member of the New-York Historical Society, &c." *The American Medical and Philosophical Register; or, Annals of the Medicine, Natural History, Agriculture, and the Arts* 3 (1814),

employment of mercury was by no means new in the former North American colonies, the “bold” and “vigorous” practice in the case of fever was – and Francis, among others, interpreted it as an adaptation of methods cultivated in “hot” climates.

Second, independence and upheaval in this period altered the local epistemological contexts in which early republican medical men performed and understood their work. Unstable political circumstances were transforming the very idea of “community” and cultural belonging into a topic of pointed concern and lively debate among culture-brokers and intellectuals of the new republic. These figures negotiated new practices in knowledge-making and identity in diverse arenas: politics, literature, and, important for our purposes, medicine. The situation combined with new ecological circumstances to create a space for the cultivation of new networks and practices that ought to define approaches to a novel health crisis.

This intellectual and cultural work, moreover, was taking place not only in flourishing correspondence and conversation societies but also a flowering new print culture. The American Revolution had helped to expand domestic print. It also helped to transform print into a central vehicle for disseminating information as well as arguments and ideas about fellowship and epistemologies that ought to define various facets of American society.³⁸ Early republican medical men took to print, transforming

437. Francis was by no means the only physician to connect mercury’s dissemination in the US to Chisholm’s influence. See, for example, Benjamin Rush, *Medical Inquiries and Observations: Containing an Account of the Biliious and Remitting and Intermitting Yellow Fever, as it Appeared in Philadelphia in the Year 1794. Volume 4* (Philadelphia: Thomas Dobson, 1796), 112-116; James Hardie, *An Account of the Malignant Fever which Prevalled in the City of New-York: During the Autumn of 1805* (New York: Southwick and Castle, 1806), 190-195.

³⁸ For elaborated arguments of this point about print in the early republic, see David Waldstreicher, *In the Midst of Perpetual Fetes: the Making of American Nationalism, 1776-1820* (Chapel Hill: University of

Philadelphia and New York into new centers for treatises and print platforms for working out the character of the pandemics and appropriate treatment.

The situation of North American ports subsequently provided new spaces and tools outside of northern Europe for remaking British military medical work on fevers in warm climates. Many of the early republican medical elite confronted their new material conditions by going beyond producing and circulating knowledge in domestic print. They mobilized the culture-brokering tools of the early republic to create new genres and forums that could accommodate the shifting boundaries of the worlds of fever study and treatment.

The early republic's bustling periodical culture, for example, provided American and British imperial actors with a new and important technology of community-building. In 1797, Chisholm's treatise landed in the hands of Elihu Hubbard Smith, one of the chief editors of the nation's first medical periodical – the *Medical Repository*. The *Medical Repository* was founded by three local physicians: Smith as well as Edward Miller and Samuel Mitchill. Smith, Miller, and Mitchill were not merely immersed in the growth of new transnational epistolary networks and fever literature during the 1790s. They were deeply involved in a variety of cultural and intellectual projects. In reaction against the contentious factions and periodical communities that emerged out of political and cultural feuds over the new republic's relationship to the revolutionary Atlantic, the three physicians collaborated with one another and other lettered men to cultivate alternative spaces where men could collaborate across partisan and geopolitical divisions in the

North Carolina Press, 2007); and Jeffrey Pasley, *The Tyranny of Printers: Newspaper Politics in the Early American Republic* (Charlottesville: University of Virginia Press, 2002).

pursuit of “useful knowledge.” It was not partisan rhetoric and allegiance but rather intellectual openness that promised to improve Americans and, subsequently, universal knowledge.³⁹

It was this outlook on the general state of knowledge-production in the US that shaped the three men’s perceptions of the yellow fever problem and necessary solutions. They saw in both the unprecedented mortality and discordant interpretations of the outbreaks more than a low state of knowledge. Underlying the cacophony of ideas about the disease’s origins and appropriate treatment was a much larger problem in the modes of producing knowledge about health. Americans, Smith believed, were pulling the debates over the disease into the realm of gossip and partisan feuds in the nation’s bustling seaports. In order to contribute productively to the larger project of reforming health knowledge, Smith and his colleagues agreed, Americans needed to learn to unite across divisions and embrace their firsthand experience with the environs producing the disease.⁴⁰

In order to realize improvement in knowledge, Smith, Miller and Mitchill decided that treatises and letter-collecting projects were not enough.⁴¹ They desired a means to collect and disseminate new knowledge as well as a space where they could cultivate the epistemological practices and ideas that constituted that envisioned community.⁴² They

³⁹ Catherine O’Donnell Kaplan addressed this larger context in her study of Smith and his circles, including his perception of the problem of yellow fever. See Kaplan, *Men of Letters in the Early Republic: Cultivating Forums of Citizenship* (Chapel Hill: University of North Carolina Press, 2008).

⁴⁰ Elihu Hubbard Smith, and James E. Cronin, *The Diary of Elihu Hubbard Smith (1771-1798)* (Philadelphia: American Philosophical Society, 1973), 74.

⁴¹ Smith recorded in his diary his conversations with Miller, Mitchell and other colleagues about the purpose of the new journal. *Idem.*, 58-60.

⁴² *Idem.*, 167; Kaplan, 91.

decided to appropriate the very technology of community-building used by political and culture-brokers of the new republic: the periodical. Smith, Miller and Mitchill created a medical forum that did more than to collect, compile and circulate observations. It mirrored the tactics of contemporary partisan political gazettes, which each claimed through editorials, reviews and arrangement of content to represent and speak for “America” and thus enlist support and try to instill in audiences certain visions of American political and cultural identity in relation to European powers. In this case, Smith, Miller and Mitchill were using editorials, essays and reviews of publications to cultivate and spread a particular vision of “American” identity in relation to the Atlantic medical world.⁴³

The journal’s editors, for one, presented yellow fever as a product of American environs and the domain of the American interpreter. They wove tropes of intellectual independence into their arguments. In the *Medical Repository*’s inaugural edition, the editors proclaimed in their circular letter their objective to cast aside what they classified as “systematic works” on American natural phenomena.⁴⁴ What America required, they insisted, was a “medical collection” of studies of the climate and diseases grounded in

⁴³ Bryan Waterman made a similar argument, although he confined his view to internal developments, thus overlooking the international context that shaped the editors’ goals and tactics. See Waterman, “Arthur Mervyn’s *Medical Repository* and the Early Republic’s Knowledge Industries,” *American Literary History* 15:2 (2003), in particular 222-224.

⁴⁴ In the context of medicine and natural inquiry, “systematic” typically carried a derogatory meaning. It implied that someone was being insensitive to the nuance and complexity of the world. Physicians and naturalists often used it to criticize someone for attempting to develop maxims and organize knowledge without having carefully applied their senses and experienced something firsthand. Even though classification and quest for universals was in vogue during the eighteenth century, that impulse yielded more and more to popularity of methods that privileged the senses and observation. For a brief overview of the practice of “system-making,” see Lester King, *The Medical World of the Eighteenth Century* (Chicago: University of Chicago Press, 1958). For a very subtle analysis of the contemporaries’ perceptions of “systematic” approaches in natural inquiry, see Jessica Riskin, *Science in the Age of Sensibility: The Sentimental Empiricists of the French Enlightenment* (Chicago: University of Chicago Press, 2002).

firsthand observation. An American medical man, they told their readers, possessed a keen advantage by virtue of his proximity to local natural phenomena and “the opportunities it affords of observing [and] comparing the diseases, or phenomena of each disease, and the operation of the same remedies, in the same or different complaints, in Europe and America.”⁴⁵ Rather than regard the local disease as an unwanted stigma, and rather than descend into the trap of political rancor over disease sources and treatment, Americans ought to embrace the disease and its environs as objects they alone could study and master.

The editors likewise promoted their vision of where Americans belonged in the larger geography of knowledge production in the Atlantic world. The journal, as an enterprise for the general improvement of knowledge about disease and health, would certainly draw upon cooperation with contacts abroad. However, the editors were very selective in their use of correspondents, arrangement of content and book reviews about what actors in different parts of the world could and could not contribute to this new storehouse of knowledge.

Their treatment of medical writers based in northern Europe is telling. Any reader of the periodical would have encountered laudatory comments on the new British developments in smallpox vaccination technologies. In the very same volumes, though, the editors castigated European writers who attempted to take up the new problem of yellow fever. A yellow fever treatise by James Tytler, the compiler of the medical section in the *Encyclopedia Britannica*, came under fire in the *Medical Repository*'s book

⁴⁵ “Circular Address,” *Medical Repository* First Hexade 1.1 (August, 1797), 20-22. Emphasis my own.

review section in 1801. Clearly, they argued, he had not been “personally conversant” with the disease. “Nor is he entitled to the character of an original observer of events and occurrences, in such time of public commotion.”⁴⁶ The editors hastened to add that they took no issue with Tytler as a medical writer. He was, as they put it, a fellow participant in their “transatlantic community” of medical improvers. However else he and other writers based in Europe might participate in the Atlantic medical world, their spaces of inquiry had little business in studies of diseases of the Americas. In contrast, the editors proclaimed loud and clear in the circular letter of their inaugural volume that the best knowledge about yellow fever and its environs belonged to the domain of those who “possessed a keen advantage by virtue of their proximity [...] and the opportunities it affords of observing [and] comparing the diseases to those in Europe.”⁴⁷ American and European men alike wielded the knowledge and conceptual tools of the enlightened centers of Europe. What distinguished Americans in this context was the power of firsthand experience with a unique disease crisis.

As alternative models for disease knowledge production and therapeutic practice, the editors directed readers’ attention away from internal politics and away from northern Europe to writings from the West Indies. Among several of the initial works Smith recorded reviewing and discussing for the new project were the latest treatises on febrile diseases by Robert Jackson, Benjamin Moseley and Colin Chisholm – all military officers based in the West Indies.⁴⁸ And while they tapped into local and regional

⁴⁶ “REVIEW: A Treatise on the Plague and Yellow Fever, &c.” *Medical Repository*, First Hexade 3:4 (May 1, 1801), 54.

⁴⁷ “Circular Address,” *Medical Repository*, First Hexade 1.1 (August, 1797), 20-22

⁴⁸ Smith kept detailed records of his reading practices in his diary. Moseley, Jackson and Chisholm all crop up in his records. See Smith and Cronin, 331, 333, 384, 286, 399, 400, 401, 426, 442, 445 and 452.

networks to solicit articles, Smith and Miller also made use of personal and professional correspondence channels that extended beyond the United States. Hence, Miller called upon not only his former medical teacher in Philadelphia, Benjamin Rush, but also Rush's correspondent, George Davidson, who was stationed in Martinique and St. Vincent in the 1790s.⁴⁹

In both book reviews and articles, the editors wove observations and interpretations from the West Indies into the American corpus of knowledge about yellow fever. These works became pieces in the larger puzzle of the new world disease problem. Medical writers wrote pieces emphasizing observations of local weather, climate and geographic features within which fever outbreaks were embedded. Contributors often presented their observations as imperfect or incomplete – materials readers could refine or use to make sense of phenomena in other parts of the Americas. In a description of a fever that broke out on his ship outside of Curaçao, Samuel Anderson, a surgeon's mate, offered a "short account of the weather which preceded and that which accompanied the disease, and relate a few other circumstances, which may perhaps lead to discovery of its cause." He hastened to add that he had, unfortunately, "not been able to ascertain, from a want of that experimental knowledge, by which only we can with certainty find out the cause of fever." He offered up his observations for those who might build upon his "collection of facts," not merely for understanding what happened in Curaçao. He read the landscape in relation to the conditions of the climate in Pennsylvania as well. "The atmosphere," he wrote of the island, "was not possessed of elasticity, the happy effects of

⁴⁹ Edward Miller to Benjamin Rush, July 18, 1799, Rush Manuscripts, Correspondence, Library Company of Philadelphia.

which (Dr. Rush informs us) are experienced by the Pennsylvanians, except when accompanied with the moisture and a south-west wind. In consequence of this principle, the heat was oppressive and very distressing.” It was not through local study but rather comparison of two regions in the Americas that Anderson attempted to make sense of an epidemic. He was working with readers to ascertain the “principles” that accounted for similarities and differences among the sites of outbreaks.⁵⁰

Reviews of West Indies-based treatises also offered larger lessons about reading practices, knowledge-making, and authoritative resources. They became models for Americans’ study of their own diseases and “allies” in the improvement of knowledge about disease ecologies that produced yellow fever. In their review of Benjamin Moseley’s fourth edition of *A Treatise on the Tropical Diseases; on Military Operations; and on the Climate of the West Indies*, the editors offered up Moseley as more than a knowledge resource. His combination of skilled disease observation and long residence in the West Indies made him someone the editors could consider “not improperly...as an American writer investigating the product of our soil, and the nature of our diseases.”⁵¹ Here, the editors transformed the work of a “British” military doctor in the West Indies into the work of an “American” interpreter.

⁵⁰ Samuel Anderson, “An Account of a Bilious Yellow Fever which Prevailed on Board the United States Ship Delaware, in the Island of Curacao, from the beginning of Nov. 1799, until the latter end of February, 1800: Communicated by Samuel Anderson, Surgeon’s Mate.” *Medical Repository* First Hexade 5 (1802), 280-287. Passage taken from 281.

⁵¹ “REVIEW: A Treatise on the Tropical Diseases; on Military Operations; and on the Climate of the West-Indies. By Benjamin Moseley, M.D. &c. 4th edition, 8vo. Pp. 670. London, 1803.” *Medical Repository* Second Hexade 3 (1806), 178. For a very similar review, see “REVIEW: A Treatise on Sugar; with Miscellaneous Medical Observations. By Benjamin Moseley, M.D. &c. Second Edition, with considerable Additions. 8vo. Pp. 276. London. Robinsons. 1800,” *Medical Repository* First Hexade 6 (1803), 288-295.

Military and naval medical personnel, in turn, began shaping the content and purpose of the *Medical Repository*. The journal was turning into a space where British imperial medical writers talked to, corrected and collaborated with Americans. Such British actors used it to communicate to each other. There was no equivalent periodical in the Caribbean, where periodical cultures were far more isolated and limited in scale. By 1800, subscribers had extended outside of the US and Europe to include medical men based in Martinique and Jamaica. Copies and excerpts of the journal circulated through private transnational correspondences as well. They wound up in the footnotes and prefaces of new and revised editions of treatises published in the US and British Empire alike.⁵²

Medical men within and outside of the US had come to understand the *Medical Repository* as more than a knowledge resource shared by medical writers working in the environs of yellow fever. As we shall see, it became a forum powerful enough to inspire exhaustive responses and revised editions of monographs on fevers in warm climates. Actors outside of northern Europe were creating a new space where they could assemble and interact as a community distinct from their local political and institutional contexts.

⁵² See, for example, Edward Nathaniel Bancroft, *An essay on the disease called yellow fever: with observations concerning febrile contagion, typhus fever, dysentery, and the plague : partly delivered as the Gulstonian Lectures, before the College of Physicians, in the years 1806 and 1807* (London: Cushing and Jewett, 1821), 189, 223, 244, 247, 248, 249, 251, 252, 254, 260, 266, 268, 269, 270, 276, 277, 278, 279. Bancroft cited articles in the *Medical Repository* to develop his argument that yellow fever was a product of local circumstances. For similar examples, see Robert Jackson, *An outline of the history and cure of fever, endemic and contagious; more expressly the contagious fever of jails, ships, and hospitals; the concentrated endemic, vulgarly the yellow fever of the West Indies. To which is added, an explanation of the principles of military discipline and Economy: with a scheme of Medical arrangement for-armies. By Robert Jackson, M.D.* (Edinburgh, 1798), 208, 301, 302; Thomas Trotter, *Medicina Nautica: An Essay on the Diseases of Seamen: Comprehending The Health in the Channel for the Years 1799, 1800, and 1801* Volume II (London: T.N. Longman and O. Rees, Paternoster-Row, 1803), 90, 93, 98.

Medical men subsequently cultivated these new spaces and genres that could accommodate interchange by engaging in the messy process of adapting their language, evidence and socio-cultural ties in order to share codes of conduct across sharpening socio-political divisions. We see this in the events leading up to the 1799 American edition of Chisholm's work.

Recall that, in the wake of pandemics throughout the West Indies and parts of the United States, Chisholm decided to assess the relationship between the events in Grenada and those in other parts of the West Indies and United States. Chisholm integrated into his interpretation a ship – the Hankey – which sailed from the west coast of Africa to St. George in that year. He formed the argument that the ship had generated a fever during its voyage to Grenada, introduced the sickness into the island and into the diverse shipping networks connecting the island to other parts of the West Indies and Philadelphia.⁵³

Chisholm quickly encountered some serious challenges in promoting his assessment of the ship. One was reconciling some of the sharpening divisions within the Atlantic World over what constituted credible witnessing when it came to making claims about the health of Atlantic shipping. Abolitionists were not only reshaping patterns of health in Atlantic shipping through voyaging. As abolitionists heightened their campaigns against the slave trade and in favor of new colonization projects, they managed to alter the politics of assessing the health of shipping that connected Africa, the West Indies and other parts of the Atlantic World. They turned the health of the slave

⁵³ Chisholm, *An Essay on the Malignant Pestilential Fever*, A2.

trade and health of their colonization pursuits into political objects that served the reform of the slave economy.⁵⁴ In so doing, they recast language, conduct and credibility in terms of stance on the issue of slavery and the slave trade.

It was these terms that several abolitionists applied in their own account in print of the Hankey's voyage – one that contradicted Chisholm's interpretation. In contrast to Chisholm, they wove their assessment of the ship's relationship to the Grenada fever into a narrative about the virtue of their colonization efforts called *An Essay on Colonization*. The author, C.B. Wadström, was among those who were sponsoring the colonization efforts in Sierra Leone and Bulama. Having learned of the events surrounding the ship's inspection and quarantine in St. George from recently returned voyagers, Wadström formed his own views on local assertions about the ship's contagious state. "It might easily have been ascertained, that the mortality in Grenada, while the Hankey was there, was owing to one of those disorders to which the W. Indian islands are unfortunately subject." Wadström's criticism of the view, however, ultimately rested on his perceptions of the "West Indians" who had assessed the ship's state. He argued: "So flaming was the zeal of the Grenadians against the Abolition of the Slave-trade, and the *free* colony at Bulama, that they employed every illiberal art to prevent Capt. Cox from getting cargo at Grenada."⁵⁵ Here, Wadström was encouraging readers to read firsthand accounts about

⁵⁴ Richard Sheridan, "The Guinea Surgeons on the Middle Passage: The Provision of Medical Services in the British Slave Trade." *International Journal of African Historical Studies* (1981): 601-625. Klas Rönnbäck, "Enlightenment, Scientific Exploration and Abolitionism: Anders Sparrman's and Carl Bernhard Wadström's Colonial Encounters in Senegal, 1787–1788 and the British Abolitionist Movement," *Slavery & Abolition* 34.3 (2013), 425-445.

⁵⁵ C.B. Wadström, *An Essay on Colonization, Particularly Applied to the Western Coast of Africa, with Some Free Thoughts on Cultivation and Commerce: Also Brief Descriptions of the Colonies Already Formed, or Attempted, in Africa, Including Those of Sierra Leona and Bulama : in Two Parts*. (London :

the ship with an eye for language that would signal political motives; with attention to political credentials of witnesses anyone might use to reconstruct the events surrounding the ship. As a resident, a physician employed in local plantation estates and a plantation owner himself, Chisholm risked having his performance discredited as driven by his investment in plantation slavery.

This implication became particularly problematic for Chisholm, when Wadström's treatise circulated across the Atlantic into New York and, eventually, to the study of Elihu Hubbard Smith. It arrived via a traveler, Mr. J. Paiba, who was one of the men who had travelled on the *Hankey*. The abolitionist and Smith shared knowledge about one another via the colleagues and reading materials that constituted Smith's intimate involvement in the arena of manumission and abolition. Smith, like Paiba, was used to talking about ships and traffic in an abolitionist framework. An introduction from a mutual colleague in these circles, Noah Webster, strengthened Paiba's credibility as a witness to the events surrounding the ship's health. Face-to-face interaction helped as well. Paiba's travel to New York City in 1797 and conversation with both Webster and Smith ultimately solidified Smith's faith in Paiba's firsthand knowledge of the voyage. "He is a sensible man," Smith concluded, "I took notes of his Information and decided to return to Dr. Chisholm's statement."⁵⁶ Paiba had used multiple means, including a shared set of cultural values; knowledge of mutual social circles in the early republic; introductions and face-to-face conversation in order to shape the notions of credibility a New Yorker would use to judge accounts and, ultimately, the events surrounding the

printed for the author, by Darton and Harvey. And sold by G. Nicol; W. Faden; J. Stockdale; J. Edwards [and 4 others in London], 1794-95), 159.

⁵⁶ Smith and Cronin, *Diary*, 285.

health of a ship in the West Indies. Paiba's creation of himself as a good witness led Smith to return to reviewing Chisholm's account with the help of his notes from Paiba's conversations and a copy of Wadström's treatise.⁵⁷

Smith crafted a review for the public out of his notes and reflections. He was not just going to disagree with Chisholm's interpretation; Smith was going to invalidate Chisholm's credibility in the medium of public print. And he was going to use that critical review to make a much larger point to American audiences about model methods in assessing the cause of fever outbreaks.

Rather than open with his typical summary and analysis of an author's physical setting, Smith positioned Chisholm's work in a very different context:

It will be remembered that the expedition to Bulama was set on foot by an Association of philanthropic gentlemen in England, with an express design of counteracting, as far as possible, the iniquitous traffic in human flesh. It will naturally be supposed that an enterprise like this would be regarded with evil eyes, by the West-Indian planters; to whose opposition and intrigues the shameful delay of justice in the British Parliament, is chiefly to be attributed.⁵⁸

Smith introduced these circumstances and highlighted Chisholm's dual identity as both a fellow practitioner in warm climates and a plantation owner in Grenada and Demerara.⁵⁹

Smith implied that, as a slave owner, Chisholm would, like others, have resisted the abolition movement in Britain, which a decade later would realize its ambition to ban the

⁵⁷ *Idem.*, 384-392.

⁵⁸ *Medical Repository* 1.4 (1798), 492.

⁵⁹ Douglas Hamilton briefly discusses Colin Chisholm's position as both a plantation owner and plantation doctor in the islands. See Hamilton, *Scotland, the Caribbean and the Atlantic World, 1750-1820* (Manchester: Manchester University Press, 2005), 112-118.

slave trade in the British Empire. Smith, in other words, was highlighting an implication about how Chisholm's life as a planter shaped his understanding of fever.

Smith proceeded to direct readers' attention to the language Chisholm had used to describe the voyage. "He describes them as 'induced by the delusive prospect of wealth *held out to them,*' (an indirect charge on the benevolent projectors,) 'and the fanatic *enthusiasm for the Abolition of the Slave Trade, &c.*'" If nothing else, he argued, that statement alone warranted the dismissal of Chisholm's interpretation of the ship.⁶⁰ Smith understood "delusive" and "fanatic enthusiasm" as part of the vocabulary used by proponents of the slave trade to make very negative assessments of abolitionist voyagers and colonization projects. Chisholm's assertion of importation, in sum, was not a product of model application of firsthand knowledge. Rather, it was grounded in the dark politics of the slave trade and plantation economy. Chisholm's study of the Hankey reflected the practices and conduct of a provincial West Indian planter.

Smith turned to his views on where the Hankey fit in the health landscape of early republican port cities. He paired many of Chisholm's findings with those of his own and other domestic studies in order to show how Chisholm's observations of St. George's Bay, not his assertions about the ship, matched up with local and regional observations. For example, a table which Chisholm inserted as a record of the state of the climate "perfectly corresponds with what has uniformly been observed in the United States, and is in all respects such as might rationally be expected, from the operation of those local

⁶⁰ Ibid., 492.

causes.”⁶¹ Chisholm had even misused his own observations for the sake of making his claims. Practitioners, Smith concluded, might remain inclined to believe that the fevers in Philadelphia and New York were products of imported contagion. Regardless, “they should fail of deriving any countenance from what occurred in Grenada.”⁶² It was not simply that Chisholm’s interpretation of the Hankey was not credible. Rather, Chisholm’s epistemology was compromised by his role as a slave owner. Adherents to Chisholm’s view, Smith implied, would be similarly compromised.

Smith’s review did not remain in New York. Through the overlapping regional and international networks the editors were cultivating for their publication, the review began to circulate beyond New York and beyond the US to reach the medical practitioners working on the problem of fever in different parts of the West Indies. It was this review that Robert Jackson in Jamaica used to question Chisholm’s characterization of the fever aboard the Hankey.⁶³

Much like Mr. J. Paiba, Chisholm sought out means to navigate the print communities and platforms based in New York and Philadelphia. In lieu of direct personal acquaintance and face-to-face interaction with the editors of the new journal, Chisholm opened a brief epistolary exchange with the editors. While the methods Chisholm used to accomplish this new exchange are less clear, the function of his letter is. Acknowledging that Smith, Mr. Paiba and the *Medical Repository* editors had all

⁶¹ Ibid., 487-488.

⁶² Ibid., 495.

⁶³ Jackson, *An Outline of the History and Cure of Fever, Epidemic and Contagious, more especially of Jails, Ships, and Hospitals, and the Yellow Fever. With Observations on Military Discipline and Economy, and a Scheme of Medical Arrangement for Armies* (Edinburgh : printed for Mundell & Son; and for T. N. Longman, and Murray & Highley, London, 1798), 223.

found means to discredit his methods, Chisholm argued that his letter would serve to “give further proofs of the fair and solid grounds on which I have proceeded, as would remove every doubt from reasonable and unprejudiced minds.” He wanted to introduce aspects of his biography and medical experience that he felt warranted his status as a credible observer. He would defend his views on the character of the fever and its relationship to the environs of the West Indies and US by refashioning his identity and choice of evidence.

Chisholm dislodged his practices from the context of the slave trade. Belief of the Hankey’s infectious character, he observed, was not “by any means confined to those whose interest might have been affected by the prosperity of an infant colony on the coast of Africa.” The evidence he advanced, Chisholm insisted, “is founded on the information of captains of vessels, who knew all the circumstances of the Hankey,” among them “a gentleman of the navy” in addition to the “gentleman who chartered the ship to England.”⁶⁴ While Chisholm necessarily relied on the testimony of travelers who witnessed the ship firsthand during its voyage, he was careful to emphasize the ways in which their credibility did not rest on partiality toward the interests of planters.

In place of language and location that might highlight his status as a West Indian planter, Chisholm played up other elements of his medical world, ones he shared in common with the editors. He elaborated on “a habit of observation I early in life acquired, by committing to paper every circumstance capable of elucidating the

⁶⁴ The letter, as we shall see below, was printed in the *Medical Repository*. See Chisholm, “Concerning the Malignant Pestilential Fever of Grenada, As It Appeared in 1793 and 1794; in a Letter from Dr. C. Chisholm,” *Medical Repository* First Hexade 2 (1799), 286.

diseases.” Chisholm hastened to add that these were skills he honed and practiced neither solely in Europe nor purely in his residence in Grenada, but, above all, in his “practice whilst surgeon to the 71st regiment, during the late war in North-America; and since, during my residence in the West-Indies, in private and public practice.” It was not his position as a West Indian planter but rather his skill and experience as traveling imperial military practitioner – one who modeled the practice of detailed observation – that allowed Chisholm to speak about the ecological relationship between New York City and Grenada. The material underpinnings of Chisholm’s medical world were what really allowed him to both speak and correct with credible authority.⁶⁵

So it was that Chisholm felt he could revise in minute detail the picture the editors had tried to create of the climate, spaces and social make-up of St. George’s Bay. He did not end his letter with his detailed corrective regarding Grenada. “I shall take leave to offer one remark, whilst on the subject of imported infection, as it relates to New-York: During a considerable part of the years 1776 to 1778, my duty led me very much to reside, for weeks together, in that city.” During that residence, Chisholm argued, he had observed the “remarkable state of the heat” in the summers, the “lower character” of the streets, the state of the slips as well as the character of health among the crowds of “troops or inhabitants” who operated in that environment. The editors had not only falsely studied Grenada; they had failed to observe and accumulate enough observations to correctly correlate the ecologies of New York and Grenada.⁶⁶

⁶⁵ Ibid., 290.

⁶⁶ Ibid., 291.

Chisholm was not the only one participating in this process. His efforts clearly paid off to some extent. Within a year, the editors decided to retract the methods and language Smith had used to discredit Chisholm's performance. They did so by giving Chisholm a space for rebuttal in their platform, publishing his letter in response to the editors in the *Medical Repository* with introductory comments.

Carefully, the editors also used the "language of retraction" to admit bad conduct without completely discrediting their credibility as witnesses and participants in the enterprise of fever study. Their introduction, on the one hand, offered an apology to Chisholm and to their readers. Contrary to their earlier treatment of Chisholm's work, they introduced his letter as an "honorable" rebuttal and refinement of his views. Still, the editors wished to maintain their status as credible participants among their audience. "We must maintain that no motives could be more pure, honourable and benevolent, than those which directed [Smith's] conduct," the editors hastened to observe. "Whatever error has been committed on this occasion, it must be ascribed to the ardour of his feelings in every thing [sic] that concerned the slavery of the unhappy Africans." The editors were not guilty of ungentlemanly conduct. They were simply guilty of slipping and applying the wrong gentlemanly conduct, conduct that was really suited for the cause of abolitionism. After this statement," they ended, "we have too good an opinion of Dr. Chisholm's character to doubt his approbation of what we have done." Implicitly they

agreed with Chisholm, that exchange, critique and revision of views should proceed on different terms.⁶⁷

The editors and Chisholm never completely resolved their divisions over the cause of the disease. They did, however, concur on what constituted appropriate norms of behavior between and among medical men. Their debates retreated back into the realm of disputes over the relationship between distant outbreaks and reconciling differences in nosology. The outcome of the controversy ultimately shows us the ways in which figures like Chisholm and the editors felt impelled to adapt codes of behavior in order to foster productive exchange about ecological movement across political divisions in the expanding arena of fever study. Reinforcing these new codes of conduct was part of the reason for the 1799 American edition of Chisholm's work, which was not merely a reprint. The printer appended John Lining's famous study of "American yellow fever" in Charleston to Chisholm's piece. In the context of the controversy and Chisholm's other tactics, this hybrid "American" edition of Chisholm's work functioned just as much as a cultural statement as it did an intellectual one. Chisholm's views, it proclaimed implicitly, were not grounded in the politics of the slave trade in the West Indies. Nor, for that matter, was its relevance confined to the "tropical" climates of the West Indies. Rather, his evidence and interpretations were based on a physician's firsthand experience

⁶⁷ Chisholm, "Concerning the Malignant Pestilential Fever of Grenada, as It Appeared in 1793 and 1794; in a Letter from C. Chisholm to the late Dr. E.H. Smith," *Medical Repository*, First Hexade, 2.3 (February, 1799), 285-286.

in an ecology that he, fellow military medical men across the political spectrum, and Americans shared in common.⁶⁸

“Into a form more diffused”

In 1801, Chisholm published yet another edition of 1795 treatise, this time through a printer in London. The new edition was one thousand and twenty pages long – over seven hundred pages longer than the original. This version spoke to so much more than the accumulation of observations and experience over the course of new outbreaks. The form of the content had changed dramatically as well. Collectively, these transformations in Chisholm’s work reveal how dramatically his view of the character and function of the British imperial centers of print and medicine for the problem of yellow fever had changed by the end of the decade. London, to his mind, had rapidly turned from a powerful center for imperial medical agents into one node in an increasingly international enterprise, albeit a node with superior facilities for publishing extended medical treatises. Military and naval medicine had become integrated in an increasingly unwieldy corpus and web of networks that stretched from the East Indies, all the way to the Caribbean, into the United States and back across the Atlantic. Military and naval medicine, in sum, had become a more globally oriented resource for the problem of yellow fever.

⁶⁸ Chisholm, *An essay on the malignant pestilential fever introduced into the West Indian Islands from Boullam, on the coast of Guinea, as it appeared in 1793 and 1794 / By C. Chisholm, M.D. and surgeon to His Majesty’s ordnance in Grenada. ; To which is annexed, a description of the American yellow fever, which prevailed at Charleston in 1748, in a letter from Dr. John Lining* (Philadelphia: Printed for Thomas Dobson, at the stone house, no 41, South Second Street, 1799).

The intended audience of the book was remarkably different from the first edition. Chisholm amended his dedication and preface to reflect this new readership. While the dedication still targeted medical personnel of the British military and navy, Chisholm acknowledged these readers' immersion in the same transnational sources that had challenged his motives. He felt the need to reassure the "Gentlemen" of his good intentions "regardless of every power which may attempt to thwart the benevolent purposes of this publication; and of every interested view."⁶⁹ A new preface appeared after the original one. The new preface, in contrast to the older one, addressed fellow military and naval personnel as part of much larger, ill-defined audience that encompassed "those of my Readers who have acquaintance with a very useful medical work, periodically published at New York under the denomination of the Medical Repository."⁷⁰ Chisholm's audience was a community organized around the enterprise of fever study: civilian Americans and British military personnel alike.

Chisholm likewise laid out a revised description of the ecological context for manifestations of fever and his work on the problem. Whereas his 1795 volume guided readers through a rich local topography of St. George's Bay, Chisholm now offered his readers an exploration of the subtle differences between several individual colonies. He opened his revised discussion with the following observation: "Without a delineation of the circumstances relating to the topography, endemic morbid causes, climate, &c. of a country, how is a stranger to discriminate between the morbid constitution of any

⁶⁹ Chisholm, *An Essay on the Malignant Pestilential Fever: Introduced into the West Indian Islands from Boullam, on the Coast of Guinea, As It Appeared in 1793, 1794, 1795, and 1796* (London: Mawman, 1801), v.

⁷⁰ *Idem.*, xxi.

particular year, and that which generally prevails, and arises from causes merely local?” He added, “It is to assist the reader’s discriminating powers in this respect, I have prefixed a general account of each colony.”⁷¹ Chisholm presented his readers with descriptions of the ecological conditions for fourteen colonies: Martinico, St. Lucia, St. Vincent, Barbadoes, Demerary, Tobago, Trinidad, Grenada, Dominica, Antigua, St. Christopher’s, Tortola, St. Thomas’s and Saint Croix. He devoted a whole chapter to each colony, guiding readers through rich descriptions of the fauna, settlement patterns, built environment and confluence of people in ports that had witnessed outbreaks in fever over the past couple of decades.⁷² In order to create these descriptions, Chisholm relied on a variety of networks that linked him to these colonies: French and British travel narratives, correspondence with fellow military hospital attendants, ordnance surgeons, private practitioners as well as Anglophone, Francophone and even Danish “men not of professional, although capable of judicious observation.”⁷³ By carefully calling attention to his resources at the outset of this section of his treatise, Chisholm was presenting himself to readers as a medical writer embedded in a complex ecology that extended beyond Grenada and even beyond the Caribbean.

In addition to publishing and circulating his revised treatise in conventional imperial networks, Chisholm managed to secure space for his revised work in a number of New York-based periodicals aside from the *Medical Repository*. In August and September of 1803, extensive excerpts of Chisholm’s revised study appeared in the pages of the *New York Evening Post* and *The New-York Herald*. *Poulson's American Daily*

⁷¹ Idem., 74.

⁷² Idem., 77-347.

⁷³ Idem., 75.

Advertiser featured reprints of the excerpts for Philadelphia audiences as well. The excerpts took up whole pages and multiple editions of the newspapers. Periodicals such as these now functioned for Chisholm as more than resources for advertising his work; now they circulated it as well. Not unlike the *Medical Repository*'s editors, Chisholm and his allies embraced the periodical's function as a forum for promoting and disciplining readers morally and epistemologically in major early republican seaport towns. Those long excerpts of Chisholm's work were accompanied by editorial commentary, which encouraged audiences to read Chisholm's use of evidence and language as the work of a "gentleman," "a correct and elegant scholar," who derived "great weight from an extensive practice of many years" as "*Inspector General of the Ordnance Medical Department in the West Indies.*"⁷⁴ The editor erased from Chisholm's character and credentials his involvement in the local plantation economy and position regarding the slave trade. Chisholm and his allies were now actively trying to adapt to an audience they viewed as a transnational collective of actors outside of northern Europe with forums, reading practices, use of testimony and codes of conduct they were trying to share.

The treatise also reflected a larger shift in perceptions of the therapeutic epistemologies that ought to guide the management of the expanding yellow fever crisis. More specifically, the shifting geography of yellow fever had opened up tensions among geographically scattered practitioners between a heightened impulse to share and export on the one hand, and localism on the other. Chisholm made very explicit his desire that

⁷⁴ *New York Evening Post*, 31 August 1803, September 3 1803 and September 20 1803; *New-York Herald*, 3 September 1803, 5 September 1803, 7 September 1803, 10 September 1803, 14 September 1803 and 21 September 1803; *Poulson's American Daily Advertiser*, 5 September 1803.

his “salutary” method should “be generally diffused” throughout North America, the West India Islands and India. He consciously framed his presentation of therapeutic approaches as not only “enlarged” but also “in a form more diffused.”⁷⁵ This latter descriptor suggested conscious attention to the widening geographic range of interconnected sites of warm climate fevers and, hence, potential audiences for his innovations in Grenada. Indeed, as we saw earlier, Chisholm’s therapeutic methods had traveled with his name through the increasingly dense webs of print, correspondence and conversation that now extended from Grenada and Great Britain into multiple islands in the Caribbean, the East Indies and up into the United States.

“Diffused” and “diffuse,” however, carried a double meaning. They simultaneously referred to the impulse to account for and manage variations in the use and reception of his practice. In his explanation of the format of his discussion of therapeutics, Chisholm wrote:

In treating this part of my subject, the views of the actual state of each colony, I have given, may be considered as too diffuse, and unnecessarily minute; but I have found the matter which presented itself, important; and the shades of variation are too considerable to remain unexamined in the investigation of morbid causes.⁷⁶

Chisholm’s choice in presenting his therapeutics reflected some of the challenges he was facing with the reception of his method. For each of those practitioners who identified dramatic ecological change and the need to look abroad for innovation, others reacted

⁷⁵ Chisholm, *An Essay on the Malignant Pestilential Fever: Introduced into the West Indian Islands from Boullam, on the Coast of Guinea, As It Appeared in 1793, 1794, 1795, and 1796*, xiii.

⁷⁶ *Ibid.*, xxi.

against what they saw as an omission of consideration of real and persistent differences in climates and constitutions within the landscape of yellow fever outbreaks. This was, after all, a period when many university-trained practitioners were reacting against the Enlightenment fashion of simplified, rational systems in therapeutic systems. In light of this larger development, practitioners who circulated practices among different sites of outbreaks walked a fine line between reconciling new ecological connections on the one hand and suffering accusations of thoughtless system-building on the other.⁷⁷

When John Wakefield Francis of New York commented on the influence of Chisholm's approach with mercury in the United States, he did so critically, a backlash against a perceived trend. Francis, among others, worried that North American physicians were importing a practice wholesale without proper attention to differences in climate and constitutions. "The climate in this country," Francis cautioned his readers, "is singularly unfavourable to the salutary operation of this medicine." He insisted that local transitions in weather did not match up with those Chisholm recorded in his work. Climatic elements particular to the continent thus "give the body a certain morbid predisposition, that renders it unable to withstand the influence of a mercurial course, which on the native of a more southern and temperate atmosphere, would at least prove not so injurious, and probably successful." Wakefield, furthermore, could not replicate Chisholm's findings through dissection. Nor had he learned of similar findings from colleagues in New York and Philadelphia. He concluded that "while the liver appears to be the most diseased organ in those who die of yellow fever in the West Indies, as Dr.

⁷⁷ On the tensions between system-building and empiricism around the turn of the nineteenth-century, see Paul Kopperman, "'Venerate the Lancet': Benjamin Rush's Yellow Fever Therapy in Context," *Bulletin of the History of Medicine* 78:3 (Fall 2004), 549.

Chisholm and others have declared, this important viscus seems to be in a remarkable degree exempt from derangement, in those who have died of the same disease in this country.” Because yellow fever affected the hepatic system differently in northern parts of the United States, mercury was, according to Francis, ineffective in those parts.⁷⁸

Francis’s account was ultimately a cautionary tale about the fate of localism in light of the shifting ecological relations between the West Indies and North American seaports. He feared that too many responded by replicating the regimens they discovered in “West-Indian” essays. For him, the ideal physician did not circulate and import a system. He attended to differences that existed in spite of the new circumstances. The ideal physician adapted, tailored or even rejected practices based on comparison of local meteorology and pathological investigations in the hospitals.

Local and regional variants in theories about the human frame also presented a challenge for the circulation of Chisholm’s therapeutic regimen. By the late 1790s, nervous theories about the body and disease began to take hold in Great Britain, the Americas and, eventually, the East Indies. The notion that a fever might, for example, be a product of overly excited nerves challenged more entrenched notions of putrefaction – notions that guided Chisholm’s therapeutic goals. The main principle here was not the evacuation of dangerous substances but alleviation of the cause and symptoms of nervous debility. Within the increasingly dense webs of correspondence and medical print, practitioners ranging from New York to Jamaica to Calcutta circulated and modified nervous theories of the kind articulated by William Cullen and his rebellious student John

⁷⁸ Francis, 442-443.

Brown.⁷⁹ What emerged, in turn, were struggles to reconcile both local ecological differences and local variations in ideas about the body.

Benjamin Rush, for example, admired Chisholm's generous administration of mercury. He displayed as much in his practice, publications and lectures to students.⁸⁰ The major difference between Rush and Chisholm lay in the rationale for their therapies. The sole principle of Rush's treatment was to restore vitality and alleviate symptoms caused by nervous debility. Mercury, accordingly, did not function as a purgative – nor was it central to his regimen. Rather, it took on a palliative function and played a secondary role to bloodletting. Rush's reasoning derived from his creative manipulation of ideas developed from his own schooling under Cullen as well as the works of Robert Jackson and Hector M'Lean, military surgeons who were turning hospitals in St. Domingue and Jamaica into new sites of innovation in treatments that rested on notions of vitality and excitability.⁸¹ As all of these men circulated their work, Chisholm had to contend with a growing number of practitioners who questioned the very premise on which his therapeutics were based.

⁷⁹ Scholars argue that it is very difficult to attribute notions of excitability and vitality to any one specific authority. Contemporaries modified them according to their own local circumstances. See, for example, Michael Barfoot, "Brunonianism under the Bed: An Alternative to University Medicine in Edinburgh in the 1780s," in William Bynum and Roy Porter, eds., *Brunonianism in Britain and Europe* (London: Wellcome Institute for the History of Medicine, 1988), 22-43; Christopher Lawrence, "Cullen, Brown and the Poverty of Essentialism," in Bynum and Porter, eds., *Brunonianism in Britain and Europe* (London: Wellcome Institute for the History of Medicine, 1988), 1-21.

⁸⁰ Rush Lecture Notes, 1797, Lecture 45, Benjamin Rush Manuscripts, Library Company of Pennsylvania; Rush, *Medical Inquiries and Observations: Containing an Account of the Biliary and Remitting and Intermittent Yellow Fever, as it Appeared in Philadelphia in the Year 1794. : Together with an Inquiry Into the Proximate Cause of Fever; and a Defence of Blood-letting as a Remedy for Certain Diseases*, Volume 4 (Philadelphia: Thomas Dobson, at the stone-house, no 41, South Second-Street., 1796), 89 and 219.

⁸¹ See Kopperman, 557-564.

All of the above circumstances altered the ways in which Chisholm engaged exchanges about therapeutics.⁸² Chisholm, for example, did not dismiss bloodletting in favor of high doses of mercury. Nor did he completely disagree with the principle of depletion on which it rested.⁸³ He found a more subtle way of critiquing the approaches developed by Rush. Chisholm criticized the “attempt to establish general rules” to circulate the practice of bloodletting wholesale across afflicted regions. He drew upon the editors of a familiar transregional platform, the *Medical Repository*, to develop this point: “Every epidemic season,” he quoted, “and every individual case, justly claims the right of deciding for itself. In one instance, blood-letting may be the anchor of hope; in the other, it may precipitate death.”⁸⁴ Chisholm used this espousal as a starting point for discussion of the sheer difficulty in circulating one particular “plan” with bloodletting. “Some practitioners in the West Indies I find have adopted the plan of Dr. Rush, but by no means with the wonderful success he has attributed to it.” He proceeded to describe how the “hot climate” and condition of “our military hospitals” rendered Rush’s particular plan ineffective in the West Indies.⁸⁵

Conclusion

Chisholm never ceased to revise and expand his work. He published modifications in 1809, 1815 and 1822. Like the series of publications and letters between 1795 and 1801, each new volume addressed new debates and sites of fever study. His activities reflected a persistent drive to manage and navigate an increasingly complex and

⁸² Chisholm, *An Essay on the Malignant Pestilential Fever: Introduced into the West Indian Islands from Boullam, on the Coast of Guinea, As It Appeared in 1793, 1794, 1795, and 1796*, xxi.

⁸³ *Ibid.*, 469.

⁸⁴ *Ibid.*, 341.

⁸⁵ *Ibid.*, 469.

unwieldy corpus of materials on the pandemic crisis. By the second decade of the nineteenth century, his work, like that of many other military practitioners, had migrated through multiple print and correspondence networks that now linked fever work in the West Indies, United States, Spain and even the East Indies.⁸⁶ In addition to British and American publications, his name, as we shall see, appeared in the footnotes of a growing number of Francophone and even Spanish works.

The odyssey of Chisholm's work reveals the complex legacies of the imperial medical corps that expanded in number and geographic presence during the Age of Revolutions. Over the course of a couple of decades, British military medicine became embedded in webs of networks and a corpus of literature that did not fit easily into categories like "imperial," "military," "colonial" or even "warm climates." Practitioners in different parts of the new international divide had, due to new material circumstances, transformed the military and naval apparatus into transnational resource. They modified the knowledge and practices cultivated in military and naval hospitals into a form "more diffuse."

⁸⁶ Colin Chisholm and David Hosack, *Observations on the laws governing the communication of contagious diseases, and the means of arresting their progress: read before the Literary and Philosophical Society of New-York, on the 9th of June, 1814* (New-York: Printed by Van Winkle and Wiley, 1814); Chisholm, *A Letter to John Haygarth... from Colin Chisholm... exhibiting farther Evidence of the Infectious Nature of this fatal Distemper in Granada during 1793, 4, 5, and 6; and in the United States of America from 1793 to 1805: In Order to correct the Pernicious Doctrine promulgated by Dr. Edward Miller and other American Physicians, relating to this Destructive Pestilence* (London: 1809); *Ibid.*, *A manual of the climate and diseases of tropical countries: in which a practical view of the statistical pathology, and of the history and treatment of the diseases of those countries* (London: Printed for Burgess & Hill, 1822).

Chapter 3

Revolutionary Migrations in Health: Francophone Refugees and the New Geography of Yellow Fever Medicine

Introduction

By 1806, the *Medical Repository's* forum on yellow fever and warm climates had acquired more Francophone and Spanish flavors. Alongside British, American and Anglo-American publications, the New York periodical began featuring a growing number of materials by French military doctors, Lavoisian chemists and translated excerpts of Spanish treatises the editors received via France. The readership of the yellow fever content expanded too, enjoying circulation in France, the Francophone Caribbean and Spain. This development was due to the activities of a recently settled immigrant whom the Samuel Mitchill and Edward Miller had welcomed into their inner circle: Doctor Felix Pascalis-Ouvière.

Pascalis-Ouvière's activities reveal the effects of another larger phenomenon unleashed by the Revolutionary Atlantic: the diaspora of Francophone refugees. Between the outbreak of the 1789 Revolution in France and the final loss in 1804 of France's most prized Caribbean colony, St. Domingue, as many as forty-five thousand refugees crisscrossed the Atlantic ocean between France, the Caribbean and up into North America. Among those many refugees were an assortment of medical writers: doctors, military and naval personnel, unlicensed healers and lay intellectuals. Pascalis-Ouvière was one such refugee. As they migrated through different parts of the Atlantic during the pandemics, these medical writers inserted themselves into the local communities of fever work cropping up in the Caribbean, US and southern Europe. As Pascalis-Ouvière's impact suggests, they had the potential to shape international medical relations in ways

that many Anglo-American, British military and even French military medical men did not.

This chapter uses the world of Pascalis-Ouvière to explore the impact of this diaspora on the management of the yellow fever pandemics. While Francophone refugees have not gone unnoticed in scholarship, their stories appear fragmentary at best. Historians of the American experience with yellow fever have addressed the role of the refugees fleeing from St. Domingue; however, they treat these medical actors as fleeting anomalies who are not part of the story of how Americans linked up with medical communities in the larger Atlantic world during this period. They show up during Philadelphia's famous outbreak in 1793 and quickly disappear from the historical record, overshadowed by narratives about the rise of Parisian clinical medicine in American medical and scientific culture¹ Likewise, historians of the European and colonial Caribbean experiences with yellow fever have focused primarily on interactions between colonies and the metropolitan centers of Paris. American seaports do not figure as centers in the European arenas of disease study. The heart of the problem, here, is medical historians' conceptualization of the Age of the Revolutions and its impact on French

¹ See, for example, J.H. Powell, *Bring out Your Dead: The Great Plague of Yellow Fever in Philadelphia in 1793* (New York: Time Life Books, 1949), 165-177; J. Worthes Estes, "Introduction: The Yellow Fever Syndrome and Its Treatment in Philadelphia, 1793," in J. Worthes and Billy G. Smith, eds., *A Melancholy Scene of Devastation: the Public Response to the 1793 Philadelphia Yellow Fever Epidemic* (Science History Publications, 1997), 12-13; Martin Pernick, "Politics, Parties and Pestilence: Epidemic Yellow Fever in Philadelphia and the Rise of the First Party System," in *Ibid.*, especially 122-123, 128; Simon Finger, *The Contagious City: the politics of public health in early Philadelphia* (Cornell University Press, 2012), 125 and 132. For a brief analysis of Pascalis-Ouvière's 1797 publication on yellow fever in Philadelphia, see W.S. Middleton, "Felix Pascalis-Ouvière and the yellow fever epidemic of 1797," *Bulletin for the History of Medicine* 38 (1964), 497-515.

medicine. Collectively, this scholarship privileges a traditional narrative about the rise of Paris as the preeminent center of medical innovation for Europeans and Americans.²

I want to bring this scholarship into better dialog with approaches developed by historians of the French Revolutionary Atlantic. Ashli White, R. Darrell Meadows and Allan Potofsky, among others, are expanding our concept of the geographies of movement and sociocultural transformations that constituted the French Revolutionary Atlantic. Whereas earlier scholarship has tended to treat connections between France and the US and France and the Caribbean separately, these scholars encourage us to view the Caribbean, American and European ports as densely interconnected land bases in the Francophone world. It was a dynamic multi-centered Atlantic world that shaped the pathways and networks of refugees. Those historians have likewise nuanced our picture of the impact of the diaspora by attending to refugees' agency in creating something new out of the experience of exile. Refugees did not simply import views and practices wholesale into their host communities. Nor were views and practices simply lost. Refugees' work, politics and socio-cultural status were contingent on the refugees' routes and the port communities they encountered.³

Using this framework, I argue that the refugee diaspora created a new type of Atlantic intermediary for international work on the problem of yellow fever. Not unlike

² Erwin H. Ackerknecht, "Anticontagionism between 1821 and 1867," *Bulletin of the History of Medicine* 26 (1948): 562-593; E. Heaman, "The Rise and Fall of Anticontagionism in France," *Canadian Bulletin of Medical History/Bulletin canadien d'histoire de la médecine* 12 (1995), 3-25.

³ Meadows, "Engineering Exile"; Idem, "The Planters of Saint-Domingue, 1705-1804: Migration and Exile in the French Revolutionary Atlantic," (PhD Diss: Carnegie Mellon University, 2004); Ashli White, *Encountering Revolution: Haiti and the Making the Early Republic* (Baltimore: Johns Hopkins University Press, 2010); Allan Potofsky, "The "Non-Aligned Status" of French Emigrés and Refugees in Philadelphia, 1793-1798," *Transatlantica. Revue d'études américaines. American Studies Journal* 2 (2006), 1-8.

the American and European figures we encountered in the previous chapter, medical refugees' migrations through different zones of yellow fever activity made the disease a prominent element in their material existence and work lives. Subsequently, their work on yellow fever became intimately intertwined with the cultural, political and social circumstances particular to their movements and experiences with asylum in the Atlantic World.

Pascalis-Ouvière journeyed through different parts of the French Revolutionary Atlantic – before and after he settled in the United States. As did, he managed to accrue social capital and forms of cultural and political dexterity that other medical writers in the Atlantic World did not have. He brought these perspectives to bear in his work on the yellow fever puzzle. His new contacts in the US and Europe, in turn, integrated that perspective into their work. Subsequently, he helped to reshape the relations other civilian and military practitioners were forging to study yellow fever. His story shows us that the impact of flight and asylum is not solely a story about fragmentation and loss. It is also a story about how medical writers remade the diaspora into a valuable resource for managing an international health crisis.

The Medicine of Flight

When Felix Pascalis-Ouvière escaped to the United States from St. Domingue in 1793, he brought with him a jumble of different ideological, geographical and medical experiences. He had studied university medicine, imbibed the principles of Lavoisian chemistry, roamed the Alps and southern Europe, and worked in a hospital in St. Domingue. He had been, at different times, a doctor, an activist against the French

Catholic Church, a military hospital surgeon and a government representative in revolutionary St. Domingue. Now he embarked on a new life in the United States.

Not all medical refugees could claim the same breadth of experience as Pascalis-Ouvière. Still, Pascalis-Ouvière's journey to Philadelphia demonstrates the type of medical mobility that had become possible for Frenchmen through the French and Haitian Revolutions. In order for us to understand what Pascalis-Ouvière brought to his work on yellow fever, we need to unpack what that mobility looked like and how it came into being.

Pascalis-Ouvière's career of medicine and migration began in southern France in the 1780s. He was born into a wealthy family attached to the royal government in Aix in 1762. The Frenchman immersed himself in learning from a very young age, completing classical studies by 1778. Pascalis-Ouvière eventually took up studies at the elite University of Montpellier. It was there that he began immersing himself in the pursuit of medicine and natural inquiry.⁴

The University of Montpellier provided Pascalis-Ouvière and fellow French students with a cosmopolitan environment for learning. The city and university sat in a nexus of international commercial and cultural interchange with Mediterranean Spanish and Italian towns. The centuries' old university had a long tradition of hosting itinerant

⁴ For a biographical sketch of Pascalis-Ouvière, see, Edwin Williams, "Pascalis-Ouvière, Felix," Edwin Williams, et al, eds., *The Treasury of Knowledge and Library of Reference*, Volume 3 (New York: C.C. Childs, 1850), 263-264.

doctors and scholars who traveled from different parts of Europe, in particular Spain, Italy and England. The tradition continued up into Pascalis-Ouvière's time.⁵

In addition to a cosmopolitan setting for study in southern Europe, Pascalis-Ouvière's education at the University of Montpellier provided him with opportunities to explore some of the new intellectual currents emerging in French medicine during the 1770s and 1780s. The university's medical faculty, for example, embraced new approaches and practices coming out of what historians have identified as the "chemical revolution." In the early 1770s, the French chemist Antoine Lavoisier and his circles began crafting new concepts about irreducible substances and matter and their compounds. Lavoisier developed the idea that that oxygen was the critical agent in combustion, calcination, and respiration. Irreducible substances –oxygen, nitrogen, etc, – composed all of nature. Lavoisier showed that any of these simple substances, as well as many of the various compounds they formed, could exist as gas, liquid, or solid. They represented states of matter, not fundamental elements.⁶

Investigators of disease began to integrate Lavoisier into the medical curricula of the University of Montpellier. They subsequently exposed students like Pascalis-Ouvière to experiments with a new epistemological approach to understanding disease. By adopting Lavoisier's framework, proponents reconceptualized the operations of the agent that caused disease. They developed the belief that any deleterious material could turn

⁵ On the cosmopolitan nature of Montpellier's student and faculty body, see James Livesey, "London by the light of Montpellier: scientific networks between Britain, northern Europe and the Languedoc (1706-1789)," *Studies on Voltaire and the Eighteenth Century* 4:4 (2010). pp. 85-102; Elizabeth Williams, *A Cultural History of Medical Vitalism in Enlightenment Montpellier* (London: Ashgate, 2003), 18.

⁶ Jan Golinski, "Chemistry," in Roy Porter, ed., *The Cambridge History of Science, Vol. 4, Eighteenth-Century Science* (Cambridge: Cambridge University Press, 2003), 381-388.

into a gas and harm people. The source of the disease lay with some disruption of the proper balance of the constitutive components of atmospheric air, the composite of gases that surrounded people and sustained life.⁷

The French Revolution transformed Pascalis-Ouvière's path in life following his time at Montpellier. It began with the Catholic Church in the late 1780s, when Pascalis-Ouvière stepped away from medicine and became entrenched in local feuds over the Church. He penned treatises on the corruption of the clergy, which resulted in his excommunication. He then got swept up in the political fervor of the Revolution, which, he later recalled, led to a falling-out with superiors in his royalist-leaning Catholic family.⁸

It was these new political circumstances that pushed Pascalis-Ouvière across the Atlantic and into the realm of military medicine in St. Domingue. Turmoil within France, as R. Darrell Meadows has shown, sent waves of French people to the Americas. In addition to the royalists who sought asylum in places like Great Britain and the United States, others simply fled out of personal and financial necessity.⁹ While coming to terms with his new predicament, Pascalis-Ouvière became acquainted with a military surgeon who was set on migrating to the opposite end of the French empire: St. Domingue.¹⁰ Pascalis-Ouvière left behind the personal and political turmoil of southern France for a new career in Port-au-Prince, St. Domingue.

⁷ For a very rich discussion of Lavoisier's views, including its application in medicine during this period, see Frederick Lawrence Holmes, *Lavoisier and the Chemistry of Life: An Exploration of Scientific Creativity* (Madison: University of Madison Press, 1987).

⁸ Williams, "Pascalis-Ouvière, Felix," 263.

⁹ Meadows, "Engineering Exile."

¹⁰ Williams, "Pascalis-Ouvière, Felix," 264.

Port-au-Prince exposed Pascalis-Ouvrière to an environment and medical culture somewhat different from what he had experienced in France. In spite of the colony's strong ties to the medical and scientific centers of metropolitan France, decades of French imperial warfare and colonization in the Caribbean had stimulated the growth of institutions, disciplines and knowledge that were distinctly colonial in character.

The island's disease ecology, to begin with, was unlike what Pascalis-Ouvrière had experienced back in continental France: a comparatively warm climate, cultivation of sugar and coffee plantations, huge population of Africans and African-creoles in addition to a large military and naval presence. The landscape manifested diseases that Pascalis-Ouvrière would not have encountered back in France – diseases like yellow fever.¹¹ By the time of Pascalis-Ouvrière's arrival, medical writers had developed a sizeable corpus of literature on the island's medical topography. We saw some examples of this literature in the previous chapter.

Through imperial expansion over the course of the eighteenth century, France had also enveloped St. Domingue into an extensive network of military and naval medicine. Alongside royal public health officials, medical bureaucrats and lay medical writers, the military and navy were a strong presence in the medical culture of St. Domingue's urban centers. Le Cap Francais and Port-au-Prince, the biggest port cities of the island, featured

¹¹ James E. McClellan, *Colonialism & Science: St. Domingue and the Old Regime* (Chicago: University of Chicago, 2010), 23-33.

imposing hospital facilities alongside libraries and the private chambers of civilian practice.¹²

That branch of French medicine manifested itself in the form of specialized medical schools and large hospitals that catered to the armed forces. Well before the advent of Paris Clinic in the 1790s, the military and naval facilities provided surgeons and doctors with opportunities to dissect bodies and cultivate anatomical pathological approaches to studying disease. In St. Domingue, practitioners began applying this approach to the study of diseases particular to the island, including yellow fever.¹³ By the 1790s, practitioners in the island had not only produced a sizeable corpus of medical topographical studies of St. Domingue. They had elaborated techniques for studying yellow fever's pathology through mass dissection.

Pascalis-Ouvière would not have been able to settle into the local medical establishment like his imperial forbears. The coming of revolution to St. Domingue brought a radically altered political context in which the medical administration and scientific societies had to operate. The circumstances exposed bitter divisions among medical figures over revolutionary politics, resulting in the breakdown of the communities and institutes that fostered the study of disease. Scientific societies, private libraries, private practices and socio-intellectual networks suffered even more in 1791. A series of slave insurrections followed on the heels of the French Revolution. They ripped

¹² James E. McClellan and François Regourd, 'The Colonial Machine: French Science and Colonization in the Ancien Regime,' *Osiris* 2nd ser., 15 (2000), 32. See also McClellan, *Colonialism & Science*, 75-109 and 128-147; Pierre Pluchon, *Histoire des médecins et pharmaciens de marine et des colonies* (Toulouse : Privat, 1985), chap. 4.

¹³ Laurence Brockliss and Colin Jones develop this important point about the military and naval medical services in the eighteenth century. See Brockliss and Jones, *The Medical World of Early Modern France* (Oxford: Clarendon Press, 1997), 689-700.

through the island, spilled over into the island's major seaports and escalated into the Haitian Revolution. Streets turned into war zones and caused thousands of residents to flee from the cities and from the island altogether. Many physicians, surgeons and lay medical figures subsequently dispersed through the Atlantic World.¹⁴

Pascalis-Ouvière's flight involved an odyssey through multiple parts of the Atlantic World. Once again, he put aside medicine and joined liberal political activists for whites and free coloreds. At the behest of Jean-Pierre Boyer, one of leaders, the doctor repaired to Paris in order to solicit aid in quelling the insurgency of the slaves. He arrived with his commission just prior to the arrest and beheading of the king. The flood of Jacobinism overwhelmed him during his stay, and he quickly made an escape undercover to London in order to return to the Caribbean. He was apprehended in Kingston, Jamaica by the governor and subjected to a rigorous interrogation about his ties to the events in both Paris and St. Domingue. Rather than find a way to return to St. Domingue, Pascalis-Ouvière decided to escape his predicament by cancelling his connection to the island's turmoil. He penned a final letter to one of his political contacts in St. Domingue and pled for help in finding refuge elsewhere.¹⁵ The governor in Kingston found him an alternative: the United States. The country's neutral status had made it a prime destination for a variety of French citizens. Pascalis-Ouvière secured a

¹⁴ McClellan, *Colonialism and Science*, 273-288.

¹⁵ Pascalis-Ouvière kept a copy of that letter. See Pascalis-Ouvière to Pierre Pinchinat, 8 March 1793 (Kingston). MS. Fol. Copies of letters and papers, mostly concerning yellow fever and the Medical Repository. New York Academy of Medicine Rare Book and Historical Collections. Pierre Pinchinat was one of the leaders of the free men of color in St. Domingue.

letter from the governor that cleared him of “stigma in this or any other place he may have occasion to visit.” In 1793 he boarded a British vessel bound for Philadelphia.¹⁶

Collectively, the French, Haitian and American Revolutions generated new patterns in circum-Atlantic movement and political mobility in the Francophone Atlantic. That context created opportunities for medical men like Pascalis-Ouvière to piece together elements of local medical cultures that emerged in different parts of the French empire in the mid- to late eighteenth century. Through these circumstances Pascalis-Ouvière also developed a political and cultural identity that defied rigid national and ideological categories. By the time he arrived in Philadelphia, his revolutionary fervor had given way to survival strategies. His political activism ceased when he entered the United States. Pascalis-Ouvière’s medical world, in sum, had not become embedded in particular ideology. Rather, it became embedded in an outlook that was a product flight.

The Disease of Flight and Asylum

As Pascalis-Ouvière and other medical refugees embarked to the new country, asylum reshaped the material and socio-political underpinnings of their medical worlds. Yellow fever emerged as a central object in this process – with new form and meaning. It became deeply intertwined with their new lives.

The disease, to begin with, became a prominent element in the material experiences that newly defined Pascalis-Ouvière’s world. As we saw in Chapter 1, the mass migrations of refugees to the United States coincided with the onslaught of new

¹⁶ William Bullock, Letter Concerning Felix Pascalis Ouvière, 7 May, 1793 (Kingston). MS. Fol. Copies of letters and papers, mostly concerning yellow fever and the Medical Repository. New York Academy of Medicine Rare Book and Historical Collections.

outbreaks of yellow fever in both St. Domingue and hosting American seaports. A particularly severe outbreak hit Philadelphia very shortly after Pascalis-Ouvière's arrival in the summer of 1793 – the first outbreak in the city since 1762. Up to five thousand of the city's inhabitants, locals and refugees alike, died that autumn. Other outbreaks followed in subsequent years, coinciding with a string of outbreaks in nearly every other port that hosted refugees in addition to their points of departure in St. Domingue.¹⁷

The pandemics demanded a heavy increase in medical manpower in both private practice and health relief facilities. Requests for assistance came from local American mayors and governors, relief societies but also the American-French relief organizations and French consuls who were all likewise engaged in managing the refugee crisis.¹⁸

The outbreaks, moreover, became tangled up in tensions over the socio-political status of refugees. Some of those arriving in the midst of the yellow fever crisis were lucky enough to spare possessions and funds as well as draw upon familial and business ties to their ports of destination. These were useful means of rebuilding capital during asylum, particularly given Americans' divided stance on the political developments in the Francophone Atlantic.¹⁹ Others, like Pascalis-Ouvière, arrived with little more than letters

¹⁷ K. Patterson, "Yellow Fever Epidemics and Mortality in the United States, 1693-1905," *Social Science and Medicine* 34.8 (1992), 858.

¹⁸ French consuls stationed in afflicted American ports wrote back to their superiors in Paris about the outbreaks and their quest for resources to care for ailing refugees as well as French sailors coming from the Caribbean who tried to put into American harbors. We see this in the letters of the US-based commissioners to the French Minister of Foreign Affairs. See, for example, Legation de Philadelphie Affaires Etrangères Finances No. 6, 7 May 1794. Reprinted in "Correspondence of the French Ministers to the United States, 1791-1797," Frederick J. Turner, ed., *Annual Report of the American Historical Association for the Year 1903* (Washington, D.C.: Government Printing Office, 1904), 337.

¹⁹ R. Darrell Meadows discussed the role of pre-existing personal and business ties in refugees' strategies to build capital during asylum (or in order to secure passages back to France or other parts of the Caribbean). Meadows, "Engineering Exile." Allan Potofsky explored the ways in which these larger fluctuating political views shaped refugees' strategies in engaging print and social circles. He argued that a large number of refugees tried to adapt to their circumstances by "keeping with the American 'struggle for

that could testify to their origins and potentially reduce suspicions among an American population.

Political relations between the US and revolutionary France did not smooth over. They remained in flux, deteriorating in the latter half of the decade, when the Federalists came to power and engaged in a quasi-war with France. Refugees met pronounced xenophobia during this period – directed in particular toward refugees thought to harbor radical political views. The xenophobia even manifested itself in 1798 in the form of legislation in 1798: the Alien and Sedition Acts. The laws subjected refugees to rigorous interrogation and, for some, deportation. Such a situation would have only compounded Pascalis-Ouvière’s problems.²⁰ Indeed, as he lamented two decades later, these were circumstances that, collectively, transformed his life into an ongoing struggle to “shake off a least before I die the odious appellation of a foreigner.” As long as political relations remained in flux in the Atlantic World, Pascalis-Ouvière felt he walked a fine line between safety and acceptance on the one hand and hostility and suspicion on the other.²¹

The yellow fever pandemics added pressure to medical refugees’ struggles to work out their status in relation to American ports. Debates over the cause of such an unprecedented pandemic crisis became conflated with much larger debates over American seaports’ relationship to the Francophone Caribbean. The refugees stretched the resources local public and private relief organizations needed to invest in managing

neutrality.” See Potofsky, “The Non-Aligned Status of French Emigres and Refugees in Philadelphia, 1793-1798,” *Transatlantica* 2 (2006), 1-2.

²⁰ *Ibid.*, 6; White, 120-123.

²¹ Felix Pascalis-Ouvière communicated this deep-seated frustration to his wife, Eliza Pascalis in 1813, when a member of Congress rejected his petition to serve as surgeon for the US Navy because his name had a “French sound in it.” Tellingly, Pascalis-Ouvière actually connected his efforts to cast aside his “Foreigner” status to his “useful employment” and “public merits” in medicine in the United States. More on that strategy below. See Felix Pascalis to Eliza Pascalis, 16 December 1813. Ms. Fol. Copies of Letters and Papers, New York Academy of Medicine Rare Book and Historical Collections.

the effects of the outbreaks.²² The political atmosphere created by the Quasi-War likewise stirred up discussions about whether or not the country's political relationship to revolutionary France was to blame for the outbreaks.²³ In *A Sketch of the Rise and Progress of the Yellow Fever*, published in 1799, the Philadelphia physician William Currie weighed in on a heated debate in local and trans-regional print over whether or not the West Indies was the common origin of the disease. War and rebellion in St. Domingue, he insisted, were what ended a decade without any traces of the disease in the sugar island or in the United States.²⁴ The College of Physicians in Philadelphia agreed, stating that the fever "was easily traced to some persons who were lately arrived from some of the West Indies, where it was epidemical."²⁵ Refugees were not only potentially suspect in their political views; they were culprits in the American republic's health crisis.²⁶

The outbreaks, in sum, amplified the very animosities medical refugees needed to contend with as they tried to attain some degree of stability in their new lives. We see this inflected in refugees' initial struggles to rebuild their practices and livelihoods. In order to promote their practice and win support, many took to the same public forums that featured disputes over disease and the presence of exiles. Newspapers in Charleston, Norfolk, Philadelphia, New York and New Haven filled with advertisements for the medical services of recently arrived refugees – in both English and French. One Dr.

²² For a discussion of the strains of the refugee crisis on private and public philanthropy in American cities, see White, 61-78. She made this point about the yellow fever outbreaks on page 76.

²³ The Quasi-War was an undeclared war fought mostly at sea between the US and Great Britain against the French Republic from 1798 to 1800.

²⁴ William Currie, *A Sketch of the Rise and Progress of the Yellow Fever* (Philadelphia 1799), 60.

²⁵ The College of Physicians, *Facts and observations relative to the nature and origin of the pestilential fever, which prevailed in this city, in 1793, 1797, and 1798* (Philadelphia: Thomas Dobson, 1798), 80.

²⁶ Pernick, "Politics, Parties and Pestilence," 121-127; Andy Doolen, *Fugitive Empire: Locating Early American Imperialism* (Minneapolis: University of Minnesota Press, 2005), 82-84.

Courbe, for example, publicized his expertise in treating yellow fever, observing that the epidemic in Philadelphia in 1793 could have been averted had the “St. Domingo” method of treatment been implied. It is not clear from the advertisement what Courbe actually meant by the “St. Domingo method.” What is clear is that Courbe was converting his ties to St. Domingue – a nearby seat of disease and violence – into something positive, if not superior, for potential local patrons.²⁷

In the context of the political tensions surrounding the refugee crisis, such uses of Dominguan identity also served to neutralize any potential political stigma. “Doctor George Chreffwa,” for example, appealed to New Haven inhabitants during the yellow fever crisis in 1794 as a victim “who made his escape from the horrible massacre at Cape-Francois” and now came before potential victims of yellow fever with “the method of treating it in the West-Indies, and other places where it has prevailed.” Chreffwa was trying to cultivate sympathy and patronage. Contrasting two associations with the West Indies – slave “massacres” and European colonial medicinal knowledge – also signaled to Americans that these refugees were not importing turmoil. Their West Indian identity was connected to benevolent seasoned skill and knowledge.²⁸

Yellow fever, by virtue of its severity and relationship to the “foreigner” status of refugees, became an object at the center of medical figures’ struggles to build new social, cultural and political capital in the United States. As the above advertisements suggest, medical refugees did not react to their situation in defeat. Rather, many responded by trying to build something new and positive. Their activities, as we shall see presently,

²⁷ *Baltimore Daily Intelligencer*, 24 December 1793.

²⁸ *Connecticut Journal*, 8 October 1794.

would have a significant impact on the resources for health management in the United States.

Building Fever Work out of Asylum

Shortly after his arrival, Pascalis-Ouvière began working out his status in asylum by immersing himself in work on the local disease crisis. He, like other medical refugees, set about converting his “foreigner” status into health management resources for communities in US seaports. The result was the creation of new local and international resources for work on the problem of yellow fever.

On the eve of the French and Haitian Revolutions, Pascalis-Ouvière would have found in the United States semblances of the medical cultures he had encountered in France and St. Domingue. Elements of continental French medicine and natural philosophy existed in Philadelphia. While many of the nation’s medical elite tended to study in Great Britain during this period, many also drew upon developments in natural inquiry from continental France. Lavoisian chemistry was on the rise in American medicine by the 1790s. Americans were exposed to different threads of chemical analysis in the eighteenth century, but the new ideas and practices that emerged out of continental France in the 1770s gained a particularly enthusiastic following in the American republic’s northeastern seaports. Americans imported treatises from Paris and even picked up ideas by traveling to the French metropole. By the arrival of the refugees,

Lavoisian chemists had come to dominate the local Chemical Society in Philadelphia as well as the natural philosophy curriculum in the nation's young medical schools.²⁹

Philadelphia also enjoyed some direct scientific and medical relations with St. Domingue. In the 1770s and 1780s, the topography and populations of the thriving colony piqued American intellectuals' curiosity. In November of 1789, for example, the editor of the periodical *American Museum* republished an article by the St. Dominguan intellectual Moreau de St. Mery: "Character of the Creoles of St. Domingo." In between articles about other curiosities in the world, the editor presented Philadelphia readers with ideas about the impact of the "torrid zone" on the character and constitutions of those who were born on the island.³⁰

As this article's authorship indicates, Philadelphia's direct connections to the island's scientific society helped to satisfy some of this curiosity. The American Philosophical Society held close ties to the Cercles des Philadelphes in Cap Francais. The Cercles des Philadelphes, in fact, had modeled itself after the American Philosophical Society. The St. Dominguan society's founders turned Benjamin Franklin and Benjamin Rush into corresponding members and sent local pamphlets about the island's medical topography and disease phenomena to the American Philosophical up until the height of

²⁹ John C. Greene, *American Science in the Age of Jefferson* (Ames: Iowa State University Press, 1984), 158-187. Denis I. Duveen, and Herbert S. Klickstein, "The Introduction of Lavoisier's Chemical Nomenclature into America," *Isis* 45.141 (1954): 278-92.

³⁰ Moreau de St. Mery, "Character of the Creoles of St. Domingue," *The American Museum or Repository of Ancient and Modern Fugitive Pieces, Prose and Poetical* 6 (November 1789), 359-361.

the French Revolution.³¹ Philadelphia, in sum, was already a node in the French Atlantic networks of disease study – albeit, a peripheral one.

The refugee crisis changed the character and function of that international node. As he navigated opportunities and resources for working on the problem of yellow fever, Pascalis-Ouvière ended up participating in the process of building new institutions, networks and disciplines for yellow fever in and near Philadelphia.

Pascalis-Ouvière became attached briefly to the creation of an institution for healthcare and study: the Bush Hill hospital. It was the first of a string of hospitals that emerged along the eastern seaboard between 1793 and 1797 in Philadelphia, Charleston, Norfolk and New York City.³² Generally speaking, hospitals were unusual neither in the United States nor the French empire. What distinguished these hospitals were the purpose, sources of patronage, personnel and character of practice.

Such hospitals were products of negotiations among local governors, French consuls and ministers as well as private relief organizations that represented local Francophone and non-Francophone communities. Bush Hill was originally an abandoned private estate, which was taken up by a local committee consisting of the mayor, local Anglo-American philanthropists and Stephen Girard – a wealthy migrant from St. Domingue who had settled in Philadelphia before the French Revolutions.³³ After the outbreak peaked, the estate's hospital function did not simply lapse. On February 1, 1794, the French Minister bought it on behalf of the French Republic and transformed it

³¹ McClellan, 195-197 and 226-227.

³² Letter from Commissioners to French Minister of Foreign Affairs, 7 May 1794. Reprinted in "Correspondence of the French Ministers to the United States, 1791-1797," 337.

³³ Powell, 140-160.

into a “French hospital” for the service of sick refugees and sailors arriving from fever-ridden St. Domingue.³⁴ The result was an institution that was neither solely military nor private/philanthropic in function. It was the product of different international sources of patronage.

Because of the institutions’ politically ambiguous status, they catered to a mix of local American and refugee patients. Even though the committee initially established Bush Hill for local citizens, the Minister of the French Republic made repeated requests to acquire beds for impoverished refugees, French sailors and soldiers housed in the local prison³⁵ and “wounded Frenchmen who lately arrived from Cape-Francois.”³⁶ The hospitals likewise drew in a mix of refugee and local practitioners. They provided local physicians with opportunities to practice medicine and benevolence. The institutions also gave former practitioners in the imperial hospitals of St. Domingue opportunities to ply their old trades and reclaim status as servants to the health of the populace. As institutions that partially served the French Republic, these hospitals would have been familiar sources of social and financial gain to those refugees.

Bush Hill, for example, introduced Pascalis-Ouvière to the work of another refugee: Jean Devèze. Devèze had been the chief surgeon to the military based in Cap Français. Like Pascalis-Ouvière, the surgeon arrived in Philadelphia in the summer of 1793, just prior to the famous outbreak in the capital. When yellow fever broke out and

³⁴ Committee to Attend to and Alleviate the Sufferings of the Afflicted with the Malignant Fever, *Minutes of the Proceedings of the Committee, Appointed on the 14th September, 1793, by the Citizens of Philadelphia, the Northern Liberties, and the District of Southwark, to Attend to and Alleviate the Sufferings of the Afflicted with the Malignant Fever Prevalent in the City and Its Vicinity* (Philadelphia: Philadelphia: R. Aitken & Son, 1794), 187.

³⁵ *Idem*, 29.

³⁶ *Idem*, 150.

instigated the construction of hospital facilities, Devèze decided to apply for the post through Stephen Girard, who, as a former resident of Cap Francois, had contacts who could vouch for Devèze's character.³⁷ When the French Minister took over the hospital facilities for the French Republic, Devèze similarly appealed to the Minister, this time with his credentials as both a physician at Bush Hill and a public health servant to the French government. The hospitals may have been temporary. As we shall see later, however, the ties and social stature refugees forged through the hospitals were not.

Refugees also helped to reorganize disciplines and practices in disease study. As the outbreak in Philadelphia started to wane, Devèze began applying a discipline he had learned in the military hospitals of the tropics: anatomical pathology. In contrast to the St. Domingue, which provided ample material for this type of disease study, dissection and anatomical pathology were comparatively limited in practice in the early republic. Hospitals were generally smaller, private and characterized by Christian charity. Prior to the outbreak, a military surgeon like Devèze would not have been able to perform this type of work in Philadelphia on a large scale.³⁸ The pandemics created a different set of material and political circumstances for Devèze. Large-scale mortality from a hemispheric disease and an international jumble of poor victims' corpses in Bush Hill's

³⁷ Girard wrote of Devèze: "Dr. Devèze appears to be a professional character, and that from the information he has received of his abilities and practice in Cape Francois, from persons who are intimately acquainted with him at that place, he believes him well qualified to perform the duties of a physician at the Hospital at Bush Hill." Committee to Attend to and Alleviate the Sufferings of the Afflicted with the Malignant Fever, 21.

³⁸ John Harley Warner and Charles Rosenberg have both made this point about American hospitals in the eighteenth and early nineteenth century. Warner argued that the lack of opportunities to dissect bodies was one of the reasons many Americans traveled to Paris in the mid-nineteenth century. They had access to autopsy material there. The hospitals in post-revolutionary France were larger, medicalized and followed more lenient policies in dissection. Warner, *Against the Spirit of System: The French Impulse in Nineteenth-Century American Medicine* (Baltimore: Johns Hopkins University Press, 1998), 34-43; Charles Rosenberg, *The Care of Strangers: the Rise of America's Hospital System* (New York: Basic Books, Inc., 1987), 47-68.

wards presented Devèze with materials and space to perform dissection, study the organs and tissue of victims and compare individual cases.

In order to tailor and validate his choice in therapeutic intervention, Devèze opened bodies of the deceased to correlate change in tissue and organs with the symptoms he had charted during treatment. When he set about preparing a publication on his findings, Devèze took his studies and organized them into eighteen “observations.” They appeared at the end of treatise that also included a topography of Philadelphia, the course of the epidemic and his approaches in therapeutics. One such observation followed “a man between thirty-six and thirty-eight years of age” from arrival to the hospital on September 29 all the way to the autopsy table on October 1. He guided readers through his study of the patient’s physical features and “bilious temperament,” recreating the course of the symptoms, the therapeutic agents he applied and when they were used. Seamlessly, he moved into the autopsy, exploring the state of “the membranes of the brain,” the texture of the lungs and the color of the blood.³⁹

Through publication, Devèze helped to transform the place of knowledge from French Caribbean military hospitals in American medical culture. Whereas the research from French Caribbean military hospitals had once been an object of curiosity among intellectuals in Philadelphia, they now became a part of Philadelphia’s disease experience. In 1794, Devèze ultimately packaged his findings into a resource for both Anglo-American citizens and Francophone audiences in Philadelphia. *An Enquiry Into, and Observations Upon the Causes and Effects of the Epidemic Disease, Which Raged in*

³⁹ Jean Devèze, *An Enquiry Into, and Observations Upon the Causes and Effects of the Epidemic Disease, Which Raged in Philadelphia from the month of August till towards the Middle of December, 1793* (Philadelphia: Parent, 1794), 74-76.

Philadelphia from the month of August till towards the Middle of December, 1793

appeared in both English and French: French on one page, English translation on the other. Devèze also presented himself to readers as “master in surgery, from cape francais, physician of the hospital at Bush-Hill, Surgeon-Major and Principal Physician of the Military Hospital Established by the French Republic of Philadelphia.”⁴⁰ In so doing, Devèze signaled to readers that this was a text that could appeal to diverse sectors involved in the health crisis: citizens of Philadelphia, fellow refugees from St. Domingue and members of the revolutionary government. Local audiences subsequently appropriated Devèze’s findings and integrated them into their studies of the disease.⁴¹ However uneasily, Devèze had helped to transform Philadelphia into a new node of activity in French military medicine.

Pascalis-Ouvière ultimately found a home in another discipline of yellow fever study that was cropping up in town: chemistry. Collectives of local chemical literati were interested in harnessing the tools of Lavoisian chemistry to develop explanations for the disease and ideas for management.⁴² They believed that the perspectives pioneered by Lavoisier would deliver a major breakthrough in the study and management of yellow fever. A revolution in the conceptualization of matter would expose the chemical makeup of the matter that caused the disease. In *Treatise on Yellow Fever*, for example, a young medical writer in New York named Joseph Browne commented on the potential of chemical research: “We are now able to analyze the atmospheric air [...] Which instead

⁴⁰ See title page.

⁴¹ See, for example, Valentine Seaman, *An account of the epidemic yellow fever, as it appeared in the city of New-York in the year 1795. Containing, besides its history, &c., the most probable means of preventing its return, and of avoiding it, in case it should again become epidemic* (New York: Printed by Hopkins, Webb & Co. no. 40, Pine-Street, 1796), 17-18.

⁴² Catherine O’Donnell Kaplan, *Men of Letters in the Early Republic: Cultivating Forums of Citizenship* (Chapel Hill: University of North Carolina Press, 2008), 93-94.

of being a simple element, is found to be a chemical compound, a knowledge of whose principles becomes the more interesting, as nature has made them her principal agents in most of her operations.”⁴³ The physician Samuel Mitchill concurred. In *Nomenclature of the New Chemistry*, Mitchill wrote of chemistry’s benefits to the study of the era’s new disease problems. “The doctrines of poisons and contagions,” he wrote, “will be as intelligible as those of digestion and respiration.”⁴⁴ Subsequently, regional medical and chemistry societies began sponsoring orations and essay contests on the subject. Mitchill likewise took an interest in integrating such work in his international platform for yellow fever study: *The Medical Repository*.⁴⁵

These activities reawakened Pascalis-Ouvière’s enthusiasm for a discipline he had begun to explore back in continental France. Given Pascalis-Ouvière’s situation in asylum, moreover, familiarity with Lavoisian chemistry, his status as a lettered medical writer and his linguistic skills became potentially valuable sources of social gain. Pascalis-Ouvière combined these skills and experiences to create a new role for himself: turning the New Chemistry into a tool for dealing with yellow fever in the Atlantic.

His initial foray into this sphere of activity came with the publication of his *Medico-Chymical Dissertation on the Causes of the Epidemic Called Yellow Fever*. The treatise originated as a response to an essay contest from the Medical Society of Connecticut on the question: “*What are the chymical properties of the effluvia of*

⁴³ Joseph Browne, *Treatise on the Yellow Fever* (New York: from the Office of the Argus, 1798), 6-7.

⁴⁴ Samuel Latham Mitchill, *Nomenclature of the New Chemistry* (New York: T. and J. Swords, 1794), 11.

⁴⁵ Sidney M. Edelstein, “The Chemical Revolution in America from the Pages of the *Medical Repository*,” *Chymia* 5 (1959), 155-179. See also Thomas Apel, “Feverish Bodies, Enlightened Minds: Yellow Fever and Common-Sense Natural Philosophy in the Early American Republic, 1793-1805,” (PhD. Diss., Georgetown University, 2012), 100-105.

contagion of the epidemic of New-York, in the year 1795; what its mode of operation on the human body; and does said epidemic differ from the usual fevers of this country except in degree?" Pascalis-Ouvière looked to one of Lavoisier's irreducible substances for an answer: caloric. Caloric was heat that Lavoisier had imagined as nearly weightless fluid that moved from bodies of higher temperatures to bodies of lower temperatures. It figured in a broad range of chemical reactions, especially those that involved the transition of matter from one state to another.⁴⁶ Ouyiere argued that caloric caused yellow fever and other similar diseases. If present in sufficient quantities, the caloric would generate the decomposition of blood. Caloric would raise the temperature of the blood to such an unusually high degree, spreading through the body and causing the harmful disease. After all, he reasoned, caloric abounded in the hot months of summer and early fall, precisely when yellow fever occurred.⁴⁷

Pascalis-Ouvière's view never gained wide reception. In fact, Samuel Mitchill criticized it in the *Medical Repository*.⁴⁸ Still, Pascalis-Ouvière's contest entry was significant, because it won him attention among medical literati. He used the essay contest and Mitchill's rebuke as opportunities to enter print forums and local circles devoted to chemical analysis of the disease and its potential antidotes. He joined the Chemical Society of Philadelphia. He entered into regular correspondence with, among others, Mitchill, Miller and Benjamin Rush. Other refugees joined the growing circle, including Louis Valentin, a former military doctor and professor of medicine residing in

⁴⁶ For a discussion of Lavoisier's concept of "caloric," see Holmes, 416-438.

⁴⁷ Felix Pascalis-Ouvière, *Medico-Chymical Dissertation on the Causes of the Epidemic Called Yellow Fever* (Philadelphia: Snowden and M'Corkle, 1796).

⁴⁸ "REVIEW: Ouyière's *Medico-Chymical Dissertation on the Causes of the Epidemic Called Yellow Fever*," *Medical Repository* First Hexade 1:1 (1797), 88-94.

Norfolk. Pascalis-Ouvière also continued to publish. By the end of the decade, he had produced a new treatise, an oration and a short essay for the *Medical Repository*.⁴⁹

Pascalis-Ouvière and his new circles subsequently transformed these exchanges and platforms into resources for ideas and practices they could adapt and then circulate. Through his interactions with Samuel Mitchill, for example, Pascalis-Ouvière revised his views on disease causation and nuanced his ideas for therapeutic intervention. He began experimenting with Mitchill's concept of "septon," which Mitchill identified as a gaseous element that derived commonly from "animal putrefaction." Mitchill noted, from his correlation of writings from different sites of outbreaks in the Americas, that yellow fever tended to occur in the same places that favored the production of "septon": "large cities [where] it is generally most abundant, by reason of the greater collection, along some of their streets, sewers, wharfs, docks, &c. of those materials, which afford it, and on account of the difficulty of ventilation [...] which allows the noxious vapours to settle there." It was a view on the local origins of disease crafted out of Lavoisian principles. Mitchill subsequently began promoting new modes of prevention, including the practice of cleansing spaces with alkaline-based substances.⁵⁰

Pascalis-Ouvière cast aside his earlier view and embraced Mitchill's concept. Beyond that, he helped Mitchill create platforms for the promotion of their program and constellation of ideas. In 1800, for example, Pascalis-Ouvière published a public letter to Mitchill in the *Medical Repository*. He wrote: "Professor Mitchill has proved to the

⁴⁹ Pascalis-Ouvière, *Annual Oration, Delivered before the Chemical Society of Philadelphia, January 31st, 1801* (Philadelphia: John Bioren, 1802). According to the oration, Pascalis-Ouvière was by then vice president of the society. Ibid., "Observations of the Yellow Fever: Communicated in a Letter from Dr. Felix Pascalis to Dr. Mitchill, dated Philadelphia, Nov. 11, 1799," *Medical Repository* First Hexade 3:4 (May, 1800), 344-351.

⁵⁰ Samuel Latham Mitchill, *Remarks on the Gaseous Oxyd of Azote or of Nitrogene* (New York: T. and J. Swords, Printers of the Faculty of Physic of Columbia College, 1795), 13-14.

world what are the sources, combinations, and venomous effects of septon (azote). The identical nature of our epidemic, in different years and places proclaims the truth of the discovery, and I adhere to the doctrine.” He added, that, although they were starting to dismantle ideas about the importability of yellow fever, “The field of chemical inquiries is not exhausted.” He invited readers to use the tools of chemical analysis to help nuance these views on the local origins of the disease.⁵¹

The medical world Pascalis-Ouvière helped to build was not a product of ideas imported wholesale. Nor did it simply involve assimilation. It was a dynamic process that involved negotiations, adaption and selectiveness. He and others had helped to build new centers of interchange and knowledge production in the Atlantic World.

Transatlantic Intermediaries

At the dawn of the new century, a new geopolitical order emerged in the Atlantic World. The radical phase of the French Revolution subsided. Napoleon Bonaparte came to power and set about revamping Revolutionary France into a new empire. Unlike the droves of refugees who embraced this regime change as an opportunity to return “home”, though, Pascalis-Ouvière seemed set on remaining in the United States.⁵² As the tide was turning in France and Europe, he married into a local Anglo-American family, became naturalized and removed the very French “Ouvière” from his last name. Dr. Pascalis also busied himself more than ever with local medical work, expanding his activities in practice, scientific sociability and even taking on an active role in board of health politics.

⁵¹ Pascalis-Ouvière, “Observations of the Yellow Fever: Communicated in a Letter from Dr. Felix Pascalis to Dr. Mitchill, dated Philadelphia, Nov. 11, 1799,” 346-347.

⁵² For discussion of this development in movement of refugees, see Potofsky, 6-7.

Only in 1805, in the wake of yellow fever's appearance in the Mediterranean and southern Spain, did Pascalis decide to pay a visit to continental Europe.

In light of the new geography of yellow fever, the geography of fever study and debate began to shift. The government and medical faculties in Napoleon's France took a particularly keen interest in the disease. The outbreaks began to take a toll on the process of postrevolutionary stabilization and repositioning the republic as a new empire in a shifting global order. The disease delivered a devastating blow to the French campaigns to restore order in St. Domingue in 1802-1803, killing troops by the thousands. Now the disease was encroaching on France's neighboring spheres of influence and expansion in southern Europe. Napoleon's government and metropolitan medical societies responded by enlisting physicians and health officers from home and abroad to publish on the disease, deliver lectures and travel into Spain and Italy to meet with local medical writers and policymakers; as well as study and map sites of outbreaks.⁵³

These developments affected transatlantic relationships between American medical communities and those in the realm of the ascending French empire. New sites of outbreak and study, of course, piqued the interest of US-based medical audiences, who wondered what it meant for their understanding of the disease's origins. Europe-based actors deliberating on the subject likewise did so with an eye to the character of recent

⁵³ E.A. Heaman, "The Rise and Fall of Anticontagionism in France," *Canadian Bulletin for Medical History* 12 (1995), 5-8. For more on Napoleon's general efforts to inject the state in health administration and, subsequently, studies of pressing epidemic crises, see Ann La Berge, *Mission to Method: The Early Nineteenth-Century French Public Health Movement* (Cambridge University Press, 2002), in particular 16-47. For a discussion of the place of yellow fever in the historical memory of nineteenth-century French and military and naval medicine, see Michael Osborne, *The Emergence of Tropical Medicine in France* (Chicago: University of Chicago Press, 2014), 94-98.

outbreaks and responses not only in Europe and the Caribbean but also in the United States.

New trade and shipping relations also altered the terms and dynamic of the debates. One of the reasons medical actors took an interest in the new outbreaks was because of the young American republic's fluctuating maritime relations to both West Indian and European ports during this period. American shipping had swollen dramatically in the context of the French Revolutionary Wars. The circumstances fueled political and cultural clashes across the Atlantic over disease intelligence and health regulations. Authorities and physicians in ports ranging from Cadiz to Marseilles and Livorno responded to the new outbreaks by slapping harsh quarantines on ships from the United States, turning several away and forcing vessels to sit in lazaretto facilities for anywhere between ten and forty days. These authorities were mobilizing in response to the new disease measures that rested largely on centuries of experience with plague in southern Europe. Politically charged debates emerged among Europeans and between Americans and Europeans over the place of such measures in what for many felt like a new epidemiological era.⁵⁴

As Americans and Europeans attempted to negotiate new relations in the study and management of yellow fever, they created a new opportunity for those medical writers who had built expertise through the circum-Atlantic migrations unleashed by the French Revolutions. One by one, medical writers who had resided in Caribbean, US and French nodes in the French Revolutionary Atlantic repurposed their networks, linguistic

⁵⁴ See Chapter 5 for a general discussion of this pattern.

skills, cultural dexterity and lingering political ambiguities in order to reconfigure the relations between US and European communities of fever study.

Two of Pascalis's former fellow refugees, Jean Devèze and Louis Valentin, became actively involved in this process. By the time of the first outbreak in Spain, both men had joined the waves of refugees who returned to France at the turn of the new century. As they resettled into the continental medical scene, they each perceived in the French responses niches for the experience they had cultivated in the United States. Their subsequent activities would help to reshape the relationship between their former centers of study in the United States and those cropping up in continental Europe.

Jean Devèze put his experience in Bush Hill to new use. He took his interpretation of Philadelphia's topography and observations from within the hospital and repackaged them into a resource for fellow health officers back in France. Aware of health officers' struggle to make sense of the recent disaster in St. Domingue, Devèze presented his observations from Philadelphia as means of enriching their understanding of the disease phenomena.⁵⁵ As the treatise began circulating among audiences in France, Devèze decided the treatise was worth the attention of audiences back in the United States. He drew upon his former colleague, Pascalis-Ouviere, to circulate the treatise.⁵⁶

⁵⁵ Devèze, *Dissertation sur la fièvre jaune qui régna à Philadelphie, en 1793* (Paris: Imprimerie de Madame Huzard, rue de l'Eperon, 1804).

⁵⁶ Devèze to Pascalis, 8 November, 1804, MS. Fol. Copies of letters and papers. New York Academy of Medicine Rare Book and Historical Collections.

Sure enough, the treatise finally wound up in the review section of the *Medical Repository*.⁵⁷

Louis Valentin also applied the perspective and resources he had gained through flight and asylum. At the time of the initial wave of European outbreaks, Valentin was trying to resettle into medical practice, teaching and scientific sociability in Nancy and then in Marseilles. As European interest in the disease grew, Valentin began receiving requests from European contacts for information about the character of the disease and modes of treatment he had developed during his time in the Americas. His experience in both the United States and the Caribbean was becoming a desired expertise. The director of L'Ecole de Medecine in Paris, for example, approached him with a special request for a publication: "Citizen colleague," he wrote, "The school is occupied with an object of extreme importance: the yellow fever ravaging in Spain. We know you have thoroughly witnessed its disastrous effects several times as well as the ways to combat a scourge so terrible [...] The assistance of your enlightened wisdom can only be advantageous to the school."⁵⁸ Valentin's experience in both the US and Caribbean, not just the Caribbean, was becoming a valuable commodity.

Valentin responded to the interest by turning to his connections back in the United States into resources for studying yellow fever in Europe. In his first publication, *Traité de la Fièvre jaune d'Amerique*, Valentin presented his readers with reading practices and ideas he had developed during his time in the United States. He used and translated

⁵⁷ "REVIEW: Dissertation sur la Fievre jaune qui regna a Philadelphie en 1793," *Medical Repository* Second Hexade 2 (1805), 80-84.

⁵⁸ Valentin reprinted the letter in the introduction to his treatise *Traité de la Fièvre jaune d'Amerique* (Paris: Méquignon, 1803), 1-2. Translation from the French my own.

excerpts from numerous Francophone and Anglophone publications in the US in order to recreate the character of multiple outbreaks along the US seaboard. His footnotes are fat with different references and translated excerpts. One such footnote begins on page 34 and ends on page 36. It contains a reference to Jean Deveze's 1794 publication, an translated excerpt from an article Valentin wrote for the *Norfolk Herald and Portsmouth Advertiser*, a reference to a *Medical Repository* article about the 1800 outbreak in Baltimore and two lengthy excerpts from articles about the 1802 New York outbreaks, which were penned by New York correspondents for the French government organ, *Le Moniteur*.⁵⁹ Valentin also endorsed Mitchill's concept of septon, translating an excerpt from one of his treatises on the benefits of alkaline minerals for the prevention of the disease.⁶⁰ He was writing a perspective developed through flight into the French corpus of literature on yellow fever.

As Valentin corresponded with regional European physicians, he began to perceive limitations in the channels of intelligence his European correspondents turned to. He decided to remedy the situation by putting his transatlantic networks to use. One such problem related to Spanish perceptions of consensus in Philadelphia about the cause of the disease. In one of his letters to Benjamin Rush, Valentin wrote:

Two respectable physicians of Spain who don't believe to [sic] the importation of the yellow fever wrote to me lately that the Marquis Don Casa de Frujo, Spanish Minister, wrote to his government from Philadelphia two years ago, that it had been proved there, juridically, against your opinion, that the malignant yellow fever had been imported

⁵⁹ Valentin, 34-36.

⁶⁰ Valentin, 188-189. Valentin's excerpt was from *Mitchill's Remarks on the Gaseous Oxyde of Azote or of Nitrogen* (New York: T & J Swords, 1795).

into the United States beginning by Philadelphia. They asked me if that fact was consigned to the second edition of your Medical Inquiries.

Both physicians, it turned out, had not had access to later editions of Rush's work, in which the doctor had revised and refined his views. Valentin reported "I answered positively no & that I had no knowledge of such transaction which I believe untrue. Perhaps Mr. De Frujo speaks of the additional facts of the college of physicians." He finished his account with a request that Rush send his latest views on the disease's cause to circulate among Valentin's medical acquaintances in Spain. Valentin used his personal knowledge of both the Spanish physicians and Rush to invalidate one of the channels through which Spanish physicians had learned about medical politics in Philadelphia. He replaced it with one that was a product of his own journeys and ideas about reliable sources.⁶¹ He started circulating materials back to his colleagues in the United States – including his own publication, which the editors of the *Medical Repository* reviewed and promoted.⁶²

Meanwhile, in the United States, Pascalis and his colleagues responded to the new transatlantic interchange by seeking out means to participate actively in the European circles of fever study. This moment is when Pascalis began to re-evaluate the skills and cultural dexterity he had developed through his migration and new life in the United States. He saw them as a means for shaping the interchange between southern Europe and the United States.

⁶¹ Valentin to Rush, October 22, 1807. Benjamin Rush Manuscripts, Correspondence, Library Company of Philadelphia.

⁶² See "Medical Intelligence from the Mediterranean," *Medical Repository* Second Hexade, 2.4 (1805), 447-449.

In 1805, Pascalis made arrangements for his first trip back to France since his flight fifteen years earlier. The itinerary he put together reads at first glance like a Frenchman returning home. Pascalis would travel through southern France and into southern Spain. He was going to visit his older brother, who had since resettled in one of the Italian outposts of Napoleon's French empire. From there, he would proceed up into Paris. Yet, nostalgia played a very minimal role in Pascalis' desire to return to Europe. As he conveyed in a letter to Benjamin Rush: "Some important business obliges me to go." That business, he wrote, was the "recent occurrences of yellow fever in Spain."⁶³

Pascalis was thinking about his familiarity with the landscape of southern Europe together with his knowledge of French and Spanish as a means of collecting materials about the outbreaks in Europe and forging ties with medical writers in the region. Familial ties helped too. "My brother," he informed Benjamin Rush in his letter about his planned trip, "is the Principal Officer de Santé of the army in that section of the French Empire." As a medical officer in the service of Napoleon's state in southern France and Italy, he could help provide Pascalis with safe routes and useful connections to facilitate his journey into the region.⁶⁴

Pascalis and his colleagues began the process of converting his ties to his former home into resources for medical relations between communities of fever study in America and Europe. Pascalis collaborated with local government figures and medical colleagues to organize his journey into Europe. He obtained an official letter of

⁶³ Pascalis-Ouvière to Rush, 24 April 1805, Benjamin Rush Manuscripts, Correspondence, Library Company of Philadelphia.

⁶⁴ Idem.

endorsement and passport from both President Jefferson and Governor Thomas McKean, who testified to Pascalis's character by acknowledging his membership in local and regional medical societies in addition to his new role as a commissioner for the Board of Health. Pascalis accordingly deserved the "protection and favorable attention of all officers, civil, naval and military of the said United States, and of those nations in alliance or amity with the United States of America [...] to afford him all the aid he may stand in need of on his voyage." Pascalis began preparing himself for a voyage aboard the John Adams Frigate, which was destined for several Mediterranean ports.⁶⁵

Mitchill and Miller eagerly capitalized on Pascalis's trip as well. In addition to publications from Europe, both authors sought to expand the number of contacts who might communicate news on the debates and aid them in their efforts to participate more actively in the debates. On May 9, just prior to his trip, Mitchill wrote to Pascalis that, after so many useful communications on disease studies, Pascalis would now "confer a great favor on his friends D. Mitchill and D. Miller by making known to a respectable physician of Madrid and another at Cadiz, that they would be extremely gratified by forming a correspondence [...] communicating reciprocally the accounts of epidemics and small medical publications of their respective countries." The editors drew upon not only Pascalis's travel but also the linguistic dexterity he had acquired through his Atlantic migrations. They asked him to find someone with sufficient English as well as the means and willingness to circulate volumes of the *Medical Repository*, three of which were

⁶⁵ "Official Recommendation that Dr. Felix Pascalis be extended the protection and attention of all officers of the United States and of those nations in alliance on his voyage to and from France." Philadelphia, 27 April, 1805. With the signature of Thomas McKean, Gov. of Pennsylvania and Signer of the Declaration of Independence." MS. Fol. Copies of Letters and Papers. New York Academy of Medicine Rare Book and Historical Collections. The actual passport is enclosed with the letter of endorsement.

included with the letter to Pascalis.⁶⁶ So it was that a former Francophone exile departed for his native Europe as an ambassador for medicine and governing bodies in the United States.

Sadly, Pascalis' letters and notes during his trip are lost, which makes it difficult to recover his experiences during this journey. His activities upon his return, however, reveal some of the ways in which his journeys over the past decade had come to shape his work in the problem of yellow fever. At the behest of Mitchill and Miller, Pascalis set about translating and preparing a series of reviews of the treatises for the *Medical Repository*, which appeared in multiple volumes between 1806 and 1807.⁶⁷ Doctor John Redman Coxe of Philadelphia likewise sought out Pascalis's work for his own recently launched medical periodical *The Philadelphia Medical Museum*.⁶⁸ Collectively, Pascalis and his American colleagues were placing him in the position of ideal intermediary who, by virtue of his unique talents and connections, could best "translate" Southern Europe for American audiences.

Pascalis did not simply collect, circulate and translate works word for word. Along with his ability to travel and translate, the doctor put his fluency in different political cultures to new work in the service of transatlantic politics surrounding yellow fever. Rather than simply describe the scientific merits of Spaniards' writings and assess their use for Americans, the doctor decided to situate the writings in the political

⁶⁶ Samuel L. Mitchill to Pascalis-Ouvière, 9 May, 1805, MS. Fol. Copies of Letters and Papers. New York Academy of Medicine Rare Book and Historical Collections.

⁶⁷ Samuel L. Mitchill to Pascalis, 20 February, 1806, MS. Fol. Copies of Letters and Papers. New York Academy of Medicine Rare Book and Historical Collections.

⁶⁸ Felix Pascalis, "Review of Work Entitled 'Relacion de la Calentura biliosa remitente amarilla, que se manifesto en Filadelfia, en el ano de 1793,'" *The Philadelphia Medical Museum* 3.3 (March 1807), 163-185.

landscape of southern Europe. His review of Don Rodriguez Armesto's *Reflexiones sobre la Epidemia padecida en Cadiz y pueblos Circumvecinos, a fines del Anno de 1800, dirigidas a los Profesores de Medecina, por un Amante del bien Publico* reads less like a review of the author's medical views and more like a story about the effects of political and religious oppression. Pascalis did not open with the editors' usual introduction to the contents of the treatise. Rather, he began with a story about the author's political persecution:

We may justly observe that this previous pamphlet, so expressive of the lively genius and of the elevated turn of mind of the Spaniards, is, after six years, rescued from oblivion, and even from the flames. Its eloquent author, Don Rodriguez Armesto, a young officer of the navy, became the object of a criminal prosecution, shortly after he had published it with the usual permission of the censors appointed by the government of his country. But these judges of the performance, when they first examined it, had not yet been influenced by the prejudices and mortified pride of the whole host of contagionists [...]. A few weeks after it had circulated, orders from the court were issued for its suppression, and for the arrest and prosecution of the author, for diffusing false, dangerous and seditious opinions. He was soon compelled to subscribe to a formal declaration of his pretended guilt, and to a certain formula of retraction.⁶⁹

Pascalis's review, he announced following this story, constituted a rescue mission. He was bringing a pamphlet publicly condemned and burned to light, so that audiences might have the "whole" picture of the debates in Spain. Pascalis, moreover, translated excerpts from the treatise. The excerpts he selected were about how the ill effects of "long and disastrous war" had caused the outbreaks; how physicians opposed to the view that the disease had been imported abroad had been subjected to the threats of "an inquisitorial

⁶⁹ Felix Pascalis, "Remarks on a Spanish Pamphlet, Entitled, 'Reflexiones sobre la Epidemia padecida en Cadiz y pueblos Circumvecinos, a fines del Anno de 1800, dirigidas a los Profesores de Medecina, por un Amante del bien Publico,'" *Medical Repository* Second Hexade 5 (1808), 131-132.

authority.”⁷⁰ On the one hand, Pascalis’s choice in treatise and the focus of his review evokes some of the powerful experiences that shaped his own life as a political revolutionary. It is reasonable to assume that he would have thus harbored deep sympathy for the plight of a persecuted physician and that this, subsequently, would have reinforced his own opposition to health policies that rested primarily on the belief that yellow fever was contagious.

Pascalis’s strategy in “translating” southern Spain, however, ultimately speaks less to his history as a political revolutionary and more to his newfound identity as a medical go-between. The review, for one, speaks to his acquired fluency in American political discourse and ability to mobilize it. The tropes of anti-despotism that infuse his review were not uncommon in public discourse on American identity. Pascalis moreover coupled these tales of government oppression with reminders of the unjust accusations those same Spanish authorities had leveled against Americans’ precious transatlantic shipping.⁷¹ Pascalis was careful to speak not as a former foreign political revolutionary but rather as a US-based scientific traveler. He had learned through the course of his flight to present his ties to politically unstable regions – sources of his early odyssey – as resources for firsthand observation of medical landscapes and acquaintances with physicians in those destinations. The body of the text and footnotes are both sprinkled with anecdotes about the geography of the doctor’s travels and relationships he had cultivated along with reminders of his status as a “witness”:

⁷⁰ Idem, 134-135.

⁷¹ Idem, 136.

For the honour of the Spanish faculty I can with pleasure mention myself as a witness, and thereby add to the testimony of our persecuted writer, that many worthy physicians devoted themselves to the pestilential scourge, and that many more would have vigorously opposed the frightful torrent of importation and contagion, had they not been, by an inquisitorial authority, compelled to be silent.⁷²

By writing himself as a seasoned “traveler” in southern Europe and “witness,” Pascalis was giving himself room to judge and characterize the medical political landscape of southern Europe. His interpretation of events, he signaled, counted as reliable testimony. Other American (and even European) medical writers might attempt to describe and comment on the state of the response to yellow fever in Spain. In contrast to them, though, Pascalis was able to do so with greater authority by virtue of the direct cultural, social and linguistic ties that allowed him to move between both parts of the Atlantic.

Pascalis’ review work did not go unnoticed. Rather, he created rich material that others in the United States and Atlantic world soon took up. He won the endorsement of the journal’s editors. His reviews also came to inform the work of other medical writers trying to relate the Spanish debates to other parts of the Atlantic world. That included even British imperial officers who read the journal. Nathaniel Bancroft, British military physician and avid reader of the journal, relied heavily on Pascalis’ translations and narratives about the politics of contagion in Spain in order to relate the debates there to those persisting in the British Empire.⁷³

⁷² Idem, 135.

⁷³ Nathaniel Bancroft, *An essay on the disease called yellow fever; with observations concerning febrile contagion, typhus fever, dysentery, and the plague; partly delivered as the Gulstonian Lectures, before the College of Physicians, in the years 1806 to 1807* (Cushing and Jewett: 1821), 301-304, 311 and 320.

Pascalis's work would eventually extend beyond frequent contributions and reviews. In 1812, he finally became a chief editor of the *Medical Repository*. Through regular correspondence with American, French and new Spanish contacts, he helped to keep up the Atlantic dimensions of the journal's coverage and readership. Together with Mitchill, he also helped to maintain the journal's mission in the international enterprise of yellow fever study well up into the second decade of the nineteenth century.⁷⁴

Conclusion

Over the course of his life, Pascalis never completely shook the lingering ambiguities of his "foreigner" status. Yellow fever had also become embedded in his experience of migration. But he, along with other medical refugees, had learned how to adapt to these circumstances. He had learned how to turn his firsthand experience with yellow fever into a source of authority. He had also managed to turn his travels and political ties into sources of socio-intellectual and cultural dexterity: valuable means for forging exchanges in yellow fever study among American, French, British and even Spanish medical writers. In different parts of the Atlantic, medical men engaged with the writing, editorial and circulating practices of Pascalis and fellow former refugees. A new type of migrant, particular to the revolutionary age, had helped to shape the international arena of yellow fever management.

⁷⁴ Edwin Williams, "Pascalis-Ouviere, Felix," 266. We will also see evidence of this in the next chapter.

Chapter 4

Making Commerce into Health Diplomacy: Consuls and Commercial Agents in the Age of Yellow Fever

Introduction

In February 1804, Doctor Edward Miller of New York received a package from Doctor James Mease in Philadelphia. As an editor who worked to expand the coverage of his medical journal, the *Medical Repository*, Miller welcomed a growing influx of treatises and correspondence on diseases and disease ecologies in the US and different parts of the Atlantic world. When Miller opened the parcel, he discovered not a letter from Dr. Mease but rather letters and extracts from “the doctor’s acquaintance,” J.F. Eckard, Esq., the Danish Vice-Consul to the Middle States.¹ “Sir,” Eckard wrote, “In one of a series of numbers republished last autumn, in a newspaper of this city, from a New-York gazette [...] I observed some extracts from a medical work, referring to the prevalence of the malignant pestilential fever in the island of St. Thomas, which forcibly drew my attention.” These were none other than extracts from Colin Chisholm’s 1801 edition of *An Essay on the Malignant Pestilential Fever* (discussed in Chapter 2). Eckard had witnessed the very same outbreak in 1796 and he recognized several of the victims described in the piece, including merchants, captains, physicians, and a Danish consul. “Knowing the statement to be inaccurate,” Eckard decided to correct it by writing an account of his own. He based his corrections on his long-term residence in the island, personal knowledge of captains’ habits in the port, and “intimate” ties with the consul and several merchants mentioned in the account. Mease and Miller were both pleased with Eckard’s piece. Miller promptly published the “Correction of Dr. Chisholm’s Mistatement” in a new volume of

¹ Miller very briefly recounted this incident to his former mentor in Philadelphia, Doctor Benjamin Rush, who received frequent updates on Miller’s editorial activities. See Edward Miller to Benjamin Rush, February 20, 1804, Benjamin Rush Manuscripts. Correspondence. Library Company of Philadelphia.

the *Medical Repository*.² American and non-American readers in different parts of the Atlantic soon picked it up and worked the consul's perspective into their new treatises on yellow fever in warm climates.³

J.F. Eckard was no anomaly in the medical world. Over the course of the 1790s and early nineteenth century, consuls and commercial agents became increasingly active in the medical networks spanning the Atlantic world. On the ground in ports-of-call and within the pages of the *Medical Repository*, agents ranging from Eckard in Philadelphia to the US consul in Havana discussed and debated with physicians and policymakers alike about the character of yellow fever.⁴

Nonetheless, consuls and commercial agents like Eckard remain underexamined in histories of pandemics during this period. They are missing from scholarship because of how historians of medicine have conceptualized commerce. Many historians' analyses tend to frame commerce as a force in epidemiological change – as networks of moving ships and people that circulated disease. The commercial agents that feature in histories of debates over disease

² J.F. Eckard, "Correction of Dr. Chisholm's Mistatement respecting the Prevalence of the Malignant Fever at St. Thomas's, by J.F. Echard, Esq. Danish Vice-Consul at Philadelphia, in a Letter to James Mease, M.D. of Philadelphia," *The Medical Repository* Second Hexade, 1 (1804), 331-338.

³ See, for example, Benjamin Rush, *Medical Inquiries and Observations, Volume 3* (Philadelphia: J. Conrad & Co., 1805), 226; Edward Nathaniel Bancroft, *An Essay on the Disease Called Yellow Fever; with Observations Concerning Febrile Contagion, Typhus Fever, Dysentery and Plague* (London: T. Cadell and W. Davies, by G. Sidney, 1811), 523.

⁴ See, for example, Benjamin Rush, *Medical Inquiries and Observations, Volume 3* (Philadelphia: J. Conrad & Co., 1805), 226. Edward Bancroft, *An essay on the disease called yellow fever: with observations concerning febrile contagion, typhus fever, dysentery, and the plague, partly delivered as the Gulstonian lectures, before the College of Physicians, in the years 1806 and 1807* (London: T. Cadell and W. Davies, Strand, 1811), 710.

causation and disease control policy figure as actors guided by the pursuit of profit rather than as medical actors in their own right.⁵

This chapter revises our understanding of how contemporaries understood and mobilized commerce in the age of yellow fever. It does so by drawing upon scholars who have expanded our understanding of how eighteenth- and early nineteenth-century commercial and shipping networks. More than mere resources for travel, commodities and economic growth, the actors, practices and information channels constituting commercial and shipping networks also functioned as resources for intelligence-gathering and negotiations among polities.⁶ In a similar vein, historians of early modern science and medicine have shown us how natural knowledge production and circulation were intimately connected to the networks through which trust, commercial information and trade were mediated and exchanged. It was not merely lettered physicians who claimed authority to judge and make sense of the objects, medicines and observations that came from abroad. Those scholars and practitioners, together with governing figures, grant knowledge-making authority to lay travelers, missionaries, commercial agents and even ship captains who navigated distant cultures and regions. All of these actors, in turn, brought their own socio-cultural capital and epistemological tools to bear in the production of natural knowledge.⁷

⁵ Mark Harrison's *Contagion: A Commerce Spread Disease* captures this approach. In this study of the relationship between global commerce and global disease, Harrison situates responses to disease in the context of ideologies about commerce as well as commercial rivalry.

⁶ Glaisyer, 467-468.

⁷ For general overviews of this trend, see James Delbourgo and Nicholas Dew, "Introduction: the Far Side of the Ocean," in idem, eds., *Science and Empire in the Atlantic World* (New York: Routledge, 2009), 1-28; Marcelo Aranda, et al., "The History of Atlantic Science: Collective Reflections from the 2009 Harvard Seminar on Atlantic History," *Atlantic Studies* 7.4 (2010). For scholarship on knowledge brokerage in particular, see Simon Schaffer, Lissa Roberts, Kapil Raj and James Delbourgo, "Introduction," in idem, eds., *The Brokered World: Go-Betweens and Global Intelligence, 1770-1820* (Sagamore Beach: Science History Publications, 2009). For travel and trust in this period, see Steven Shapin, *A Social History of Truth: Civility and Science in Seventeenth-Century England*

This analysis draws upon the insights of these historians to enrich our understanding of the relationship between commerce and health in the eighteenth century. Contemporaries, I argue, conceived of commerce as far more than a force that moved bodies and diseases in new ways within the Mediterranean and across the Atlantic. As networks of knowledge and channels through which power was exercised and negotiated, commerce also became a rich resource that European and American polities utilized in creative ways to mediate those shifting health relations. Negotiating disease control policies, health relations and even socio-intellectual relations became deeply embedded in the expansive networks and activities of actors who operated in and between ports of call: governors, merchants, lay travelers, ship captains, medical practitioners, consuls and commercial agents.

The World of Consuls and Commercial Agents

In order to recover the role of consuls in the changing medical world order, we must first take a closer look at their role in international statecraft during the Age of Revolutions. The scale of consuls' presence, their locations, the nature of their duties and the conditions of their work all positioned them well to become entangled in the transnational sphere of warm climate medicine.

Consuls grew in number and global presence during the eighteenth century – a product of changing economic and state-building conditions. Over the course of the century, as European

(Chicago: University of Chicago Press, 2004), in particular Chapter 6, 243-309. For studies focusing on the relationship between commercial networks and natural knowledge, see Harold Cook, *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age* (New Haven: Yale University Press, 2008); Pamela Smith and Paula Findlen, eds., *Merchants and Marvels: Commerce, Science and Art in Early Modern Europe* (New York: Routledge, 2001). Sverker Sörlin also sheds light on the ways in which naturalists availed themselves of shipping and shipping crews to collect specimens and make observations. See Sörlin, "Ordering the World for Europe: Science as Intelligence and Information as Seen from the Northern periphery," *Osiris*, 15 (2000), 51-69;

powers continued to push their commercial interests and political rivalries beyond continental Europe, they increasingly invested in the establishment of state representatives on the ground in their growing number of Mediterranean, Atlantic and even East Indian ports of call. To enable their valuable trade to operate in the changing political climate, merchants and captains required good relations with local authorities in ports of call. They needed to remain vigilant and informed about threats to the safety of ships and crews. Sick, shipwrecked or kidnapped seamen also required assistance. Consuls were charged with the task of brokering commercial and diplomatic relations with foreign officials on the ground. They were also to both gather and provide commercial and naval intelligence from and for merchants, captains, and government officials. By the late eighteenth century, European consuls had become prominent fixtures in the international relations and commercial expansion – within the Mediterranean, the Atlantic and even beyond, in the East Indies.⁸

New geopolitical circumstances at the end of the eighteenth century altered the scope and geography of consular networks. A new player – the United States – entered the arena of

⁸ Most studies of this period focus on particular national and imperial contexts. Examined collectively, they highlight the important role of commercial and political expansion in facilitating European powers' investment in the establishment of consular posts (and not merely diplomats, who were, in fact, fewer in number). Studies have also alluded to the role of international political and commercial pressures in inspiring the establishment of consuls, in particular in the Mediterranean, where the culture of consular services thrived in the early eighteenth century (and even before). Leos Müller addressed this larger context in his study of the role of consuls in the establishment of Swedish commercial expansion into the Mediterranean. See Müller, "The Swedish Consular Service in Southern Europe, 1720-1815," *Scandinavian Journal of History* 31.2 (2006), 186-195. Silvia Marzagalli, James R. Sofka and John J. McCusker also address the growth of consuls in the eighteenth century, in particular their role in the circulation of commercial and political news. See Marzagalli, Sofka and McCusker, "Rough Waters: American Involvement in the Mediterranean in the Eighteenth and Nineteenth Centuries: Introduction," in Silvia Marzagalli, James R. Sofka and John J. McCusker, eds., *Rough Waters: American Involvement with the Mediterranean in the Eighteenth and Nineteenth Centuries* (International Maritime Economic History Association: St. Johns, 2010), 1-6. For other contexts, including France, see Christian Windler, "Representing a State in a Segmentary Society: French Consuls in Tunis from the Ancien Regime to the Restoration," *The Journal of Modern History* 73.2 (2001), 233-274. As a testimony to consuls' increased presence in on-the-ground diplomacy, a number of historians of the Atlantic Revolutions have used and promoted consuls' records as a lens through which to study transatlantic relations during the period. See, for example, Robert J. Alderson, *This Bright Era of Happy Revolutions: French Consul Michel-Ange-Bernard Mangourit and International Republicanism in Charleston, 1792-1794* (University of South Carolina Press, 2008).

international commerce and politics. The young republic relied heavily on securing and promoting many international markets for its agricultural produce and carrying trade. Between 1793 and the 1810s, warfare among Great Britain, France and Spain opened up opportunities for the “neutral” nation to carry goods across international boundaries. Merchants and officials alike fought to maintain this position in the midst of political turmoil. Attitudes toward the new nation’s shipping fluctuated among various powers during this period. As a fledgling republic, the country’s officials and merchant marine needed to establish respect and trust necessary to secure favorable commercial relations. Americans also needed to contend with European powers that were establishing their own consuls in various seaports along the Atlantic seaboard of the US.⁹ Hence, Americans took up the tools of international statecraft and began investing in their own consular services.

By 1800, both Europeans and Americans had created new networks of consuls within and beyond the Atlantic. British, French, Spanish and Danish powers, among others, had established consular posts in various American seaports from New York to Philadelphia to Charleston, South Carolina. These consuls became valued brokers for commercial and political intelligence about the port, the new nation, and the Caribbean. Reciprocally, in places ranging from St. Croix to Tangier to Naples, a new cast of over seventy American consuls translated regulations, presided over ship prize cases, negotiated commercial policies, circulated naval intelligence and even mediated fights between American and foreign sailors.¹⁰

⁹ For a general discussion of the effects of the French Revolution and Napoleonic Wars on American shipping, see Anna Cornelia Clauber, “American Commerce As Affected by the Wars of the French Revolution and Napoleon, 1793-1812,” (PhD Dissertation, University of Pennsylvania, 1932).

¹⁰ For the Mediterranean context, see Anthony Antonucci, “Consuls and *Consiglieri*: United States Relations with the Italian States, 1790-1815,” in Silvia Marzagalli, James R. Sofka and John J. McCusker, eds., *Rough Waters: American Involvement with the Mediterranean in the Eighteenth and Nineteenth Centuries* (International Maritime

While criteria for selection varied according to a country's interests in a given region, governing officials typically sought out men who harbored knowledge of the regulatory cultures, shipping, outlets for commercial intelligence, language or political circumstances in the port in question. The post of consul was, moreover, neither full-time nor fully salaried. Consuls were expected to profit above all from their own business and personal pursuits in the region. As a result, consular posts were typically filled by merchants; middling class, educated men with experience in travel; former naval officers; or residents (both citizens and non-citizens) who resided in the port while holding business, political or cultural ties to the country they would serve.¹¹

Consuls needed to mobilize social, cultural and political capital in order to perform their administrative duties, channel information and broker relations. They drew upon their backgrounds as well as local and trans-local resources, transforming them into tools for their work as consuls. Agents from mercantile backgrounds, for example, applied their skills in accounting and creating inventories in order to monitor ships and calculate fluctuations in tariffs and volumes in shipping. As we shall see later on, men with established business and social ties to a port-of-call did not hesitate to draw upon regional commercial partners, their knowledge of the local markets or newspapers that provided business news. Business connections to shopkeepers and grocers even served consuls who sought provisions for seamen in distress.

Economic History Association: St. Johns, 2010), 77-100. In his study of American seamen, Brian Rouleau found in sailors' correspondence, diaries and court records multiple instances of consuls serving as translators, mediating fights and hunting down facilities for seamen in Pacific and Atlantic ports alike. See Rouleau, "With Sails Whitening Every Sea: Commercial Expansion, Maritime Empire, and the American Seafaring Community Abroad, 1780-1870," (PhD Dissertation, University of Pennsylvania, 2010).

¹¹ Both Charles Kennedy and Leos Müller situate their studies of American and Swedish systems in this general eighteenth-century trend. Kennedy, *The American Consul: A History of the United States Consular Service, 1776-1914* (New York: Greenwood Press, 1990), 19-27; Müller, "Consuls, Corsairs and Commerce: The Swedish Consular Service and Long-distance Shipping, 1720-1815," (PhD Diss: Universitatis Upsalienis, 2004), 46-47.

A consul's political, cultural and social circumstances could also determine the types of relationships he formed and relied upon for his work. Consider the case of Thomas Appleton, the US consul in Livorno, Italy. His background in the American export trade to France and Italy provided him with a lingua-franca in Livorno and the ability to immerse himself in the regional commercial culture. The port's cosmopolitan character and positive outlook on American shipping eased both the process of assimilation and the task of mediating relations between captains and port authorities. In the context of these warm relations and Appleton's enthusiasm for the area, Appleton established new contacts for commercial agents back in the US. He not only sent officials' information about port regulations. Just a few years into his post, he began translating and submitting some of them as models for the US seaports. In other words, he was forging ties in both commerce and port regulatory cultures.¹²

Of course, not all consuls had the same linguistic dexterity, cultural knowledge and political capital as Appleton. The first three US consuls in Algiers were not fluent in Arabic, had little cultural familiarity with the Barbary States and arrived at a time when the local dey was rather hostile toward American shipping in the region. They ended up relying heavily on intermediaries: American slaves, who had managed to become fluent in Arabic and work their way up the slave hierarchy to win the dey's trust. Most of those consuls' interactions, then, were filtered through the lens of American slaves.¹³ As these different examples reveal, the texture of consuls' work was such that they created and remade nodes of political, cultural and social interchange within and beyond the Atlantic. And they did so in diverse ways.

¹² Antonucci, 83-92.

¹³ Kennedy, 28-32.

By virtue of their locations, duties and backgrounds, many consuls were well placed to have an impact in warm climate medicine. A world shaped by new patterns in commerce and warfare ultimately put Americans and Europeans abroad and at home in contact with new pandemics, foreign ecologies and, subsequently, foreign medical and disease control cultures. Through the cycles of Caribbean warfare during the Napoleonic Wars and fluctuating traffic between the US and West Indies, yellow fever pandemics spread throughout Caribbean and US seaports. As American shipping ventured into the Caribbean, captains and seamen confronted the problem of disease ecologies and mortality from fever outbreaks in ports far away from home. The increase in traffic between the Atlantic and southern Europe also transformed the disease landscape of the Mediterranean. A Mediterranean world shaped by centuries of plague suddenly had to confront the threat of a “new world” disease: yellow fever. With American shipping pouring into Mediterranean ports, American seamen and Mediterranean port authorities were forced to adapt their disease experiences to one another.¹⁴ Maritime disease problems, health and medicine subsequently became tangled up in trade, international relations and the preservation of shipping and travelers in ports of call – all part of the domain of consuls.

A number of consuls and commercial agents, moreover, were already embedded in networks of transnational scientific and medical exchange because of the social and business backgrounds they brought to their posts. By the eighteenth century, many men from the very backgrounds discussed above had come to occupy positions in networks of scientific and cultural exchange within the Atlantic and beyond. It was not uncommon for European and American merchants to blend business with the vibrant commerce in knowledge and cultural/scientific

¹⁴ See Chapter 1.

artifacts that had grown dramatically in the context of European and American expansion.¹⁵

Indeed, we can find records in a number of consuls' account books of trans-oceanic shipments in botanical items, published natural histories and medical curiosities to merchants, laymen and even physicians.¹⁶

Depending on the demands of their work as consuls and businessmen, a number of merchants and non-merchants took what time they could to pursue their own intellectual and cultural interests. In addition to administrative papers and business records, a few consuls have left notebooks, letters and even publications that reveal interests in botany, the study of natural history and transnational scientific exchange. There is even evidence of consuls who used their tasks and powers as consul for their own economic and intellectual purposes, using missions into an unexplored region to collect new natural specimens or, as we shall see later, using connections to shipping routes in order to safely transport letters or goods.¹⁷ By the beginning of the nineteenth century, scientific institutes like the American Philosophical Society boasted a

¹⁵ For a discussion of the overlap between commercial agents and the expansion of trans-oceanic scientific and medical exchange in the early modern period, see Harold Cook, *Matters of Exchange: Commerce, Medicine and Science in the Dutch Golden Age* (New Haven: Yale University Press, 2007), in particular 1-81. For more on merchants' and lay travelers' roles in scientific exchange in the eighteenth-century Atlantic context, see Londa Schiebinger, "Scientific Exchange in the Eighteenth-Century Atlantic World," in Bernard Bailyn, ed., *Soundings in Atlantic History: Latent Structures and Intellectual Currents* (Cambridge: Harvard University Press, 2009), 294-328; *ibid.*, "Introduction: The European Colonial Context," *Isis* 96:1 (March 2005), 52-55.

¹⁶ As both US consul and merchant in Livorno, Italy, Thomas Appleton developed an interest in the region's wine cultivation and art, and he sent friends like Thomas Jefferson samples of grape vines and art pieces as gifts. Historians have in fact come to view his account book as a valuable source for studying cultural relations between Italy, southern France and the US. See Philipp Fehl, "The Account Book of Thomas Appleton of Livorno: A Document in the History of American Art, 1802-1825," *Winterthur Portfolio* 9 (1974), 123-150.

¹⁷ An excellent example of this is Andre Michaux, the French consul based in Charleston, South Carolina in the 1790s. Michaux was supposed to monitor Americans' responses to the French Revolution and rally support among Americans for French expansion into the Mississippi. While in the US, he devoted a considerable amount of time to botany, traveling in the Appalachians to collect plants, sending specimens back to France and coordinating explorations with American botanists (and French consuls) based in New York and Philadelphia. During his diplomatic missions, he carried with him a botanical notebook and recorded observations. David M. Rhembert, "The Carolina Plants of Andre Michaux," *Castanea*, 44: 2 (Jun., 1979), 65-80. See also Gilbert Chinard, "Andre and Francois-Andre Michaux and Their Predecessors. Botanical Exchanges between America and France," *Proceedings of the American Philosophical Society* 101.4 (1957), 344-361.

range of correspondents, among them, several US, French and Spanish consuls and ambassadors.¹⁸ In sum, by virtue of many consuls' social status and the networks in which natural knowledge production was embedded, consuls were well placed to become resources for information about distant sites of warm climate disease activity.

Because of the variety their backgrounds and the local and trans-local resources consuls drew upon for their work, they altered the world of yellow fever in a number of ways. They remade the epistemological tools and added to the corpus of work on the disease. And as they created and remade nodes of political, cultural and social interchange, consuls were likely to remake relations in health regulatory cultures and intellectual exchange. A close, comparative look at the experiences of three different consuls in disparate contexts highlights varied kinds of expansion and the multifarious forms they took.

Remapping the Terrain of Havana

In April of 1805, Secretary of State James Madison appointed Henry Hill the new US consul for Havana, Cuba. The news subsequently reverberated through the newspaper circuits of several Northeastern and Mid-Atlantic ports.¹⁹ The Connecticut merchant's appointment was part of the recent efforts among US officials and merchants to expand American trade connections to the Spanish Caribbean. Havana loomed large for merchants in New York,

¹⁸ Michaux became an active correspondent, as did the French consul in New York, J. Hector St. John de Crevecoeur. See Rhembert, 69-70. The APS also received correspondence from Marques de Casa Yrujo, the Spanish Minister in Washington in the early nineteenth century (who liked to correspond with Thomas Jefferson scientific topics as well). One of the most prominent US consuls was an agent based in Paris in the early nineteenth century, David Bailie Warden, who sent the institute letters from foreign scientists, publications and few of his own treatises. We will revisit him later in the chapter.

¹⁹ Roy F. Nichols, "Trade Relations and the Establishment of the United States Consulates in Spanish America, 1779-1809," *The Hispanic American Historical Review* 13.3 (1933), 295. For announcements in newspapers (resources for general commercial news), see *Charleston Courier*, 14 May, 1805; *The United States Gazette*, 25 May, 1805; *Salem Gazette*, 31 May, 1805; *Connecticut Gazette and Commercial Intelligencer*, 55 June 1805; *The Newport Mercury*, 8 June, 1805.

Philadelphia and New England as a market for American exports, a venue for the carrying trade and a source for staples like sugar and coffee. In the wake of American independence and escalations of warfare during the French Revolutionary and Napoleonic Wars, political tensions with the British and French limited Americans' options for trade destinations in the West Indies. Cuba quickly emerged as a dynamic alternative to the British and French West Indies.²⁰

Opening up the port to the United States proved to be no smooth process. An elaborate series of commercial regulations had accumulated over the eighteenth century designed to confine the entire trade to a few Spanish mercantile houses. Spain's late eighteenth-century entanglements in warfare with Great Britain and France, in addition to natural disasters, made relaxation necessary, as Cuban colonial officials had to admit foreign trade in flour and other goods. American merchants and officials thus contended with inconsistent attitudes and policies toward their shipping in Havana.²¹

By 1805, moreover, Havana began taking on new significance in light of Americans' recent acquisition of the Louisiana territory and interest in Florida. From the Cuban perspective, Cuba was being drawn too close to the United States, and Cuban officials were more than ever disposed to be friendly to France (and French privateering) as a protective device. US-Cuban trade, while it flourished, was in a precarious position. Henry Hill was to foster Americans' vulnerable shipping. Secretary of State James Madison gave him specific instructions to report any unusual military or naval activity between Cuba, Louisiana and Florida.²²

²⁰ Nichols, 289-313; Linda Salvucci, "Atlantic Intersections: Early American Commerce and the Rise of the Spanish West Indies (Cuba)," *The Business History Review* 79.4 (2005), 781-809.

²¹ Nichols, 289-313; Sherry Johnson, "El Niño, Environmental Crisis, and the Emergence of Alternative Markets in the Hispanic Caribbean, 1760s-1770s," *William and Mary Quarterly*, 3rd Series, 62:3 (July, 2005), 365-410.

²² Nichols, 307-308.

When Hill arrived in Havana with his instructions, he found his office in a rather precarious position. Cuban and Spanish imperial attitudes toward official US presence in the port shaded between ambivalence and suspicion, particularly in light of Americans' geopolitical ambitions in the region. Americans had gone through six consuls at the port within the past twenty four years, two of whom did not even receive official recognition by local authorities. Now the captain general refused to recognize Hill as the new consul. American merchants and ship captains were also confronting new irregular alterations in duties and customs policies toward ships arriving from US ports. Hill's lack of familiarity with the port created some additional dilemmas. Previous consuls had been able to bring to their posts greater on-the-ground experience in Cuba and other regional Spanish possessions. Hill, in contrast, was fresh from Guilford, Connecticut and had no experience with the regulatory culture in the port.²³

Hill's struggles are apparent in the lengthy dispatches he prepared for the Secretary of States. Hill tried, diligently, to perform the tedious task of monitoring fluctuations in duties on American shipping, calculating their changes and potential impact on profits from trade. His dispatches are long, filled with detailed accounts of alterations in port regulations for American captains and seamen as well as activities of the French privateers roaming the region. He collected editions of the *Havana Aurora*, a "government organ," for officially published updates on regulations and sent them along with his reports.²⁴

Unfortunately, reading and negotiating the regulatory culture that produced those regulations proved no easy task for the consul, who did not refrain from complaints to the

²³ Ibid., 307-308.

²⁴ See, for example, "Henry Hill to James Madison, [undated] May, 1805," NARA, Department of State, "Consular Dispatches from Havana," RG 59.

Secretary of State about his situation. While Hill tried to keep up with officially published regulations, captains' grievances with customs officers frequently alerted him to overlooked rules, many of which he thought "ruinous," arbitrary" and mere products of Cubans' dissatisfaction with US foreign policies in the region. His anger lapsed into Anglo-American disdain for Spanish imperial political culture. Customs officers appear in his dispatches as "barbarick" and "petty despots" who were driven by "rude prejudice" against American seamen. They did not hesitate to throw American captains "into a prison the most loathsome in the world, among criminals of every class and crime, and description of colour, or placed in the publick stocks exposed to public view and ridicule." Cultural dissonance and distrust, amplified by current political tensions, shaped Hill's interactions with the Spanish colonial port.²⁵

As Hill was soon to discover, Cuba's environs presented another problem for American shipping: disease. Like many ports in the West Indies during this period, Havana was vulnerable to the importation of diseases that circulated through the channels that linked the port up the Atlantic world. Pandemics of yellow fever proved a particularly great source of anxiety. They had been a problem as early as the mid-eighteenth century. Over the previous two decades, however, the disease moved with greater frequency between Havana and the North American and Caribbean ports that flooded the city's harbor with shipping. Indeed, concerns about the causal relationship between American sailors and the importation of yellow fever had already figured in some of disease treatises by Havana-based medical writers.²⁶ By the time of Hill's arrival, disease surveillance and regulation of bills of health were beginning to figure in the

²⁵ See Henry Hill to James Madison, report, 1-10 November, 1805, NARA, Department of State, "Consular Dispatches from Havana," RG 59.

²⁶ An excellent example of this is the Spanish Cuban physician, Tomas Romáy. Following an outbreak in 1799, Romáy wrote in a local newspaper that he believed American sailors had imported the disease. For a discussion of Romáy's views and the debates among Spanish-Cuban medical writers about yellow fever, see Adrián López Denis, "Disease and Society in Colonial Cuba, 1790-1840," (PhD Diss., University of California Los Angeles, 2007), 134.

Spanish and American consular networks that linked Cuba, American port town towns and Spain.²⁷

In mid-summer 1805, not too long after Hill's arrival, yellow fever returned to Havana in full force. Hill included news of the outbreak in his June 27 dispatch to Madison: "The yellow fever in some instances [has] made its appearance, I am apprehensive many of the Seamen will fall victims to its malignity in the cause of the season." Hill's worries were confirmed. Shortly thereafter, American seamen began dying from the disease. In subsequent dispatches, Hill wove disease and health into his other updates relating to tariffs and local judicial matters relating to captains and the jurisdiction of ships. His consular duties quickly expanded to managing the disease harming American seamen and shipping.²⁸

But Hill himself was still relatively new to Havana. While he had struggled to master the character of the local regulatory culture, tariffs and American traffic in the port, he displayed even greater unfamiliarity with Havana's local ecology, the character of outbreaks and medical resources. Hill subsequently faced severe challenges in his quest to make sense of the situation and create some order. One was determining the sheer magnitude of the mortality among the American seamen, who began falling sick in large numbers aboard ships and in a local hospital.

Locating medical resources also presented cultural barriers for a native of Connecticut. Hill learned to chart the ways in which sick American seamen navigated Havana's medical world. As he did, his own cultural and social background colored his perceptions of local care

²⁷ Linda Salvucci noted this in her study of the activities of the Philadelphia-based Spanish consul, who was charged with the task of filling out bills of health for Americans traveling to Havana during an outbreak of yellow fever in that city in 1803. See Salvucci, n. 35, 798.

²⁸ See Henry Hill to James Madison, 27 June 1805, NARA, Department of State, "Consular Dispatches from Havana," RG 59.

options and their shortcomings. He fumed in one lengthy letter to Secretary of State James Madison:

When attacked with [yellow fever], they are either confined on board to the unskillful and neglectful care of their captains or mates, or hurried off to the hospital where they are sure to die. I hear they are placed in apartments very illy [sic] adapted to their state and are looked upon more as objects of profit than of benevolence and commiseration. Their fees are greater for burying them, than for medicine and attendance while living. And as those hospitals are operated by an order of people less humane and more unprincipled than perhaps any other class of human beings (I speak of the friars), I doubt not but they prefer their patients should die, rather than live.

Hill's general frustrations with the treatment of American interests and shipping surely inspired some of his exasperation with the treatment of sick Americans. However, Hill was also reading the hospitals, the treatment of the Americans, and hospital staff's communications through the lens of a New Englander who had grown up with medical institutions embedded in a constellation of Protestant values and Anglo-American medical traditions. Those values generally inspired disdain for Catholic institutions and the belief that Catholic religious orders were unfit to govern and dictate the proper function of a hospital. Hence Hill's contrast between the "death traps" of "inhumane" and "greedy" "friars" and the culture of "benevolence" and rationalized order he desired in a hospital.²⁹ But in Havana there were few alternatives to charity hospitals supervised by the Catholic Church. Other institutions in the city, such as the military hospital Intendencia de Hacienda, largely restricted care to specific segments of local society.³⁰

²⁹ Enlightenment reformers sought to rationalize hospital care and architecture in the late eighteenth century Anglo-American and French contexts. They were thus highly critical of religious orders, in particular the Catholic Church, which not only funded hospitals but also staffed them and shaped their function. See Guenter Risse, *Mending Bodies, Saving Souls: A History of Hospitals* (Oxford University Press, 1999), 231-256, 289-338. Hospitals in the Early American Republic were also an integral part of the culture of benevolence and philanthropy, which were very often tied to the promotion of Protestant values. See, for example, Nina Reid-Maroney, "Scottish Medicine and Christian Enlightenment at the Pennsylvania Hospital, 1775-1800," in *Nation and Province in the First British Empire: Scotland and the Americas, 1600-1800*, ed. Ned C. Landsman (Lewisburg, 2001).

³⁰ López Denis, 170-171.

Cultural clashes and limited options aside, Hill expressed concern about the ability of Spanish-Cuban practitioners to monitor and adapt therapeutics to the constitutions and habits of men who resided in “northern” climates and failed to adjust to the much warmer environs of Cuba. He ended his letter by posing the question to Madison “whether the importance of our trade to this port, the number of seamen employed and their incidence to disease while here would not warrant the Establishment of an hospital for the reception of American seamen here at the expense of the United States.”³¹ While Hill considered hospital treatment an appropriate way to cope with yellow fever, he wanted a hospital run according to his own principles, not those of Catholic charity.

In lieu of his sought-after transplant of the medical institutions he knew and trusted for the care of lower-class North Americans, Hill found other ways to take command of the situation. Sometime between his frustrated letter to Madison in June 1805 and autumn of 1805, Hill began transforming the tools and knowledge of his familiar commercial and medical worlds into valuable resources, which he used to make a new “map” of the disease and medical environs of Havana.

First, Hill took up the skills he had cultivated and applied in his work monitoring the ships, goods and citizens arriving in the port. He began to organize information about health, disease and environment as he had information about local circumstances for American shipping. Hill went to his primary source for political and commercial news, the *Havana Aurora*, and collected the October 30 edition, which featured an excerpt of a royal physician’s study of the disease off the coast of Spain. Hill transformed his practice of collecting records of ship cargos,

³¹ Ibid.

crews and voyage histories into a method for gathering information about the deceased seamen. He applied to the masters of American vessels for information about the names of the deceased; names of the vessels to which they were attached; the names of masters and the ports to which they belonged; their usual residence and their native country. By the end he had produced a list of eighty-six men which was, by his estimate, imperfect. “I suppose,” he added at the end of the list, “about one hundred seamen have fallen victims to disease in this port, during the period above-mentioned.”³²

Not unlike his lists of the ship arrivals in Havana, Hill arranged the seamen’s information in a table. The resulting table served not only to “inform friends of the deceased” back in the United States but also to satisfy Hill’s “own curiosity” about the character of disease mortality among Americans. It is clear that the lists alone did not satisfy Hill’s curiosity. After the outbreak had subsided, Hill began calculating mortality rates out of the records.³³ By autumn of 1805, he had managed to produce a comparison between his calculated rates and those from the “returns made from different churches and hospitals” about births and deaths of Spanish-Cuban residents.³⁴ Calculating mortality rates among Americans and relating them to the local environs and health records were not unlike Hill’s efforts to map out all of the political, cultural and environmental factors that affected the course of American shipping in the region.

Second, Hill drew upon his own cultural background to identify and select the elements of local medical care he deemed most trusted and familiar. As Hill charted Americans’ navigation of the local medical world, he discovered a practitioner, José Agustín Tomás

³² “Report to Secretary of State James Madison, 30 August 1805,” NARA, Department of State, “Consular Dispatches from Havana,” RG 59.

³³ *Idem.*

³⁴ *Idem.*

Domínguez. Domínguez held considerable appeal for Hill, more for the hybrid nature of his identity and medical background than any specific experiences in Havana. He was originally from Scotland. John Holliday Heragod had arrived in Havana in 1792, where he adopted the Catholic faith and a Spanish alias in order to obtain a license from the Royal Protomedicato to practice medicine. While he boasted local credentials and experience with yellow fever, Holliday also carried a degree from the University of Edinburgh – a major center for medical education in the Anglo-American world.³⁵ He mobilized both of these medical and cultural backgrounds to make a niche for himself. Well before Hill’s arrival, the doctor had produced studies in both Spanish and English on yellow fever in 1794 and explored common local therapeutics. Known by his Spanish alias among locals, José Agustín Tomás Domínguez was “John Holliday” to the Americans who arrived in port and to medical print audiences back in Great Britain.³⁶

Hill turned “John Holliday” into a valued intermediary between the more foreign elements of the Spanish-Cuban medical culture in Havana and the ones he knew and trusted. “Doctor Holliday, a Scotch gentleman, who has resided twelve years in this country, and has had great experience in practice, is usually employed by Americans, and has been very successful generally.” Hill chose to emphasize Holliday’s Scottish background in his own interpretation of effective elements of local medicine, and he relied on Holliday as a guide to local therapeutics and local studies of yellow fever in Havana. Hill’s sources of medical information thus came to

³⁵ Lisa Rosner, among others, has addressed Edinburgh’s role as an exemplar for Anglo-American medicine. See Rosner, “Thistle on the Delaware: Edinburgh Medical Education and Philadelphia Practice, 1800-1825,” *Social History of Medicine* 5:1 (1992).

³⁶ For a biographical study of Holliday, including his general practice and work on yellow fever in Havana, see José Antonio López Espinosa, “Una rareza bibliográfica escrita en Cuba sobre fiebre amarilla,” *ACIMED* 13.2 (2005), 1-6. I am also indebted to Adrian López Denis for sharing his findings on Holliday’s thriving practice among Americans in Havana.

include Holliday's own manuscript treatise along with the doctor's "estimation" of effective remedies employed in the city.³⁷

Ultimately, Hill complemented his medical cultural knowledge and consular skills with his own on-the-ground experiences with the materiality of yellow fever. Throughout much of his report, Hill referred to Holliday and unnamed practitioners when discussing the disease and therapeutics. However, he also slipped a first-person account: "I have seen the progression of the fever much more rapid than in other cases, and seldom an instance of recovery from an attack of much greater violence."³⁸ Hill signaled to his readers that these were his own firsthand observations of physical manifestations of the disease in American bodies. Even though he himself was not a practitioner, he deemed them authoritative enough to include in a report on the disease's course.

Hill penned his whole piece in four pages of an official dispatch, burying the account and table of deceased seamen in one of his usual lengthy reports to the Secretary of State. He sent along with it John Holliday's manuscript treatise and the October 30 edition of the *Havana Aurora*. In spite of the similarity in format, Hill's report does not read entirely like his other dispatches. He decided to give his report a title, *Observations and Remarks on the Prevailing Fever at Havana*, which echoed the style of another genre: the fever treatises doctors and military medical writers produced and circulated during that period.³⁹

³⁷ "Report to Secretary of State James Madison, 30 August 1805," NARA, Department of State, "Consular Dispatches from Havana," RG 59.

³⁸ Ibid.

³⁹ Ibid. For more on the genre of "Observations" in medicine during this period, see Lorraine Daston, "The Empire of Observation," in Lorraine Daston and Elizabeth Lunbeck, eds., *Histories of Scientific Observation* (University of Chicago Press, 2011).

Hill's identity underwent one final transformation not on the ground in Cuba but back in the United States. His report did not remain in Secretary of State James Madison's hands. Much like the sphere of statecraft abroad, government circles back in the US often blurred with the worlds of science and medicine. Madison passed Hill's report on to Samuel Mitchill, a physician who worked in both early Republican federal government and medicine. As Hill's piece changed hands, it changed in function. Mitchill read the piece as a physician and editor of the *Medical Repository*, which, as discussed in Chapter 2, was rapidly becoming an important forum for discussions about yellow fever in different parts of the Atlantic world. In spite of the journal's growth in geographic coverage, the editors complained that "literary and professional productions from Spanish America rarely come into our hands." Both language barriers and limited access to Cuba's medical print made it difficult for the editors to tap into information about yellow fever's activity, in particular its effects on Americans. As a solution, Mitchill and Miller had begun using literature and information from the consuls based in Havana.⁴⁰

Unbeknownst to him, Mitchill and Miller turned Hill into a medical correspondent. Mitchill turned Hill's administrative work and report into a treatise. He removed Hill's table of deceased seamen from the essay on yellow fever and gave the account a new name: *Observations on the Mortality by Yellow Fever, among the Seamen of the United States, who, with northern Constitutions and Habits, sail to Havanna, in Cuba; and on the Health and Longevity of the Native Spanish Inhabitants*. By Henry Hill, Esq. Commercial Agent for the United States at that

⁴⁰ One of Hill's predecessors, John Morton, actually sent Spanish publications to Mitchill and Miller in 1803. In a letter to his former mentor, Benjamin Rush, Edward Miller commented on the value of Morton's contributions in light of Americans' limited access to studies of yellow fever in Havana. See Miller to Benjamin Rush, 10 August 1803 in Benjamin Rush Manuscripts: Correspondence. Library Company of Philadelphia. The quote appeared in the introduction to the review in the 1803 review of the literature Miller received from Morton. See "REVIEW," *Medical Repository*, Second Hexade, Volume 6 (1803), 49-52.

City: Communicated to Dr. Mitchill by the Secretary of State.⁴¹ Mitchill then published it in the *Medical Repository*. Mitchill remade the audience for Hill's piece by inserting it into a journal that circulated not only through the US but other parts of the Anglophone and even Francophone Atlantic. Through his revised title, moreover, Mitchill designed the piece more clearly as one of many new resources medical men might use for study of the shifting ecologies of disease and health in the Atlantic world.

By entering into the collective process of mapping the changing ecological and cultural landscape of the Atlantic, Hill had helped alter the world of yellow fever two pivotal ways. By making a medical role for himself, Hill had expanded his function on the ground in Havana. Like many of the civilian physicians and military medical officers who contributed to the world of fever mapping and observation, Hill had drawn upon a mixture of his own medical cultural knowledge and firsthand experience with yellow fever. Mitchill and Miller, in turn, had given him an authoritative position in the world of warm climate medicine by publishing and circulating his work.

Hill subsequently contributed practices and capital particular to his work as a consul. The materials that landed in Mitchill's hands and the essay that circulated via the *Medical Repository* rested on Hill's preferred local print sources, captains' ship records, seamen's maps of the local medical culture as well as the recording and accounting practices he used to perform his duties as consul. While Hill had helped open up Havana as a site of study, Havana was ultimately filtered through the lens of an Anglo-American consul in a Spanish colonial port.

⁴¹ Henry Hill, "Observations on the Mortality by Yellow Fever, among the Seamen of the United States, who, with northern Constitutions and Habits, sail to Havanna, in Cuba; and on the Health and Longevity of the Native Spanish Inhabitants. By Henry Hill, Esq. Commercial Agent for the United States at that City: Communicated to Dr. Mitchill by the Secretary of State," *Medical Repository* Second Hexade 4 (1806), 113-117.

Translating New Disease Experiences in the Mediterranean

This flux in geopolitical circumstances was not confined to the Atlantic world. During Hill's forays into the Spanish West Indies, another consul, Étienne Cathalan, Jr. was grappling with the changing landscape of disease in Marseilles, France. At the time of his appointment in 1789, the newly independent Americans had come to regard not only Spanish Caribbean ports but also southern French and Italian entrepôts as viable alternative markets for their carrying and export trade. Cities like Marseilles subsequently experienced an influx of American vessels that transported goods and seamen between the US, West Indies, Spain and various destinations within the Mediterranean. The region was also witnessing new forms of naval activity. The Napoleonic Wars also introduced new movements of American, British and French troops and agents throughout the Mediterranean – between the Atlantic, various southern European ports and northern Africa. Barbary privateers, who frequently attacked American shipping and kidnapped seamen, also roamed the region and magnified the Mediterranean's significance for the US government.⁴²

Étienne Cathalan, Jr. was very much a product of this changing world. He was born in 1757 to a successful French merchant family that thrived on the export trade in Marseilles. When his father began integrating him into the business in the 1770s, many French merchants in the region were becoming swept up in the American Revolution. Americans appealed to the French for support in the cause, and a number of French merchants answered the call by taking

⁴² See Marzagalli, Sofka and McCusker, "Rough Waters: American Involvement in the Mediterranean in the Eighteenth and Nineteenth Centuries: Introduction," in Silvia Marzagalli, James R. Sofka and John J. McCusker, eds., *Rough Waters: American Involvement with the Mediterranean in the Eighteenth and Nineteenth Centuries* (International Maritime Economic History Association: St. Johns, 2010), 1-6; John J. McCusker, "Worth a War? The Importance of the Trade between British America and the Mediterranean," in *Ibid.*, 7-24; Silvia Marzagalli, "American Shipping into the Mediterranean during the French Wars: A First Approach," in *Ibid.*, 43-62.

up the risky venture of exporting grains and even ammunition to the rebelling colonies. Cathalan, Sr. was among those who seized the moment, identifying not only pecuniary advantages but also the possibility for future prosperous ties to a new nation. In the wake of the American Revolution, Cathalan, Jr. absorbed his father's outlook and a legacy of transatlantic commercial, political and social ties, which he subsequently integrated into his connections to ports and merchants in Italy.⁴³

New political and commercial developments in the 1780s and 1790s altered the information channels that Cathalan, Jr. had used to connect Marseilles with the broader world. Americans' expanded naval and commercial activity, for one, opened up more exchanges in goods, news and people between the Mediterranean and North American ports than before Independence. Through his early business transactions with Americans and exposure to American commercial and government agents, Cathalan, Jr had acquired proficiency in English, and he put both French and English skills to work in some of the transatlantic personal and business correspondences he cultivated during and in the wake of the American Revolution. Cathalan, Jr. even answered American contacts' requests for regional news, Mediterranean foods, wine and botanical objects.⁴⁴

The increased presence of American shipping and seamen also accompanied the growth of a new web of networks. In lieu of guaranteed protection and representation by the

⁴³ André de Gasquet, *Étienne Cathalan: vice-consul des Etats-Unis à Marseille de 1789 à 1819. No. 78, Cashiers du Comité du Vieux Marseille* (Marseille: Comité du vieux Marseille, 1998), 68-73. For a brief overview of Marseille's commercial situation over the course of the eighteenth century and early nineteenth century, see Charles Carière, *Négociants marseillais au XVIIIe siècle: Contribution à l'étude des économies maritimes*, I, 564-565; and William Hamilton Sewell, Jr., *Structure and Mobility: The Men and Women of Marseille, 1820-1870* (Cambridge: Cambridge University Press, 2009), 15-21.

⁴⁴ Cathalan's correspondences came to include, among others, Thomas Jefferson, who became acquainted with Cathalan during his time in Paris. See Gasquet, 75-79.

Mediterranean-based agents of their former mother country, Americans began establishing their own consuls and vice consuls in various Italian, French Mediterranean, coastal Spanish and northern African ports who eased the movement of American shipping in the region by circulating relevant naval intelligence, translating port regulations, mediating between local authorities and seamen and also helping seamen and travelers in distress.⁴⁵ Cathalan, for example, began involving himself in the difficult task of creating new regional intelligence channels and support networks for Americans trying to escape the threat of Barbary privateers. He became an important intermediary between the US and the consuls in Algiers, who frequently required help in freeing kidnapped Americans or needed to find alternative routes for naval intelligence.⁴⁶

New patterns in movements of ships, goods and seamen also wrought ecological and medical cultural transformations. Like many other southern European ports, Marseilles's health regulations and disease experiences rested on a long and intimate history with plague. The city's massive lazaretto and permanent health office, created in the late seventeenth century, were both products of the city's centuries-old ongoing battles with regional plague pandemics in the Mediterranean. Outbreaks, quarantine regulations and correspondences with regional Italian ports had fuelled local discussions, health decisions and created rich material for the explosion of plague literature in the late seventeenth and eighteenth century. By Cathalan's appointment in 1789, plague had not appeared in the city for fifty nine years. The city's 1720 epidemic had, in fact, acquired fame as the last outbreak in Western Europe. Nonetheless, plague was still entrenched in the city's culture, medicine and legislation. The office and lazaretto remained

⁴⁵ Marzagalli, 45-49; Anthony Antonucci, "Consuls and Consiglieri: United States Relations with the Italian States, 1790-1815," in Silvia Marzagalli, James R. Sofka and John J. McCusker, eds., 77-100.

⁴⁶ Gasquet, 99-112.

active and important fixtures in the city's health regulations and relationship to the maritime world. Plague literature from the 1720s was still reprinted, cited and talked about in Marseilles and other parts of France.⁴⁷

The 1790s witnessed a resurgence of the disease in Egypt, Algiers and islands off the coast of northern Africa. The disease itself was not a new threat, but its routes and victims were. As the Napoleonic Wars played out in Egypt, French troops threatened to spread the disease to southern European ports-of-call where they typically landed.⁴⁸ Americans fell victim not only to attacks and kidnappings in northern Africa but also to outbreaks of plague, a disease many had never experienced. And they, too, threatened to spread the disease from port to port.⁴⁹

New plague activity also raised concern about the vulnerability of US ports to the Mediterranean pandemic. During a regional plague outbreak in 1796, Cathalan became outraged with the consul in Gibraltar, who decided to shorten a ship's quarantine and send it on its way back to the United States. "If this could have been allowed to me," he observed to the Secretary of State, "I would have opposed to it, to prevent Plague to be imported by them to the United States."⁵⁰ It was not so much the ship itself, but rather American ports' defense that concerned Cathalan. "There being no place fitted for quarantine, nor proper known ways to extirpate from all their clothes the effluvia, which is the custom here." American ports, to his mind, lacked the experience and necessary facilities so well established in Marseilles. Cathalan, among others, was starting to think about American port operations in relation to plague.

⁴⁷ Laurence Brockliss and Colin Jones, *The Medical World of Early Modern France* (Oxford: Clarendon Press, 1997), 37-53 and 347-356.

⁴⁸ *Ibid.*, 833-834.

⁴⁹ Joel Barlow to Étienne Cathalan, 12 July, 1796, NARA, Department of State, "Consular Dispatches from Marseilles," RG 59.

⁵⁰ *Ibid.*

The growth of trade with the Americas also brought with it a new disease threat to the Mediterranean: yellow fever. In the 1790s and early 1800s, reports and rumors about outbreaks in the US and West Indies spread through French and Italian ports via consuls, merchants and intraregional government networks. Health authorities in Marseilles began approaching Cathalan with news from the French consuls in Charleston and Philadelphia about the state of health in their regions.⁵¹ Port officials in Naples and Livorno subjected Americans to particularly rigorous quarantine policies – a result of conflicting reports from the US and suspicion of American captains’ accounts of their movement from port to port.⁵² Cathalan, as a result, began receiving requests from other US consuls for information about captains who might have touched in Marseilles before approaching health authorities in Italian ports.⁵³ The threat of yellow fever became all the more real in 1800, when outbreaks began occurring along the Spanish coast in Cadiz and Gibraltar – right at the mouth of the Mediterranean. By 1804, the disease had spread to Cordoba, Grenada, Valencia, Catalonia, Malaga and Livorno. The latter was one of the top destinations for the American re-export trade.⁵⁴

⁵¹ See, for example, the Health Office’s report to Cathalan, dated 2 February, 1802, which Cathalan forwarded to Secretary of State James Madison. Cathalan to Madison, 10 March 1802, NARA, Department of State, “Consular Dispatches from Marseilles,” RG 59.

⁵² In February 1804, for example, John Mathieu, the consul in Naples, complained to Secretary of State John Marshall that an outbreak in Malaga was believed by the Neapolitan health office to have been brought to that port by an American ship. The office decided not to admit any American ships from Philadelphia or any southern US ports. Those from northern ports were subject to a twenty-one-day quarantine. See Mathieu to Marshall, 12 February 1804, NARA, Department of States, “Consular Dispatches from Naples,” RG 59. In June, 1799, the consul in Livorno, Thomas Appleton, responded to a petition by American merchants about the city’s quarantine policies against American shipping, which they thought unreasonably rigorous. Appleton, in turn, requested information from Secretary of State Thomas Pickering that would “prove the perfect conditions of health in the United States.” See Appleton to Pickering, 28 June 1799,” NARA, Department of State, “Consular Dispatches from Livorno,” RG 59.

⁵³ See, for example, Cathalan to Marshall, 4 September 1804, NARA, Department of State, “Consular Dispatches from Marsellies,” RG 59.

⁵⁴ For an overview of early outbreaks in southern Europe, see William Coleman, *Yellow Fever in the North: the Methods of Early Epidemiology* (University of Wisconsin, 1987), 18-20. For Livorno’s status as the major port for American shipping, see Marzagalli, 54-55.

With the advent of plague and yellow fever, Cathalan began putting his cultural and linguistic mobility to work in matters concerning health relations. One challenge presented itself in July of 1796, when a group of kidnapped Americans encountered a plague outbreak in Algiers. The Americans began falling victim to the disease. The consul in Algiers, Joel Barlow, quickly turned his regional support networks for aiding kidnapped Americans into resources for medical assistance and disease prevention. After acquiring money to free kidnapped Americans in the region, he directed the ship to Livorno with a letter of explanation to the consul there: “It is the only way in which I could get the people free and save the rest of them from dying with the plague.”⁵⁵ The ship arrived in Marseilles instead. The captain explained to Cathalan that he had altered his course because of the rigor and expense of the quarantine in Livorno. Cathalan knew these health policies well. He had learned from both the consul there and “captains arriving from [Livorno]” that the procedure was “nearly double that of Marseilles.” Cathalan quickly sent word of the captain’s arrival to Barlow and the consul in Livorno, forwarding all of his correspondence to the Secretary of State.⁵⁶ Cathalan, fellow consuls and a captain had made regional maritime and government information channels into a system for disease and health surveillance.

Such situations often demanded the vice consul’s skill in negotiating between the needs and desires of American seamen and the authorities and local population of Marseilles. When the captain arrived, he begged Cathalan to assist in care for the sick seamen and consultations

⁵⁵ Letter from Joel Barlow to Filippo Fellicchi [consul in Livorno], 12 July, 1796. Cathalan sent this letter in a dispatch to Secretary of State Timothy Pickering, [undated], NARA, Department of State, “Consular Dispatches from Marseille,” RG 59.

⁵⁶ Cathalan to Secretary of State Timothy Pickering, 26 July, 1796, NARA, Department of State, “Consular Dispatches from Marseille,” RG 59.

with local authorities that might “expedite our quarantine.”⁵⁷ Cathalan obliged. He interviewed, translated and explained the medical information to the captain and the Secretary of State. Cathalan was in a particularly good position to negotiate with the lazaretto surgeons and doctors. He was not only a local citizen who grew up with the city’s medical culture. The head physician, “Citizen Bourg,” was Cathalan’s personal physician. He expressed to both Pickering and the captain his faith in the physicians’ skill and sense of pride in the lazaretto facilities.⁵⁸

As a resident of Marseilles, Cathalan understood aspects of the city’s relationship to the time-honored lazaretto facilities. He observed that “the good policy of the lazaretto, and the safety of the Town” created limitations in how the sick seamen might acquire foodstuffs and other goods to refresh themselves in light of the sickness. Cathalan used both his warm personal relations to the health officials and his acquaintance with a nearby inn keeper to set up provision of breakfast and dinner rations for the men.⁵⁹ When the men completed their stay, the captain expressed his gratitude to both Cathalan and the superintendent of the lazaretto “for their humanity in using every possible means for Preserving our health” and ensuring a smooth performance of quarantine.⁶⁰ Cathalan’s interactions with captains would not always prove as successful. Regardless, this incidence reveals the social and cultural capital the Marseilles merchant-turned-US-consul began using to cultivate a new medical role for himself.

As Cathalan witnessed these ecological transformations, brokered disease information and mediated health relations, he began to re-evaluate the relationship between American and

⁵⁷ Cathalan copied the content of the captain’s note in his dispatch to Secretary of State, 22 July, 1796, NARA, Department of State, “Consular Dispatches from Marseille,” RG 59.

⁵⁸ Cathalan to Secretary of State Timothy Pickering, 26 July, 1796, NARA, Department of State, “Consular Dispatches from Marseille,” RG 59.

⁵⁹ Ibid.

⁶⁰ Letter from the captain dated Lazaretto, 24 July, 1796. Cathalan included the letter in the above dispatch to Timothy Pickering, 26 July, 1796, NARA, Department of State, “Consular Dispatches from Marseille,” RG 59.

Mediterranean health measures, bodies of disease knowledge as well as the medical men and policymakers who produced them. Clashes and misunderstandings over health regulations, local anxieties over yellow fever and American anxieties over plague all suggested to the vice consul that American and European disease zones and experiences were colliding in unprecedented ways. These circumstances, he believed, warranted new types of interchange between American and European physicians and health offices.⁶¹

Inspired, Cathalan developed a new project. He was going to do more than translate and channel information. He would help remake relations between American and Mediterranean medical writers and health authorities. Sometime between 1796 and 1799, Cathalan decided to set up a meeting with “Citizen Bourg” and “three others of our most reputed physicians.” The vice consul approached the doctors with a series of questions about the city’s lazaretto facilities and their opinions about the cause of yellow fever.⁶² After a number of consultations, Cathalan returned to his desk. He pulled recent letters from Timothy Pickering out of his files. They were letters that had described the state of yellow fever in Philadelphia in 1798 – personal and official – and containing queries about the character of health regulations in Marseilles. He began arranging and rearranging the French and American materials together. He finally set to work translating from French into English and from English into French.

By the time he finished, Cathalan had produced a fifty nine-page treatise: *Recueil de pièces relatives a la fièvre jaune d'Amérique, envoyées par le consul des États-Unis d'Amérique, à Marseille, au gouvernement des États-Unis, 1799*. It was nothing like the topography Henry

⁶¹ Cathalan to Timothy Pickering, 10 June 1799, NARA, Department of State, “Consular Dispatches from Marseilles,” RG. 59.

⁶² Cathalan compiled records and materials from his project into the above dispatch.

Hill had made. *Recueil de pièces* reads more like a series of exchanges – between Cathalan and the physicians, between Pickering and Cathalan and between “American and European” physicians. It captures Cathalan, Jr’s belief that Americans and Mediterranean Europeans shared common experiences with warm climate diseases. This went right down to the level of personal suffering. The treatise opens with a personal letter between Pickering and Cathalan, dated December 15, 1798, in which Pickering conveyed the sad news that the Frenchman’s brother-in-law had fallen victim to a recent yellow fever outbreak in Philadelphia. The volume proceeds with an official letter from Pickering. This one updated Cathalan on discussions in the US about “means of prevention of this calamity and plague” and expressed interest in the “establishments at Marseilles for preventing the introduction of the plague, [and] said to be the most complete in Europe.”⁶³ Through the medium of letters, both personal and official, Cathalan presented both the cultural bonds as well as the ecological and intellectual ties that united American and Mediterranean encounters with maritime pandemics.

Cathalan also used *Recueil de pièces* to present the knowledge and tools he (and others) thought American and southern European port cities could and should share. Pickering had signaled to Cathalan that the health regulations in Marseilles might work as a model for those in the United States. Cathalan, in response, turned the city’s physicians and legacy of plague literature into resources for Americans’ own health policies. He included a detailed record of the regulations of the lazaretto, “which [the physicians] have given me for the use of the Government of the United States.” Along with the treatise, he sent Pickering “a Journal abridged of what happened in this town of Marseilles during the Plague of 1720, drawn from a memorial

⁶³ Stephen Cathalan, *Recueil de pièces relatives a la fièvre jaune d'Amérique, envoyées par le consul des États-Unis d'Amérique, à Marseille, au gouvernement des États-Unis, 1799* (A Marseille: De l'Imprimerie de Jean Mossy, imprimeur-librairie, a la Canebiere, an VIIe de la République française, 1799), 3-5.

in this Municipality [and the] Historical Relation of the Plague of Marseilles in the year 1720, by Mr. Bertrand, Doctor Physician who attended to the great number of Patients.”⁶⁴ While the resurgence of plague once again tested Marseille’s power against the disease, “this horrid calamity” threatened the United States all the more, as it was “not yet known there.”⁶⁵

Cathalan also inserted the French physicians’ opinions regarding the cause of yellow fever in the United States. The physicians had mobilized treatises at their disposal, notably John Lining’s 1756 *A description of the American yellow fever* – a famous American work that had been circulating in French since 1758.⁶⁶ They used Lining’s meteorological observations, description of the marshy landscape in South Carolina and disease among “negros” to determine the environmental circumstances in which the disease could thrive and the body types that were most susceptible. More recent reports on the status of outbreaks in the 1790s had also allowed them to chart yellow fever’s progress and geographic range along the Atlantic seaboard of the United States. They even related these materials to their own records of the “bilious remittent fevers of the warm climates of Europe” and their own observations of the habits of American travelers in the region.⁶⁷

What the physicians finally concluded was that they wanted more information: “We still need to know how it responds to the influence of localities and in different atmospheric constitutions and seasons.” They required meteorological observations and records of the fever’s

⁶⁴ Ibid., 32; Cathalan to Timothy Pickering, 10 June 1799, NARA, Department of State, “Consular Dispatches from Marseilles,” RG 59.

⁶⁵ Cathalan, *Recueil de pièces*, 34.

⁶⁶ John Lining, “A description of the American yellow fever: in a letter from Dr. John Lining, physician at Charleston in South Carolina, to Dr. Robert Whytt, professor of medicine in the University of Edinburgh,” *Essays and Observations, Physical and Literary*, II (1756), 370-395. The French translation appeared in French medical periodical. John Lining, “De La Fievre Jaune D’Amerique,” *Journal De Med, Chirurg. et Pharm.*, 8 (1758):408-422.

⁶⁷ Cathalan, *Recueil de pièces*, 40-42.

course in individuals and its effects on different temperaments. “All of these facts,” they wrote, “could be united into one enlightening collection, which would allow us to make a decision with certainty.”⁶⁸ Cathalan likewise apologized that the memorandum was “very imperfect, being redacted only on what I could have heard by few American or French people, arrived here after the yellow Fever of 1797 and preceeding years [sic], I have heard there are precious observations made by Physicians or other [sic] in Philadelphia and other afflicted towns, works on that disease have been lately published.” Accordingly, the physicians and Cathalan used the treatise to request more recent volumes of medical literature from the United States. Such works, they argued, “would a great deal inlight [sic] the Physicians of Montpellier” and help them form their assessment. Americans might regard the Montpellier faculty as a resource for studying of yellow fever.⁶⁹

At first glance, Cathalan’s ideas about authoritative knowledge read like a European fashioning of old world disease experiences as the seasoned knowledge a younger nation lacked. Americans might gather facts and materials for the august European centers of medicine to interpret. Cathalan, after all, was deeply embedded in a French Mediterranean medical culture that privileged the University of Montpellier. The lazaretto and health office were both a well-established part of the city’s relationship to maritime diseases. They were also enshrined in heroic accounts of the outbreak in 1720. This was a world that Cathalan knew very well.

Ultimately, though, Cathalan revealed to readers that he felt that that world was changing too. The physicians he interviewed did not merely want to advise Americans about plague and yellow fever. “The health officers,” they wrote in one letter to the vice consul, “are concerned

⁶⁸ Ibid., 38-39.

⁶⁹ Ibid., 28.

about the Health of Europe, because of the relationship between the two worlds.” By the end of their review, the physicians determined that more up-to-date information from Americans about yellow fever would also be useful for them when the disease threatened their own ports.⁷⁰ “I would advise,” Cathalan concluded, “to request the Faculty or society of Physicians of Philadelphia, New-York, etc. To appoint a comitee [sic], to correspond the soonest possible with and consult the most celebrated Faculties of Physicians of Montpellier and Paris (if that has not been done already), in order that on the result of their different consultations, added to the opinion one with the other,” Americans and Europeans might both produce greater knowledge.⁷¹ The treatise was not only a resource for new ideas about health relations. Nor was it mere advice to Americans. It was a model and plea for future collaborations. Cathalan prepared the publication for both American and southern European audiences. The consultations with the physicians appear in both the original French and English. The same pages with the vice consul’s letters to and from Pickering feature a corresponding French translation. In addition to Pickering, the vice consul sent one copy of the treatise “to each of our Consuls in Spain and Italy.” He did not forget the local French physicians: “Ones have been asked to me by the Doctors health office, &c.”⁷²

In the end, political circumstances and trade patterns in the 1790s had transformed Cathalan. By virtue of his status as consul, he, like Hill, had become a new participant in warm climate medicine.

⁷⁰ Ibid., 12-13.

⁷¹ Ibid., 30.

⁷² Ibid., 32; Cathalan to Timothy Pickering, 10 June 1799, NARA, Department of State, “Consular Dispatches from Marseilles,” RG 59.

There are other lessons to take away from Cathalan's medical work. Unlike Hill's experience in Havana, Cathalan reveals another way in which consuls came to figure in the world of warm climate medicine: as men well placed to alter medical relations in ports-of-call. New movements in shipping, new information channels and new cultural relations had fundamentally altered Cathalan's sense of place: as a southern Frenchman, a merchant and a consul. They had thereby transformed his ideas about the relationship between his world of plague and the Atlantic world of yellow fever. Cathalan became part of a growing number of medical actors – consuls, policymakers, physicians and travelers – who were importing, exporting and remaking disease experiences in the Mediterranean.⁷³ However uneasily, they had collectively connected the worlds of plague and yellow fever.

Preserving Yellow Fever's Republic of Letters

In contrast to Henry Hill and Etienne Cathalan, David Bailie Warden neither came from a commercial background nor developed a head for business. His post in Paris was also far removed from the onslaught of yellow fever and plague. Nevertheless, by virtue of his unique background and Paris's changing position in the medical world, Warden was destined to play an important role in the networks of letters and sociability that constituted the study of yellow fever.

David Bailie Warden entered the consular circles of Paris via a rather unconventional route: his cosmopolitan immersion in the world of letters and sciences. In fact, his placement as

⁷³ Thomas Appleton performed a feat similar to Cathalan's publication. After a yellow fever outbreak in Livorno in 1804, he translated all 284 rules of the three local lazaretto facilities, and had the translations printed by a local printer with the governor's permission. The project served a dual function. Appleton believed that ship captains were having too many run-ins with the port authorities because of their "ignorance of the laws" and the language. He added to this: "Having heard that the governments of the United States were establishing in various ports lazarettos to prevent the introduction of contagious disorders I have thought that a translation of laws and regulations of the three Lazarettos of [Livorno] would be no unacceptable tribute of my respect." See Thomas Appleton to James Madison, 14 July 1806, NARA, Department of State, "Consular Dispatches from Leghorn," RG 59.

consul in Paris was rather fortuitous. Warden had devoted most of his life crafting a career as an all-round scholar and enthusiastic information broker. He was born in County Down, Ireland in 1772, and from an early age, the Irishman immersed himself in diverse array of subjects, never easily settling on just one. He attended Bangor Academy and Glasgow University, where he received a Master of Arts degree, won a prize for general proficiency in natural philosophy and became fluent in French and Latin. While in Glasgow, Warden decided to take courses in anatomy and surgery and earned a certificate in midwifery. In spite of his newfound interest in medicine, he never practiced and moved on to a new interest in theology. He decided to enter the Presbyterian ministry, where he quickly became wrapped up in the revolutionary fervor of the Irish Revolt against in England in 1798. A series of fiery sermons in support of the uprisings soon got him into trouble with authorities. Warden was expelled from British territory and set sail for New York in 1799.⁷⁴

Once in New York, Warden's political zeal waned while his passion for the sciences persisted. He embraced his new intellectual environs, participating in local agricultural experiments and improving technologies for farming. In order to earn money, he put his broad-based knowledge of medicine, sciences, civil law and French to work and secured the principalship of a seminary in Kinderhook, New York. By the time he took up a new post as a principal tutor in Kingston, New York in 1801, Warden had built a network of like-minded intellectuals interested in the natural sciences, largely through correspondence and the exchange of specimens.⁷⁵

⁷⁴ Francis Haber, *David Bailie Warden: A Bibliographical Sketch of America's Cultural Ambassador in France, 1804-1845* (Washington, D.C.: Institut Francais de Washington, 1954), 1-3.

⁷⁵ Idem.

Warden also expanded his networks across the Atlantic. He sent his friend, Dr. S.M. Stephenson of Belfast, local minerals and seeds of American plants. Upon news that Warden had revived his study of medicine, Stephenson cautioned that, although “it would suit your inquisitive philosophical genius,” medical practice itself might prove too laborious for a scholar such as Warden, who was interested in a range of natural-historical topics. He eventually helped the cosmopolitan scholar to earn a membership in the Literary Society of Belfast by presenting the Society with natural objects that Warden collected and a journal he had kept on weather, disease, and meteorological phenomena around Kinderhoek.⁷⁶

Through his broad scholarly background and activities in New York, Warden eventually established relationships that would lead, unexpectedly, to his diplomatic career in Paris. While principal tutor of Kingston Academy, Warden became acquainted with a variety of local prominent people, including the Republican senator General John Armstrong. Impressed with Warden’s academic background, Armstrong hired Warden as a tutor for his children and invited him into his household. When Thomas Jefferson appointed Armstrong as United States Minister to France in 1804, Armstrong decided Warden’s fluency in French and ability to absorb new skills and information would make him a valuable assistant. He hired Warden as secretary, arranged for his naturalization and took him to Paris. When the post of consul opened up in 1808, Warden applied to Armstrong for the position and got it.⁷⁷

In his capacities as secretary and consul, Warden became occupied with new forms of brokering. While working for Armstrong, he networked for the diplomat, helped with creating passports and helped produce reports for the US government. He even took over the entire

⁷⁶ Stephenson to Warden, April 25, 1801, David Bailie Warden Papers, 1797-1851, American Philosophical Society.

⁷⁷ Haber, 4.

business of legation when Armstrong went on a tour of France with his wife. As a consul, he hosted travelers, relayed political and naval intelligence from Paris and served as an intermediary for other consuls within France. A mounting shipping crisis also occupied his time as consul. During his term from 1808 to 1814, Warden had to meet the problem of handling a large number of prize causes, which resulted from both England and France preying on neutral ships during the Napoleonic Wars and War of 1812. In order to earn an additional living, Warden also tried to do what many other consuls had done: he became a business agent for American merchants.⁷⁸

Still, administrative duties, politics and business did not lessen Warden's enthusiasm for the sciences. On the contrary – the sciences tended to consume his time. As he had in Ireland and in New York, Warden immersed himself in diverse branches of the sciences in Paris. While secretary to Armstrong in 1806, he formally enrolled in the Ecole de médecine de Paris and took courses in comparative anatomy, the causes of sickness, zoology, mineralogy, botany and chemistry. Warden also kept abreast of the latest medical and scientific publications, new journal volumes and different booksellers who populated the world of print in Paris.⁷⁹ While he was failing to turn himself into a successful and savvy business agent for American interests, Warden still managed to host dinners and converse with a variety of scientists and physicians.⁸⁰

Nor had Warden lost his ties to his like-minded correspondents in the US and to the scientific and medical societies there. Once again, Warden adopted the role of transatlantic correspondent and intermediary, but from the European side of the Atlantic. He wrote to a variety of US-based physicians and scientists, sending publications, objects and news about

⁷⁸ Jolynda Brock Chenicek, "Dereliction of Diplomacy: The American Consulates in Paris and Bordeaux during the Napoleonic Era, 1804-1815," (PhD. Diss: Florida State University, 2008), 105-108; Haber, 11-12.

⁷⁹ *Ibid.*, 5-6.

⁸⁰ *Ibid.*, 19.

Paris.⁸¹ One of his most avid correspondents, Doctor Samuel Mitchill, editor of the *Medical Repository* and chemistry enthusiast, gladly received the latest literary productions and news about new appointments to French scientific societies.⁸² On one occasion, Warden indulged Mitchill's fascination with chemistry and sent him fifty-five volumes of the *Annales de Chimie*. In exchange for volumes of the *Annales de Chimie*, Warden distributed copies of the *Medical Repository* in Paris and throughout France.⁸³

Not simply an avocation for his own intellectual development, Warden came to regard this transatlantic interchange as a critical component of his work in international relations. In a way, he absorbed his new duties and tasks as secretary and consul into his work as a scholar. In 1813, when Warden decided to put his concept of a consul's function into writing, he made the sciences central to the credentials he thought most suitable for the job. "It is the current practice," he wrote, "to fill a consulate in a foreign country with a resident businessman who accepted the position on a part-time basis with the clear understanding that it must not seriously interfere with his own commercial affairs." Warden attacked this idea of a consul's background and work, replacing it with the idea of a representative who might also improve his nation in matters that were not commercial. "To be useful to his country in arts, sciences and manufactures, a consul must have no commercial engagements," he wrote.⁸⁴ "In the course of a few years, what a variety of useful information may a consul communicate to his country, if he have an acquaintance with the director and professors of public establishments. Books, maps, pamphlets, models and drawings of machines, seeds and plants, are gladly offered in exchange for similar

⁸¹ See William D. Hoyt, Jr., "The Warden Papers," *Maryland Historical Magazine* 36 (1941): 302-14

⁸² See, for example, Warden to Mitchill, 1 September 1807, David Bailie Warden Papers, 1797-1851. American Philosophical Society; Warden to Mitchill, 1 August 1807, *Ibid.*

⁸³ Warden to Mitchill, 24 June, 1807, *Ibid.*

⁸⁴ David Bailie Warden, *On the Origin, Nature, Progress and Influence of the Consular Establishments* (Paris: Smith, 1813), 20.

articles.”⁸⁵ Alongside trade and commercial intelligence, a nation’s wealth and health rested on commerce in useful knowledge and natural objects. Good relations manifested themselves in intellectual ties, not merely commercial treatises and policy negotiations. A consul thus needed to broaden his range of resources beyond merchants and government representatives to include medical and scientific establishments as well. He was to be just as much a cultural agent as a commercial one.

While Warden was crafting his role as transatlantic culture-broker, aftershocks of the Haitian Revolution and Napoleonic Wars were also altering the medical worlds Warden knew and served. In spite of the city’s geographical remove from the ravages of yellow fever and upsurge of plague, France’s medical capital witnessed a surge of interest in the topics during Warden’s tenure there. These developments transformed the geography of yellow fever study, and, subsequently, Warden’s transatlantic medical world.

As we saw in the previous chapter, resettled refugees did not sever their ties to correspondents and colleagues back in the US and Caribbean, but worked to preserve those connections in spite of the new distance between them. In fact, actors on both sides of the Atlantic actively sought to expand those networks and capitalize upon the growing interest in warm-climate medicine in France. Former St. Dominguan refugees and medical officers began producing an unprecedented number of books on warm-climate diseases, which they published in Paris, one of the biggest centers of French medicine. They sent their works to colleagues back in the US along with details of other new publications that had begun appearing in French medical literature and periodicals Warden absorbed. Alongside the works of Deveze and

⁸⁵ Ibid., 26-27.

Valentin, Parisian medical pressed churned out treatises by Victor Bally, N.P. Gilbert, J.D. Larrey and Etienne Pariset, all current and former health officers who had worked in the Caribbean and Egyptian theaters of the Napoleonic Wars.⁸⁶

The study of yellow fever had also begun to penetrate many of the medical schools and societies that were a part of Warden's network. Junior health officers returned to the Ecole de Medicine de Paris, where they wrote dissertations on the disease. Former medical officers began forming new intellectual circles and helped create new medical societies and health bureaus, like the Academy of Medicine, in cooperation with the government.⁸⁷ Further south, near Marseilles, the faculty in Montpellier took an ever increasing interest in the alarming changes in the disease ecologies of southern Europe.⁸⁸ Louis Valentin, the former refugee we looked at in Chapter 3, began socializing with the faculty members of Montpellier after resettling in the south. As he did, he made every effort to create an interchange between his new acquaintances and colleagues back in the US. In exchange for news on yellow fever in the United States, Valentin sent to Rush his latest French treatise on the disease and "pamphlet of Dr. Beguerie of Montpellier concerning a fever which made its appearance in French vessels going to St. Domingue & which was truly yellow fever."⁸⁹

Preserving these treasured networks proved no easy task, though. Disruptions in transatlantic shipping, for example, often frustrated efforts to keep up correspondences and access some of the latest news and publications on yellow fever. Eager though Louis Valentin

⁸⁶ E.A. Heamen, "The Rise and Fall of Anticontagionism in France," *Canadian Bulletin of the History of Medicine* 12 (1995), 6-11.

⁸⁷ *Ibid.*, 6.

⁸⁸ The faculty published the result of their study of the site of an 1800 outbreak of yellow fever in Cadiz, Spain. See F.C., Cauzergues, *Mémoire sur la contagion de la fièvre jaune* (Montpellier: Picot, 1817).

⁸⁹ Valentin to Rush, 22 October 1807, Benjamin Rush Manuscripts, Correspondence, Library Company of Philadelphia.

was to keep up a steady flow of favored publications and news between southern France and the United States, he experienced an array of problems with shipping. He was disappointed in 1807 to discover that his requested literature had arrived in a damaged state. “The pamphlet of Doct. Caldwell on quarantines [was] almost torn into pieces and soaked in vinegar,” he complained in a letter to Rush. He blamed the “awkwardness of the captain” who had mismanaged the docking and quarantine procedures in Marseilles. He wondered to his friend about alternative packets.⁹⁰

Reliability was not the only issue. As hostilities mounted between the US and Great Britain, ship confiscations began to frustrate Valentin’s efforts. In October of 1807, he wrote to Rush: “I entertain some doubts concerning that of January last acknowledging your favor and returning you my gratitude for the handsome and valuable gift of the second edition of your works; I say some doubts, because I heard that the Vessel, Columbia Packet, directed to Mr. Clapier of Philadelphia had been taken and sent to Bermuda or Halifax. Perhaps the captors have permitted the packet of books, I do not know.”⁹¹ In 1808, channels of communication remained very vulnerable and Valentin’s anxieties lapsed into near defeatism. “I am so much the more disappointed that very probably it will pass a great while before our communications should be free,” he wrote to Rush. “With America in the present circumstances and almost universal contest between European powers and the new World will deprive us of corresponding.”⁹² Valentin treasured his ties so much. They were an important part of his medical life. Now naval warfare threatened to weaken, even sever them.

⁹⁰ Valentin to Rush, 21 September 1807, Benjamin Rush Manuscripts, Correspondence, Library Company of Philadelphia.

⁹¹ Valentin to Rush, 22 October 1807, Benjamin Rush Manuscripts, Correspondence, Library Company of Philadelphia.

⁹² Valentin to Rush, 1 January 1808, Benjamin Rush Manuscripts, Correspondence, Library Company of Philadelphia.

Valentin, and his fellow correspondents, came to transform Warden's position as consul. Valentin suggested a new tactic to Rush. "If you can find an opportunity for any French ports in the ocean in the Mediterranean or for Paris, to the American ambassador or other agents, I would recommend to your goodness to avail yourself with it."⁹³ By 1809, Valentin and Rush had begun applying to Warden, who obliged and turned his government envoys into alternative routes for the men's letters and packages.⁹⁴ As Valentin wrote in the middle of one letter to Rush: "Let me know the medical news in case Mr. Warden would come back again as it is hoped if he embarks himself at Philadelphia or when your government envoys an ambassador or any agent you could avail yourself with their opportunity unless free intercourse should be reestablished between both countries."⁹⁵ Convoys and consular agents, in particular Warden, increasingly became as much a subject of both men's correspondence as the medical content itself. In light of new geographical and political obstacles, Rush, Valentin and Warden took channels and powers designated for the preservation of the American Republic and began turning them into a means for preserving yellow fever's republic of letters.

Medical men and Warden also took advantage of his position in the changing medical world of Paris. As he had with other branches of the sciences and medicine, Warden also began keeping abreast of the latest developments in warm-climate medicine in Paris. Samuel L. Mitchell, for example, began turning his valued source of news about chemistry in Paris into a resource for news about yellow fever discussions in France.⁹⁶ Alongside French publications on

⁹³ *Idem*.

⁹⁴ Valentin to Rush, 15 August 1809, Benjamin Rush Manuscripts, Correspondence, Library Company of Philadelphia.

⁹⁵ Valentin to Rush, 14 November 1810, Benjamin Rush Manuscripts, Correspondence, Library Company of Philadelphia.

⁹⁶ See, for example, Samuel Mitchill to Warden, July 20, 1807, David Bailie Warden Papers, 1797-1851, American Philosophical Society.

natural philosophy and chemistry, the American Philosophical Society in Philadelphia began receiving new literature on yellow fever from their dedicated member and correspondent.⁹⁷

Medical writers wanted more than just reliable channels for the circulation of news and literature; they sought personal connections to other scholars. US-based physicians, who could rarely come to Paris in person, desired agents who could get works translated and republished and who could deliver works to potential patrons previously encountered only in print. Warden possessed and promoted those connections. Felix Pascalis, for example, wanted to integrate the warm-climate medicine community in New York into the fever discussions in Paris. He started translating treatises into French and establishing new correspondences with participants in Paris. He and his co-editor, Samuel Mitchill, were already promoting the *Medical Repository* in Paris; they now discussed circulation of the journal in relation to warm-climate medicine. In spite of his ties to Francophone medical communities, including those in Paris, Pascalis did not find it all that easy to insert himself in the Paris-based circles of warm-climate medicine. Without immediate familiarity with some of the editors and medical writers in those circles, Pascalis felt uncertain about the best means of winning patronage and opening up possibilities for the *Medical Repository*. In addition to relying upon Warden's connections to shipping routes, Pascalis began prevailing upon Warden's knowledge of medical print in Paris. He asked Warden what kind of patronage he might receive in France if he published a translation of Rush's works.⁹⁸ In his shipments of the *Medical Repository*, Pascalis included descriptions of volumes that contained

⁹⁷ David Balie Warden's inscription appears on the inside of the cover of at least ten of the early nineteenth-century French volumes on yellow fever and plague housed in the American Philosophical Society.

⁹⁸ Pascalis to Warden, 22 October 1818, David Bailie Warden Papers, 1797-1851, American Philosophical Society.

particular reviews and essays about yellow fever. He begged Warden to find the best means of circulating the material in the print circuits of Paris.⁹⁹

Acquaintance in print was also different from personal interaction. Both played roles in building and maintaining good relationships within the epistemic community of yellow fever study. Pascalis, for example, succeeded in contacting the former medical officer, Victor Bally, and prevailing on him for a copy of his yellow fever treatise, in order to initiate exchanges with Bally's circle and to expand the scope of transatlantic discussions in print. Pascalis decided to review Bally's work in the *Medical Repository* and then distribute the volume to Bally and other contacts in Paris and France. However, Pascalis worried about the tone of his review, which was very critical of Bally's belief that yellow fever was contagious. Pascalis decided to send Bally's copy of the *Medical Repository* to Warden, along with an explanation:

In a preceding Number the 4th of the third volume I had a review of it in which I am afraid, if he has seen it, he may think to himself severely treated, although, I have in the same abundantly acknowledged his talents and merit in this number, the second of the IV Volume, you will see the same subject thought again: the review by me of Maclean on pestilential disease, &c. as this writer is a powerful opponent to all contagionists, I will be glad to let Bally see how far he may be yet of a true reckoning, you will therefore confer a favor by transmitting to him, a copy with my best respects.¹⁰⁰

Medical writers such as Pascalis, as this letter shows, walked a fine line between productive criticism and personal attack, as questions about the cause of yellow fever became bound up in many practitioners' professional identity. Without personal acquaintance and prior standing in Bally's circles, Pascalis's criticism could come across as rude attacks on character rather than a healthy component of collaborative work. By showing preference for Charles Maclean, a

⁹⁹ Pascalis to Warden, 28 May 1819, David Bailie Warden Papers, 1797-1851, American Philosophical Society; Pascalis to Warden, 21 September 1821, David Bailie Warden Papers, 1797-1851, American Philosophical Society.

¹⁰⁰ Pascalis to Warden, 1 January 1818, David Bailie Warden Papers, 1797-1851, American Philosophical Society.

particularly vocal and divisive British medical officer who opposed views endorsed by Bally, Pascalis risked accusations of partisanship, breaches in implicit codes of conduct among medical writers. Pascalis viewed Warden as someone who understood these politics well enough to mediate. By virtue of his direct and indirect acquaintances with Bally and his colleagues in Paris, Warden possessed not only that knowledge but also the cultural and political capital that Pascalis lacked. Warden could help create and stabilize relationships in spite of the factions and contentious language that were crystallized in print.

When Pascalis solicited Warden's help with Bally, the political landscape had changed. While Warden still resided in Paris in 1818, he no longer served as an official consul for the US government. The Napoleonic Wars, moreover, had come to an end; so too had the War of 1812. As naval hostilities settled, the new peace reduced the dangers of shipping and travel and opened up the possibility of easier intercourse between Paris and the US. Medical students and physicians in the US took advantage of the situation and began traveling in great numbers to study in Paris and grasp it for themselves.¹⁰¹

In spite of this turn in political and cultural circumstances, Warden's power as an agent in the networks of study and debate in yellow fever persisted. In the 1820s, Warden's role even broadened as more Americans came to Paris. In addition to ongoing solicitations for news, publications, and favors, Warden now received an increasing volume of students and medical visitors with letters of introduction.¹⁰² Vast hospitals, surgery, and pathological medicine aside, a number of those travelers sought specific connections to the Parisian practitioners of warm-

¹⁰¹ For the role of post-Napoleonic geopolitical circumstances in facilitating a growing volume of American medical travel to Paris, see John Harley Warner, *Against the Spirit of System: The French Impulse in Nineteenth-Century American Medicine* (Baltimore: The Johns Hopkins University Press, 2003), 32-35.

¹⁰² Haber, 30-34.

climate medicine.¹⁰³ Physicians and Warden had remade an agent for the American Republic into an agent for yellow fever's republic of letters.

Conclusion

By the end of the Napoleonic Era, the epistemic community debating yellow fever had expanded beyond the Americas into the Mediterranean and taken hold of European medical centers like Warden's Paris. Commerce had played a pivotal role in this expansion not merely as a force of epidemiological change, but also as a rich resource for new health relations. Collectively, consuls like Henry Hill, Etienne Cathalan and David Baillie Warden reveal how the study of the disease and mediation of new health relations became embedded in the commercial networks that fluxed and expanded within different parts of the Atlantic and beyond.

Their diverse contexts and medical roles also highlight the variety of ways in which commercial agents contributed to responses to yellow fever. Consuls introduced methods of knowledge-production based on practices and networks particular to their work in commerce and statecraft. By virtue of the cultural and social capital they mobilized in ports-of-call, consuls also succeeded in remaking the webs of relationships for international yellow fever work.

¹⁰³ For example, Peter Solomon Townsend of New York traveled to Paris in 1828 specifically to network with Paris-based physicians who were participating in the debates there. The first person he approached for a description of the local medical politics and introductions to practitioners was David Bailie Warden. See, Peter Townsend, Unpublished Diaries, Series II, Volume 4, 53-56. New York Academy of Medicine Rare Books and Manuscript Collection.

Conclusion

On October 26, 1853, Doctor E.H. Barton of New Orleans wrote to a colleague in Philadelphia, René La Roche. Since their days together in medical school at the University of Pennsylvania, Barton had moved away from the east coast to join a growing American medical center along the gulf coast. He kept up his ties with La Roche, though, communicating on sundry medical topics: new surgery techniques coming out of Paris, lectures he was developing for his students and the state of the recently established medical societies in Louisiana. Now Barton approached his colleague about a particularly pressing matter: yellow fever. The disease had struck New Orleans that summer, and Barton was struggling to make sense of it. In his quest to understand the local outbreak, Barton looked abroad for answers. “Sir,” he wrote to La Roche, “I have met with no reliable account of the yellow fever of Rio Janeiro [sic] for the last few years.” He added, “I am also ignorant of the recent Epidemics of the West Indies. Have you met with any reliable treatises on the epidemics of these several places and could you refer me to them?” La Roche obliged Barton with several references. Shortly thereafter, Barton departed for the West Indies to study the sites of outbreaks for himself.¹

Sixty years earlier, when yellow fever spread through the Atlantic World, medical writers based in different ports had begun to correspond and embark on journeys much like Barton’s. New patterns of commercial, military and political interchange had created a new ecology for the disease of yellow fever. Those material circumstances likewise

¹ E.H. Barton to René La Roche, 26 October 1853, René La Roche Collection, Letters Received (1818-1867), College of Physicians of Philadelphia. For some background on Edward Hall Barton’s career, see W.D. Postell, “Edward Hall Barton, Sanitarian,” *Annals of Medical History* 4 (1942), 370-381.

created conditions for a new global ecology of health management by compelling medical writers to re-evaluate the geography of their epistemological practices and identities.

Civilian physician, military and naval personnel, commercial agents, government agents and lay intellectuals responded to the transformations by forging networks and new epistemic genres that connected varied readerships and ways of investigating disease across multiple sites. They built those resources out of the channels of armed conflict, migration and commercial interchange in which they were embedded. Military and naval medical personnel did not confine their work and exchange to their own imperial apparatus. In light of the shifting ecologies of their work, those practitioners re-evaluated their epistemological relationships to other centers of yellow fever work. Together with those medical writers, military and naval men refashioned their medical topographies, clinical work on bodies and therapeutics into resources that could a broader collective.

The refugee crisis unleashed by the French and Haitian Revolutions introduced additional resources in the management of the health crisis. Francophone refugees fleeing from both France and the revolutionary Caribbean during this period reconfigured the movement of yellow fever and the geography of medical networks confronting the disease. As refugee physicians and surgeons crisscrossed the Atlantic from the Caribbean into the United States and back into Europe, yellow fever became part and parcel in their efforts to rebuild social, cultural and political capital throughout the course of their journeys. In the process, they managed not only to adapt and move knowledge but also translate and broker relations between the varied communities they encountered.

These channels of intellectual and social interchange ultimately intersected with those of commerce. As matters concerning health became intimately connected to the vitality of commerce, consuls and commercial agents absorbed the study of disease and politics of health relations into their day-to-day work. They mediated new health relations between afflicted ports, circulated publications and letters and even created their own disease studies. In so doing, they helped maintain medical networks in times of conflict and enriched the new corpus of literature produced from exchanges within the Atlantic World. What emerged by the end of the Napoleonic Era was a rich tapestry of vibrant networks, medical literature and practices that spanned across new national divides.

In the decades between the end of the Napoleonic Wars and E.H. Barton's time, a lot had changed in the realm of disease and disease control. Yellow fever, once a menace in ports as far north as New York and Boston, had more or less retreated to the Gulf region and Latin America. The period of 1819 to 1822 marked one final period of intense pandemic activity in Baltimore, New York, Philadelphia and Boston. As the United States expanded its territorial hold in the Gulf region and opened more trade with Latin America, New Orleans emerged as the major entrepôt between the West Indies and the Mississippi Valley. These new circumstances transformed the Crescent City into a new focus of yellow fever activity, and, subsequently a new major center for yellow fever work.²

² Patterson, 856. Margaret Humphreys, *Yellow Fever and the South* (New Brunswick: Rutgers University Press, 1992), 45-50.

Seaport communities along the Atlantic basin confronted a new and terrifying disease problem: cholera. As European powers expanded their commercial interests into the Indian Ocean following the Napoleonic Era, they helped to reconfigure the global channels of commerce and shipping that connected ports in Europe and across the Atlantic. Revolutions in steam technology ensured even faster movement of goods and people throughout the world. Cholera, a deadly pathogen from Asia, subsequently coursed through those routes at several points beginning in the 1830s.³

The new geopolitical order was also reconfiguring approaches to disease control. The warfare and refugee crisis set in motion by the Atlantic Revolutions had long ceased by Barton's time. The post-Napoleonic era ushered in a new era of international relations, in which European powers sought to work out their differences at the conference table – the formal arena of congresses – rather than on the battlefield. This climate of internationalism promoted the formation of new institutional frameworks for managing the epidemic diseases that crossed national boundaries. Rather than hash out differences over disease etiology and preventative measures on the ground or in the chambers of national government, Europeans created international sanitary conferences. European diplomats and physicians coordinated disease theories and multilateral

³ On the emergence of cholera as a pressing epidemic problem in US Atlantic ports, see Charles Rosenberg *The Cholera Years: The United States in 1832, 1849, and 1866* (Chicago: University of Chicago Press, 2009). On the diffusion of cholera and its connections European expansion into southeast Asia, Valeska Huber, "The Unification of the Globe by Disease? The International Sanitary Conferences on Cholera, 1851-1894," *The Historical Journal* 49.2 (2006), 454-455.

approaches to disease control at the conference table, settling on policies and publishing formal proceedings. The first of such congresses occurred in Paris in 1851.⁴

Yet, while so much had changed by the 1850s, medical communities throughout the Atlantic still experienced the legacy of the Revolutionary era. Even if the Gulf region and Latin America became primary hubs of yellow fever activity, yellow fever remained entrenched in the historical memory of European and American port communities – particularly ports in the Americas. It still loomed as a real threat. Outbreaks occurred on occasion in northern American cities and on occasion in Europe. While the outbreaks were not as frequent as before, they nonetheless served as reminders of the ports’ vulnerability to the disease. René La Roche conveyed this outlook in the yellow fever treatise he eventually published in 1855: *Yellow Fever, Considered in Its Historical, Pathological, Etiological, and Therapeutic Relations*. He clarified in the preface that the idea for the book was not borne out of idle medical curiosity. “Of all the countries situated beyond the limits of the tropics, none has been so frequently visited by, or has suffered so severely from the disease as our own.” He acknowledged that the majority of epidemic activity had seemed to recede in recent years to southern ports, but added, “Atlantic cities and towns of our middle States, and a few of the northern ones, though seldom the seat of even sporadic cases, have been at times more or less scourged by epidemical manifestations of the disease.” That included La Roche’s Philadelphia, which, just two years earlier, had witnessed an epidemic.⁵ Even as practitioners and policymakers further north turned their attention to the new problem of cholera, yellow

⁴ Huber, “The Unification of the Global by Disease?”; for an in-depth discussion of the impact of new diplomatic context, see Mark Harrison, “Disease, Diplomacy and International Commerce: the Origins of International Sanitary Regulation in the Nineteenth Century,” *Journal of Global History* 1 (2006), 197-217.

⁵ Rene La Roche, *Yellow Fever, Considered in Its Historical, Pathological, Etiological, and Therapeutic Relations* Volume 1 (Philadelphia: Blanchard and Lea, 1855), v.

fever never completely retreated from their medical worlds. The impulse to study the disease and think about the ecology of ports in relation to the larger Atlantic World persisted.

The tools contemporaries took up to manage disease problems in the post-Napoleonic era also bear the marks of an earlier period. While the international sanitary conference system created a new institutional framework for working out health relations, consuls and commercial agents did not fade away from the international scene. As Europeans and Americans continued to push their commercial interests abroad, consuls persisted as agents in negotiating that expansion on the ground at the local level. As long as health remained tangled up in the problem of commerce, consuls' posts and networks continued to function as vital arenas for working out health relations and producing information about disease. Consuls continued to appear in medical periodicals that circulated information for practitioners studying epidemic diseases.⁶

Fever investigators, furthermore, did not relegate the impressive transnational corpus of literature from the Revolutionary era to the dusty archives. On the contrary, that literature became an important framework for disease investigation in the mid- to late nineteenth century. As La Roche observed in his treatise: "From the days of Lining and Moultrie to our own, numerous writings, of various degrees of pretention in point of size

⁶ We see this in both American and European responses to, among other disease threats, cholera. During the early years of the first cholera pandemics, newspapers in New York, for example, both drew upon U.S. consuls stationed near Egypt during the outbreaks there and observed to readers that "consuls of different nations [stationed in Egypt]" were collaborating in constructing "sanitary measures" to halt the spread of the disease. See *The New York Mercury*, 21 December 1831. British and American medical periodicals also built reports on the trajectory and character of outbreaks in different parts of the world out of reports and statistics created by British and foreign consuls. See, for example, "Mode in Which Cholera Is Propagated," *London Medical Gazette* 9 (8 October 1831–31 March 1832). Henry Perrine, U.S. consul in Yucatan in the 1830s, commented not only on cholera's trajectory but also judged local methods of treatment in that part of the world. See Henry Perrine, "Epidemic Cholera in Yucatan," *Western Journal of the Medical and Physical Sciences* 7 (October–December 1833), 321-341.

and merit, have accumulated on our shelves; while the medical periodicals of the country contain a goodly number of valuable communications on the subject.”⁷ Practitioners continued to find value in publications from that earlier era. They took up these volumes and turned them into guides as they opened bodies to study the pathology of the disease, determined the right course of treatment and make sense of the environmental conditions that shaped the course of an epidemic. A fellow physician in Philadelphia, Elisha Bartlett, explored the anatomical lesions of yellow fever by comparing what he saw to the autopsy descriptions of four different sources: Jean Devèze’s dissections in Bush Hill, Dr. Don Juan Manuel de Arejula’s autopsies in Cadiz, Spain during the 1800 outbreak and the investigations of a British military physician, Sir James Fellowes. These resources helped Bartlett make sense of the texture of organs, the lesions he studied and correlations between the different phenomena he observed.⁸

The communities that built the new centers of fever study along the Gulf coast also bore some striking similarities to what had emerged in Philadelphia, New York and continental Europe less than half a century before. Anglo-American physicians like Barton worked alongside Francophone physicians in New Orleans. In the aftermath of Napoleon’s campaigns in the Americas, when the United States acquired the Louisiana territory, American medical communities acquired a small population of Francophone physicians who had migrated to the region from the revolutionary Caribbean. They contributed to a mix of new Francophone and English-speaking medical societies and

⁷ *Idem.*, vi.

⁸ Elisha Bartlett, *The History, Diagnosis, and Treatment of the Fevers of the United States* (Philadelphia: Blanchard and Lea, 1852), in particular 476-480.

print platforms in New Orleans.⁹ Medical writers along the eastern seaboard subsequently integrated that center of fever research into their own print platforms and correspondence networks.

Barton's correspondent, René La Roche, was himself a product of the refugee diaspora. He was the son of Dr. René La Roche and Marie Jeanne de la Condemine, French émigrés from St. Domingue and natives of southern France.¹⁰ While La Roche junior was born in 1795 and raised in the United States, he imbibed the very sense of socio-intellectual belonging we saw in medical men like Felix Pascalis, Jean Devèze and Louis Valentin. He was a resident of Philadelphia who wrote in English and socialized with a range of practitioners within the United States. At the same time, he was embedded in Francophone networks that continued to link the circum-Caribbean, United States and France in the 1820s and 1830s. La Roche began to really immerse himself in the study of yellow fever during the epidemic activity along the northeastern seaboard between 1819 and 1822. As he did, he drew upon a collection of established networks that already linked Philadelphia, New York and parts of France. Felix Pascalis approached La Roche, in French, about the subject in the 1820s.¹¹ La Roche also began receiving requests for information from correspondents in France, among them, Louis

⁹ On the general pattern of French legacies for different sectors of medicine in Louisiana, see John Duffy, *Rudolph Matas History of Medicine in Louisiana* (New York: Pelican, 1976), 43-75. A number of Francophone treatises on yellow fever came out of New Orleans in the mid-nineteenth century. See, for example, Raoul de Champmanoir, *Methode de Traitement dans la Fievre Jaune* (Nouvelle Orleans, 1821); *Fait a la Societe Medicale de la Nouvelle Orleans sur la Fievre Jaune qui a regne Epidemiquement durant l'Ete et l'Automne de 1819* (New Orleans, 1820).

¹⁰ Smitta Dutta, "La Roche, René," *American National Biography Online*. Sadly, very little is known about René La Roche's father.

¹¹ See, for example, Felix Pascalis to la Roche, 1 August 1829 (New York), René La Roche Collection, Letters Received (1818-1867), College of Physicians of Philadelphia.

Valentin.¹² In exchange for news and publications from the United States, La Roche received updates on the status of the discussions taking place in Paris in the late 1820s. By the 1830s, his networks had expanded from Paris and southern France into New Orleans and Martinique.¹³

Now, in 1853, these same approaches continued to guide physicians' investigation and treatment of the disease. As we see in the case of Barton, practitioners in the new US centers of yellow fever activity continued to look to the West Indies, and, now, increasingly to Latin America for answers to the yellow fever puzzle. They continued to think about their work in relation to other sites of outbreaks. And they made use of the epistemic communities already established through the circum-Atlantic movement of Francophone refugees and armed forms. These activities and outlook tell us that the history of the mid-nineteenth century was not simply a story about change and departure in the history of globalization and health. It is also about the complex legacy of commercial and geopolitical expansion during the half century before.

¹² See, Louis Valentin to La Roche, 12 December 1827 (Nancy), René La Roche Collection, Letters Received (1818-1867), College of Physicians of Philadelphia.

¹³ See, for example, Pierre Lefort to La Roche, 10 May 1836 (Martinique), René La Roche Collection, Letters Received (1818-1867), College of Physicians of Philadelphia.

Bibliography

PRIMARY SOURCES

Archival Collections and Libraries

American Philosophical Society, Philadelphia, PA
David Bailie Warden Papers, 1797-1851
Correspondence of Stephen Girard

College of Physicians of Philadelphia, Philadelphia, PA
René La Roche Collection

Library Company of Philadelphia, Philadelphia, PA
Benjamin Rush Manuscripts

National Archives and Record Administration, College Park, MD
Record Group 59: State Department Records

New York Academy of Medicine Rare Book and Historical Collections, New York, NY
Felix Pascalis, Copies of Letters and Papers.
Peter Townsend, Unpublished Diaries

Wellcome Library for the History and Understanding of Medicine, London, UK
Nicholas Chervin Papers, 1817-1822

Newspapers and Periodicals

The American Medical and Philosophical Register; or, Annals of the Medicine, Natural History, Agriculture, and the Arts

The American Museum or Repository of Ancient and Modern Fugitive Pieces, Prose and Poetical

Baltimore Daily Intelligencer

The Boston Gazette, and the Country Journal

Charleston Courier

Connecticut Courant

Connecticut Gazette and Commercial Intelligencer,

Connecticut Journal,

Edinburgh Medical and Surgical Journal

London Medical and Physical Journal

London Medical Gazette

Medical Essays and Observations, Published by a Society in Edinburgh

The Medical Repository, Comprehending Original Essays and Intelligence Relative to Medicine, Chemistry, Natural History, Agriculture, Geography, and the Arts

New York Evening Post

New York Herald

The New York Mercury
The Newport Mercury
The Philadelphia Medical Museum
Salem Gazette
United States Gazette
Western Journal of the Medical and Physical Sciences

Published Correspondence and Diaries

Turner, Frederick. "Correspondence of the French Ministers to the United States, 1791-1797," *Annual Report of the American Historical Association for the Year 1903* (Washington, D.C.: Government Printing Office, 1904)

Fehl, Philipp. "The Account Book of Thomas Appleton of Livorno: A Document in the History of American Art, 1802-1825." *Winterthur Portfolio* 9 (1974): 123-150.

Rush, Benjamin, and George W. Corner. *The autobiography of Benjamin Rush : his "Travels through life" together with his Commonplace book for 1789-1813. Edited with introduction and notes by George W. Corner.* Princeton: Published for the American Philosophical Society by Princeton Univ. Press, 1948.

Smith, E H, and James E. Cronin. *The Diary of Elihu Hubbard Smith (1771-1798).* Philadelphia: American Philosophical Society, 1973.

Books and Essays

"Circular Address," *Medical Repository* First Hexade 1.1 (August, 1797): 20-22.

"Medical Intelligence from the Mediterranean," *Medical Repository* Second Hexade, 2.4, (1805): 447-449.

"REVIEW: Ouyière's *Medico-Chymical Dissertation on the Causes of the Epidemic Called Yellow Fever*," *Medical Repository* First Hexade 1.1 (1797): 88-94

"REVIEW: A Treatise on the Plague and Yellow Fever, &c." *Medical Repository* First Hexade 3.4 (May 1, 1801): 373-379.

"REVIEW: A Treatise on the Tropical Diseases; on Military Operations; and on the Climate of the West-Indies. By Benjamin Moseley, M.D. &c. 4th edition, 8vo. Pp. 670. London, 1803." *Medical Repository* Second Hexade 3 (1806): 178-194.

"REVIEW: Dissertation sur la Fievre jaune qui regna a Phildelphie en 1793," *Medical Repository* Second Hexade 2 (1805): 80-84.

"REVIEW: A Treatise on Sugar; with Miscellaneous Medical Observations. By Benjamin Moseley, M.D. &c. Second Edition, with considerable Additions. 8vo.

- Pp. 276. London. Robinsons. 1800," *Medical Repository* First Hexade 6 (1803): 288-295.
- Samuel Anderson, "An Account of a Bilious Yellow Fever which prevailed on Board the United States Ship Delaware, in the Island of Curacao, from the beginning of Nov. 1799, until the latter end of February, 1800: Communicated by Samuel Anderson, Surgeon's Mate." *Medical Repository* First Hexade 5 (1802): 280-287.
- Bancroft, Edward Nathaniel. *An essay on the disease called yellow fever: with observations concerning febrile contagion, typhus fever, dysentery, and the plague : partly delivered as the Gulstonian Lectures, before the College of Physicians, in the years 1806 and 1807.* London: Cushing and Jewett, 1821.
- Bartlett, Elisha. *The History, Diagnosis, and Treatment of the Fevers of the United States* (Philadelphia: Blanchard and Lea, 1852.
- Browne, Joseph. *Treatise on the Yellow Fever.* New York: from the Office of the Argus, 1798.
- Cathalan, Stephen. *Recueil de pièces relatives a la fièvre jaune d'Amérique, envoyées par le consul des États-Unis d'Amérique, à Marseille, au gouvernement des États-Unis, 1799.* A Marseille : De l'Imprimerie de Jean Mossy, imprimeur-librairie, a la Canebiere, an VIIe de la République française, 1799.
- Cauzergues, F.C. *Mémoire sur la contagion de la fièvre jaune.* Montpellier: Picot, 1817.
- Chisholm, Colin. *An Essay on the Malignant Pestilential Fever introduced into the West Indian Islands from Boullam, on the Coast of Guinea, As it appeared in 1793 and 1794.* London: Printed for C. Dilly, in the Poultry, 1795.
- . *An essay on the malignant pestilential fever introduced into the West Indian Islands from Boullam, on the coast of Guinea, as it appeared in 1793 and 1794. By C. Chisholm, M.D. and surgeon to His Majesty's ordinance in Grenada. To which is annexed, a description of the American yellow fever, which prevailed at Charleston in 1748, in a letter from Dr. John Lining.* Philadelphia: Printed for Thomas Dobson, at the stone house, no 41, South Second Street, 1799.
- . *An Essay on the Malignant Pestilential Fever, Introduced into the West Indian Islands from Boullam, on the Coast of Guinea, As it Appeared in 1793, 1794, 1795 and 1796. Interspersed with Observations and Facts, tending to prove that the Epidemic existing at Philadelphia, New-York, &c. was the same Fever introduced by Infection imported from the West India Islands: And illustrated by Evidences founded on the State of those Islands, and the Information of the most eminent Practitioners residing on them.* London: Mawman, 1801.

- . *A Letter to John Haygarth... from Colin Chisholm... exhibiting farther Evidence of the Infectious Nature of this fatal Distemper in Granada during 1793, 4, 5, and 6; and in the United States of America from 1793 to 1805: In Order to correct the Pernicious Doctrine promulgated by Dr. Edward Miller and other American Physicians, relating to this Destructive Pestilence.* London: Mawman, 1809.
- . *A manual of the climate and diseases of tropical countries: in which a practical view of the statistical pathology, and of the history and treatment of the diseases of those countries* (London: Printed for Burgess & Hill, 1822).
- . "Concerning the Malignant Pestilential Fever of Grenada, as it appeared in 1793 and 1794; in a Letter from Dr. C. Chisholm," *Medical Repository* First Hexade 2 (1799): 286-289.
- , and David Hosack. *Observations on the laws governing the communication of contagious diseases, and the means of arresting their progress: read before the Literary and Philosophical Society of New-York, on the 9th of June, 1814.* New-York: Printed by Van Winkle and Wiley, 1814.
- Clark, James. *A treatise on the yellow fever, as it appeared in the island of Dominica, in the years 1793-4-5-6: to which are added, Observations on the bilious remittent fever, on intermittents, dysentery, and some other west India diseases; also, The Chemical Analysis and Medical Properties of the hot mineral waters in the same Island.* By James Clark, M.D. F.R.S.E. and fellow of the College of Physicians of Edinburgh. London: printed for J. Murray and S. Highley, No 32, Fleet Street, M.DCC.XCVII. [1797].
- College of Physicians of Philadelphia. *Facts and observations relative to the nature and origin of the pestilential fever, which prevailed in this city, in 1793, 1797, and 1798.* Philadelphia: printed for Thomas Dobson, at the stone house, no. 41, South Second Street, 1798.
- Committee to Attend to and Alleviate the Sufferings of the Afflicted with the Malignant Fever. *Minutes of the Proceedings of the Committee, Appointed on the 14th September, 1793, by the Citizens of Philadelphia, the Northern Liberties, and the District of Southwark, to Attend to and Alleviate the Sufferings of the Afflicted with the Malignant Fever Prevalent in the City and Its Vicinity.* Philadelphia: R. Aitken & Son, 1794.
- Currie, William. *A Sketch of the Rise and Progress of the Yellow Fever.* Philadelphia 1799.
- Devèze, Jean. *An Enquiry Into, and Observations Upon the Causes and Effects of the Epidemic Disease, Which Raged in Philadelphia from the month of August till towards the Middle of December, 1793.* Philadelphia: Parent, 1794.

- . *Dissertation sur la fièvre jaune qui régna à Philadelphie, en 1793* (Paris: Imprimerie de Madame Huzard, rue de l'Eperon, 1804).
- Eckard, J.F. "Correction of Dr. Chisholm's Mistatement respecting the Prevalence of the Malignant Fever at St. Thomas's, by J.F. Echard, Esq. Danish Vice-Consul at Philadelphia, in a Letter to James Mease, M.D. of Philadelphia," *The Medical Repository* Second Hexade 1 (1804): 331-338.
- Francis, John Wakefield. "Observations on Mercury: embracing its Medical History and its abuse as an article of the Materia Medica. By John W. Francis, M.D. Fellow of the College of Physicians and Surgeons of New-York, Member of the New-York Historical Society, &c." *The American Medical and Philosophical Register; or, Annals of the Medicine, Natural History, Agriculture, and the Arts* 3 (1814): 424-445.
- Hardie, James. *An Account of the Malignant Fever which Prevailed in the City of New-York: During the Autumn of 1805*. New York: Southwick and Castle, 1806.
- Hill, Henry. "Observations on the Mortality by Yellow Fever, among the Seamen of the United States, who, with northern Constitutions and Habits, sail to Havanna, in Cuba; and on the Health and Longevity of the Native Spanish Inhabitants. By Henry Hill, Esq. Commercial Agent for the United States at that City: Communicated to Dr. Mitchill by the Secretary of State," *Medical Repository* Second Hexade 4 (1806): 113-117.
- Hosack, Alexander. *An inaugural essay on the Yellow Fever, as it appeared in this city in 1795. Submitted to the public examination of the faculty of physic, under the authority of the trustees of the Columbia College in the state of New-York, William Samuel Johnson, LL.D. president, for the degree of Doctor of Physic, on the 3d of May, 1797. By Alexander Hosack, Jun. A.M. of New-York*. New York: T. and J. Swords, 1797.
- La Roche, René. *Yellow Fever, Considered in Its Historical, Pathological, Etiological, and Therapeutic Relations*. Philadelphia: Blanchard and Lea, 1855.
- Lind, James. *An Essay on Diseases Incidental to Europeans in Hot Climates*. London: T. Becket and P.A. De Hondt, 1771.
- Lining, John. "A description of the American yellow fever: in a letter from Dr. John Lining, physician at Charles-town in South Carolina, to Dr. Robert Whytt, professor of medicine in the University of Edinburgh," *Essays and Observations, Physical and Literary*, Vol. II (1756): 370-395
- . "De La Fievre Jaune D'Amerique," *Journal De Med, Chirurg. et Pharm.*, 8 (1758):408-422.

- Jackson, Robert. *A Treatise on the Fevers of Jamaica, with some Observations on the Intermitting Fever of America, and an Appendix Containing some Hints on the Means of Preserving the Health of Soldiers in Hot Climates*. London: John Murray, 1791.
- . *An Outline of the History and Cure of Fever, Endemic and Contagious; More Expressly the Contagious Fever of Jails, Ships, and Hospitals; The Concentrated Endemic, Vulgarly the Yellow Fever of the West Indies. To which is Added, an Explanation of the Principles of Military Discipline and Economy; With a Scheme of Medical Arrangement for Armies* (Edinburgh: Printed for Mundell & Son, 1798).
- M'Lean, Hector. *An Enquiry into the Nature, and Causes of the Great Mortality among the Troops at St. Domingo; with Practical Remarks on the Fever of that Island; and Directions, for the Conduct of Europeans on their First Arrival in Warm Climates. By Hector M'Lean, M.D. Assistant Inspector of Hospitals for St. Domingo*. London: Printed for T Cadell, Jun. and W. Davies in the Strand, 1797.
- Mitchill, Samuel. *Nomenclature of the New Chemistry*. New York: T. and J. Swords, 1794.
- . *Remarks on the Gaseous Oxyd of Azote or of Nitrogene*. New York: T. and J. Swords, Printers of the Faculty of Physic of Columbia College, 1795.
- Monro, Donald. *Observations on the Means of Preserving the Health of Soldiers*. London: 1780.
- Pascalis, Felix. *Annual Oration, Delivered before the Chemical Society of Philadelphia, January 31st, 1801*. Philadelphia: John Bioren, 1802.
- . *Medico-Chymical Dissertation on the Causes of the Epidemic Called Yellow Fever*. Philadelphia: Snowden and M'Corkle, 1796.
- . "Observations of the Yellow Fever: Communicated in a Letter from Dr. Felix Pascalis to Dr. Mitchill, dated Philadelphia, Nov. 11, 1799," *Medical Repository* First Hexade 3.4 (1800): 344-351.
- . "Remarks on a Spanish Pamphlet, entitled, 'Reflexiones sobre la Epidemia padecida en Cadiz y pueblos Circumvecinos, a fines del Anno de 1800, dirigidas a los Profesores de Medecina, por un Amante del bien Publico,'" *Medical Repository* Second Hexade, 5 (1808): 131-137.
- . "Review of Work Entitled 'Relacion de la Calentura biliosa remitente amarilla, que se manifesto en Filadelfia, en el ano de 1793,'" *The Philadelphia Medical Museum* 3.3 (March 1807): 163-185

- Poissonnier-Despèrrieres, Antoine. *Traité des fièvres de l'isle de S. Domingue*. Paris, 1763.
- Rush, Benjamin. *Medical Inquiries and Observations: Containing an Account of the Bilious and Remitting and Intermittent Yellow Fever, as it Appeared in Philadelphia in the Year 1794. Volume 4*. Philadelphia: Thomas Dobson, 1796.
- Seaman, Valentine. *An Account of the Epidemic Yellow Fever as it Appeared in the City of New York in 1795*. New York: Hopkins, Webb and Co. no. 40, Pine-Street.
- St. Mery, Moreau de. "Character of the Creoles of St. Domingue," *The American Museum or Repository of Ancient and Modern Fugitive Pieces, Prose and Poetical* 6 (November 1789): 359-361.
- Trotter, Thomas. *Medicina Nautica: An Essay on the Diseases of Seamen: Comprehending The Health in the Channel for the Years 1799, 1800, and 1801* Volume II. London: T.N. Longman and O. Rees, Paternoster-Row, 1803.
- Valentin, Louis. *Traité de la Fièvre jaune d'Amerique*. Paris: Maquigonon, 1803.
- Wadström, C.B. *An Essay on Colonization, Particularly Applied to the Western Coast of Africa, with Some Free Thoughts on Cultivation and Commerce: Also Brief Descriptions of the Colonies Already Formed, or Attempted, in Africa, Including Those of Sierra Leona and Bulama : in Two Parts*. London : printed for the author, by Darton and Harvey. And sold by G. Nicol; W. Faden; J. Stockdale; J. Edwards [and 4 others in London], 1794-95.
- White, Benjamin and John White. *A Catalogue of a Large and Valuable Collection of Books in all Languages ...* London: 1793.
- White, John. *A Catalogue of Rare, Splendid, and Valuable Books...including the entire Libraries of the Rev Harvey Spragg, ...* London: 1798.

SECONDARY SOURCES

Articles and Book Chapters

- Ackerknecht, Erwin. "Anticontagionism between 1821 and 1867," *Bulletin of the History of Medicine* 22 (1948): 562-593.
- Anderson, Warwick. "Immunities of Empire: Race, Disease, and the New Tropical Medicine, 1900-1920." *Bulletin of the History of Medicine* 70.1 (1996): 94-118.
- Marcelo Aranda, et al., "The History of Atlantic Science: Collective Reflections from the 2009 Harvard Seminar on Atlantic History," *Atlantic Studies* 7.4 (2010): 493-509.

- Barfoot, Michael. "Brunonianism under the Bed: An Alternative to University Medicine in Edinburgh in the 1780s." In *Brunonianism in Britain and Europe*, edited by William Bynum and Roy Porter. London: Wellcome Institute for the History of Medicine, 1988): 22-43.
- Bashford, Alison. "Global Biopolitics and the History of World Health," *History of the Human Sciences* 19:1 (2006): 67-88.
- Chinard, Gilbert. "Andre and Francois-Andre Michaux and Their Predecessors. Botanical Exchanges between America and France," *Proceedings of the American Philosophical Society* 101.4 (1957): 344-361.
- Cooter, Roger. "Anticontagionism and History's Medical Record." In *The Problem of Medical Knowledge: Examining the Social Construction of Medicine*, edited by P. Wright and A Treacher. Edinburgh: Edinburgh University Press, 1982, 87-108.
- Daston, Lorraine. "The Empire of Observation." In *Histories of Scientific Observation*, edited by Lorraine Daston and Elizabeth Lunbeck. Chicago: University of Chicago Press, 2011, 81-113.
- Delbourgo, James, and Nicholas Dew, "Introduction: the Far Side of the Ocean." In *Science and Empire in the Atlantic World*, edited by James Delbourgo and Nicholas Dew. New York: Routledge, 2009, 1-28.
- Dutta, Smitta. "La Roche, René." *American National Biography Online*.
- Edelstein, Sidney M. "The Chemical Revolution in America from the Pages of the *Medical Repository*," *Chymia* 5 (1959): 155-179.
- José Antonio López Espinosa, "Una rareza bibliográfica escrita en Cuba sobre fiebre amarilla," *ACIMED* 13.2 (2005): 1-6.
- Fidler, David P. "The Globalization of Public Health: the First 100 Years of International Health Diplomacy," *Bulletin of the World Health Organization* 79.9 (2001): 842-849.
- Fissell, Mary. "Making Meaning from the Margins: The New Cultural History of Medicine." In *Locating Medical History*, edited by F. Huisman and John Harley Warner. Baltimore: Johns Hopkins University Press, 2004, 364-389.
- Gasquet, André de. *Étienne Cathalan: vice-consul des Etats-Unis à Marseille de 1789 à 1819. No. 78, Cashiers du Comité du Vieux Marseille*. Marseille: Comité du vieux Marseille, 1998.
- Geggus, David. "Yellow Fever in the 1790s: the British Army in Occupied St. Domingue," *Medical History* 23 (1979), 38-58.

- . "Slavery War and Revolution in the Greater Caribbean, 1789-1805." In *A Turbulent Time: The French Revolution and the Greater Caribbean*, edited by David Barry Gaspar and David Patrick Geggus. Indiana University Press, 1997, 1-50.
- Golinski, Jan. "Chemistry." In *The Cambridge History of Science, Vol. 4, Eighteenth-Century Science*, edited by Roy Porter. Cambridge: Cambridge University Press, 2003, 381-388.
- Goodwon, Gordon, rev. Jeffrey S. Reznick, "Chisholm, Colin (b. in or after 1747, d. 1825)." *Oxford Dictionary of National Biography*.
- Green, James N. "The Rise of Book Publishing." In *A History of the Book in America: Vol. 2*, edited by David Hall, Robert A. Gross, and Mary Kelley. Chapel Hill: University of North Carolina Press, 2010, 75-80.
- Hamlin, Chistopher. "Predisposing Causes and Public Health in Early Nineteenth-Century Medical Thought," *Social History of Medicine* 5.1 (1992): 43-70
- Harrison, Mark. "Disease and Medicine in the Armies of British India, 1750-1830: The Treatment of Fevers and the Emergence of Tropical Therapeutics." In *British Military and Naval Medicine, 1600-1830*, edited by Geoffrey Hudson. New York: Rodopi, 2007, 87-120.
- . "'The Tender Frame of Man': Disease, Climate and Racial Difference in India and the West Indies, 1760-1860," *Bulletin of the History of Medicine* 70.1 (1996): 68-93
- Heaman, E.A. "The Rise and Fall of Anticontagionism in France," *Canadian Bulletin of the History of Medicine* 12 (1995): 3-25.
- D. Hoyt, Jr., William. "The Warden Papers," *Maryland Historical Magazine* 36 (1941): 302-14
- Huber, Valeska. "The Unification of the Globe by Disease? The International Sanitary Conferences on Cholera, 1851-1894," *The Historical Journal* 49.2 (2006): 453-476
- Johnson, Sherry. "El Niño, Environmental Crisis, and the Emergence of Alternative Markets in the Hispanic Caribbean, 1760s-1770s," *William and Mary Quarterly*, 3rd Series, 62.3 (July, 2005): 365-410.
- Johnston, Katherine. "The Constitution of Empire: Place and Bodily Health in the Eighteenth-Century Atlantic World," *Atlantic Studies* 10.4 (2013): 443-466.

- Klickstein, Herbert S. "The Introduction of Lavoisier's Chemical Nomenclature into America," *Isis* 45.141 (1954): 278-92
- Knaut, Andrew L. "Yellow Fever and the Late Colonial Public Health Response in the Port of Veracruz," *HAHR* 77.4 (Nov. 1997): 619-644.
- Kopperman, Paul. "The British Army in North America and the West Indies, 1755-83: A Medical Perspective." In *British Military and Naval Medicine, 1600-1830*, edited by Geoffrey Hudson. New York: Rodopi, 2007, 51-86.
- . "'Venerate the Lancet': Benjamin Rush's Yellow Fever Therapy in Context," *Bulletin of the History of Medicine* 78.3 (Fall 2004): 539-574.
- Lawrence, Christopher. "Cullen, Brown and the Poverty of Essentialism." In *Brunonianism in Britain and Europe*, edited by William Bynum and Roy Porter. London: Wellcome Institute for the History of Medicine, 1988, 1-21.
- Livesey, James. "London by the light of Montpellier: scientific networks between Britain, northern Europe and the Languedoc (1706-1789)," *Studies on Voltaire and the Eighteenth Century* 4.4 (2010): 85-102.
- Mante-Saakwa, N. "Jackson, Robert (bap. 1750, d. 1827)." *Oxford Dictionary of National Biography*.
- McClellan, James E., and François Regourd. 'The Colonial Machine: French Science and Colonization in the Ancien Regime,' *Osiris* 2nd ser., 15 (2000): 31-50.
- McNeill, J.R. "Yellow Jack and Geopolitics: Environment, Epidemics, and the Struggles for Empire in the American Tropics, 1650-1825," *OAH Magazine of History* 18.3 (2004): 9-13.
- Meadows, R. Darrell. "Engineering Exile: Social Networks and the French Atlantic Community, 1789-1809," *French Historical Studies* 23.1 (2000): 67-102.
- Middleton, W.S. "Felix Pascalis-Ouvière and the yellow fever epidemic of 1797," *Bulletin for the History of Medicine* 38 (1964): 497-515
- Müller, Leos. "The Swedish Consular Service in Southern Europe, 1720-1815," *Scandinavian Journal of History* 31.2 (2006): 186-195.
- Murphy, Kathleen S. "Translating the vernacular: Indigenous and African knowledge in the eighteenth-century British Atlantic." *Atlantic Studies* 8.1 (2011): 29-48
- Nichols, Roy F. "Trade Relations and the Establishment of the United States Consulates in Spanish America, 1779-1809," *The Hispanic American Historical Review* 13.3 (1933): 289-313.

- Osborne, Michael A. "Resurrecting Hippocrates: Hygienic Sciences and the French Scientific Expeditions to Egypt, Morea and Algeria." In *Warm climates and Western Medicine: The Emergence of Tropical Medicine, 1500-1900*, edited by David Arnold. Rodopi, 1996, 92–93.
- Oz-Salzberger, Fania. 'The Enlightenment in Translation: Regional and European Aspects' *European Review of History: Revue européenne d'histoire* 13.3 (2006), 385-409.
- Patterson, K. David. "Yellow Fever Epidemics and Mortality in the United States, 1693-1905," *Soc. Sci. Med.* 34.8 (1992): 855-865.
- Pernick, Martin. "Politics, Parties, and Pestilence: Epidemic Yellow Fever in Philadelphia and the rise of the First Party System." *William and Mary Quarterly*, 3rd Series. 29 (1972): 559-586.
- Postell, W.D. "Edward Hall Barton, Sanitarian." *Annals of Medical History* 4 (1942), 370-381.
- Potofsky, Allan. "The "Non-Aligned Status" of French Emigrés and Refugees in Philadelphia, 1793-1798." *Transatlantica. Revue d'études américaines. American Studies Journal* 2 (2006): 1-8.
- Ramsay, Matthew. "Medical Pluralism in Early Modern France." In *Medical Pluralism: Past – Present – Future*, edited by Robert Jütte. Stuttgart: Franz Steiner Verlag, 2013, 57-80.
- Reid-Maroney, Nina. "Scottish Medicine and Christian Enlightenment at the Pennsylvania Hospital, 1775-1800." In *Nation and Province in the First British Empire: Scotland and the Americas, 1600-1800*, edited by Ned C. Landsman. Lewisburg, 2001, 245-264.
- Rhembert, David M. "The Carolina Plants of Andre Michaux," *Castanea* 44.2 (Jun., 1979): 65-80.
- Rönnbäck, Klas. "Enlightenment, Scientific Exploration and Abolitionism: Anders Sparman's and Carl Bernhard Wadström's Colonial Encounters in Senegal, 1787–1788 and the British Abolitionist Movement," *Slavery & Abolition* 34.3 (2013): 425-445.
- Charles Rosenberg, "Epilogue: Airs, Waters and Places," *Bulletin of the History of Medicine*, 86.4 (Winter 2012): 661–670.
- Rosner, Lisa. "Thistle on the Delaware: Edinburgh Medical Education and Philadelphia Practice, 1800-1825," *Social History of Medicine* 5.1 (1992): 19-42.

- Salvucci, Linda. "Atlantic Intersections: Early American Commerce and the Rise of the Spanish West Indies (Cuba)," *The Business History Review* 79.4 (2005): 781-809.
- Sawchuk, Lawrence A., and Stacie D. A. Burke. "Gibraltar's 1804 yellow fever scourge: the search for scapegoats," *Journal of the History of Medicine and Allied Sciences* 53.1 (1998): 3-42.
- Schiebinger, Londa. "Scientific Exchange in the Eighteenth-Century Atlantic World." In *Soundings in Atlantic History: Latent Structures and Intellectual Currents, 1500-1830*, edited by Bernard Bailyn and Patricia Denault. Cambridge: Harvard University Press, 2009, 294-328.
- Sheridan, Richard. "The Guinea Surgeons on the Middle Passage: The Provision of Medical Services in the British Slave Trade." *International Journal of African Historical Studies* 14.4 (1981): 601-625.
- Sörlin, Sverker. "Ordering the world for Europe: science as intelligence and information as seen from the Northern periphery," *Osiris* 15 (2000): 51-69.
- Stern, Alexandra Minna, and Howard Markel, "Commentary: Disease etiology and political ideology: revisiting Erwin Ackerknecht's Classic 1948 Essay, 'Anticontagionism between 1821 and 1867,'" *International Journal of Epidemiology* 38 (2009): 31-33.
- Stevenson, L.G. "Putting Disease on a Map: the Early Use of Spot Maps in the Study of Yellow Fever," *Journal of the History of Medicine and Allied Sciences* 10.3 (1965): 226-261.
- Tomes, Nancy. "Introduction: Imperial Medicine and Public Health." In *Colonial Crucible: Empire and the Making of the Modern American State*, edited by Alfred McCoy and Francisco Antonio Scarano. Madison: University of Wisconsin Press, 2009, 273-277.
- Waserman, Manfred J., and Virginia Kay Mayfield. "Nicolas Chervin's Yellow Fever Survey, 1820-1822." *Journal of the History of Medicine and Allied Sciences* 26.1 (1971): 40-51.
- Waterman, Bryan. "Arthur Mervyn's Medical Repository and the Early Republic's Knowledge Industries," *American Literary History* 15.2 (2003): 213-237.
- Williams, Edwin. "Pascalis-Ouvière, Felix," In *The Treasury of Knowledge and Library of Reference, Volume 3*. New York: C.C. Childs, 1850, 263-264.

Windler, Christian. "Representing a State in a Segmentary Society: French Consuls in Tunis from the Ancien Regime to the Restoration," *The Journal of Modern History* 73.2 (2001): 233-274.

Monographs

Alderson, Robert J. *This Bright Era of Happy Revolutions: French Consul Michel-Ange-Bernard Mangourit and International Republicanism in Charleston, 1792-1794*. University of South Carolina Press, 2008.

Anderson, Benedict. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. London: Verso, 1991.

Braidwood, Stephen J. *Black Poor and White Philanthropists: London's Blacks and the Foundation of the Sierra Leone Settlement, 1786-1791*. Liverpool: Liverpool University Press, 1994.

Brizan, George. *Grenada: Island of Conflict: From Amerindians to People's Revolution, 1498-1979*. London: Zed Books Ltd., 1984.

Brockliss, Laurence, and Colin Jones, *The Medical World of Early Modern France*. Oxford: Clarendon Press, 1997.

Coleman, William. *Yellow Fever in the North: The Methods of Early Epidemiology*. Madison: University of Wisconsin, 1987.

Cook, Harold. *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age*. New Haven: Yale University Press, 2008.

Doolen, Andy. *Fugitive Empire: Locating Early American Imperialism*. Minneapolis: University of Minnesota Press, 2005.

Duffy, John. *Rudolph Matas History of Medicine in Louisiana*. New York: Pelican, 1976.

Duffy, Michael. *The British Army in the West Indies: Society and the Military in the Revolutionary Age*. University Press of Florida, 1998.

Estes, J. Worth, and Billy G Smith, eds. *A Melancholy Scene of Devastation: The Public Response to the 1793 Philadelphia Yellow Fever Epidemic*. Canton: Science History Publications, 1997.

Finger, Simon. *The Contagious City: The Politics of Public Health in Early Philadelphia*. Cornell University Press, 2012.

- Geggus, David. *Slavery, War, and Revolution: The British Occupation of Saint Domingue, 1793-1798*. Oxford: Clarendon Press, 1982.
- Greene, John C. *American Science in the Age of Jefferson*. Ames: Iowa State University Press, 1984.
- Haber, Francis. *David Bailie Warden: A Bibliographical Sketch of America's Cultural Ambassador in France, 1804-1845*. Washington, D.C.: Institut Francais de Washington, 1954.
- Hamilton, Douglas. *Scotland, the Caribbean and the Atlantic World, 1750-1820*. Manchester: Manchester University Press, 2005.
- Holmes, Frederick Lawrence. *Lavoisier and the Chemistry of Life: An Exploration of Scientific Creativity*. Madison: University of Madison Press, 1987.
- Humphreys, Margaret. *Yellow Fever and the South*. New Brunswick: Rutgers University Press, 1992.
- Kaplan, Catherine O'Donnell. *Men of Letters in the Early Republic: Cultivating Forums of Citizenship*. Chapel Hill: University of North Carolina Press, 2008.
- King, Lester. *The Medical World of the Eighteenth Century*. Chicago: University of Chicago Press, 1958.
- Kelly, Catherine E. *War and the Militarization of British Army Medicine, 1793-1830*. London: Pickering and Chatto, Ltd., 2010.
- Mark, Harrison. *Medicine in an Age of Commerce and Empire: Britain and Her Colonies, 1660-1830*. Oxford: Oxford University Press, 2010.
- . *Contagion: How Commerce Has Spread Disease*. New Haven and London: Yale University Press, 2012.
- Kennedy, Charles. *The American Consul: A History of the United States Consular Service, 1776-1914*. New York: Greenwood Press, 1990.
- La Berge, Ann. *Mission to Method: The Early Nineteenth-Century French Public Health Movement*. Cambridge University Press, 2002.
- Marzagalli, Silvia, and James R. Sofka and John J. McCusker, eds., *Rough Waters: American Involvement with the Mediterranean in the Eighteenth and Nineteenth Centuries*. International Maritime Economic History Association: St. Johns, 2010.
- McClellan, J.E. *Colonialism & Science : St. Domingue and the Old Regime*. Chicago : University of Chicago Press, 2010.

- McNeill, John R. *Mosquito Empires: Ecology and War in the Greater Caribbean, 1620-1914*. Cambridge: Cambridge University Press, 2010.
- Osborne, Michael. *The Emergence of Tropical Medicine in France*. Chicago: University of Chicago Press, 2014.
- Parrish, Susan Scott. *American Curiosity: Cultures of Natural History in the British Atlantic World*. Chapel Hill: University of North Carolina Press, 2006.
- Pasley, Jeffrey. *The Tyranny of Printers: Newspaper Politics in the Early American Republic*. Charlottesville: University of Virginia Press, 2002.
- Pelling, Margaret. *Cholera, Fever, and English Medicine, 1825-1865*. Oxford: Oxford University Press, 1978.
- Pluchon, Pierre. *Histoire des médecins et pharmaciens de marine et des colonies*. Toulouse: Privat, 1985.
- Powell, J.H. *Bring Out Your Dead: the great plague of yellow fever in Philadelphia in 1793*. Philadelphia: University of Pennsylvania Press, 1949.
- Riskin, Jessica. *Science in the Age of Sensibility: The Sentimental Empiricists of the French Enlightenment*. Chicago: University of Chicago Press, 2002.
- Risse, Guenter. *Mending Bodies, Saving Souls: A History of Hospitals*. Oxford University Press, 1999.
- Rosenberg, Charles. *The Care of Strangers: the Rise of America's Hospital System*. New York: Basic Books, Inc., 1987.
- . *The Cholera Years: The United States in 1832, 1849, and 1866*. Chicago: University of Chicago Press, 2009.
- Schaffer, Simon and Lissa Roberts, K. Raj, and James Delbourgo, eds. *The Brokered World: Go-Betweens and Global Intelligence, 1770-1820*. Sagamore Beach: Science History Publications 2009.
- Sewell, Jr., William Hamilton. *Structure and Mobility: The Men and Women of Marseille, 1820-1870*. Cambridge: Cambridge University Press, 2009.
- Shapin, Steven. *A Social History of Truth: Civility and Science in Seventeenth-Century England*. Chicago: University of Chicago Press, 2004.
- Smith, Billy G. *Ship of Death: A Voyage That Changed the Atlantic World*. New Haven: Yale University Press, 2013.

Smith, Pamela, and Paula Findlen, eds., *Merchants and Marvels: Commerce, Science and Art in Early Modern Europe*. New York: Routledge, 2001.

Waldstreicher, David. *In the Midst of Perpetual Fetes: The Making of American Nationalism, 1776-1820*. Chapel Hill: University of North Carolina Press, 2007.

Warner, John Harley. *The Therapeutic Perspective: Medical Practice, Knowledge, and Identity in America, 1820-1885*. Cambridge: Harvard University Press, 1987.

Waterman, Bryan. *Republic of Intellect: the Friendly Club of New York City and the Making of American Literature*. Baltimore: Johns Hopkins University Press, 2007.

Weaver, Karol. *Medical Revolutionaries: The Enslaved Healers of Eighteenth-Century St. Domingue*. Urbana: University of Illinois Press, 2006.

White, Ashli. *Encountering Revolution: Haiti and the Making of the Early Republic*. Baltimore: Johns Hopkins University Press, 2010.

Williams, Elizabeth. *A Cultural History of Medical Vitalism in Enlightenment Montpellier*. London: Ashgate, 2003.

Unpublished Dissertations and Articles

Apel, Thomas. "Feverish Bodies, Enlightened Minds: Yellow Fever and Common-Sense Philosophy in the Early American Republic, 1793-1805." PhD Dissertation: Georgetown University, 2012.

Chenicek, Jolynda Brock. "Dereliction of Diplomacy: The American Consulates in Paris and Bordeaux during the Napoleonic Era, 1804-1815." PhD. Dissertation: Florida State University, 2008.

Clauber, Anna Cornelia. "American Commerce As Affected by the Wars of the French Revolution and Napoleon, 1793-1812." PhD Dissertation: University of Pennsylvania, 1932.

Denis, Adrián López. "Disease and Society in Colonial Cuba, 1790-1840." PhD Dissertation: University of California Los Angeles, 2007.

Marks, Harry. "How Might Biology Matter? Explorations for a Materialist History of Disease." Johns Hopkins University Department of the History of Science, Medicine and Technology, Baltimore, May 29, 2001.

- Meadows, R. Darrell. "The Planters of Saint-Domingue, 1705-1804: Migration and Exile in the French Revolutionary Atlantic." PhD Dissertation: Carnegie Mellon University, 2004.
- Müller, Leos. "Consuls, Corsairs and Commerce: The Swedish Consular Service and Long-distance Shipping, 1720-1815." PhD Dissertation: Universitatis Upsalienis, 2004.
- Murphy, Kathleen. "Portals of Nature: The Pursuit of Natural History in Eighteenth-Century British Plantation Societies." Ph.D. Dissertation: Johns Hopkins University, 2007.
- Rouleau, Brian. "With Sails Whitening Every Sea: Commercial Expansion, Maritime Empire, and the American Seafaring Community Abroad, 1780-1870." PhD Dissertation, University of Pennsylvania, 2010.
- Sussman, George. "From Yellow Fever to Cholera: a Study of French Government Policy, Medical Reformism and Popular Movements in the Epidemic Crises of the Restoration and July Monarchy." PhD Dissertation: Yale University, 1971.
- Taylor, Sean P. "'We Live in the Midst of Death': Yellow Fever, Moral Economy, and Public Health in Philadelphia, 1793-1805." PhD Dissertation: Northern Illinois University, 2001.

CURRICULUM VITAE

Katherine Arner

Department of the History of Medicine
School of Medicine
1900 East Monument Street/Room 320
Baltimore, MD 21205-2113
karner1@jhmi.edu

Education

- 2014 (expected) PhD, History of Medicine, Johns Hopkins University
Thesis: "The Malady of Revolutions: Yellow Fever in the Atlantic World, 1793-1828" Advisor: Mary Fissell
Committee: Randall Packard, Graham Mooney, Philip Morgan and Toby Ditz
- 2005 University of Wisconsin - Madison
B.A. History (honors), German Linguistics

Publications

- "Making Global Commerce into International Health Diplomacy: Consuls and Disease Control in the Age of Atlantic Revolutions," *Journal of World History* Special Issue: The State and the Epidemiological Transition (Dec. 2013) 24:4.
- "The History of Atlantic Science: Collective Reflections from the 2009 Harvard seminar on Atlantic History," *Atlantic Studies*, vol. 7, no. 4 (Dec. 2010). Jointly authored with Marcelo Arunda, et al.
- "Making Yellow Fever American: The Early American Republic, the British Empire and the Geopolitics of Disease in the Atlantic World," *Atlantic Studies*, vol. 7, no. 4 (Dec. 2010)

Book Reviews

- "REVIEW: Peter McCandless, *Slavery and Suffering in the Southern Lowcountry* (Cambridge: Cambridge University Press, 2011)," *South Carolina Historical Magazine* (forthcoming).
- "REVIEW: Karol Weaver, *Medical Revolutionaries: the Enslaved Healers of Eighteenth-Century Saint Domingue* (University of Illinois Press: 2006)," H-LatAm, H-Net Reviews (October, 2012).

Awards and Fellowships

2013-2014	Dean's Teaching Fellowship, Johns Hopkins University
2011-2012	Dissertation Writing/Visiting Fellowship, Center of Historical Research, Ohio State University. Program: "Health, Disease and Environment in World History."
2011-2012	Paul Klemperer Fellowship in the History of Medicine, New York Academy of Medicine
2011-2012	Dissertation Research Fellowship, Philadelphia Area Consortium in the History of Science
2010-2011	Long-term Dissertation Research Fellowship, Program in Early American Economy and Society
2010-2011	Andrew W. Mellon Foundation Fellowship, American Philosophical Society
2007-2012	Doctoral fellowship/instructorship, Johns Hopkins University, Institute for the History of Medicine
2005-2007	Fulbright Scholarship/Teaching Fellowship, Austria
2005	Award for Outstanding Thesis in History, "The Discourse on Plague in Early Hanoverian England: A Chapter in the Social History of Public Health," University of Wisconsin – Madison, Department of History
2005	Phi Beta Kappa

Invited Talks and Presentations

June, 2012	"Preserving Etienne Cathalan's World of Exchange: Commerce, Warfare and the Growth of International Health Diplomacy in the Eighteenth Century." Workshop: Epistemic Exchange in the Early Modern World. Europeans and non-Europeans in dialogue: Research perspectives. European University Institute, Florence, Italy.
April, 2012	"Fever, Commerce and Diplomacy: Consuls and the Making of Warm Climate Medicine in the Era of Atlantic Revolutions" Spring 2012 Seminars: Epidemiology in World History, Center for Historical Research, Ohio State University
September, 2011	"Preserving the Health of Our Commercial Nation: Consuls and the International Roots of US Disease Control" Workshop: "Re-thinking the History of Health, Disease and Medicine from a Global Perspective," Oxford University

July, 2011 “Shaped by Fever, Commerce and War: American Medicine and Disease Control in the Age of Atlantic Revolutions”
Colloquium/Lecture Series, New York Academy of Medicine

April, 2011 “A Creole Complex: Yellow Fever, the Atlantic World and the Formation of Early Republican Medical Culture”
Library Company of Philadelphia, Joint Seminar of the Program in Early American Economy and Society at the LCP and the McNeil Center for Early American Studies, Philadelphia

Conference Presentations and Workshops

August, 2013 Participant, Third Summer Academy of Atlantic History: “Circuits of Knowledge (15th to 19th century).” Hamburg, Germany.

July, 2012 Panel Organizer and Panelist, “Before and Beyond ‘Paris Clinic’: The Haitian Revolution and the Francophone Impulse in American Medicine.” Panel: “Re-Charting the Itineraries of Early Republican Science and Medicine.”
Annual Meeting of the Society of Historians of the Early American Republic, Baltimore.

January, 2012 “A Space for a New World Medical Order: The *Medical Repository* and the Formation of Medical Communities in the Age of Atlantic Revolutions.”
126th Annual Meeting of the American Historical Association, Chicago. Co-Sponsored by the Conference on Latin American History.

August, 2009 “Making Yellow Fever American: The United States, the British Empire and the Transatlantic Travails of Yellow Fever, 1793-1810”
International Seminar on the History of the Atlantic World, 1500-1825, Harvard University, Cambridge Massachusetts.

July, 2009 “Bridging the Gap: Transatlantic Approaches in American Histories of Medicine.”
Annual Transatlantic Studies Association Conference, Christ Church University, Canterbury, England

April, 2009 “Preserving the Republic: Quarantine, Fever and Nation in Early Republic America”
Johns Hopkins University, Department of History of Science, Medicine and Technology Colloquium Series

Teaching Experience

Fall, 2013 Instructor, Johns Hopkins University
Course: “From Colonial to Global Health: Health, Medicine and European Expansion, 1500-1950”

Spring, 2013
Spring, 2010
Spring, 2009

Graduate Instructor, Johns Hopkins University
Course: "History of Modern Medicine: Enlightenment to Present Day"

2011-2012

Co-instructor, Ohio State University
Graduate Colloquium: "Health, Disease and Environment in World History"

Fall, 2010
Fall, 2009
Fall, 2008

Graduate Instructor, Johns Hopkins University
Course: "History of Medicine: Antiquity to Scientific Revolution"

Other Teaching Experience

2005-2007

Teaching Assistant (English language and composition as well as American culture and politics), Fulbright Austrian-American Educational Commission, Innsbruck and Salzburg

Professional Service

October, 2013

Panel Chair, "Economic Authority of Special Knowledge"
Thirteenth Annual Conference of the Program in Early American Economy and Society: Ligaments of Colonial Economies
Philadelphia, Pennsylvania

October, 2013

Panel Organizer, "Locating the Atlantic World in French Medicine"
Annual Meeting of the Western Society for French History, Atlanta
Georgia

Fall, 2012

Research Assistant for Mary Fissell, "Women and Medicine." In *Oxford Bibliographies Online: Renaissance and Reformation*,
<http://www.oxfordbibliographies.com>.

2011-2012

Visiting Fellow, Center for Historical Research, Ohio State University

- Helped host guest speakers and social events for Center seminar series
- Helped facilitate discussions and organize complementary curricula
- Helped organize and lead graduate colloquium

March, 2011

Panel Chair, "Theorizing Health and Illness during the Early American Enlightenment."
Society of Early Americanists' Seventh Biennial Conference,
Philadelphia

October, 2010

Panel Chair, "Networks, Practices and Latour."
Symposium in Honor of Harry Marks, Institute for the History of Medicine, Johns Hopkins University

2008-2011

Steering Committee, Joint Atlantic Seminar for the History of Medicine

- Co-organized regional conferences for graduate students in the history of medicine

2008-present Participant, Atlantic History Seminar Series, Johns Hopkins University

2007-present Participant, History of Science, Medicine and Technology Colloquium Series, Johns Hopkins University

Consultant Work

2011 Historian Consultant, *Philadelphia: The Great Experiment*, Episode: “Fever 1793” (Winner of the 2013 Mid-Atlantic Emmy for Best Documentary)
Interviewee, Webisodes: “Yellow Fever: Anatomy of an Epidemic,” “Doctors and Cures” and “Port City” (www.historyofphilly.com)

Professional Membership

American Association for the History of Medicine
American Historical Association
Omohundro Institute for Early American History and Culture
Society of Early Americanists
Society for Historians of the Early American Republic
World History Association

Languages

English – Native
German – Near Native
French – Proficient in Reading and Translating
Dutch – Proficient in Reading and Translating
Spanish – basic reading